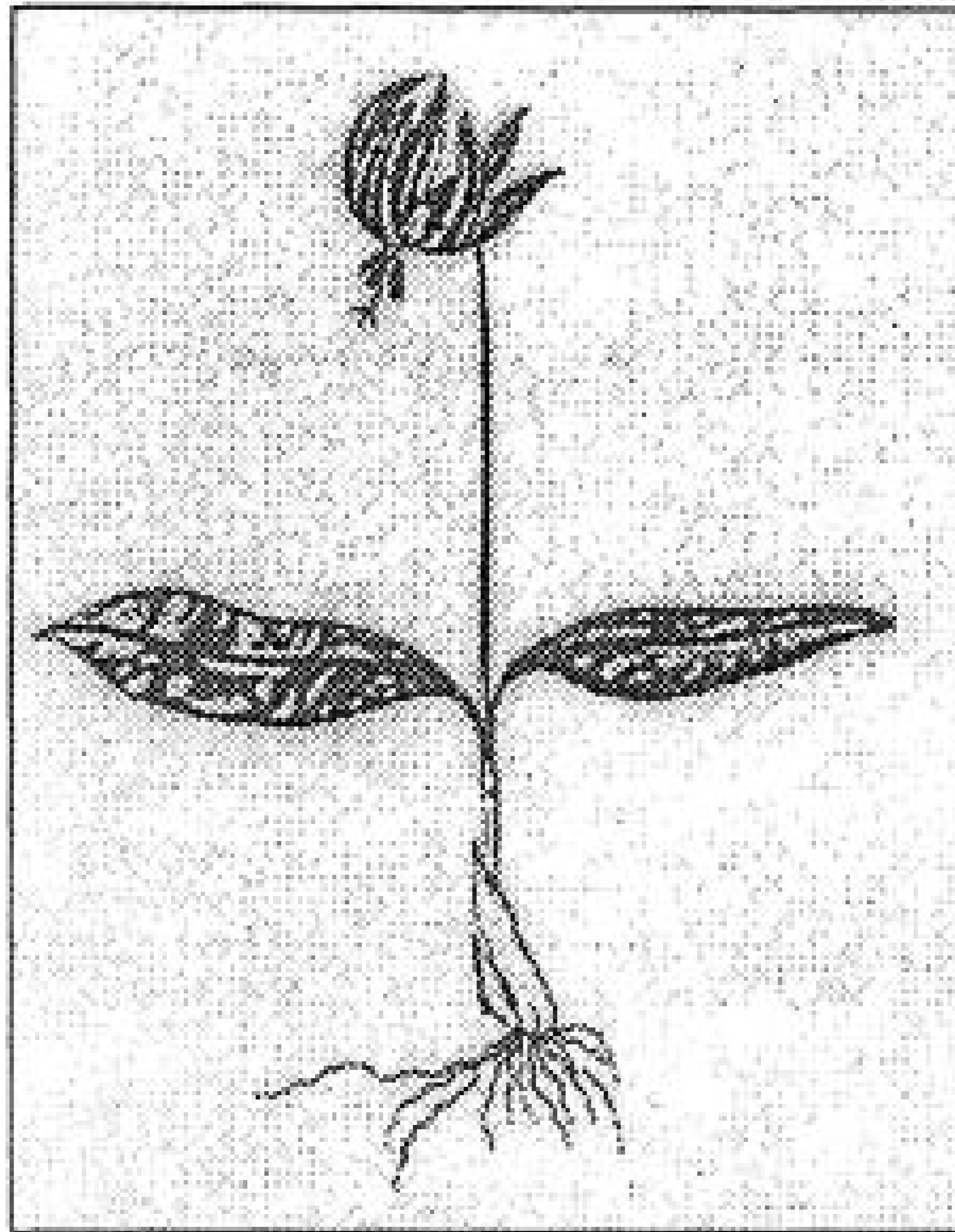


THE BULB
NEWSLETTER



Number 33

January-March

2001

The Bulb Newsletter No. 33

January-March 2001

ISSN 1463-967X

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A very Happy and Healthy New Year to Bulb Enthusiasts
from the BN Team!

A Variable Himalayan Frit.

Back in the summer of last year, Henry and Margaret Taylor contacted us to enquire about a *Fritillaria* they had seen in the north-western Himalaya, in area close to the Tibetan border on the Nalgan Pass. There was a colony of about 50 plants growing in a steep fertile moraine at about 15,000 ft (see right). Now, these very knowledgeable and astute plant hunters are familiar with *F. roylei* from areas such as the Rohtang Pass but this one seemed rather different and led Henry to pose the question:

"Is there enough variation in *F. roylei* to encompass the tall green-flowered plant we have seen at 12,000 feet in the Rohtang 100 miles away and also this dwarf yellow one from 15,000



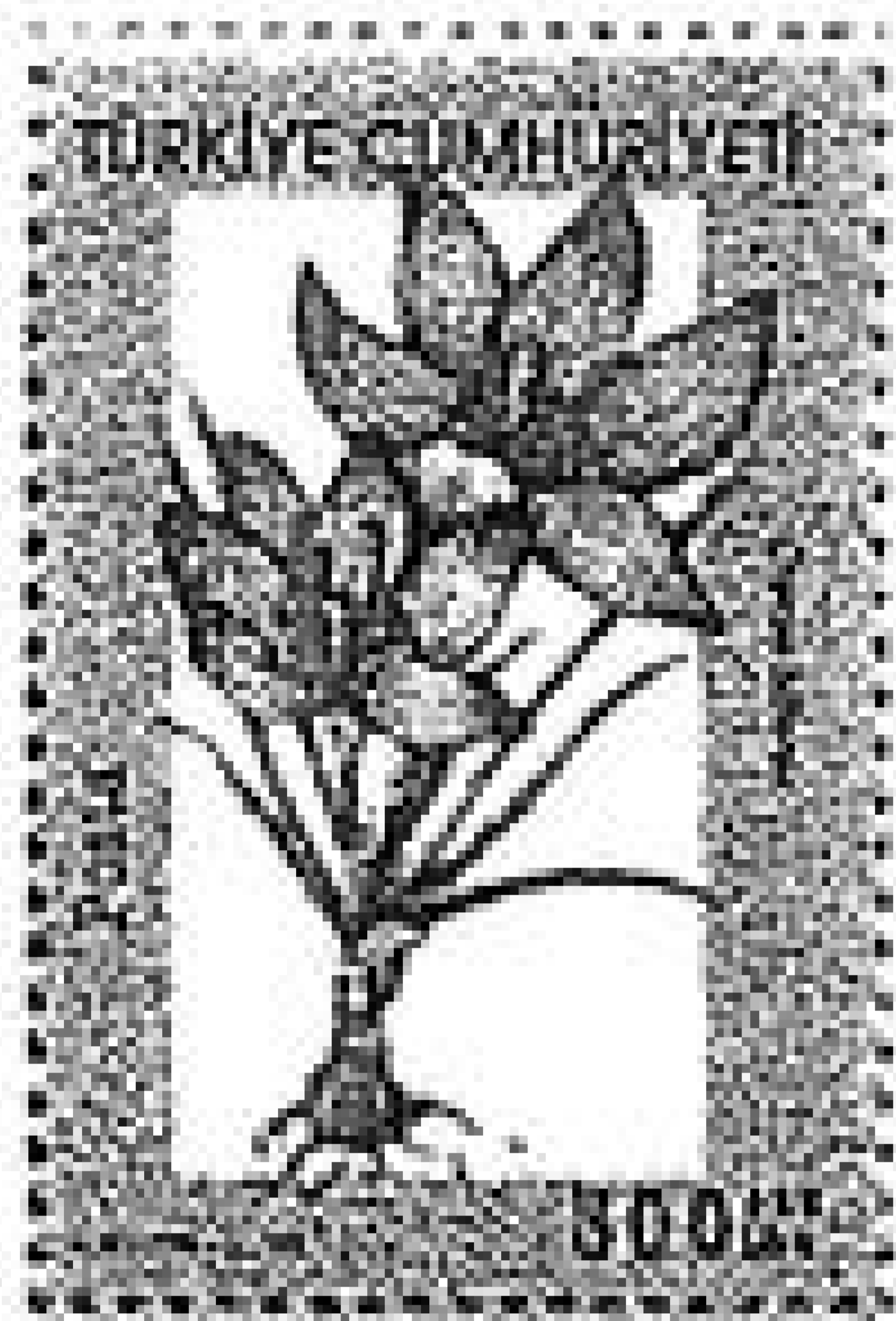
feet? The green Rohtang *F. roylei* had many more leaves on a stem, with the leaves held horizontally, whereas the dwarf yellow-flowered Nalgan plant has fewer leaves and these are held at an upward angle."

A check through the specimens in the Kew Herbarium shows that unfortunately, as is so often the case when you look at species from all over their range, there is a great deal of variation in the western Himalayan fritillarias. So much so that some have suggested that *F. roylei* and *F. cirrhosa* should be merged, but that does seem excessive. So, *F. roylei* it is - at least for the moment, unless someone can come up with some defining characteristics to separate out this rather more exciting (horticulturally) dwarf yellow-flowered plant.

STAMPS

It is obvious that the world is at last realising what amazing plants crocuses are. For this issue of BN we have received five 'bulb' stamps, all portraying *Crocus* species!

Olive Mason of Chaddesley Corbett (yes, we have villages with names like that in Britain!) has kindly sent us one from Malta labelled Zaghfran salvagg, otherwise known as *C. longiflorus*. The three style branches, one of the diagnostic features of the Saffron group, are visible.



Also, thanks to Adil Güner for sending a set of Turkish stamps depicting four *Crocus* spp.: *C. chrysanthus*, *C. olivieri*, *C. biflorus* and *C. sativus*. The one shown here is *C. biflorus* in a depth of blue that suggest it is subsp. *pulchricolor* from Ulu Dag. *Crocus olivieri* is a pale lemon yellow form, the like of which I have never seen before!

We have probably already included the 32 cent *Galanthus* stamp from the USA, but they are so popular and it is the right time of year - at least, for those of us in the northern hemisphere! With its bright green leaves and smallish green blotch on the inner perianth segments, this looks like a form of *G. woronowii* rather than the grey-leafed *G. nivalis*, the common snowdrop (if I may dare to use the c-word about a *Galanthus*!)



And talking of Snowdrops.....

A 'Galanthus Gala 2001' will take place on February 17th, 2001 at the Alderman Peel High School, Wells Next the Sea, North Norfolk. The day begins at 10.00am with a morning of lectures by Kit Grey-Wilson, John Grimshaw ("Early Spring in the Czech Republic") and Joe Sharman on "Galanthus Memorabilia". The lectures will be followed by a plant sale which has become one of the best places to buy rare and unusual snowdrops, also hellebores, corydalis, pulmonarias, celandines, etc. Nurseries attending include North Green Snowdrops, Marchants Hardy Plants, Anita Thorp, Long Acre Plants and Monksilver Nursery. Following lunch, we will move on to visit the garden at nearby Warham Rectory which will be specially opened for the Gala. This is where *Galanthus* 'Diggory' was found; there are also numerous naturalised *Galanthus plicatus* ssp. *byzantinus* and

other bulbs such as *Eranthis*, *Galanthus*, *Colchicum*, *Leucojum* and *Narcissus pseudonarcissus* in a woodland setting. There will also be a visit to Walsingham Estate which has millions of *Galanthus nivalis* and *G. nivalis* 'Flore Pleno'. The day costs £9.50 for the Gala, £6.50 for the optional lunch, £1.00 for entry to Walsingham Estate.

A programme, map and application form, on receipt of SAE, can be obtained from: Joe Sharman, Monksilver Nursery, Oakington Road, Cottenham, Cambridge, CB4 8TW. Answerphone: 01954-251555, Fax: 01223-502887, email: plants@monksilver.com

Incidentally, a month later on 17th March (10am-4pm), Monksilver Nursery is having a 'Spring Thing' when there will be many good spring-flowering plants on sale from the host nursery and about 10 other nurseries which have been selected for their range of interesting plants. Bulbs, in the widest sense, usually feature quite prominently.

And another Galanthus-Fest

A Connoisseur's Snowdrop Day. Anglesey Abbey is the venue for this event on 6 February 2001. Every year thousands of people visit the grounds to see the snowdrops which were probably planted there in the 1850s when the Abbey was owned by the Reverend Hailstone. The display we see today is due to the efforts of Richard Ayres the Trust's recently retired head gardener who called in experts to identify unusual snowdrops found on the garden's Victorian rubbish dump 25 years ago. These were planted out onto the banks of the Abbey's old stewponds where they thrive. Richard's interest in snowdrops continued and he has since found and planted even rarer varieties which now form a private collection in the grounds; *Galanthus* 'Ailwyn' and 'Lodestar' are amongst the most recently named. There will be a private tour of the snowdrops led by Richard Ayres, preceded by an illustrated talk by 'galanthophile' Daphne Chappell. The private view day costs £35.00 and includes a three course lunch and morning and afternoon refreshments.

To book, contact Anglesey Abbey, Lode, Cambridge. CB5 9EJ Telephone 01223-811200

Success! In BN 32:6, we made an appeal for information about *Muscari azureum* 'Amphibolis'. This prompted several replies and, thanks to Johan van Scheepen of KAVB in Holland, we now have some bulbs at 90 Foley Road. Apparently it is still cultivated in Holland, including in the comprehensive collection of Hoog & Dix. Graham Simpson from East Grinstead bought some in the 1960s and it is still with him; he notes that it is quite large, pale china-blue and later-flowering than the normal.

The excellent *Iris lazica*

This much underrated relative of *Iris unguicularis* is not really very well known as a garden plant and yet it has a great deal of merit. It is a native of the Black Sea coast region where I have seen it on many occasions growing on moist mossy banks in the hazel nut (*Corylus*) plantations and *Rhododendron ponticum* scrub and can be found with primroses and *Cyclamen coum*; here, it receives rainfall throughout the year. It is therefore a very different plant ecologically

from *Iris unguicularis* which is a Mediterranean plant preferring warm sunny situations on limestone formations and receiving rainfall from autumn to spring, with a long, hot, dry summer. However, both flower in winter or spring which makes them such useful plants for the garden. Unlike *I. unguicularis*, it appears that *I. lazica* is not very variable in flower colour - certainly in the wild it always looks much the same colour, in the mid-



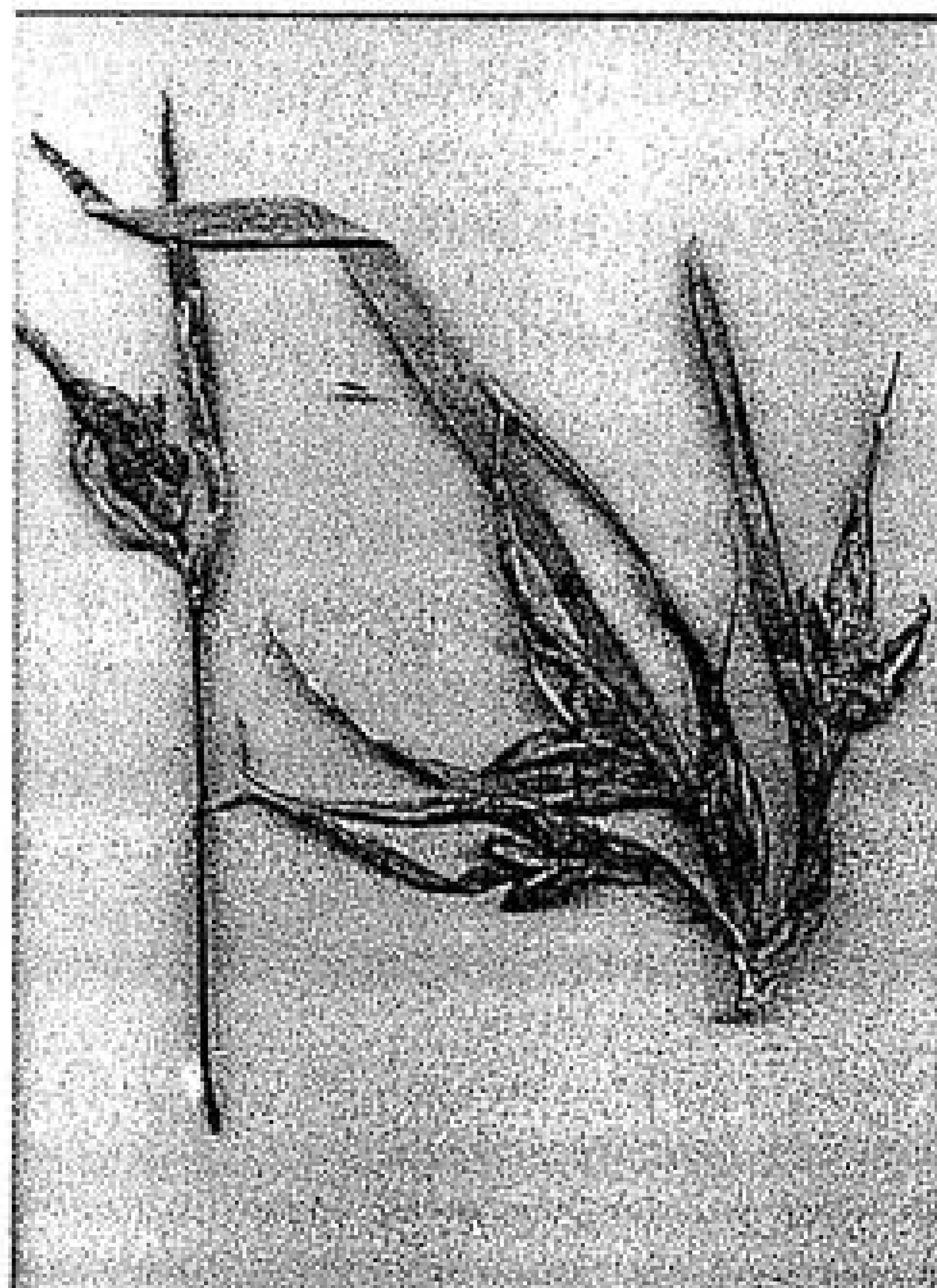
lavender-violet shades with just a little variation. However, I don't know of anyone who has made a special effort to search through populations of it. In 1990, Aaron Davis and Stephen Jury published a taxonomic review of the two species of *Iris* series *Unguiculares* (In *Botanical Journal of the Linnean Society* 103: 281-300) and observed that it could be 'rarely white'. However, as far as I know, an albino has never been introduced alive into cultivation.

Only one variant has been named: a pleasing colour form that was given the cultivar name of 'Turkish Blue' by E. Charles Nelson (see *Curtis' Botanical Magazine* Vol. 16, Part 1: Plate 357 (1999)). This was cultivated in Ireland by Wendy Walsh, who also provided the illustration for the magazine, and by Charles Nelson in his Norfolk garden; the plant was originally introduced from Of, in Trabzon province, Turkey, by E. Martyn Rix (EMR 1020) in 1968. The colour of the blade of the outer segments ('falls') is described by Charles Nelson as rich blue-purple, that of the inner ('standards'), a rich violet-blue.

Propagation of *Iris lazica* is very easy by division since it increases quite rapidly into large clumps, but of course this will not lead to any variations. For this, seeds are required, but capsules are apparently not produced very freely in Britain - Charles Nelson says that seeds were not produced in Wendy Walsh's garden during a 30 year period - but occasionally they are to be found. It is possible that, as with *I. unguicularis*, growers do not notice them, for the capsules are carried down among the leaf rosettes. A search among my own clumps over the last few years has yielded a few.

However, our friend Wessel Marais living in Lasvaux in the Dordogne has a quite different experience; this year he has sent us a large quantity of seeds and the mature capsules, which has enabled us to modify the description of the fruiting stages of this interesting plant. The reasons for this much better seed set are not known. Maybe, so much farther south, there are more pollinating insects around at flowering time than in England, or perhaps the greater warmth of the sun encourages fertilisation. Whatever the cause, we now have the potential to produce hundreds of seedlings (although not the space!). As Wessel says, you must raise every one because if you don't, you can be sure that the white one will be among the seeds that you threw out!

From the botanical viewpoint, these dried off remains of the fruits are interesting. It was known that the flowers of *I. lazica*, which, like those of *I. unguicularis*, appear to be stemless, are in fact carried on short stems (not to be confused with the long floral tube which is a part of the flower itself). I had



recorded stems only up to 6 cm long. However, as Wessel had observed, the stem can be much longer. These specimens showed that by the time the capsules (fruits) are ripe, the stem can be as much as 13 cm long. When flowering, it is clear that each 'fan' of leaves produces several flowers in succession more or less from the same point; these fruiting specimens are useful in that they allow one to pull the fan apart to see what the structure is like, much more clearly than at flowering time. In these specimens there are up to three stems

per fan of leaves and each stem is one-flowered; the stems are completely leafless but some of the inner leaves of the fan are very narrow, long-tapering and bract-like and they sheath the stem all the way up to the flower. The two true (floral) bracts (a bract and bracteole) that subtend the flower are also narrow and long tapering and are up to 12 cm long. Within these bracts is the flower with its basal ovary and long perianth tube (up to 13 cm long), but here again it is possible to see that by fruiting time the capsule is carried on a short stalk (pedicel). At flowering time this is scarcely apparent.

So, if these seeds germinate and grow on to flowering size, it will be interesting to see how much, if any, variation in flower colour there is. Either way, there should be a lot of *Iris lazica* for distribution in the Surrey area in due course!

Calling all Muscari enthusiasts

Martin Philippo from The Netherlands is an enthusiastic collector of *Muscari* and is on the lookout for any to add to his collection. These do not necessarily have to be plants of known wild origin as he is looking for new varieties (i.e. new to his collection) as well as the species.

In the past, the grape hyacinths have perhaps been one of the 'poor relations' in the bulb world but they are once more gaining acceptance as valuable garden plants. The trial of 'small blue bulbs' [its respectable title is the 'Trial of Hardy Hyacinthaceae' [i.e. *Scilla*, *Chionodoxa*, *Chionoscilla*, *Muscari* (incl. *Leopoldia*), *Puschkinia*, *Hyacinthella*, etc.] which is taking place at Wisley Garden over the next three years will probably assist in their popularity. The trial, by the way, excludes that big genus *Ornithogalum* which, although hardy and in *Hyacinthaceae*, are not blue - they are so numerous that they need a trial of their own.

Anyone who would like to get in touch with Martin should do so directly rather than through the BN office:

Martin Philippo, Astilbe 8, 2211-MP Noordwijkerhout, Netherlands.
Tel: 00-31-252-377625; e-mail: philippo.hennessy@worldonline.nl

***The Biarum Monograph* - a clarification and update.**

Gary Fisher has pointed out to us that in the Alpine Garden Society's Bulletin, December 1998 (p. 477) it was mentioned that Peter Boyce (an aroid specialist at RBG Kew) was about to publish a monograph of the curious genus *Biarum*. Did I blink and miss it, he asks? In fact, BN can help as we have some inside information. No, it has not been published but Peter tells us that the taxonomic work is nearly complete; it will take a while to get it into publishable form as there are paintings to complete, etc. But rest assured, it will come in due course.

The Allium corner

True to form, another *Allium* piece has turned up, although this time not a new species but an interesting one from the past. Sören Stocker from Herning, Denmark, alerted us to it, following an article that the BN Editor wrote on the subject of small alliums in the *Bulletin of the Alpine Garden Society* 68, no. 1 (March 2000). Sören enjoyed the article but said that he felt slightly let down because I had not mentioned the one that Frank Kingdon Ward had written about in his book *Burma's Icy Mountains*. Well, many species were left out of course; with a genus of around 1000 species it is difficult to get them all into a 1500 word article, but this one did sound rather special. But what was it? Reference to KW's book (page 79) reveals the following: ".....another day climbed the cliff which had stopped our direct approach to Pasoi Hpawng, whence I followed the ridge down to the chasm which had stopped me the first day.....here I found one of the most delightful of all the plants I came across - a dwarf *Allium* with little nodding white flowers like miniature snowdrops." A few pages later it is mentioned again (p. 96): "...jammed into crevices above the splashing water, I spotted two plants..... One was the small tufted *Allium* with narrow grass-like leaves and nodding white flowers already described. It is an extraordinarily dainty rock plant."

Sören thought that this might have been named by W.T.Stearn in the *Bulletin of the British Museum (Natural History)*, and indeed it has, based on Kingdon Ward's specimens from 1937. It is *Allium acidoides* Stearn, which is apparently confined to northern Burma.

The description tells us that it is a tufted plant with very narrow almost cylindrical bulbs on a small rhizome, about 12-15 cm in height with thread-like stems and leaves only about 1 mm wide. The umbels bear 1-4 pendent bell-shaped flowers on slender 2-3.5 cm long pedicels; the flowers are 1-1.2 cm long and are white, flushed pink towards the base and with a reddish line along the centre of each perianth segment. The stamens are included within the bell and have purplish anthers. Kingdon Ward saw it in flower in August and September 1937 and noted on one of the specimens that it was 'a beautiful little rock plant, the modest hanging flowers almost suggesting snowdrops.'

Stearn considered that the flowers looked more like the small-flowered snowflakes (such as *Leucojum autumnale*) than snowdrops (*Galanthus*), so he formed the epithet accordingly. These small snowflakes have been placed in the genus *Acis* in the past, separate from the true leucojums (*L. vernum* & *L. aestivum*) and 'acidoides' refers to the *Acis*-like nature of this little *Allium*.

Allium acidoides was collected in Burma in the Nam Tamai Valley (KW 13209) and Mungku Hyet (KW 13024) at between 2700 and 3000 m.

***Leucojum* - further studies required.....**

The mention of Snowflakes above reminded us that Manfred Koenen had drawn our attention to a statement in Frederick Stern's *Snowdrops and Snowflakes* (1956, page 102) under *L. autumnale*. This follows on from a discussion about the specimens in the Kew Herbarium of *Acis (Leucojum) cephalonica* from the Greek island of Cephalonia (this has now, rightly or wrongly, been equated with *Leucojum valentinum* from Spain); this species has two spathes subtending the umbel of flowers whereas *L. autumnale* has one. The statement is that 'There is.. one specimen in a collection of *L. autumnale* collected by H. Ross near Palermo (Sicily) in the herbarium at Edinburgh, which has two spathes'. A check at Kew reveals one individual on a herbarium sheet of specimens, collected by Todaro near Palermo, that may also have two spathes, although the other individuals do have just one - it is sometimes not easy to see if the specimen has not been well prepared. In view of this albeit flimsy evidence, Manfred is querying whether *L. valentinum* could be present in Sicily - it would make a geographical link between the two extreme known localities of the species*.

The answer of course may be simply that *L. autumnale* is variable in the number of spathes that it can have, but, either way, the matter needs clearing up. So, if anyone feels like investigating leucojums in the vicinity of Palermo in the autumn, it might be a pleasant little break and serve a useful purpose at the same time.

***Note:** There is another, more definitive character that distinguishes the two, that of a fleshy disk at the base of the stamens in *L. valentinum*; this is not present in *L. autumnale*. Unfortunately it is not easy to see in dried specimens.

While on the subject of leucojums, Wessel Marais (Cazillac, France) sent us a specimen of one he is cultivating in his garden, enquiring which snowdrop it was. It proved to be *L. valentinum*. We thought at the time it was odd that Wessel referred to it as a snowdrop, since, as the monocot specialist at Kew until retirement, it was unlikely that he would mistake a *Leucojum* for a *Galanthus* - they are both white and dangly, but otherwise not very similar! The answer lies in the origins of Wessel Marais. He writes:

'My referring to *Leucojum valentinum* as a snowdrop does, in fact, have a 'valid' reason! In South Africa we never knew *Galanthus* but we all had *Leucojum aestivum* which was known as 'snowdrop'. Even among the English families who visited England every 2-3 years - my mother's friends - that was the 'accepted' name. So, what more natural than, in my second childhood, absentmindedly returning to the time-honoured nomenclature!'

Hippeastrum News

Veronica Read, NCCPG National Collection Holder of *Hippeastrum* will be putting on a display of the best Dutch, Japanese and North American *Hippeastrum* hybrids at the RHS Westminster Show on 13-14 March 2001. The display will be divided into sections - each showing off a particular nation's and breeder's best creations.

Dutch breeders are currently dominant in *Hippeastrum* breeding and most of the hybrids featured will be of Dutch origin, including several new creations from Holland's finest breeders: Penning Breeding B.V., Nieuwkerk Amaryllis B.V., G. van Staalduin and Oudendam. The focal point of the Dutch section will be a display of the fine small and medium sized hippeastrums that are proving so popular. Three particularly lovely Dutch doubles will be appearing for the first time: 'Unique' (medium, wispy bright orange red); 'Nymph' (large, peony shaped, creamy white and pink) and 'Salmon Peacock' (large, deep salmon orange).

The Japanese section will focus upon some of the best doubles to have emerged in recent years from the Miyake nursery: *H.* 'Red Peacock', *H.* 'Mary Lou', *H.* 'Aphrodite' and *H.* 'Blossom Peacock'.

Veronica also hopes to feature some of the very dainty and exotic primary hybrids created by two North Americans - the late Fred Meyer and Len Doran. Whilst yet not widely available in the UK, these hybrids have already aroused considerable attention when shown at the Keukenhof, and at her own "Hippeastrum Easter Festival" in 2000. It is hoped to include: *H.* 'Lima', *H.* 'Emerald', *H.* 'Ruby Meyer', *H.* 'Amputo', *H.* 'Tango', *H.* 'Pink Floyd' and *H.* 'Germa' in the display.

Veronica Read has also launched her new website, dedicated to *Hippeastrum* (www.veronicareadhippeastrum.com). This includes comprehensive information on growing, details about the UK National Collection, the latest breeding developments in Europe, Asia, Africa and North America, information about her previous and forthcoming shows, and bulbs for sale. There are useful addresses and web sites and 25 photographs showing some of the range of hippeastrums now available.

For those who are unable to visit the RHS Show, there will be a 'Great Hippeastrum Autumn 2001 Catalogue' where some of the finest Japanese and Dutch cultivars will be on sale. In addition, the catalogue will include a good selection of the elegant and daintier, small-flowered types, including some new ones offered for the first time. The catalogue will be issued in August 2001, but requests for it can be sent at any time.

Anyone who is unable to visit the website or use e-mail (there are still many around, so don't worry about it!) can contact Veronica Read at 3 Park Lane, South Harrow, Middlesex HA2 8NW, UK.

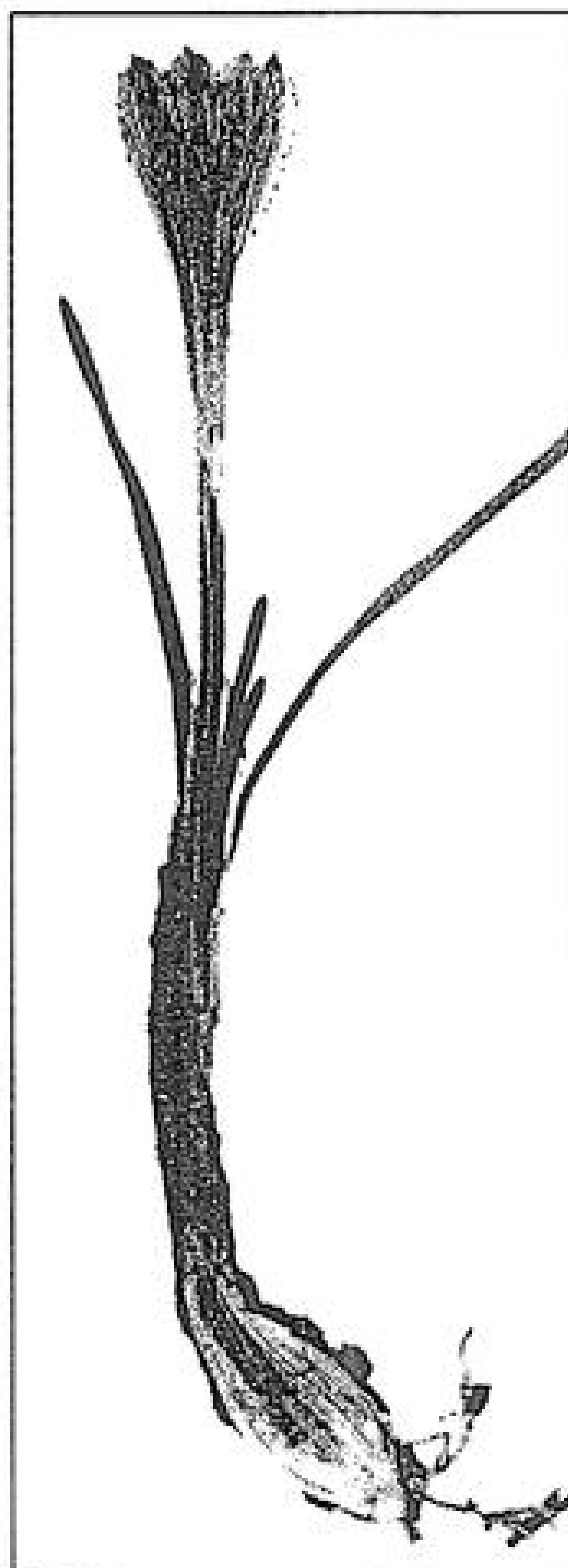
Crocopsis fulgens = *Stenomesson humile*

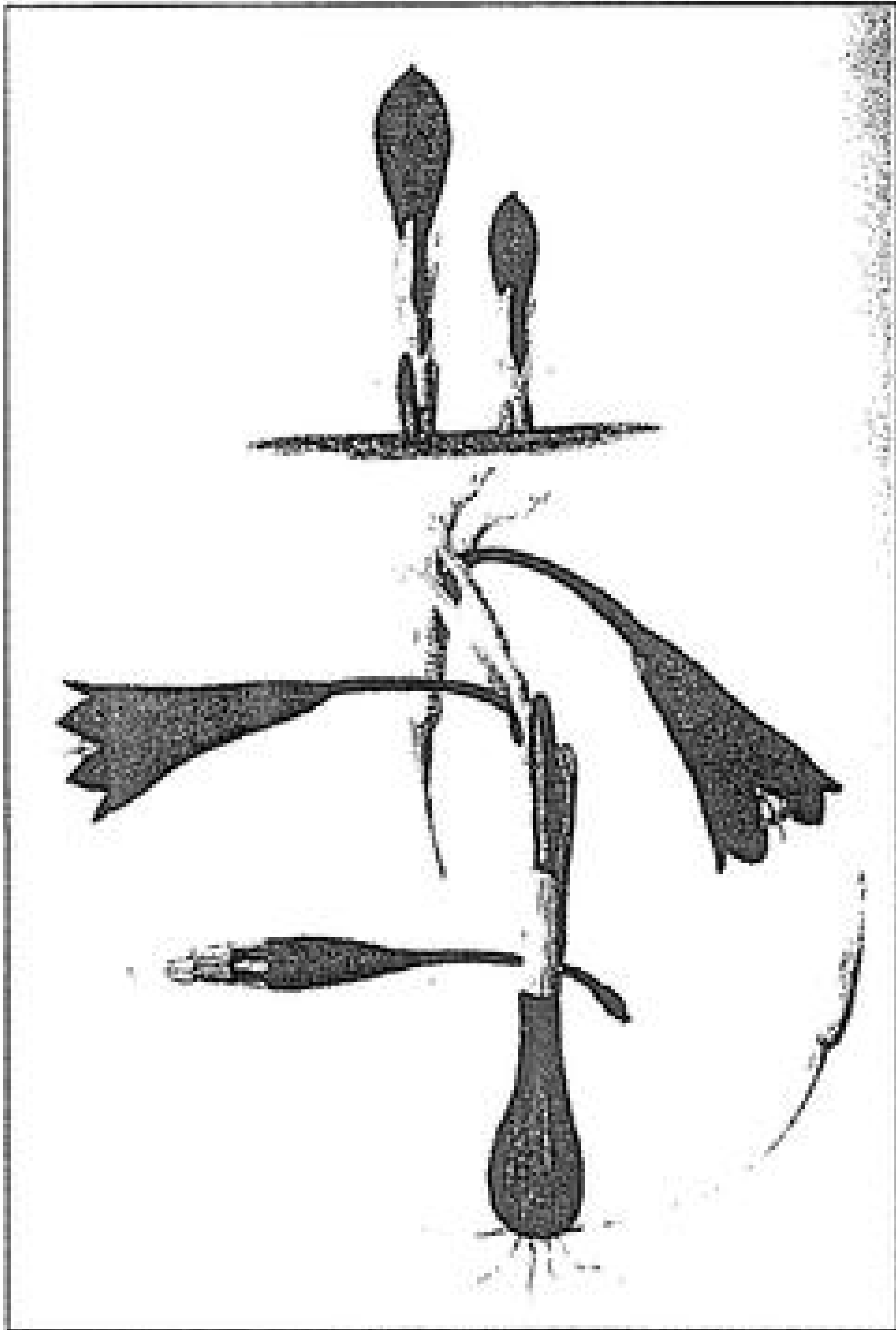
In response to a query from Jack Brownless about the cultivation of this interesting little bulb, we have attempted to put together a 'plant profile' of it.

It is such an enticing name, *Crocopsis fulgens* - something looking like a *Crocus* with scarlet flowers. That is what Ferdinand Pax named this fascinating Peruvian member of the *Amaryllidaceae* in 1890. Unfortunately it appears that William Herbert had got there first and had described the same thing as *Coburgia humilis* in 1842. Kew's John Gilbert Baker subsequently transferred it into the genus *Stenomesson*, as *S. humile*, in 1873, and this is where it currently stays, until someone decides otherwise.

On the face of things, however, this is the correct place for it, since it does seem to be just a high altitude little 1-flowered *Stenomesson*. It seems that the same thing was described again by Friedrich Kraenzlin in 1908, this time as *Stenomesson acaule*.

The illustration (right) is of a recent dried specimen showing an upright flower - very *Crocus*-like. The one on the next page is Herbert's original drawing in the *Botanical Register* of 1842 depicting a plant that he cultivated from bulbs collected by J. Maclean in Peru at 'Palcamayo', where it was growing in an area of wheat and potatoes. It flowered for Herbert in March and April 1842. It can be seen that the flower is at first upright but then often turns over to the horizontal so that the flower lies more or less on the surface of the ground - as shown in Herbert's drawing. This is also how it is shown in photographs sent in some years ago by Pamela Holt from an expedition to Peru. As can be see, particularly in the dried specimen, the bulb is rather slender with a long neck, indicating that it is capable of growing at a considerable depth. Interestingly, Herbert's experience was that it produced stolons, as shown in his illustration. His plants also set seeds, but there is no evidence that it ever became well-known in cultivation subsequently.





In the wild, *Stenomesson humile* is plant of open areas at high altitudes (approx. 3700-4400 m) , often in black 'peaty' soils in rock crevices on volcanic formations, but some field notes state limestone and others refer to sandy soils.

The flower colour is reported as varying considerably: orange-red, brilliant scarlet red, pinky-red and 'pink to yellowish'; some forms are bicoloured with a red perianth and yellow tube, some are red with yellow tips to the lobes. The narrow leaves are either absent at flowering time, or they are partly developed, then elongating as the plant ends its flowering period and goes into the fruiting stage.

The flowering time varies greatly from September to February in

the wild. It is tempting to think of this as spring and early summer but of course being so near to the Equator there is not a lot of difference in the temperature through the year. A check on this shows that at Cuzco, near where this grows, the average daily maximum temperature varies only from 20 to 23 degrees Celsius through the year, although the daily minimum (night) temperature varies a little more, from 4°C to 7°C in September-March (the flowering and growing season for *S. humile*) and from -1°C to 4°C in April to August. So, it is a fairly uniform temperature throughout the year, slightly colder at night in 'winter'. A look at the rainfall figures, however, shows why the *Stenomesson* grows when it does. May, June, July, August and September ('winter') are the dryer months with 15,5,5,10, and 25 mm of rain per month, whereas October, November, December, January, February, March and April have 66, 76, 137, 163,150,109 and 51 mm respectively.

So, what does this mean for growers in temperate countries? One can never be sure, of course, without trying a range of conditions and potting mixes, but it suggests that the bulbs should be kept dry and frost-free for the winter, then started into growth in spring with plenty of water through the summer, using a free-draining potting mix.

Perhaps Jack Brownless will be kind enough to report back when he has a good pot of flowering bulbs!

The New Flora of China

The latest volume to be published in the English language version of the *Flora of China* is an exciting one for bulb enthusiasts, for it is Vol. 24, *Flagellariaceae* to *Marantaceae* - not that either of these two families will raise the pulse too much - it is what is in between that counts!

There are 22 families involved, including *Liliaceae* in its wide sense, *Iridaceae*, *Amaryllidaceae* and *Zingiberaceae*. So, in *Liliaceae sens. lat.* we find accounts of all the familiar genera - the 'true' (bulbous) members of *Liliaceae*: *Lilium*, *Nomocharis*, *Notholirion*, *Cardiocrinum*, *Erythronium*, *Fritillaria*, *Tulipa*, *Gagea* and *Lloydia*. The rhizomatous ones include genera such as *Paris*, *Polygonatum*, *Heteropolygonatum*, *Streptopus*, *Disporopsis*, *Ophiopogon*, *Liriope*, *Trillium*, *Aspidistra*, *Tupistra*, *Heloniopsis*, *Peliosanthes*, *Veratrum*, *Tricyrtis*, *Hosta*, *Hemerocallis* and *Rohdea* (plus a few more). *Allium* and its curious spicate-flowered relative *Milula* (an anagram of *Allium*) are also included here in the *Liliaceae*.

Amaryllidaceae consists mostly of naturalised genera, but *Lycoris*, *Crinum*, *Ixiolirion*, *Hypoxis* and *Curculigo* have native species (some of these regarded as belonging to other families by some authorities, for example *Hypoxidaceae*).

In the *Iridaceae* there are only three native genera: *Iris*, *Crocus* and *Belamcanda* (*Pardanthopsis* having been absorbed into *Iris*, and maybe *Belamcanda* will eventually be as well).

The *Flora* has the usual information provided by such works: a key to the genera in each family, a key to the species in each genus, and a full description of each species with its habitat and distribution.

There are understandably very few of the winter-growing bulbous genera that abound in the Mediterranean, Middle East and Central Asia, but there are of course many spring and summer growers as a result of the summer rainfall. For a lot of our BN subscribers it is the treatment of popular genera such as *Fritillaria* that will provide the most interest; 24 species are recognised within China, a great reduction in the number of names that have been published in recent years, as many 'species' have been sunk into synonymy. For example *F. verticillata*, *F. monantha*, *F. sichuanica* and *F. cirrhosa* now have many synonyms. It is the sheer richness of the flora that impresses. There are 138 *Allium* species, including *A. neriniflorum* which is otherwise known as *Caloscordum neriniflorum* (nothing new in this concept, it was first done in 1855 by George Don!). *Lilium* has 55 species, some of them almost unknown botanically or horticulturally and badly in need of further investigation. The thought of 39 *Polygonatum* species is exciting, and several more which are now recognised as a separate genus *Heteropolygonatum*

(see BN 23:16) (in fact another has been found recently in Sichuan by Mikinori Ogisu and will be described as a new species in *Curtis's Botanical Magazine* during 2001). In *Iridaceae*, 58 *Iris* spp. are recognised, and in *Zingiberaceae* there are 13 of the increasingly popular *Roscoea* spp. *Ophiopogon* and *Liriope* have 47 and 6 species respectively.

A feast indeed! Although there are no illustrations, there is a companion series of volumes containing drawings; these are being published separately but the monocot one is not on offer yet.

Flora of China is co-published by Science Press, Beijing, and Missouri Botanical Garden, St Louis, Missouri. Volume 24 costs \$85 (plus postage \$4 in US, \$8 international, surface mail) and is available from Missouri Botanical Garden, MBG Press Orders, P.O. Box 299, St Louis, MO 63166-0299, USA. Tel: 314-577-9534; Fax: 314-577-9591; e-mail mbgpress@mobot.org

Note that payment is required before books can be sent, and that payment must be in US funds payable through a US bank. Visa & Amex payments are accepted.

Letters

Yvonne Matthews has a suggestion that Michael Upward's mystery bulb (see BN 32:12) might be an *Ornithogalum*, some of which increase so fast that they can be a bit of a pest - at least they were in her previous garden in south-east England (Kent), but not in her present garden in Cornwall (south-west); Yvonne suspects that pheasants are digging them up, as they do many of the arums. She also mentions *Nothoscordum inodorum* and *Ipheion uniflorum* as possibilities, both of which increase rapidly by offsets; however, in my experience these two smell of onions and the bulbs do not have much in the way of tunics on the outside - Michael's bulb is not 'oniony' and does have tunics. So, we await its appearance in the spring, although, if it doesn't flower very often, which spring is the question.

Brian Bixley, who lives 70 miles north-west of Toronto, has written to us in response to an article on *Colchicum* 'Waterlily' that the BM wrote, in which I commented on the naked flowers and gross foliage of the autumn-flowering colchicums. Brian has an idea which works well in his garden. Instead of growing them in grass, which involves regular mowing if it is not to become a wasteland, he has used hardy geraniums, several species planted thickly to form a complete ground cover. These provide interest right through the summer and are then mown down in August with a rotary mower. By *Colchicum* flowering time they have formed a pleasing ground cover of foliage once more.

Personalities in the Bulb World 14 - Edward K. Balls



Although not as widely known in the world of plant hunters as some of the great names such as George Forrest, Ludlow & Sherriff and Ernest Wilson, Edward Kent Balls (1892-1984) is certainly well-known to those interested in bulbs and the Middle East. His remarkable travels in Turkey and Iran in the 1930s preceded the exploits of the likes of Peter Davis and Paul Furse by a quarter of a century. Travel by road in ordinary saloon cars of the day must have been 'interesting' when I recall the condition the roads and mountain tracks were in 30 years later, on my first visits to Turkey and Iran in 1963 and 1965.

'EKB' as he is often still referred to, was not a trained botanist or gardener, but clearly had a great love of plants and of travelling. He was a Quaker and after the First World War volunteered for relief work in France, the Balkans and Russia, and it was in Russia that he met Natalie who became his wife. In 1926 he joined the Six Hills Nursery of Clarence Elliott at Stevenage, England, and soon became the nursery's builder of rock gardens, including one comprising 200 tons of rock at Exbury garden for Lionel de Rothschild. In 1932 came the first of his exploits, to what was then known as Persia with P.L. Giuseppi, a founder member of the Alpine Garden Society and later its President. They were there from April until August and saw many of the great 'bulbous' treasures of the country: *Iris* of the *Oncocyclus*, *Reticulata* and *Juno* groups, many *Tulipa*, *Fritillaria*, *Colchicum* and *Crocus* species, and of course many perennials and alpines including *Dionysia* species then unknown in cultivation. It is clear that, in retrospect, EKB considered that he could have done much more (don't we all!), for he wrote later to Paul Furse that "I made fewer collections than I should have done, had I been really conversant with the botanical use for material on this trip."

In 1933 and 1934, Balls travelled extensively in Turkey with Dr W. Balfour Gourlay of Cambridge, collecting about 400 'numbers' in 1933 and nearly 1500 in 1934. Their journeys took them the length and breadth of the country, from the Aegean and Mediterranean in the west and south to the moist Black Sea climate of the north and the harsh central plateau area. This meant that they recorded a huge range of bulbs (and many other plants of course) and a glance through the specimen citations in Volume 8 of the *Flora of Turkey* will reveal the extent of the value of the EKB collections to later researchers. Here again, as with Iran, he seems to have particularly

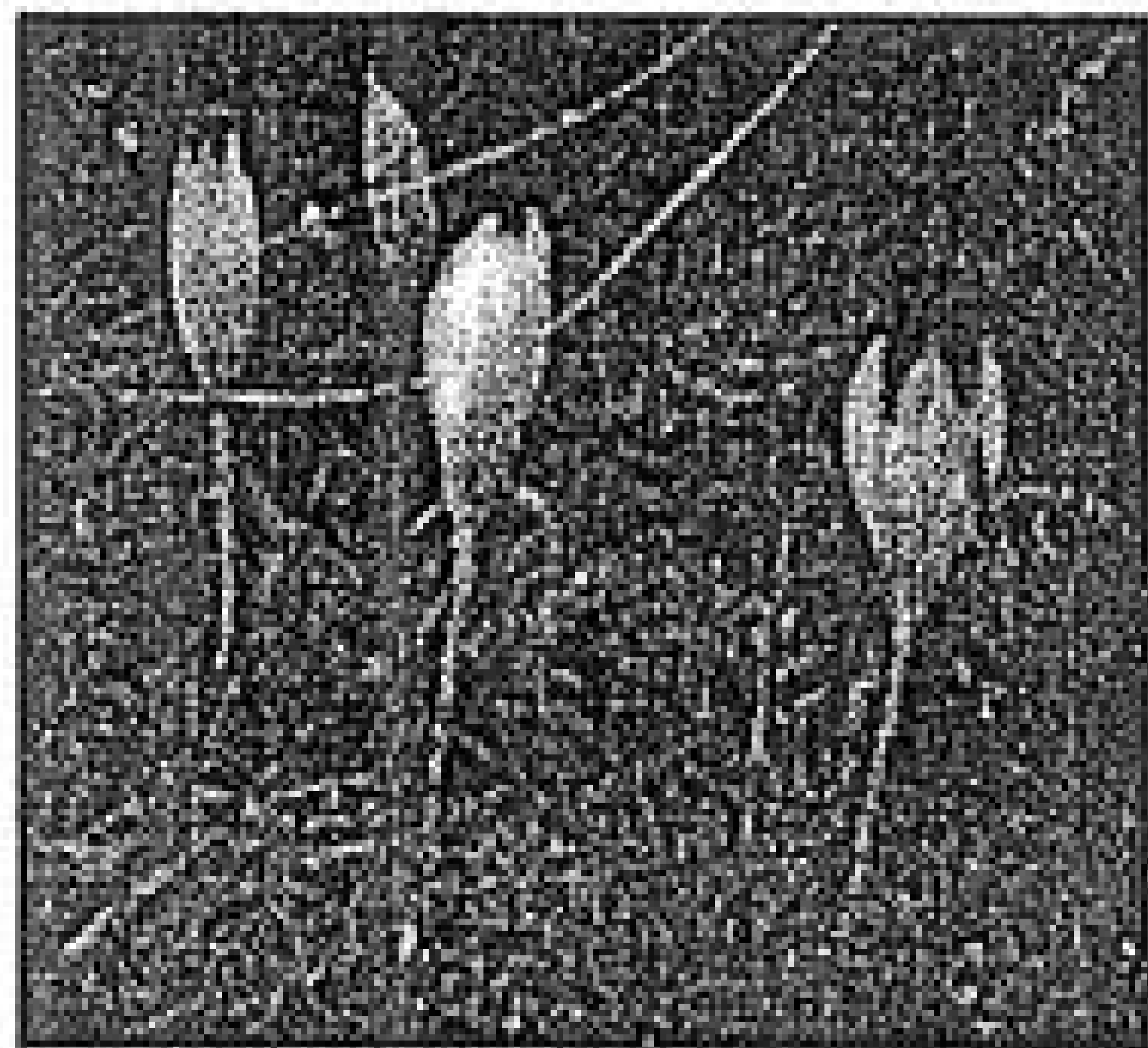
enjoyed seeing the *Oncocyclus* Irises and he was clearly captivated by *Iris sari* with its great variability. In Gaziantep, at the American College, he noted that the Americans had brought specimens into their gardens to cultivate. One of EKB's notes on this variation in *I. sari* reads:

'Flowers cream to yellow ground veined with chocolate-brown to purple. Yellow beard. Large chocolate or purple spot on fall at tip of beard. Immense variety in colouring & density of markings on blooms. 6" to 15" tall.'



Near Maras, EKB saw many in the wild and his photo (above) of *I. sari* EKB 821 shows a vase of them; the much larger flower at the right of the bunch is what he called 'the black Iris', no. 917, which he thought was probably related to *I. susiana*; for the *Flora of Turkey* account of *Iris* I treated this as *I. kirkwoodii*.

One of the most famous 'bulbs' collected by E.K. Balls was the little autumnal *Cyclamen* which is now known as *C. intaminatum*: he was the first to record this species, although there seems to have been a mix-up over its location and it was stated to have been collected in the Taurus Mountains; in fact it is a fairly local plant in western Turkey. These were long trips, lasting right through from the spring *Crocus*



species to the autumn-flowering ones on the Pontus mountains where he photographed *C. scharojanii* (*lazicus*) and *C. vallicola* (photo left: EKB 147) and enjoyed the yellow lilies of the *Lilium ponticum/ciliatum/szovitsianum* group. There were many, many treasures listed in his notes, far too numerous to mention here.

1935 saw another visit to Turkey (collection numbers 2046-2164) with Charles Bird who was, I believe, an ornithologist! In 1936 he made an extensive visit to Morocco with Richard Seligman (also a well-known alpine gardener of the day); *Narcissus watieri* and *Colchicum triphyllum* were two of the 'good' bulbs seen on this trip. A visit to Greece followed in 1937 with Balfour Gourlay (numbers 3165-4038), mainly to the north, in Macedonia. One of the interesting bulbs seen

here was the little *Fritillaria* featured in Christabel Beck's *Fritillaries* (fig. 14), listed by Balls in his notes as "*F. graeca* ssp. *epirotica* ined."; this has now been described as a species, *F. epirotica*.

Between 1938 and 1940 E.K.Balls visited Mexico and the Andes on potato-studying expeditions, but World War II intervened and he stayed in the United States, working for various British government agencies. Following the war he again took on relief work, this time in Yugoslavia and China for the UN. In 1947 he partnered Lester Rowntree in her seed-collecting enterprise in California, then joined the Rancho Santa Ana Botanic Garden as a horticulturist. After living briefly in Spain, he and his wife Natalie returned to Britain in 1978 to Yorkshire where she died in 1983 and he a year later at the age of 92. There are still some 'EKB' plants around in cultivation, now many generations on and probably not entitled to bear their collector's number - but they do serve to remind us of this gentle but resourceful plant hunter and plantsman.

That striking Australian Crinum again

Following our note about *Crinum flaccidum* in BN 31: 2 (2000), with a photograph sent in by Rosemary Steele, we have had a follow-up letter from Robyn Rohrlach of Bowen, New South Wales. Robyn comments that the photo 'jumped off the page' when the BN arrived (it must be that new scanner, I must get it seen to!). She encloses a

photo of a really superb *Crinum* which is a light lemon yellow, growing alongside a track after heavy rains in June 1990 - early winter in this area of northern South Australia. The day temperatures range between 15 and 20 degrees C, with frosty nights down to -2 or -3 degrees C. This locality is some hundreds of miles south of the one shown previously in



BN 31, east of Port Augusta. Checking this out in *Flora of Australia* Vol. 45, this does still fall within the concept of *C. flaccidum* which can have white, cream or yellow flowers. The anthers can be seen to be strongly curved, and the flower is carried on a long pedicel, both characteristics of this species. It is a superb, handsome plant which does not seem to be cultivated much. In fact *The (UK) Plant Finder* lists only the South African *C. moorei*, *C. bulbispermum* and the hybrid *C. x powellii*. Maybe it is grown in Australia and the southern United States where it would receive the necessary heat in summer.

The Karaca Arboretum Magazine

This Turkish journal usually has something of interest to bulb enthusiasts and the latest two parts (Vol. 5, Parts 3 & 4, 2000) are particularly well endowed. There are articles and excellent accompanying photographs of (in Part 3) the dwarf blue *Bellevalia rixii*, *Puschkinia scilloides*, *Tulipa biflora* and (in Part 4) the small yellow *Fritillaria minima* and brick red *F. minuta*. All of these are from south-eastern Turkey where the author Mehmet Koyuncu is working, in Van University. There is also a photograph (in Part 3) of *Muscari sandrasicum*, an endemic Turkish species very little known as yet, but a brilliant blue and one that will hopefully prove amenable to cultivation.

Enquiries about the Magazine should be addressed to: The Editor, Karaca Arboretum Magazine, P.K. 1130, 06046 Ulus, Ankara, Turkey. Subscriptions are \$10 per year or \$5 for individual issues.

Roman Iris CD-Rom

Prof. Maria Antonietta ('Maretta') Colasante, Iris specialist of "La Sapienza" University in Rome has produced three CDs about Irises: '*Iris, The Rainbow Flower*', '*Iris, Species & Hybrids and Polymorphism*' and '*Iris, Colours and Pigments*'.

I cannot run through all the contents here, but just to give an example, under 'some Iris species present in Italy', there are colour images of each of them and quite detailed descriptions in Italian and English.

The CDs cost £10 each and are obtainable from Prof. Colasante at Universita di Roma "La Sapienza", P. le A. Moro 5, 00185 Roma, Italy [e-mail address: maretta.colasante@uniroma1.it or alternatively at gambelli@aconet.it]

Canary Islands literature

Henning and Birthe Christiansen are planning to visit the Canary Islands and have written to ask if there is any useful literature on the wild flowers - and, in addition, are there any interesting bulbs to be seen?

The best books are those of David and Zoë Bramwell, *Wild Flowers of the Canary Islands* (1984) and the later *Flores Silvestres de las Islas Canarias* (1990); the latter has better photos. Bulbs are not plentiful in the islands, but there are two squills, the impressive *Scilla latifolia* and *S. haemorrhoidalis*, *Pancratium canariensis*, the whitish-spathed *Dracunculus canariensis*, *Romulea columnae* var. *grandiscapa* and several terrestrial orchids.

Anyone for a snack of Sarana?

David King, in his studies into the fritillaries of North America, which includes *F. camtschatcensis* (the only species that overlaps Asia and North America), has become involved in trying to find out what 'Sarana' means. This is often quoted as being the vernacular name of the plant (in Asia). David wrote to us a while ago to say that the *RHS Lily Year Book* of 1965 had an article about lilies by a Latvian, Janis Lacis, and this topic was touched upon. In reference to *Lilium [martagon] pilosiusculum*. It seems that one of the most widespread names for the plant is 'tsarskiye kudri' or 'Tsar's Curls'. In the Tartar language it is called 'sarishen' from which the Russians have derived the names 'sarana' or 'saranka'.

It just so happens that in the next *Curtis's Botanical Magazine* (May 2001), one of the plants to be featured is *Lilium medeoloides* which is a widespread species from Japan to Kamtchatka, the Russian Far East, the Kuril Is. and Sakhalin. The Swedish botanist Hultén, in his studies of the flora of Kamtchatka, noted that it was so plentiful that the bulbs were being used as food in the form of a porridge under the name 'sarrana' or 'sarranaofsjanka'. So, it seems that variants of this name are used for several members of the *Liliaceae*, including *Fritillaria camtschatcensis*, which is also eaten in various parts of its extensive range, sometimes as a soup - hopefully with no Tsar's curls in it!

Narcissus gets improved status

In the *Anales Jardín Botánico de Madrid* 57(2): 430-431 (2000), the Spanish *Narcissus nevadensis* subsp. *enemeritoides* is upgraded to the status of species, *N. enemeritoides*. The authors of the paper are Sánchez-Gómez, Carillo, Hernández, Carrion-Vilches and Güemes. They provide a comparative table of characters between this and the species that are considered to be related to it: *N. nevadensis*, *N. alcarcarensis*, *N. segurensis* and *N. yepesii*.

The various features that are compared are: Leaf length and width, scape length, spathe length, number of flowers (i.e. one or two), pedicel length, size of the perianth (corolla) segments, length of corona, length of the stamens and the length of the anthers.

Food for thought: I have just returned to the office from a visit to the frames, where mice have devastated the *Crocus* collection. It seems to me that if those who are dabbling with genetic modification want to do something really useful they can breed a crocus with a disgustingly-flavoured corm.

Agapanthus open day in Leiden, Holland

For *Agapanthus* enthusiasts, there will be an 'open day' on Wednesday 25 July 2001 (10.00-15.00) when anyone can turn up without an appointment. The collection on display will be that of the Nederlandse Planten Collectie (NPC), consisting of 40 different cultivars. The location is at the experimental garden of the Pharmacognosy Dept. in Leiden near junction 8 on the A44 Motorway.

Wim Snoeijer is the specialist in charge of this collection and he can be contacted at the LACDR Division of Pharmacognosy, P.O. Box 9502, 2300 RA Leiden, The Netherlands. [w.snoeijer@lacdr.leidenuniv.nl]

Catalogues

Before starting on the review of catalogues, it occurred to me that we might spare a thought for the people who grow bulbs to supply the retail trade. Many of the 'ordinary' bulbs change hands more than once between the grower and the retailer, that is generally accepted, but so do quite a number of the more specialised items. Their lists never get reviewed here, since enthusiasts cannot buy direct from them. For example, that wonderful range of *Fritillaria* and *Calochortus* (etc.) species produced by Wim de Goede in Breezand, Holland, or the extraordinary list of rarities grown by Polly & Mike Stone at Askival Alpines in Scotland - that is where the stocks of a lot of the cool-growers originate, such as trilliums, Chinese & Himalayan lilies and erythroniums. They are obtainable, though, offered by some of the retailers. So, do applaud the growers as well when you are next searching through the catalogues; raising the stocks is the difficult bit!

Snowdrop time is upon us once more here and the catalogue of The Snowdrop Company has just arrived; this year it includes 23 single cultivars, 7 'new introductions', 6 doubles and 4 species. It is difficult to pick out any and say these are the best, as they are all beautiful, but any of those that have received the RHS Award of Merit or First Class Certificate are bound to be something special. Those that the owner, Ronald Mackenzie, has exhibited with success since 1996 are 'John Gray' (FCC), 'Ketton', 'Bertram Anderson', 'Merlin' and 'Bill Bishop' (all AMs) and 'Florence Baker', x *allenii* and 'Peg Sharples' (Preliminary Commendations). Among the newer cultivars offered for the first time is 'Primrose Warburg', a *G. plicatus* cross which has bright yellow markings - very special, like the lady after whom it is named. There is also one of my favourites, the plant that has been called *G. caucasicus* var. *hiemalis*, although it should perhaps be referred to as a variant of *G. elwesii*. It flowers at Christmas every year without fail, which is recommendation enough. The Snowdrop Company, Barn Cottage, Shillington, Oxfordshire OX18 4AB. Tel: 01993-842177.

Spinners is a nursery not normally associated with bulbs (but a fascinating list of woody plant & perennials); however, they do have quite a range available in limited numbers. Worth asking for the 'Supplement of non-woody plants' - the 2000-2001 list includes *Erythronium albidum*, *elegans*, and *multiscapoideum*, several *Fritillaria* spp., *Galanthus* (ask for rarer snowdrops!), *Lilium albanicum*, *grayi*, *medeoloides* and *parryi*, *Narcissus longispathus*, *Paris incompleta* and lots of *Trillium* spp. (they have one of the NCCPG National Collections of the genus). **Spinners Garden, School Lane, Boldre, Lymington, Hants SO41 5QE. Tel: 01590-673347.**

The same might be said of **Cotswold Garden Flowers**, suppliers of unusual perennials *par excellence*. Here again, get the catalogue (128 pages, £1.50) and do some browsing, for the bulbs are there. Many of the plants are grown in containers so that you do not necessarily have to wait until 'dormant bulb time' in the autumn. Without spending a great deal of time, I found an excellent range of *Alstroemeria* spp., about 20 *Arisaema* spp. and quite a lot of unusual *Arum* spp., several *Tricyrtis* including the rare *T. ohsumiensis* (keep it out of the sun!) and the Yungi Temple form of *T. macropoda*, 9 *Tulbaghia* including *T. dregeana* (see BN31:1), over 4 pages of Kniphofias, the green-flowered *Galtonia regalis* and a surprising number of *Disporum* species - very graceful little woodlanders. **Cotswold Garden Flowers, Browns Nursery, Gibb's Lane, Offenham, Evesham, Worcs. WR11 5RR. Tel: 01386 422829. Website: www.cgf.net**

The bulb list from Mike Salmon's **Monocot Nursery** is the place you try if you cannot find a particular bulb anywhere else, but reading the seed list is also an extraordinary experience: 54 *Narcissus* accessions (from stated origins), quite a range of N. Hemisphere *Romulea* spp. (which are not easy to obtain), a lot of species *Colchicum* and *Scilla*, including several of the seldom-seen North African species, and the wavy-leaved *Urginea undulata* - a real enthusiast's plant! **Monocot Nursery, St. Michaels, Littleton, Somerton, Somerset, UK. Tel: 01458-272356.**

The Bulb Newsletter is published quarterly and is obtainable from:
Brian Mathew, 90 Foley Road, Claygate, Esher, Surrey KT10 0NB, U.K.
Rates are as follows: [Airmail postage is included]

- UK: £12.50 per year
- Europe: Eurocheque or International Money Order for £15 per year
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