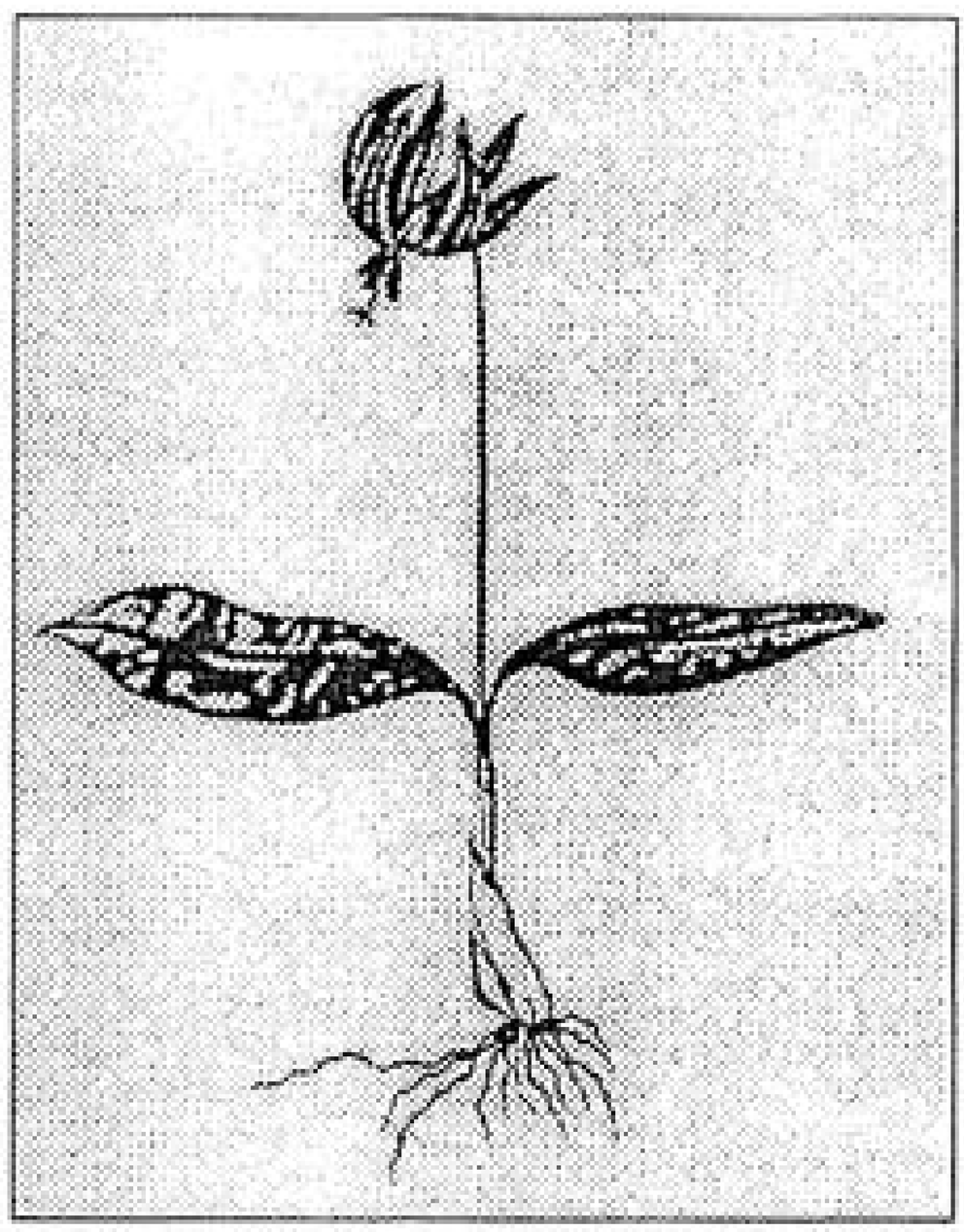
THE BULB NEWSLETTER



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An elegant Olsynium

Harry Hay has sent in a specimen of a fragrant *Olsynium* for identification, grown from seeds collected in Chile. For those who haven't tuned in to olsyniums, they are the rushed-leafed American members of the Iridaceae that were included within *Sisyrinchium*, such as *douglasii* (*grandiflorum*), *filifolium* and *junceum*. This one is the elegant *O. biflorum* with fragrant funnel-shaped white flowers, variously striped with purple. It has also been known as *Sisyrinchium odoratissimum* and *Phaiophleps o.*, etc. (see BN2: 5, 1993).

The Nerine and Amaryllid Society

A recent enquiry to BN indicated that there are amaryllid specialists around who do not yet know of the existence of this new(-ish) Society, so we invited their Secretary Roger Beauchamp to send us some information:

The Nerine & Amaryllid Society was inaugurated on 25th October 1997 and the first Annual General Meeting will be held in October 1999. We are therefore a very new Society but we are dedicated to the future serving of a wide spread of interests concerning a whole family of flowering bulbous plants, namely the Amaryllidaceae. We shall wish to explore every aspect of every genus in the family even though we have a special interest in *Nerine*. We are the successors of the original Nerine Society which ceased to exist in the very early 70s. That was a sad and lamentable event and we must do all we can to ensure the future success of our new Society.

We want to emphasise that the Society is for anyone and everyone interested in plants. Currently, the membership includes the full spectrum of interests ranging from those who describe themselves as complete amateurs through to those who are on the professional side of horticulture. We also have a small nucleus of international members and are developing a web site. One of our chief concerns is to develop partnership relationships with other societies, for this aim will stimulate exchange of ideas and provide us with general support in the horticultural world. Currently it may be argued that the articles in

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the Journal do not reflect the full spread of interests among the Membership; this is due solely to the fact that not all interests in the Society at present provide editorial copy. This we regret and do urge Members to write articles or letters on topics which interest them. Ultimately, the Journal can only be what the Members make it to be.

It is difficult to anticipate queries from potential new members and I will be glad to answer any you may have. I do hope you will wish to join. The subscription rates are:

Individual Membership----------£10
Joint Membership----------£15
Individual Membership outside UK--------£15

For members outside the UK, currency notes to the equivalent of pounds sterling are acceptable; we regret that we cannot accept cheques drawn in other currencies.

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Channel Islands Colchicum poisoning

In 1994 we included in BN 8: 8 a small piece about the gathering of *Colchicum* corms for pharmaceutical purposes in England during World War Two when drug supplies were difficult to obtain.

This has prompted Adélaïde Stork, of the Conservatoire et Jardin Botanique, Geneva, to write about some information that she and Pierre Lebrun came upon whilst on holiday in the Channel Islands. They were researching various aspects of the German field post in the islands when they were shown some of the local archives on Alderney concerning the death of some Russian prisoners who were held there at the time. The cause of death was stated to be "an Vergiftung durch Colchicum automnale" - literally, "by poisoning through Colchicum autumnale". Writing in *The Channel Islands Occupation Review* No. 18 (December 1990) , Stork and Lebrun go on to say that "This plant is not mentioned for Alderney in the local lists of plants or Flora------although it has been cited for Jersey a couple of times (in 1869 and in 1963)-------. Nor had we seen it during our many walks on Alderney. So we were eager to check if the doctor had made a misidentification. And what plant could he have mistaken for a meadow saffron?" They continue: "The Organization Todt was an important employer of labourers. As we knew where its headquarters had been situated, we followed the road from Saint Anne to the present hotel, Devereaux House,

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studying the vegetation thoroughly. As it was September, an investigation was possible, since the plant flowers in autumn. The certificates of death date from early December. When we arrived in the hotel garden, to our surprise, beautiful tufts of pale lilac flowers belonging to the meadow saffron were in bloom under the trees! These corms could not have been newly planted, because they need time to produce such clusters. The doctor's diagnosis was probably right and we were ignorant about the presence of this species, which has been so rarely reported from the Channel Islands."

It seems quite likely that the rather succulent-looking foliage of the autumn colchicums, or their substantial fleshy corms, might have appeared an attractive proposition for adding to a meal during times of hardship - after all, it is reported that tulip bulbs were eaten during the Second World War and colchicum corms are not dissimilar in appearance. However, they would have fared better had they eaten the local onions that the BN team saw when they were on holiday in Guernsey; these were *A. ampeloprasum*, found around several of the wartime fortifications (see BN 8:3, 1994).

Colchicum studies, including new species

Karin Persson of Göteborg Botanical Institute has been researching *Colchicum* for many years and has sent us copies of several papers concerning species in Turkey and the Balkans.

In one of the papers (*Edinburgh Journal of Botany* 56: 85-102,1999), six new species are described from Turkey:

C. munzurense K. Persson. A spring-flowering species, with white to pale lilac-purple flowers in April, the segments about 1.8-3 cm long; the anthers are dark grey, brown or blackish with yellow pollen. There are 3 leaves, present with the flowers, short and narrow (up to 8 mm) wide at flowering time but up to 20 cm long and 12 mm wide at maturity. The corms is irregular, with horizontal lobes up to 4 cm long ("soboliferous"). East-central Turkey, Tunceli Province in steep scree and on cliffs along the Munzur River at 950-1000 m.

C. minutum K. Persson. Another spring-flowering species with 3-4 narrow leaves (usually 2-6 mm wide, increasing to up to 8 mm at maturity), present at flowering time; it also produces corms with slender 'fingers' that extend outwards from the central part vertically to horizontally. The flowers are very small, with narrow segments only 1.5-3.5 cm long; they are pale pinkish or nearly white with biscuit-yellow to yellow-grey anthers. It comes from southern Turkey, in Antalya Province in the region of Manavgat at 1000-1400 m.

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C. sanguicolle K. Persson. An autumn-flowering species, flowering without its leaves in September. The flowers are 'pinkish purple or generally rich rosy purple or violet purple', with segments 3.3-4.6 cm long; the anthers are yellow. The 3-4 leaves, which develop later, are up to 28 cm long and 3.5-4 cm wide in a glossy green often flushed brown-purple in the lower part. The name *sanguicolle* refers to the leaf sheaths ('cataphylls') that are a blood red colour, a feature that is noted by Karin as being unknown in any other *Colchicum* species and which contrasts strikingly with the white perianth tube. This one is from south-western Turkey, quite widespread in Antalya and Muğla provinces at 1200-1800 m.

C. micaceum K. Persson. Although an autumnal species, the leaves absent at flowering time, this one flowers very early, in August, and the leaves do not appear until the snow melts the following May or June. The flowers are quite small with the segments 1.5-4 cm long, pinkish purple or rosy purple with a white stripe along the centre; the anthers are yellow. There are usually 3 'normal' leaves, up to 15 cm long and up to 3.5 cm wide, sometimes accompanied by 1-3 much smaller 'extra' leaves. The name derives from the fact that it is recorded from two mountains in western Turkey growing on micaceous schist rock formations. These are Boz Dağ and Baba Dağ, where the *Colchicum* grows at 1000-1800 m.

C. heldreichii K. Persson comes from much farther to the east, in central Turkey. It too is a 'hysteranthous species' (leaves appearing after flowering) and flowers in August or September in the wild. It has white to pale lilac-pink perianth segments 2-5 cm long which (within a single flower) are often very unequal in length; the anthers are yellow. The leaves appear in spring and sometimes remain, albeit brown and withered, until the next flowering season; they are 3-4 in number, somewhat twisted and undulate at the margins and glossy mid-green, 7-15 cm long and 1-2.5 cm wide. It is from Konya and Antalya provinces, near Derbent and on Geyik Dağ at 1600-2338 m in mountain meadows and hollows. It is compared with *C. kotschyi*, a rather larger species from even farther east in Turkey.

C. inundatum K. Persson. The specific epithet refers to the grassy habitat of this new species, periodically flooded. This is an autumnal species, flowering without its leaves; the flowers are very pale pinkish lilac with yellow anthers, with perianth segments 2.7-4.5 cm long. The leaves are produced in spring and are 4-12 in number (per corm), 13-16 cm long, 4-5 cm wide, slightly glaucous green. This is from the border area between Konya and Antalya provinces, in the region of Ibradi where it grows in water meadows at 1200-1300 m.

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Karin Persson's paper gives many more details than are outlined here, of course, and there are colour photographs of all of the new species.

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In the second paper, entitled "The genus Colchicum in Turkey II. Revision of the large-leaved autumnal species" (*Edinburgh Journal of Botany* 56: 103-142, 1999), she provides a survey of all the autumn-flowering species that have very large leaves; there are two keys, one to identify plants when in flower and the other for plants that are in the leafing/fruiting stage. The new (autumnal) species mentioned above are incorporated here, as are three more which are:

C. paschei K. Persson. White or very pale mauve flowers in late July or August, the perianth segments 2.6-3.5 cm long, narrow and usually unequal (within one flower); anthers pale yellow. Leaves appearing in spring, 3-4, mid-green and often glossy, 12.5-16 cm long, 1.6-4.5 cm wide. This resembles *C. kotschyi* in general appearance but differs in a number of ways, one of which is picked out for use as the point of distinction in the key: the stamens have anthers that are mostly less than half the length of their filaments (in *C. kotschyi* they are often equal to or even longer than the filaments); the general stature of *C. paschei* is said to be smaller and more delicate than *C. kotschyi*. The new species is from one of Turkey's most famous archaeological sites Nemrut Dağ in the province of Adiyaman. It is, of course, named after Erich Pasche, expert cultivator and photographer who has carried out much botanical exploration in Turkey, particularly in the field of bulbous plants.

C. dolichantherum K. Persson. A fairly large-flowered species with up to 15 flowers of pale mauve, rosy lilac or white, plain or with a slightly tessellated pattern; the perianth segments are up to 5.5 cm long and differ in length considerably within a single flower; the anthers are yellow and long (to 1.5 cm), hence the name (from *dolicho* = long). The leaves come later in spring and are 4-6 in number, 25-50 cm long and 5-10 cm wide, bright glossy green. The author describes this as being one of the most floriferous of *Colchicum* species, producing large bunches of flowers, and also characterized by its very large leaves, "probably the largest (or at least the longest) in the genus". [This does surprise me, since I saw some enormous colchicum foliage last spring, in south-western Turkey in the region of Dalyan. I assumed to be of *C. macrophyllum* but maybe it belonged to this new species]. The distribution given for *C. dolichantherum* is a wide one, in the Taurus and Amanus mountains, from Antalya province in the west to Adana and Gaziantep provinces in the east. Clearly this is a rather handsome species of considerable horticultural value.

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C. imperatoris-friderici K. Persson. This is not a new name, having being used by Walter Siehe (See Personalities in the Bulb World, BN 22:15) on some of his dried specimens. This does not necessarily mean that it has been validly published (in the botanical sense), so Karin Persson has formally described it. She explains the derivation of the epithet that commemorates "Emperor Frederick I Barbarossa who, while leading his troops on the Third Crusade, drowned as he crossed the Calycadnus river"; the type locality of the species is nearby. It has up to 10, or occasionally more, flowers that are described as being thin in texture, almost translucent, of palest shimmering lilac to purplish lilac, not tessellated; perianth segments 3.5-6.5 cm long, quite variable in length within a single flower; anthers yellow. The leaves, usually 4-5 per corm, are produced in spring and are large, up to 45 cm long and 4.5-11 cm wide, thick in texture and slightly glaucous. Karin describes the corms as being 'king-size' (or even 'emperor-size'!) and individuals may be up to 8 cm in diameter. This is from central-southern Turkey - the Isaurian Taurus mountains - in the region of Anamur, Silifke and Gülnar from near sea level to 1650 m.

In addition to the identification keys and full descriptions of the species there are colour and monochrome photographs and distribution maps. The autumn-flowering Turkish *Colchicum* species with large, broad leaves that are dealt with in this paper by Karin Persson are:

balansae, *cilicicum*, *davisii* (see BN 23:15, 1998), *decaisnei*, *dolichantherum*, *imperatoris-friderici*, *inundatum*, *kotschyi*, *macrophyllum*, *paschei*, *sanguicolle*, *speciosum*.

There are, of course, several other autumnal colchicums in Turkey with smaller leaves that are not included.

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Another paper by Karin Persson, "Comments on some tessellated Colchicum species in the east Mediterranean area" (in *Candollea* 53: 399-418, 1998) goes into the details of five of the species from the Balkans and Turkey that have chequered patterns on their flowers:

C. euboeum from Euboea (Evvia) and Halkidiki is recognised as a species (it was formerly a subspecies of *C. bivonae*).

C. chalcedonicum is divided into two subspecies, subsp. *chalcedonicum* from north-eastern Greece and north-western Turkey and subsp. *punctatum* from farther south in western Turkey in the province of Aydin. The latter has noticeably longer leaves and rather larger flowers with yellow (instead of dark brown) anthers.

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C. lingulatum is also split into two: subsp. *lingulatum* which is restricted to south -eastern Greece (especially Attica) and subsp. *rigescens* for the south-western Turkish populations (Marmaris) which have very thick, leathery, falcate (arched) leaves usually rather less undulate than those of subsp. *lingulatum*.
C. sfikasianum (see BN 12:5, 1995) is shown to have a fairly wide distribution in Greece, for example in the Peloponnese, Cephalonia, Zakinthos and Attica; it includes the not-validly-published *C. polymorphum* of Orphanides. There is an illustration of this species in Martyn Rix & Roger Phillips' excellent *The Bulb Book*: page 176, fig i (1981), labelled as *C. parlatoris*.
The paper contains full descriptions of the above species, black-and-white photographs and distribution maps.

Finally (well, in the present batch of papers that is!), Karin Persson has published "New and revised species of *Colchicum* (*Colchicaceae*) from the Balkan Peninsula" in *Plant Systematics and Evolution* 217: 55-80 (1999). This includes three new species:
C. chimonanthum K. Persson. A winter/spring-flowering species from the Serres and Thessaloniki areas of north-eastern Greece, of which the author says: "In the Balkans there is no species even remotely like [it]." It is a small plant with 5-8 narrow (1.5-5 mm) leaves present at flowering time, but rather short. The flowers are white or very pale pinkish-lilac with grey or purple-black anthers; the segments are 1.7-2.5 cm long, so this is a fairly diminutive plant, but it is quite attractive judging from the colour photograph provided. The Greek *cheimon* = winter.

C. rausii K. Persson. Autumn-flowering, in September, without the leaves. It has slender, pale mauve to pinkish-purple flowers with perianth segments 1.6-3.3 cm long, and yellow anthers. The leaves appear in spring and are 2-3, rarely 4 per corm, nearly erect and mid-green. This is yet another species that is described as "soboliferous", that is the corms produce elongated, finger-like extensions, in this case up to 5 cm long. It is from north-western Greece from alpine meadows in the Karditsa region.

C. confusum K. Persson. This is an appropriate name for an autumnal *Colchicum*! It is another one that flowers without leaves in the autumn, in September or October. The segments are usually 2.2-4.5 cm long, mid to deep reddish purple to violet-purple with a white stripe along the centre. The 3-5 leaves, produced in spring, are up to 20 cm long and 4.5 cm wide at maturity. It is recorded from Mt Olympus, widely in the Pindus range southwards to Parnassus, and in Corfu.

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This paper also contains a review of the taxonomy and nomenclature of *C. autumnale* and *C. haynaldii* in the Balkans; the latter, which usually has slightly chequered flowers, has been confused with *C. bivonae* - including by me, since I notice that several of my collections that I thought were that species are referred to here as *C. haynaldii*! The distribution of *C. haynaldii* is shown to be a wide one in the Balkans, from the northern part of the Adriatic region southwards to Albania, Macedonia and northern Greece.

Colchicum chemistry

Some of the species listed above had not been described when Nurhayat Sütlüpinar (Faculty of Pharmacy, Istanbul University) wrote her paper on the alkaloids of Turkish autumn-flowering *Colchicum* species. The investigation was carried out in view of the interest to the pharmaceutical industry; species known to have low alkaloid content or small seeds were excluded from the study, leaving 10 that were thought to be of interest. It is the European species *C. autumnale* that has traditionally been used for the extraction of alkaloids.

It is observed that, after the Second World War, the production of drugs from plants such as this decreased due to high labour costs. In the case of *Colchicum*, the demands of the alkaloid industry were partly met by the importation of seeds from [mainly] *C. speciosum*, cultivated in north-eastern Turkey for the purpose - the quoted figure of 45 tons of seeds exported from Trabzon harbour is astonishing!

The study into the alkaloid content of Turkish *Colchicum* was prompted by these facts, and set out to ascertain whether other species were as good as or even richer than the standard set by *C. autumnale*. The results showed that some of them were:

> "With regard to the total alkaloid content calculated in terms of colchicine; the corms of *C. baytopiorum*, *bornmuelleri* (included by Persson in *C. speciosum*), *cilicicum* and *kotschyi* and the seeds of *C. baytopiorum*, *bivonae*, *bornmuelleri*, *kotschyi* and *speciosum* have either equal or higher amount of alkaloid when compared with medicinal *C. autumnale*".

Dr. Sütlüpinar's paper contains tables showing the amounts of different alkaloids (not just colchicine) found in both seeds and corms in a range of species. It is published in the *Journal of the Faculty of Pharmacy of Istanbul University* 32: 1-7 (1998).

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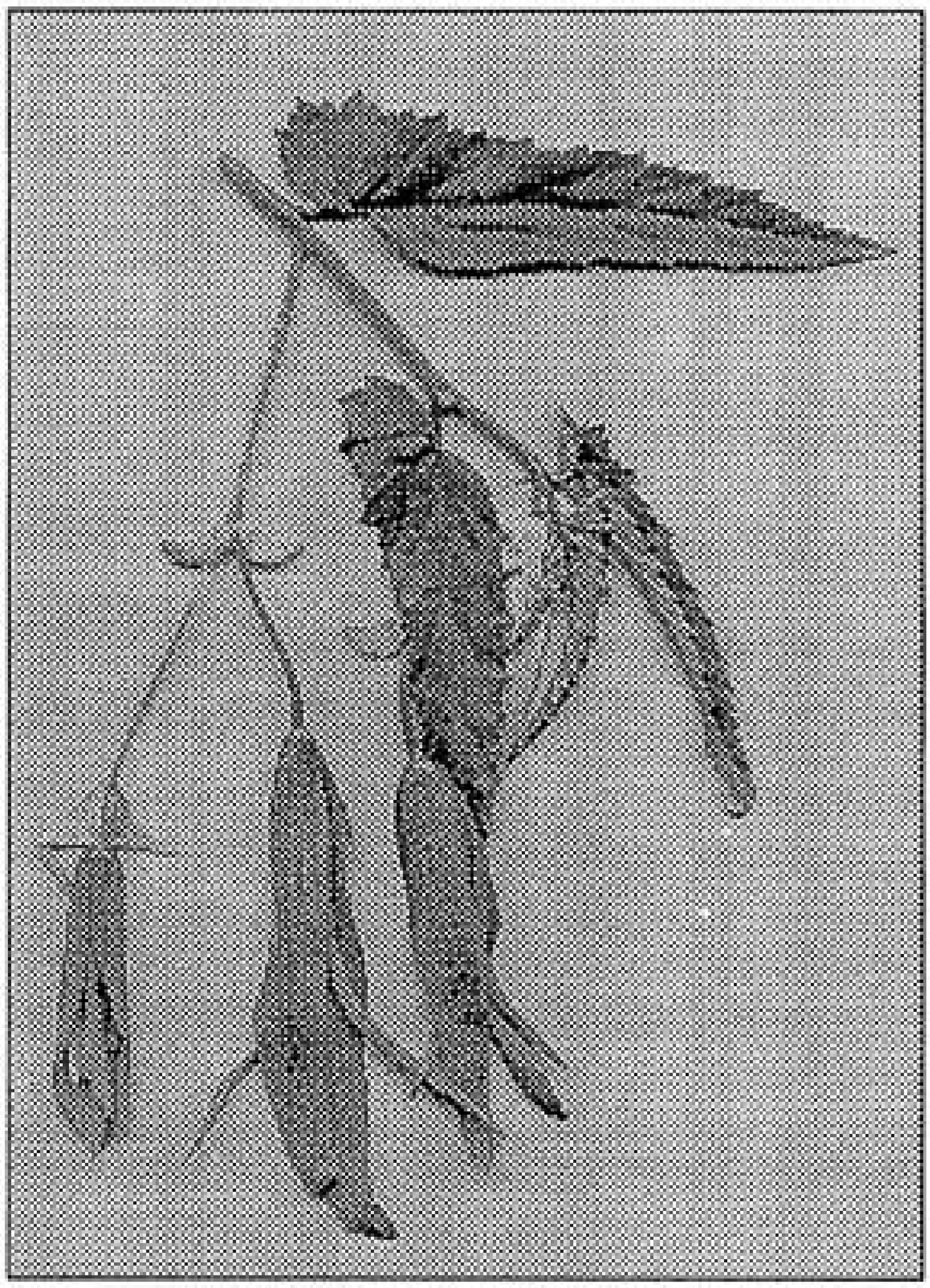
An amazing Begonia

A couple of years ago, on a visit to Portland, Oregon, I had the interesting experience of seeing round the collection of plants that Sean Hogan has built up. Needless to say I came back laden with gifts, one of which was a tuberous *Begonia* from north-western Argentina near Tucuman, said to be *B. boliviensis*.



Begonia boliviensis

I was keen to see this, since mostly all one meets in the nursery trade these days are the gaudy hybrid tuberous begonias. It grew quite well in its first year and was, I thought, a very graceful pendent *Begonia* with a touch of the aristocracy. This year, after a dormant winter period, during which time it was stored dry and in a frost-free glasshouse, it was started into growth by potting and watering in April. By May the tuber was sprouting a fairly stout fleshy stem and it looked as if it might do well. That was a classic under-estimate! Currently the plant, which is much-branched, has 103 blooms, and they have been produced continuously like this for the last two months; the floor beneath is often a carpet of the fallen blooms. These are very elegant, the male ones with four, long-tapering petals 6.5-8 cm long (the piece of inflorescence shown above is reduced by 50%). The colour, according to most descriptions, is given as red or scarlet, but these are a deep rich salmon. Although the new *RHS Dictionary of Gardening* gives the information that this is an erect species to 90 cm, drooping with age, our plant drooped almost immediately and is entirely pendent; as it developed, it was necessary to raise the pot several times to prevent it trailing on the floor and the main stem is now 1.2 m in length - all in all, a most impressive sight, and a plant I can thoroughly recommend for the conservatory.

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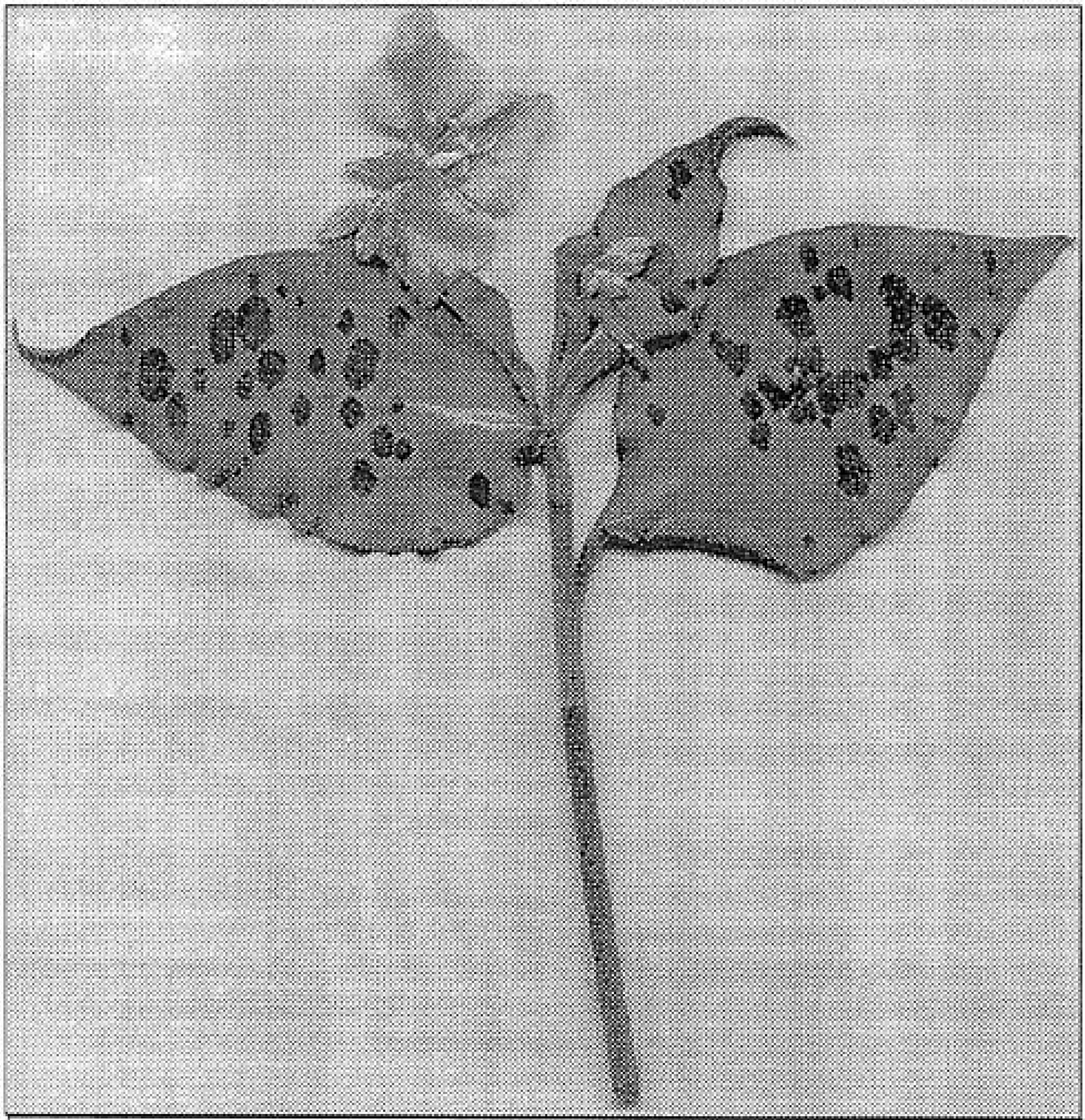
Another one from the Sean Hogan Collection

A plant flowering in our conservatory at present (July) is a member of the Commelinaceae (it is a monocot and is rhizomatous, so just about qualifies for inclusion in BN!), also from Sean's interesting glasshouse. It is probably a *Tradescantia*, a sprawling plant with the usual rather fleshy growth and short-lived 3-petalled flowers. All of which sounds a bit derogatory but in fact it is well worth having. The ovate leaves are deep green, tinged with purple and strikingly



Tradescantia sp. Mexico

blotched dark purple. The flowers complement its appearance by being a soft shade of mid lilac-violet and, although they do last only a day, there is a long succession. Collected in Mexico, it is as yet unidentified. If anyone recognises it, please let the BN office know.

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Stamps

Although not monocots and not really 'bulbous' either, I am sure that many bulb enthusiasts are growing *Corydalis* and, given the chance, the related *Dicentra peregrina*. A 50 Yen stamp received from Japan bears a picture of the latter - a very fine clump, the like of which we have certainly never achieved here in Surrey. Maybe we should settle for admiring it on the stamp - much less troublesome! Also of 50 Yen denominations, and most definitely bulbous, are *Fritillaria camtschatcensis* & *Erythronium japonicum* - now those we can grow.

Sally Walker is keeping up a steady flow of flower stamps from the USA and in the latest group of four (33 cent) very showy ones there are two which are among the most spectacular of monocots - *Gloriosa superba* and *Strelitzia reginae*.

Seed collecting hints

The latest newsletter of the Calochortus Society - *Mariposa* Vol. XI, No. 1 - contains, as well as the usual informative detailed notes on *Calochortus* species, has some 'Thoughts on seed collection' - with some ideas about how one might gather seeds in a responsible way without adding to the problems of survival and regeneration that plants face.

The main points made are that no more than 5% of the seeds should be removed from any one stand (population) or, if returning year after year to the same place, reduce this to 2% or less; and do not take all the seeds from any one plant since if the plant dies and you have removed all its potential offspring its genes will have been lost to the population. All this would help to maintain a diverse gene pool within the colony and hence its survival - and, at the same, a greater degree of interest to us as enthusiasts in the form of natural variation.

The Readers' Forum is a good section in this newsletter; there are useful observations and members share their cultivation problems.

The Calochortus Society and the *Mariposa* editorial team can be contacted:
c/o Robinett, P.O. Box 1306 Sebastopol, CA 95472, USA.

Requests

Margaret Criddle is seeking seeds or plants of any of the more unusual species of *Dierama*.

Currently, *The RHS Plant Finder* lists a surprising number - 19 species and many cultivars - but several of the species are offered by one nursery only.

If anyone can help, please contact Margaret directly (and advise her of the cost).

Margaret V. Criddle, 5 Storeys Lane, Burgh le Marsh, Skegness, Lincs. PE24 5LR.

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Lily Auction

Lilium enthusiasts might be interested in the RHS Lily Group annual auction of lily bulbs, to be held in London at 2.30 on 5 October. There are usually some interesting items to bid for - species or cultivars that are in short supply in the nursery trade.
Enquiries about membership of the Group should be sent to Dr Patricia Huff, Castle House, Leighton Bromswold, Huntingdon, Cambs. PE18 0SJ, UK.

An overlooked Narcissus from Morocco

Narcissus albimarginatus was a new name encountered recently, with an intriguing epithet - what part of it has a white margin?

This was described in 1989 by D. & U. Müller-Doblies in *The Flowering Plants of Africa* 50: t. 1986, a good sign because this meant that there would be a colour illustration of it.

On checking this journal (which is a wonderful illustrated record of African plants along the lines of *Curtis's Botanical Magazine*), this Moroccan species turned out to be a member of the *Apodanthi*, the group that includes *N. rupicola*, *N. watieri*, *N. calcicola*, *N. marvieri*, *N. atlanticus*, *N. scaberulus* and *N. cuatrecasasii*. This group is sometimes merged with the jonquils (Section *Jonquillae*), or is recognised as a separate section, *Apodanthi*, or treated as a subsection of the *Jonquillae*. Whatever the status, they are quite distinctive; although the flowers are similar to those of many of the small jonquils, the leaves are angular with obvious keels on the underside, and *N. albimarginatus* is similar to the others in this respect. It is a plant of up to 27 cm in height at flowering time with 1 or 2 flowers in the umbel; these are on stalks 1-4 cm long, very fragrant and golden yellow, except for a white rim to the corona - hence the chosen name; the perianth tube of the flower is green. The other details of the flowers are: 3.7-5.5 cm in diameter, the perianth tube 11-17 mm long, the perianth segments 17-25 mm long and 8-11 mm wide and reflexed; the corona is 6-9 mm long (i.e. deep) and 8-12 mm in diameter with a crinkled margin which is white for about 1 mm of its length. The 2-3 (sometimes up to 5) leaves are 4-7 mm wide with 2 keels on the underside.

The authors consider that this is larger-flowered than any others of its group and that the nearest relative is *N. calcicola*; they make a particular point about the fact that the flowers are heterostylous (as in pin- and thrum-eyed primroses).

Narcissus albimarginatus was collected in Morocco at Jebala, in limestone crevices of the Jebel Bouhachem at 1650 m.

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Personalities in the Bulb World - 11. Edward Whittall

The name of Whittall is closely associated with the exploration of western Turkey for its rich bulb flora. Many were introduced into cultivation by him, some of them new to science and subsequently bore his name - for example *Tulipa whittallii* and *Fritillaria whittallii*. He was also responsible for naming and describing some of them, such as *Chionodoxa gigantea* (now known to be synonymous with *C. luciliae*), the enigmatic *C. tmoli* and *Crocus mouradii* (a synonym of *C. flavus* subsp. *dissectus*).

Edward Whittall (1851-1917) was a member of an English business family based in Izmir. The history of their involvement in Turkey dates from 1809 when Charlton Whittall, at the age of 18, was sent to encourage trade between the two countries. In 1811 he started a firm of his own, Whittall & Co., and this family business flourished and became very influential in Turkey.

In the second half of the nineteenth century, the firm was in the care of three Whittall brothers, one of them, Edward, who had a keen interest in the outdoor life rather than the office. Indeed, plants and gardening became his main interest and his garden at Bornova near Izmir was clearly something rather special with fine specimen trees, large glasshouses and undoubtedly many bulbs. He began trading in bulbs and employed locals to collect, up to 50 men at a time. Many bulbs were planted in one of his gardens (he created another at the top of Nif Daǧ near Izmir), but surplus bulbs also found their way to Britain and Holland; many were sent to Kew Gardens, but these were a gift. It is recorded that by 1893 more than a million bulbs had been planted in the Nif Daǧ garden; one wonders what effect this might have had on the mountain's natural bulb flora!

Whittall's input into the collections at Kew was considerable - there are some 15 pages of entries with about 30 items per page. In addition to the living bulbs, he prepared herbarium specimens and these also went to Kew, some of them ultimately becoming the type specimens of newly described species. Nowadays, of course, such large-scale collecting is condemned, but times have changed. In the last century the world's natural resources must have seemed limitless to the few who were interested. Now that everywhere is within reach of everyone, the situation is quite different.

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Has anyone seen a white *Gloriosa superba?* We have not heard of such a thing in the BN office, but Paul Shirley obviously has and he is seeking one. What an attractive variant it would be, a nice change from the red-orange-yellow shades. If any subscriber knows of the plant and has a spare [preferably two, since there would be a good home for it here as well], please let us know - either via BN or direct to:
Paul Shirley, Juliana Straat 16, 2771 DX Boskoop, The Netherlands.

Prolonged dormancy

There are certain bulbs (& corms) that have an unfortunate habit of going into a period of dormancy that it is very difficult to break. The RHS Joint Rock Garden Plant Committee has noted this and is proposing that some experiments should be carried out to ascertain how to prevent or overcome the problem. Undoubtedly in some cases it will be a strategy that the plant has adopted naturally in order to overcome exceptionally dry periods - it just stays below ground out of harm's way until there is substantial rainfall, if necessary skipping a year or two. In other cases it is probably brought about by incorrect cultivation.

Some examples come to mind immediately: *Merendera filifolia* from Majorca lived for several years in a pot here without so much as a leaf, let alone a flower, before eventually getting started. And *Androcymbium* species often do the same. These both tend to have rather thick, woody tunics surrounding their corms and Chris Lovell once suggested that the way to get them going was to chip a hole (carefully) in the tunic and water them copiously in the autumn after their summer dormancy.

Zephyra and *Conanthera* (both Tecophilaeaceae) will take a year out with very little encouragement; in fact I had the former in the glasshouse for several years before even a leaf appeared. I have tried keeping them dry through the summer dormancy, and watering them periodically, but neither seems to work; some years they grow, others not.

Some *Ipheion* and *Nothoscordum* (Alliaceae) species behave in this way too; the following all have a tendency to stay below ground: *N. ostenii*, *N. sellowianum*, *N. dialystemon*, *I. sessile* and even *I. uniflorum* does occasionally. However, I am hopeful that in this case the problem has been solved. This year, instead of drying them off after they died down in the spring, I have kept the pots well watered and currently (in mid-summer) there are long, fresh roots emerging from the drainage hole into the plunge material; there is no sign of

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any leaf growth, so the activity is confined to below ground. This interesting behaviour (i.e. strong root growth during the 'dormancy' period) led to the thought that there might be something about the climate in their native region that could account for this - summer rain, for instance. A check in *The World Weather Guide*, a book I find absorbing (well, I was a meteorologist in the past!), and invaluable at times like this, show that Uruguay does have rainfall spread throughout the months of the year:

Month	Ja	Fe	Ma	Ap	Ma	Ju	Jul	Au	Se	Oc	No	De
rain/mm	74	66	99	99	84	81	74	79	76	66	74	79
°C	28	28	26	22	18	15	14	15	17	20	23	26

This shows that in the summer months (December-March) it is appreciably warmer than in the winter but is quite damp. If compared with typical Mediterranean bulb country - e.g. in Athens, Greece, we find that the summers are slightly warmer (30-33°C) but the rainfall is much less (only 6-14 mm); the winters in Athens are similar to those of Uruguay, at 13-16°C (December-February) with a rainfall of 62-71 mm. Obviously one can go on playing with these figures, and great fun it is too, comparing all the 'bulb areas' of the world - but the point made in this example is that the bulbs from Uruguay do not need a Mediterranean bulb baking, and it may well be damaging to give them one.

If anyone has examples of other bulbs or corms that go into a state of permanent dormancy, do let us know and we will pass the information on to the Rock Garden Plant Committee; similarly any observations on how to prevent (or break) dormancy would be appreciated.

An Iris garden worth visiting

The latest British Iris Society newsletter has information on a new Iris garden that is being established in The Garden of the Rose - the rose garden set up by the Royal National Rose Society at Chiswell Green, near St Albans, Hertfordshire, England. The Siberians were planted in 1997 and this year the 30 varieties provided a magnificent display. The bearded irises were planted in 1998 so these should be excellent in the coming year. Smaller varieties will be grown in a raised stone bed that is yet to be constructed, and there will be borders of mixed perennials-and-irises for prolonged interest. There are, of course 50,000 roses as well.....

The BIS can be contacted through the Secretary, Mrs S. A. Ecklin, 1 Sole farm Close, Great Bookham, Surrey KT23 3ED., UK

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It's enough to make you sick

The scarlet amaryllis, *Hippeastrum puniceum* or *H. equestre*, is depicted beautifully in the *Flore Pittoresque et Medicale des Antilles* by M. E. Descourtilz (1829). We came across this recently while searching for old illustrations of *Sprekelia* and were interested to learn that this beautiful plant has a sinister side to its nature. Under a section headed 'Propriétés Médicinales' it is suggested that an infusion of the flowers is anti-spasmodic and may be used to advantage in nervous complaints. However, the bulbs are noted as being acrid and 'provoquent le vomissement' - one doesn't need much French to understand that phrase. Even worse, it can cause death within three or four hours; those 3-4 hours must be fairly hard going, for the author notes that the symptoms are: constriction of the throat, painful mouth and stomach, cramps, cold extremities, convulsions..... I won't go on, it is all too horrible - just don't get your onions mixed up with your *Hippeastrum* oignons in the kitchen.

Sprekelia bulbs have also been utilised in various ways, one of which seems to have been as an injection to dissolve stones. I think I'll pass on that one.

A Scilla from Lampedusa

And where, some of you will no doubt be asking, is Lampedusa? The answer lies in the first few lines of the abstract in the paper by S. Brullo and P. Pavone where this species is described (*Candollea* 42: 613-620, 1987). It is a small calcareous island south-west of Sicily.

Scilla dimartinoi is named after the botanist A. Di Martino who first collected the plant. It is one of the *S. peruviana* group of species and most closely related to *S. sicula* with which the authors compare it by means of a table. It is a small plant, with a bulb only 2-4 cm in diameter, and has 7-10 leaves per bulb that are flat on the ground, linear, 8-20 mm wide with ciliate margins. The inflorescence is held on a scape only 7-10 cm tall and is hemispherical with 20-40 starry, lilac flowers; these are carried on pedicels 2-3 cm long. Without going into all the individual details, it is sufficient to say that this is a little plant compared with *S. sicula* and *S. peruviana*, smaller in all its parts - bulbs, leaves, flowers, etc. *Scilla cupanii* is another of the smaller versions of *S. peruviana* and the authors acknowledge that the new species is similar to this; unfortunately they do not elaborate - other than that it differs substantially 'in the chromosome complement and in some morphological characters.'

There is a drawing accompanying the article showing that it really is a very small plant - the flower head is just 4-5 cm in diameter, unlike the massive inflorescences of *S. peruviana*.

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Zantedeschia info. required

We have many enquiries for information on a wide range of 'bulbs' coming in to the office, but David Budd is the first to have asked for details of the genus *Zantedeschia*. Maybe bulb enthusiasts do not consider them to be bulbs, or maybe it is because they are not hardy here in the UK, other than *Z. aethiopica* of course which does survive underground in spite of being turned to mash at the first frost. David asks for reference material, and whether there is a society that is particularly strong on the genus.

The first part of the question is relatively easy, but we don't know of any society devoted to them - other than the Aroid Society, but they have very wide interests in the aroids and especially those of tropical origin.

Zantedeschia, which is wholly Southern African in its natural distribution, was monographed by Cythna Letty in 1973 and this revision is the one to follow at present. It was published in the journal *Bothalia* Vol. 11, parts 1 & 2 (1973). Six species and two subspecies are recognised, there is a key to their identification and full descriptions accompanied by 8 colour plates by Cythna Letty . The species are:

Z. aethopica - Evergreen (it is naturally but, as mentioned above, it is not in cold climates), the leaves unspotted, arrow-shaped or lobed at the base. Spathes white, with the female flowers interspersed with sterile ones - the only species to show this.

Z. rehmannii - Deciduous. Spathe white through shades of pink to deep maroon (almost black), no dark centre inside. Leaves unspotted. Differs from all others in that the leaves are lance-shaped, not lobed at the base.

Z. jucunda - Deviduous. Spathe bright golden yellow with a purple blotch inside at the base. Leaves white-spotted and blotched.

Z. elliottiana - Deciduous. Spathe bright golden yellow, with no dark blotch inside. Leaves with white spots. This was described in 1892 from cultivated specimens and was not known as a wild plant when Cythna Letty published her revision, and we have not heard of anyone finding it; some have considered that it may be of hybrid origin.

Z. pentlandii - Deciduous. Spathe 'clear lemon-chrome yellow ' with a dark purple blotch inside at the base. Leaves usually unspotted.

Z. albomaculata - Deciduous. Spathe white, cream or straw-coloured to pale yellow or pink, usually with a dark purple blotch inside. Leaves white spotted or plain.

Z. a. subsp. ***macrocarpa*** has straw-coloured spathes and a few large berries up to 2 cm in diameter.

Z. a. subsp. ***valida*** has thick-textured leaves and ivory to cream spathes with a purple blotch inside.

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There are many hybrid zantedeschias and these, and the species, are mentioned by Terry Hatch in his book with Jack Hobbs, *Bulbs for New Zealand Gardeners and Collectors* (Godwit Press, Auckland, 1994); there are also some cultivation tips, a useful addition since these are not as easy to grow as the old calla lily, *Z. aethiopica*. Terry has been responsible for quite a lot of hybridising in the genus, giving rise to a great range of colourful crosses. We understand from Terry that the book is about to be re-issued.

Catalogues

Ian & Margaret Young, bulb enthusiasts and expert growers from Aberdeen, have just sent out their second list of surplus bulbs that contains some of the items we find a bit tricky here some 500 miles farther south in our warmer, drier air. *Crocus* species such as *C. scardicus*, *C. gargaricus* and *C. vallicola* all thrive in their garden which is perhaps understandable since they are all damp alpine meadow plants in the wild. A free-flowering clone of *Erythronium americanum* is offered - a welcome change from the leafy wanderer that roams around on our peat bed with the occasional flower - nice leaves, though. A good number of fritillaries includes the lovely *F. camtschatcensis* yellow form, a selected *F. kotschyana* called 'Craigton Max' with large pale flowers, a free-flowering *F. thunbergii*, etc. *Narcissus cazorlanus* sounds interesting - the cross between *N. triandrus* and *N. bulbocodium*; just occasionally one sees them in mixed colonies in gardens, and they are usually well worth having. The curious little *Scoliopus bigelovii* (Trilliaceae) doesn't get offered very often - now is your chance to perfume the alpine house with the fragrance of wet dog! **Ian & Margaret Young, 63 Craigton Road, Aberdeen AB15 7UL.**

The Supplementary Bulb List from **Hythe Alpines** is supplementary to the main list issued earlier and should be used in conjunction with it since the terms etc. are explained there. Mike Smith has a few special bulbs that are seldom to be seen. The exquisite blue *Bellevalia forniculata*, for example, from water meadows in eastern Turkey, the white *Crocus vallicola* look-alike, *C. kotschyanus* subsp. *suworowianus* (but much easier to grow in drier climates), the excellent, vigorous clone of *C. serotinus clusii* called 'Gwen Edwards', *Fritillaria pyrenaica* 'Lutea' and *Muscari mcbeathianum* (see BN 25: 5, 1999) - I promise you, this is a lovely little *Muscari* - as grape hyacinths go! *Romulea atrandra* is one of the best of the South African species - just frost-protection. **Hythe Alpines, Methwold Hythe, Thetford, Norfolk, IP26 4QH, UK**

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You will have great fun digging into the deceptively flimsy three A4 pages of Rannveig Wallis' **Buried Treasure.** Here is a feast of rare bulbs. *Bellevalia forniculata* is here too, so if this review whips up too much trade at least there are two sources - maybe more! Several aroids such as *Biarum davisii* - 'like monks chatting in the pot' - and *Arum dioscoridis* which 'has a personal odour problem', a Spanish form of *Biarum tenuifolium* that is 'not a plant that one wants in the car' and *Scoliopus bigelovii* (again) which is described as 'the foetid adder's tongue - very apt' (Rannveig, you are trying to sell these things!). Quite an array of species and hybrid *Colchicum* including *C.davisii* (see BN 23: 15) and *C. psaridis*, many *Crocus* species (*C. scharojanii* var. *flavus*, *C. graveolens* ('unbelievable scent! You have been warned!'), nearly a page full of *Fritillaria* - *F. argolica*, *F. conica* (one of my favourites), *F. glauca*, *F. sp.*(I like these, unless I am asked to identify them!) and *F. whittallii* - named after Edward Whittall, see page 13, this issue. The list goes on - *Iris histrio*, *Hyacinthella heldreichii*, *Leucojum tingitanum*.....August 30 is the closing date for this year. **Buried Treasure, Llwyn Ifan, Porthyrhyd, Carmarthen, SA32 8BP, Wales.**

Diana Chapman's nursery **Telos Rare Bulbs** are in to their first year of selling by mail; they have the stated intention of offering 'as wide a range as possible of rare and unusual selections' and claim to have 'many hundreds of new and different species of bulbous plants coming along.' The catalogue ($2)is divided into four categories: Bulbs of the Western United States, Bulbs of Central and South America, Bulbs of Southern Africa and Bulbs from Other Parts of the World. The first of these contains a lot of *Calochortus, Brodiaea, Dichelostemma, Triteleia* and even *Muilla* (an anagram of *Allium* - did you spot it?!) and the odd North American representative of the Tecophilaeaceae, *Odontostomum hartwegii.* All the native bulbs are grown from seed; the nursery states 'we do not sell any wild-collected bulbs.' In the South American category there are representatives of *Phaedranassa, Stenomesson, Leucocoryne, Cypella* (the curious aquatic one, *C. aquatilis*) and the beautiful orange-yellow *C. peruviana* (*Hesperoxiphium p.*), some *Tigridia* species (*T. dugesii, durangense, multiflora*) and *Herbertia tigridioides* from Argentina. In the Amaryllidaceae there are several *Habranthus*, *Zephyranthes* and *Rhodophiala* spp. The Southern African section contains *Babiana, Chasmanthe, Cyrtanthus, Dierama* (several), *Gladiolus* spp., *Ixia, Oxalis* (many*), Watsonia*, etc. The 'bulbs from other parts of the world' is sparse by comparison, but there are a few seldom-seen 'specials' such as the Australian *Calostemma purpureum* and *Lycoris albiflora.* Diana says that they are not yet exporting but may do so next year. **Telos Rare Bulbs, P.O. Box 4978, Arcata, CA 95518, U.S.A.**

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Bookends

Growing Bulbs Indoors by P. J. M. Knippels. Published by A. A. Balkema, P. O. Box 1675, 3000 BR Rotterdam, Netherlands 1999. ISBN 90-5410467-8. £25.

Although on the face of things this is a rather slim volume of no great substance (101 pages) with a not-very-promising title, it is in fact quite a surprising and useful book. Mainly, I think, because it includes a lot of bulbs that are overlooked by all other books dealing with 'hardy' bulbs. There are some introductory sections, outlining the main bulb areas of the world and their climates, general comments on cultivation such as summer-growers v. winter-growers, propagation, pests and diseases, etc. before we come to the part that most enthusiasts look for - the descriptive A-Z of bulbs.

Here, the author has provided a simple table of symbols to indicate month-by-month what should be happening - details of the growth cycle, watering regime, planting depth, and a 'cultivation difficulty' index. The genera that are included are, understandably, those that require protection in a temperate climate. So, we find genera such as *Albuca, Ammocharis, Boophone, Bowiea, Brunsvigia, Bulbinella, Bulbine* (I have never seen a photo of *Bulbine mesembryanthoides* before, let alone how to grow it), *Ledebouria*, *Manfreda* (spotty-leaved herbaceous agaves, basically!), *Massonia*, and many others. Yes, this book does fill a gap and there is much fun to be had in the bulb world with a slightly heated greenhouse, conservatory or even a windowsill.

Visiting Oxford?

There is an exhibition in the Bodleian Library, Oxford until 25 September, devoted to Sibthorp & Smith's wonderful 10-volume work *Flora Graeca*. This tells the story of the travels of John Sibthorp and John Hawkins through Turkey in the 18th century, accompanied by one of the greatest botanical illustrators of all time, Ferdinand Bauer. The Library is in Broad Street, Oxford. Enquiries to: Tel. (+44)-(0)1865-275082.

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