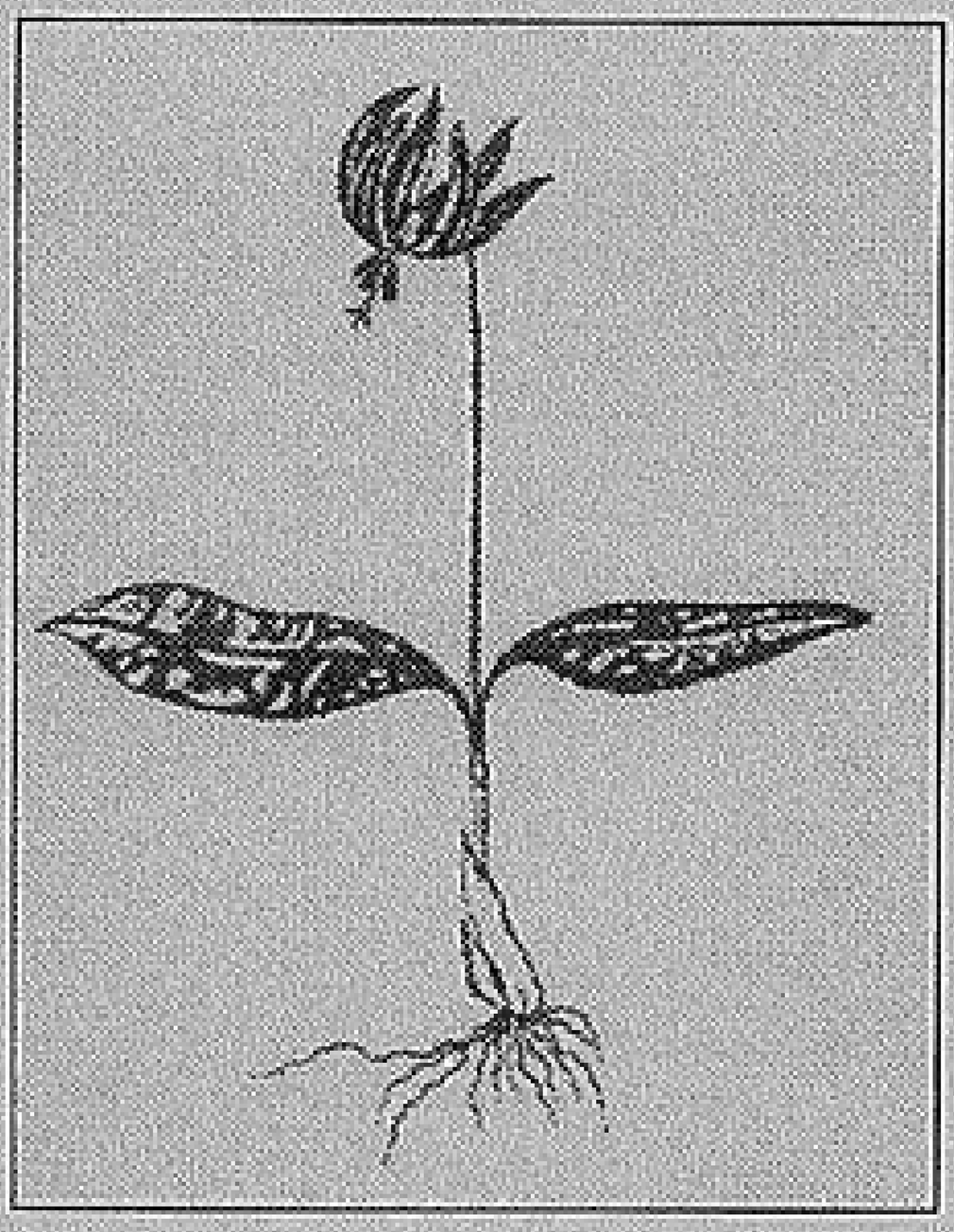
THE BULB

NEWSLETTER



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The Bulb Newsletter Number 4

Excellent news for all!

I have just heared from those returning from the recent Botanical Congress in Japan that a motion has been approved whereby species names of plants can now be conserved, in the same way that generic names have been conserved in the past. This means that if a well-known plant is threatened with a name change for some reason or other, it will now be possible to make a case for the conservation of its name. The case will then be put before a committee for consideration. Another change in the International Code, closely related to this, is that species names can now be proposed for rejection, so if an earlier but overlooked and little-known epithet for some well-known plant is 'dug up' out of the literature, it can now be put forward for rejection altogether. The phrase relating to this is: 'any name that would cause a disadvantageous nomenclatural change may be proposed for rejection'. I can think of a few, including an earlier name for our old favourite, *Crocus medius*. E.A.Bowles wrote 40 years ago that he hoped that an International Botanical Congress might one day strengthen the regulations 'in order to prevent the changing of specific names'. His wish has been granted, but too late, I imagine, to save the name of *Crocus susianus*, the yellow Crimean crocus about which he wrote so graphically; I suspect that the earlier *C.angustifolius* has become too well-established in the years since B.L.Burtt pointed out the fact in the 1952 edition of Bowles' Handbook of Crocus and Colchicum, and this frequent usage would probably be a sufficiently strong reason for the conservation proposal to be rejected by the Committee. Still, these developments are very welcome and should now reduce the number of major upsets in nomenclature.

Conservation of another sort

In 1990 a society of bulb exporters was formed in Turkey, called the Dogal Ciceksogancilar Dernegi, or the Wild [Natural] Flowerbulb Society. At first this consisted of the exporters only but in 1992 Turkish botanists became involved and the Society is now developing an interest in the conservation implications of its activities. This includes schemes to propagate more of the bulbs which are exported and to instruct the villagers who collect the bulbs so that, if collecting is continued, it is at least on a sustainable basis. An additional aim is for Turkey to become a signatory to CITES. To date, educational visits have been made to villages in the Taurus mountains, brochures have been distributed and there have been meetings between exporters, botanists and the Ministry

of Agriculture to discuss bulb propagation plans. The Fauna & Flora Preservation Society, represented by Andy Byfield, and the Dutch bulb industry, represented by Mr Lemmers, have also been involved and there are now several projects to investigate the mass propagation of various bulbous plants, mainly Galanthus at present. This is all good news. I have long thought that that the best way of dealing with this problem is for the villagers to be shown how propagate the bulbs which grow naturally in their area and they could then sell them, via an exporter who would deal with all the storage and transportation aspects of the trade. That way, the natural populations of bulbs would be relatively safe, the villagers and exporters would still receive their income, and the country would still earn much-needed foreign currency from the bulk sales to consumer countries like the UK and the Netherlands. In the ideal conditions of their natural climate, they should grow well and quickly, resulting in a better, more uniform product than the wild-dug bulbs, so, altogether, everyone should benefit. Until this is achieved it seems a very good idea to instruct villagers on how to collect on a sustainable basis without 'cleaning out' an area completely. I am quite sure that certain 'bulbs' could be farmed from the wild without any adverse effects on the populations. *Cyclamen cilicium* is a good example, for this occurs in incredible numbers over a huge area, often in rock crevices where they are impossible to collect, so there is always a reservoir of flowering and seeding plants to produce the next generation. Mind you, it surprises me that there is still a demand for collected Cyclamen tubers when they can be propagated at such a rapid rate from seed! Nevertheless, over 1 million tubers of Cyclamen are still exported each year, mainly to Europe (incl. UK).

A note on Cyclamen propagation in Turkey

About 5 years ago I accompanied an EC working party to Turkey whose purpose it was to assess and and report on the wild collection of bulbs. During the visit we met a nurseryman from the Izmir area, Kemal Yasemin, who was growing a small quantity of *Cyclamen* from seed. He had not heard of the white form of *C.hederifolium* and was keen to experiment further with seed-raised stocks so, on return, I acquired as many as possible from various friends & colleagues (thank you all for your generosity!). The first batch was sent to him in 1991 and he sowed these on 10th October. Almost exactly one year later, in October 1992, a package arrived from Turkey containing colour photos of them in flower! Although not yet saleable, it was clear that two growing seasons would be quite sufficient to produce a decent tuber. These were grown in poly houses with net shading on top and net sides for ventilation. I imagine that quite a range of bulbs could be grown quite rapidly under the same

sort of conditions.

Incidentally, and somewhat related to all the above---

This year the British Bulb Distributors Association will be labelling packaged bulbs with a note saying if they are from a wild source or of cultivated origin; the Dutch industry has been doing this for two years.

The world is a monocot-lover's oyster!

Our recent family holiday, walking in the Bernese Oberland of Switzerland, reminded me of the fact that although the majority of 'bulbous' monocots are grouped in certain areas of the world where there are marked alternating wet and dry periods in the year (eg, the Middle East, California, the South-West Cape, the Andes), interesting petaloid monocots can be found almost anywhere; many of these have rhizomes and/or fibrous roots since they do not require a swollen storage organ to enable them overcome a long dry period. This was not intended to be a plant-hunting holiday but even so, from footpaths and without even trying, we saw no less than 10 genera of terrestrial orchids (*Listera, Gymnadenia, Dactylorhiza, Corallorhiza, Coeloglossum, Traunsteinera, Herminium, Nigritella, Orchis and Cephalanthera*) and the following petaloid monocots: *Polygonatum verticillatum, P.? multiflorum, Paris quadrifolia, Allium schoenoprasum, A.victorialis, Maianthemum bifolium, Colchicum ?alpinum, Crocus vernus* (probably ssp. *albiflorus*), *Veratrum album* and *Anthericum ramosum.* Seeing the crocuses in seed, their capsules pushed up above ground level on long, rather weak stalks led me to ponder again as to why this has developed. Is it that the capsules can be eaten by grazing animals and their seeds thus dispersed, or is it that the tall stem bearing the capsule, being weak, bends over and deposits the seeds well away from the parent corm on to the ground where they are distributed by ants; ants certainly show an interest in Crocus seeds in the garden and although I did not see any in the vicinity of the crocuses in the wild, I am sure that they were around somewhere since ants must surely be among the most widespread and successful of all creatures. *Veratrum album* was in flower in the Swiss Alps, very uniform in appearance, with wholly green flowers, and very different from the much more striking white-flowered version which one occasionally sees in gardens. Is it really correct, I wonder, to lump these into one species under the name *V.album*, or should the green-flowered *V.lobelianum* (which was originally described from Switzerland in 1808) be recognised as distinct from *V.album*. In a review of the genus in The Plantsman [Vol.11, part 1(1989)] I did merge them, following works such as Flora Europaea, the argument being that intermediates exist, but I

still have some reservations and would like to have a look in more detail one day.

Crocus scharojanii in Turkey

Mr Freemantle telephoned a few weeks ago to say that he had been in north-eastern Turkey in July/August and had seen a deep orange-yellow crocus which he assumed to be *C.scharojanii*, and with them were a few lemon-coloured forms. This is interesting, and I am not sure that there is an instant answer. This could be natural variation, or it could be as a result of hybridisation with the white *C.vallicola*. In my experience this very often grows in the same area as *C.scharojanii*, although not in exactly the same habitats, and for the most part it flowers slightly later, but sometimes there is an overlap making it possible for the late 'scharojaniis' to liaise with the early 'vallicolas' via the bees which pollinate them. They do have the same chromosome number, although in *Crocus*, which is cytologically rather extraordinary, this does not necessarily mean that they are capable of hybridising. However, many years ago John Marr visited the area, and I have done so more recently, and it does seem to be the case that when the two species meet, pale sulphur-coloured hybrids occur in the boundary zone between the populations. *C.scharojanii* prefers much wetter sites than *C.vallicola*, so the two tend not to be intermingled in mixed populations: in fact if they did, and flowered at the same time, I suppose that they would lose their identity, or would have never gained it in the first place! As far as I can see, in order to exist in the same place and flower in the same season, related species of one genus either have to be separated genetically, or have different pollinating agents, or produce their flowers at a slightly different time; in the case of these two crocuses they have almost succeeded with the last of these categories.

Studies in Alophia

In a paper describing a new species of *Alophia* (a South American *Tigridia*-like genus in the *Iridaceae*), Peter Goldblatt and Thad Howard have included a few details of the other species as well. In their view there are 4 species: (1) *A.drummondii* (= Eustylis purpurea, E.puctata), the best-known and most widespread, which has violet to reddish-purple flowers, speckled dark purple on a creamy-yellow ground in the centre; this occurs in the southern U.S. to southern Mexico & possibly Guyana. (2) *A.silvestris* (Nemastylis bequaertii, Alophia rotata), from southern Mexico and Costa Rica, has much smaller flowers than this. (3) *A.medusa* (Chlamydostylis medusa) from Goias, Brazil is a large-flowered species with perianth segments nearly 3 cm long. (4) *A.vera-*

cruzana, the newly described species, is from north-eastern Mexico and resembles *A.drummondii* but differs in having pale to deep lilac-blue flowers with more or less erect inner perianth segments. There are also differences in the inner perianth segments: in *A.drummondii* they are narrower than the outer, they are bent sharply at the base, and they have an obvious nectary. *A.veracruzana* has the inner segments as wide as the outer, they do not bend sharply, and have no nectary. The genus Alophia is defined by Goldblatt and Howard on the character of the stamens and the style: the anthers are pandurate (fiddle-shaped) in shape and they dehisce (split open) almost in a latrorse direction (roughly along the sides); the deeply divided style has slender arching branches with stigmatic surfaces right at the tips. The complete paper can be found in The Annals of the Missouri Botanical Garden 79, part 4, pages 901-905(1992).

A newly described (big!) Ophiopogon from China

Most of the ophiopogons are fairly small plants with narrow tough wiry leaves making them very useful for ground cover; they are used in some places as a substitute for turf under trees and shrubs. In Istanbul, for instance, I have seen large beds of a very dwarf species making solid and very durable green mats which no weeds can compete with. However, there are a few tall species as well and a recently described one from China is said to be 70 cm in height. *O.jiangchengensis*, named by Qian Yiyong in Acta Bot. Austro Sinica 7:14-16(1991), has erect stems carrying bunches (up to 14 per bunch) of narrow (4-11 mm wide) dark green leaves, the bunches separated by 5-7 cm of bare stem. There are 20-60 pale violet flowers in each raceme and they are bell-shaped, about 5 mm in length and 8-11 mm in diameter; the racemes vary from 4-12 cm in length. So, this appears to be quite a robust plant with sizeable flowers, for an *Ophiopogon*, that is. Not for ground cover, but it sounds as if it might have horticultural value. It was discovered in Yunnan province at Jiangchen, in woods at 350-1250 metres altitude.

And a new Solomon's Seal from China

Z-Y Zhu has recently published details of a previously undescribed species of Polygonatum from Mt Omei (Emeishan), in the Bulletin of Botanical Research of the North-East Forest University Volume 12, part 3:267-269(1992). It has been appropriately named *P.omeiense*, collected on Mt Omei at 1800 metres.

The plant is described as being 25-35 cm in height with purple-spotted arching or erect stems and oblong-lanceolate, broadly ovate or ovate-elliptic leaves 4-10 cm long and 2-3.5 cm wide, acute at the apex, green

on the upper side and paler beneath. The (whitish-green?) flowers are produced in the leaf axils, either solitary or in a pair (at each axil), on peduncles 1.5-5cm long and pedicels 0.5-1 cm long; they are tubular-bellshaped and 2-2.5 cm long, of which 1.8-2.1 cm is tube, divided into six short triangular obtuse lobes 2-3 mm long; the bracts are deciduous.

For those who know *P.adnatum* (sorry, I do not!), the author gives distinguishing features: the new species differs from it in having a purple-spotted stem, broadly oblong-lanceolate or broadly ovate leaves, a perianth 2-2.5 cm long, and stamens with densely white-hairy filaments.

And while on the subject of Solomon's Seals

Kit Grey-Wilson recently asked me to look through his colour transparencies from a trip to Sichuan and Yunnan with a view to suggesting names for some of the monocots, not an easy task for there seem to be undescribed species, or odd variants, cropping up all the time. One of the polygonatums is a very dwarf one with the overall appearance of *P.hookeri* but with creamy white flowers and possibly rather broader leaves, although in the wild the very widespread *P.hookeri* does vary quite a lot--the material in cultivation may consist of a few clones only. This dwarf white-flowered species has been collected before, for instance by Joseph Rock in Kansu province, but the herbarium material is all included under *P.hookeri*, so this is a question which requires further investigation when living material can be acquired. Another of Kit's photos shows a dwarf plant with purplish flowers and many narrow leaves, similar to the plant from the Himalaya which I think of as *P.graminifolium*. However, the type specimen of *P.pumilum* at Kew, which is from China, is also very similar to the plant in the photo. It looks to me as if *P.graminifolium* and *P.pumilum* might be synonymous but, here again, studies of living material are necessary before any firm decisions are made. The Chinese botanist Prof.Wang considered *P.pumilum* to be inseparable from *P.hookeri*, which means that all of these extremely dwarf polygonatums (ie, those under about 5 cm) would be lumped into the one species, not a popular move for horticulturists and surely not the answer.

And while on the subject of Mt Omei---!

Another white trumpet lily has been named from China, *Lilium omeiense*, by Z.Y.Zhu. This occurs on Mt Omei, or Emeishan, at 700 metres and is described as being related to *L.sargentiae*. It has purplish bulbs producing 1-2 m stems (it is a stem-rooting type) carrying lanceolate leaves 12-16(-18) cm long and 1-1.5(-2) cm wide, with bulbils in their

axils. The 3-16 flowers are fragrant, 'greenish-white or yellowish-white', tinted pale yellow-green at the base, and have perianth segments 15-18 cm long, the outer ones 1.6-2 cm wide and the inner 3-4 cm wide, and they are recurved at the tips. So, it must be very similar in appearance to the other Chinese trumpet types. It is said to differ from *L.sargentiae* in having the inner perianth segments tapered into a narrow claw, and also hairy, near the base, a style which is hairy in the lower part, and a broadly winged seed capsule. This may, I suppose, have been introduced into cultivation in the West by one of the recent seed-collecting expeditions, since Mt Omei is one of the more frequently-visited parts of China. The full paper where it is described is in the Bulletin of Botanical Research of the North-East Forestry University Vol.13, part 1:54-56(1993).

Does anyone cultivate Pucara?

Some bulbs seem to exist as names in literature, hopefully accompanied by a dried specimen in an herbarium somewhere, but little-known and apparently not in cultivation. I do not condone over-collecting by any means, but it is valuable to introduce living material in order to study a plant 'in the flesh' as it were, and hopefully propagate and distribute it so that its future is assured. Such a plant is the South American Amaryllid, *Pucara*. This was described as a new genus in 1972 by P.F.Ravenna in the Anales del Museo de Historia Natural, Valparaiso No.5:85-89, with just one species, *P.leucantha*. It occurs in northern Peru, in the Departments of Cajamarca and Amazonas, at 990-1650 metres. *P.leucantha* was described as being between 15 and 50 cm in height and has a many-flowered umbel of smallish upright white funnel-shaped flowers, each about 1.5 cm long. They have the perianth segments joined together at the base for a short distance and inside there is a small 3-lobed corona with a deeply-toothed margin, so in some ways it resembles the genus *Stenomesson*, but the style is distinctly 3-lobed at the apex, which is one of the distinguishing features (the style is not divided, or barely so, in the latter genus). The lanceolate leaves are not fully developed at flowering time. I am hoping that someone will write in to say that they have large clumps of it in their greenhouse and would I take some away-it sounds most interesting! It would be very tender, more or less tropical in its requirements, of course, and presumably would behave as a summer-grower.

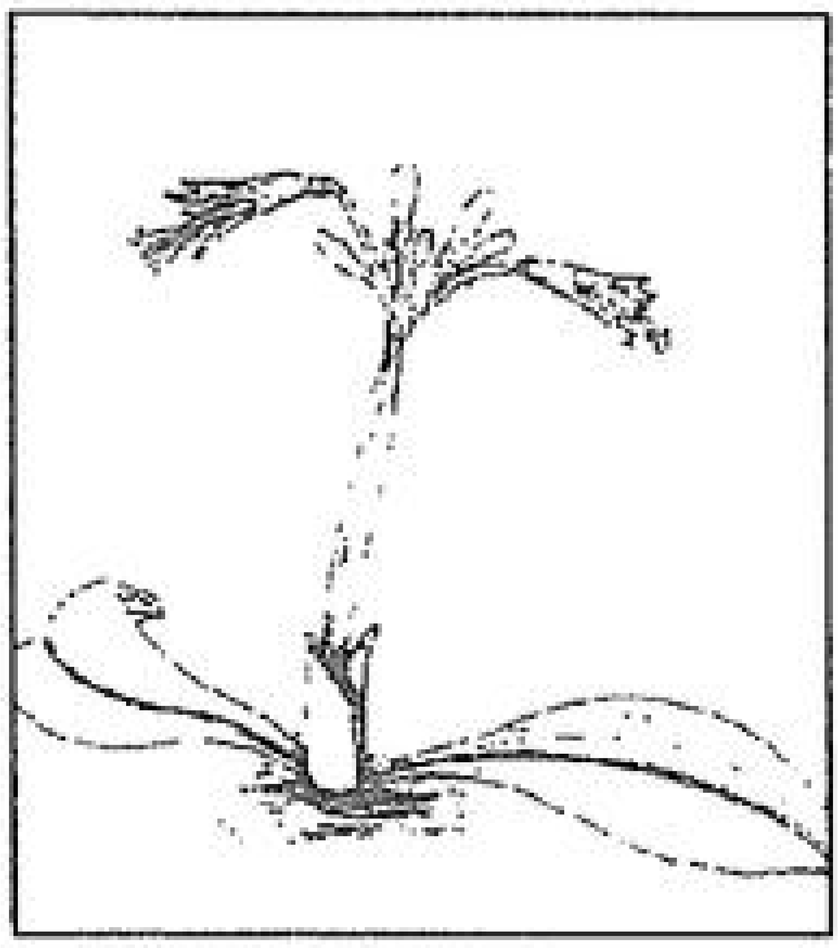
And another odd South American Amaryllid

Paul Christian wrote recently asking if I knew or could find out anything about *Pseudostenomesson vargasii*. I have to admit that it was just a

name to me and I have not even seen a herbarium specimen, although in the case of Amaryllids it is not always much of an advantage anyway since they tend to look like boiled cabbage! The journal in which Octavio Velarde Nunez described it was not easy to come by, but was eventually tracked down. It was described as a new genus from Peru in 1949 and, not surprisingly, looks rather like a *Stenomesson*. It large bulbs (up to 10 cm diameter) producing 6-10 strap-like leaves up to 80 cm long and 5 cm wide, and a stout flower stem to 55 cm tall bearing an umbel of 7-15 green tubular flowers, each as much as 8 cm long, 4.5 cm of which is a narrow tube, with six outward-curving segments. The stamens arise from a 'corona', a tubular structure about 2 cm long, hidden inside the perianth tube. Like *Stenomesson*, and unlike *Pucara* (above), The style is slender and undivided. It seems that the genus was distinguished from *Stenomesson* largely on the basis of the seeds since they are green ("assimilating") and rounded, more like those of *Hymenocallis*. Two species were mentioned in the paper, *P.vargasii* (the type species) and *P.morrisonii*, which was originally described as *Stenomesson morrisonii* by Vargas in 1943 but transferred to *Pseudostenomesson* by Nunez. This has smaller (at most 4.5 cm long) whitish-green flowers. Both species are from Peru, *P.vargasii* from the Dept. of Junin, between Chamiseria and Huancayo at 3317-3350 metres, and *P.morrisonii* from the Department of Apurimac at 2400-2800 metres altitude.

And a final note on these curiosities---

Last winter, just before I 'retired' from Kew, an extraordinary S.American Amaryllid was sent in to the Herbarium for its name to be checked. It was *Rauhia*, a rather coarse-looking bulbous plant, but beautifully grown. The large leaves were spreading almost horizontally on the ground and were thick and leathery, more like those of a *Clivia* in texture, although broad and elliptical in shape. The flowers were, again, similar to those of some of the stenomessons, tubular and green with the stamens protruding, produced in an umbel of about six on a stout stem. The new leaves appeared to be pushing up at flowering time forming a tubular structure between the pair of old leaves and from the centre of which the flowering stem emerged. The one species, *R.decora* (it is questionable as to whether it is decorous!), is also Peruvian.



A successful Narcissus at Reading

Writing in Bulletin 24 of the 'Society pour l'echange des plantes vasculaires de L'Europe et du Bassin Mediterranean'*, Stephen Jury of the School of Plant Sciences, Reading University, gives an account of the discovery of a Narcissus which was subsequently named *N.radinganorum* by J.Fernandes-Casas [Fontqueria 6:41 & 46(1984)], a member of the section *Pseudonarcissus*. The first collection was made on 17 April 1982 in Valencia, Eastern Spain, and at the time a bulb was collected (Akeroyd, Goyder & Jury 55) for introduction to Reading University Botanic Garden; this has, it is pleasing to hear, multiplied into a clump with about 45 flowers and is the earliest Pseudonarcissus to come into flower at Reading. It is also noted that the species is known from only one population and from the conservation viewpoint is thus considered a vulnerable plant in the wild.

** This is society which acts as a medium for the exchange of herbarium material between botanical institutes. As an offshoot of this activity interesting observations are made about European plants and their distributions.*

Lily beetles

Professor Gower of Orpington, Kent recently sent me some test tubes containing some 'unpleasant bits of madonna lilies covered with 'worms' plus a bright red insect', with a request for an identification and suggested remedy. The identification is simple, and all lily enthusiasts living in the south-east of England will know the answer already: they are lily beetles (*Lilioceris lilii*), handsome in their shiny red array in the adult stage and totally repulsive in the larval stage, as yellowish grubs covered in their own dark blackish-brown slimy excrement. Both stages are very damaging to lilies and can completly defoliate them unless controlled. The adults overwinter out of sight somewhere and appear in mid to late spring, laying large clusters of reddish eggs, usually on the underside of lily leaves in my experience, which hatch very quickly into the evil-looking larvae; these feed until quite plump, then pupate in the soil. Apart from lilies, they attack the related genus *Nomocharis* (they are fairly good taxonomists!), and are especially attracted to fritillarias which provide a food supply in spring until the lilies emerge. It is reported that they also attack *Polygonatum*, although they have not done so in our garden (maybe there is no room for them between the Solomon's Seal Sawfly larvae!), and they have not touched the tulips or erythroniums. An interesting point, in our garden at any rate, is that they do not attack certain lilies whilst others are very susceptible. *L.henryi* has never been touched, nor 'Black Beauty' (a henryi hybrid), *L.speciosum* & *auratum*

are also quite resistant. Control is by spraying with insecticide (malathion etc.) or, if on a small scale, hand-picking the small beetles (oblong, about 5mm long) and despatching them by some means; unfortunately fresh ones will just fly in from elsewhere. The larvae are easy to kill by spraying but if you want to avoid poisonous sprays I have found that they can be washed off with a jet from the hosepipe and are not active enough to crawl back to the plants; they may, of course, just go into premature pupation in the soil, I have not studied that aspect yet.

In Britain lily beetles are confined to the south-east, centred roughly on Surrey, where they appear to have been introduced, presumably from Europe, in the mid 20th century.

From red beetles to red lilies

A good flowering of *L.pumilum* this year reminded me of an interesting article on *Lilium tenuifolium* by Norman C.Deno last year in the Bulletin of the American Rock Garden Society (Vol 50, No 3, p.224-227). He draws attention to these two names and puts the case for treating them as two distinct species. Both of these red-flowered lilies are from eastern Siberia and have been regarded as inseparable but he says that Joseph Halda considers them to be distinct and, from the discussion, it appears that there is reason to believe that this is so. The details given are that *L.pumilum*, which is well-known and cheap to buy, has tightly recurved perianth segments, giving a truly turk's cap flower which is pendent and symmetrical in shape; this can be up to 4 ft (over a metre) in height with up to 20 flowers (in cultivation it seldom reaches such stature in my experience). *L.tenuifolium*, on the other hand, has flatter flowers with only the tips recurved slightly, they face outwards rather than downwards, and they are somewhat asymmetrical, the lower segment separated from its two neighbours by a wider gap than that separating the rest. It has a maximum height of 2 ft (60 cm) and at the most 10 flowers. The flowering time is also commented upon, *L.tenuifolium* flowering 3 weeks later than *L.pumilum*. The article has a good account of the history of both species, and there is the information that seeds are offered by J.Halda, PO Box 514, Englewood, Colorado 80151-0514, USA

The ARGS

Having mentioned the American Rock Garden Society I must go on to say that, as with the Bulletin of the Alpine Garden Society in Britain, the ARGS Bulletin contains much of interest for monocot enthusiasts. In addition to the valuable lily information mentioned above, 1992 saw articles on Trilliums, and on Fritillaries in Central Asia, accompanied by stunning colour photographs.

Edited by Gwen Kelaidis of 1410 Eudora St, Denver, Colorado 80220, the Bulletin comes with membership of the ARGS which can be contacted at PO Box 67, Millwood, New York 10546 (standard membership sub. is $25).

Two thirds of an Iris

Occasionally iris flowers occur with their flower parts in multiples of four rather than the normal three, and I have seen other monocots doing the same--*Merendera* and *Crocus* spring to mind. In April this year at Kew an *Iris caucasica* ssp. *furcica* produced a flower with only two falls, standards & style branches. These malfunctions do not usually persist into the next year & appear to be a slight hiccough, caused by weather conditions perhaps? Thanks to Peter Brandham of the Jodrell Laboratory, Royal Botanic Gardens, Kew for noting this oddity.

Hole-in-the-middle irises

Primrose Warburg has a novel plant association for large clumps of Spuria irises which grow steadily outwards in a ring, leaving a hole in the centre. She writes: 'I fill their abandoned centres with compost and Martagon hybrid lilies, & *L.szovitsianum*, which thus get some support. They look gorgeous and flower at the same time'.

Iris prints from the BIS

The British Iris Society has produced some attractive prints from the watercolour originals of Pauline Dean's lovely paintings for the 1993 calendar. These are trimmed ready for framing and cost 50 pence each or £3.00 for a set of six, plus 50 pence postage and packing. The irises represented are *I.reticulata* 'Harmony', *I.schachtii*, *I.unguicularis*, *I.pallida*, *I.versicolor* var. *kermesina*, and the Pacific Coast hybrid 'No Name'. They are obtainable from Iris Prints, Copper Beeches, North End Lane, Downe, Orpington, Kent BR6 7HG (cheques made out to British Iris Society please).

More bulbous stamps

A 29 cent stamp recently received from the USA depicts two un-named irises, one a yellow bearded type and the other a bicoloured Xiphium (or possibly Spuria), and Germany has issued a beautifully executed *Lilium martagon* ("Turkenbund") stamp (50 pfennigs); thank you, Friedbert Dumke, for sending me that one!

Lots of names for one little bulb

John Rogers of Mill Hill has commented on the number of names which the South African *Anomatheca laxa* has acquired over the years, and it seems useful to set out what the most recent opinion is regarding its correct name. In fact it is 20 years ago that Peter Goldblatt settled (I hope!) the matter, in Contributions from the Bolus Herbarium No.4(1972): *Anomatheca laxa* (Syn. Anomatheca cruenta, Lapeirousia cruenta, Lapeirousia laxa).

There are four species in the genus, *A.laxa*, with its red(there are white and blue variants: see page 15 for comments on the latter) flowers, the six segments of which are less than half as long as the long perianth tube, *A.grandiflora*, which is like a large version of it with segments more than half as long as the tube, *A.viridis*, with green flowers, and *A.verrucosa* with pink, much shorter-tubed flowers.

A holiday in Portugal, anyone?

Bulb enthusiast and Newsletter subscriber Henning Christiansen and his wife Birthe have lived for many years in Portugal and have renovated some old farmhouses which they are now letting as holiday homes. They are about 25 km NW of Lisbon and would presumably be a good base for anyone wanting to tour in the Estremadura area (quite 'bulby' I believe). Henning & Birthe can be contacted at Quinta das Flores, Casal do Borralho, 2665 Malveira, Portugal.

Tulip Publications

Two papers reached me recently, dealing with the Tulips during the Ottoman period in Turkey; Both are by Prof. Turhan Baytop, formerly of the Faculty of Pharmacy at Istanbul University and my co-author of 'The Bulbous Plants of Turkey'. One is called 'The Tulip: Symbol of Two Nations' and is published by the Turco-Dutch Friendship Association. This looks at the history ot the Tulip in Turkey and gives an interesting account of the 17th century 'council of expert-florists' who judged new cultivars and named them if they were deemed to be worthy of such recognition. There are lists of the cultivars, illustrations of Tulip vases of the period, examples of market prices of tulips and comments about the characteristics which were considered desirable. This is obtainable from M.Th.Houtsma Stichting, Drift 15, 3512 BR Utrecht, The Netherlands, but as yet I do not have details of cost. The other is wholly in Turkish but this doesd not matter too much to non-Turkish speakers since it consists mainly of coloured illustrations of these old tulip cultivars, showing the very long narrow segments (like T.acuminata) which was the favoured

form of that time. This costs 25000 TL, and is available from: It is called Istanbul Lalesi (istanbul tulips) and has an ISBN number 975-17-1020-0, which should enable a bookshop to track it down; there does not seem to be a full address in the book.

An old Scilla with a new(ish) name

Scilla bifolia and all its variants (some of which have been described as separate species) is a well-known and much loved squill, distributed over a wide area of Europe and western Asia. Most of these variants have the same overall appearance and, at a glance, one would identify them as *S.bifolia*. There is, however, one very distinct version from south-western Turkey which does, I am sure, merit recognition. This was known to Edmund Boissier, the great Swiss botanist who compiled the monumental Flora Orientalis, as *S.bifolia* var. *polyphylla* (ie. Greek for 'many-leaved') since it has more leaves (4-7) per bulb than the usual complement of 2 which *S.bifolia* posesses, and these are rather narrow and parallel-sided rather than broader towards the tip as in 'ordinary' *S.bifolia*. I have seen this plant several times in the mountains between Fethiye and Antalya and I was reminded of it the other day when an excellent colour photo arrived from John Leedal for identification. A specific name does exist for this, for the Austrian botanist Franz Speta distinguished it in 1976 as *S.longistylosa*. I agree that it does make sense to recognise it as a species, so I shall be recommending that John's transparency should be labelled *S.longistylosa* (with *S.bifolia* var. *polyphylla* in brackets just for good measure!). However, there is a problem which I have not yet resolved in my own mind concerning another similar species which was described, also by Franz Speta, from the same region of Turkey in 1980. This was named *S.pleiophylla*, and 'pleiophylla' translates from the Greek as 'more-than-usual-leaves'. So, is it the case that this squill has acquired another name to add to the list or are there two species related to *S.bifolia* in SW Turkey with several leaves per bulb.

Good news about some South African bulbs

In 'Veld and Flora', volume 78, part 3(1992), Graham Duncan of the National Botanic Garden, Kirstenbosch, describes how two bulbous plants which were thought to be extinct have been rediscovered. These are *Moraea incurva* and *Lachenalia polyphylla*, both from the Tulbagh District of the South-West Cape [hence they are winter-growers, summer-dormant]. The *Moraea* was assumed to be extinct since it had not been seen for 50 years and its habitat had largely been destroyed. However, after a controlled fire in a patch of scrub on a farm, *M.incurva*

're-appeared' and flowered profusely; it must however still be regarded as very endangered since this is the only population known. It seems that it does make only fleeting appearances, presumably in response to fire as with a number of other South African bulbs; it was recorded first in the 1820s, then in 1932 and again in the 1990s. Kirstenbosch now hopes to propagate and distribute this rare species to interested growers. *M.incurva* is so-named because the inner perianth segments ('standards', in an iris) are curved inwards towards the centre of the flower; its flowers are in varying shades of purple with yellow central 'signal patches' on the three outer ones ('falls'). It is 35-40 cm in height with one long narrow basal leaf and the flowers are about 4 cm across. Other vulnerable or endangered moraeas which are mentioned are *M.tulbaghensis, M.neopavonia, M.gigandra, M.loubseri, M.insolens, M.aristata, M.calcicola* and *M.atropunctata*, several of which are now well-established in cultivation.

The other rarity, *Lachenalia polyphylla,* was re-discovered after a 20-year gap but is still considered to be close to extinction due to habitat destruction. It was found in a small area which had 'miraculously escaped the plough'. It has 5-8 very slender purplish-tinted leaves and short spikes of small bell-shaped flowers which are described in 'The Lachenalia Handbook' [also by Graham Duncan*] thus: 'the outer perianth segments are pale blue at their bases and shade to rose-pink, while the very slightly protruding inner segments are white with a rose-pink central zone and have recurved tips'. It sounds wonderful, but the author says that it is not particularly attractive. This too is in cultivation in Kirstenbosch, where stocks are being built up in the nursery. Other species which are considered to be under threat are *L.mathewsii, L.viridiflora and L.purpureo-caerulea.*

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* *The Lachenalia Handbook: Annals of the Kirstenbosch Botanic Gardens, Volume 17 (1988). This and several other bulb books are obtainable from the Botanical Society of South Africa, Kirstenbosch, Claremont 7735, Republic of South Africa.*

IBSA

For those interested in the fascinating bulbs of Southern Africa I must mention the Indigenous Bulb Growers Association of South Africa (IBSA). They produce an annual Bulletin which includes articles by members, lists of nurseries offering bulbs or seeds, a 'requests' column, and lists of 'useful publications'. The Secretary is P.F.X.von Stein, 3 The Bend, Edgemead 7441, Cape Province, Republic of South Africa.

South Tropical African Iridaceae

The most recent part of Flora Zambesiaca, which is known affectionately to researchers of the African flora as 'FZ', to be published is Volume 12, part 4, devoted to the *Iridaceae*. FZ is a definitive account of all the native flowering plants occurring in 'South Tropical Africa' which is comprised of Mozambique, Malawi, Zambia, Zimbabwe and Botswana. It is edited at the Royal Botanic Gardens, Kew, by Gerald Pope. The account of *Iridaceae*, prepared by Peter Goldblatt, is a substantial piece of work of 106 pages with full descriptions and identification keys to the 19 genera and 101 species which are recognised as occurring in the area. 9 new species of *Gladiolus* are described, there are illustrations (line drawings), synonyms are given, extensive literature references accompany each species, and local distributions are indicated through the citation of herbarium specimens. There is also an outline of the habitats in which the species mentioned are to be found. The genera covered are: *Anomalhecа* (2 spp.), *Aristea* (7 spp.), *Babiana* (1 sp.), *Crocosmia* (2 spp.), *Dierama* (8 spp.), *Dietes* (2 spp.), *Ferraria* (1 sp.), *Gladiolus* (37 spp.), *Gynandriris* (1 sp.), *Hesperantha* (3 spp.), *Homeria* (1 sp.), *Lapeirousia* (12 spp.), *Moraea* (17 spp.), *Radinosiphon* (1 sp.), *Romulea* (1 sp.), *Savannosiphon* (1 sp.), *Schizostylis* (1 sp.), *Tritonia* (2 spp.) and *Zygotritonia* (1 sp.). Several genera have disappeared into synonymy under *Gladiolus*: *Acidanthera*, *Homoglossum*, *Oenostachys* and *Sphaerospora*, and *Antholyza* as well, but before anyone starts to panic about the popular *A.paniculata*, don't worry, this is correctly known as *Crocosmia paniculata*, as we have all come to know it in recent years! There are no serious name changes to get used to, since the inorporation of *Acidanthera bicolor* into *Gladiolus*, as *G.callianthus*, took place some years ago and this has now appeared in print several times. It was also pointed out some time ago that the very common and very variable tropical African *Gladiolus* known under the names *G.psittacinus*, *G.natalensis*, *G.quartinianus* and *G.primulinus* should probably be referred to as *G.dalenii*, and Dr Goldblatt has confirmed this in his account of the genus.

Those who cultivate the blue-flowered version of *Anomalhecа laxa* (*Lapeirousia cruenta*) will now be able to label this as subspecies *azurea*, and *Crocosmia pauciflora* becomes a subspecies of *C.aurea*. Of the 37 *Gladiolus* I know of only two in cultivation! I am familiar with quite a lot of these as herbarium specimens and I can say quite confidently that many of them would be fascinating and in some cases beautiful garden plants, if they proved to be amenable to cultivation. This is an important piece of work for 'bulb' enthusiasts and represents a big step forward in the knowledge of the many and, to date, rather poorly-known

tropical African irids. It is a pity that so few of them are presently in cultivation since many are very attractive, and they should be relatively easy to cultivate since they would behave as summer-growers in the cooler countries and could be lifted and dried off for the winter, away from frost. *Iridaceae* is the first of the monocot families to be published for the FZ area, so we are in the happy position of having all the rest to look forward to.

The next landmark in tropical African irids will be the publication of the *Iridaceae* for the Kew-based Flora of Tropical East Africa ('FTEA') which covers Kenya, Uganda and Tanzania (Tanganyika and Zanzibar). This is currently being prepared by Peter Goldblatt, based on previous unpublished work by Wessel Marais who retired from Kew a few years ago.

FZ, Vol. 12, part 4 is obtainable from The Secretary, Flora Zambesiaca, R.B.G. Kew, Richmond, Surrey, TW9 3AE. Cost is £15.00 in the U.K., incl. postage, but postage will be added on for other countries.

From the postbag

Noel Lothian from Crafers, South Australia, has some comments which might interest other subscribers: Re. Mother-in-Law's tongue, he says 'we in Australia are a little bit more specific and this epithet is applied to species of *Dieffenbachia*. This genus, as you know, has sap which can affect the throat, hence its names of Dumb Cane or Ordeal Cane. Because of its ability to 'shut up' it is called Mother-in-Law's Tongue.

Prompted by my comments on *Oxalis corymbosa*, he continues: 'one of the worst weeds in Victoria and South Australia was *Oxalis pes-caprae**. Originally introduced as a pot plant it soon escaped and invaded hundreds of acres of farmland and gardens. Prior to herbicides, continual cultivation was the recommended method to reduce its vigour and hopefully its demise. Then along came the glycophosphates--Roundup, Zero, or whatever you call them. Just at or before flowering, a touch and no further appearance in the following year. This should fix *O.corymbosa* and other weedy species. It fixes *Nothoscordum*, and *Oxalis* should be easier because of its leaf surface.

Concerning *Anigozanthos*, Noel continues: 'Like all Australian plants they like plenty of sunshine and a slight drying out in the summer time. Australian epiphytic orchids benefit from a period on the glasshouse roof in summer; if pots of *Anigozanthos* are stood in the hottest place of the garden they should flower more freely.'

* *O.pes-caprae is a very successful weed in the Isles of Scilly but is not hardy here in Surrey, thankfully.*

Requests, Offers, Sales and Exchanges

Mr K.W.Swales of Hawthorn Cottage, Coppingford, Huntingdon, Cambs. PE17 5XY is seeking Fritillaria pyrenaica var. lutescens and 'Giant Form' (bulbs or seed).

Lady Barbirolli recently asked for advice on where to obtain *Iris histrioides* 'Major', but unfortunately there seems to be no ready answer to this. Not so many years ago there were several cultivars of *I.histrioides* in commerce but these have all vanished from the catalogues. 'Major', 'Lady Beatrix Stanley', 'Reine Immaculee', 'G.P.Baker' and 'Angel's Eye', where are you all? [Incidentally, I made a stupid error in my book 'The Iris' by referring to this last cultivar (which Blom's were offering in 1985) as 'Angel's Tears' rather than 'Angel's Eye'. Apologies to Walter Blom & Son Ltd].

Dr. Vlastimil Pilous is offering for sale or exchange 'a limited number of three exceptionally rare plants': *Fritillaria macedonica, Corydalis paschei* and *Corydalis zetterlundii.* Dr Pilous tells me that these are seed-propagated stocks. He can be contacted at Jiraskova St. 396, 543 71 Hostinne, Czech Republic. F.macedonica occurs in Albania and the adjacent part of Macedonia and is one of the species with broad-shouldered bells, purplish and chequered like *F.tubiformis*, to which it is probably most closely related. I am familiar with it as herbarium specimens but as far as I know it has never been in cultivation. *Corydalis paschei* is in the same group as *C.solida*, but is thought to be more closely related to *C.angustifolia* than *C.solida* itself; it has pale pink flowers. *C.zetterlundii* is also in the same group; this is said to be related to *C.integra* and has pale purple flowers.

Catalogues

The South African firm Sunburst Bulbs recently sent their leaflet of bulbs for sale, not many but a few interesting items including the robust whitish-flowered *Eucomis pole-evansii* which is a robust one up to a metre in height when in flower, and *Ammocharis coranica*, a fascinating Amaryllid with grey-green strap-like leaves spreading on the ground and a rounded, somewhat nerine-like, umbel of pinkish-red flowers, on a 25 cm stem. *Boophane disticha* is also offered, a fine plant but one I have not been too successful with in the past. It is also an Amaryllid with a rounded umbel of pink-red flowers, rather like an *Haemanthus,* produced while the plant is leafless. The leaves are fascinating since there are several of them, narrow and grey-green, pushing up in a flat, perfectly symmetrical fan (ie distichous!). These are all summer-growers, dormant in winter, so slightly easier for those in cold-winter climates, they can be

dried off and tucked away under a greenhouse bench or frost-free shed. The previous list, Jan-July 1993, contained some nice winter-growers such as *Ixia viridiflora, Lapeirousia silenoides, Gladiolus orchidiflorus, Geisshoriza radians* and *Watsonia aletroides*. Sunburst Bulbs, PO Box 183, Howard Place 7450, South Africa.

Norman Stevens (Cambridge Bulbs) is offering a good range of crocus species, mostly seed-raised stocks, including *C.abantensis, C.bayo-piorum* and *C.banaticus* 'Albus'. Most bellevalias are very dull, but he is listing the brilliant blue *B.fomiculata* which needs a wettish place to grow; the water meadows in north-eastern Turkey where it grows are one of the unforgettable floral sights of my life, clear blue sheets of colour, sometimes mixed with pink *Primula auriculata*. It is closely allied to the dusky blackish-blue *B.pycnantha* and *B.paradoxa*. Other items of interest in this excellent list are *Fritillaria latakiensis, F.stenanthera* and the rare American species *F.eastwoodiae* and *F.purdyi*, a supplementary list has more rarities such as *F.rhodocanakis* subsp. *argolica*, *F.forbesii* and *F.gentneri*. Cambridge Bulbs, 40 Whittlesford Road, Newton, Cambridge, CB2 5PH.

Avon Bulbs have a very attractively produced catalogue with good, convincing, photographs, not the specially staged 'studio shots' which so many of the larger firms go for these days. They are a good source of *Iris unguicularis* selections, and the yellow flowered version of *I.foetidissima*, and I certainly haven't seen *Erythronium grandiflorum* on offer very often. There are several other out-of-the-ordinary items to be found here, such as x *Brunsvigia parkeri alba* and *Ferraria undulata*, a weird brown smelly winter-growing Irid from South Africa. There are some useful cutivation tips given with each genus as well. Avon Bulbs, Burnt House Farm, Mid Lambrook, South Petherton, Somerset TA13 5HE.

Nadine Albouy and Christian Geoffroy (and Virgile their dog, who is included in the catalogue!) have a nursery in Paris known as 'Ellebore, since 'ellebores are a particular love of theirs. Their current list also includes some scarce bulbs including *Iris pamphylica, I.lazica, I.cyclo-glossa, Lilium pomponium, L.japonicum, Nerine filifolia, Paradisia lusitanica, Pancratium illyricum* (young bulbs), *Romulea nivalis, Tecophi-laea violiflora* (NB: not *T.cyanocrocus* var. *violacea*), and *Tropaeolum azureum*. Oh yes, and if anyone has the room for something huge and smelly they have *Amorphophallus rivieri*!

John Amand has a nicely illustrated autumn bulb catalogue and is offering, as usual, quite a wide range from the ordinary bread-and-butter bulbs (I am not criticising these, we use a lot around the garden!) to some really interesting ones. One item which caught my eye was the

straight species *Iris histrioides* (ie not one of the cultivars, which seem to have disappeared from the trade anyway). However, I understand from him that it is in very short supply, so I have already missed out on that one. Some of the fairly new and enormous hybrid 'drumstick' alliums are also offered- 'Beau Regard' and 'Globemaster'. These are quite expensive but if you need to make a statement in the garden, as the designers say, you can say it loudly with one of these onions! Arisaemas are currently popular and Amand is listing eight, including *A.urashima* var. *thunbergii, A.ringens, A.nepenthoides* and *A.griffithii.* Other 'specials' to be found are *Colchicum hungaricum* in pink and white forms, *Crocus laevigatus* 'Fontenayi' which is slowly returning to catalogues after a long break, *Crocus scepusiensis* (a distinctive eastern European variant of *C.vernus*), and several rare fritillaries, notably *F.brandegei, F.davisii, F.alburyana* and *F.purdyi*, most of these I know to be propagated in Holland so the bulbs should be good. And I must get my order in for *Erythronium* 'Joanna', a new pink and yellow hybrid. Jacques Amand, The Nurseries, Clamp Hill, Stanmore, Middlesex, HA7 3JS.

Janis Ruksans, a bulb-growing friend from Latvia of long standing, now runs a bulb nursery there and has a fascinating list containing many Central Asian species, for example *Allium bucharicum* (it has a 'schubertii' type of umbel), *A.cupuliferum*, described as having large purplish-violet campanulate flowers, *A.darwasicum*, *A.fetisowii* and *A.komarovii*-don't the names alone want to make you acquire them! *A.nevskianum* is one I can vouch for; it has one broad greyish leaf and a reddish-purple umbel on a short stem. The seldom-seen *Muscari pallens*, (i.e., the real thing) with whitish-blue unconstricted bells, is a charmer, although I have lost it out in the open garden. There are tempting *Corydalis* such as *C.bracteata*, *C.macrocentra*, *C.nevskii* and *C.ruksansii*, a newly described species said to have white flowers with a blue stripe. Rare irises include the junos *I.kuschakewiczii, I.willmottiana* and the reticulata *I.kolpakowskiana. Colchicum laetum, Scilla vvedenskyi* and so on---. Janis Ruksans, Bulb Nursery, PO Box 441, LV-1098, Riga, Latvia.

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A box arrived recently through the post (thank you for the Chionodoxas, Alan!) labelled "Bulbs--please keep cool". How can I keep cool when a box of bulbs arrives?!

****

The Bulb Newsletter team: Brian & Margaret Mathew,

90 Foley Rd, Claygate, Surrey, KT10 ONB, England.

Annual subscription: £10.00 for UK & Irish
Rep.US$20.00 elsewhere, including airmail postage.

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