

THE NEED TO KNOW

The present international obsession with the activities of William Jefferson Clinton has led to a healthy discussion over what and how much anyone needs to know. The 'Washington Post' states that "it is the public, not Congress, that now needs to reach a judgment as to the President's conduct." It is certainly valid to argue that whatever happens in the Oval Office of the White House is the concern of the American people and that they need to know. Is it the concern, however, of any other nation? A discussion of this question would be pointless. We live in a time when the rapid transmission of facts and gossip around the world means that we are continually confronted with an excess of information, most of which we have no need to know at all. Nevertheless, the decision as to whether or not any one of us needs a particular piece of information should be a personal one.

**integrity and
complete honesty
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scientific publication**

When others take that decision out of our hands and withhold information on any subject which may affect us, it must be for a very good reason. We are prepared to consider numerous contentions regarding national interests and security or commercial confidences

but never the simple statement that "there is no need for them to know." Whatever the arguments may be regarding government and international politics there is one field of human activity where integrity and complete honesty are prerequisite. That is scientific publication.

Over the last few years, several new species relevant to many of you have been described but information regarding the type-locality has been withheld. The reason is claimed to be that, if it is revealed, 'someone will dig everything up'. Your reaction may well be "Quite right! We don't need to know that." No matter how emotive this explanation may be, it is spurious. Would you accept any scientific account in the fields of chemistry or physics where only the conclusion of experimental work was published and not the method? This is sloppy stuff and should never have been accepted by any editor, who exercises a modicum of scientific rigour in assessing material for publication. If it is actually now the editorial policy of some publications to conceal this most necessary of facts, that is truly distressing. While 'The New Plantsman' or 'Herbertia' might rank, in scientific terms, alongside the 'Proceedings of the Botanical Society of Baluchistan', they are important to all of us, as they are widely read by informed gardeners, the main users of these names.

Many of these gardeners have backgrounds where exercising a considerable amount of intellectual rigour in their own fields has been

part of their daily lives for decades. Most would accept that the current procedure for sticking names on plants is hardly a scientific activity, in spite of its pretensions. The methodology may be silly but they all go along with it because it is necessary and, moreover, it gives an infinite opportunity for stimulating argument and discussion.

**the antidote to
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and sunlight**

Last century, it was people with a training in medicine or the law, who named plants. Today there are 'amateurs' with a much greater knowledge of certain groups of plants than any 'professionals' have ever had. It is a knowledge of plants in their natural habitats that is the forte of today's 'amateurs'. The validity of a newly described species can only be assessed by reviewing the entire population in nature in the stated type-locality. To publish a new species in these informed times and fail to provide an exact type-locality is deplorable. The 'Washington Times' argues for making the Starr report available to the public in full: "the antidote to cynicism and suspicion is fresh air and sunlight...the public needs to have the evidence before them so that they can hold lawmakers accountable."

A Chinese takeaway in Stockport

When Will Mclewin returned from his collecting-trip to SE Europe, there was hardly any seed left on his *Helleborus thibetanus*. Just little nests of empty capsules neatly stacked between the containers. "The ultimate Chinese takeaway," said Will. We think he really did mean ultimate for the well-fed Mancunian mice.

A Chinese takeover in Vancouver

No. We have no opinions about the increase in property prices in Vancouver, allegedly due to an influx of wealthy Chinese. We only comment on gardening. When Jim was at a conference there in March, he was taken to the vast wholesale nursery of Piroche Plants Inc. at Pitt Meadows. This specialises in importing and marketing nursery stock from China. His enthusiastic and gracious guide was Yuekun Chen, an employee of a Chinese botanic garden spending a couple of years in Canada to learn all about commercial horticulture in North America. Jim commented

that one of our customers, Robert Newman is spending a few years working as curator at the Nanjing Institute of Botany. Yuekun Chen was both amused and bemused. In a recent letter Robert writes, "It is staggering and astonishing to me how little most of the people working in botanic gardens here care about their work." Yuekun Chen's enthusiasm had certainly been stimulated by associating his work with dollars, both Canadian and US. Whether this will benefit Chinese plants or botanical science in his country is another matter.

Thanks to everyone for their help and support so far in 1998.

While our main aim is to offer you seeds collected or grown by ourselves, a vast amount of help from our friends in Britain and abroad is always much in evidence in our lists. Collectors are mentioned in some instances but it is not possible to name sources in all cases. We are grateful to : John Andrews, Stan Farwig & Vic Girard, Jim & Georgie Robinett (all California, USA), Jim Almond (Shropshire, UK), Charles Bailey (BC, Canada), Dinah Batterham (Dorset, UK), John Blanchard (Dorset, UK), Peter Chappell (Hants., UK), Alan Edwards (Surrey, UK),

Terry Hatch (NZ), Marcus Harvey (Tasmania), Dave Hoskins (Hants., UK), Richard Hancock (Hereford, UK), Melvyn Jope (Surrey, UK), Will McLewin (Cheshire, UK), Alan McMurtrie (Ontario, Canada), Janis Ruksans (Latvia), Rachel & Rod Saunders (South Africa), David Stephens (Surrey, UK), Norman Stevens (Cambridge, UK), Mike Tucker (Somerset, UK), Bob & Rannveig Wallis (Wales, UK). Our apologies to anyone omitted. Sincere thanks to all and to all our customers for continuing to support our work.

Ordering from this list could not be easier

We shall accept your personal cheque in US \$, £ sterling or DM, with two qualifications : cheques in US \$ must be on a US bank account - charges on negotiating cheques on foreign accounts are very high in the USA (foreign banks can sometimes sell you a US \$ cheque drawn on one of their US branches) ; please do not send Eurocheques made out in US \$ - these are unfamiliar to the US banking system. Payments from France can cause problems. While we price in FF, we must ask French customers not to send cheques in FF and especially not to use cheques on 'La Poste'. These have proved very difficult to handle. A Eurocheque made out in £ sterling is excellent ; a Giro payment in sterling is used by many French customers - you can price in FF and have the current equivalent sent to us in £ sterling. FF cash sent by registered letter is also no problem. If fluctuations in exchange rates mean that it is advantageous to select a currency other than your own, please do so - it makes little difference to the operation of

our business. Apart from personal cheques, payments can be made in bank-notes for any of these currencies (please send by registered mail), a bank draft or International Money Order (in sterling for these please). We do not operate a Giro account to enable direct transfers nor do we accept credit card payments at present. If remitting by sterling cheque, it is great help both to you and to us, if you send us an open cheque, limited to the total value of your order. Obviously it cannot be made out for more than the limit but it can certainly be made out for less, avoiding annoying credits or refunds - you will only pay for what we have sent after the order is despatched. If you do not wish to do this, a list of some possible substitutes will be very helpful - we shall not use them unless we have to and, if we do, we always try to send more than the value of the items not supplied. We shall not pay in your cheque until after your order has been sent - it is in our interest, as well as yours, to complete your order as quickly as we can .

PLEASE HELP US BY PRINTING YOUR NAME & ADDRESS CLEARLY. NO CHARGE FOR AIRMAIL ON SEEDS OR LISTS.

New customers please understand

There may be a delay of some weeks before you receive your order. Most orders come in during the first week or so after we send out a list. We receive orders very much faster than we can despatch them. If you feel your order is too long in arriving, check with your bank to find out if your cheque has been cashed - we do not pay in cheques until orders have been despatched. If it has been cashed, let us know immediately. Postal services are on the whole reliable. We try to be as reliable ourselves.

Our population reference numbers

The species in our lists are divided into five distinct geographical areas. Within these areas they run in alphabetical order. The numbers appearing before the names run in numerical order (which means we do not much like generic 'splitting'). These numbers refer to particular populations, mainly in the wild, though cultivated material without data is given a number also. Wild collections which cannot be fully identified will be found under a five-digit field number. This number refers to a collection made by us on a particular date only. Both sets of numbers are permanent. The use of population references is to avoid seed from the same population of plants being distributed under a proliferation of field-numbers. In some instances, the same population of plants can be found in our own field-notes under a multitude of field-numbers, when it has been visited by us in different years. When another collector is involved their name or field number is quoted in the data following the plant name.

Identified species from Europe, W Asia & N Africa have six-digit numbers here, though they have an 0. before them on our records and you may sometimes see this on a label. The seven-digit numbers start with a 1. for North America, 2. for South America, 3. for Southern Africa (S of the Sahara), 4. for Eastern Asia and 5. for Australasia. Garden hybrids and selections (with which we are not much concerned) start with 6.

Cultivated seed, which has become increasingly evident in our lists, as we build up stocks raised from seed of wild origin, is marked with an asterisk (*). The field-data given in these cases refers to the parents. Almost all cultivated seed was collected in 1998. Most is hand-pollinated but it will not necessarily produce similar-looking seedlings. As our parent-stocks represent samples of wild populations, seedlings will show the variation present in the wild. We attempt to preserve the genetic diversity of the wild plants not to impose our concepts on them.

. welcome to our list

The spring of 1998 was difficult for bulb enthusiasts in Britain . .

The exceptionally warm British weather in February, 1998, seriously upset the metabolism of many of the summer-dormant plants as well as that of their owners. Many *Fritillaria* species started to go into a premature dormancy and seed-set was very poor with a lot of growers. We did not suffer as badly as most and we have harvested a good range of these again. Those *Narcissus* species which had already flowered developed some splendid seeds but many *Crocus* species again aborted their developing seed-capsules. Problems were compounded by the subsequent cold, dull weather but, in spite of all this, we have some excellent seeds, including many not listed before. There is no reason why we should expect an ideal season every year for these early-flowering plants. It is certainly not provided in the wild, where they can also suffer spring drought and heat or be pelted with hail or covered with snow when in full flower.

and for bulbs in California

Much of our summer was spent collecting in the West of North America. In California, the winter and spring had been extraordinarily wet. It stopped raining only the week before we arrived in June. For the first time we saw a green-tinged landscape, lush with grass and weeds twice as high as normal. Californian friends were pessimistic about the quality of seed on the early flowers but it was, in fact, not at all bad. Flowering and seed-set to the east, in the Great Basin and Utah, were in many cases the best we have seen since 1989. Our main problem was the lateness of the season. Seed on many plants was more than

a month later in maturing than it had been in 1995, itself a late year. Towards the end of our visit, it became exceptionally hot with temperatures exceeding 100 F (40 C) every day at lower altitudes. This brought its own problems. Many of the later flowers went over rapidly, not setting seed, aborting seed or maturing it too quickly. More of this in our next list where most of our North American collections will be listed. For the moment we include only *Erythronium*, *Fritillaria* and *Trillium*, which fit in with the other species here, suitable for immediate sowing.

In spite of all this, we think you will find plenty of interest here . .

In this early list, we offer seeds from summer-dormant species, along with a few other genera, such as *Helleborus* and *Pulsatilla*, which are best sown as soon after harvesting as possible. The first and main section in the present list covers species from within the area of Europe, N Africa (N of the Sahara) and W Asia (W from Pakistan N through the Pamirs,

the Tien Shan & the Altai), a distinct floristic area. Nomenclature follows the basic floras, 'Flora Europaea', 'Flora of Turkey' & 'Flora Iranica' with a little editing and updating, if this is felt to be relevant & helpful to gardeners. Collections from the republics of the former USSR are usually listed under the names supplied.

The figure in brackets before the price code is the number of seeds per packet

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Species from Europe, W Asia & N Africa :Seeds from Jim & Jenny Archibald

- 154.200 : ANDROCYMBIUM RECHINGERI *** Greece, Crete, Hania, Falassarna. Sea-level. Sandy soil among coastal, limestone rocks. Ex a P.& P. Watt coll. (One of two European species in this mainly S African genus, close to *Colchicum*. A smaller, choicer plant than the Spanish *A. europaeum*, until recently this was only known from the island of Elafonisos off the Cretan coast. A succession of stemless, delicately veined, white starry flowers appears in late winter in the centre of a flat rosette of shiny green leaves. Surprisingly hardy so far in our unheated greenhouse, though sensitive to watering in damp weather.) (10+) **E**
- 160.402 : ANEMONE BLANDA *** Greece, Viotia, Oros Parnassos. 1500m. Openings in coniferous woodland. (Incomparable woodlander. Deep blues, sometimes called '*ingramii*', are common on Parnassus, but it can be paler blue as well.) (15+) **B**
- 161.003 : ANEMONE HORTENSIS *** Italy, Sardinia. 850m. Ex a T. Norman coll. (A neglected W Mediterranean species & a special delight of Corsican & Sardinian woodlands with its myriad, many-petalled flowers in soft violets & pinks.) (15+) **B**
- 161.610 : ANEMONE PALMATA *** No data. A charming, small, summer-dormant, tuberous, SW European species seldom seen in cultivation. Lobed, rounded, basal leaves & yellow flowers, 3cm. across. No problem in a pan in the alpine-house. (10+) **C**
- 161.900 : ANEMONE PAVONINA *** Greece, Lakonia, between Areopoli & Githio. 100m. Edge of scrub. (The epitome of spring in Greece. Brilliant, pure-scarlet flowers with a white central zone (var. *ocellata*). Seed grown outside in Dorset, UK.) (20+) **B**
- 162.050 : ANEMONE PETIOLULOSA *** No data. An attractive, dwarf, tuberous-rooted species, widespread through the montane steppe of the Tien Shan, Pamir-Alai & other mountains of Central Asia but still little-known in cultivation. Finely cut foliage below pure yellow flowers, opening in spring from globular bronze or red-tinted buds. Not difficult in the alpine-house or bulb-frame but, like most of the small, tuberous anemones, not extremely long-lived and most easily maintained from seed.) (10+) **D**
- 227.702 : BELLEVALIA DUBIA *** Italy, Sicily, Castel Mola near Taormina. (Ex an A. Edwards coll. The most striking of the European species in a selected form with particularly brilliant, ultramarine blue young flowers. Electric.) (15+) **C**
- 227.703 : BELLEVALIA DUBIA *** Italy, Calabria, near Monasterace. Ex an M. Salmon coll. (Similar S Italian form.) (20+) **B**
- 227.705 : BELLEVALIA DUBIA** Greece, Messina, near Saidona. c.1000m. Under olives. D. Hoskins 98-9. (Coll. out of flower but almost certainly this fine species. *B. trifoliata* & *B. romana* also have cylindrical fruiting racemes & grow in S Greece.) (20+) **B**
- 227.770 : BELLEVALIA FORNICULATA *** Turkey, Agri, W of Eleskirt. 2300m. Hay meadows. (Outstanding with buds & flowers of penetrating turquoise-blue. Restricted to a few sites in the chilly Erzurum area, where its amazing blue mists the melt-water meadows. Choice but growable - maybe best outside in the UK. If in a pot, don't overdry it in summer.) (10+) **C**
- 227.800 : BELLEVALIA GRACILIS *** Turkey, Sivas, Camlibel Da., N of Yildizeli. 1600m. Exposed, stony areas. (10) **C**
- 227.840 : BELLEVALIA KURDISTANICA *** Turkey, Hakkari, Zab gorge at Bagisli. 1500m. Igneous scree. (10) **C**
- 227.900 : BELLEVALIA LONGIPES *** Turkey, Van, NNW of Baskale. 3000m. Open, stony slopes. (10) **C**
- 227.950 : BELLEVALIA LONGISTYLA *** Turkey, Van, E of Lake Van. 1800m. Heavy clay in moist, depression. (10) **C**
- 228.080 : BELLEVALIA PYCNANTHA *** Turkey, Van, NNW of Baskale. 2800m. Short turf in alpine meadows. (Near *B. forniculata* but with heads of strangely crumpled bells in deep, inky blue-black. An easily grown plant of moist meadows.) (15+) **B**
- 228.130 : BELLEVALIA RIXII *** Turkey, Van, NNW of Baskale. 2800m. Talus on open slopes. (Only known from around the type-locality. Falcate leaves & 5cm. stems of purple-brown flowers with violet anthers. Not easy. Best in an alpine-house pan.) (8) **E**
- 228.150 : BELLEVALIA ROMANA *** Greece, Ioanina, Mitsikeli. 860m. Ledges on S-facing, limestone cliff. (15+) **B**
- 228.410 : BELLEVALIA WEBBIANA *** No data. N Italian species near *B. romana* but with deep purple-brown flowers. (20+) **B**
- 232.110 : BIARUM CARRATRACENSE *** No data. One of the largest, most spectacular members of this strange genus in *Araceae*. Endemic to S Spain, though allied to the SW Asian *B. bovei*. Big, deep, rich red-purple spathes surround similarly coloured spadices in autumn before the oblong leaves appear. For the bulb-frame or alpine-house of nasally impaired aroid-enthusiasts.) (5) **D**
- 240.000 : BRIMEURA AMETHYSTINA *** France, Hautes-Pyrenees, Vallee d'Ossoue. 1500m. Stony clay over limestone. (More or less endemic to the Pyrenees. Like a dainty, miniature, brighter blue bluebell - easy & not seen as often as it should be.) (20+) **A**
- 240.100 : BRIMEURA FASTIGIATA *** France, Corsica, Pointe de Revellata. Sea-level. Among moss & stones in wet-flush (dry in summer). (Tiny bulb, only a few cm. high. Dense racemes of wide-open bells, lilac-pink in this form.) (15+) **B**
- 311.301 : COLCHICUM ATTICUM (Merendera attica) *** Turkey, Burdur, SSW of Tefenni. 1300m. Among scrub in clay over limestone. (Few linear leaves appear with dark-anthered white or pale pink flowers - in spring with this population.) (10+) **B**
- 311.420 : COLCHICUM AUTUMNALE *** No data. A plant of European meadows. Pink flowers in early autumn (20+) **A**
- 311.501 : COLCHICUM BALANSAE *** Turkey, Icel, NE of Gulnar. 1200m. Pockets of red clay on limestone. (A robust, S Turkish endemic. White to purple-pink flowers in autumn from amazingly long-necked, deep-growing corms.) (15+) **C**

Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 311.600 : COLCHICUM BAYTOPIORUM** * Turkey, Antalya, Gulluk Da. 750m. Among limestone boulders in dense scrub. (Ex a type-locality coll. of this local, medium-sized species. Pink flowers in autumn, with narrow, recurving leaves later.) (10+) C
- 311.702 : COLCHICUM BIVONAE** * Greece, Pieria, Oros Olimbos. 1000m. N-facing slopes. (One of the finest larger species. This is the form once called *C. bowlesianum*. Heavily tessellated rosy purple, bell-shaped flowers. Good outside in the UK.) . . . (20+) B
- 313.010 : COLCHICUM CORSICUM** * No data. A dwarf species from lowish altitudes in S Corsica. Lilac-pink flowers in autumn, followed by narrow, 10cm. high leaves. Reputedly uncommon in nature but easily grown & maintained in the UK. (20+) B
- 313.705 : COLCHICUM DECAISNEI** Turkey, Antalya, N of Kas. 1250m. Damp hollow in scrub. N. Stevens coll. (Flowers not seen & our guess as to identity, though it seems a little large for this species. Should have white to pink flowers in autumn.) . . . (20+) C
- 314.754 : COLCHICUM KOTSCHYI** Turkey, Gaziantep, W of Gaziantep. 850m. Among scrub on limestone. N. Stevens coll. (Medium-sized species, distributed E through Iraq & Iran. The white or pale-pink flowers often appear in late summer.) . . (20+) C
- 315.602 : COLCHICUM MACROPHYLLUM** Greece, Crete, Agios Ioannis. 750m. Open scrub. M. Jope 96-11. (Local in SW Turkey & some adjacent islands. Totally distinct in its large, pleated, *Veratrum*-like leaves. Usually with purple-pink & white chequered flowers in autumn, it is very variable in colour here & there are a good number of plants with pure white flowers.) (10+) C
- 315.900 : COLCHICUM MONTANUM** (*Merendera montana*, *M. bulbocodium*) * Spain, Aragon, N of Canfranc-Estacion. 1300m. (Bright, purple-pink flowers open flat in early autumn before the few, narrow, dark leaves. Easy & increases well.) (20+) B
- 316.400 : COLCHICUM PARNASSICUM** Greece, Viotia, Oros Parnassos. 1600m. Among grasses on stony, limestone slopes. 7.6.96 (Pale purple-pink autumn flowers followed by narrow leaves. Endemic to Parnassus & adjacent Elikon only.) (10+) B
- 317.710 : COLCHICUM SOBOLIFERUM** (*Merendera sobolifera*) * No data. A distinct little plant from SE Europe across to Iran. Stoloniferous corms, like *C. boissieri* & *C. psaridis*, and starry, white to pink flowers over a long period in spring.) (15+) B
- 317.802 : COLCHICUM SPECIOSUM** Turkey, Rize, above Ikizdere. 1400m. Alpine meadows. N. Stevens coll. (A spectacular, robust species from the wet mountains along the Black Sea coast of NE Turkey across the Caucasus to the Caspian ranges of Iran. Huge, deep-pink goblets in autumn. The best one for outdoor cultivation in UK gardens and a parent of most hybrids.) (15+) B
- 318.101 : COLCHICUM TRIGYNUM** (*Merendera trigyna*) * Turkey, Mugla, Gok Tepe. 1500m. Open stony areas among sparse *Pinus* on limestone. (Variable & near *C. atticum*. White to pale pink flowers over a long period in spring) (10+) B
- 318.802 : COLCHICUM VARIEGATUM** * Turkey, Antalya, N of Akseki. 1400-1600m. Limestone slopes with *Quercus*, *Pinus* or *Abies*. (An arresting and choice autumn-flowering species from SW Turkey & some adjacent E Aegean islands. Neat, thick-textured flowers with purple-black anthers & precise chequering in rich red-purple and off-white. Tidy, undulate leaves.) (8) D

Crocus : exciting 1998 collections from Turkey

To generalise, which we do not usually like to do, *Crocus* is the most difficult in cultivation, among the main genera of 'bulbs' we list. Because a few crocuses are familiar garden plants in Europe, many gardeners assume all are easy and turn to the imagined challenges of *Fritillaria* or some of the *Narcissus* spp. For the specialist grower, we are attempting to build up basic fertile parent-stocks, raised from wild material where possible, as a source of hand-pollinated seeds for our lists. This is less easy with *Crocus* than with most other genera, as they have few

seeds in a capsule & maintaining quite a large number of corms is necessary. Seed-collection is also quite critical & troublesome. Seed of many will always be expensive & in short supply. In our efforts to list a good range, we have been much assisted by several other growers, particularly David Stephens, who takes the National Crocus Collection in his care seriously. To David and to Norman Stevens, we are also grateful for some important collections of wild seed. Standard reference for the genus is Brian Mathew's model monograph 'The Crocus' (1982).

- 339.701 : CROCUS ADANENSIS** * Turkey, Adana, above Kurt Kalesi. Ex a N. Stevens coll. (Typically pale lilac-blue with a white throat, in spring. Related to *C. biflorus* & only found in this very small area but not too difficult to grow and proving a very worthwhile plant under bulb-frame conditions in the UK. Norman's coll., made high up above Wolf Castle, has shown more variability than some earlier ones. Some are larger-flowered. Some have yellow throats with a diffuse white rim.) (10) D
- 339.800 : CROCUS AERIUS** Turkey, Trabzon, Zigana Da. 2300m. Stable scree. D. Stephens 98-05. (An extremely rare opportunity to acquire wild-collected seed of this snow-melt species limited to very high altitudes in the wet mountains S of Trabzon in NE Turkey. Indeed, only recorded from this site and Soganli Da. Virtually unknown in cultivation, though the name has been greatly misapplied, usually to forms of *C. biflorus* subsp. *pulchricolor*. We listed seed from such an impostor a year or so ago, under our reference 339.810, derived from the stock awarded a Preliminary Commendation by the Joint Rock Garden Plant Committee of the RHS, AGS & SRGC. In the face of misidentification by such authorities, we suggest that the true plant has hardly been seen in cultivation at all. Likely to be difficult and to need treatment like other truly alpine species, such as *C. scardicus*, *C. pelistericus*, *C. scharojanii*, etc. - cool and moist in summer. Dark-veined, blue flowers with pale yellow throats in spring.) (8) F

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- 340.009 : CROCUS ANCYRENSIS** Turkey, Sivas, Seyfibel Gecidi. 1440m. Sandy clay along field edges. N. Stevens coll. (A coll. of this bright orange-yellow, spring-flowering, endemic of north-central Turkey, at the eastern extremity of its distribution. Growing here with *C. biflorus* subsp. *tauri*, so some seed of both may be included. Usually easy under glass in the UK.) (10+) C
- 340.201 : CROCUS ANTALYENSIS** Turkey, Antalya, Bey Dag. N. Stevens coll. (A handsome robust species in Series *Flavi*, localised in several, limited, disjunct populations in W Turkey. Seldom-seen in cultivation and rather difficult in our experience, though Brian Mathew states it is easily grown. Though usually a plant of heavy clays, we find it resents excess moisture at any time. Pale to deep lilac-blue, yellow-throated flowers, sometimes buff or marked with violet outside, in spring.) (10) D
- 340.351 : CROCUS ASUMANIAE** * Turkey, Antalya, N of Akseki. 1200m. Limestone slopes among sparse *Pinus*. (Quite a local species in the wild, limited to the oak-scrub region around Akseki in the western Taurus range, but it has proved to be one of the best of the saffron group in cultivation. Possible outside in a sunny, dry site and an easy, satisfying species under glass in the UK. Delicately veined, white to palest lilac flowers with showy, scarlet styles, generously produced in autumn.) (15+) C
- 340.800 : CROCUS BIFLORUS** (subsp. *biflorus*) * Italy, Basilicata, between Trivigno & Arizi. 800m. Ex M. Oorgaard 95-36 (A very rare plant in cultivation, the seldom-seen type-race from the limestones of S Italy. Parent of the sterile hybrid 'Scotch Crocus', usually with white flowers, strikingly striped with 3, brown-purple bands on the exterior segments. Possibly quite easy to grow.) . . . (10) D
- 340.801 : CROCUS BIFLORUS** (subsp. *biflorus*) * Italy, Puglia, between Altamura & Bari. 420m. Ex M. Oorgaard 95-28 . . . (10) D
- 341.250 : CROCUS BIFLORUS** subsp. **ISAURICUS** * Turkey, Antalya, Irmasan Gecidi N of Akseki. 1500m. Stony humus under *Abies* over limestone. (Spring-flowering race from the W end of the Taurus. In particularly fine form here, variable in colour & markings. Usually lilac-blue with strong, purple feathering outside. Attractive & satisfactory under glass in the UK.) (10) B
- 341.353 : CROCUS BIFLORUS** subsp. **MELANTHERUS** * Greece, Argolida, SW of Ligourio. Ex a M. Harvey coll. (Endemic to the Peloponnese & the only autumn-flowering race of this diverse species. Long confused with the similar spring-flowering *C.b.* subsp. *crewei*, (both have striking purple-black anthers). Always white with variable dark exterior stripes or speckles.) . . . (10+) C
- 341.456 : CROCUS BIFLORUS** subsp. **NUBIGENA** Turkey, Mugla, Gok Tepe N of Mugla. 1500m. Among sparse *Pinus* on limestone. N. Stevens coll. May, 1997. (It is not possible to place this population comfortably under any taxon but as Brian Mathew & David Stephens include it under *C.b.* subsp. *nubigena* we follow. It appears to be this mixed or intergrading with *C.b.* subsp. *isauricus* (with some *C. chrysanthus* thrown in) & is mentioned by Brian on p.82 of his monograph. Expect variable, mainly lilac, spring flowers but not all with have the black-maroon anthers characteristic of *C.b.* subsp. *nubigena*.) (10+) C
- 341.555 : CROCUS BIFLORUS** subsp. **PSEUDONUBIGENA** Turkey, Gaziantep, W of Gaziantep. 800m. D. Stephens 98-21 (Described by Brian Mathew in 1982, this remains almost unknown in cultivation. Endemic to S central Turkey, more or less in an arc round the northern rim of the Syrian Desert, an area of high summer temperatures, this will need careful watering in winter & drought when dormant. Distinctively clove-scented, white to lilac flowers with dark-striped exteriors in spring.) (5) E
- 341.670 : CROCUS BIFLORUS** subsp. **PULCHRICOLOR** * No data. From various forms of this rich violet-blue, yellow-throated, spring-flowering race native to damp meadows in the cold, wet, NW corner of Turkey. Good outside in the UK. (15+) B
- 341.721 : CROCUS BIFLORUS** subsp. **TAURI** Turkey, Sivas, Ziyaret Gecidi. 2100m. Among steppe vegetation on open limestone slopes. D. Stephens 98-15. (The eastern race in this complex group, usually a snow-melt plant of dryish, montane steppe, extending from central Turkey into NW Iran and Armenia. In theory, distinguished by its combination of numerous, erect leaves, thin corm tunics, usually unmarked lilac flowers and silvery bracts but really a variable and confusing entity, to which David has applied this name as it is the only one available for plants from this area. Expect this and the following collections to vary a lot.) (10+) C
- 341.725 : CROCUS BIFLORUS** subsp. **TAURI** * Turkey, Erzurum, Kop Da. 2400m. D. Stephens 98-07. (1997 seed collected from undehisced capsules on plants flowering along the margins of melting snow-patches at the end of May, 1998.) (10+) C
- 341.726 : CROCUS BIFLORUS** subsp. **TAURI** Turkey, Agri, near Eleskirt. 2100m. D. Stephens 98-27 (10+) C
- 341.727 : CROCUS BIFLORUS** subsp. **TAURI** Turkey, Kayseri, N of Sariz. 1800m. Grazed turf. D. Stephens 98-17 (10+) C
- 341.801 : CROCUS BORYI** * Greece, Messinia, S of Pilos. 200m. Open limestone slopes. (Big, creamy white goblets with orange styles in autumn. More widespread in S Greece than the sympatric *C. niveus* but not so easy to grow with us.) (10) D
- 341.880 : CROCUS CAMBESSEDESII** * Spain, Mallorca, Porto Cristo. Ex a D. Stephens coll. (This little Balearic endemic flowers from late autumn into early winter. Very variable from white to deep lilac-blue, usually purple-striped outside.) (15+) D
- 341.900 : CROCUS CANCELLATUS** (subsp. *cancellatus*) * Turkey, Icel, SE of Arslankoy. 1100-1450m. Among sparse conifers in clay over limestone. (The type-race from S Turkey into Israel. Scented, soft lilac-blue flowers in autumn.) (10) C
- 341.926 : CROCUS CANCELLATUS** subsp. **DAMASCENUS** Turkey, Adiyaman, Nemrut Da. 1350m. D. Stephens 98-23. (The most southern race of *C. cancellatus*, spread from Israel to N Iraq & W Iran, and possibly the most difficult to grow. All repay a hot, dry rest in summer, for this it is essential. Lilac-blue flowers, often basally veined outside with violet, in late autumn.) (8) D
- 341.972 : CROCUS CANCELLATUS** subsp. **LYCIUS** * Turkey, Antalya, between Kemer & Ovacik. Ex D. Stephens 97-02 (A local SW Turkish race with smaller, yellow-throated, creamy white flowers & widely spreading, rich orange style branches.) (10) D
- 342.002 : CROCUS CANCELLATUS** subsp. **MAZZIARICUS** * Greece, Evia, W of Halkida. 100m. E-facing limestone hills. (The attractive western race. Autumn-flowering with both white & lilac forms, often darkly veined.) (10) C

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
 B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 342.007 : CROCUS CANCELLATUS** subsp. **MAZZIARICUS** * Turkey, Burdur, W of Golhisar. 1150m. Openings among *Pinus* & *Quercus*. (Mainly SE European in its distribution, this race only enters Turkey in the SW corner.) (10) C
- 342.010 : CROCUS CANCELLATUS** subsp. **MAZZIARICUS** * Greece, Pieria, Oros Olimbos. (Very local on Olympus, where it only grows at around 400m. on the N foothills. Deep lilac-blue, well-feathered forms may occur.) (10) C
- 342.011 : CROCUS CANCELLATUS** subsp. **MAZZIARICUS** Greece, Argolida, SW of Ligourio. M. Harvey coll. (Most decorative of the 5 subspecies It needs a warm, dry rest & is well-suited to cultivation under glass in the UK. The species, as whole, with its characteristic, very coarsely reticulate tunic, is a plant of dry habitats in nature, though it often grows in heavy clays.) (10) C
- 342.400 : CROCUS CANDIDUS** * Turkey, Canakkale, near Lapseki. Ex N. Stevens 2074. (A most distinct plant of very limited distribution on the low, scrub-covered limestones of the Asian side of the Dardanelles. Often with only one, sometimes two, very broad, dark, glossy leaves and pure-white flowers, usually just misted outside with blue-grey, in early spring.) (8) D
- 342.802 : CROCUS CARTWRIGHTIANUS** * Greece, Evia. Ex Christian, Elliott & Hoog 613. (Spectacular autumn-flowers, almost as often white as lilac with huge flopping, scarlet styles. A Greek island plant - keep it dry under glass in the UK.) (10) C
- 343.000 : CROCUS CASPIUS** * Iran, Mazanderan, Caspian coast W of Chalus. Among scrub, in sand. (From both our own and P. Furse 5035 colls. made below sea-level along the Caspian shore in the 1960's. A beautiful autumnal species, with yellow-throated, white to lilac-pink flowers. Quite hardy in the UK but seldom seen - it does not like being too hot & dry in summer.) (10) E
- 343.208 : CROCUS CHRYSANTHUS** * Greece, Kozani, Oros Vourinos. Ex C. Lovell & P. Bird 97-188. (Somewhat neglected by the specialist grower, doubtless due to the existence of its easily grown, widely available hybrids, the wild forms tend to be much smaller, daintier plants, often none too easy to grow well. Distributed from Serbia to central Turkey, it is essentially a yellow-flowered version of the *C. biflorus* complex and is similarly highly variable. The species may cover several taxa.) (10) C
- 343.600 : CROCUS CVIJICII** * Greece, Imathia, Oros Vermio near Seli. 1500m. In turf under *Pinus* on N & W-facing slopes. (A very local, high altitude species, from the mountains where the Greek, Albanian & Macedonian borders meet. Scented spring-flowers in chrome-yellow to orange yellow. Tolerated our hot 1995 summer, dry under glass but maybe best kept cooler.) (10) E
- 343.800 : CROCUS CYPRIUS** Cyprus, Troodos, Chionistra. 1950m. Ex D. Stephens 96-08 (Little member of the *C. biflorus* group, only known from high in the western Troodos range. Pale violet to white with brilliant, red-orange filaments.) (8) E
- 344.610 : CROCUS FLAVUS** (subsp. *flavus*) * No data but the true wild plant - not the sterile 'Dutch Yellow'. Native to SE Europe into NW Turkey, its profuse fiery, orange-yellow flowers in spring make it one of the finest garden-plants in the genus. (15+) B
- 344.990 : CROCUS GARGARICUS** (subsp. *gargaricus*) * Turkey, Mugla, Gok Tepe N of Mugla. 1500m. Heavy clay in openings among *Pinus*. (This type-race is only known from here & Kaz Da., far to the NW. The Ulu Da. race (*C.g.* subsp. *herbertii*) is the commonly grown one - this is only very recently in cultivation. It has no stolons & a coarsely reticulate tunic. It also seems quite tolerant of drying-off in summer. Very hardy & neat with rich orange-yellow flowers in spring.) (10) D
- 345.100 : CROCUS GILANICUS** * Iran, Azerbaijan, between Heroabad & Asalem. 2400m. Ex Shirdelpur & Wendelbo 14910. (From a type-locality coll. of this local & little-known plant of the S Talysh, with white flowers in autumn. In Series *Kotschyani* & most resembling *C. kotschyanus* subsp. *suworowianus*, though possibly not closely related to it. A plant of pastures & the margins of beech forest in a comparatively high rainfall area, so must not be dried off too thoroughly when dormant.) (8) F
- 345.200 : CROCUS GOULIMYI** * Greece, Messinia, S of Kalamata. 300m. In humus among stones, under *Quercus*. (Local in nature but easy under glass in the UK. Prolific, distinct & beautiful pale lavender flowers on very long tubes in autumn.) (10+) B
- 345.211 : CROCUS GOULIMYI** from 'MANI WHITE' * From the fine white form of the type-race on the 'middle finger' of the Greek Peloponnese. This occurred in cultivation & is distinct from the wild *C.g.* var. *leucanthus*. May not come white. (5) D
- 345.220 : CROCUS GOULIMYI** var. **LEUCANTHUS** * Greece, Lakonia, SW of Monemvassia. Ex an S. Keeble coll. (From type-locality material of this recently described, geographically isolated race, which is evenly & consistently white-flowered.) (5) E
- 345.605 : CROCUS HADRIATICUS** * Greece. Ex B. Mathew 5048 (White autumnal flowers, usually with yellow throats. Shorter, more erect orange-red styles easily distinguish it from the allied, usually lilac, *C. cartwrightianus*.) (10) C
- 346.350 : CROCUS KERNDORFFIUM** * Turkey, "central Taurus." 900-1600m. Screes & among scattered *Quercus*, *Juniperus* & *Pinus*. Ex the type-collection, HKEP 90-10. (Described in 1993, in Series *Biflora* & possibly closest to *C. leichtlinii* but differs in the outside of the pale lilac-blue segments being consistently creamy white with a median violet stripe. Spring.) (5) F
- 346.500 : CROCUS KOSANINII** * Jugoslavia, Serbia, Kosovo, NNW of Kacanik. 300m. *Quercus* woodland. (A distinct little plant, quite recently described and only known from the oak woods of a small area of Kosovo. It likes cool summers & can be grown outside in the UK, though it is hardly as vigorous as *C. tommasinianus*, a form of which is currently circulating as *C. kosaninii*. Apart from many other substantial differences, the throat is white in *C. tommasinianus* & deep yellow in *C. kosaninii*. With bluish violet flowers, usually with dark stripes outside, in early spring, it is possibly closest to the N Italian *C. etruscus*.) (10) E

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- 346.703 : CROCUS KOTSCHYANUS** (subsp. *kotschyanus*) * Turkey, Kahramanmaras, Armut Dag. 1300m. Open areas among *Quercus* on limestone. (Lilac flowers, with yellow-blotched throats, in autumn. Excellent grower & increaser.) (10+) **B**
- 346.710 : CROCUS KOTSCHYANUS** (subsp. *kotschyanus*) * No data - from several E. Pasche colls. - for the garden. (20+) **A**
- 346.900 : CROCUS KOTSCHYANUS** subsp. **CAPPADOCICUS** Turkey, Sivas, Ziyaret Tepe. c. 2000m. Open sites, in turf & among limestone rocks. D. Stephens & N. Stevens colls. (From type-locality colls. of the lovely central Anatolian race. Lilac, autumn flowers, beautifully veined with a darker shade. Not so vigorous as the type-race but not at all difficult & seldom seen.) . . . (10+) **C**
- 346.901 : CROCUS KOTSCHYANUS** subsp. **CAPPADOCICUS** * Turkey, Kayseri, N of Sariz. D. Stephens 98-16 (10+) **C**
- 347.101 : CROCUS KOTSCHYANUS** subsp. **SUWOROWIANUS** Turkey, Rize, Ovit Dag. 2600-3000m. Dryish, stony ridges. D. Stephens 98-36. (The most distinct, white-flowered race from high altitudes in NE Turkey into Georgia. Seldom seen in cultivation and not one of the easiest to grow. An alpine plant, adapted to considerable snow-cover in winter & to cold summers, this definitely resents both fluctuating and high soil temperatures, though unlike most alpine *Crocus* spp., it does not mind drying, as long as it is cool. Slower to flower from seed than some, it does so reliably with us when there is a small fall in the mean-temperature at any time from July on. Variable in size & markings, its creamy white flowers are usually delicately veined with violet) (15+) **D**
- 347.102 : CROCUS KOTSCHYANUS** subsp. **SUWOROWIANUS** Turkey, Kars, E of Savsat. 2625m. D. Stephens 98-34 (15+) **D**
- 347.103 : CROCUS KOTSCHYANUS** subsp. **SUWOROWIANUS** Tu., Erzurum, Golyurt. 2400m. D. Stephens 98-38 . . . (15+) **D**
- 347.403 : CROCUS LAEVIGATUS** * Greece, Evia, SE of Karistos. 200m. Among scrub in open, stony areas. (Endemic to Greece & its islands. Very variable autumn & winter flowers in white to lilac with diverse purple markings outside.) (10+) **C**
- 347.501 : CROCUS LEICHTLINII** * Turkey, Elazig, SE of Elazig. Ex KPPZ 182. (Limited to the volcanic area around Karaca Da. in SE Turkey - very cold in winter ; very hot & dry in summer. Spring flowers, usually in greyish blue, slaty outside, with deep yellow throats. A difficult, moisture sensitive plant for the specialist, little known in cultivation & likely to remain so.) (5) **E**
- 347.601 : CROCUS LONGIFLORUS** * Italy, Sicily, Madonie Nebrodi. Ex an A. Edwards coll. (Autumn-flowering from S Italy & Malta. Scented, pale to deeper purple flowers with dark veins on a buff ground outside. Quite easy in the alpine-house.) . . . (10) **C**
- 347.610 : CROCUS LONGIFLORUS** * No data. From a good deep-coloured clone pollinated with one from Malta. (10) **C**
- 347.800 : CROCUS MALYI** * Croatia, Velebit Planina above Karlobag. 500m. Among limestone boulders. (A splendid endemic of the stark limestones of the Velebit range, rising sheer above the Adriatic coast. Certainly one of the finest of all species with big, pure-white flowers with yellow throats in late spring. A good grower, said to be excellent outside in sun in the UK.) (10) **C**
- 347.910 : CROCUS MATHEWII** * No data. A recently described, lilac, autumn-flowering, SW Turkish saffron *Crocus* of somewhat debatable status. Distributed from SE Mugla into Antalya, it is close to the (apparently) geographically isolated *C. asumaniae* but is distinguished in the type-description mainly by its rich, deep-violet throat. The long-known population on Baba Dag (once assigned to *C. pallasii*), however, is not consistent in this respect and many plants lack this essential characteristic. Reputedly, some other populations are more even. This seed is from corms collected by E. Pasche in the undisclosed type-locality, supplemented with material from other colonies. Anticipate some variation from seed and the possibility that some selection in cultivation may be needed. So far proving almost as accommodating as *C. asumaniae*, under similar conditions, there is no doubt that once selected, purple-throated clones are available to gardeners, they will be rated among the most striking of all crocuses. (5) **E**
- 348.800 : CROCUS NIVEUS** Greece, Messinia, S of Kalamata. 200m. Among scrub on rocky, N-facing, limestones slopes. D. Hoskins 98-21. (Magnificent, pure-white, autumn-flowering species of the S Peloponnese with gorgeous scarlet styles. One of the most satisfying & reliable in cultivation - a good grower in the bulb-frame or in pots.) (10+) **C**
- 348.806 : CROCUS NIVEUS** * Greece, Lakonia, N of Pargos Dirou. c.150m. N-facing bank. D. Hoskins 98-2 (From a locality where the exquisite pale lilac-pink & bicoloured forms occur, so expect some fine variations in this wild coll.) (10+) **D**
- 349.020 : CROCUS NUDIFLORUS** * No data. A splendid species from moist meadows in SW France & N Spain, reaching about 2000m. in the Pyrenees. One of the best outside in UK gardens, where its stoloniferous character can result in fine colonies. Elegant flowers, normally in rich purple (it can vary to paler shades) appear on long tubes before the leaves in autumn. (15+) **B**
- 349.305 : CROCUS OLIVIERI** (subsp. *olivieri*) Greece, Arkadia, E of Tripoli. 750m. M. Harvey coll. (Spring-flowering & widespread (though, like many, rather local) at middle-altitudes through the Balkans & W Turkey. This type-race has bright orange-yellow flowers, usually without any exterior markings, other than some brown shading on the perianth-tube.) (10+) **C**
- 349.606 : CROCUS OREOCRETICUS** * Greece, Crete, Psiloritis. Ex SBL 347. (Autumn-flowers in mid- to deep lilac with purple veining & silvery to buff exteriors. A member of the *C. sativus* group from high up in the Cretan mountains.) (10) **C**
- 349.803 : CROCUS PALLASHII** (subsp. *pallasii*) * Greece, Samos, Lazaros pass, between Vourliotes & Pandrosos. (Pale lilac flowers with feathery, scarlet style branches, in autumn. Like others in the *C. sativus* group, it enjoys a hot, dry rest in summer.) (8) **C**
- 350.000 : CROCUS PELISTERICUS** * Macedonia, Karadzica Planina. Peaty turf. Ex H. Zetterlund 85-67 (Limited to a very few localities, usually above 1900m., along the Greek-Macedonian border, this is a difficult snow-melt alpine, which needs to be kept moist in summer and dryish in winter. Drought & high temperatures will kill it rapidly. Near *C. scardicus* with striking flowers, described by Brian Mathew as having "an unusual intensity of colour, a deep rich violet with a very glossy surface.") (5) **E**

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- **C** : \$4.00 ; £2.50 ; DM6,- ; FF21.- **E** : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- **D** : \$5.00 ; £3.50 ; DM9,- ; FF30.- **F** : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 350.001 : **CROCUS PELISTERICUS** * Greece, Pela, Kajmakcalan. 1700m. Wet mountain meadow on mica-schist. (5) **E**
- 350.011 : **CROCUS PESTALLOZAE** from **BLUE FORM** * No data. Quite a strong-coloured form of this dainty, little species with bunches of small, neat, rounded blue-violet flowers with yellow throats, in early spring. A little sweetie. (10) **D**
- 350.800 : **CROCUS RETICULATUS** (subsp. *reticulatus*) * Croatia, Velebit Planina above Tucepi. 900m. Openings among scrub on limestone. (Local but widespread, spring-flowering species. Lilac, beautifully marked outside with very dark violet.) (10) **C**
- 351.010 : **CROCUS ROBERTIANUS** * Ex a M. Harvey coll. (Pale to deeper lilac-blue with a frilly, orange style. Brian Mathew rates it "one of the best of the autumnal species." Not difficult under glass but said to be growable outside in the UK.) (10) **D**
- 352.099 : **CROCUS SEROTINUS** subsp. **SALZMANNII** * Spain, Granada, Sierra Nevada below Penones de San Francisco. 2300m. Turf in NW-facing depression. (A strongly stoloniferous race from alpine-turf. We came across it in 1970 but, other than recording its existence, no-one has thought it worth distinguishing. We have not seen any other quite like it but the *C. serotinus* group is more than a little complicated. Small corms with long, couch-grass-like stolons. Profuse, pale lilac flowers in autumn.) (15+) **C**
- 352.400 : **CROCUS SIEBERI** (subsp. *sieberi*) Greece, Crete, Hania, Omalos. Ex M. Jope 95-46. (The type-race, endemic to Crete is very rarely seen in gardens. Flowers in spring, always basically white but stained outside with purple brush-marks & with an orange or deep yellow throat - the invalid name *C.s. var. heterochromus* was apt. A beautiful but difficult snow-melt plant.) (8) **D**
- 352.455 : **CROCUS SIEBERI** subsp. **ATTICUS** Greece, Atiki-Pireas, Pendeli E of Athina. c. 800m. M. Harvey coll. (A type-locality collection of this race, also seldom seen in cultivation & with a restricted distribution in nature, almost confined to Attica. Distinct in its very coarse, *C. cancellatus*-like corm-tunics. Yellow-throated, pale to deep violet-blue flowers in spring.) (10) **C**
- 352.554 : **CROCUS SIEBERI** subsp. **SUBLIMIS** * Greece, Trikala, Ori Kerketio. Ex C. Lovell & P. Bird 97-227 (Lilac blue flowers with yellow throats as the snow melts in spring. The race from most of mainland Greece. Easier to grow than the type.) (10) **B**
- 353.120 : **CROCUS SPECIOSUS** subsp. **XANTHOLAIMOS** * Turkey, Sinop, SW of Kabali. 1350m. Ex AHEP 83-24 (Only known from *Abies* woodland in this wet area. More dainty than the type race with narrower leaves & smaller flowers, distinguished by their yellow, rather than white, throats, filaments & anthers. Otherwise, translucent, veined lilac-blue goblets in autumn.) (15+) **B**
- 353.210 : **CROCUS THOMASII** * No data. Autumn-flowering & close to Greek *C. hadriaticus* but with pale to deep lilac flowers. Native to S Italy & the limestones of the Adriatic coast-ranges, below 1000m., this will need a warm, dry summer rest. (10) **C**
- 353.413 : **CROCUS TOMMASINIANUS** from **'PICTUS'** * Though this species, actually a rather local plant in the Balkans and not at all well-known botanically, can be a (usually welcome) weed in some British gardens, some of its variants are more restrained. This distinct form with white tips to the lilac flowers is both striking & not at all widely available commercially. (15+) **B**
- 353.600 : **CROCUS TOURNEFORTII** * Greece, Rhodes. Ex an I. Barton coll. (A charming plant of the Greek islands. Ideal for the alpine-house. Lilac-blue flowers with yellow throats open flat & stay open at night during late autumn into winter.) (10+) **C**
- 354.002 : **CROCUS VELUCHENSIS** * Yugoslavia, Serbia, Kosovo, above Vratnica. 800m. Leaf-soil over clay in dense *Fagus* woods. (A splendid, woodland form from the area where Albania, Kosovo & Macedonia meet. Large, lavender-blue flowers shading to darker, violet tips, in spring. Likes it cool & not too dry. Does well here in a pot but may be just as good outside.) (10+) **B**
- 354.205 : **CROCUS VERNUS** (subsp. *vernus*) Slovenia, near Novo Mesto. W. McLewin 98-04. (The wild, central European ancestor of many hybrids, itself rarely seen in gardens. The eastern populations, once distinguished as *C. scepusiensis* and *C. heuffelianus*, have their large, lavender flowers tipped with darker purple 'Vs', though some Slovenian colonies are mainly white.) (15+) **B**
- 354.600 : **CROCUS VERSICOLOR** * France, Alpes de Haute Provence, Col de la Colle St. Michel. 1400m. Stony, S-facing slope. (Endemic to SE France, just crossing into Italy. Elegant white or pale lilac flowers, delicately feathered outside, in spring. Usually quite late with us, like the related *C. malyi*, but in 1998 it flowered very early - it all depends on the winter weather) (8) **C**

SOME CROCUSES FOR THE OPEN GARDEN : A COLLECTION

Many of the rarer *Crocus* species are difficult plants for the specialist bulb-grower but, apart from the mass-produced *C. chrysanthus* and *C. vernus* hybrids, there are a few pure species, which are quite easily grown in the open garden, in the UK. For those who find our range of awkward plants daunting and retreat to the security of the bulb catalogues, we can offer seven packets of seeds representing both spring and autumn-flowering species, which should do well outside in most British gardens. One packet each of *C. flavus*, *C. nudiflorus*, *C. veluchensis*, *C. vernus*, *C. speciosus xantholaimos*, *C. tommasinianus 'Pictus'*, *C. kotschyanus* : 7 packets in all (list price £13.50).

For only £10 or \$15

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
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Cyclamen : an indispensable genus

Few genera inspire such devotion as cyclamen. Their flowers & beautiful foliage can be enjoyed almost throughout the year. Only the basic wild species are here. Garden selections are in the last section of this list. *C. hederifolium*, *C. coum* & a few others are, of course, reliable garden-plants but the majority can be grown to perfection, in the UK, only under glass. All, including *C. rohlfsianum*, will take very brief periods of light frost but some measure to prevent prolonged or severe freezing is only common-sense. Shading & preventing dehydration

when dormant are sensible also. Sowing seed straight from the capsule is a counsel of perfection. Reasonably fresh seed should be perfectly satisfactory. Like most of the species in this list, these germinate at low-temperatures. Soaking seed in hot (not boiling) water & leaving for 24 hours at room-temperature before sowing appears to aid germination. Always keep pots of ungerminated seed (they will appear in time) and guard against mice, which love them as much as we do. The best references are C. Grey-Wilson's monographs on the genus.

- 358.000 : CYCLAMEN AFRICANUM** * Algeria, Kabylie, E of Azazga. 850 m. Humus under deciduous *Quercus*. (Large, patterned, dark green leaves & big, pink flowers in autumn. Borderline hardness in UK - best grown frost-free.) (10+) **C**
- 358.500 : CYCLAMEN BALEARICUM** * Spain, Mallorca, N of Andratx. 350m. In humus among *Quercus*. Ex a D.M. Hoskins coll. (Delicately pencilled, white flowers in spring. Likes a lot of shade, resents overdrying in summer & is best frost-free.) (15+) **B**
- 360.100 : CYCLAMEN COUM f. ALBISSIMUM** * Syria (Israeli Occupied Territory), Golan Heights near Mas'ada. (The recently introduced pure white form of *C. coum*, lacking the dark 'nasal markings' of previously cultivated whites. Surely one of the most exciting of several variants brought to light & introduced through Cyclamen Society field-work. Rather thin-textured, round, unmarked, dark green foliage and big, broad flowers. Interesting not only in its distinct appearance but in its southern habitat. Because of the latter, as well as its rarity in cultivation, it will be best grown under glass in the UK for the present.) (10) **E**
- 360.500 : CYCLAMEN COUM subsp. CAUCASICUM** (*C. elegans*) * Iran, Mazandaran, S of Chalus. 20m. In humus & moss in wet *Fagus* woodland. (Maintained from our 1966 coll. by D. Hoskins, who is able to spare some seed this year. Not an easy plant to grow, seldom setting much seed, it continues to be a rarity in cultivation. It almost certainly merits specific status as *C. elegans* but more field-work in the Caspian forests is needed to establish the alleged clinal variation. Exquisite, large pink flowers without a white 'nose' & with elongated, acute petals above pointed, silver-patterned leaves, more heart-shaped than in western *C. coum*. It must have some protection in the UK & is best grown frost-free, shaded & cool in summer, when it should never be allowed to dry completely. Its peak flowering is in early winter, usually November in the UK, filling a gap in the *Cyclamen* season.) (10) **F**
- 360.510 : CYCLAMEN COUM subsp. CAUCASICUM** (*C. elegans*) * Azerbaijan. No further data. From the material grown at Moscow Botanic Garden as *C. elegans* & originally collected in Azerbaijan. Not quite the same as our 1966 colls. from further east on the Caspian coast of Iran but seems a little easier to grow & still has the characteristics of this distinct taxon.) (10) **E**
- 361.510 : CYCLAMEN CYPRIUM** * No data. Fragrant, white flowers with auricles & magenta blotches around their mouths, from late autumn into winter. Distinctive, grey-marbled, dull-green leaves, crimson below. Best grown frost-free in the UK. (15+) **C**
- 363.003 : CYCLAMEN GRAECUM** * Greece, Lakonia, Agios Nikolaos NW of Githio. 500m. Steep slopes under olives. (From several forms, originally selected in the wild for the outstanding patterns & shapes of their leaves.) (15+) **C**
- 363.015 : CYCLAMEN GRAECUM** * Greece, Lakonia. (From a coll. made in the Mani over 20 years ago by Alan Edwards (Surrey, UK) with whom it has survived unharmed outside since then and proved itself to be reliably free-flowering.) (15+) **B**
- 363.016 : CYCLAMEN GRAECUM** Greece, Messinia, between Kardamili & Petriovouni. M. Jope 98-07 (15+) **B**
- 363.017 : CYCLAMEN GRAECUM** * Greece, Messinia, SW of Hora. Ex an H. & I. Barton coll. (From two fine clones selected by Ivor Barton in 1980, both with excellent foliage and one with particularly richly coloured, carmine-pink flowers.) (15+) **B**
- 363.049 : CYCLAMEN GRAECUM** * Turkey, Antalya, W of Kemer. 300m. Among *Pinus* on steep, limestone slope. (From a good clone with well-marked foliage which, like many of the Turkish forms, is delicately scented.) (10+) **C**
- 363.098 : CYCLAMEN GRAECUM** * No data. From a plant, originally from the garden of John Blanchard's father, grown outside for many years by Dinah Batterham (Dorset, UK). It must be at least 50 years old and is huge, carrying hundreds of flowers, but this is the first time it has ever set seed with Dinah. "Lovely and has very deeply coloured, long petals," she writes. (15+) **B**
- 363.099 : CYCLAMEN GRAECUM** * No data. From a very wide range of this magnificent, autumn-flowering species, variable in colour from carmine-pink to shell-pink, in time of flowering (from August to November in the UK) &, of course, in size, shape & markings of the leaves. Well worth growing for the last quality alone. Safest frost-free, with a warm summer-rest.) (20+) **B**
- 363.100 : CYCLAMEN GRAECUM f. ALBUM** * Data as for 363.003. Pure white ex the original E. & R. Franke coll. (10) **E**
- 364.003 : CYCLAMEN HEDERIFOLIUM** * Greece, Evia, W of Karistos. 200m. Among scrub on schist. (A distinct, large-leaved, large-flowered race, resembling *C. africanum*. Long, late flowering-season, well into November under glass with us.) (15+) **B**
- 364.004 : CYCLAMEN HEDERIFOLIUM** * Greece, Lakonia, Oros Taigetos, Profitis Ilias. 1500m. Ex D. Hoskins 95-14. (15+) **B**
- 364.100 : CYCLAMEN HEDERIFOLIUM f. ALBUM** * No data. From white-flowered plants. Variable foliage. (20+) **B**

Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 364.520 : CYCLAMEN INTAMINATUM *** No data. Distinct variant with dark, unmarked leaves, like a plain-leaved *C. coum*. Dainty, delicately veined, white flowers in early autumn. Usually a more enthusiastic grower than other forms of this. (20+) **B**
- 365.000 : CYCLAMEN LIBANOTICUM *** Lebanon, NE of Beirut. 1000m. Steep, limestone scree over humus-rich soil on N-facing slope. Ex an E. Hodgkin coll. (Derived from a little material collected by Eliot Hodgkin in March 1962, guided by Pere Mouterde, who had rediscovered this extremely local species in the wild the previous year. Distinct from the long-cultivated form in its elegant, longer-petalled, deeper-pink flowers & in its more distinctly marked leaves, often pink-tinted as they unfold.) (10) **E**
- 365.010 : CYCLAMEN LIBANOTICUM *** No data. Most sumptuous of the spring-flowering ones with large, pale-pink flowers, distinctively marked with crimson. We have seen it grown successfully outside in the UK but it is best under glass. (15+) **C**
- 366.500 : CYCLAMEN PERSICUM *** Lebanon, S of Tripolis. (From material we collected in the 1960's in the Lebanese hills, where it fills the dry-stone walls of abandoned terraces with a profusion of white & pale pink, crimson-nosed flowers.) (15+) **C**
- 366.510 : CYCLAMEN PERSICUM *** Greece, Rhodes. Ex an E. Sewell coll. (From an excellent form, dwarfier & altogether more compact than usual. This flowers profusely and always excites attention when exhibited.) (10+) **C**
- 366.551 : CYCLAMEN PERSICUM from CRIMSON FORM *** No data. From an exceptional crimson-pink form, grown by John Blanchard's father under the barely decipherable label 'Karpat'. It has been further selected by Peter Moore as 'Tilebarn Karpathos', though there was no other indication that the original came from that island. A lovely, deep, dusky colour.) (10+) **D**
- 367.005 : CYCLAMEN PSEUDIBERICUM *** Turkey, Kahramanmaras, Armut Dagi above Tekir. 1500m. Among deciduous oaks on N-facing slope. (Our cultivated seed from a colony we found in 1985 - it represents a considerable northern extension of the distribution, well into the Anti-Taurus & at the altitudinal limit recorded for the species. Well-marked, glossy foliage.) (10) **D**
- 367.010 : CYCLAMEN PSEUDIBERICUM *** No data. Among spring-flowering ones, this S Turkish endemic rivals the related *C. libanoticum* in its magnificent rich crimson-purple flowers. Possible outside & splendid in an unheated greenhouse (15+) **C**
- 367.015 : CYCLAMEN PSEUDIBERICUM from PALE PINK FORMS *** Turkey, Adana, near Dortyol. Ex ACW 664. (Originally selected out of the Albury, Cheese & Watson coll. of this very variable Amanus population by Jack Boggis in the late 1960's. Distinct from most cultivated forms, not only in the colour but in their elegant, more elongated petals.) (10) **D**
- 367.990 : CYCLAMEN REPANDUM from WHITE FORMS *** The cultivated white forms of the type race of *C. repandum* seem to have originated from Corsican plants. The flowers are pure white without a pink nose and resemble those of *C. creticum* except for the exerted style. Seldom sets much seed but this usually produces a good number of white-flowered seedlings. (10) **E**
- 368.003 : CYCLAMEN REPANDUM subsp. PELOPONNESIACUM *** Greece, Lakonia, Oros Taigetos, above Paleopanagia. 1400m. In humus under *Platanus*, *Abies* & *Pinus*. (From plants with foliage, speckled all over with white, but this population, from a much higher altitude than that usually recorded for this subspecies, has extremely variable leaf-markings, many like the type-race. Flowers, however, are consistently the pale-pink with red noses to be expected in most Peloponnese *C. repandum*.) (10+) **D**
- 369.000 : CYCLAMEN ROHLFSIANUM *** Libya, Cyrenaica, Benghazi to Jebel Akhdar. 200m. Among scrub in limestone pockets. (Pale to deep pink flowers with projecting cones of anthers in autumn. Beautiful rounded leaves. Must be frost-free.) (10+) **D**
- 383.450 : DAPHNE LAUREOLA *** No data. Dark, leathery evergreen leaves. Fragrant, yellow-green flowers in winter. (8) **A**
- 384.020 : DAPHNE MEZEREUM *** No data. Glorious shrub. Purple-pink flowers wreath the naked branches in spring. (8) **A**
- 384.050 : DAPHNE MEZEREUM f. ALBA *** No data. White flowers followed by yellow fruits. Comes 'true' from seed. (8) **B**
- 385.050 : DAPHNE PONTICA *** No data. Glossy evergreen foliage. Scented, spidery, yellow-green flowers in spring. (8) **A**
- 385.450 : DAPHNE SERICEA *** No data. Grey-green leaves. Rosy pink, scented flowers & orange-red fruits. (8) **C**

Erythronium dens-canis : 1998 wild collections not to be missed

- 472.002 : ERYTHRONIUM DENS-CANIS** Bosnia & Hercegovina, NW of Bosanski Petrovac. W. McLewin 98-31 (A splendid, fresh collection from the infamous "Bihac pocket" of N Bosnia. Perhaps the finest in the genus with beautifully brown-mottled, grey-green leaves and large, elegant, rosy purple flowers in spring. Easy outside in the UK but slower to establish than some.) (20+) **C**
- 472.003 : ERYTHRONIUM DENS-CANIS** Slovenia, near Ljubljana. W. McLewin 98-23. (From an extraordinary site, a vestigial ancient meadow almost within the city boundary of the Slovenian capital, to which Will was taken by local botanists.) (20+) **C**
- 472.200 : ERYTHRONIUM SIBIRICUM** (*E. dens-canis* var. *sibiricum*) Russia, SE of Tomsk. (The eastern version of the preceding, collected in central Siberia, on the northern rim of the Altai. Distinct in its yellow anthers and somewhat larger flowers, which appear to be frequently white but little information exists on it in nature & it is still an obscure plant in cultivation.) (20+) **D**

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Fritillaria : we maintain an outstanding range of seeds

Possibly the genus most esteemed by the more specialised of British bulb-enthusiasts at present. Most are not at all difficult to grow in standard bulb-frame conditions or, perhaps better, in pots in a well-ventilated, unheated greenhouse in the UK. Few, however, are easy in the open garden in Britain. As with *Crocus* & *Narcissus*, we progress towards our aim of establishing authentic parent-stocks of all species, if possible raised from wild seeds, for the production of hand-pollinated seed for our lists. While specialists await the definitive, modern monograph

from Martyn Rix, popular interest in this genus may be stimulated by the recent publication of "The Gardener's Guide to Growing Fritillaries" by Kevin Pratt & Michael Jefferson-Brown. This is primarily aimed at presenting widely cultivated representatives to the general gardener. Some names in this book are not used here, as we generally follow the nomenclature of the Rix accounts in the standard floras for Europe, Turkey & Iran. "The Bulb Book" by Rix & Phillips provides a reasonably complete photographic record with brief, accurate notes.

- 490.000 : FRITILLARIA ACMOPETALA** (subsp. *acmopetala*) * Turkey, Antalya, Gullukdagi, NW of Antalya. 800m. Grassy & stony areas among scrub. (Round-shouldered, elegantly waisted bells, usually in yellow-green with brown central shading.) (15+) **B**
- 490.010 : FRITILLARIA ACMOPETALA** * No data. One of the easiest in a bulb-frame or even outside in the UK. (20+) **A**
- 490.011 : FRITILLARIA ACMOPETALA from DARK FORM** * No data. Comes 'true' from seed - a fine thing. (15+) **B**
- 490.100 : FRITILLARIA ACMOPETALA subsp. WENDELBOI** * Turkey, Antalya, S of Madenli. 1900m. Pockets of black soil & limestone talus. (The high altitude inland race, recorded in 3 sites above 1600m. in the Cilician Taurus. This is from the area of the type-locality. It differs substantially from the typical race in its much broader foliage & large flowers with sharply angular, rather than rounded, 'shoulders'. A big, bold plant with spectacular flowers in chocolate and a luminous lime yellow-green.) (10) **E**
- 490.510 : FRITILLARIA ALBURYANA** * No data. A little cultivated seed of this notoriously difficult pink species. (5) **F**
- 490.800 : FRITILLARIA ALFREDAE subsp. GLAUCOVIRIDIS** * Turkey, Adana, above Hasanbeyli to Fevsipasa. 1100m. Open stony areas among *Quercus* scrub on W-facing slopes. (A most graceful & beautiful species - elegant, yellow-green flowers with a glaucous sheen. Endemic to this corner of Turkey near the Syrian border. Not difficult in a bulb-frame in the UK.) (15+) **C**
- 491.100 : FRITILLARIA ARGOLICA** * Greece, Argolida, near Ermioni. Ex an R. & R. Wallis coll. (Recently acknowledged taxon, supposedly a hybrid or intergrade between *F. graeca* & *F. rhodocanakis* & more or less intermediate in appearance.) (10+) **D**
- 491.101 : FRITILLARIA ARGOLICA** * Greece. Ex V. Horton 1415 (Originally collected as a hybrid between *F. graeca* & *F. rhodocanakis*, this appears to fit in here, though it is closer to *F. rhodocanakis* than to the former species.) (10+) **D**
- 491.102 : FRITILLARIA ARGOLICA** Greece, Argolida, Poros. 200m. Uncultivated olive-groves. M. Harvey coll. (A wild coll. from this island off the NE tip of the Argolida peninsula and next to the *F. rhodocanakis* island of Idra.) (10+) **E**
- 491.205 : FRITILLARIA ARMENA** * Turkey, Agri, Tahir Gecidi. 2350m. Ex R. & R. Wallis 93A-36. (The small, dark, snow-melt endemic of the E Turkish mountains, seldom-seen in cultivation. Nodding bells, purple-black inside & out.) (10) **D**
- 492.101 : FRITILLARIA BITHYNICA** * Greece, Samos, Ambelos. 700m. Under *Castanea* in leaf-soil on mica-schist. Ex a D.M. Hoskins coll. (Glaucous, yellow-green bells, yellower inside. The island, Samos & Khios, races are little-known but this is certainly a fine plant with strongly winged seed-capsules, though these are apparently not a necessary diagnostic character.) (10+) **C**
- 492.200 : FRITILLARIA BUCCHARICA** * No data. Beautiful Central Asian, distributed from NE Afghanistan into the Pamir-Alai at up to 2400m. Up to 10, open, green-tinted, white bells on 20cm. stems. No great trouble in the bulb-frame in the UK. (15+) **C**
- 492.400 : FRITILLARIA CARICA** (subsp. *carica*) * Greece, Samos, Ambelos. 950m. Under *Pinus* on mica-schist. Ex a D.M. Hoskins coll. (Grey-green leaves & dark nectaries inside its clear-yellow bells. One of the most charming of this group.) (10+) **C**
- 492.401 : FRITILLARIA CARICA** (subsp. *carica*) * Turkey, Mugla, Gok Tepe. 1500m. Under sparse *Pinus* on limestone. (10) **C**
- 492.402 : FRITILLARIA CARICA** * Turkey, Burdur, W of Yesilova. 1280m. Loose serpentine talus of open slope. (A fine form, growing in a precisely similar habitat with the same serpentine-associates as *F. carica* subsp. *serpenticola*.) (10) **D**
- 492.700 : FRITILLARIA CAUCASICA** Turkey, Kars, W of Sarikamis. 2000-2200m. Heavy, peaty soil in open, stony areas of coniferous zone. N. Stevens coll. (Not often seen in cultivation, the species extends from this cold NE corner of Turkey across Transcaucasia into NW Iran. A fresh 1998 coll. of a form we have grown here without too much trouble for over a decade, though it barely increases vegetatively. Rather a fine thing with quite large, conical, glaucous purple-brown bells.) (10+) **D**
- 493.000 : FRITILLARIA CONICA** * Greece, Messinia, S of Pilos. 200m. Edge of *Quercus* scrub on open limestone slope. (One of the more robust in the group of E Mediterranean, yellow-flowered species. Up to 25cm. high with large bells & rich-green, glossy foliage. Extremely local in nature but not at all difficult to grow in the alpine-house or bulb-frame in the UK.) (15+) **C**
- 493.001 : FRITILLARIA CONICA** Greece, Messinia, SE of Pilos. Edge of macchie. M. Harvey coll. (15+) **D**
- 493.305 : FRITILLARIA CRASSIFOLIA** (subsp. *crassifolia*) * Turkey, Erzurum, Kop Dag. 1700m. Ex R. & R. Wallis 93A-17. (The type race has a wide but very local distribution across Turkey from Denizli in the W to Erzurum in the E. Always in isolated sites & always growing in steep, loose, unstable talus-slides. In general, a dwarf plant with fleshy, twisted, greyish foliage & big, greenish yellow, brown-chequered bells. This is a very fine form but the least easy to grow of the three listed here.) (15+) **D**

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- **C** : \$4.00 ; £2.50 ; DM6,- ; FF21.- **E** : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- **D** : \$5.00 ; £3.50 ; DM9,- ; FF30.- **F** : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 493.306 : FRITILLARIA CRASSIFOLIA** (subsp. *crassifolia*) * Turkey, Gumushane, S of Soganli Gecidi. 1600m. Ex R.& R. Wallis 93A-46. (An interesting northern extension of the range well into the Pontus and a vigorous grower in cultivation.) (15+) **D**
- 493.307 : FRITILLARIA CRASSIFOLIA** (subsp. *crassifolia*) * Turkey, Kahramanmaras, Ahir Dag. Ex R.& R. Wallis 93-25. (A southern population from well within the distribution of the allied *F. hermonis* subsp. *amana*, which oddly does not seem to occur on this mountain. A particularly dwarf form with somewhat yellower flowers than the preceding two. All are distinct.) (15+) **D**
- 493.500 : FRITILLARIA CRASSIFOLIA** subsp. **KURDICA** * Turkey, Van, NNW of Baskale. 2800m. Open, stony slopes. (In this site, variable in the colour & markings of its plump, chequered bells - striped & tinted in red-brown to yellow-green.) (15+) **C**
- 493.503 : FRITILLARIA CRASSIFOLIA** subsp. **KURDICA** * Iran, Kurdistan, S of Rezaiyeh. 1980m. Rocky, S-facing slope. (An extremely robust form of this variable race with up to four, brown-chequered bells on each 20cm. stem.) (15+) **C**
- 493.505 : FRITILLARIA CRASSIFOLIA** subsp. **KURDICA** * Turkey, Van, E of Bahcesaray. 2350m. Ex R.& R. Wallis 87-26. (From a fine, dark red form, selected in the wild in this Mecca for bulb-enthusiasts on the shoulders of Artos Dag.) (10+) **D**
- 493.507 : FRITILLARIA CRASSIFOLIA** subsp. **KURDICA** * Turkey, Hakkari, Esendere. 1700m. Ex a Z. Zvolanek coll. (From right against the Iranian border and showing a range of variation somewhat similar to the population 493.503.) (15+) **B**
- 494.000 : FRITILLARIA DAVISII** * Greece, Lakonia, NW of Pargos Dirou. Low, limestone hills. (An endemic of the S tip of the Mani peninsula, near *F. graeca* but with shiny bright-green leaves & no green stripes on its tubby, brown-purple chequered bells. Although one of the most localised species in nature, it is one of the easiest and most rewarding in cultivation.) (15+) **C**
- 494.001 : FRITILLARIA DAVISII** Greece, Lakonia, N of Pargos Dirou. Uncultivated olive-groves. M. Harvey coll. (15+) **D**
- 494.400 : FRITILLARIA DRENOVSKII** * Greece, Drama, Falakro above Volokas. 1500m. Among sparse *Pinus* in subalpine meadow. (One of our favourite species. Slender & elegant, with thin, greyish leaves on 15-20cm. stems. Narrow brown bells, varying in this site from dark chocolate to honey-brown shades. Endemic solely to the Greek-Bulgarian border-ranges.) (10+) **D**
- 494.605 : FRITILLARIA EDUARDII** * No data. Distributed at about 2000m. in & around Tadzhikistan, this is a distinct dwarf relative of *F. imperialis*. About 40cm. high, its pendant bells with widespread segments are in a soft yellow-orange. (5) **E**
- 494.800 : FRITILLARIA EHRHARTII** * Greece, Evia, E of Karistos. 200m. Seasonally damp, N & W-facing sides of gully on mica-schist. (A beautiful native of S Euboea & the neighbouring Kiklades. Big, bloomy, yellow-tipped, grape-black bells glow to ruby in the evening sun. Stout 20-30cm. stems can carry up to 6 flowers. Not often seen but easy enough here under glass.) (15+) **C**
- 494.811 : FRITILLARIA EHRHARTII** from **YELLOW FORM** * Field data as above. From a single clear-yellow clone we found here in April, 1985. We have grown several hundred seedlings from it & so far have flowered two more yellows. These have been back-crossed with the original but we can give no guarantee as to the results. A very long shot but interesting! (10) **E**
- 495.200 : FRITILLARIA EPIROTICA** * Greece, Ioanina, Oros Smolikas E of Konitsa. 2300m. Loose, stony, E-facing, serpentine slopes. (Fat, purple-brown bells, dimly tessellated with yellow-green, sit almost on the ground, where the prostrate, thick, grey-green leaves twist & curl. From the type-locality, where the E.K. Balls 3434 coll. was made in 1937. This very dwarf, alpine species is almost exclusively endemic to the serpentine screes around the summit of Smolikas. One of the most desirable of all species, both exquisite and appropriate grown in an alpine-house pan, it is still little-known in cultivation & should be cherished.) (10) **E**
- 495.205 : FRITILLARIA EPIROTICA** * Greece, Ioanina, Katara. 1700m. Serpentine. (Though some plants from lower altitudes on the Katara pass vary in height & approach *F. montana*, according to Kamari, this seed is from forms almost indistinguishable from the Smolikas population. Seed listed from an R. Baker coll., under our population reference 495.200 a couple of years ago, should have been given this reference. A little detective work by Robert Rolfe established its origin on the Katara.) (10) **E**
- 495.700 : FRITILLARIA FORBESII** * Turkey, Mugla, Baba Da. SE of Fethiye. 850m. Humus beside boulders in shade of *Pinus*. (From near Forbes' 1842 type-locality & a little different to the serpentine populations on the Marmaris peninsula. Lime-tinged, yellow bells. Near *F. carica*, with which it grows, but taller, at 20cm. or so, & with narrow, linear, bright-green leaves.) (10+) **D**
- 496.002 : FRITILLARIA GRAECA** (var. *graeca*) * Greece, Lakonia, Akrotiri Tainaro (Cape Matapan). Near sea-level. Ex an A. Edwards coll. (Certainly this is *F. graeca*, though an extraordinary coll. from the most southern tip of the Peloponnese, really the territory of *F. davisii*. A fairly dwarf race, very similar in flower to the Taigetos population we grow under 496.005, this has produced some charming pale greeny yellow forms, which we have not seen in any other populations of *F. graeca*.) (15+) **C**
- 496.005 : FRITILLARIA GRAECA** (var. *graeca*) * Greece, Lakonia, Oros Taigetos. Ex an N. Stevens coll. (Quite dwarf with little, rounded bells in chocolate-purple with the neat acid-green fascia, characteristic of this race.) (15+) **C**
- 496.020 : FRITILLARIA GRAECA** (var. *graeca*) * No data. From several colls., mainly on the mountains of Attica. Most have single, broadly campanulate bells, on stems of about 15cm. Purple-brown segments with distinct yellow-green fascia. (15+) **B**
- 496.100 : FRITILLARIA GRAECA** var. **GUICCIARDII** * Greece, Attiki, Parnis. Ex an N. Stevens coll. (From a type-locality coll. of this taxon, doubtfully worth separating from the variable *F. graeca* but Kamari gives it varietal status.) (15+) **C**

- 496.950 : FRITILLARIA HERMONIS** (subsp. *hermonis*) Syria, Mt. Hermon, NE slopes between Quatana & Barqash. 1450m. Ex R. & R. Wallis 96-45. (From several selections, mainly red-browns with a slight green tessellation. Before Bob & Rannveig's recent investigations, this dwarf type-race, only known from high on Mt. Hermon, was little-known botanically & unknown in cultivation. The range of variability illustrated by their collections may have made the botanical situation even muddier.) (10+) E
- 497.003 : FRITILLARIA HERMONIS subsp. AMANA** * Turkey, Hatay, E of Belen. 1250m. Among *Quercus* scrub on steep, limestone slopes. (Very different to much Syrian & Lebanese material which must be assigned to this variable taxon - a group again in need of review. Large, elongated green bells tessellated or marked with purple-brown & with clear green fascia.) (10+) C
- 497.004 : FRITILLARIA HERMONIS subsp. AMANA from YELLOW FORM** * Turkey, Kahramanmaras, SE of Goksun. 1550m. NE-facing limestone slope. (The data applies to the seed-parent, a yellow clone, ex Horton & Stevens 2333, (which has been named 'Goksun Gold'). Our experience with yellow forms of other species is that only a very small proportion, if any, come 'true' in the first generation - note our comments under *F. ehrhartii*. This year Norman has hand-pollinated this using the fine EKB 1034 coll. (the type coll. from Kahramanmaras, Zeytun Dag), so at least you can expect some splendid seedlings.) (10+) D
- 497.005 : FRITILLARIA HERMONIS subsp. AMANA** * Lebanon, above B'Shari Cedars. 2000m. Terra rossa on limestone outcrops. (Ex ACW 963 & a W.K. Aslet coll. from the same area, distributed in the 1960's as *F. crassifolia*. A neat little plant with dimly chequered, green bells, much closer to some Syrian populations than to the larger, more northern, Turkish plants.) (10+) D
- 497.020 : FRITILLARIA HERMONIS subsp. AMANA** * No data. From several colls. of this fine member of the *F. crassifolia* group, including the E.K. Balls type. Centred on the Amanus range in S central Turkey, S into Syria & the Lebanon, at about 1500m. Long, greenish or yellowish bells, variably tessellated with brown purple & with clear, green fascia. Stems of about 20cm. (15+) C
- 497.310 : FRITILLARIA IMPERIALIS** * No data. The beautiful Crown Imperial, most spectacular of the genus, distributed from SE Turkey through W Iran & beyond. Heads of big, amber-orange bells on stems of 60cm. or more. (10+) B
- 497.610 : FRITILLARIA INVOLUCRATA** * No data. From several forms of this elegant species. Wild in the Alpes-Maritimes & NW Italy. About 20cm. high, narrow-leaved & with green, purple-chequered bells. Possible outside in the UK. (15+) C
- 497.700 : FRITILLARIA KITTANIAE** * Turkey. Ex O. Sonderhausen 1310 & 1318. (From type-locality colls. made on Ole Sonderhausen's last trip. This is an odd, variable entity, like several recently described species doubtfully deserving specific status. Thought by some to be intermediate between *F. carica* & *F. pinardii*, Henrik Zetterlund thinks it may be derived from *F. carica* & *F. ehwesii*, resembling the former in shape & size but with the latter showing in the green & brown stripes, which can be most striking in some clones. Well worth selecting from seed, though a proportion will be more or less plain *F. carica*.) (10+) E
- 499.010 : FRITILLARIA MELEAGRIS** * No data. An elegant, easy garden-plant in the UK, often sowing itself. Native to S England across central Europe to S Russia, often in the flood plains of rivers. Seed from both purple-chequered & white forms. (20+) A
- 499.700 : FRITILLARIA MESSANENSIS subsp. GRACILIS** * Bosnia & Hercegovina, W of Trebinje. 500m. Among *Quercus* scrub over limestone. (Untessellated, chestnut-brown bells, edged with gold. Very hardy & one of the finest, most vigorous species with us, though never numerous in the wild. Definitely worth trying outside in the UK, in a sunny, well-drained site.) (20+) B
- 499.701 : FRITILLARIA MESSANENSIS subsp. GRACILIS** * Bosnia & Hercegovina, Bjelasnica (NNE of Dubrovnik). (20+) B
- 500.001 : FRITILLARIA MINIMA** * Turkey, Van, Kavussahap Dag. 2700m. Steep limestone screes on open slopes. (This is mainly ex O. Sonderhausen 824, grown in Sweden, with some of our seed - the first time we have had any, perhaps due to our cold 1995-96 winter & spring. Not impossible to cultivate but, like some other high-alpine, snow-melt species, extremely difficult to flower well. Dainty, yellow bells, the twin of the N American *F. pudica*. Native only to Artos Dag & the adjacent mountains.) (10+) E
- 500.300 : FRITILLARIA MONTANA** * Macedonia, Galicica Planina above Trpjeca. 1600m. Exposed, dry, limestone slopes. (A slender, dwarf form of this variable, widespread group. Globular, brownish bells & bulbs with a stoloniferous habit.) (15+) C
- 500.510 : FRITILLARIA OBLIQUA** * No data. Endemic to a small part of Attica, on the Greek mainland. Close to *F. tuntasia* of the Cyclades. Similar black bells but stockier with fewer flowers & leaves, which lie mainly at the base of the 15cm. stem. (10+) D
- 500.810 : FRITILLARIA OLIVIERI** * No data. This is from Alan Edwards. Our own stock with data seems self sterile and we have only just acquired a different clone. A handsome plant from high, wet meadows in the N Zagros range of Iran. Not usually difficult to grow in the UK, though seldom seen. Big pale green bells flushed with brown along the edge of each segment (15+) C
- 501.200 : FRITILLARIA ORIENTALIS** * Full data not available but the genuine species from material collected in the Caucasus by M. Pavelka & grown by N. Stevens. An obscure, little understood plant in the confusing *F. montana* group, where names have been much misapplied. The synonym *F. tenella* is appropriate - slender, 20-30cm. stems with many, linear leaves, the uppermost in a whorl of 3, incline to hang out up to 5 dark bells, densely chequered brown-purple outside & reddish inside. (10+) E
- 501.205 : FRITILLARIA ORIENTALIS** * No data. From the stock grown by Martyn Rix. A little different to the above (10+) D
- 501.210 : FRITILLARIA ORIENTALIS** * No data. From the stock grown by Ron Beeston as *F. tenella*. (10+) D
- 501.400 : FRITILLARIA PALLIDIFLORA** * Kazakhstan, Khrebet Tarbagatai. Ex a J. Ruksans coll. (From a coll. of this splendid Central Asian species, made in this seldom-visited range, on the Sinkiang border N of the Dzungarian Ala-Tau. About 30cm. high with broad, grey leaves & big pale-yellow bells. One of the finest & most satisfactory to grow outside in the UK. (15+) C
- 501.410 : FRITILLARIA PALLIDIFLORA** * From long-cultivated British stock of this reliable species (20+) B

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Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 501.801 : FRITILLARIA PINARDII** * Turkey, Denizli, Honaz Dag. 1650m. Stony clay over limestone. (This is good - a very neat plant & an excellent grower with us. Dwarf with yellow bells, which mature to rust-red. Suspiciously like *F. carica* at first glance but the altitude & habitat seem wrong for this. Norman Stevens felt it best we keep it under *F. pinardii* (though we think he has changed his mind now) so we'll stick with this for the present. *Fritillaria* is not so clear-cut as many growers imagine.) . . . (10+) **C**
- 501.811 : FRITILLARIA PINARDII** Turkey, Adiyaman, Nemrut Dag. 2000m. Rocky, limestone slopes. N. Stevens coll. (Last year we listed cultivated seed ex E. Frank 87-10 from this locality. This was from a most distinct brick-orange form, which might almost be mistaken for *F. minuta*, but we do not know if it is typical of the entire population on Nemrut Dag.) . . . (10+) **D**
- 501.850 : FRITILLARIA PINARDII** * No data. From a wide range of variants of this diverse species, grown by Norman Stevens, who must be the prime candidate to hold the National Collection of *F. pinardii* forms. Bell-shaped flowers on stems from 5-20cm. high can vary from purplish to greyish outside and from greens through yellows to orange-browns inside. The stigma can be either entire or trifold. Centred on Turkey, the species-group extends to Armenia, W Iran, Syria & the Lebanon. . . . (15+) **B**
- 502.010 : FRITILLARIA PONTICA** * No data. A plant of moist shade in the woodlands of Bulgaria & NE Turkey, so, not surprisingly, one of the best to grow outside in the UK. Big, soft-green, brown-tinged, round-shouldered bells. . . . (20+) **B**
- 502.102 : FRITILLARIA PONTICA** var. **SUBSTIPELATA** * Greece, Lesbos, between Keramia & Agiassos. c.350m. In terra rossa on steep slope half-shaded by *Platanus*. Ex D.M. Hoskins 97-1. (An interesting island-race adapted to much warmer, drier habitats than the mainland type-race. In this coll., it is a taller, more slender plant with narrower foliage than the mainland ones. Longer, waisted, pale-green bells heavily blotched with purple-brown at the tips inside. A very fine thing, rare in cultivation.) . . . (10+) **D**
- 502.401 : FRITILLARIA RADDEANA** Turkmenistan, Kopet Dag, Arvaz valley. (Like a dwarf, primrose yellow version of *F. imperialis*. Small enough for a pot or the bulb-frame but growable outside in the UK though it starts to grow & flower early, so protection safeguards both flowers & seed-set. The cultivated UK stock seems almost wholly derived from the N Iran P. Furse colls. made in the 1960's. This is wild collected seed from the other side of the border. A rare opportunity.) . . . (10+) **D**
- 502.600 : FRITILLARIA RHODOCANAKIS** Greece, Argolida, Idra, above Idra town. 150m. M. Harvey coll. . . . (10+) **E**
- 502.601 : FRITILLARIA RHODOCANAKIS** * Greece, Argolida, Idra. Ex M. Jope & R. & R. Wallis colls. (Endemic to the island of Hydra, off the SE Peloponnese. Neat, about 10cm. tall, & usually with yellow-tipped, chocolate-brown, widely flaring bells. Wholly yellow-green forms seem not to be uncommon in nature, though they seldom appear among seedlings.) . . . (10+) **D**
- 502.620 : FRITILLARIA RIXII** * Greece, Evia. (Described by Zaharof in 1986, from 700-800m. on Xiron & Kandhili on Euboea. Georgia Kamari (1991) considers it a "poorly defined ecotype" of the higher altitude *F. euboica*. As the latter is still little-known, it should be no less desirable to the specialist. Yellow bells - maybe closest to the Turkish *F. sibthorpiana*.) . . . (10) **E**
- 502.700 : FRITILLARIA RUTHENICA** Russia, (formerly Mordovskaya ASSR), Penza district. (A wild coll. of this seldom-seen, northern species, made for Janis Ruksans in the Volga basin, SE of Moscow & N of the Caspian. In the *F. orientalis* group & closest to the equally obscure *F. orientalis* (q.v.), from which it is easily distinguished by the curled, cirrhose tips of the upper leaves. Though this name is sometimes misapplied to other members of this group in cultivation, we grew the genuine plant years ago from material given to us by Paul Furse but originating from Moscow Botanic Garden. A very elegant thing it was with narrow leaves & dark maroon-red, chequered bells. It should be a plant which is possible in the open garden in the UK.) . . . (15+) **D**
- 502.750 : FRITILLARIA SEWERZOWII** Uzbekistan, Chimgan valley. (A wild coll. of this exciting & most distinct Central Asian species, with affinities to *F. imperialis* & to *Lilium*. Split by some into the monotypic genus *Korolkowia*. We have always found it a difficult plant but others grow it successfully. Like no other in its pendant, narrow bells with widespreading tips to the segments of brilliant yellow-green to blackish brown. About 30cm. or more high with broad, grey-green leaves.) . . . (10+) **D**
- 502.805 : FRITILLARIA SIBTHORPIANA** * Turkey, Mugla, near Bozborun. (Described in 1809 & 'lost' for 185 years after Sibthorp's type-coll. (meanwhile its name was widely misapplied). Still only known from two localities in the extreme SW corner of Turkey. Distinct from the others with bright yellow bells in its 2 or 3 broad leaves, clasping the 20-30cm. stem.) . . . (10+) **E**
- 502.900 : FRITILLARIA SPETSICOLA** Greece, Spetses, ridge below Profitis Ilias. M. Harvey coll. June, 1997 (A recently described island race - we think near *F. argolica* & *F. rhodokanakis*. It is difficult to keep track of Kamari's proliferating species.) . . . (10) **E**
- 503.500 : FRITILLARIA STRIBRNYI** * Turkey, Canakkale, Gelibolu (Gallipoli). Ex V. Horton & N. Stevens 2067. (Extremely local in SE Bulgaria & adjacent European Turkey, just crossing the Bosphorus into Asia here. Elegant, about 20cm. high with linear, greyish foliage & narrow, glaucous, untesselated, purple & green bells. Slow, seldom available but not so difficult.) . . . (10) **E**
- 503.601 : FRITILLARIA THESSALA** (subsp. *thessala*) (*F. graeca* subsp. *thessala*) * Greece, Trikala, below Katara. 1500m. Open W-facing slope with *Pinus* & *Juniperus*. (Quite an even population & a distinct enough species here in the central Pindus. Big, long bells, variably chequered with brown-purple hang below the topmost whorl of 3 broad, grey-green leaves.) . . . (15+) **B**
- 503.700 : FRITILLARIA THESSALA** subsp. **IONICA** (*F. ionica*) * Greece, Kerkira, Pantokrator. Ex A. Edwards & E. Sewell colls. (Doubtfully separable from mainland populations but we retain the name for the Corfu island-race, which is fairly consistent in its single green bells just touched with a purple or pink tessellation on the margins. A good grower in the UK.) . . . (20+) **C**

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- 503.800 : FRITILLARIA TUBIFORMIS** (subsp. *tubiformis*) * France, Hautes-Alpes, Pic de Gleize NNW of Gap. 1800m. Among *Helictotrichon* on steep, SE-facing limestone slopes. (One of the finest alpine species with huge, fat, chequered, brown-purple bells on short stems. Absolutely hardy & better grown cool in a frame or even a raised bed outside than cooked under glass, though this population from a summer-dry site seems more accommodating than those from moister, meadow-habitats.) (15+) C
- 504.210 : FRITILLARIA TUNTASIA** * No data but endemic to the islands of Kithnos & Serifos in the Kiklades, off the coast of Attica in Greece. A somewhat taller, more slender plant than the allied *F. obliqua* with greyish leaves more evenly distributed up the 20-30cm. stems & up to 5 flowers. The conical bells are virtually black with a glaucous bloom outside. (15+) D
- 504.700 : FRITILLARIA WHITTALLII** * Turkey, Antalya, SW of Elmali. 1600m. Opening among *Cedrus* in pocket of black soil mixed with limestone talus. (Exceptionally local, this appears limited to patches of humus-rich scree at about the tree-line of cedar-forest in Antalya & Isparta provinces. Elegant with linear leaves & wide pale-green bells, tessellated with purple.) (15+) D
- 507.300 : GAGEA FIBROSA** * Turkey, Hatay, E of Belen. 1250m. Stony areas & fissures on limestone outcrop. ("One of the largest & most striking" writes Martyn Rix. Starry, bright-yellow flowers with long perianth segments, which persist in seed.) . . . (20+) B
- 509.300 : GALANTHUS REGINAE-OLGAE** * Greece, Messinia, Oros Taigetos, Langadas pass. 1200m. Humus under *Platanus*. (Hand-pollinated seed from the type-race of this beautiful snowdrop, flowering in autumn before the leaves appear.) (10+) C
- 509.301 : GALANTHUS REGINAE-OLGAE** Greece, Lakonia, Oros Taigetos, Profitis Ilias. 1400m. D. Hoskins 98-22. . . (10+) C
- 531.802 : GLADIOLUS ANATOLICUS** * Turkey, Adana, Nur Dag, above Hasanbeyli. 1100m. Stony clay among *Quercus* scrub. (A handsome, purple-pink S Turkish endemic, 30-40cm. high, related to the Cypriot *G. triphyllus*. Easy in a bulb-frame. (15+) B
- 531.902 : GLADIOLUS ANTAKIENSIS** * Turkey, Hakkari, Zab gorge at Bagisli. 1500m. Among *Quercus* on stony slopes. (Confined in Turkey to the oak-scrub areas of the SE corner. Fine carmine-pink flowers, marked white. About 50cm. high. (15+) B
- 531.949 : GLADIOLUS aff. ANTAKIENSIS** * Turkey, Hakkari, Beyez Dag. 1800-2000m. Ex a N. Stevens coll. (Probably a new species but the E Turkish gladioli are a taxonomic mess and it would be rash to publish it as such without a more complete review of the genus there. Based on a few herbarium sheets, Kit Tan's account does not work well in the field - disparate taxa have to be fitted into the existing names. Hamilton's *G. antakiensis*, only published in 1983, has to be taken to cover diverse dry-growers. Taxa are quite well defined geographically and ecologically, so competent field-work could instil some order. With martial law in operation throughout the SE and unhindered travel impossible, this is hardly likely at present. This is an attractive & distinct, dwarf plant, only about 20cm. high, with 3-5 flowers, occasionally white but mainly soft-pink, darkening with age.) (8) E
- 532.601 : GLADIOLUS KOTSCHYANUS** * Turkey, Van, NNW of Baskale. 2800m. Along seasonal, snow-melt stream. (A soft-lilac, 30cm., alpine-meadow form of this characteristic species of spring-wet, grassland habitats in cold E Anatolia.) (15+) B
- 532.602 : GLADIOLUS KOTSCHYANUS** * Turkey, Erzurum, Kop Dag. 2400m. Among *Salix* in wet-flush. (A good deep-crimson form, originally collected as a dwarf variant but it now reaches 40cm. in cultivation.) (15+) B
- 532.605 : GLADIOLUS KOTSCHYANUS** * Turkey, Van, W of Yukari Narlica. 2200m. Stony alluvium near stream. (Pale mauve marked with white. These three montane forms are more slender & dainty than those from lower hay-meadows.) (15+) B
- 532.810 : GLADIOLUS PALUSTRIS** * No data. An attractive plant very seldom seen in UK gardens, though it is utterly hardy and well-adapted to the climate. Distributed, usually in moist meadows, here and there though central & E Europe, from SE France to the Ukraine. About 30cm. high with a loose, secund spike of up to 6 purplish red flowers in early summer. (15+) B

Helleborus : fresh 1998 seed from troubled lands

We list a very full representative range of this genus, almost all from wild colonies. This is largely possible through the efforts of Will McLewin, not only with his own material from troubled areas of SE Europe but also in arranging collections by local botanists in Georgia & Ukraine, a complicated operation exacerbated by the current economic & political situation in Russia. If you are interested in this genus, order & sow the seed without delay. Place it at normal outdoor temperatures. Though there is still plenty of time, late-sown seed (after the weather has cooled down in autumn), may not germinate until the following winter. Soaking seed in hot (not boiling) water and leaving it at room temperature for a day before sowing may help germination the first winter. Like almost all species in this list, these germinate at low-temperatures. Keeping seed warm after sowing will inhibit germination. For more information & accounts of each species, refer to 'Hellebores' by Brian Mathew or 'The Gardener's Guide to Growing Hellebores' by Graham Rice & Elizabeth Strangman. While we use the classification

proposed by the former (and accepted by the latter), it must be appreciated that this is only a reasoned compromise. We stress that the species of Section *Helleborastrum* seldom comply with the main diagnostic criteria used to divide them into the artificial concept of 'species' - flower colour, free or joined carpels, overwintering leaves and especially leaf characteristics are not consistent features. Most colonies are extremely variable and there is a great deal of intergradation. Such problems are being considered in an ongoing series of articles, by Brian Mathew & Will McLewin in 'The New Plantsman'. Many of the wild hellebores are plants of continental climates, used to snow-cover in winter & dry conditions in summer. Consequently, they are not always so easy in wet, temperate climates, such as that of the UK. Choose a well-drained site for the central & E European ones. Seeds from the much more accommodating garden hybrids, influenced by *H. orientalis* from the moister, Black Sea area, will be found listed in the section dealing with 'Garden Hybrids & Selections' towards the end of this list.

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Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 559.810 : HELLEBORUS ARGUTIFOLIUS** (*H. corsicus*) * No data. Endemic to Corsica & Sardinia but a splendid, reliable garden-plant throughout the UK. Leathery, overwintering, spine-edged leaves & huge, 1m. high heads of pale-green cups. (20+) **A**
- 560.002 : HELLEBORUS ATRORUBENS** Slovenia, near Novo Mesto. W. McLewin 98-03. (Variable in foliage & colour, this is one of the most local & least-known Balkan species. Not all are purple but it can produce some striking purple-flowered plants with purple-tinged leaves. The name is still misapplied in gardens to hybrids, usually of *H. orientalis* subsp. *abschasicus*.) (10) **E**
- 560.010 : HELLEBORUS ATRORUBENS** * Slovenia, near Novo Mesto. (1998 cultivated seed from Alan Edwards, grown from an earlier W. McLewin coll. in the same locality as above. Though the parents are authentic, this may have crossed in cultivation. There was little wild seed in 1998 and this is an alternative for the non-purist. Same qualification applies to the next.) (15+) **C**
- 560.500 : HELLEBORUS CROATICUS** * Croatia, near Osijek. Ex aW. McLewin coll. (Though regarded by Brian Mathew as synonymous with *H. torquatus*, Will thinks this recently described taxon is distinct & sustainable. It might be best placed at infraspecific level under *H. atrorubens*. Extremely local in the wild, this is from a type-locality collection.) (10+) **E**
- 560.628 : HELLEBORUS CYCLOPHYLLUS** Macedonia (No further data). (Seed collected by a local botanist of this species, typical of the cold interior areas and mountain ranges of Macedonia & Greece. A hardy species suited to cold, continental climates, less easy in the mild, damp UK. Leaves, backed with silvery hairs in spring, seldom overwinter. Big, clear-green flowers.) (10+) **C**
- 560.804 : HELLEBORUS DUMETORUM** Croatia, Slavonija, near Vocin. W. McLewin 98-27 (A distinct, dainty species of mature, deciduous woodland, growing here near the Hungarian border. Deciduous leaves, usually finely toothed, appear with the small, somewhat conical green flowers, pendant on slender pedicels. Elegant & reputedly a good garden-plant in the UK.) (10) **D**
- 561.021 : HELLEBORUS FOETIDUS** from 'WESTER FLISK' * Our British native caulescent hellebore with dark, divided foliage & stout heads of many green, purple-rimmed cups. This is originally from a Scottish selection with narrow leaf segments, sometimes tinged red, & beetroot-red stems. This & the following forms may vary a little when grown from seed, which can be slower to germinate than others (except *H. vesicarius*), sometimes waiting for a second winter, even if sown freshly.) (15+) **B**
- 561.024 : HELLEBORUS FOETIDUS** from 'SOPRON' * Hungarian form with lead-green leaves. Feathery bracts. (15+) **B**
- 561.502 : HELLEBORUS MULTIFIDUS** (subsp. *multifidus*) Croatia, Velebit Planina, near Krasno. W. McLewin 98-33. (Core species of a confusing, essentially Yugoslavian, complex of cut-leaved hellebores with pendant, green-tinged yellow flowers. The currently recognized taxa intergrade both with each other & with adjacent species. This is from a superlative colony with beautiful divided foliage. These inland, deciduous species do best in the UK in an open, well-drained situation.) (10+) **D**
- 561.506 : HELLEBORUS MULTIFIDUS** (subsp. *multifidus*) Croatia, Cres. W. McLewin coll. (A rare coll. from an isolated population on the elongated Adriatic island of Cres, E of Krk & S of Rijeka. In theory, these should be *H. m.* subsp. *multifidus*, but they look more like intermediates with *H. m.* subsp. *istriacus*. This is a confusing group.) (10+) **D**
- 561.580 : HELLEBORUS MULTIFIDUS** subsp. **BOCCONEI** Italy, Toscana, W of Firenze, near border with Emilia-Romagna. W. McLewin coll. (This & the next have certainly close affinities with the Yugoslavian *H. multifidus* complex & we are more than happy to list them as 'authentic' *H. m. bocconeii*, a very little-known taxon in cultivation, sought by the specialist & never previously listed by us. The main diagnostic difference, a dubious one, is theoretically in the foliage but these are quite distinct in flower, generally with larger, more rounded flowers in greenish yellow, on shorter pedicels than Yugoslavian plants.) (10) **E**
- 561.581 : HELLEBORUS MULTIFIDUS** subsp. **BOCCONEI** Italy, Emilia-Romagna, S of Bologna. W. McLewin coll. (10) **E**
- 561.705 : HELLEBORUS MULTIFIDUS** subsp. **ISTRACUS** Croatia, Istria, Ucka. W. McLewin 98-42 (While this subspecies tends to intergrade with *H. odoratus* further N. This coll. is from a population in the woodlands on the highest mountain in Istria, well into the Istrian peninsula. It should produce less variable seedlings, which can certainly be called authentic *H. m. istriacus*.) (15+) **D**
- 561.707 : HELLEBORUS MULTIFIDUS** subsp. **ISTRACUS** Slovenia, Slavniki Vrh. W. McLewin 97-53 (The populations of this subspecies with less-divided foliage, tend to intergrade with *H. odoratus* nearer to the Italian border. Nevertheless, it is acceptable as quite a distinct entity, though, as usual with hellebores, the distinction defies consistent & accurate description.) (10+) **D**
- 561.806 : HELLEBORUS NIGER** Slovenia, Bohinj. W. McLewin coll. (The classic Christmas Rose with huge white, bowl-shaped flowers above low clumps of dark, glossy green, divided foliage. This wild seed is from the outstanding population, which Will discovered & called 'Sunset'. A large percentage of the plants have flowers which flush to red shades as they mature.) (15+) **C**
- 561.807 : HELLEBORUS NIGER** Slovenia, SE of Jesenice. W. McLewin coll. (From another population in the Julian Alps, here on the N slopes of the Triglav. Will's 'Sunrise' - a good percentage are pink-flushed & mature to red. Lovely things.) (15+) **C**
- 562.006 : HELLEBORUS ODORUS** Hungary, Mecsek Mts., near Pec. W. McLewin 98-29. (Hungarian populations tend to be more isolated and more homogeneous than those to the S. If you want really good green flowers, go no further than this) (15+) **C**
- 562.399 : HELLEBORUS ORIENTALIS** Turkey, Artvin-Kars, Yalnizcam Daglari, ESE of Ardanuc. 1800m. N. Stevens coll. (A 1998 Turkish coll. from an interesting locality on a range which runs on into Georgia, well away from the Black Sea coast-ranges to which this species is largely confined in NE Turkey. Not seen in flower but most Turkish populations are greenish cream.) (15+) **D**

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- 562.405 : HELLEBORUS ORIENTALIS** Georgia, N of Tblisi. From a superb colony with rounded, cream-coloured flowers. Will visited some of these Georgian populations in flower in 1996. Having seen his photographs of this, we can see where so-called hybrid clones, such as 'Sirius' may have their origins - in fact rather than having progressed, they may have regressed. . . . (15+) E
- 562.510 : HELLEBORUS ORIENTALIS subsp. ABCHASICUS *** Cultivated seed from Georgia, gathered from authentic material seen in flower by Will & originally collected in Abkhazia, currently very much a 'no-go area', which is unlikely to become accessible in the foreseeable future. Until we can regard it otherwise, this is separated as the purple-flowered race of *H. orientalis*. . . (10+) D
- 562.520 : HELLEBORUS ORIENTALIS subsp. GUTTATUS** Ukraine, Matzesta near Sochi. (An exciting, 'one-off' wild-collection from the forests along the NE corner of the Black Sea, near the border of Abkhazia. As far as we know , no authentic wild-collected material of this spotted race has been seen in western gardens. Plants recently introduced from Georgia were from stock grown in a botanic garden. According to Georgian botanists, this subspecies does not occur in Georgia. We are told that it is only known from this area. Whether this or the preceding taxon merit subspecific status is another matter. In both cases, they appear to be merely colour variants occurring in variable colonies. The Russian collector describes the plants here as both spotted and unspotted on a green or cream-white ground (this colour possibly due to the age of the flower), so expect a wide range of diversity.) (15+) E
- 562.600 : HELLEBORUS PURPURASCENS** Hungary, Bukk Mts. W. McLewin 98-30. (Will tells us there are some superb dull-purple clones in these populations of this neat, predominantly Hungarian species, very little-known in cultivation. Comparatively dwarf & deciduous, it is more resentful of winter wetness than some & needs a well-drained site in the UK.) (10) E
- 562.620 : HELLEBORUS PURPURASCENS** Ukraine, near Rakhov. (From the foothills of the central Carpathians, down in the corner of the SW Ukraine where it borders on Romania & Moldova. About as far E as this continental-climate species goes. These peripheral populations are often more uniform and this should produce distinct & interesting plants) (10) E
- 562.804 : HELLEBORUS TORQUATUS** Bosnia & Hercegovina, N of Bosanski Petrovac. 500m. Among scrub & on open, grassy slopes. W. McLewin 98-20. (A superlative colony here in the 'Bihac Pocket' at the N tip of Bosnia - different to the southern populations ascribed to *H. torquatus* in Montenegro. Essentially *H. multifidus* subsp. *multifidus* with variable inky-purple flushing & veining on the flowers. Some exquisite things here - one is illustrated on p.106 of Brian Mathew's monograph.) (10+) E
- 563.000 : HELLEBORUS VESICARIUS *** Turkey, Adana, Nur Da. above Hasanbeyli. 1150m. Among deciduous *Quercus* on shaley slope. (Some British, cultivated seed from this extraordinary relic thanks to the skill of Dinah Batterham, who has established this from our 1985 coll. in the open garden in Dorset. Like no other in its inflated seed-capsules, up to 15cm. long, this is summer-dormant & usually best suited to the bulb-frame in the UK. Cultivated seed is still very limited & likely to remain so.) (5) E
- 563.001 : HELLEBORUS VESICARIUS** Turkey, Gaziantep, hills between Gaziantep & Sackagoz. c. 1000m. Among sparse scrub in terra rossa over limestone. N. Stevens coll. (A fresh 1998 wild coll. Both wild and cultivated seed germinates irregularly. The cucumber-like seedlings usually go dormant without producing true leaves. These first-year, dormant roots can be lost through overdrying & this is the most critical period. Viability of seed lasts for many years so do keep ungerminated seed.) (10+) E
- 570.950 : HYACINTHELLA ACUTILOBA *** Turkey, Sivas, Ziyaret Tepe. 2100m. Thin, limestone gravel on exposed ridges. (Wiry, 10cm. stems with little pale to mid-blue bells rising from 2-3 distinctively broad leaves. A central Anatolian endemic in this delightful & interesting genus - all are on a similar pattern & ideal for the alpine-house in stature & requirements.) (15+) C
- 571.000 : HYACINTHELLA ATCHLEYI *** Greece, Evia, mainland hills opposite Halkida. 200m. Open limestone slopes with sparse scrub. (Lots of little, clear-blue bells on wiry, 10-15cm. stems in early spring. Only grows around here & Thebes.) (15+) C
- 571.140 : HYACINTHELLA HELDREICHII *** Turkey, Antalya, SE of Korkuteli. c. 1000m. Open slopes with sparse *Quercus*, *Pinus* & *Daphne*. (Sessile, deep blue bells on wiry, 10cm. stems. Not quite so dark as the allied *H. lazulina* from further E.) . . . (15+) C
- 571.160 : HYACINTHELLA HISPIDA *** Turkey, Nigde, E of Ulukisla. 1500m. Steep, exposed, limestone slopes. (Distinct, hairy leaves & 10cm. racemes of up to 30 blue-violet flowers. Like most in this dainty & neglected genus, a local plant.) (15+) C
- 571.201 : HYACINTHELLA LAZULINA *** Turkey, Karaman, SSE of Karaman. c.1100m. Open steppe. (Recent 'split' from *H. heldreichii*, mainly from the area S of Karaman to Gulnar. Glauous leaves & deepest blue, violet-shot flowers.) (15+) C
- 572.005 : HYACINTHOIDES ALGERIENSIS** (*H. hispanica* var. *algeriensis*) * Morocco, Middle Atlas, ESE of El Ksiba, Tizi-n-Ifar. Ex J.W. Blanchard 89-18A. (An attractive Moroccan bluebell, rather like *H. reverchonii* and, like it, often a plant of limestone-fissures. Worthwhile & easy under glass. Both John & ourselves are enthusiastic about these disjunct, relict bluebells.) . . . (15+) B
- 572.201 : HYACINTHOIDES NON-SCRIPTA** UK, Wales, below Ffostrasol. 150m. Mixed, deciduous woodland. (From our population of bluebells, most spectacular of native British bulbs, hardly in need of 'conservation' around here.) (20++) A
- 572.300 : HYACINTHOIDES REVERCHONII *** Spain, Jaen, Sierra de Cazorla, above source of the Guadalquivir. 1400m. Red clay pockets on limestone cliffs. (An obscure, narrow-endemic but easy to grow here under glass. Alan Edwards grows it outside in Surrey & has had hybrids with *H. non-scripta*. Glossy leaves & distinct, wide-open, rich-blue flowers on 15cm. stems.) (15+) C
- 572.340 : HYACINTHOIDES VICENTINA from WHITE FORM *** Only known from the Cabo S. Vicente in S Portugal. Ex a V. Horton coll. (White form of this disjunct relative of *H. italica*, distinguished by its yellow, instead of blue, pollen.) (10+) C
- 572.600 : HYACINTHUS ORIENTALIS subsp. CHIONOPHILUS *** Turkey, Sivas, Ziyaret Tepe. 2100m. Limestone crevices & among rocks. (Dwarf, few-flowered hyacinth - a snow-melt alpine from the high mountains in S Central Turkey. Pale slate-blue, waxy flowers with long perianth lobes, on short stems. Stays neat here under glass & has the most exquisite scent.) (15+) C

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
 B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Iris : junos and reticulatas : easy and not so easy

The junos (Subgenus *Scorpiris*) include some of the most difficult of bulbs to challenge & frustrate the specialist. There are also comparatively easily grown ones which will be no trouble in a bulb-frame or in pots in the alpine-house. So, do read the comments about these & don't waste your money (and also the efforts others have made to produce this seed) by trying to grow the difficult ones before you have grown the easier species. Several juno listings are from Alan McMurtrie

(Toronto, Canada), who is mainly involved in hybridising within this group but has hand-pollinated spare flowers of some of the species to make 'pure' species material available. For the first time, we also list seed from several 'reticulatas' (Subgenus *Hermodactyloides*). This is very seldom available. It is extremely difficult to collect in nature and rarely sets in cultivation, so don't miss this opportunity. The best reference for all the species is 'The Iris' by Brian Mathew.

- 584.320 : IRIS AUCHERI** (Subgen. *Scorpiris*) * No data. Mainly from a variable Diyarbakir population & a lilac-blue from Van. One of the easier junos to grow in the UK, 15-30cm. high with flowers in shades from mid-blue to violet blue. (8) C
- 585.700 : IRIS CYCLOGLOSSA** (Subgen. *Scorpiris*) * Afghanistan, SW of Herat. 1450-1700m. Seasonally moist, grassy places near streams. Ex Hedge, Wendelbo & Ekberg 7727. (A superlative & spectacular species, unlike any other Juno, or indeed any other *Iris*, & known only from the currently inaccessible type-locality. Slender, branching stems, about 30cm high, with up to 3, large, flat, violet-blue flowers. Shaded white & yellow-blotched on the falls. Not difficult in the bulb-frame or alpine-house but still needs some skill & care to maintain, though it is now being grown successfully by some in the open garden in the UK.) (8) E
- 588.809 : IRIS HISTRIOIDES** (Subgen. *Hermodactyloides*) * No data. From the clone 'Lady Beatrix Stanley', which according to Brian Mathew is fairly typical of the wild plant but seed has been open-pollinated in the UK and may produce some hybrids. One of the most sumptuous of dwarf, bulbous irises. Its large violet-blue flowers, heavily spotted on the falls, push through the bare earth in early spring. The species is endemic to a small area of Samsun & Amasya provinces in NW Turkey at between 1300 & 1750m., in the coniferous forest zone of a much moister area than *I. histrio* & most of its relatives. Growable outside in the UK.) (8) D
- 590.270 : IRIS KOLPAKOWSKIANA** (Subgen. *Hermodactyloides*) * No data. A very odd species, placed in this subgenus with the 'reticulatas' & resembling them in its bulbs but somewhat 'juno-like' in its narrow, channelled leaves. Pale blue or purple flowers with rich, red-purple blades below the orange-yellow ridge of the falls. A plant of open, stony slopes at up to 1300m. in the Tien Shan, this has always been a challenge to grow & maintain. Hand-pollinated Canadian seeds from Alan McMurtrie.) (8) F
- 590.640 : IRIS LINIFOLIA** (Subgen. *Scorpiris*) * No data but the true species, native to Pamir-Alau & Tien Shan at around 2500m.. Dwarf, less than 10cm. high, with curved, narrow leaves & slender flowers in yellow & white. Easier than some junos. (5) E
- 590.900 : IRIS MAGNIFICA** (Subgen. *Scorpiris*) Uzbekistan, Agalik, Seravschan. (A wild coll. from Janis Ruksans of this splendid Central Asian, which we hope may show some variation on the following, more generally cultivated, form.) (10+) C
- 590.910 : IRIS MAGNIFICA** (Subgen. *Scorpiris*) * No data. A splendid Central Asian, possibly the easiest juno to grow (even outside in a sunny bed) in the UK. Large pale lavender flowers & glossy, green leaves on stout stems of 60cm. or more. (10+) B
- 590.911 : IRIS MAGNIFICA from WHITE FORM** * Hand-pollinated by A. McMurtrie from an absolutely pure white. (8) D
- 590.950 : IRIS MARACANDICA** (Subgen. *Scorpiris*) * No data but the true species from the Pamir-Alai. Dwarf at less than 15cm. & yellow-flowered. Until recently little-known in cultivation but, now we have it established, proving not too difficult. (5) E
- 591.250 : IRIS NICOLAI** (Subgen. *Scorpiris*) * No data. A striking, dwarf Juno from NE Afghanistan & Tadjikistan. Purple-stained, lilac-white flowers with velvety violet lines & tips to the falls surrounding bright orange crests. Difficult (5) F
- 592.505 : IRIS PERSICA** (Subgen. *Scorpiris*) * Turkey, Van. Ex a J.G. Elliott coll. (From one of the most eastern colonies of this exquisite but difficult juno, which does not actually appear to extend to Iran. Often a plant of sparse oak-scrub rather than steppe. These forms are in shades of jade-green, emerald, smoky green and yellow-green, all with pronounced markings.) (5) E
- 592.550 : IRIS PERSICA** (Subgen. *Scorpiris*) * From several of our colls. of this rather difficult & temperamental juno from S Turkey, usually in oak-scrub or open pine woods. Translucently tinted, yellow-crested flowers in browns & plum-purples. (5) E
- 595.820 : IRIS RETICULATA** (var. *reticulata*) (Subgen. *Hermodactyloides*) * Armenia, near Lake Sevan. Hand-pollinated Canadian seed of a distinct form, originally collected in the E Caucasus at the northern limits of the species-distribution. Wide segments of red-purple which age to lighter, pinker shades. See the garden-hybrid section at the end of this list for hybrids using this form. 'Reticulata' seed, which we hardly ever have available, often takes two winters to germinate. (5) E
- 596.060 : IRIS ROSENBACHIANA** (Subgen. *Scorpiris*) * No data. An exquisite, little juno (close to *I. nicolai* & *I. zaprjagajewii*) from the Pamir-Alai, at up to 2000m. Intolerant of excess moisture & can be rather difficult to maintain over a long period but usually progresses well from seed. Bright green leaves & rich-purple flowers with bright-orange crests on the falls. (5) E
- 598.850 : IRIS STENOPHYLLA** (subsp. *stenophylla*) (Subgen. *Scorpiris*) * No data. Beautiful, 10cm. high, yellow-crested, rich violet-blue to purple juno from the steppes of central S Turkey. Considered a little easier than the related *I. persica*. (5) E

- 600.415 : IRIS UNGUICULARIS subsp. CARICA** (var. *angustifolia*) Greece, Lakonia, S of Areopoli. M. Jope 98-08. (The smaller, narrower leaved eastern race of the classic winter-flowering iris, excellent outside in most of the UK, in a well-drained sunny site. Beautiful, deep violet flowers rise on long tubes among the tufts of grassy foliage, on and off all winter with a profusion as spring approaches. The S Peloponnese forms tend to be dwarfer than those from further N and incline to the Cretan race.) (10+) C
- 600.416 : IRIS UNGUICULARIS subsp. CARICA** Greece, Messinia, Kardamili to Petriovouni. M. Jope 98-09. (10+) C
- 600.910 : IRIS VICARIA** (Subgen. *Scorpiris*) * No data. Central Asian, sometimes confused with *I. magnifica* : almost as robust & growable as it is. About 50 cm. high with pale blue-violet flowers, crested with white & blotched with yellow on the falls. (8) C
- 601.110 : IRIS WILMOTTIANA** (Subgen. *Scorpiris*) * No data. From the Pamir-Alai but described originally from material grown in the UK in 1901. Very rarely seen today - the plant grown as "*I. wilmottiana alba*" appears to be a form of *I. bucharica*. 15-20cm. high, with glossy leaves & white-crested, soft-lavender flowers, blotched with white & deeper purple on the falls. (5) E
- 630.120 : LEUCOJUM AUTUMNALE** (subsp. *autumnale*) * No data. Delightful & dainty with little white, pink-tinged bells dancing on dark stems before the leaves appear, in autumn. Possible in a sunny, well-drained site outside in the UK (20+) B
- 630.450 : LEUCOJUM ROSEUM** * France, Corsica, Pointe de Revellata NW of Calvi. Pockets on granite. (Delicate, tiny, fairy-like autumn-flowering bulb. Shell-pink bells dance on thready stems. Best under glass in 'cyclamen conditions' in the UK.) (15+) C
- 630.480 : LEUCOJUM TINGITANUM** * Morocco, Rif, above Chaouene. Ex the J. Blanchard (JWB 88-02) & T. Norman colls. (A fine, spring-flowering plant, considered a doubtful species by many, until recently rediscovered & introduced. Large white bells on 20cm. stems. May be closest to *L. nicaeense* & proving as easily grown in similar conditions in the alpine-house.) (10+) D
- 632.600 : LILIUM CANDIDUM** * Greece, Lakonia, W of Sparti. 500m. Steep, limestone slopes among *Euphorbia*, *Phlomis*, etc. (Incomparable, pure-white lily. Older cultivated stock is sterile & full of virus. From stock maintained here by hand-pollination from our 1983 wild seed coll. Sown early, this will germinate this winter. Other species of *Lilium* will be in our next list.) (15+) C
- 687.950 : MUSCARI ANATOLICUM** * Turkey, Konya, Sultan Dag. 1760m. Exposed limestone ridgetop. (Appears to be this tiny, recently described species, rather like *M. discolor* in its open-mouthed, white-tipped flowers but easier to flower here.) . . . (15+) C
- 688.101 : MUSCARI AUCHERI** * Turkey, Bolu, near Abant Golu. 1000m. Ex N. Stevens 2541 (A striking bicoloured form of this easily grown species. Mid-blue and white flowers over short, neat foliage. From a cool, moist part of Turkey.) (20+) A
- 688.500 : MUSCARI BOURGAEI** * Turkey, Denizli, Honaz Dag, SE of Denizli. 1700m. Gravelly areas on exposed, limestone ridge. (W Turkish, alpine endemic, only recorded above 1500m. Glauconous foliage & very dense heads of globular flowers, in mid-blue to violet-blue, with paler lobes, on 10 cm. stems. Not too easy but settling down with us under glass.) (15+) C
- 688.600 : MUSCARI CAUCASICUM** (Subgen. *Leopoldia*) * Turkey, Kars, SSW of Sarikamis. 1800m. Stony, igneous slopes. (A handsome 30cm. high species, extending across Transcaucasia to NW Iran. Striking, amethyst-violet sterile flowers.) (15+) B
- 689.050 : MUSCARI aff. COMOSUM** (Subgen. *Leopoldia*) * Greece, Ioanina, N of Konitsa. 800m. Clay over shale. (Will not key-out as *M. comosum* as the bulb tunics are not pink. We successfully dissuaded Kit Tan from describing it as a new species.) . . (15+) A
- 689.450 : MUSCARI GRANDIFOLIUM** * Morocco, Middle Atlas Mts., above Ifrane. 1700m. Red clay on limestone. (Not unlike a large version of *M. latifolium* but best under glass. Fine heads of blue-black flowers from china-blue buds. 20-30cm.) . . (20+) B
- 689.705 : MUSCARI INCONSTRICUM** * Jordan. No further data. Ex a Salmon, Bird & Lovell coll. (A southern species entering Turkey in Hatay then through Syria & N Iraq to Iran. Loose racemes of up to 30, very dark blue tubular flowers.) (15+) C
- 689.800 : MUSCARI LATIFOLIUM** * Turkey, Balikesir, Kaz Da. 1200m. Openings in coniferous woodland. (A very local species but an easy garden-plant in the UK. Racemes of deepest violet-black flowers from pale-blue buds.) (20+) B
- 689.850 : MUSCARI LEUCOSTOMUM** * Turkmenistan, Kopet Dag, near Duschak. Ex a J. Ruksans coll. (An eastern species, allied to *M. neglectum*, barely known in cultivation. Distinct blue-black flowers.) (15+) C
- 689.901 : MUSCARI LONGIPES** (Subgen. *Leopoldia*) * Turkey, Sivas, WSW of Hafik. 1300m. Calcareous hills. (Distinct with a big tassel of violet, sterile flowers. Pedicels elongate greatly in fruit & the dry stem blows away tumbleweed-fashion.) (10+) B
- 689.980 : MUSCARI MCBEATHIANUM** * Turkey, Adana, ENE of Tufanbeyli. 1200m. Open areas among *Pinus* in moist, fine sand. (A charming, delicate and none-too-easy little species we discovered in 1985 and which was named by Kit Tan in 1988 in honour of our old friend Ron McBeath, at that time responsible for growing *Muscari* at the RBG Edinburgh. It took us over 12 years to build up a stock to produce enough seed to list but we have splendid crop of hand-pollinated seed this season.) (20+) E
- 690.010 : MUSCARI MACROCARPUM** * No data. A gloriously scented species, near *M. muscarimi*, very local in SW Turkey & some E Aegean islands. Greyish, channelled leaves & yellow flowers opening from dull-purple buds on 15cm. stems. (10+) C
- 690.150 : MUSCARI MIRUM** (Subgen. *Leopoldia*) * Turkey, Mugla, SE of Altinyayla. 1650m. Open, stony slope on serpentine ridge. (Recently described & distinct in flower, foliage & seed. Subtle rather than spectacular in dull gold & purple. Not an easy species to maintain and grow well in our experience, it needs care in watering and must be hand-pollinated to set seed.) (10+) E
- 690.201 : MUSCARI MUSCARIMI** * Turkey, Burdur, W of Yesilova. 1280m. Loose, serpentine talus on open slope. (Local, SW Turkish endemic, always on serpentine in our experience. Grey-green leaves & racemes of greyish-ivory flowers open from purple-brown buds. Famously scented (deliciously different to *M. macrocarpum*) & esteemed for this for over 200 years.) (10+) C

- 690.700 : MUSCARI PSEUDOMUSCARI *** Iran, Mazendaran, S of Chalus. 1500m. Ledges on limestone cliffs. (Lovely endemic of the Chalus gorge on the wet, Caspian slope of the Elburz, described as *M. chalusicum* in the 1960's, though *M. pseudomuscari* has priority. A choice plant with refined heads of china-blue bells, open at the mouths, not pinched in.) (15+) **B**
- 691.200 : MUSCARI TENUIFLORUM** (Subgen. *Leopoldia*) * Turkey, Kayseri, S of Pinarbasi. 1200m. Limestone fissures. (To 50cm. high & distinct from *M. caucasicum* & *M. comosum* in the black teeth of the fertile perianths. Violet sterile flowers.) (15+) **A**
- 691.250 : MUSCARI aff. TENUIFLORUM** (Subgen. *Leopoldia*) * Turkey, Hakkari. Ex a N. Stevens coll. (A distinct taxon, which seems to be confined to both sides of the ranges of Kurdistan, along the border of Turkish Hakkari & Iran. Paul Furse dubbed it the 'bluehot poker' & we still grow an Iranian bulb. The tallest of all, almost up to 1m. in the wild & at least 60cm. here, this can be keyed-out to *M. longipes*, as the lower pedicels elongate in seed & it is then intermediate between these two species.) (15+) **C**

Narcissus : wild daffodils from Wales south to the Sahara

Narcissus is very much a western genus, spread S from Britain to NW Africa and centred on Spain. Many species from higher rainfall areas or moist, montane habitats in Spain & Portugal grow well outside in UK gardens. Some, however, from drier areas, especially the Moroccan ones, need a dry, summer rest. These are ideal alpine-house or bulb-frame plants, especially valuable as many flower during winter & very early spring. A great many of the original wild collections from which the following cultivated seed has been grown, were made by John Blanchard (JWB), whose lifetime's work with this genus is unrivalled. We follow the nomenclature used in his monograph, 'Narcissus - A Guide to Wild Daffodils', the best reference work on the genus. It can be described as an informed gardener's compromise as far as names are concerned. A thorough botanical revision of the genus would appear to be badly needed

but it would be very unlikely to suit both botanists & gardeners, so it is perhaps better unwritten. Many species are both extremely variable & ill-defined. We have to deal with a diversity of taxonomic concepts. The leading current 'splitter', the Spanish botanist Fernandez Casas, whose work recalls that of Pugsley with the trumpet daffodils, has now moved on to the Moroccan populations, where previously we had only Maire's 'lump'n'split' names (which required very long labels). Most descriptions are wholly inadequate to define the taxon concerned and distinguish it from others, in any case. Keys just do not work when applied to wild populations. Gardeners, however, will find the sum of characteristics in most populations distinct enough. 'Splits' are shorter to write out but it is very much a question of 'take your pick' concerning the name you stick on them.

- 693.800 : NARCISSUS ASSOANUS** (*N. juncifolius*, *N. requienii*) * France, Haute-Pyrenees, Vallee d'Ossoue. 1500m. S & W-facing limestone cliffs & slopes. (Beautiful, little, clear yellow jonquil. A delight in a pot but accommodating in the garden.) (10+) **B**
- 694.100 : NARCISSUS ATLANTICUS *** Morocco, High Atlas, above Amizmiz. 2000m. Among scrub, in soft, moist loam. Ex the 1936, E.K. Balls type coll. (A very local plant in the wild & still rare in cultivation after over 60 years, as it is by no means easy to grow & maintain. Sweetly scented, creamy white jonquils carried singly on 15cm. stems. Distinct from the *N. rupicola* group in its deeper, cup-shaped corona & in the arrangement of the anthers, it most resembles a white version of *N. cuatrecasatii*.) (8) **E**
- 694.305 : NARCISSUS BICOLOR *** No data. Unknown in the wild, though reputedly recently found in the Pyrenees. About 30cm. high with horizontal or ascending flowers. White or cream segments surround the lobed, yellow trumpet. (8) **B**
- 694.800 : NARCISSUS BUJEI *** Spain, Cordoba, Sierra de Cabra. Ex JWB 87-13. (An unexpected trumpet-daffodil quite recently described from southern Spain. Thought by some to be a race of the mysterious *N. hispanicus* but maintained sensibly at specific level in one of the latest Spanish floras. About 30cm. high with concolorous yellow flowers.) (8) **D**
- 695.110 : NARCISSUS BULBOCODIUM var. CITRINUS *** No data. The cool lemon yellow race of hoop-petticoats, mainly prevalent in N Spain & often quite late-flowering. Usually among the best for growing outside in UK gardens. (15+) **B**
- 695.400 : NARCISSUS BULBOCODIUM var. GRAELLSII *** Spain, Sierra de Guadarrama. Ex a J.W. Blanchard coll. (Distinct, dwarf, slightly greenish-white race, neglected in literature but proving quite easy to grow in acid soil.) (15+) **C**
- 696.250 : NARCISSUS BULBOCODIUM var. NIVALIS *** Spain, Avila, Sierra de Gredos, NE of Pico Almanzor. 1800m. In turf on steep, open slopes. (A miniature alpine hoop-petticoat with small, bright-yellow flowers. Utterly different to the *N.b. nivalis* of Maire (now listed under *N. jeanmonodii*) not only in flower but in its narrow, upright foliage. Delightful in a pan.) (15+) **B**
- 696.410 : NARCISSUS BULBOCODIUM subsp. OBESUS *** No data. From a very fine, free-flowering form grown by D. Batterham. Dark leaves & rich soft-yellow flowers with large, satisfyingly obese, horizontal coronas. Good outside in UK gardens. (10+) **C**
- 696.600 : NARCISSUS BULBOCODIUM var. PALLIDUS *** Morocco, High Atlas, Tizi Gourane above Amizmiz. 1800m. Schist fissures. (Cultivated seed from our 1982 coll. Recently named *N. jacquemondii*, (*q.v.*), by Fernandez Casas.) (10+) **C**
- 696.700 : NARCISSUS BULBOCODIUM subsp. PRAECOX *** Morocco, High Atlas Mts., Moulay Brahim gorge below Asni. 1000m. Humus-filled pockets on limestone boulders. (A fine, robust & distinct race. Big, soft-yellow flowers with narrower, more funnel-shaped trumpets than similarly coloured *N. romieuxii* forms, in late winter or earliest spring. Alpine-house in UK.) (10+) **C**

- 698.251 : NARCISSUS BULBOCODIUM var. TENUIFOLIUS** * Portugal, Oliveira do Hospital. Ex Salmon & Blanchard 185. (Floriferous, very deep yellow, dwarf hoop-petticoat with dark, thready leaves. Excellent alpine-house pan-plant.) (15+) **B**
- 699.806 : NARCISSUS CANTABRICUS** (subsp. *cantabricus*) * Spain, Malaga, near Estepona. Ex a B. Corneille coll. (A reliable & free-flowering form with profuse, pure-white hoop-petticoat flowers in early winter to brighten the alpine-house.) (10+) **C**
- 699.807 : NARCISSUS CANTABRICUS** (subsp. *cantabricus*) * Morocco, Djebel Zerhoun. Ex a T. Norman coll. (10+) **C**
- 699.819 : NARCISSUS CANTABRICUS** (subsp. *cantabricus*) * No data. From a range of forms, flowering all winter. (15+) **C**
- 699.830 : NARCISSUS CANTABRICUS var. FOLIOSUS** * No data. Seed from Ivor Barton's stock, long-cultivated under this name. A fine plant for the alpine-house, flowering in late winter with profuse white hoop petticoats. Dry these off in summer. . . . (15+) **C**
- 699.951 : NARCISSUS CAVANILLESII** (*Tapeinanthus humilis*) Morocco, ESE of Essaouira (Mogador), between Sebt-Korimate & Et -Tnine. Ex M. Salmon & M. Fillan 260. (Only recently placed in *Narcissus*. Upward-facing, starry, yellow flowers before the leaves, in autumn. A fine form, proving easier to grow & flower than the populations around Tangier & in S Spain.) (10+) **D**
- 700.002 : NARCISSUS CORDUBENSIS** * Spain, Cadiz, between Grazalema & Ubrique. Ex a J.W. Blanchard coll. (A fine, scented, deep yellow jonquil, near *N. fernandesii*, with up to 3 flowers on 20-30cm. stems. Accommodating in pots or a frame.) . . . (15+) **B**
- 700.200 : NARCISSUS CUPULARIS** * Italy, Sardinia. 800m. Ex a T. Norman coll. (Dwarf, pale yellow to cream tazetta, 15-20cm. high. Listed in the past as *N. tazetta* subsp. *aureus* (it would be this in 'Flora Europaea') & *N. bertolonii primulinus*.) (8) **B**
- 700.310 : NARCISSUS CYCLAMINEUS** * No data. Little-known in the wild & thought to be all but extinct but well established in UK gardens, where it can sow itself when suited in rather heavy, acid loam. Grown before 1608 but 'lost' for 300 years until rediscovered in Portugal in 1885. Parent of a multitude of larger hybrids, the wild plant is still unrivalled - an irresistible, little, brilliant yellow daffodil, like no other in its extraordinarily long, narrow trumpet and fully reflexed perianth segments. . . . (20+) **B**
- 701.020 : NARCISSUS FERNANDESII** * No data. From several J.W. Blanchard colls. of this yellow jonquil, distributed locally along the drainage of the Tagus. A poorly defined species in a confusing group but all variations are worthwhile.) (20+) **B**
- 701.600 : NARCISSUS HISPANICUS** * No data. A good, rich- yellow trumpet daffodil, known in cultivation for over 400 years but of obscure origin and debatable taxonomic status. Included under *N. pseudonarcissus* subsp. *major* by Webb. (8) **B**
- 701.850 : NARCISSUS JACQUEMONDII** (see also 696.600 : *Narcissus bulbocodium* (subsp. *vulgaris*) var. *pallidus*) Morocco, High Atlas Mts., between Asni & Amizmiz. Ex a J.W. Blanchard coll. (From a type-locality coll. by John of this recently named little hoop-petticoat, which appears to be the same taxon we have listed under Maire's name. Suit yourselves. A good alpine-house plant with pale to deeper primrose flowers in early spring (much later than *N.b.* subsp. *praecox*). About 10cm. high.) (15+) **D**
- 701.870 : NARCISSUS JEANMONODII** (*N. bulbocodium* subsp. *nivalis* as applied by Maire in 'Flore de l'Afrique du Nord') * Morocco, High Atlas Mts., above Tizi-n-Tichka. 2000m. In turf. (Previously listed under 696.200 as *N.b.* subsp. *nivalis* of Maire, this is a dwarf, snow-melt plant of the High Atlas, quite different to the Spanish ones, which have also been called '*nivalis*'. We have long said 'this needs a new name' but we did not anticipate anyone describing it at specific level. We fear that we are all stuck with this legitimately published epithet from the Spanish 'splitter' Fernandez Casas, even if the taxon is eventually placed at a sensible subspecific level as "*N.b.* subsp. *jeanmonodii*". Anyway, this is an excellent, distinct race with broad, prostrate, glossy foliage & brilliant yellow, upward-facing flowers with much exerted anthers. An easy grower, possible outside in the UK.) (15+) **B**
- 701.910 : NARCISSUS JONQUILLA** * Spain, Cordoba, Sierra de Cabra. Ex JWB 87-12. (An excellent yellow jonquil, which grows well outside in the open garden with Dinah Batterham (Dorset, UK). Rewarding under glass as well, of course.) (10+) **C**
- 701.980 : NARCISSUS JONQUILLA var MINOR** * Spain, Ciudad Real, SE of Almaden. Ex J.W. Blanchard 86-03 (Previously listed by us under 701.050 as *N. aff. fernandesii*, this is a splendid plant, which both John & Mike Salmon are agreed should be placed under *N. jonquilla* var. *minor*, previously considered a rather obscure entity. This was originally from an isolated colony mentioned on p.83 of John's monograph. Mike Tucker (Somerset, UK) writes "stunning" - up to seven large flowers.) (10+) **D**
- 701.981 : NARCISSUS JONQUILLA var. MINOR** * Spain, Cordoba, Sierra Morena, N of Andujar. Ex a T. Norman coll. (Seed from John Blanchard, who also thinks highly of this fine jonquil, which has rapidly settled down well in cultivation.) (10+) **D**
- 702.100 : NARCISSUS LONGISPATUS** * Spain, Albacete, Sierra de Alcaraz. Ex JWB 86-16 (This & *N. nevadensis* differ from all other trumpet daffodils in having 2-4 flowers per stem. In a wet, rich site in nature, this has been recorded approaching 2m. in height but expect much less in cultivation. It will possible be happiest outside in the UK. Ascending yellow trumpets.) (8) **D**
- 702.450 : NARCISSUS NEVADENSIS** * Spain, Granada, Sierra Nevada, upper Rio Monachil valley. 2200m. Wet-flush on W-facing slope. (Isolated, very local Sierra Nevada endemic, much easier to grow than *N. longispatus* & generally best outside in the UK. Differs from *N. longispatus* mainly in its white & pale yellow, bicoloured flowers. Usually about 30cm. high.) (15+) **C**
- 702.472 : NARCISSUS NOBILIS** * Spain, Leon, Puerto de San Glorio. Ex an A. Edwards coll. (A splendid, bicoloured trumpet-daffodil from N Portugal & N Spain, where it can occur in extensive colonies. Ascending flowers with white segments surrounding deep-yellow coronas on 50cm. stems. Differs in several characteristics from *N. bicolor* and is seldom seen in cultivation.) (8) **B**
- 702.500 : NARCISSUS OBVALLARIS** UK, Wales, below Ffostrasol. 150m. Open grassland & deciduous woodland. (Our lovely, local Welsh trumpet daffodil. Really an imaginary taxon but generally, if not consistently, different to more eastern British colonies of *N. pseudonarcissus* in its horizontal to upward-facing flowers which tend to be concolourous rather than bicoloured.) (20+) **B**

Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 702.680 : NARCISSUS PANIZZIANUS** * Spain, Cadiz, near Grazalema. Ex C. Stocken & J.W. Blanchard colls. (An excellent, dwarf, white tazetta. The name (originally applied to a NW Italian plant) may or may not be correctly applied to this but it is as good as any for this distinct Andalusian population. Flowers in spring with successive stems, 30cm. or less high, bearing clusters of up to 8, scented, white flowers. For decades, grown by John outside in Dorset, in a raised bed against a S-facing wall.) (10) C
- 702.702 : NARCISSUS PAPYRACEUS** * Cyprus. Ex a C.C. Mountfort coll. (A fine, vigorous tazetta, long grown by John Blanchard as *N. pachybolbus*. Possibly most safely labelled *N. papyraceus* Cyprus form. Clusters of scented, white flowers.) (8) B
- 703.705 : NARCISSUS PSEUDONARCISSUS** * France, Auvergne. Ex J.W. Blanchard 94-01 (From the stunning population illustrated on the dust-jacket of John's monograph. For what it is worth, the current general consensus is that these should be placed under *N. bicolor* but this French population has been called *N. pseudonarcissus* for so long that we stick with this for the present. Don't get bogged down with the names, these are really super little wild trumpet-daffodils for the garden in cool areas.) . . . (10+) B
- 705.100 : NARCISSUS ROMIEUXII** (subsp. *romieuxii* var. *romieuxii*) * Morocco, Middle Atlas Mts., above Ifrane. 1700m. Leafsoil over clay in mixed woodland. (From a splendid colony, as numerous as bluebells in a British wood, from which we first collected in 1962, best-known under the field-number 805. Extremely variable in form & colour from cream to deeper yellows.) . . . (20+) B
- 705.120 : NARCISSUS ROMIEUXII** from 'Julia Jane' selfed * Data as above. From an outstanding clone, selected in flower here from among thousands. The parent is virtually a pale yellow version of *N. cantabricus* var. *petunioides* with large flowers, whose coronas open flat or even slightly reflex. The clonal name, of course, should not be applied to seedlings, which will vary producing an exceptional range of colour forms from almost white through to yellows. If these are hybrids they are natural ones.) (15+) C
- 705.200 : NARCISSUS ROMIEUXII** var. **RIFANUS** * Morocco, Rif Mts., Iguermalet. Ex J.W. Blanchard 89-28 (From authentic material of this delightful, pale-yellow hoop-petticoat, proving to be a good grower under glass in the UK.) (15+) B
- 705.302 : NARCISSUS ROMIEUXII** subsp. **ALBIDUS** * Morocco. Ex J.W. Blanchard 91-17 (Pretty, distinct, pure-white hoop petticoat from NE Morocco & W Algeria. Projecting, scattered anthers. May be better placed under *N. cantabricus*.) . . . (10+) C
- 705.405 : NARCISSUS ROMIEUXII** subsp. **ALBIDUS** var. **ZAIANICUS** * Morocco, Zaian Mts., near Oulmes. Ex JWB 89-23. (Wild collected seed from this moist, lower altitude locality has produced an amazing range of forms, including some really splendid clones - possibly a group of hybrids or intergrades, like the Ifrane *N. romieuxii* population. The name is probably not worth much botanically - pick out a pale yellow one to call *N.r.a.* var. *zaianicus*! A diversity of creams & soft citron yellows.) (15+) B
- 705.500 : NARCISSUS RUPICOLA** (subsp. *rupicola*) * Spain, Avila, Sierra de Gredos, NE of Pico Almanzor. 1800m. In turf on open slopes. (A very neat member of Sect. *Apodanthae* with flat, clear-yellow flowers & glaucous leaves. A plant of acid soils in nature, this is a rather choice, small, high altitude race and one of the last *Narcissus* to flower with us.) (10+) C
- 705.502 : NARCISSUS RUPICOLA** (subsp. *rupicola*) * Spain, Caceres, Sierra Guadalupe. Ex a T. Norman coll. (8) C
- 705.520 : NARCISSUS RUPICOLA** (subsp. *rupicola*) * No data. Derived from stock grown by John Blanchard's father. Its origins are unknown but it has always been designated as 'Early Form'. Flowering at least a month before the preceding, this is a slightly larger plant and increases vegetatively more than the preceding. It may have a more southern or lower elevation origin. . . . (10+) C
- 705.600 : NARCISSUS RUPICOLA** subsp. **MARVIERI** * Morocco, Middle Atlas, S of Ksar-el-Ksiba. 1700m. N-facing, limestone slope with *Quercus* & *Cedrus*. (The yellow race endemic to Morocco. Larger & flowers earlier here than the preceding but not quantifiably different. Not easy in our experience. Needs careful watering & appreciates a warmer, drier rest in summer.) . . . (8) C
- 705.701 : NARCISSUS RUPICOLA** subsp. **WATIERI** * Morocco, High Atlas Mts., above Tizi-n-Tichka. 2300m. Moist, or shaded sites on rocky slopes. (One of the most beautiful of wild daffodils. The incomparable, crystalline-white race from the great massifs of the central High Atlas. We have only found it on acid soils. Grow it cool & never bake it when dormant.) (10+) C
- 706.303 : NARCISSUS SEROTINUS** * Morocco, Zaian Mts., Pont Martin. 900m. Ex J.W. Blanchard 93-09 (Widespread, autumn-flowering species. White flowers with orange coronas before the leaves. Keep it hot & dry in summer.) (10+) C
- 707.320 : NARCISSUS TRIANDRUS** (var. *triandrus*) * No data. A delightful species with up to 6 elegant white flowers, their tepals reflexing back from the cup-shaped coronas, on 20-30cm. stems. The sole member of Section *Ganymedes* & not very satisfactorily divisible into subspecific taxa. The pure-white, broader leaved type-race seems confined to NW Spain & perhaps adjacent N Portugal. Not always the easiest to grow - a cool site outside in acid, sandy soil seems the ideal in the UK. (15+) B
- 707.415 : NARCISSUS TRIANDRUS** var. **CERNUUS** (syn. subsp. *pallidulus*) * Portugal, Mondego valley. Ex a P. Bird coll. (Over much of Portugal & Spain, narrower-leaved, cream to pale yellow colonies occur, sometimes varying to deeper shades.) . . (10+) B
- 738.100 : ORNITHOGALUM ARCUATUM** * Turkey, Van, W of Yukari Narlica. 2200m. Stony alluvium in dried river bed. (A tall, handsome species, in effect a giant version of *O. narbonense*, distributed from E Turkey into NW Iran & N Iraq. Cylindrical racemes of many white flowers, with green fascia outside, on 1.5m. stems. Restrained but quite easy outside in the UK.) (20+) B
- 738.810 : ORNITHOGALUM NUTANS** * No data. A lovely, 20cm. high species from SE Europe & W Turkey. It can naturalise where suited in British gardens but we have never found it over enthusiastic. Large, nodding, white, green-backed flowers. (15+) A

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Paeonia : you could save a year by sowing soon

We list fresh 1998 seed from cultivated plants & refrigerated 1997 seed from natural populations in the republics of the former USSR & elsewhere. We do not yet know what, if any, wild collections will materialise in 1998. Apart from the uncertainty of 1998 supplies, you could gain a year by sowing early. Even if sown promptly, these may not show leaf-growth until spring, 2000. These are plants for the dedicated and patient

grower. Always keep ungerminated seed - it is large enough to check that it is sound. Like some lilies, many peonies will germinate hypogeally, forming a root-system underground during the first cool period before sending up true leaves the following season. Our thanks to Will McLewin for his painstaking collaboration with the botanists in the republics of the former USSR, who have made many of these collections.

- 745.802 : PAEONIA ANOMALA** Russia, Khakassia, Shirinsky district. (A Siberian coll. of this fine species, widespread in the colder areas of N Asia. Foliage cut into narrow segments, beautiful even without the flat flowers in deepest rose-pink.) (6) C
- 745.950 : PAEONIA BIEBERSTEINIANA** (*P. tenuifolia* complex) Russia, Stavropol district. (Much dissected leaves but less finely cut than *P. lithophila* foliage & bright red flowers. Distinct in its greyish, hairy foliage. Like several, a very local plant). (6) E
- 746.100 : PAEONIA CAMBESSEDESII** * The dwarfest species, endemic to the limestones of the Balearic Islands, about 30cm. high with beautiful, smooth, grey-green foliage, crimson beneath, & big, rosy flowers, up to 10cm. across in spring. (6) C
- 746.130 : PAEONIA CARTHALINICA** (*P. tenuifolia* complex) Georgia, Dampalo hills, Kartli. (An obscure entity only known from the one colony this area. Apparently the most robust of the *P. tenuifolia* complex, over 1m. high with bright red flowers.) (6) F
- 746.150 : PAEONIA CAUCASICA** (*P. mascula* complex) SE Georgia, Daba area. (The fine Caucasian representative of the variable *P. mascula* complex. About 50cm. high with dissected, flat, smooth foliage, glaucous beneath, & big rosy-red flowers.) (6) C
- 746.305 : PAEONIA CORIACEA** (*P. mascula* complex) Spain, Granada, near Alhama de Granada. (Only known in Europe from S Spain but extending into Morocco & Algeria. Beautiful, rose-pink flowers set against most distinct, lead-green foliage.) (6) E
- 746.500 : PAEONIA DAURICA** (*P. triternata*) (*P. mascula* complex) Ukraine, Krim (Crimea). (Close to *P. mascula* but distinct in its few, rounded leaflets with undulate margins. The valid name is an unfortunate misspelling of "*P. taurica*".) (6) D
- 746.640 : PAEONIA LITHOPHILA** (*P. tenuifolia* complex) Ukraine, Krim (Crimea). (The Crimean race, distinct in its light-green, much dissected leaves cut into a mass of filiform segments. Glossy, brilliant red bowls on stems about 50cm. high.) (6) D
- 747.110 : PAEONIA MLOKOSWITSCHII** (*P. wittmanniana* complex) * No data. "A sovereign among Paeonies" according to Farrer. Pale lemon-yellow flowers with deeper yellow stamens above 60cm. clumps of rounded, greyish-green leaves. (6) C
- 747.850 : PAEONIA STEVENIANA** (*P. wittmanniana* complex) (possibly the same as *P.w.* var. *nudicarpa*) Georgia, Bakuriani area. (Likely to be wholly different to *P. mlokosewitschii*. We still know little of the variation of these Caucasian populations) (5) F
- 747.900 : PAEONIA TENUIFOLIA** Georgia, Igoeti area. Steppe. (This type-race should have rich-green, glabrous foliage, less finely cut than *P. lithophila*, & crimson flowers. This collection is from a very small isolated colony of only a handful of plants.) (6) F
- 747.960 : PAEONIA TOMENTOSA** (*P. wittmanniana* complex) Azerbaijan, Lerik, Sinabad, Talysh. (Very little-known. Plants from seed collected in the Iranian Talysh in the 1960's (as *P. wittmanniana*) were compact with white flowers & most distinct.) (5) F
- 709.502 : PANCRATIUM ILLYRICUM** * France, Corsica, Venaco SSE of Corte. c.500m. Ex an A. Edwards coll. (A few seeds of this spectacular bulb in *Amaryllidaceae*, endemic to the W Mediterranean islands of Corsica & Sardinia. Very slow from seed but hardy in the UK - we grew it for many years outside in Dorset. Umbels of sweet-scented, white 'lilies' on 30cm. stems.) (5) E
- 758.001 : PELARGONIUM ENDLICHERIANUM** * Turkey, Erzincan, E of Refahiye. 1500m. Igneous scree. (A disjunct relict stranded in Turkey, thousands of miles from its relatives in Sect. *Jenkinsonia*, in the Cape. Butterfly-like flowers with two large, upper petals in bright-pink with crimson veins. Absolutely temperature-hardy & possible outside in the UK in dry site.) (5) C
- 800.600 : PULSATILLA CAMPANELLA** * China, Xinjiang, Tien Shan, Urumqi valley. 2470m. Ex T. Dickerson 94-34. (A delightful, little Central Asian species with neat, very finely cut, basal foliage and drooping bells in a lovely deep violet.) (10+) D
- 801.000 : PULSATILLA MONTANA** * Slovenia, NW of Permani. 500m. Exposed karst with diverse meadow-vegetation. (Seed grown in Dorset, UK, from our 1990 coll. A handsome thing with bells of intense black-violet & a cone of golden anthers.) (15+) C
- 809.500 : RANUNCULUS ABNORMIS** * Spain, Avila, Sierra de Gredos, NE of PicoAlmanzor. 1800m. Among rocks in melt-water gulleys. (A beautiful, tuberous-rooted species, which goes dormant as the ground dries in summer. Branching, 10cm. stems with many varnished, lemon-gold buttercups, each with up to 10 'petals', from tufts of grassy foliage. Choice & delicate but not difficult with some care - it fits in well with alpine-house 'bulbs', though it will resent complete dehydration in summer.) (20+) E
- 814.010 : RANUNCULUS CRENATUS** * No data. A delightful white-flowered, alpine buttercup from the E Alps into the Balkans. Rounded, dark-green, scallop-edged leaves & a succession of flowers like tiny, pure-white roses on 10cm. stems (20+) B
- 827.150 : ROMULEA BULBOCODIUM** * No data. The form grown in the garden at Knightshayes in Devon. A very fine, vigorous, comparatively hardy member of this widespread, extremely variable, Mediterranean species. Grassy leaves & big rich-violet crocus-like flowers with yellow throats in spring. Good outside, in the S of Britain at any rate, it even does quite well here (20+) B

Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 827.310 : ROMULEA CLUSIANA** (*R. bulbocodium* complex) * Gibraltar. Ex a J. Hulme coll. (An outstanding race from SE Spain, particularly splendid with large flowers in rich violet with extensive yellow-orange centres. Alpine-house or frame) (15+) C
- 827.410 : ROMULEA CROCEA** (*R. bulbocodium* var. *crocea*) * Turkey, Antalya. A spectacular race from below 900m. on sandy soils in SW Turkey & W Syria, exceptional among the northern hemisphere *Romulea* species in its wholly yellow flowers. (15+) C
- 827.610 : ROMULEA LEICHTLINIANA** (*R. bulbocodium* var. *leichtliniana*) * No data. A race of sporadic distribution in the E Mediterranean region, usually below 600m. White flowers shaded purple externally and with yellow throats. (15+) C
- 872.305 : SCILLA ARMENA** Turkey, Erzurum, S of Ispir, Golyurt Gecidi. 2360m. Sandy clay slopes. N. Stephens coll. (Not seen in flower but possibly more likely to be this than *S. monanthos*, which has similar seeds. Very much smaller & more delicate than *S. siberica*. A pale, penetrating, electric blue more intense on the dark blue midribs. Cool summer conditions.) (15+) C
- 873.020 : SCILLA BIFOLIA** Greece, Fokida, Oros Parnassos. 2100m. Open, stony, limestone slopes. (The high altitude, Greek, race of this widespread, variable 'species-group'. It follows the melting snows with a wash of ultramarine-blue flowers.) (20+) B
- 873.210 : SCILLA BITHYNICA** * No data. Sows itself here in our heavy, acid clay. From low altitudes along the wet, Black Sea coasts of Bulgaria & NW Turkey, with 20cm. racemes of starry, blue or white flowers with navy-blue anthers in spring.) (20+) A
- 873.650 : SCILLA HOHENACKERI** (possibly correctly *S. greilhuberi*)* Iran, Mazendaran, S of Chalus. (Paul Furse's 'Caspian Bluebell'. Delightful, soft violet-blue flowers with reflexed segments. Hardy but best protected from the weather.) (15+) B
- 874.400 : SCILLA LILIO-HYACINTHUS** * France, Hautes-Pyrenees, N of Col du Pourtalet. 1500m. Deciduous woodland. (A distinct plant, especially in its loosely scaled bulbs, distributed from SE France into N Spain. An easy garden-plant in the cool climate of the UK. Its lush, glossy leaves always attract attention, even without the 30cm. racemes of soft-blue starss.) (15+) A
- 874.800 : SCILLA LITARDIERI** * Bosnia & Hercegovina, above Dubrovnik to Trebinje. 500m. Fragmented limestone. (Heads of starry, pale-blue flowers on 20cm. stems. A lovely plant, local in nature but hardy in a sunny site in the UK.) (15+) A
- 875.000 : SCILLA MELAINA** * Turkey, Hatay, E of Belen. 1300m. Fissures on & at base of limestone cliffs. (More or less endemic to the Amanus Mts. Little known but excellent & trouble-free under glass here. Seems quite hardy in the UK & may even prove a fine garden-plant. Possibly closest to *S. mischtschenkoana* (*S. tubergeniana*) but with prussian-blue flowers.) (15+) C
- 875.200 : SCILLA MESSENIACA** * Greece, Messinia, S of Kardamili. 30m. In shade, among limestone rocks. (Very local & confined to the tail-end of the Taigetos but seems totally temperature-hardy here. Racemes of pale-blue, starry flowers. 20cm.) (15+) B
- 875.605 : SCILLA MORRISII** * Cyprus, Paphos district. 700m. Moist, shaded crevices & banks, under *Quercus*. Ex D. Meikle 4015. (A very local Cyprus endemic, about 10 cm. high with erect racemes of 3-5, campanulate flowers in milky-white tinged with lilac & with pale-blue anthers. We hope to see this very attractive & genuinely rare species well-established in gardens.) (15+) D
- 878.000 : SCILLA VERNA** * Spain, Avila, Sierra de Gredos, SW of Hoyos de Espino. 1700m. Moist turf on open slopes. (Racemes of starry, lilac-blue flowers with blue-purple anthers. A montane, snow-melt form of this W European species.) (15+) A
- 933.000 : STERNBERGIA CANDIDA** * Turkey, Mugla, SE of Fethiye. 1100m. Limestone crevices, ledges & talus on steep slopes with sparse *Cedrus*. (A unique plant in this otherwise yellow-flowered genus. Robust with narrowly, strap-shaped, grey-green leaves & large, scented, pure-white flowers on 10cm. stems in winter to early spring. Bulb-frame or alpine-house in the UK.) (8) D
- 950.603 : THALICTRUM ORIENTALE** Greece, Messinia, near Kardamili. 20-50m. Dense shade in leafsoil. D. Hoskins 98-1 & 98-11 ; M. Jope 98-02 (This & the next are the only two species in Europe with showy, petaloid perianth-segments. Both are summer-dormant. Grow this dainty, white-flowered, 20cm. shade-lover with delicately cut foliage in *Cyclamen*-conditions.) (10+) D
- 950.700 : THALICTRUM TUBEROSUM** * Spain, Huesca, W of Anzanigo. 600m. Steep, stony, limestone banks (This coll. has proved to be taller & more spectacular than other examples of this Pyrenean endemic we have seen. Planted out under glass here, it is about 40cm. high with airy panicles of big, ivory flowers over a very long period. Ideal for the bulb-frame.) (10+) D
- 969.252 : TULIPA ARMENA** var. **LYCICA** * Turkey, Antalya, N of Akseki. 1400m. Steep, limestone slopes with *Quercus* & *Pinus*. (The western race, separated from the the eastern type-race & *T. julia* mainly on the characters of the hairs of the bulb-tunics. Stunning red flowers with central black blotches & glaucous, undulate leaves. 15cm. Reliable with us under glass.) (15+) B
- 969.460 : TULIPA BIFLORIFORMIS** * No data. Originally from the Gothenburg Botanic Garden stock of this Central Asian species. Distinct, dwarf, dainty & attractive with multi-flowered stems carrying many, starry, white, yellow-centred flowers. (15+) C
- 969.600 : TULIPA CRETICA** * Greece, Crete, Hania, Akrotiri NE of Hania. 100m. Terra rossa. Ex a P.& P. Watt coll. (A tiny tulip, endemic to Crete, best appreciated in an alpine-house pot. Its diminutive stature easily separates it from other Cretan tulips. Starry white flowers, tinged with pink & grey-green outside & with yellow bases, on stems less than 10cm. high.) (15+) C
- 970.401 : TULIPA** aff. **JULIA** * Turkey, Hakkari, Zab gorge S of Hakkari. 1300m. Steep stony slope below NE-facing cliffs. (Raised from seed collected in 1986 under our field number 7673, this does not match the *T. julia* populations higher up the Zab at Bagisli but the scarlet tulips are such a taxonomic nightmare that it seems most appropriate to place it under this species.) (10+) C

We have been collecting in North America this summer and seeds from the West will feature in a special North American list out later this year

We list only *Erythronium*, *Fritillaria* and *Trillium* in this list, as they are best sown earlier. There is still plenty of time to sow the other summer-dormant American species, so *Calochortus*, *Delphinium*, *Iris*, *Lewisia* and so on will be included in our next list. Most seeds listed here were collected by ourselves during summer, 1998. There is also an increasing number of seeds from cultivated plants, as stocks raised from previous wild collections mature. Nomenclature for Californian species follows 'The Jepson Manual', published in 1993, in most cases. 'Flora of the Pacific Northwest', 'Intermountain Flora' and 'A Utah Flora' are used for taxa occurring within their areas.

Erythronium : not deterred by a cold wet spring

We list here a comprehensive range of seed from the western members of this fashionable genus, in spite of what would seem to have been a very poor season for these early flowering plants in 1998. Most grow in well-drained habitats usually in light shade. When areas are hot & dry in summer, the corms are likely to be growing deeply among stones, where soil-temperature & moisture remain constant. Their preference for serpentine areas is marked - singularly inhospitable, infertile soils, deficient in nitrogen, phosphorous & calcium, with high concentrations of magnesium. We suggest caution in attempting these in pure peat - a mix of half granite chippings and half sphagnum peat or leafsoil might be more appropriate. Species from warmer, drier summer habitats might be best in well-drained sites in full sun in cool, wet climates and may need a summer-rest. All seem remarkably temperature-hardy and many

grow surprisingly well in the open garden in wetter climates. Seed of most of the species from California & Oregon will come up easily after a sufficient cool period. Early experience with *E. klamathense*, *E. pusaterii*, *E. pluriflorum* & *E. purpurascens* showed them to be extremely difficult to germinate. (The following comments may also apply to various races of *E. grandiflorum*, *E. idahoense*, *E. nudopetalum*, etc. & other cold-climate taxa, like *E. montanum* & *E. citrinum* var. *roderickii*.) They appeared to require a very long cold period or repeated freezing. This has been verified, wholly independently, by John Andrews in California, Art Guppy in British Columbia & Norman Stevens in the UK. They all germinated *E. pluriflorum* & *E. pusaterii* after subjecting imbibed seed to long spells in the refrigerator. What would appear to be required is a period of about 6 months at a temperature around 0 C or 32 F.

- 1.350.200 : ERYTHRONIUM CALIFORNICUM** Cal., Humboldt Co., SSW of Willow Creek. 1580m. Stony serpentine areas in openings among conifers. (The lovely species of the N Californian Coast Ranges distributed S from here almost to the Bay area. A plant of foothill woodland & pine forest. Beautifully mottled leaves. Creamy white flowers with yellow throats.) (20+) C
- 1.350.202 : ERYTHRONIUM CALIFORNICUM *** Cal., Trinity Co., above Zenia. 1200m. In shade of coniferous woodland on stony, serpentine slopes. (A population intermediate to *E. multiscapoideum*. From seed collected in 1989 (our 11005)) (15+) C
- 1.350.400 : ERYTHRONIUM CITRINUM** Oregon, Josephine Co., SW of Selma. 550m. Steep slopes with sparse conifers. (Mottled leaves & white to cream flowers with lemon bases. Restricted to the Coast Ranges on the California-Oregon line.) (20+) C
- 1.350.401 : ERYTHRONIUM CITRINUM *** Cal., Del Norte Co., ENE of Gasquet. 450m. Coniferous woodland. (15+) C
- 1.350.500 : ERYTHRONIUM CITRINUM var. RODERICKII** Cal., Trinity Co., Scott Mts., between Tangle Blue Creek & Bear Creek. 1250m. Openings in coniferous forest. (Listed in 1989 as a form of *E. californicum* with purple filaments (11018). Nearest recorded populations of *E. citrinum*, *E. hendersonii* & *E. californicum* are all about 35km. distant. This may have something to do with all or any of them. It is not recognized as a valid taxon in "Jepson" but the name covers quite a large population.) (15+) D
- 1.351.000 : ERYTHRONIUM GRANDIFLORUM** (var. *grandiflorum*) Utah, Cache Co., above Tony Grove Lake. 2400m. Open slopes with *Artemisia*. (Montane, snow-melt plant with a northern & eastern distribution. Outstanding bright yellow flowers and plain green leaves. Here with red-brown anthers - so far S, it usually has yellow-anthers (subsp. *chrysandrum*)). (20+) C
- 1.351.002 : ERYTHRONIUM GRANDIFLORUM** (var. *grandiflorum*) Idaho, Nez Perce Co., N of Lake Waha. 300m. Steep slopes, among conifers. (Applegate assigns an 1892 coll. here to this type-race. Red, white & yellow anthers occur in N Idaho.) (20+) C
- 1.351.100 : ERYTHRONIUM GRANDIFLORUM var. CANDIDUM** Washington, Whitman Co., Steptoe Butte. 1020m. N-facing slope with sparse *Pinus*. (From the 1906 type-locality of this white-flowered plant. May or may not be the same as *E. idahoense* (q.v.). Isolated here on top of a quartzite butte rising above intensively cultivated palouse country on the Idaho line.) (15+) E

Species from North America : Seeds from Jim & Jenny Archibald

- 1.351.101 : ERYTHRONIUM GRANDIFLORUM var. CANDIDUM** Washington, Whitman Co., Kamiak Butte. 1020m. In mixed coniferous woodland on N-facing slope. (No early records from here but a twin, quartzite butte habitat.) (15+) **E**
- 1.351.201 : ERYTHRONIUM HELENAE *** Cal., Lake Co., SE of Middletown. 450m. Among *Arctostaphylos* chapparral on serpentine slope. (A beautiful, very local species with mottled leaves, quite near *E. californicum* but with yellow anthers and a definite capacity to increase vegetatively. A little UK seed from our 1989 coll. of this lower altitude population, now no longer accessible, which has settled down well with pot-cultivation under glass & seems to enjoy a drier summer rest than others.) (15) **D**
- 1.351.300 : ERYTHRONIUM HENDERSONII** Oregon, Jackson Co., N of Medford. 400m. Openings among scrub in *Quercus* woodland. (Limited to the Oregon-California borders, a superlative, robust species with dark-mottled leaves. Lavender-pink flowers with dark anthers & a purple base, surrounded by a white or yellow zone. Quite easy in a well-drained site in the UK.) . . . (20+) **C**
- 1.351.301 : ERYTHRONIUM HENDERSONII *** Oregon, Jackson Co., Siskiyou Mts., 1030m. Wooded slope. (15+) **C**
- 1.352.302 : ERYTHRONIUM HENDERSONII *** Oregon, Jackson Co., Jacksonville. 500m. Among *Quercus* scrub. (15+) **C**
- 1.351.500 : ERYTHRONIUM HOWELLII** Oregon, Josephine Co., E of Takilma. 670m. Among conifers. (15+) **C**
- 1.351.501 : ERYTHRONIUM HOWELLII** Oregon, Josephine Co., above Waldo. 650m. Among *Arctostaphylos* scrub & in shade of deciduous *Quercus*. (A type locality of this local plant, only known where the Illinois valley meets the Klamath Ranges. Nearest to *E. citrinum* but with no basal appendages to the anthers. White flowers turning pink as they age. Mottled leaves.) (20+) **C**
- 1.351.700 : ERYTHRONIUM KLAMATHENSE** Cal. Siskiyou Co., SW of Castle Lake. 1580m. Openings among scrub on steep, stony slopes. (High altitude species, rarely extending below 1500m., & closest to *E. purpurascens*, whose relatives tend to be the more difficult ones to grow and germinate. We have insufficient experience of this to express an opinion or advice. Yellow-centred, milk-white flowers with creamy anthers. Plain bright-green leaves. A local, mountain-plant, mainly of S central Oregon) . . . (15) **D**
- 1.352.000 : ERYTHRONIUM MULTISCAPOIDEUM *** Cal., Butte Co., N of Magalia. 600m. Under *Cupressus* on serpentine. (Mottled leaves and white flowers with pale, greenish yellow centres & white anthers. No close affinities among the westerners (though see comments under the 1.350.202 population of *E. californicum*) and the only species with stoloniferous corms. These are much dwarfer plants than the following. Seems quite easy to grow with us but maybe best kept dryish in summer.) . . . (15+) **C**
- 1.352.100 : ERYTHRONIUM MULTISCAPOIDEUM (E. "cliftonii") *** Cal., Butte Co., S of Pulga. 420m. Steep, open, serpentine scree. (More or less a giant form of the species only known from this one site. Never described botanically but grown in the UK as *E. "cliftonii"*. Proving a good grower. Adaptable and reputedly quite accommodating in the open garden.) (15+) **D**
- 1.352.200 : ERYTHRONIUM NUDOPETALUM** Idaho, Valley Co., NNE of Lowman, along Cache Creek. 2050m. Margin of coniferous woodland. (Refrigerated seed from our 1995 type-locality coll. of this obscure plant, collected here by Applegate in 1930, later reduced to a var. of *E. grandiflorum* by Hitchcock. A long journey to make a fresh 1998 collection was fruitless due to the late season. Flowering was only just over & no seed was set. Golden-yellow flowers with dark-red or maroon anthers.) (10) **E**
- 1.352.400 : ERYTHRONIUM OREGONUM subsp. LEUCANDRUM** Oregon, Douglas Co., S of Tiller. 460m. Among *Pinus* on steep serpentine slopes. 14.6.95 (Race with white anthers, of more limited distribution towards the SE of the range. The white flowers, often maturing to pink, have markings in orange, dark-red or brown around the yellow bases. Superlative.) (20+) **C**
- 1.352.700 : ERYTHRONIUM PLURIFLORUM** Cal., Madera Co., Shuteye Peak (Sierra Nevada E of Merced). 2310m. NW-facing granite ledges. J. Andrews coll., 1995 (Described in 1990 & allied to *E. purpurascens* with plain green leaves but the 30cm. stems carry up to 10 - exceptionally to 20 - nodding, bright yellow flowers, maturing to bronze or pinkish. Isolated high on Chiquito Ridge between Shuteye & Little Shuteye Peaks, it flowers as late as July. Refrigerated seed - a coll. unlikely to be repeated.) (20+) **E**
- 1.352.800 : ERYTHRONIUM PURPURASCENS** Cal., Plumas Co., S of Greenville. 1370 m. Among conifers on steep granite-grit slopes. (Plain green leaves & yellow-centred white flowers, purple-tinged with age. Most widespread of this trio & most numerous around the upper drainage of the Feather River, reaching to 2500m. A coll. made virtually in the type-locality.) (15+) **D**
- 1.353.000 : ERYTHRONIUM PUSATERII** Cal., Tulare Co., Jordan Peak (Sierra Nevada ENE of Porterville). 2774m. Granite rock-falls. J. Andrews coll. 1995 (Again described in 1990 - the Purpus coll. of 1895 was placed under *E. purpurascens* & Pusateri's later colls. in *E. grandiflorum*. Like a large *E. purpurascens* with well developed appendages on the segments & a larger yellow centre. The most southern of the westerners, confined to a small area at the sources of the Tule & Kaweah Rivers.) (15+) **E**
- 1.353.100 : ERYTHRONIUM REVOLUTUM** Canada, British Columbia, Vancouver Is. (Spread S to NW California but essentially a coastal plant, seldom above 1000m., of high rainfall areas. Mottled leaves and sumptuous rose-pink flowers.) (15+) **C**
- 1.353.120 : ERYTHRONIUM REVOLUTUM *** No data. Fresh 1998 seed from vigorous British stock in varying shades of pink. A species of the wet Pacific NW by far the best in moist UK gardens, where will usually sow itself in shady conditions (20+) **B**
- 1.353.300 : ERYTHRONIUM TUOLUMNENSE *** Cal., Tuolumne Co., NE of Columbia. 750m. Steep slopes in deciduous woodland. (Plain green leaves & up to 5, bright-yellow flowers. Amazingly hardy & easy in European gardens. A low altitude relic, nearest to *E. grandiflorum*, of limited distribution in the wild, though more locally abundant than was once thought.) (15+) **C**

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-

Fritillaria : the specialists of serpentine, granite and adobe clay

Names here mostly follow the account in Jepson, which is itself derivative from work done by Roger MacFarlane, whose names are largely in use in the UK. Some of those who know the genus well in California are not impressed by the current treatment of some 'species'. Individual populations of species like *F. affinis* (*F. lanceolata*) and *F. biflora* can look more distinct than many Mediterranean populations given specific status. It is quantifying the differences and finding a degree of consistency in them that is the problem. For gardeners, the articles written

by Dr. Sylvia Martinelli in the March & June 1992 AGS Bulletins are the most useful references available. Successful cultivation of these plants is much more widespread now than in the past. The basic criteria would appear to be well-drained, lime-free, low nutrient composts and, in the UK, giving them their first winter watering quite late. An excess of nitrogenous fertilizer should be avoided, especially for serpentine species - please note our comments about the chemical characteristics of this under *Erythronium*.

- 1.370.000 : FRITILLARIA AFFINIS** (*F. lanceolata*) Cal., Solano Co., NW of Vacaville. 550m. Steep scrub-covered slopes. (Coast Range form of this immensely variable group distributed in a great arc from around here N to Canada and E to Idaho. Nodding bells mottled in brown-purple & pale yellow. Up to 50cm. here. One of the easier ones in cultivation.) (20+) **B**
- 1.370.040 : FRITILLARIA AFFINIS var. TRISTULIS** * Cal., Marin Co., NW of Nicasio. 10m. Grassland. Ex D. Haselgrove & S. Martinelli 349. (Distinct & the only race maintained in "Jepson". Tall with extremely broad foliage and large, wide-open bells with broad segments, darkly mottled in browns. A low altitude plant, which appears happiest given lots of water in spring. It increases well vegetatively but was thought to be sterile. Hand-pollinated, it set massive capsules in 1998 for the first time here.) . . . (15+) **D**
- 1.370.120 : FRITILLARIA AFFINIS** Dark, deep brown-purple, almost black, from the Okanagan valley, B.C., Canada. (15+) **C**
- 1.370.200 : FRITILLARIA AFFINIS** (*F. lanceolata*) Idaho, Kootenai Co., ESE of Worley. 750m. *Pinus* woodland on sandy clay. (A giant from the NE extremity of the group distribution. Not the sort of thing expected so far E and just S of the Canadian border. Stout stems, 60cm. or more high, whorled with broadly lanceolate leaves carry up to 8 flowers.) (20+) **C**
- 1.370.301 : FRITILLARIA AGRESTIS** Cal., Alameda Co., ESE of Livermore. 450m. Among grass on clay slopes. (An adobe-clay plant, the valley-grassland version of *F. biflora*. Once widespread in the Central Valley but now very localised as most of its habitat has been destroyed by agriculture & development. Green-cream bells, purple-brown inside. Up to 50 cm.) (15+) **C**
- 1.370.500 : FRITILLARIA BIFLORA** * Cal., San Luis Obispo Co., above San Simeon Bay. 10m. Coastal grassland in sandy clay. (In fine form here, 20-30cm. high with darkest, brown-purple, green-striped bells. Always a coastal plant extending S to around the Mexican border - maybe best grown frost-free but the coast is cool in summer so do not bake it when dormant.) (20+) **B**
- 1.370.650 : FRITILLARIA EASTWOODIAE** (*F. phaeanthera*) * Cal., Shasta Co., S of Shingletown. 1000m. Openings in mixed woodland. (A dubious 'species', apparently a stable but fairly recent hybrid between *F. recurva* & *F. micrantha*. Dr. Martinelli describes the elegant bells here as from all red or all apricot to brown-orange edged with yellow and orange with yellow inside. About 50cm. high in the wild but less than 30cm. with us in cultivation, where it is proving quite easily grown) (20+) **C**
- 1.370.800 : FRITILLARIA GLAUCA** Cal., Humboldt Co., SSW of Willow Creek. 1580m. Unstable, serpentine talus on steep, N-facing slope. (Very dwarf, serpentine-endemic of the NW Coast Ranges, not unlike the Turkish scree-forms of *F. crassifolia*. Thick, glaucous leaves & nodding bells in yellow through to red-browns here. Not difficult to grow with us.) (15+) **D**
- 1.370.802 : FRITILLARIA GLAUCA** * Cal., Mendocino Co., Mendocino Pass. 1500m. Serpentine. (Selected yellows) . . . (10+) **D**
- 1.371.101 : FRITILLARIA LILIACEA** Cal., Sonoma Co. 240m. J.& G. Robinett coll. (A beautiful species, closest to *F. biflora* & *F. roderickii* with a very limited distribution N & S of San Francisco. Perhaps best kept frost-free in winter & cool in summer. Bright-green leaves, mostly clustered close to the ground, & up to 5, pendant, creamy white bells on 30cm. stems.) (15+) **E**
- 1.371.200 : FRITILLARIA MICRANTHA** Cal., Mariposa Co., NE of Coulterville. 1050m. Thin coniferous forest. (Robust species of the W Sierra Nevada foothills. Up to 10 nodding bells, usually purplish but varying to paler, greener tones.) (20+) **B**
- 1.371.500 : FRITILLARIA PINETORUM** Cal., Kern Co., Mt. Pinos. 2650m. In granite grit at margin of *Pinus* woods. (Like *F. falcata* in its wide-open, flat, thick-textured, upward-tilted flowers and fleshy, glaucous foliage. Its shallow bowls are basically lime-yellow but thickly peppered all over with purple-brown dots & with brilliant orange anthers. Less than 15cm. high.) (15+) **D**
- 1.371.520 : FRITILLARIA PINETORUM** Cal., Tulare Co., Jordan Peak. 2770m. J. Andrews coll. 1995 (John thinks these may be different to the above but they do have the curious horned capsule, considered unique to this species.) (15+) **D**
- 1.371.600 : FRITILLARIA PLURIFLORA** Cal., Lake Co., Walker Ridge. 600m. Open, grassy areas in heavy clay. (One of the most distinct & beautiful in the genus, 10-30cm. tall with up to 7, conical bells in a rich, pure unmarked pink. A classic adobe-clay plant from soil that is wet & glutinous in spring but dries like concrete later. A challenge but it has been grown well.) (15+) **C**
- 1.371.700 : FRITILLARIA PUDICA** Idaho, Butte Co., NE of Carey. 1520m. E & SE-facing slopes of stony ridge. (Unlike any other N American. Nodding, clear-yellow bells, sometimes maturing to orange-red shades, on stems of 20cm. or less. Usually a plant of montane steppe, extending into Canada & SE to Colorado. Often well-grown but not always easy - likes a cold winter.) . . . (20+) **C**
- 1.371.701 : FRITILLARIA PUDICA** Washington, Whitman Co., Kamiak Butte. 1020m. Open, SE-facing slope. (20+) **C**
- 1.371.750 : FRITILLARIA PUDICA** * No data. Seed from a vigorous, scented form from Wim de Goede. (20+) **B**

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-

- 1.371.800 : FRITILLARIA PURDYI** Cal., Trinity Co., S of Bear Creek. 960m. Open, stony, serpentine slope. (Local on the N Coast Ranges. Now being successfully grown in Europe. Stems of 10cm. or less carry a few wide, waxy, nodding, green-white, brown-veined bells, described by Martinelli as "voluptuously curved", "the shiniest, most delectable fritillaria flowers.") (20+) C
- 1.371.906 : FRITILLARIA RECURVA** Cal., Trinity Co., above Canyon Creek N of Junction City. 500m. Serpentine. (Incomparable, unique orange-scarlet species, which we do not find a great problem to grow if it is not kept too hot & dry in summer.) . . . (15+) D
- 1.372.000 : FRITILLARIA RECURVA var. COCCINEA** Cal., Lake Co., NW slope of Mt. St. Helena. 700m. (A few.) (10) F
- 1.372.050 : FRITILLARIA RODERICKII** (possibly *F. grayana*, lost under *F. biflora* in "Jepson") * Cal., Mendocino Co. Among grass in open woodland on clay. From an original coll. by Wayne Roderick. (Known from one or two vanishing sites away up on the NW Pacific coast. Obtuse segments in brown tipped with white. Quite dwarf & one of the easiest for UK growers.) . . . (15+) C
- 1.372.150 : FRITILLARIA VIRIDEA** Cal., San Benito Co., above Clear Creek W of San Benito Mt. 970m. J. Andrews coll. 1995 (A narrow endemic of serpentine-barrens, with nodding bells only on one side of the 30-50cm. stem. According to Martinelli, variable in green, brown & yellow tones. Ness in 'Jepson' says it is "pale green to almost black, not mottled.") (15+) E
- 1.495.000 : LEUCOCRINUM MONTANUM** Nevada, White Pine Co., SE of Little Antelope Summit. 1980m. Open areas among *Artemisia*, in loose, calcareous clay. (A very beautiful, dwarf member of the *Liliaceae*, in a genus on its own. Like a thinner version of the Moroccan *Asphodelus acaulis* in its tufts of linear leaves rising from a clump of fleshy, roots but the big, starry, fragrant, white flowers rise up from the centre on long tubes, originating well below the ground, where each may slowly mature one or two big, black seeds in a subterranean capsule. Not an easy subject from which to collect seed. Not only do you have to know exactly where a colony grows and be able to locate the sparse, dry wisps of foliage but the neck of each plant has to be gently excavated to find if it has set any seed and, if so, to gather a few capsules. All this in a temperature exceeding 100 F (40 C.) (5) E

Trillium : start to solve the problems with us

Two American books on these fascinating and beautiful woodland plants were published in 1997. They will certainly stimulate interest in the genus. There are many unanswered questions about seed germination and not a few myths, based on hearsay rather than facts. As the Cases state in their monograph, "published experimental documentation of the germination phenomena is surprisingly skimpy." Apart from *T. rivale*, which

we know can be safely dried, the following are being stored in a rather crude but, we hope, effective manner, which should keep them both moistish and free from mould. Please sow as soon as you can and do let us know the results, whether positive or negative. With conventional methods, you may not have any germination before spring 2000. While this is definitely a project for the millenium, it could be a worthwhile exercise.

- 1.919.500 : TRILLIUM ALBIDUM** Oregon, Josephine Co., Waldo Hill. 650m. In shade of deciduous *Quercus* over serpentine. (Described by Case as "one of the showiest of the western sessile trilliums." A robust plant, about 50cm. tall, with broad leaves, blotched with dark grey-green, surrounding the sessile flower with upright or slightly spreading creamy white petals.) (10) E
- 1.920.010 : TRILLIUM CHLOROPETALUM - RED FORM** * From the deep crimson form of this 30cm. high species from moist, W Coast woodlands, sometimes grown in the UK as "*T. sessile rubrum*". The same Edinburgh plants are illustrated in one of the two new monographs on this genus as "*T. chloropetalum giganteum*" and in the other as "*T. kurabayashii*" (the last probably correct). Large leaves, beautifully mottled with grey, & sessile, dark red, erect-petalled flowers. Our own, freshly collected seed. . . . (10) D
- 1.920.990 : TRILLIUM HIBBERSONII** * Canada, British Columbia, Vancouver Island. (Currently not recognized as botanically separable from *T. ovatum*, merely an extreme miniature version. In nature limited to a few remote localities on the W coast of Vancouver Is. About 10cm. high, with clear pink flowers, becoming paler as they age (the opposite to *T. ovatum*.) (15+) D
- 1.921.650 : TRILLIUM OVATUM f. MACULOSUM** Cal., Mendocino Co., N of Gualala. 20m. Among undergrowth in shade of coastal *Sequoia* forest. (A type-locality coll. from this colony, some members of which constitute the form *maculosum*, described by F. & R. Case. in 1997. We have actually listed seed collected here previously : a Wayne Roderick coll. listed under 11808 in our December, 1989, list. The form with dark purple-green blotches on the foliage is unique among the pedicellate trilliums but these markings are not evident on all plants. Leaves vary from plain green through an entire gradation of markings to completely purplish ones in one or two cases. The flowers here are reputedly all the normal white. Expect a lot of variation among seedlings. To try to ensure a reasonable proportion of plants with purple-blotched foliage, we shall send a good number in each packet.) (20+) E
- 1.922.301 : TRILLIUM RIVALE** Oregon, Josephine Co., SW of O'Brien. 550m. Among moss on level, stony areas under *Pinus*. (An exquisite little endemic from both sides of the serpentine ranges dividing Josephine Co., Oregon, & Del Norte Co., California. One of the most distinct in the genus & extremely successful in peat-bed conditions in UK gardens, where it can form much larger clumps than are ever seen in the wild. No more than 15cm. high with little white, pink-flushed or purple-speckled flowers.) (10+) D
- 1.923.005 : TRILLIUM UNDULATUM** Canada, Ontario, near Whitney. A. McMurtrie coll. (The unique & beautiful Painted Trillium, a local plant of cool, very acidic, humus-rich soils in woodland or ericaceous scrub from Nova Scotia S to Georgia & W to Michigan. About 30cm. tall with white flowers marked on each wavy-edged segment with an inverted rich red V, whose colour seeps along the main veins. A famously beautiful plant but also one of the more difficult ones to establish & maintain in gardens.) (10+) D

- 2.026.950 : ALSTROEMERIA aff. EXSERENS** * Chile, VI, Cachapoal, NE of Coya. Ex an A. Brinck coll. (as *A. exserens*) (Much taller, about 60cm., than the alpine type-race. Long, narrow leaves & big heads of rose-pink flowers, neatly banded bright yellow above the white, crimson-speckled zone of the upper, inner segments. Though different in character, a bit like a very large *A. pallida*, we cannot assign this to another species & the locality is within the distribution of *A. exserens*. Worthwhile & hardy.) (10+) **B**
- 2.027.010 : ALSTROEMERIA aff. GARAVENTAE** * Chile, V, Quillota, Cerro La Campana. Ex an A. Brinck coll. (From a coll. made a little to the N of the type-locality, certainly very close to *A. garaventae*, with large flowers on stems of about 30cm., heavily speckled on every segment (not just the inner ones) with broken lines of crimson dots on the salmon-pink ground.) (10+) **D**
- 2.027.800 : ALSTROEMERIA LIGTU subsp. INCARNATA** * Chile, VII, Cerro de los Cipreses (Rio Teno valley E of Curico). 1500m. Ex an A. Brinck coll. (Robust & about 1m. high, always with a pink ground-colour & distinct in its rather short, broad, upper segments. Glowingly described by Mike as "gorgeous...sumptuous...the best one here" but can resent winter wetness.) . . . (10+) **C**
- 2.027.900 : ALSTROEMERIA LIGTU subsp. SIMSII** (*A. haemantha*) * Chile, VI, Cachapoal, Rio Cachapoal valley W of Pungal. 950m. Openings among scrub in sandy soil. (Long known as *A. haemantha*, a misapplied name, this is the tallest race of *A. ligtu*, reaching 1.6m. in nature, more in cultivation, with huge umbels of up to 50 flowers. Basically brilliant orange-red to tomato-red with the long, prominent, upper, inner segments streaked red-brown on an orange ground. Successful & hardy in the UK.) (10+) **B**
- 2.028.300 : ALSTROEMERIA MAGNIFICA subsp. MAXIMA** * Chile, IV, Choapa, Pichidangui. Ex an A. Brinck coll. (Indeed magnificent, 50cm. high with very large, flat, lilac flowers marked on the two upper segments with dark red. Distinct, bright-green, glossy, rather fleshy foliage. A low altitude coastal race but perfectly hardy in our unheated greenhouse.) (10) **C**
- 2.028.500 : ALSTROEMERIA PALLIDA** * Chile, Reg. Metro., Lagunillas, ENE of San Jose de Maipo. 2200m. Steep, open, stony slopes. (Few alpine plants can rival the spectacle of this in flower. Remaining 20cm. or less high with us under glass here, its umbels of large flowers in pale to deep pink or white have the upper, inner segments blotched with gold & streaked with crimson. Limited to the ranges S & W of Aconcagua between 1500m. & 2800m., it should be tried outside in sunny scree in the UK.) (10) **C**
- 2.028.609 : ALSTROEMERIA PATAGONICA** * Argentina. Ex S. Pern & J. Watson 6226 (No further data) (The dwarfest of all, with the most southern distribution, S from Santa Cruz & Chubut in Argentina to Tierra del Fuego. Narrow, twisted, blue-grey foliage & small, upward-facing, orange-yellow flowers on stems under 10cm. high. Absolutely hardy in the UK & possible in a trough or scree-bed but maybe easiest in the alpine-house, though it does not enjoy being too warm in summer.) (8) **D**
- 2.028.710 : ALSTROEMERIA PAUPERCULA** * Chile. Ex a J. Watson coll. (No further data) (Both this & *A. philippii* were assigned to the now invalid entity *A. violacea* by Philippi last century, though we suspect many records of *A. violacea* in cultivation should be referred to *A. magenta*. One of the most northern of all, stretching all the way up the Atacama coast into Antofagasta. In theory, this should be one of the least growable in colder, wetter climates but this seed is from plants grown in a British bulb-frame by Mike Tucker (Somerset, UK). About 30cm. high with lilac to violet flowers, sparsely streaked with deep violet on the inner, upper segments, & with most distinct, broad, thick-textured, matt grey-green leaves with very undulate margins.) (10) **D**
- 2.029.100 : ALSTROEMERIA PRESLIANA subsp. AUSTRALIS** * Chile, IX, Malleco, Cordillera de Nahuelbuta, W of Vegas Blancas. 1200m. Openings in woodland, often in shade. (One of the most southern, distinct from the type-race in its striking, red-brown anthers, more elongated upper segments, heavily streaked with crimson, & intense, deep-pink ground-colour. It has proved hardy, tolerant of wetter summers & reliable, remaining compact both in its rootstock & height at around 30cm.) (10+) **C**
- 2.030.310 : ALSTROEMERIA aff. ZOELLNERI** * Chile, V, Quillota, Cerro La Campana. Ex an A. Brinck coll. (From the same wild coll. which yielded *A. aff. garaventae*. It does not wholly match the type-race but is nearer *A. zoellneri* than *A. garaventae*, Elegant, pointed, pale lilac segments, barely speckled & just smudged with yellow on the upper, inner ones. 40cm. high.) . . (10) **D**
- 2.780.000 : RHODOPHIALA ADVENA** * Chile, VIII, Bio Bio, S of Canteras (E of Los Angeles). 400m. Open site in sandy soil. (No trouble to grow in the bulb-frame or cold-greenhouse in the UK. Red & yellow forms, with some in between, occur here but so far we have only flowered scarlet & apricot ones. Up to 5 flowers on each 20-30cm. stem in mid-summer.) (10+) **C**
- 2.781.500 : RHODOPHIALA PRATENSIS** * Chile, IX, Malleco, Cordillera de Nahuelbuta. 1200m. Openings among scrub. (Elegant, pale scarlet-flowered species, about 20cm. high, which Prof. Grau, who is working on the Chilean species, suggests may be the "often wrongly interpreted *R. pratensis*." No problem to grow here in our unheated bulb-house, flowering in summer.) (10+) **D**
- 2.940.010 : TECOPHILAEA CYANOCROCUS** No data. The famous blue Chilean crocus, not difficult to grow in standard Mediterranean bulb conditions, though perhaps best not overheated in summer. Pure & intense gentian-blue. (10) **E**
- 2.940.011 : TECOPHILAEA CYANOCROCUS 'LEICHTLINII'** A slightly paler blue form with a large white centre. (10) **E**
- 2.971.400 : TROPAEOLUM SESSILIFOLIUM** * Chile, Reg. Metro., Lagunillas. 2200m. Steep, open rocky slopes. (Well established from our 1991 & 1994 colls. & not difficult in a scree-bed or the bulb-frame. One of the dwarfest in the genus with erect or flopping, 20-30cm., branching stems with tiny, lobed leaves & white or pale lavender flowers with orange-yellow centres.) (5) **D**
- 2.971.810 : TROPAEOLUM TRICOLOR** No data. A summer-dormant, tuberous-rooted climber with fascinating, complex flowers in scarlet, black, yellow & green in spring. It grows up to middle altitudes in Chile. No trouble in a cold greenhouse. (8) **C**

Some winter-growers here but we hope there will be new collections from the Drakensberg & other South African summer-rainfall areas in 1999

A few winter-growers from the high, desert plateaux

- 3.109.000 : DAUBENYA AUREA from RED FORM** N Cape, Roggeveldberge, W of Middlepos. 1700m. R.& R. Saunders coll. (An unique Roggeveld endemic. Possibly closest to *Massonia* with a similar pair of ovate, fleshy, glossy green leaves flat on the ground. Between them sits a stemless, 'water-lily' head of brilliant scarlet. A pot on the show-bench will create a sensation one day. Though slow & a little temperamental, this has proved both growable & perfectly temperature-hardy alongside the Mediterranean & SW Asian bulbs in our unheated greenhouse. It has the same growth-cycle as these. We flowered it from cultivated Californian seed last spring & it even set some seed with us. It tolerates considerable frost in the garden of Stan Farwig & Vic Girard in Concord, California. They believe they grow it successfully because of their colder winters. Attempts to grow it in the Bay area or at Kirstenbosch in Cape Town have failed. Seed sown by October germinates within a month with us. Sown later, it will wait till the following year but comes up reliably then in our experience. The Saunders point out that this wild coll. may include seed from a *Neobakera*, which looks identical in seed. This may not be a deterrent, but don't complain if you get one.) (20+) **D**
- 3.109.010 : DAUBENYA AUREA from YELLOW FORM *** Cultivated Californian seed from Stan Farwig & Vic Girard. This is much rarer than the red form in cultivation & seemingly also in nature, though it was the one first described. Some think the two may be separable specifically, in which case only this would remain as *D. aurea*. Just as spectacular as the preceding. (10) **E**
- 3.267.200 : GLADIOLUS MACULATUS subsp. MERIDIONALIS *** No data. A winter-grower for frost-free conditions. An elegant, 40cm., wiry-stemmed plant with clear salmon-pink flowers from a few sites, in sandy soils, in the southern Cape. (15+) **C**
- 3.279.710 : GLADIOLUS TRISTIS *** A winter-grower comparatively hardy in much of the UK. The species is quite widespread in the winter-rainfall area of W Cape at up to 1800m. Large, fragrant creamy white flowers on stems of 50cm. or more.) (20+) **B**
- 3.410.250 : HESPERANTHA BACHMANNII *** A winter-growing, W Cape species, successful with our friends in California but will probably need to be grown frost-free in the UK. About 30cm. high with elegant white flowers with darker markings. (20+) **B**
- 3.700.200 : ROMULEA AMOENA** N Cape, Bokkeveldberge, near Nieuwoudtville. 1300m. R.& R. Saunders coll. (One of the local species of the high stony plateaux of the Nieuwoudtville area, where it can carpet the ground in spring with its huge carmine to deep rose crocus-flowers, blotched purple-black in their throats. Should be as hardy & growable as most *Crocus* spp.) (20+) **C**
- 3.701.800 : ROMULEA DIVERSIFORMIS** N Cape, Komsberg, SE of Sutherland. 1800-2000m. R.& R. Saunders coll. (Very local in the desert-ranges of the Sutherland region, along the southern margin of the Great Karoo. Clean, bright, buttercup-yellow flowers, distinct in the absence of dark internal markings. Treat it like a bulb from S central Turkey or Nevada.) (15+) **C**
- 3.703.400 : ROMULEA HIRTA** N Cape, near Middlepos. 1800m. R.& R. Saunders coll. (Another almost certainly temperature-hardy species from the continental climate of the inland plateaux, S of the Great Karoo, SE from around Nieuwoudtville to the Klein Roggeveld. Distinct, winged, ciliate leaves & pale yellow flowers, marked internally with a transverse brown band.) (20+) **B**
- 3.703.700 : ROMULEA KOMSBERGENSIS** N Cape, Komsberg, SE of Sutherland. 1800-2000m. R.& R. Saunders coll. (Only recorded from sandy soils on the high Komsberg plateau & inured to low winter-temperatures. Near *R. atrandra* but the big, rosy flowers are usually tipped with violet-blue & the buttercup-yellow cup, below a bluish band, has a brown base.) (10+) **C**
- 3.704.800 : ROMULEA MONTICOLA** N Cape, near Moedverloor. 1300m. R.& R. Saunders coll. (Confined to the high plateaux of the Bokkeveld & Gifberg, this is sympatric with the preceding & remarkably similar in flower. The two are not at all closely allied, however, & have quite different corms. Red-brown backed, golden yellow flowers, with deeper yellow centres.) (20+) **C**
- 3.706.800 : ROMULEA SLADENII** W Cape, Gifberg S of Vanrhynsdorp. 1000m. R.& R. Saunders coll. (Endemic to the sandstone of the Gifberg plateau. Very crocus-like with its white, yellow-centred flowers, usually purple-stained externally.) (20+) **C**
- 3.707.300 : ROMULEA SYRINGODEOFLORA** N Cape, near Middlepos. 1800m. R.& R. Saunders coll. (Endemic to the high plateaux near Sutherland NW to the edge of the Roggeveld. The only member of the small Section *Lomurea*, with rather flattened leaves, listed here. Flowers with long tubes & spreading, magenta-pink segments, yellow-striped, dark-red externally.) (15+) **B**
- 3.707.750 : ROMULEA TORTUOSA subsp. AUREA** N Cape, Komsberg SE of Sutherland. 1800-2000m. R.& R. Saunders coll. (Large, crocus-like, fragrant, buttercup-yellow or almost orange-yellow flowers without the dark markings of the type.) (15+) **B**

- 4.044.010 : ANEMONE OBTUSILOBA from BLUE FORM** * No data. Freshly gathered, green seed from a good, rich blue form of this very variable, buttercup-like perennial, widespread in meadow habitats through the Himalayas from Pakistan to Burma, between 2000 & 4300m. Flower stems rise to 15cm. from clumps of leaves, in this case, deeply cut and bright green. (8) C
- 4.250.610 : DAPHNE GIRALDII** * No data. A beautiful, deciduous shrub, about 60cm. high, from W China, in Shaanxi & Gansu, with terminal clusters of fragrant, rich yellow flowers in late spring. Can thrive on soils from limy clay to acid sand but can also be rather temperamental in our experience. When we were in Dorset we could not grow it well - we have not tried in Wales. (8) C
- 4.251.010 : DAPHNE TANGUTICA** * No data. A fine, evergreen shrub also from W China, about 1m. high, with clusters of fragrant flowers, rose-purple outside & lilac-tinged white inside. Close to *D. retusa* but the two are distinct enough in gardens. (5) B
- 4.340.002 : ERYTHRONIUM JAPONICUM** (*E. dens-canis* var. *japonicum*) Japan, Honshu, Fukushima Pref., near Shirakawa. (Sometimes included under *E. dens-canis* but a distinct enough plant, mainly distributed in the woodlands of the N & in Korea. The nodding, rich rose-purple flowers with deeper purple basal markings are at least twice the size of the European plant.) (15+) D
- 4.390.110 : FRITILLARIA CAMTSCHATCENSIS** * No data. A marvellous plant with stems of 30cm. or more, whorled with rich-green leaves, carrying nodding, thick-textured bells in darkest brown-purple. Distributed from Japan in a N Pacific arc through Sakhalin & Kamchatka into Alaska & Canada. Utterly hardy & quite easy outside in the UK in a cool situation. (20+) C
- 4.392.350 : FRITILLARIA VERTICILLATA** var. **THUNBERGII** * No data. This cultivated variant, naturalised in Japan, of Central Asian & W Chinese *F. verticillata* seldom sets seed in the UK, but grows well outside in moist, humus-rich soil in light shade. Stems, carrying cream bells can reach 80cm. and are clothed in narrow leaves, the uppermost with tendril-like tips. (10+) C
- 4.448.020 : HELLEBORUS THIBETANUS** * No data. We have only a little seed of this, just enough to list established it from the importation of cultivated plants last winter. We hope many British enthusiasts will now have stock growing so this seed can help some of our overseas customers establish it. Wild-collected seed from Gansu (type-locality of the synonymous *H. chinensis*) may yet materialise. We guess this stock originates from Sichuan. So far this seems growable with care. It flowered very early at about 15cm. with blush-white to pink flowers and showed some resentment of higher temperatures before going dormant later in summer. A cool, part-shaded site outside in the UK should suit it but for general garden purposes a pink hybrid will be a better bet.) (5) E
- 4.581.500 : PAEONIA SUFRUTICOSA** subsp. **ROCKII** (*P. rockii*, *P. s.* 'Rocks Variety') No intelligible data. Wild-collected Chinese seed of this mythical tree-peony but do not hold your breath - one Australian grower has already flowered a seedling from seed sown in 1996 and there was no blotch on the flowers. We can be reasonably confident the wild seed will produce huge flowers "refulgent as pure snow and fragrant as heavenly roses with a heart of gold", as described by Farrer but we cannot guarantee "each stainless petal flamed at the base with a clean and definite feathered blotch of maroon." (6) E
- 4.581.600 : PAEONIA VEITCHII** var. **WOODWARDII** * No data. Wide, dense clumps of shiny green, deeply cut foliage & slightly drooping, bowl-shaped flowers, usually in soft rose-pink. From up to 3000m. in SW China & excellent in the UK. (8) C

Endemics of the wet, chilly Chathams

- 5.257.400 : CORTADERIA TUBARIA** * NZ, Chatham Islands, Pitt Island. Sandy swamp. Ex a T. Hatch coll. (A spectacular, tufted perennial grass, now, like most other Chatham Is. endemics, a rare plant. As plants in this genus are usually unisexual, seedlings will show some variation between males & females - it is necessary to grow both to ensure seed and maintain this in cultivation. As far as we know, this has not been in cultivation before but it should be growable in the UK, especially in coastal areas.) (20+) D
- 5.630.000 : MYOSOTIDIUM HORTENSIA** * New Zealand, Chatham Islands, Pitt Is. Beach, at tide line. Ex a T. Hatch coll. (Another extraordinary endemic of the remote Chatham Islands, where it grows along the shore but, according to Terry, is now very rare due to the intensive grazing by sheep, which has all but eliminated the unique flora of these islands. Our plants from Pitt Is. seed, growing in a bed against a N-facing wall, survived a damaging winter a few years ago, as well as an extremely dry summer. It has certainly proved hardier and more resilient with us than plants we have grown from Irish garden-stock. Last winter foliage was undamaged & we have excellent 1998 seed, painstakingly hand-pollinated to ensure a good set and kindly harvested by friends during our absence in America. Huge, ribbed, shining leaves & a succession of giant forget-me-not flowers in celestial blue. Seed germinates irregularly but definitely comes up at lower temperatures, in spring or autumn, so do not cook it in a 'propagator'. It is a plant from a cold, moist, equable climate and hates hot, wet greenhouse conditions. Plant it outside in a cool site as soon as you can) . . . (6) C
- 5.630.011 : MYOSOTIDIUM HORTENSIA from WHITE FORM** * New Zealand seed. We have not grown this here yet . . . (5) D

While our main aim is to offer you seeds either from the wild plants themselves or from cultivated plants grown from wild seeds, we derive much pleasure in our own garden from cultivars which have been selected from the species or are of hybrid origin. Many are named clones and it is essential that vegetatively propagated stock is obtained from these but with two of our favourite genera, *Cyclamen* and *Helleborus*, sowing

seed from selected parents is the best way to propagate them. Both of these germinate at low-temperatures & are best sown before winter. The species will be found in the appropriate geographical sections. Those listed here are too far removed from wild plants to be included in there. Here is also an appropriate place to list seed from one or two other hybrids which should yield some worthwhile children.

- 6.027.900 : ALSTROEMERIA LIGTU HYBRIDS** Thriving in British gardens from Cornwall to Aberdeen - even here in our cold, wet garden. Every shade from pink to orange, flame & biscuit. By all accounts, derived from *A. ligtu* subsp. *simsii* (coll. by Clarence Elliott in 1927 as *A. haemantha*) & *A. ligtu* subsp. *incarnata* (coll. by Harold Comber in 1926 as *A.l. angustifolia*). The Comber plant was actually much more likely to be *A. presliana*, explaining the dwarf, deep pinks which sometimes appear.) (20+) **A**

Cyclamen coum & C. hederifolium : exquisite and indomitable

- 6.360.002 : CYCLAMEN COUM** from PLAIN LEAVES, PINK FLOWERS (15+) **B**
- 6.360.003 : CYCLAMEN COUM** from PLAIN LEAVES, WHITE FLOWERS (15+) **C**
- 6.360.004 : CYCLAMEN COUM** from PLAIN LEAVES, ALL COLOURS (15+) **B**
- 6.360.006 : CYCLAMEN COUM** from PATTERNED LEAVES, PINK FLOWERS (15+) **B**
- 6.360.007 : CYCLAMEN COUM** from PATTERNED LEAVES, WHITE FLOWERS (15+) **C**
- 6.360.008 : CYCLAMEN COUM** from PATTERNED LEAVES, ALL COLOURS (15+) **B**
- 6.360.050 : CYCLAMEN COUM** from SILVER & PEWTER LEAVES From pale-pink & white-flowered, silvery-leaved forms, including those circulating as 'Blush', white-flowered 'Maurice Dryden' and bicoloured 'Tilebarn Elizabeth' (15+) **D**
- 6.360.055 : CYCLAMEN COUM** from NYMANS STRAIN This is an extremely choice selection, not at all easy to grow and seldom setting much seed. It is derived from a wild collection under E.K. Balls 371, which had survived since the 1930's at Nymans in Sussex. Seedlings were wheedled out of the head gardener in the 1970's by Ruth Voelcker. A very dwarf plant with intensely coloured carmine-pink flowers and small, dark leaves, each one broadly banded with pure silver. Exquisite. (10) **E**
- 6.364.000 : CYCLAMEN HEDERIFOLIUM** from MIXED LEAF-FORMS An infinite variety of shapes & patterns. (20+) **A**
- 6.364.090 : CYCLAMEN HEDERIFOLIUM** from PEWTER LEAVES Leaves suffused with a silvery mist. Nearest to the Phil Cornish 'Silver Cloud' leaf-form but with a broader, dark-green edge. Typical pink flowers in autumn (10+) **D**
- 6.364.140 : CYCLAMEN HEDERIFOLIUM** from SILVER ARROWS Long, narrow, silvered, arrow-head leaves. (10+) **D**
- 6.364.160 : CYCLAMEN HEDERIFOLIUM** from SILVER LEAVES Jim Almond's selections, distinct from above. (10+) **D**
- 6.364.180 : CYCLAMEN HEDERIFOLIUM** from SCENTED FLOWERS This is from plants originating from Tom Blanchard, John's father, and, if recollections are correct, collected near Thessaloniki in N Greece in the early part of this century. We must add we cannot smell the scent (but we cannot smell wild *C. persicum* scent either). A good deep pink with a fine leaf. (10+) **B**
- 6.499.700 : FRITILLARIA MESSANENSIS** subsp. **GRACILIS** HYBRID From Norman Stevens. Large, brown flowers. (20+) **B**
- 6.499.710 : FRITILLARIA PYRENAICA X LUSITANICA** Hand-pollinated seed from a cross made in 1998 by Norman Stevens between a "rather green form of *F. pyrenaica*" pollinated with the splendid form of *F. lusitanica* from the Sierra Nevada, grown as "*F. nevadensis*", which has rich brown edges to the flowers. "Should make an ideal garden plant?" writes Norman. (15+) **C**

Hellebores : 1998 : not a good year for hybrid seed

Despite the sunshine and warm weather when our hellebores were in flower in the early spring of 1998, the subsequent crop of seed was very poor. We do not have sufficient seed of any of our named clones to merit listing these separately this season and we have amalgamated it into the colour categories. The following range is from *H. x hybridus*, often referred to as *H. orientalis* hybrids, though many other additional species are involved. Ideally this should be sown, in the northern

hemisphere, as soon as possible after ripening - see further comments under the wild hellebores earlier in this list. As with all open-pollinated hybrid hellebore seed, we can give no assurance that this will produce anything remotely resembling the parents. There is, however, a reasonable chance some seedlings will be close to or better than the original. The descriptions apply to the seed-parent, not necessarily to what you might expect from the seedlings. You can only hope.

HYBRID HELLEBORE SEED IN COLOUR CATEGORIES

- 6.564.121 : HELLEBORUS from CREAM & WHITE-FLOWERED HYBRIDS** Some with slight basal speckling (15+) C
- 6.564.130 : HELLEBORUS from H.O. GUTTATUS HYBRIDS** Whites, sometimes green or cream tinged but all with a distinct basal zone of maroon or crimson speckles, which in some cases bleed together into streaks. From some very good parents. (10+) C
- 6.564.150 : HELLEBORUS from PURPLE-FLOWERED HYBRIDS** From good plum and purple shades. (15+) C
- 6.564.151 : HELLEBORUS from SELECTED PURPLES** The one group from which we harvested some excellent seed in 1998. The parents are mainly selected seedlings from 'Andromeda' and from the best of what Eric Smith used to call 'Midnight Sky' types (purple with a dusting of darker speckles all over the flowers). We have collected from some with the bowl-shaped, even flowers which appealed to Helen Ballard. From unnamed clones but ones which are, quite frankly, better than their parents. (10+) D
- 6.564.160 : HELLEBORUS from SPECKLED HYBRIDS** From what Eric Smith used to categorize as 'Galaxy Strain', all along the lines of 'Cosmos' - white or greenish white, speckled all over with tiny crimson dots in varying density (15+) C
- 6.564.190 : HELLEBORUS from ZODIAC-TYPE HYBRIDS** Eric Smith's category for what are, in effect, *H. guttatus* types with a pink, instead of white, ground colour, all with a zone of maroon speckles. Eric's unrivalled speciality (15+) C
- 6.564.200 : HELLEBORUS from HYBRIDS OF ALL COLOURS** From purple, cream, pink & speckled clones. (20+) C
Extra large packets of seed from hybrids of all colours. (80+) F
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Iris : new Juno & Reticulata hybrids from Alan McMurtrie in Canada

Almost all of the following is first generation, hand-pollinated hybrid seed from Alan McMurtrie (Ontario, Canada), who is engaged in an ongoing programme of Juno & Reticulata Iris hybridisation to produce more amenable, garden-plants. It is seldom possible for those involved in hybridising to sow and

grow on all the seed they produce to flowering, so Alan shares his surplus here. See the section dealing with European & W Asian species for details of some of the parents. Seedlings should be growable in a raised bed outside in the UK and we hope in time some may prove good garden-plants.

- 6.575.495 : IRIS BUCCHARICA X VICARIA** Some distinct clones of both these amenable plants are involved as parents. (8) C
- 6.575.500 : IRIS BUCCHARICA HYBRID** An easy junos, given to Norman Stevens as a bicoloured form of *I. orchioides*, Norman thinks it likely to be an *I. bucharica* hybrid. Winged, yellow falls & cream-white standards. Open-pollinated seed (10) B
- 6.575.590 : IRIS MAGNIFICA X BUCCHARICA** Crosses with a form of *I. bucharica* from Tadjikistan with lemon-yellow standards, which Alan believes will make a worthwhile parent, as well as clones with full orange-yellow flowers (8) C
- 6.575.595 : IRIS MAGNIFICA X VICARIA** These involve a number of selected clones of both parents, including the fine, bluish *I. vicaria* 'Sangardak' with a yellow-green blotch on the falls (8) C
- 6.575.600 : IRIS MAGNIFICA X WILLMOTTIANA** Several clones of *I. magnifica*, including a dwarfer one with a markedly orange blotch on the falls, pollinated with *I. willmottiana*, grown from wild collected seeds (8) C
- 6.575.605 : IRIS MAGNIFICA ALBA X BUCCHARICA** Sumptuous white *I. magnifica* with yellow-orange *I. bucharica*. (5) E
- 6.575.790 : IRIS RETICULATA from GARDEN HYBRIDS** The unusually warm February of 1998 may have upset some of the later-flowering bulbs but it did suit the *I. reticulata* hybrids in the garden of Norman Stevens (Cambridge, UK). Exceptionally these set seed well. As they have no doubt crossed further between themselves, it seems pointless to keep seed separate, so we offer mixed seed from a wide range of hybrid clones in blues and purples. All the seedlings should be well worth growing. (10) B
- 6.575.800 : IRIS RETICULATA from ARMENIAN HYBRIDS** Seed from hand-pollinated crosses, made in Canada by Alan McMurtrie. Some parents are second generation hybrid clones already selected by Alan but a wild form from Armenia with red-purple to pink flowers is somewhere in the parentage of all the seeds. *I. hyrcana* & *I. bakeriana* are involved in some, as well as the cultivars 'Cantab', 'Gordon', 'Pauline' & 'J.S. Dijt'. Likely to produce some worthwhile & distinct clones, which should be quite different from what is already available in commerce. These hybrids represent a lot of dedicated work. *I. reticulata* is never generous with its seeds. Incidentally, these sometimes take two winters to germinate, in Alan's experience. (8) E
- 6.747.850 : PAEONIA SUFFRUTICOSA from CHINESE HYBRIDS** Cultivated tree-peony seed from China collected from a wide range of named hybrid clones : mainly doubles, in purple, pink, white & green. What might result is unpredictable (6) C
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Our next list concentrating on North American seeds will be out soon

A : \$2.00 ; £1.50 ; DM4,- ; FF13.- C : \$4.00 ; £2.50 ; DM6,- ; FF21.- E : \$7.00 ; £4.50 ; DM12,- ; FF40.-
B : \$3.00 ; £2.00 ; DM5,- ; FF17.- D : \$5.00 ; £3.50 ; DM9,- ; FF30.- F : \$9.00 ; £6.00 ; DM15,- ; FF50.-