

Our list of 1990 seeds appears much earlier than has been our custom in recent years, when our lists seem to have come around Christmas. It is, however, at least a month later than we had intended. As the emphasis in this list is on species which will germinate more rapidly and satisfactorily if sown as soon as possible after ripening, please do not delay in letting us have your orders. As ever, we shall do our best to send the seed to you as soon as we possibly can.

ORDERING could not be easier. Prices are quoted on each page in US \$, £ sterling, DM and French Francs ; with two qualifications, we shall accept your personal cheque in any of these currencies. The two exceptions are : US \$ CHEQUES must be on a U.S. bank account - charges for negotiating cheques on foreign accounts are extremely high in the U.S.A. ; please do not send us Eurocheques made out in US \$ - they are unfamiliar to the U.S. banking system. PAYMENTS FROM FRANCE do cause us some problems. We shall probably discontinue pricing in FF in 1991 but for the moment could we ask French customers not to send personal cheques in FF and especially not to use cheques on 'La Poste'. These are both proving very difficult to negotiate. A Eurocheque made out in £ sterling is excellent ; a Giro payment in sterling is used by most of our French customers - you can price in FF and have the current equivalent sent to us in £ sterling ; FF cash sent to us by registered letter is also no problem. Sorry about this but we cannot control banking. In this list, we are keeping our price structure steady. Price codes remain unchanged from 1989 and remain the same as in our 1989 North American List, which is still valid, and our 1990-91 Seed Bank Supplement. We shall hope to keep the same structure into 1991. If fluctuations in exchange-rates mean it is advantageous to you to select a currency other than your own, please do so - it makes little appreciable difference to the operation of our business. Apart from personal cheques, payment can be made in bank-notes in 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. If remitting by sterling cheque, it is a great help to both you and ourselves, 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 pay only for what we have sent, after the order is despatched). If you cannot do this, a list of some substitutes will be very helpful - we shall not use them unless we have to. Order as soon as you can - especially this season - the sooner we have your order the faster the seed can be with you. Remember we do not pay in your cheque until after the order has been despatched - it is in your interest, as well as yours, to complete orders quickly. Finally, we should stress :

THERE IS NO CHARGE FOR AIRMAIL ON THE SEEDS OR ON THE SEED-LISTS

: PLEASE PRINT YOUR NAME & ADDRESS CLEARLY

PLEASE UNDERSTAND There may be a delay of some weeks before you receive your order. The majority of orders come in very quickly, during the first week or so after we send out a list. We receive your orders very much faster than we can despatch them. You may think that because you ordered as soon as you received this list, we can send seed back just as promptly. A great many other people ordered that same day. We normally send out a list only once each year ; we have to derive our whole year's income from it : we have to handle a lot of orders! We try to avoid listing collections unless we think that there will be enough seed to satisfy the demand, so there should be no concern over this, even if you are not ordering by return. On the other hand, it is more in your interests than ours that some seed in this list is sown as soon as possible. As many of our customers garden in the Southern Hemisphere and this urgency is less important to them, this list will remain valid into 1991 but we should point out that we shall not be in the U.K. for too long after completing the main bulk of orders and that in everyone's case this time it is a matter of 'the sooner, the better'. We are well-advanced with packaging and hope to be able to move fairly quickly. If you are concerned and feel that your order is too long in arriving, check with your bank to see if your cheque has been cashed - we do not pay-in cheques until after your order has been despatched. If it has been cashed, let us know immediately. A very few items do become lost or delayed. You will find us totally sympathetic. These are very rare occurrences.

BEST LAID PLANS proverbially often fail to come to fruition. Our plans are never in this category and usually tend to develop as we go along. The rather vague intentions, drawn from a pool of possibilities on which we try to run our lives, are frequently confounded by a change in circumstances. The policy of 'planned fluidity', which we have adopted when collecting, seems to percolate into our existence more and more. We had every intention, when we wrote the Newsletter accompanying our December, 1989, List, to have a new list in your hands around the end of July or in early August at the latest. What might have been in this and how this might have been accomplished is now no longer relevant. No matter what we might have brought you this season, we think you will find a lot of exciting material in the present list ; a surprising number of species have not been listed by us (nor by anyone else) previously and several, which we have listed before, have not appeared since 1984 or 1985. It is disconcerting how many years we have been sending out these annual lists! The main reason for the contraction of the gap between the 1989 and 1990 lists is that we are attempting to tighten up our schedule so that we can spend some time in the Southern Hemisphere. It is not easy to alter the routine from areas where the peak season for seed lies between June and August to ones where it occurs between December and February. We 'plan', if we dare use the word to do some collecting in S America, during the latter period, 1990-91, with a list issued, we hope, in the following April-May. Who can say how near we shall come to realising our present intentions! Some of you may be reacting with the thought that S America is becoming a little overexposed from a collecting viewpoint. If you are, we feel that you will be involved only with alpine-plants. We do cast our nets very widely and try to satisfy a very wide range of specialised interests ; not so many of those who obtain seed from us regularly are concerned exclusively with the challenge of difficult and new alpine-house plants. Even those whose enthusiasm lies solely in this field should still be easily satiated. We are hardly talking about yet another trip to the Alpes-Maritimes or the Sierra Nevada ; the area is incomprehensibly vast and the possibilities still little explored. We shall see what we can do to keep everyone interested in due course - when we have time to think about it! It is increasingly a struggle to prevent life running away with us - our short collecting trip to S Europe in 1990 was by necessity one of the most compressed and intensive we have made. It had to be so as we were seeking early seed over an extremely wide area. It is obviously a much more expensive procedure to collect such diffuse material than it is to make peak season collections in July and August. With this in mind, we abandoned our Land-Rover, now essentially retired and put out to grass, for one of its infant relatives, a little Rover Metro, hired from our local garage. In this we were able to zip up the mountain roads of Europe and speed along the autobahns, autoroutes and autostradas with ease. Long wheel-base, diesel Land-Rovers feel quite a home in Turkey among the belching black fumes of Turkish trucks crawling up to mountain passes but suffer embarrassment as misfits among the traffic of metropolitan Europe. This is not to say that there were not a few occasions when we felt deprived of the facilities offered by our old friend and there were one or two localities we felt it wiser not to attempt in 1990. Notwithstanding the limitations placed on our activities by using a conventional, hired vehicle, we suspect we shall be doing the same in S America. When John Watson was collecting in Chile in 1971-72 he actually found a Land-Rover to hire there - at horrifying expense we might add. His expenditure did not obviate the vehicle problems we all experience.

AT HOME ON THE HOUSE RANGE In spite of the minor irritations - the odd cracked spring and the oil that seeps out insidiously - and, of course, the discomfort, we have never been left in a difficult situation because of our Land-Rover. It has, indeed, been a love-hate relationship. We have always experienced a definite feeling of security when using it. We came across an old letter from Larry Bailey of Seattle, Washington, recently where he remarks that he envied us our Land-Rover when he went in search of *Primula domensis* in the House Range of W Utah a few years ago. When we went in search of this species ourselves in 1989, we could not have echoed his sentiments more wholeheartedly. The House Range lies just N of Highway 50 not far from the Nevada line. It has become a slightly busier road in recent years, since some journalist tagged it "the loneliest road in America", and you can buy stickers and buttons to impress your friends - "I survived - 50 - the loneliest road in America". If the writer had genuinely wanted to find a lonely road, he would have turned N or S on to one of the dirt roads which disappear into nowhere. Two of these give access to the House Range and we had set off with the intention of driving the loop between them. We might interpolate here that we had not done our homework and that the episode had resulted from our 'planned fluidity' policy; we happened to be passing and thought we might try to find the plant. I reckoned that if I could find *Dionysias* I could find *P. domensis*. Indeed that might have been the case as it rapidly became obvious that the limestone mass of Notch Peak was sliced into a vast, N-facing vertical cliff - an ideal habitat. The problem was that we could see no obvious means of access from the W side. As it turns out, we were doing the thing the wrong way round and we might have been quite a long time in reaching the *Primula* from that side! Anyway, it rapidly became an irrelevant line of thought. One of our tyres blew. No problem, it was soon replaced. The engine, having enjoyed a short rest, decided that it would not restart. Knowing the temperamental nature of VW's (we have now had a love-hate relationship with two of these as well), we handled the recalcitrance with amazing patience and gentleness. All to no avail. The battery reached the final stages of expiration. At this point, we were reaching our final possibility. There were a few yards of dirt road available before an incline started. If the engine did not fire at the first push, we had a long walk back to the 'Loneliest Road'. The temperature was well over 40°C (a lot over 100°F) - Jenny volunteered to push. It started. The points had simply been trying to weld themselves together: 'Damn fools. You don't put Japanese points in a German engine', said a Utah mechanic later as he replaced everything with Bosch parts. At the time, we did not wait to diagnose the problem and we were certainly not chasing *Primulas* in the House Range without a spare tyre and with our engine acting up. The 'Loneliest Road in America' looked a very civilized, populous place when we at last returned to it. As you will find later in this list, John Andrews has succeeded where we failed and, after two high-powered trips to the Great Basin this summer, has returned with seed not only of the House Range primrose but of *P. nevadensis*.

CUPID UNCHAINED During one of our all too infrequent transatlantic telephone conversations this summer, I heard briefly about John's hunt for the primrose. "Tell me," I said, "did you see anyone else at all when you were in the House Range." "No," replied John, "but there was a car parked near the entrance to the draw I hiked up." I was about to ask how thick the layer of dust on the vehicle was - entertaining some thoughts that it probably belonged to the last botanist who went to find *P. domensis* - when John added, "Probably hunters. The bow and arrow season has started." A chilling thought. Not only is there the possibility of being skewered by a steel shaft but no-one might find the remains for weeks - months - years? Definitely an over-reaction to one of the less publicised but by no means remote hazards of plant-hunting in the U.S.A., fostered by Fred and 'Boots' Case. My experience with them in Michigan, while being taken to visit one of Fred's favourite boggy haunts, immediately came to mind. We had found a vacant vehicle parked at the start of a woodland path, just as John had done. Prior to this I had been able to observe with a certain amount of detachment that there was a considerable number of Ramboesque figures clad entirely in camouflaged clothing, walking around carrying some very sophisticated ironmongery and obviously prepared to impale any luckless herbivore around that day. "These guys shoot at anything that moves," said 'Boots'. Fortunately they appear to puncture each other's egos more frequently than those of the innocent. "Keep talking!" said Fred, "You should have been wearing something red - or orange!" Not wishing an end like Saint Sebastian, we conversed in artificially loud voices. "One of the farmers round here had to paint his cows," added 'Boots'. "Paint his cows?" I asked. Rather tired of having his livestock prematurely kebabed, he had embellished each with the label 'THIS IS A COW'.

A CASE OF THATCHERITIS ? Fred Case is, of course, one of the most brilliant plantsmen in N America. He is also a marvellously stimulating individualist and one of the most knowledgeable and entertaining lecturers on plants in the world. His talk at the 'International Rock Garden Plant Conference' at Warwick in April, 1991, will surely be a highlight of the event. "I'm not going," said Kath Dryden (a Vice-President of the A.G.S. - she'll probably change her mind!), "I only want to hear Fred Case. John Amand (who is also only interested in hearing Fred Case talk about *Trilliums*!) and I were going to drive up for the day to hear Fred but it is £60 each on the Wednesday because he's speaking." "No it's not," we said, "It's £15 more on the Wednesday for your dinner." "But we don't want the dinner," said Kath, "John and I will have to drive back home then." Hard luck, Kath. Pay-up or do without. What is somewhat disconcerting is that rather a lot of people we feel should be going to this event appear to be deciding to do without. The bottom-line has to be 'Is it a good buy?'. The cost of the Conference for a couple would be £660; with travelling expenses and the odd drink or buying a few plants, you have to be looking at a figure approaching £1000; for delegates coming from the U.S.A., you can double this to cover air-fares - about £2000 for two or near \$4000, unless Saddam Hussein commits suicide over the next few months. You can do a lot with an amount like this - have a holiday abroad to see the plants growing wild instead of listening to a lot of people talking about them! We were very enthusiastic about this Conference when we wrote our last Newsletter in December, 1989; we had every intention of putting up a small exhibit where we could chat with people. We have dropped the idea, on grounds of costs and time. We had to ask 'Is it worth it?' I do not even have to count my costs as I am speaking. Jenny's fee would be £330, we were going to have large colour prints to pay for and the trouble of bringing together, labelling and mounting herbarium material, we would have had to hire transport and pay £50 for the space to stage the exhibit. Adding it all up we were nearer £1000 than £500. Sorry. It is too expensive a public relations exercise. Those who want to speak to us will have to find us! I shall be around a lot of the time and Jenny will be lurking around the Show area. Do not for one moment think we do not sympathise with the organisers. It is a thankless task trying to strike the correct balance and an impossible one to suit everyone. We have no doubt whatsoever that for those who attend it will be a memorable event and be voted an overwhelming success. Amid the self-congratulation we shall be thinking of the multitude of specialists and expert growers whose only participation will be to have attended the Show. My own thoughts will be tinged with nostalgia for the first Conference I attended in 1961. This was held for one week in London and one week in Edinburgh, where I was a student. I could not afford to travel to London nor could I afford conference fees. I was a member of the Scottish Rock Garden Club but no-one ever asked to see my membership card or any other piece of paper when I attended lectures by people like Carleton Worth and Wilhelm Schacht. It was a historic occasion to me. Someone today who is in a similar position and who could not 'pay-up' would certainly have to do without. Even those who can afford to 'pay-up' are capable of doing some small calculations on the back of an envelope. Most people I know had expected that the fee would be nearer £200 than £300. We can all look at recent conferences fees, whether in the gardening world or outside it. £250 would seem to us a fair estimate, taking the cost of the Exeter Diamond Jubilee Conference as a starting point, adding 10% compound for inflation and adding £50 for luck. We have heard a rumour being put about that the speakers are costing £100 per delegate on a break-even figure of 600 delegates. This is £60,000. We are perfectly able to work out what the speakers are costing. At a very generous estimate - ludicrous in that would include speakers being costed for the entire conference fee each - we cannot see how their costs can exceed £15,000 - or £25 per head on 600 delegates, dropping to £18.75 on the 800 who should have been there. This would leave a £45,000 excess available for the baubles and gewgaws distributed at such events. Could it be that our charitable societies are imbued with the enterprise culture of the Thatcherite era and wish to make a profit? For that sort of excess they could have afforded some proper 'names' in the world of horticultural lecturers - like Roy Lancaster or John Kelly.

This section updates our December, 1989, list of North American collections. The 1989 list remains valid and the majority of species are still available. A list of items which must now be deleted follows at the end of this list.

SECTION I : SEEDS COLLECTED IN NORTH AMERICA, JUNE - JULY, 1990, BY JOHN ANDREWS

Our good friend and companion for some of our time in the USA in 1989, John Andrews (Berkeley, California) has produced some material of outstanding interest - in spite of the fact he spent three weeks earlier in the season with Norman Stevens in Turkey. His hurried journey to the Great Basin was made mainly in the hope of collecting seed from one or two of the relic *Primula* spp. there. We failed to come up with any of these last season. John reached one of the sites he wanted to but found he was far too early this year. He may attempt an August collection of *P. nevadensis* and we hope we may be able to make it available in due course. Nevertheless the journey had its compensations as you will see. John has pointed out three corrections to the identifications of material he collected in 1989 : 11826 listed as *Draba densifolia* is *D. oligosperma* ; 11827 listed as *D. oligosperma* is *D. densifolia*. The Mt. Eddy Gentian (11845) listed as *G. setigera* appears to be the very closely allied *G. calycosa*. We also list here three 1989 collections from John made too late for inclusion in our main North American list.

ASTRAGALUS COCCINEUS California, Inyo Co., White Mountains near Toll House Springs. 1980 m. Loose, stony clay slope. 23.6.90 (A surprisingly late coll. from the same colony as we collected from in 1989 - these desert species will often flower again if there is sufficient rain. Most opportune as our 1989 seed is now finished. An amazing plant with scarlet flowers and horned, white velvet pods on woolly white tufts. One of the greatest and most worthwhile challenges imaginable for the alpine-house specialist. More comments in main list!) (8+ seeds) F

CALOCHORTUS BRUNEAUNIS Nevada, Humboldt Co., Paradise Valley above Solid Silver Creek, Santa Rosa Ra. 1530 m. 9.9.89 (This and the following two belong to Sect. *Mariposa*, Subsect. *Nuttalliani*. Little-known in cultivation, this is a plant of *Artemisia* scrub in the mountains round the NW edge of the Great Basin. Its exquisite white flowers with purple spots above the glands are close to *C. nuttallii* but the green-striped petals distinguish it. Our Californian coll. of this from Conway Summit (11727) is also still available.) (20+ seeds) D

CALOCHORTUS EXCAVATUS California, Inyo Co., Gerkin, Owens Valley S of Bishop. 1350 m. Among grasses and scrub. 23.6.90 (Almost certainly the first time seed has been collected of this little-known species, which survives in a few spots in Owens Valley between the Sierra Nevada and the White Mts. Its predilection for dampish sites may well be its undoing as the rape of the Owens Valley water to appease the insatiable needs of Los Angeles will surely lead to a steady lowering of the water-table and possible elimination of its few habitats. We hope it may prove growable. A distinct plant with widely bell-shaped, erect, pale lavender flowers. 30 cm.) (15+ seeds) F

CALOCHORTUS PANAMINTENSIS California, Inyo Co., Panamint Mts., Wild Rose Canyon, below Charcoal Kilns. 1850 m. Along banks of 'wash' in *Artemisia* scrub. 24.6.90 (As obscure and local as the preceding but much more numerous within the confines of its limited habitat high in the Panamints which border the western rim of Death Valley. Just S of this site Telescope Peak rises to 3368 m. and a mere 20 km. due E lies the lowest elevation in the USA - 86 m. below sea-level. This disjunct and isolated species, of which this is surely the first seed-collection, is allied to *C. bruneaunis* and *C. nuttallii* but seems distinct in its unspotted petals and bluish anthers. It is also a robust plant up to 60 cm. high. Will need steppe-plant conditions like the more northern and eastern species - cold and dryish in winter - and will probably prove a challenge in cultivation.) (20+ seeds) E

ERIGERON COMPACTUS Nevada, Eureka Co., W of Eureka. 2050 m. (Some fresh 1990 seed, more or less from the same place as our 10993 - see our main 1989 list for more complete details of this extraordinary, pulvinate species.) E

ERIGERON aff. LEIOMERUS Nevada, White Pine Co., Snake Range, Mt. Washington. 3320 m. 22.7.90 (In the late 1950's when Dr. Carleton Worth was collecting, forms of this used to make occasional appearances on show-benches in the UK. We have not seen it grown for some time. Typically a species of the high alpine-tundra from E Nevada to the Rockies, a tiny, tidy, tufted plant, usually with bluish to lavender daisies on decumbent stems.) E

ERIOGONUM CAESPITOSUM California, Mono Co., White Mts. 2300 m. Open, stony, limestone slopes. 23.6.90 (One of the most desirable of the dwarf *Eriogonum*s. While quite a widespread plant, extending from here on the W rim of the Great Basin N and far to the E, we have never managed a seed-collection ourselves. We have grown it without trouble in the alpine-house in the U.K. however. Compact mats of little, spatulate, white-felted leaves and clustered heads of yellow flowers flush reddish as they age, on 5 cm. stems. Excellent, cleaned seed.) (15+ seeds) D

GENTIANA OREGANA California, Humboldt Co., Orion Mt. 1070 m. Dryish slopes among scrub. 16.9.89 (A dry-growing species from the N Coast Ranges with heads of pale-blue trumpets in late summer. About 20 cm. high.) (30+ seeds) C

LEPIDIUM NANUM Nevada, White Pine Co., W of Little Antelope Summit. 2050 m. Low, limestone ridge-tops. 22.7.90 (The classic Great Basin endemic, which has resolutely refused us a seed-collection both in 1987 and 1989, when we gavelled before it on three occasions. Its aristocratic aura has been nurtured by the writings of Roy Davidson and Dwight Ripley. The latter writes of his visit to it in 1944 : "...its hummocks look like those of some extra-tight *Dionysia*, of a peculiarly intense shade of sap green, and when in flower they are almost concealed by the profusion of its small parchment-coloured corollas...this is the *Draba* to end all *Drabas*..." It is by no means impossible to grow it in an alpine-house in the UK but to grow it in perfect character eludes us.) (30) F

OENOTHERA LAVANDULIFOLIA (*Calylophus lavandulifolius*) Nevada, White Pine Co., W of Little Antelope Summit. 2050 m. 22.7.90 (A small Nevadan coll. of this exquisite little shrublet - further details in our main list, under our Utah coll. 11529, which is still available also. A choice and delicate species.) (15+ seeds) D

OXYTROPIS OREOPHILA var. JUNIPERINA Nevada, Eureka Co., W of Eureka. 1870 m. Eroded banks of calcareous clay. 24.6.90 (The pulvinate forms of this species are among the most desirable of cushion-plants. We could find no seed on this in 1989 and several attempts to collect the allied *O. jonesii* in S Utah have met with little success - in the latter case largely due to the local rodents which eat out the seed from the inflated green capsules before it is mature. Both these taxa are essentially similar when they form solid, woolly hummocks and both are now placed by Dr. Rupert Barneby as vars of *O. oreophila*. Barneby's companion, Dwight Ripley, sums up the plant in this habitat as "one of the smallest of its race, densely caespitose and clothed all over in shaggy silver hair, each plant covered with hundreds of violet pea-flowers..." John's coll. is not large but there is rather more seed than we have ever achieved ; we hope it may be enough for someone to succeed.) (8 seeds) F

PHYSARIA CHAMBERSII Nevada, Eureka Co., W of Eureka. 1870 m. 24.6.90 (A very neat, small form with little pearly bubbles after the yellow flowers. Appears to be this but *Cruciferae* is not revised in IMF yet.) (15+ seeds) C

PRICE CODE A	:	\$1.50	;	£1.00	;	DM3, -	;	FF10. -	PRICE CODE D	:	\$4.00	;	£2.50	;	DM 7,50	;	FF25. -
B	:	\$2.50	;	£1.50	;	DM4,50	;	FF15. -	E	:	\$5.50	;	£3.50	;	DM10, -	;	FF35. -
C	:	\$3.50	;	£2.00	;	DM6, -	;	FF20. -	F	:	\$7.00	;	£4.50	;	DM13, -	;	FF45. -

- POLEMONIUM PULCHERRIMUM Nevada, Humboldt Co., Santa Rosa Ra., Granite Mt. 2800 m. 9.9.89 (This is the odd race from the Santa Rosas with the leaflets cut as in *P. viscosum*. It has been described as *P. nevadense*. For the dwarf Sierra Nevada form of this species and other *Polemonium* spp. see our main 1989 list.) (20+ seeds) C
- RANUNCULUS ESCHSCHOLTZII var. OXYNOTUS Nevada, Washoe Co., Rose Knob Ridge SW of Mt. Rose. 3180 m. 10.7.90 (The genus *Ranunculus* has many members which have adapted to exploiting the seasonal water from melting snow. You will find two Spanish species in Section II; this is the snow-melt buttercup of the high fell-fields of the western N American mountains with little, rounded, lobed leaves and brilliant yellow flowers on stems of about 10 cm. This particular var. from the drier southern ranges is distinguished by its persistent leaf-bases. Summer-dormant but remember it is a high alpine and will not appreciate over-drying or baking!) (20+ seeds) D

SECTION I : SEEDS OF SUMMER - DORMANT SPECIES COLLECTED IN NORTH AMERICA BY JIM & JENNY ARCHIBALD, 1989

The following is an abbreviated abstract of most of the summer-dormant bulbs, corms and tubers included in our 1989 list. As this list is still valid, we include only field data and brief comments here. For more information on the genera and species concerned, please refer to the 1989 list. If you have mislaid this or have not received this, simply ask us for a copy. We have selected the species here as they are likely to be more relevant than the alpine genera for summer or autumn sowing. Most of this group of plants germinated particularly well last season. This seed has been stored under refrigerated, dry conditions and we see no reason why any appreciable deterioration should have occurred. The only danger with early autumn sowing is that several species, particularly the low altitude Californians, will tend to germinate within a month or so and will definitely need overwintering under glass in colder climates. On the other hand, the longer growing season should result in better quality first-year bulbs. Species from colder areas will be unlikely to germinate before early Spring 1991. A numerical check-list will be sent with seeds for identification of the numbered packets. W.R. : Wayne Roderick ; J.A. : John Andrews.

- 11547 ALLIUM ACUMINATUM Idaho, Custer Co., Sawtooth Valley. 1980 m. Stony clay among *Artemisia*. 6.8.89 (Umbels of bright purple-pink, starry flowers on 15 cm. stems. An excellent and growable little plant.) (15+ seeds) B
- 11249 ALLIUM BISCEPTRUM California, Plumas Co., N of Seneca. 1070 m. Stony clay in clearing in coniferous forest. 29.6.89 (Not seen in flower here but usually pale to deep rose. About 20 cm.) (15+ seeds) B
- 11136 ALLIUM CAMPANULATUM California, Modoc Co., Warner Mts., E of Davis Creek. 1750 m. Gravelly clay slopes among *Artemisia*. 20.6.89 (Large heads of pale pink flowers. Similar height and habit to above.) (15+ seeds) B
- 11820 ALLIUM CRATERICOLA California, Napa Co., Palisades SE of Mt. St. Helena. 900 m. Coll. J.A. 26.5.89 (One flat, falcate leaf and an almost stemless purple flower-head. From stony volcanic & serpentine areas.) (15) D
- 11766 ALLIUM DICHLAMYDEUM California, Sonoma Co., Stewarts Point. Coastal rocks. W.R. coll. 18.7.89 (Bright cerise form of this excellent low-altitude species. Maybe the best larger one. 20-30 cm.) (15+ seeds) C
- 11626 ALLIUM FALCIPOLIUM California, Humboldt Co., SSW of Willow Creek. 1490 m. Serpentine talus. 20.8.89 (Heads of red-purple flowers on 6 cm. stems between two, thick, falcate leaves. Choice.) (15+ seeds) C
- 11393 ALLIUM GEYERI Colorado, Montrose Co., Uncompahgre Plateau, Columbine Pass. 2900 m. Openings in mixed woodland. 15.7.89 (A fairly dwarf, 20 cm., pale pink form of this widely distributed species.) (15+ seeds) B
- 11204 ALLIUM ? HAEMATOCITON California, Ventura Co., Lockwood Valley. 1370 m. Open gravelly areas among sparse *Artemisia*. 26.6.89 (Possibly this rather local, southern sp. with pink to white flowers. 20 cm.) (15+) B
- 11821 ALLIUM HOFFMANNI California, Trinity Co., Red Lassic, N of Zenia. 1660 m. Serpentine talus. J.A. coll. 15.7.89 (Narrow serpentine endemic. Purple-pink 'tumbleweed' umbel above a single flat leaf.) (15+ seeds) E
- 11121 ALLIUM ? LEMMONII (or ? anceps) California, Modoc Co., Devil's Garden N of Canby. 1500 m. Stony clay 'flats' overlaid with volcanic debris. 20.6.89 (Not seen in flower. White or pink. 15 cm.) (15+ seeds) B
- 11134 ALLIUM PLATYCAULE California, Modoc Co., Warner Mts., E of Davis Creek. 1750 m. Open, gravelly patches. (Deep rose heads on short, flat stems between two, thick, falcate leaves. 5-10 cm.) (15+ seeds) D
- 11171 BLOOMERIA CROCEA var. AUREA California, San Luis Obispo Co., NE of San Luis Obispo. 150 m. Ledges on serpentine cliffs. 26.6.89 (Choice *Brodiaea* relative. Umbels of starry, yellow flowers. 20 cm.) (20+ seeds) C
- 10997 CALOCHORTUS ALBUS California, Tuolumne Co., NE of Columbia. 760 m. Scrub-covered slopes. 16.6.89 (Pendant white flowers on branching, 20-30 cm. stems. One of the easiest to grow in the U.K.) (20+ seeds) B
- 11168 CALOCHORTUS ALBUS var. RUBELLUS California, San Luis Obispo Co., W of Templeton. 300 m. Steep, shaded, stony banks. 25.6.89 (A rich, deep carmine-pink here according to Wayne Roderick.) (20+ seeds) D
- 10965 CALOCHORTUS AMABILIS California, Solano Co., NW of Vacaville. 300 m. Openings among scrub. 15.6.89 (Like the above two in Subsect. *Pulchelli* and quite easy. Nodding, globular, clear-yellow flowers.) (20+ seeds) B
- 11727 CALOCHORTUS BRUNEAUNIS California, Mono Co., Conway Summit. 2230 m. Open 'flats' overlaid with volcanic debris. 28.8.89 (Cold desert *Mariposa*. White flowers, green striped outside, blotched purple.) (20+ seeds) D
- 11681 CALOCHORTUS CLAVATUS California, San Luis Obispo Co., NE of San Luis Obispo. 150 m. Steep, stony slopes. 26.8.89 (Sumptuous, erect, golden-yellow bowls with brown anthers and internal markings.) (15+ seeds) C
- 11277 CALOCHORTUS ? COERULEUS California, Plumas Co., N of Spanish Ranch. 1220 m. Coniferous woods. 30.6.89 (Probably this little 'Cat's Ear' with hairy, white, rose-tinged flowers on 10 cm. stems.) (15+ seeds) C
- 11824 CALOCHORTUS COERULEUS var. FIMBRIATUS California, Trinity Co., above Zenia. 1630 m. Coniferous woodland. J.A. coll. 15.7.89 (Tiny serpentine endemic with furry, white, purple-stained cups.) (15+ seeds) E
- 11548 CALOCHORTUS EURYCARPUS Idaho, Custer Co., Sawtooth Valley. 1980 m. Stony clay among *Artemisia*. 6.8.89 (White or pink bowls, striped green and blotched maroon, on wiry 30-50 cm. stems.) (20+ seeds) C
- 11443 CALOCHORTUS GUNNISONII Wyoming, Converse Co., SW of Glendo. 1980 m. Open grassland. 22.7.89 (White with intricate purple markings and golden basal hairs. From an extreme climate like the preceding.) (15+ seeds) C
- 11646 CALOCHORTUS HOWELLII Oregon, Josephine Co., SW of O'Brien. 500 m. Open stony slopes. 21.8.89 (Extremely local. White hairy petals with a diffuse smoky-brown stain above the gland and golden hairs.) (10+ seeds) E
- 11695 CALOCHORTUS INVENUSTUS California, Ventura Co., Mt. Pinos. 2680 m. Granite grit in exposed summit area. 27.8.89 (Erect pale lavender flowers basally stained deep purple on 15 cm stems.) (20+ seeds) C

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 C : \$3.50 ; £2.00 ; DM6, - ; FF20      F : \$7.00 ; £4.50 ; DM13, - ; FF45. -

- 11691 CALOCHORTUS KENNEDYI California, Ventura Co., Lockwood Valley. 1370 m. Open, clay meadows. 27.7.89 (The incomparable western race of this mythical species - solid vermilion-scarlet with black anthers.) (20+) C
- 11267 CALOCHORTUS LEICHTLINII California, Plumas Co., NNW of Quincy. 980 m. Dryish, gravelly slopes among Pinus 30.6.89 (Montane steppe species with white flowers with dark spots above the glands.) (15+ seeds) D
- 10988 CALOCHORTUS LUTEUS California, Tuolumne Co., near Chinese Camp. 380 m. Open level grassland. 16.6.89 (Sierra Nevada foothill race of this great golden Mariposa. Can vary from yellow to cream.) (20+ seeds) B
- 11771 CALOCHORTUS LUTEUS California, Lake Co., near Clearlake. 420 m. Gritty clay. W.R. coll. 30.6.89 (Coast Range foothill race. Clear yellow, tinged green, with fine, brown, basal markings.) (15+ seeds) B
- 11540 CALOCHORTUS MACROCARPUS Idaho, Butte Co., W of Craters of the Moon. 1520 m. Among volcanic debris on E & SE facing slopes. 5.8.89 (Most distinct with huge, purple, green-striped flowers. 50 cm.) (15+ seeds) D
- 11264 CALOCHORTUS NUDUS California, Plumas Co., NNW of Quincy. 1000 m. Margins of moist meadow among conifers. 30.6.89 (Dainty, 15 cm. high, moist grower with erect lavender flowers marked purple inside.) (15+ seeds) D
- 10885 CALOCHORTUS NUTTALLII Utah, Uintah Co., E of Tridell. 1700 m. Gravelly ridges with sparse Juniperus. 8.6.89 (Almost certainly the local sugar-pink race of this eastern Mariposa.) (20+ seeds) D
- 11682 CALOCHORTUS OBISPOENSIS California, San Luis Obispo Co., NE of San Luis Obispo. 150 m. Serpentine out-crops. 26.8.89 (Only one of Sect. Cyclobothra listed. Bizarre, hairy yellow & purple flowers.) (15+) D
- 11683 CALOCHORTUS SIMULANS Locality as above. 170 m. Open clay slope among grasses. 26.8.89 (Obscure, lilac-flowered Mariposa. Almost certainly the first time seed has been collected of this.) (20+ seeds) E
- 11690 CALOCHORTUS SPLENDENS California, Ventura Co., Lockwood Valley. 1370 m. Open clay meadows. 27.8.89 (Wide open flowers of soft lavender with long, wispy, white basal hairs and dark anthers.) (20+ seeds) C
- 11674 CALOCHORTUS SPLENDENS California, Lake Co., Walker Ridge E of Indian Valley. 600 m. Openings in Arcto-staphylos scrub over serpentine. 23.8.89 (Northern form with deep purple basal markings.) (15+ seeds) C
- 11772 CALOCHORTUS SUPERBUS California, Butte Co., Table Mt. N of Oroville. 150 m. W.R. coll. 14.7.89 (Usually white (can be cream or pale lavender) with purple basal markings in a yellow zone.) (20+ seeds) B
- 11104 CALOCHORTUS ? TOLMIEI Oregon, Josephine Co., E of Takilma. 850 m. Open, stony slopes among conifers. 19.6.89 (Possibly this dwarf Pussy Ear with cream flowers tinged rose-purple.) (15+ seeds) C
- 10998 CALOCHORTUS VENUSTUS California, Tuolumne Co., NE of Columbia. 600-740 m. Steep, stony slopes. 16.6.89 (Most likely to be white here with golden bases and intricate, red-brown basal markings.) (20+ seeds) B
- 11703 CALOCHORTUS VENUSTUS California, Kern Co., above Cuddy Valley. 2120 m. Openings among Pinus. 27.8.89 (Double-spot form with a pale blood-red thumbprint on each white or lilac-pink petal.) (15+ seeds) D
- 11693 CALOCHORTUS VENUSTUS California, Kern Co., Cuddy Valley. 1840 m. Openings among Pinus. 27.8.89 (Unique (as far as we know) colony with flowers in subtle, soft scarlet - pure class!) (15+ seeds) E
- 11593 CALOCHORTUS VESTAE California, Mendocino Co., E of Willits. 1240 m. Open clay slope. 19.8.89 (North Coast range relative of *C. venustus*. Usually white (sometimes pink) exquisitely purple-marked base.) (20+ seeds) C
- 11108 CAMASSIA ? LEICHTLINII subsp. SUKSDORFII Oregon, Josephine Co., SW of Wonder. 360 m. Streamside. 19.6.89 (Moisture-loving and growable outside in wetter climates. 1m. high violet-blue spires.) (20+ seeds) C
- 11122 CAMASSIA ? QUAMASH subsp. BREVIFLORA California, Modoc Co., N of Canby. 1500 m. Stony clay 'flats'. 20.6.89 (Dwarfer at about 50 cm. From a drier habitat though obviously inundated in spring.) (20+ seeds) B
- 10993 CHLOROGALUM ANGUSTIFOLIUM California, Mariposa Co., above Coulterville. 610 m. Open, grassy, clay slope. 16.6.89 (Wiry 60 cm. stems with many small, white, starry flowers - rather Anthericum-like.) (20+ seeds) B
- 10949 DELPHINIUM NUTTALLIANUM California, Sierra Co., SE of Sierraville. 1870 m. Open area in old river gravel. 13.6.89 (Dainty, dwarf tuberous-rooted species - here with purple rather than blue flowers.) (20+ seeds) C
- 11622 DICHELOSTEMMA IDA-MAIA California, Humboldt Co., SSW of Willow Creek. 650 m. Steep grassy banks. 20.8.89 (Umbels of pendant, tubular flowers in glowing red from buds tipped bright green. Up to 1 m.) (20+ seeds) C
- 11235 DICHELOSTEMMA MULTIFLORUM California, Butte Co., N Fork Feather River. 400 m. Among scrub on steep slope. 28.6.89 (Rounded umbels of violet flowers on stems of about 50 cm.) (20+ seeds) B
- 10982 DICHELOSTEMMA PULCHELLUM California, Tuolumne Co., W of Chinese Camp. 360 m. Open grassy slopes and among scrub. 16.6.89 (Tight umbels of lilac-blue flowers above purplish bracts. About 50 cm.) (20+ seeds) B
- 10969 DICHELOSTEMMA VOLUBILE California, Solano Co., NW of Vacaville. 300 m. Among scrub on open slope. 15.6.89 (Climbing stems twine up to 2 m. Compact umbels of rose-pink flowers with white staminodes.) (20+ seeds) C
- 11778 DODECATHÉON CLEVELANDII California, Santa Clara Co., E of San Jose. 370 m. W.R. coll. 29.5.89 (Magenta-pink flowers with yellow noses. This and the following are dry-climate, summer-dormant species.) (30+) C
- 11133 DODECATHÉON CONJUGENS California, Modoc Co., Warner Mts., E of Davis Creek. 1750 m. Gravelly clay slopes. 20.6.89 (A more northern species from colder, steppe conditions, reliant on snow-melt.) (30+ seeds) C
- 11624 ERYTHRONIUM CALIFORNICUM California, Humboldt Co., SSW of Willow Creek. 1490 m. Loose serpentine talus among conifers. 20.8.89 (Creamy white flowers with white anthers above mottled leaves.) (20+ seeds) C
- 11018 ERYTHRONIUM CALIFORNICUM California, Trinity Co., NNE of Weaverville. 960 m. Stony openings in conifers. 18.6.89 (Local race with striking purplish anthers not generally known in cultivation.) (20+ seeds) E
- 11065 ERYTHRONIUM CITRINUM California, Del Norte Co., NNE of Gasquet. 400-450 m. Steep slopes among dense scrub of Rhododendron, etc. 19.6.89 (Creamy white with a greenish base. Mottled leaves.) (20+ seeds) D
- 11393 ERYTHRONIUM GRANDIFLORUM Colorado, Montrose Co., Uncompahgre Plateau, Columbine Pass. 2900 m. Openings in mixed woodland. 15.7.89 (An outstanding plant with plain green leaves and yellow flowers.) (20+ seeds) C
- 11525 ERYTHRONIUM GRANDIFLORUM Utah, Cache Co., Bear River Mts., above Tony Grove Lake. 2400 m. Open Artemisia 'flats'. 2.8.89 (Wasatch populations usually have red-brown anthers rather than the usual yellow.) (20+) C
- 11678 ERYTHRONIUM HELENÆ California, Lake Co., SE of Middletown. 450 m. Stony slope among Arctostaphylos. 23.8.89 (Beautiful, local serpentine endemic. Creamy flowers with yellow anthers.) (20+ seeds) D

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Since we compiled the 1989-90 list of North American material in December, 1989, another volume of the 'Intermountain Flora' has appeared. This is entirely Dr. Rupert Barneby's contribution on the Fabales - mainly Fabaceae (Leguminosae) - and, of course, includes Astragalus. As Dr. Barneby had been kind enough to come up with rapid determinations on our herbarium material of these, all our intermountain collections of this genus are named in accordance with this new work. There are two alterations to naming, however, which we should have adopted had we known of them. *Cercis occidentalis* (11609 & 11670) is placed at varietal level under *C. canadensis*, as *C.c.* var. *orbiculata*; this seems good sense. In the genus *Lupinus*, Barneby distinguishes two taxa from the *L. breweri* of Californian botanists: *L. tegeticulus* (essentially acaulescent with a densely packed caudex above ground) and *L. breweri* (with a loosely branched subterranean caudex and short, prostrate, developed stems). This is obviously quite a basic distinction from a horticultural viewpoint as well. Our Mt. Pinos collection (11696) should be placed under *L. tegeticulus* and we think (unfortunately herbarium material was not pressed of these) the other two can remain as *L. breweri*. We still have a few seeds left of 11729 (*L. breweri*) and 11696 (*L. tegeticulus*). We have not had time to work out where 11733, listed as *L. lyallii*, might fit into Barneby's concepts of the *L. lepidus* group (the collection was made from just outside his area) but the Utah collection, 11350, remains *L. lepidus* var. *utahensis*, distinct in being stemless and the tiniest member of this terrifyingly complex group.

Apart from our collection 9019, listed as *Eriogonum* ? *soredium*, definitely not being this species (it is a form of the variable & widespread *E. shockleyi* - it was all wishful thinking), nothing particularly drastic comes to mind at present regarding misidentification of material listed from our 1987 and 1989 North American collections. This certainly does not mean to say that some terrible errors might not come to light; we are far from being infallible. We do, however, in the short time available for such activities, try to provide the most acceptable name according to current thinking for our collections. This always makes it wearisome when people, who have obviously done less homework than we have, fiddle about with names. The question of the use of the name *Phlox muscoides* is raised in the March 1990 Alpine Garden Society Bulletin: in our use of this name we follow Dorn's 'Vascular Plants Wyoming' (1988), Welsh 'A Utah Flora' (1987) and Cronquist, Holmgren et al. 'Intermountain Flora' (1984). These are modern, easily accessible works and, if anyone is still not satisfied, the holotype specimens of *P. muscoides* and the synonymous *P. bryoides* are held in the British Museum. It is even worse when anonymous wiseguys erase the name you have put on a collection. In our 1987 list, we quite clearly identified our collection 9310 as *Polemonium viscosum*. We are thrilled to see a well-grown plant of it beautifully illustrated (p.49 of the same AGS Bulletin) but why the caption "*Polemonium* sp." ? On p. 44 we learn that the seed had produced "a plant which corresponded neither with *P. eximium* nor *P. viscosum*." Obviously the crypto-taxonomists, about which we wrote some years ago, have emerged again. We are gratified that the (faceless) world authority on the genus *Polemonium* was present to condescend to examine material from one of our unworthy collections. It is a little sad to think that Robert Dorn, who has spent over 20 years living and working in Wyoming, and Earl Jensen, who actually lives within a few miles of this collection, have failed to find this new plant in the well-trodden Bighorns. One up for the Brits.!

FOR THE COMPLETE RANGE OF NORTH AMERICAN COLLECTIONS PLEASE REFER TO OUR 1989-90 LIST WHICH REMAINS VALID UNTIL 1991

#### SECTION I : 1989-90 LIST OF NORTH AMERICAN SEEDS : DELETIONS

While our 1989-90 list of North American collections remains valid, seed is now finished from a small number of species (though in a few cases there are other colls. of the same species available). Deleted items are as follows :

11333	AQUILEGIA SCOPULORUM	11705	FREMONTODENDRON CALIFORNICUM **
11770	BRODIAEA PURDYI	11370	GILIA STENOZYRSA
11844	CAMPANULA SHEPLERI	11655	LEWISIA LEEANA
10579	CRYPTANTHA HUMILIS	11579	LUPINUS BREWERI **
11337	CRYPTANTHA OCHROLEUCA	11520	MERTENSIA ARIZONICA
10827	CRYPTANTHA PARADOXA	11459	MERTENSIA ? HUMILIS
11649	EPILOBIUM OBOCDAIUM subsp. SISKIYOUENSE	9611	OXYTROPIS PODOCARPA
11642	EPILOBIUM RIGIDUM	11575	PAEBONIA BROWNII
10802	ERIGERON COMPACTUS var. CONSIMILIS	11297	PENSTEMON THOMPSONIAE var. DESPERATUS
11538	FRITILLARIA ATROPURPUREA **	11840	POLEMONIUM CHARTACEUM
10504	FRITILLARIA FALCATA	11758	ROSA ? WOODSII
11075	FRITILLARIA LANCEOLATA **	11296	SCUTELLARIA NANA var. SAPHIRINA
11679	FRITILLARIA BIFLORA	11105	SILENE HOOKERI var. BOLANDERI
11829	FRITILLARIA PURDYI	9600	TRIFOLIUM NANUM
11831	FRITILLARIA STRIATA	**	Other coll. of this species available

#### SECTION II : 1990-91 SEED-BANK SUPPLEMENT : DELETIONS

Enclosed with this list you will find a supplementary list of material collected in Europe & Turkey prior to 1989. The purpose of this list is to make such seed available to anyone who missed the opportunity to acquire it at its first listing. We tried only to include items for which we were reasonably sure we could meet the demand or, if cultivated, from which we could expect fresh 1990 seed. The latter was not the case with the following :

368.005 CYCLAMEN REPANDUM subsp. PELOPONNESIACUM f. VIVIDUM and 705.701 NARCISSUS RUPICOLA subsp. WATIERI

While our main aim is to offer you seed collected by ourselves, our lists would be much the poorer were it not for some additional material contributed by some friends in Britain and abroad. How else could we hope to bring you seed collected in Utah and Peru, Ruwenzori and the Chatham Islands, all in the same list? You will find some seed from the following in Sections I & II and, of course, primarily in Section III. Our sincere thanks to them all : John Andrews (California, USA), Helen Barton (Devon, UK), Dinah Batterham (Dorset, UK), John Blanchard (Dorset, UK), Peter Chappell (Hampshire, UK), Paul Christian (Clwyd, UK), Don Elick (Japan), Terry Hatch (Pukekohe, NZ), Mother Hilary & Sister Mary (Devon, UK), Bert Hopwood (Devon, UK), Henrik Zetterlund (Sweden), Dave Hoskins (Hampshire, UK), Hans-Erik Jensen (Denmark), Melvyn Jope (Surrey, UK), Will McLewin (Cheshire, UK), Helen Beaufort-Murphy (Peru), Karin & Jimmy Persson (Sweden), Norman Stevens (Cambridge, UK), Wayne Roderick (California, USA), Mike Tucker (Somerset, UK), Peter & Penny Watt (Hampshire, UK), Michael Wickenden (Kircudbrightshire, UK).

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- 240.000 BRIMEURA AMETHYSTINA France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. S & W facing slopes in stony clay over limestone. 30.6.90 (A delightful little bulb, essentially endemic to the Pyrenees but with one distant station in W Yugoslavia. Rather like a miniature, 15 cm. high, bright sky-blue bluebell and an excellent, growable garden plant, though surprisingly seldom seen in cultivation.) (20+ seeds) B
- 247.200 CALLIANTHEMUM KERNERIANUM Italy, Trentino-Alto Adige, Monte Baldo E of Lago di Garda. 2000 m. Exposed, stony areas on limestone summit ridge. Coll. P. & P. Watt. (An extremely local and very beautiful member of this small genus of the Ranunculaceae. Like many of this family it drops its seed while it is still green and this should be sown promptly before winter. Anemone-like, white, pink-flushed flowers on tufts of ferny, blue-green leaves. A challenge to grow well but it can be done with patience - see the note in Bull. Alp. Gard. Soc. Vol. 54, p. 344 (Dec. 1986) when it received an A.M. A rare opportunity!) (10 seeds) F
- 254.900 CAMPANULA FORMANEKIANA Greece, Imathia, Oros Vermio below Seli. 1300 m. W-facing limestone cliffs. 6.6.90 (Possibly the most exquisite of the Greek monocarpic species, limited to the limestones along the Greek/Jugoslavian border. All still in flower here were the lovely ice-blue form rather than the white, well-known in gardens. An easy alpine-house plant. A few early seeds available.) (20+ seeds) B
- 256.002 CAMPANULA HAWKINSIANA Greece, Ioanina, N of Konitsa. 700 m. Loose serpentine detritus on steep slopes. 11.6.90 (A somewhat larger more robust form than our 1985 coll. and from about 1000 m. lower altitude. The same intense violet flowers. Seed-bank seed of the earlier coll. was still germinating well in 1989 and is still available. There is a fine photograph of a plant raised from this seed in Bull. Alp. Gard. Soc. Vol. 56, p. 78 (March, 1988) - a white-centred one; many are electric-blue at the bases.) (50+ seeds) D
- 260.800 CAMPANULA PORTENSCHLAGIANA Yugoslavia, Hrvatska, above Mala Duba SE of Makarska. 50 m. W-facing limestone cliff. 1.6.90 (An excellent, well-known garden plant covering itself with violet bells but a very local thing in the wild - this is probably the first coll. of wild seed for decades!) (30+ seeds) B
- COLCHICUM AUTUMNALE The meadow saffron is a comparatively variable plant throughout its wide range - all forms usually prove excellent growable garden-plants with their lilac-pink flowers with yellow anthers appearing before the leaves in autumn
- 311.402 COLCHICUM AUTUMNALE Yugoslavia, Slovenija, N of Postojna. 600 m. Openings in deciduous woodland on limestone hills. 28.5.90 (An exceptionally robust form with very large leaves and seed-capsules) (20+ seeds) B
- 311.403 COLCHICUM AUTUMNALE Yugoslavia, Hrvatska, Velebit Planina, above Karlobag. 500 m. Among limestone boulders on steep, scrub-covered slopes. 30.5.90 (Intermediate between the other two in habit.) (15+ seeds) B
- 311.404 COLCHICUM AUTUMNALE Greece, Drama, Falakro summit ridge. 2000 m. Moist, grassy meadow. 9.6.90 (A small form from the SE extremity of its distribution - there are fascinating relic colonies of plants such as this and *Dryas octopetala* on Falakro. Small, narrow leaves here.) (15+ seeds) B
- COLCHICUM BIVONAE Although centred on the Balkans and W Turkey, this is even more variable than the preceding with such names as *C. sibthorpii*, *C. bowlesianum* and *C. visianii* applicable to taxa which are aggregated under this name. The large flowers appearing in the autumn always have a distinct goblet-shape and are strongly chequered, though the ground-colour can vary from pink to rose-purple. In general it proves a good garden-plant in the U.K. with tidy, upright leaves of dark green appearing in spring.
- 311.702 COLCHICUM BIVONAE Greece, Pieria, Oros Olimbos above Vrondou. c. 1000 m. 1989 seed coll. P. & P. Watt. (The Olympus race which can be segregated as *C. bowlesianum*. Usually reliable and hardy.) (15+ seeds) C
- 311.703 COLCHICUM BIVONAE Greece, Kavala, Pangeo above Eleftheroupoli. 1000 m. Opening in deciduous woodland. 7.6.90 (A fine, rosy chequered flower which grows well with us here in Wales.) (15+ seeds) C
- 311.704 COLCHICUM BIVONAE Greece, Thesprotia, between Gliki & Souli. c. 1000 m. Coll. & ex. hort. D. Hoskins. C
- 314.000 COLCHICUM DOERFLERI Yugoslavia, Makedonija, Galicica Planina above Trpjecica. 1600 m. Open stony, limestone slopes. 5.6.90 (A lovely, dwarf, spring-flowering plant merged by some authors with *C. hungaricum*. Horticulturally quite distinct and in the wild a plant of the higher mountains and colder inland areas. Here its lilac-pink flowers appear along the edge of the melting snow-patches.) (15+ seeds) D
- 314.603 COLCHICUM HUNGARICUM Yugoslavia, Hrvatska, Velebit Planina, Mali Halan S side. 800 m. Exposed, gravelly areas on limestone. 30.5.90 (An attractive, little plant with several flowers appearing between the two or three narrow, downy leaves in very early spring. Not seen in flower here but most of the Yugoslavian coast range forms are white with purple-black anthers. For the alpine-house or bulb-frame.) (15+ seeds) D
- 315.901 COLCHICUM MONTANUM (*Merendera montana*, *M. pyrenaica*) Spain, Granada, Sierra Nevada below Penones de San Francisco. 2300 m. Depression on NW facing slope in turf. 25.6.90 (Another first-class dwarf species but autumn-flowering. Clusters of bright rose-pink flowers, usually with white centres, appear before the 3-4 narrow linear leaves. A delight in the bulb-frame and usually happy in the open garden.) (20+ seeds) B
- 315.902 COLCHICUM MONTANUM Spain, Avila, Sierra de Gredos, SW of Hoyos del Espino. 1700 m. Open, dryish slopes and stony areas. 27.6.90 (The species is very much a plant of mountain meadows.) (20+ seeds) B
- 339.600 CROCUS ABANTENSIS Turkey, Bolu, above Abant Golu. 1100 m. Slopes above lake in scree. Seed from Horton & Stevens 2538 ex hort. N. Stevens. (Described in 1975 and only known from the type locality, this is very like *C. biflorus pulchricolor* in flower and colour - a beautiful rich lilac-blue - but utterly different in its seeds and tunics. The two need similar treatment in cultivation.) (10 seeds) E
- 340.351 CROCUS ASUMANIAE Turkey, Antalya, N of Akseki. 1200 m. Limestone slopes with *Quercus* scrub & sparse *Pinus*. Seed from Horton & Stevens 2243 ex hort. N. Stevens. (This autumn-flowering species, described in 1979, is proving a very satisfactory grower in a bulb-frame in the U.K. Nearest to the Greek *C. cartwrightianus*, it has very pale lilac or white flowers with striking scarlet styles.) (15+ seeds) D
- CROCUS BIFLORUS subsp. PULCHRICOLOR See Section III for cultivated stock of this excellent species.
- 342.006 CROCUS CANCELLATUS subsp. MAZZIARICUS Greece, Samos, Mt. Profitas Ilias. 950 m. Open areas in maquis on S facing mica-schist slopes. Coll. D. & P. Hoskins 14.5.90 (Autumn-flowering plant, usually with lilac flowers with yellow anthers from an unusual locality. Best grown in a bulb-frame in the U.K.) (15+ seeds) D
- 343.202 CROCUS CHRYSANTHUS Yugoslavia, Makedonija, Galicica Planina. 1600 m. Open, stony slopes on limestone. 12.6.90 (While the garden forms and hybrids of this are well-known, the true wild species has become rare in cultivation. A delightful little plant with golden, scented flowers in early spring.) (15+ seeds) C
- 343.600 CROCUS CVLJICII Greece, Imathia, Oros Vermio near Seli. 1500 m. N & W facing slopes in turf. 6.6.90 (Almost certainly the first wild seed-collection of this exquisite and extremely local high altitude species. Scented flowers from chrome-yellow to orange-yellow in spring. Do not over dry!) (15+ seeds) F

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- 475.500 EUPHORBIA CHARACIAS (subsp. characias) Spain, Granada, Sierra Nevada, Puerto de la Ragua. 1900 m. Open stony slopes on schist. 24.6.90 (Rather a distinct form here with particularly downy foliage giving it a grey appearance. In this western race the flower heads are stubby and wider at the top than at the base; the dark-brown glands of the flowers are diagnostic for the type-race.) (20+ seeds) B
- 475.603 EUPHORBIA CHARACIAS subsp. WULFENII Jugoslavia, Hrvatska, Biokovo Planina, SE of Makarska. 500 m. Open, stony, limestone slopes. 31.5.90 (The eastern race, distinguished by its yellow glands but also about twice the height of the preceding, at about 1.5 m., and with more columnar heads. These are of immense architectural value in the garden - evergreen, sub-shrubby perennials for full sun.) (20+ seeds) B
- 480.004 EUPHORBIA MYRSINITES Jugoslavia, Hrvatska, N of Risan. 800 m. Open limestone slopes. 2.6.90 (Prostrate stems with fleshy, grey foliage carry greenish yellow heads in spring. A garden-plant of proven worth, easily grown in a well-drained place in full sun and the hardiest of Subsect. Myrsiniteae.) (20+ seeds) B
- 480.006 EUPHORBIA MYRSINITES Jugoslavia, Makedonija, Galicica Planina. 1600 m. Exposed, stony, limestone slope. 5.6.90 (A very much dwarfed form with leaves about half the size of the preceding - the Galicica tend to produce such distinct populations - but we cannot assure you that it is genetically fixed.) (20+ seeds) C
- \* 481.501 EUPHORBIA RIGIDA Greece, Lakonia, N of Sparti. 500 m. Exposed gravelly areas. 1989 seed ex hort D. Glen from our 1984 coll. (Possibly the best of Subsect. Myrsiniteae but needs a sheltered, sunny, well-drained site in the U.K. Whorled, blue-grey leaves and lemon-yellow heads in early spring.) (20+ seeds) C
- \* 494.800 FRITILLARIA EHRHARTII Greece, Evia, W of Karistos. 200 m. N & W facing sides of gulleys on talc-schist. Coll. & ex hort. D. & P. Hoskins. (Lovely, local species with bloomy, grape-black bells, ruby against the light. A fine plant for an alpine-house pan or in the bulb-frame.) (20+ seeds) D
- \* 496.000 FRITILLARIA GRAECA (subsp. graeca) Greece, Ahaia, Ori Aroania, Helmos, N side above Kalavrita. 2000 m. Stony slopes in alpine steppe. Our 1990 seed from our 1986 coll. (Very hardy, very dwarf, 10 cm. high form, illustrated in Rix & Phillips 'The Bulb Book' from Polunin & Chater 13017 coll. here.) (15+ seeds) E
- \* 496.202 FRITILLARIA GRAECA subsp. THESSALA Greece, Ioanina, Smolikas above Agios Parashevi. 1500 m. Open, dry pasture on limestone outcrops. Seed from Christian & Hoog 880 ex hort P. Christian. (The more robust, northern race with its bracts in a whorl of three. Flowers well chequered with red in this form.) (20+) C
- \* 496.501 FRITILLARIA GUSSICHAE Jugoslavia, Makedonija, Baba Planina, above Magarevo. 1400 m. Steep slopes on igneous rock. 1990 seed ex hort. D. Hoskins from our 1984 coll. (An extremely local species with very glaucous leaves and flowers. Green bells shaded with brown but not tessellated.) (10 seeds) E
- \* 497.700 FRITILLARIA IONICA Greece, Kerkira, Pandokrator. 1989 seed ex hort. D. Hoskins from an E. Sewell coll. (Confined to Corfu and currently placed under F. graeca thessala, largely green bells.) (15+) D
- \* 499.701 FRITILLARIA MESSANENSIS subsp. GRACILIS Jugoslavia, Bosna i Hercegovina, Bjelasnica. Ex hort. P. Christian. (Usually a plant of oak scrub over limestone. Distinct from the more southern taxa in its alternate bracts and untessellated flowers - chestnut brown, gold-edged bells. Easily grown.) (20+ seeds) B
- FRITILLARIA MONTANA grows as a series of disjointed populations on the limestones of S Europe from SE France to NW Greece. The group extends E to the Siberian F. ruthenica with its winged capsule. The local populations vary greatly on a general pattern: the bell-shaped flowers are always tessellated in purple, brown or black on a greenish ground and have a papillose, trifid style; the linear leaves can be either alternate or in whorls of three - sometimes both in the same population. Many names have been applied or misapplied to these European plants: F. orientalis, F. nigra, F. tenella, etc. Considering the current interest in Fritillaria, they are not commonly seen in cultivation. In general, they are quite easily grown and temperature-hardy but, as plants of dryish habitats, are really better in a bulb-frame than the open garden in the U.K. A raised bed in full sun might be a possibility.
- 500.300 FRITILLARIA MONTANA Jugoslavia, Makedonija, Galicica Planina, above Trpjeca. 1600 m. Exposed, dry limestone slopes. 12.6.90 (A fairly dwarf form with globular, purple-brown tessellated bells. Extremely unusual in that the bulbs can be stoloniferous - a typical Galicica eccentricity!) (20+ seeds) D
- 500.301 FRITILLARIA MONTANA Jugoslavia, Hrvatska, Biokovo Planina, above Tucepi. 900 m. Among limestone boulders, in scrub. 31.5.90 (From the Dalmatian Coast ranges. Not seen in flower here.) (15+ seeds) D
- 500.302 FRITILLARIA MONTANA Jugoslavia, Hrvatska, Velebit Planina, above Karlobag. 500 m. Among limestone rocks on scrub-covered slope. 30.5.90 (Also a coastal mountain habitat. Not seen in flower.) (15+ seeds) D
- \* 500.303 FRITILLARIA MONTANA France, Alpes-Maritimes, NW of Gourdon to Caussols. c. 1000 m. Among grasses on N facing limestone slope with scattered Juniperus. Ex hort. P. Christian from his 1979 coll. PJC 282. (A French population which has been described as F. caussolensis. Heavily chequered red-brown or wine. Though Martyn Rix considers unwinged capsules diagnostic for this species, Paul Christian tells us that this population has both winged and unwinged capsules occurring together. A good grower.) (20+ seeds) C
- 519.001 GENTIANA OCCIDENTALIS Spain, Huesca, Puerto del Portalet. 1700 m. Steep grassy slope on limestone. 29.6.90 (Little-known, W Pyrenean endemic member of the G. acaulis group, possibly closest to the eastern G. clusii. Rather uncommon in the wild in our experience.) (20+ seeds) D
- 521.601 GENTIANA VERNA subsp. BALCANICA Greece, Drama, Falakro, ridge below Hionotripa. 1900 m. Exposed, montane grassland. 9.6.90 (The Balkan and W Turkish race of the Spring Gentian, perfectly distinct from G.v. subsp. pontica, though it is assigned to this in 'Flora Europaea'. The illustration in Bull. Alp. Gard. Soc. Vol. 57, p. 126 (June, 1989) is of a plant on Olympus. Here it is an even richer, darker blue with the same blue-black tinted calyx. It is over 25 years since we collected seed of this.) (50+ seeds) E
- \* 532.600 GLADIOLUS KOTSCHYANUS Turkey, Kayseri, E of Pinarbasi. 1200 m. Hay meadows. 1990 seed ex hort M. Tucker from our 1985 coll. (Robust hay meadow form. Wild seed-bank seed also still available.) (20+ seeds) C
- \* 532.602 GLADIOLUS KOTSCHYANUS Turkey, Erzurum, Kop Dag above Askale. 2400 m. Wet-flush among Salix & Betula. 1990 seed from our 1986 coll. ex hort. M. Tucker. (Dwarf, crimson but not all come dwarf!) (20+ seeds) C
- 537.200 GLOBULARIA SPINOSA Spain, Jaen, Sierra de Cazorla, above source of Guadalquivir. 1400 m. Fissures on limestone cliffs. 23.6.90 (Rock-hugging clumps of beautiful, blue-grey holly-leaves - the pale blue flower heads on rather long stems are very much secondary to the foliage. Endemic to S.E. Spain.) D
- 547.000 HABERLEA RHODOPENSIS Greece, Drama, NW of Drama. 300 m. N facing rock-fissures. 9.6.90 (This very beautiful Gesneriad with exquisite pale-lavender flowers is endemic to the mountains on either side of the Greek/Bulgarian border. Easily grown in a vertical shady crevice, alpine-house or N facing dry stone wall outside in the U.K. The minute seed should be surface sown, covered with glass and newspaper and watered from below - drying out when germinating is the main cause of failure.) (100+ seeds) D

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B : \$2.50 ; £1.50 ; DM4,50 ; FF15. -	E : \$5.50 ; £3.50 ; DM10, - ; FF35. -
C : \$3.50 ; £2.00 ; DM6, - ; FF20. -	F : \$7.00 ; £4.50 ; DM13, - ; FF45. -



- \* 561.400 H. LIVIDUS Spain, Islas Baleares, Mallorca, NE of Andraitx. 100 m. Among Rosa scrub at base of cliffs in limestone talus. From original wild material coll. D. & P. Hoskins in 1973 (We have managed to hold on to a few of the seedlings collected in Mallorca and given to us by Dave Hoskins 7 years ago. This year Helen Barton collected seed from them but we now hope to be able to establish them here under glass to provide more seed periodically. Only a few this season, from plants grown segregated under glass and unlikely to be contaminated by *H. argutifolius*. This species germinates in autumn to early winter, it is not satisfactory outdoors in the U.K. and is best grown as tender Cyclamen.) (10 seeds) F
- H. MULTIFIDUS As we understand the taxa assigned to this species, it is not at all difficult to accept Brian Mathew's division of the Yugoslavian representatives into three subspecies, which in our experience occupy three distinct geographically isolated areas. While we are at present uncertain as to the precise extent of each, we are at a loss to understand Brian's many references to "coastal mountains" - we have never seen any Hellebores on the slopes along the Yugoslavian coast nor in the main body of what we should call the coastal ranges: the Biokovo and Velebit for instance. The Hellebores we know grow in upland areas on the inland side of the coastal hills, their eastern extension blocked by the higher mountains of the Dinaric ranges and their extensions. We also find the altitudes he quotes quite incredible - up to 1600 m. for *H.m.* subsp. *hercegovinus* and up to 1500 m. for *H.m.* *multifidus*. We have only found these at around 500 m. on limestone where it is extremely hot and dry in summer. In most seasons they go dormant in summer (we don't expect many people look at Hellebores in August!) though in cultivation foliage will be retained. A very sunny, well-drained site or bulb-frame will be best.
- 561.500 H. MULTIFIDUS (subsp. *multifidus*) Yugoslavia, Hrvatska, NW of Bruvno. 500 m. Exposed areas of stony grassland. 29.5.90 (Total leaf-divisions 30-70. From a peripheral colony in a colder, inland locality - the core colonies about 30 km. S, E of Obrovacs (NE of Zadar) had dropped their seeds.) (15+ seeds) E
- 561.602 H. MULTIFIDUS subsp. HERCEGOVINUS Yugoslavia, Bosna i Hercegovina, NNW of Bileca. 600 m. Margins of Quercus scrub. 1.6.90 (Previously listed in 1984 by us as *H. multifidus* subsp. *multifidus*, following 'Flora Europaea'. A few seeds from what we believe to be one of the highest, most inland localities - again seed in the area it is most numerous, around Trebinje, had dehisced, though flowering was very sparse even here in 1990. The most divided leaf we found here had 185 narrow, linear segments.) (10 seeds) F
- 561.701 H. MULTIFIDUS subsp. ISTRIACUS Yugoslavia, Slovenija, NW of Postojna. 600 m. Openings in deciduous woodland. 28.5.90 (While many plants from this colony and the next could probably be comfortably placed in this taxon, as defined by Brian, it would have been useful to keep the name for the fairly even populations which occur on the karst S of here (& NW of Rijeka). We could find no seed on these in 1990. This is more variable, probably incorporating *H. odorus* or the like. 10-25 leaf-divisions.) (15+ seeds) D
- 561.702 H. MULTIFIDUS subsp. ISTRIACUS Yugoslavia, Hrvatska, E of Vratnik. 700 m. Open, grassy slopes. 28.5.90 (An exceptionally variable colony, 8-60 leaf divisions, growing at a high altitude for Hellebores in this area. We have seen these in flower soon after snow-melt in 1979 - some very pretty little plants here with glaucous tinge to some flowers and the occasional one with a purple-rimmed cup.) (15+ seeds) D
- 561.803 H. NIGER subsp. MACRANTHUS Italy, Trentino - Alto Adige, Mga Giu, S of Val di Ledro. 1200 m. Woodland over limestone. Coll. P. & P. Watt July, 1990. (*H. niger* was simply not ready when we passed through N Italy in June, so we are very grateful to Peter & Penny Watt for filling in this gap. We are not wholly convinced of the justification for splitting *H. niger* into two subspecies but there are some magnificent forms in the Lake Garda area, though a good degree of variation will occur.) (15+ seeds) D
- H. ODORUS No matter how botanically suspect we consider the grounds for maintaining *H. cyclophyllus* and, dare we say, *H. viridis* and *H. orientalis*, at separate specific rank, it is certainly possible to find reasonably uniform, geographically isolated colonies which one can accept as 'good' representatives of these taxa. This has not yet been our experience with *H. odorus*. If these exist, we can only assume they occur in areas which we have not visited. The following are placed here as we cannot see where else to put them. There are some excellent - and not always variable - non-conformists here. All worth trying.
- 562.001 H. ODORUS Yugoslavia, Crna Gora, between Zaton & Bioca. 1000 m. Stony slopes with sparse scrub. 3.6.90 (10-15 leaf-segments in this and the next. Seemed to have been a very creamy yellow-green.) (20+ seeds) D
- 562.002 H. ODORUS Yugoslavia, Crna Gora, SE of Gorazde. 1000 m. Open stony slopes. 3.6.90 (Probably the nearest to 'pure' *H. odorus* here but it is doubtful if leaves overwinter in this cold area.) (15+ seeds) D
- 562.003 H. ODORUS Yugoslavia, Crna Gora, Bac. 900 m. Steep stony slope. 3.6.90 (This and the above two are all from near a little blank spot on Brian's map. All seemed greens with 5-25 leaf segments here.) (15+ seeds) D
- 562.004 H. ODORUS Yugoslavia, Bosna i Hercegovina, above Borike, between Visegrad & Rogatica. c. 1000 m. Stony turf over limestone with *Crataegus* & *Juniperus*. 14.6.90 (These are from a vast colony extending over a great, cold highland area E of Sarajevo. They are far removed from what we have called *H. cyclophyllus* and it would be expected that we have 'good' *H. odorus* here. In fact, the diagnostic foliolic feature (this cannot really worry growers!) was somewhat irregular: some were free, some were connate and some had the audacity to be stipitate. Total leaf divisions varied from 9 to 16 - if leaves overwinter here they will have to do so under several feet of snow. Expect excellent yellow-greens.) (20+ seeds) D
- 562.403 H. ORIENTALIS Turkey, Artvin, Genya Da. 1700 m. Open meadows and margins of coniferous woodland. 23.7.88 (Sorry no fresh coll. from Turkey. This has been in the refrigerator and may give reasonable germination if you have missed this before. This is from the furthest NE corner of Turkey near the USSR border - usually cream or white tinged green. See Section III for the garden hybrids of this.) (20+ seeds) C
- H. TORQUATUS To us this is the unattainable. Maybe it is better to live with a gardener's fantasy than reality. Life was perhaps a little simpler when 'Flora Europaea' placed this as *H. multifidus* ssp. *serbicus*. Now that Brian has dredged up the somewhat dubious name of *H. torquatus* and reinstated the taxon at specific level, there will be no stopping the myth-merchants. Now that there is no type specimen and no type locality for this taxon, it is impossible for the sceptic to wrestle with the intangible. At least I was able to go in 1979 and look at the hellebores in the type-locality for *H. serbicus* S of Raska, near the border of Serbia and Kosovo. Seed had gone here by the time we reached it in 1990 but the plants here are much the same as those in Montenegro (Crna Gora) and every bit as variable. What we want to see is a population of purple-flowered hellebores - reasonably homogeneous. After all it is the purple colouring which is the diagnostic feature of both *H. torquatus* and *H. serbicus*. Without it we are not clear how Brian separates these and *H. multifidus*. We are perfectly open minded and willing to accept that all the populations we know are hybrids or intergrades involving *H. multifidus* and/or *H. odorus/cyclophyllus* with the 'true' *H. torquatus*. Any specific information on purple-flowered colonies in Yugoslavia will be promptly investigated! Expect a lot of variation from the following collections.

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 B : \$2.50 ; £1.50 ; DM4,50 ; FF15. -      E : \$5.50 ; £3.50 ; DM10, - ; FF35. -  
 C : \$3.50 ; £2.00 ; DM6, - ; FF20. -      F : \$7.00 ; £4.50 ; DM13, - ; FF45. -



- 612.500 KNAUTIA MACEDONICA Yugoslavia, Makedonija, NW of Bitola. 900 m. Open meadows and margins of scrub. 12.6.90 (An excellent herbaceous perennial, reasonably well-known in gardens in the U.K., where it is unfortunately usually listed as "Scabiosa rumelica", but invariably seen only in its deep crimson form. These wild forms vary to brighter crimson and also to pinks and lilacs. Although the rich, pure, dark crimson-red predominates we hope this collection may provide further colour variations of this delightful species with a succession of 'scabiouises' on branching stems, up to 1 m. tall.) (30+ seeds) B
- 627.800 LEUCANTHEMOPSIS RADICANS Spain, Granada, Sierra Nevada below Pico del Veleta. 2500-2800 m. Exposed, stony, schist slopes. 25.6.90 (A Sierra Nevada endemic and surely the choicest and most aristocratic of all alpine 'daisies'. Tight mats of tiny, much-cut, greyish leaves produce sulphur-yellow 'daisies' which flush crimson as they age. To Farrer it was "a treasure to be much desired" and to Giuseppe, who probably first introduced it in 1933, "one of the prettiest plants in existence... a difficult plant to grow but more than worth the trouble it gives." We maintained and propagated material Lyn Weeks and I collected in 1970 for many years but it is again very little known in cultivation. To be tried in an acid scree-mix in full sun in the alpine-house or trough - too much water after flowering in summer can be just as dangerous as an excess in winter - these are dry and windy mountains after snow-melt.) E
- 630.480 LEUCOJUM TINGITANUM Morocco, Rif Mts., above Xauen (Chefchaouen). (We still have some seed left from John Blanchard's 1989 coll. of this obscure species, apparently restricted to one or two localities in NW Morocco. Spring-flowering and more robust than *L. trichophyllum*. John tells us that the stems are up to 30 cm. high, each with up to 7 white flowers to 18 mm. across.) (15+ seeds) E
- 630.501 LEUCOJUM TRICHOPHYLLUM Spain, Cadiz, W of Jerez de la Frontera. 60 m. Open, sandy areas. (We have some small offset bulbets to spare of this delicate, spring-flowering species, best grown under glass in the U.K. These are mostly pink or pink-flushed white forms but we find it extremely shy-flowering. It has occasionally flowered well for no obvious reason. Kew seems more regularly successful.) (5 bulbets) D
- LILIUM Fresh, 1990 seed should be available later of all the species listed as cultivated seed in the Seed-bank Supplement. This will be hand-pollinated from bulbs grown by D. Hoskins and M. Tucker. These are *L. candidum*, *L. chalcedonicum* and *L. pomponium*; field data as in the supplementary list. There will also be some stem-bulbils available of *L. bulbiferum* (632.401). All should be ready by October.
- 634.801 LILIUM PYRENAICUM U.K., Wales, Dyfed, SW of Ffostrasol. 200 m. Open hedgerows & in woodland. 20.8.90 (Whether or not this splendid plant is truly native here is both debatable and irrelevant - it certainly grows wild in one or two spots near here. British botanists always seem unwilling to concede that any more obviously attractive species is truly native although in this case other species such as the *Narcissus* and *Meconopsis cambrica* establish a Pyrenean connection. Yellow Turk's-cap flowers, finely speckled with purple and orange-brown anthers. Rather dwarfier than we have seen in France.) (15+ seeds) C
- \* 688.101 MUSCARI AUCHERI Turkey, Bolu, near Abant Golu. 1100 m. Coll. & ex hort. N. Stevens. (From a fine form of this tidy species, selected in this cold, wet area of NW Turkey by Norman Stevens.) (20+ seeds) B
- \* 688.600 MUSCARI CAUCASICUM Turkey, Kars, SSW of Sarikamis. 1800 m. Stony igneous slopes. Ex hort. M. Tucker from our 1985 coll. (Striking blue-violet tassels above yellow-brown bells.) (15+ seeds) B
- \* 689.450 MUSCARI GRANDIFOLIUM Morocco, Middle Atlas Range, above Ifrane. 1700 m. Red clay among limestone outcrops. (Our own 1990 seed from our 1982 coll. Handsome & distinct with blue-black flowers from china-blue buds. We find this a hardy and trouble-free species & surprisingly rare in gardens.) (15+ seeds) B
- 690.400 MUSCARI NEGLECTUM Yugoslavia, Hrvatska, Biokovo Planina. 900 m. Openings in scrub on limestone slope. 31.5.90 (Little blue-black grape hyacinth - an easy and attractive garden-plant.) (20+ seeds) B
- NARCISSUS. Armed with some habitat information from John Blanchard, we had some vague hopes of making several collections of this genus in Spain this year. However, after dealing with *Helleborus* in the Balkans the season had advanced too much for any collections to be made in the more southern areas. However, we have a few collections from high elevations and some fresh cultivated material. It was also a poor year for seed of these in England but some material from John Blanchard is in Section III.
- 693.800 NARCISSUS ASSOANUS (= *N. juncifolius*, *N. requienii*) France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. S & W facing slopes in stony clay over limestone. 30.6.90 (Delightful, little, yellow-flowered Jonquil - dwarf and usually single-flowered here - usually accommodating and excellent in a pan.) (20+ seeds) C
- \* 696.200 NARCISSUS BULBOCODIUM subsp. NIVALIS (sensu Maire in 'Flore de l'Afrique du Nord') Morocco, High Atlas above Tizi-n-Tichka. 2000 m. In turf. (1990 seed from a 1982 coll. of this dwarf, broad-leaved, snow-melt race of yellow hoop-petticoats. An excellent and very hardy plant in the U.K. While variable it is distinct from the next if only in its wide, prostrate, glossy green foliage.) (15+ seeds) B
- 696.250 NARCISSUS BULBOCODIUM var. NIVALIS (auct. non Maire) Spain, Avila, Sierra de Gredos, NE of Pico Almanzor. 1800 m. Among grasses on steep, open slopes. 27.6.90 (This is the little snow-melt hoop-petticoat of the high moorlands of the Gredos, referred to *N. b.* var. *nivalis* by various authors (e.g. Polunin & Smythies in 'Flowers of South-west Europe'). What the correct application of this name should be is somewhat difficult without unearthing Graells' type-specimen. Neither John Blanchard nor ourselves have seen this population in flower but the leaves are narrow, semi-cylindrical and upright here.) (30+ seeds) C
- \* 699.200 NARCISSUS BULBOCODIUM var. PALLIDUS Morocco, High Atlas, Tizi Gourane above Amizmiz. 1800 m. Schist fissures & detritus. 1990 seed ex hort. D. Hoskins from our 1982 coll. (Distinct with pale to deep primrose yellow flowers and proving an excellent plant growing under glass in the U.K. Unlike the preceding two, this benefits from a dry resting period in summer. Flowers about February here.) (15+ seeds) D
- 702.500 NARCISSUS OBVALLARIS U.K., Wales, Dyfed, below Ffostrasol. 150 m. Open grassland, banks and deciduous woodland. 23.5.90 (The handsome Welsh trumpet daffodil, quite distinct from the British forms of *N. pseudonarcissus* and probably nearest to *N. hispanicus* in its outward-facing flowers. Usually concolorous but sometimes tending to bicolorous - likely to be more variable than garden forms.) (15+ seeds) B
- 702.600 NARCISSUS PACHYBOLBUS Morocco, N of Taourirt, near Barrage Mohamet V. 380 m. 1989 seed coll. J. Blanchard under JWB 89-09 (Sect. Tazetae. Distinct, winter-flowering Tazetta with umbels of up to 20, pure white flowers. Barely, if at all, known in cultivation before this coll.) (15+ seeds) D
- 703.200 NARCISSUS POETICUS (subsp. *poeticus*) Spain, Lerida, S of Puerto de Viella. 2000 m. Among grass on W-facing slope with granite outcrops. 1.7.90 (This species provides one of the great spectacles of the European mountains with its massed display of characteristic white flowers in late spring.) (20+ seeds) B
- 703.400 NARCISSUS POETICUS subsp. RADIIFLORUS Yugoslavia, Makedonija, NW of Bitola. 900 m. Open hay meadows & margins of scrub. 12.6.90 (The more eastern race, seldom seen in cultivation. White flowers with the little yellow corona, rimmed with red. These are lovely but not always easy in the garden.) (15+ seeds) C

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 C : \$3.50 ; £2.00 ; DM6, - ; FF20. -      F : \$7.00 ; £4.50 ; DM13, - ; FF45. -





- 852.400 SARCOCAPNOS CRASSIFOLIA var. SPECIOSA Spain, Granada, Sierra Nevada, Puerto de la Ragua. 1800 m. Fissures on shady, E-facing, schist cliffs. 24.6.90 (In this the flowers, carried in generous racemes are white with yellow centres, which turn orange as they age, and with long, fat spurs, looking much more *Corydalis*-like than the preceding. Similar thick blue-grey foliage. Old plants form asymmetrical rounded hummocks on the cliffs; if they become straggly in the rich, soft life of cultivation, an annual trim over with scissors after flowering keeps them in shape.) (10+ seeds) F
- 858.500 SAXIFRAGA COTYLEDON France, Hautes-Pyrenees, SE of Gedre. 1300 m. Fissures on acid rocks. 30.6.90 (Extremely fine, long, pyramidal panicles of large white flowers. The unrivalled Pyrenean race of this widespread Arctic-alpine species is rather local and seldom seen in gardens. Calcifuge.) (50+ seeds) C
- 861.900 SAXIFRAGA MARGINATA Yugoslavia, Makedonija, Radika gorge SW of Gostivar. 1000 m. Shady limestone crevices and ledges. 5.6.90 (A very beautiful member of Sect. *Porophyllum* forming compact cushions with large white flowers. Plants from this area may fit somewhere near *S.m.* var. *karadzicensis*.) (50+ seeds) D
- 864.001 SAXIFRAGA SEMPERVIVUM Greece, Kavala, Pangeo above Eleftheroupoli. 1800 m. Limestone ledges & fissures. 7.6.90 (Sect. *Porophyllum*. Prickly hummocks send up stems covered in pink, sticky hairs carrying dark violet flowers amid pink bracts. A widespread Balkan plant excellent in a pan.) (50+ seeds) B
- 864.003 SAXIFRAGA SEMPERVIVUM Greece, Drama, Falakro, above Agio Pnevma plateau. 1700 m. Limestone rocks. 9.6.90 (Almost every isolated mountain population of this varies marginally from others.) (50+ seeds) B
- 864.400 SAXIFRAGA STRIBRNYI Greece, Drama, NW of Drama, between manganese mine & Granitis. 300 m. N-facing rock fissures. 9.6.90 (A fresh 1990 coll. to update our seed-bank material of this distinct endemic of the Greek/Bulgarian border area. Fine, flat rosettes rather like *S. grisebachii* but with branching cymes of violet-pink flowers on stems clad in red-purple hairs. Sect. *Porophyllum*.) (50+ seeds) B
- 874.800 SCILLA LITARDIERI Yugoslavia, Bosna i Hercegovina, W of Trebinje. 500 m. Fragmented limestone. 1.6.90 (Though restricted to a few places on the Adriatic margin of Yugoslavia, this is an excellent garden-plant in a sunny, well-drained site in the U.K. About 20 cm. high with heads of starry, pale-blue flowers, rather like a miniature *S. peruviana*. Hardy and not fussy about a summer drying.) (20+ seeds) B
- 878.000 SCILLA VERNA Spain, Avila, Sierra de Gredos, SW of Hoyos de Espino. 1700 m. Moist turf on open slopes. 27.6.90 (A rather dwarf mountain form, a few cm. high, of this pretty plant, widespread in W Europe but seldom seen in gardens. Dense racemes of pale-blue flowers. Worth trying in a trough.) (30+ seeds) B
- \* 883.050 SCORZONERA SUBEROSA subsp. CARIENSIS Izmir, Boz Da., above Odemis. 1800 m. Open schist slopes among *Astragalus*. 1990 seed ex hort. J. Blanchard from our 1988 coll. (Tuberous-rooted summer-dormant species with short-lived, pink flowers and spectacular seed-heads. Not earth-shattering but pleasant.) (12+ seeds) C
- 950.700 THALICTRUM TUBEROSUM Spain, Huesca, Rio Gallego valley, W of Anzanigo. 600 m. Steep, stony banks with varied vegetation. 28.6.90 (It is incredible that such a beautiful plant as this from W Europe could remain virtually unmentioned in gardening literature and unknown in gardens. Indeed almost the only references to it are by those who have seen it growing wild and may have brought back a plant for their own pleasure. There are two members of this genus in Europe which have sufficiently well-developed perianth segments to be called showy in flower: this and *T. orientale*, which occurs in a pure white form in a very few spots at the S end of the Greek Tayetos Mts. It is more widespread in Turkey in the E Toros Mts. in pink and mauve forms and one of these is well established, though seldom seen, in gardens. While both are summer-dormant, this forms true tubers, rather like a miniature version of a *Dahlia*'s. This has flowers about half as large again as *T. orientale*, making for a more spectacular display, and they seem to be almost always ivory coloured. These both grow about 20-30 cm. high in the wild and this is restricted to middle-altitudes in N & NE Spain with an outlying station in S France. This will probably be the first seed-collection from the wild to be widely distributed and we hope it will see this well-established as a superlative plant for the bulb-frame or alpine-house.) (15+ seeds) E
- 987.200 VIOLA AETOLICA Yugoslavia, Makedonija, Galicica Planina above Trpjeca. 1600 m. Grassy depressions on open limestone slopes. 5.6.90 (A charming little plant with lots of bright yellow flowers, varying in tone but never in colour. Identification of many Balkan *Viola* spp. is a rather esoteric business and we are not wholly happy with the name - the spurs are a little longer and the sepals are acuminate in this - but we shall keep you informed. Looks as if it might be good and growable outside.) (30+ seeds) B
- 988.500 VIOLA CAZORLENSIS Spain, Jaen, Sierra de Cazorla, Prado Redondo. 1500 m. N facing limestone crevices on summit rocks. 23.6.90 (The very hot dry season in S Europe meant that there was some early seed on this difficult species but it also meant that seed-set was sparse. After a few hours of searching we have just enough to list but certainly not enough to meet demand. Anticipate disappointment!) (15 seeds) F
- 989.000 VIOLA CORNUTA Spain, Huesca, Puerto de Portalet. 1700 m. Open meadows on limestone. 29.6.90 (Lovely Pyrenean endemic as easy and reliable in British gardens as the preceding is refractory. Successions of scented, long-spurred flowers in lilac and purple shades all summer from spreading tufts.) (30+ seeds) B
- 989.300 VIOLA CRASSIUSCULA Spain, Granada, Sierra Nevada, below Pico del Veleta. 2500-2800 m. In loose talus on exposed schist slopes. 25.6.90 (One of the most exquisite of the Sierra Nevada endemics and the most southern of the *V. cenisia* group. It runs beneath the stones to form cushions set with plump, rounded flowers, invariably lavender-blue here on the slopes where Lyn Weeks & I collected the material from which the plants grown and much-esteemed in the 1970's were derived. Not easy but worthwhile.) (15+ seeds) F
- 990.001 VIOLA DUBYANA Italy, Trentino-Alto Adige, Cima Tuflungo above Val di Ledro. 1500 m. Limestone scree. Coll. P. & P. Watt, July, 1990. (A beautiful species only known from a small part of N Italy - very well illustrated in *Bull. Alp. Gard. Soc.*, Vol. 56, p. 76 (March, 1988). Seldom seen in cultivation but rated more highly than *V. cenisia* by Peter & Penny Watt. Always bright violet-purple.) (20+ seeds) E
- 992.600 VIOLA PERINENSIS Greece, Drama, Falakro, above Agio Pnevma plateau. 1800 m. Limestone talus. 9.6.90 (Restricted to the high, limestone mountains around the Greek/Bulgarian border, a very fine, distinct plant with prominent upper petals and short spurs over thick-textured foliage. Reputedly usually yellow but all we have seen here and almost all on Pangeo, are violet-purple (var. *bojadschiewii*.) (20+ seeds) E
- 993.150 VIOLA SCHARIENSIS Yugoslavia, Makedonija, Sar Planina, Popova Sapka above Tetovo. 2000 m. Loose, stony slopes, alpine turf & among *Vaccinium*. 13.6.90 (At long last we have a name for this endemic of the Sar Planina along the Yugoslavian/Albanian border. When I first collected seed in 1964, the accompanying specimens were determined by the RBG Edinburgh as "*aff. albanica*"; following the publication of the inadequate and often incompetent account of this genus in '*Flora Europaea*', we used the name *Viola grisebachiana*, while being fully aware that it is neither - there was no other name. Perfectly distinct and comparatively growable in the U.K. in a very well-drained site. Profuse lavender flowers.) (20+ seeds) D

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CYCLAMEN

Our friends among the Cyclamen-enthusiasts have come up with much interesting material this season - this is especially fortuitous as this is the first time since 1984 that we have been able to issue a list at something near the best time for sowing. Ideally, we should have listed these much earlier ; sowing immediately seed is ripe is the counsel of perfection. Notwithstanding such, unfortunately impracticable, advice, we have seen much excellent germination from seed sent out from our normal winter lists. Many reports confirm that our advice to soak seed in warm water for 24 hours or so before sowing appears to help. One customer had excellent results after shaking the seed mixed with sand and water, to produce mild scarification. Whether you wish to trouble with such activities for earlier sowings will be your choice but they will certainly do no harm. You may be assured in any event that, if seed does not germinate during the following winter it will come up in the subsequent one (unless mice eat it!). Having sown many hundred pots of Cyclamen over the years, very, very few failed to germinate. Where seed is derived directly from wild material with field data, it is listed in Section II but we have cross-referenced these. Chris Grey-Wilson's monograph on this genus, published in 1988, is an unrivalled reference.

- C. AFRICANUM For seed derived directly from our 1966 coll. in Algeria see Section II
- C. BALEARICUM & C. CILICIMUM Both available from material with field data in Section II
- C. CILICIMUM - FCC FORM Our 'standard' C. cilicium for which we gained an FCC was originally derived from a Peter Davis coll. (PD 25789 - same place as our 359.000). Pale pink, red nose. Autumn. Hardy. (15+ seeds) B
- C. CILICIMUM f. ALBUM Derived from the pure white clone introduced under the number Frank & Koenen 82-10, like the above from the Akseki area in SW Turkey. Not the same as the pink-nosed white listed last season. (10 seeds) E
- C. COUM - MIXED We did not have enough seed from any one group of this hardy, winter-flowering species so in this are included reds, whites and pinks both plain-leaved and with beautifully marked foliage. (15+ seeds) C
- C. COUM - PEWTER LEAVES These forms with the leaves overlaid with a dull, silver sheen have been developed quite recently. From rosy forms given to us by Phil Cornish & the white 'Maurice Dryden'. (10 seeds) E
- C. CYPRIUM Mostly from wild colls. by Manfred Koenen - variable in foliage. Pure white with a pink nose in autumn. Needs to be grown under glass in U.K. and benefits from a hot, dry period in summer. (15+ seeds) C
- C. GRAECUM Seed from material with field data is included in Section II
- C. GRAECUM - SELECTED LEAVES From a vast variety of different leaf-forms of this autumn-flowering, pink species. Flowers best in a deep pot or planted out under glass in U.K. with a dry period in summer. (15+ seeds) C
- C. GRAECUM - EARLY A form grown by Dinah Batterham & originating from John Blanchard's father, with very dark leaves and elongated flowers - always flowers before any others and attracts much attention. (10 seeds) D
- C. GRAECUM - SMALL LEAVES John Blanchard's plant which he has labelled "Small-leaved form, from Rhodes" was selected in the wild by Charles Mountfort in the 1950's. Much coveted by all who know it. Few. (10 seeds) E
- C. HEDERIFOLIUM The unrivalled, hardy, pink, autumn-flowering species. Also seed with field data. (20+ seeds) A
- C. HEDERIFOLIUM f. ALBUM The superlative white - from Dave Hoskins' finest white clone. (20+ seeds) C
- C. HEDERIFOLIUM 'APOLLO' A 'strain' or 'line' bred from the original plant at Wisley selected by E.A. Bowles as the finest leaved he knew. Still unrivalled in the intricacy of its silver-grey zones & marking. (15+ seeds) D
- C. HEDERIFOLIUM 'WHITE APOLLO' Developed by Dave Hoskins from a good white seedling derived from the preceding. Can be relied on to produce plenty whites with the superb, silver-patterned leaves of 'Apollo'. (15+ seeds) E
- C. HEDERIFOLIUM 'HIGHFIELD' From Dave Hoskins' clone with rather distinct, glossy foliage. (20+ seeds) B
- C. HEDERIFOLIUM - SILVER LEAVES From plants given to Dave Hoskins by Melvyn Jope (who says they come fairly evenly from seed) - we are told these have very fine leaves but have not seen them ourselves. (10 seeds) E
- C. INTAMINATUM From a variety of leaf forms - both plain and grey-zoned - of this dainty, little, white, autumn-flowering species. Perfectly hardy but rather tiny except in a trough or rock-garden pocket. (20+ seeds) B
- C. LIBANOTICUM The most sumptuous of the spring-flowering ones - beautifully marked, shell-pink flowers. From the stock originally grown by Charles Mountfort. At its best in shade under glass in the U.K. (15+ seeds) C
- C. PERSICUM No-one had seed on this in 1990 but we have some 1989 seed left from deep pink forms, which should give germination after soaking. Again spring-flowering & for the greenhouse - like the next. (15+ seeds) C
- C. PSEUDIBERICUM As nobody else had seed on this in 1990, we asked Dinah Batterham, who grows this better than anyone we know - neither did she but she has sent 1989 seed which she is confident about! (15+ seeds) C
- C. PURPURASCENS - SILVER LEAVES Marvellous leaves suffused almost entirely with silver. These originated from a few plants given to us by Manfred Koenen in the late 1970's. He found them in one spot near Limone on Lake Garda in N Italy ; both 'Limone' and 'Lake Garda' are sometimes applied to these in cultivation but there is an 'infinity' of C. purpurascens in the hills around Garda and these came from a few square yards known only to Manfred. Usually comes very evenly now. Rose flowers in late summer and reasonably hardy. (10 seeds) E
- C. REPANDUM 'ALBUM' From a pure white clone which occurred with Dave Hoskins among seedlings of our FCC strain, originally from Corsica. Almost all come white with Dave. Quite hardy but best under glass in U.K. (10 seeds) F
- C. REPANDUM subsp. PELOPONNESIACUM & C. ROHLFSIANUM Seed from material with field data in Section II
- C. TROCHOPTERANTHUM Distinct in its wide, windmill flowers in rich pinks in spring but not the easiest. Hardy but more easily managed under glass - grow cool and do not bake when dormant. This stock originally came from Stuart Boothman (who grew it outside) who had received it from the Peter Davis 25579 coll. in 1956. (10 seeds) E
- 
- DIERAMA PULCHERRIMUM Superlative S African member of the Iridaceae - absolutely hardy in the U.K. and possibly the most graceful plant in cultivation. Grassy tufts of foliage and arching 2 m. stems of pink bells. (20+) B
- PULCHERRIMUM - CARMINE More a rich, glowing carmine-pink than the "ruby purple" we called it before. (10+) C
- FRITILLARIA ACMOPETALA One of the easiest outside in the U.K. in full sun. Elegant green & maroon. (15+ seeds) B
- MELEAGRIS White and various purple-chequered forms of the lovely Snakeshead of some wet meadows in U.K. (30+) A

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- FRITILLARIA PONTICA An extremely vigorous form of this species selected by Paul Christian - over 50 cm. high with up to 5 big, pale-green, brown-tinted bells per stem. A very satisfactory plant in the open garden in the U.K. In NW Turkey we have seen it in moist woodland with *Astrantia*, etc. - not for the bulb-frame! (30+ seeds) B
- SIBTHORPIANA 'Lost' for 185 years, during which time the name was widely misapplied, and still only known from 2 localities in Mugla, SW Turkey, where it grows in open pine woods on limestone. Distinct from the other species with bright yellow bells in its 2 (occasionally 3) broad leaves. Still rare in gardens. (10 seeds) F
- STRIBERNYI Another obscure species only now becoming known in cultivation. Very local in SE Bulgaria & European Turkey. Narrow, glaucous, untessellated, purple & green bells with linear, greyish foliage. (10 seeds) F
- TUNTASIA As local as the preceding 2 - endemic to one or two islands in the Greek Cyclades - but now more widespread in cultivation and not too difficult in a bulb-frame. Black-maroon bells with grey bloom. (10 seeds) E
- GENTIANA PARADOXA Extraordinary relic from a few places around 1300 m. on limestone SE of Sochi & NW of Sukhumi in the Abkhaz ASSR. Erect, 25 cm. stems with linear, verticillate leaves. Erect blue & green trumpets. (50+) D
- GERANIUM CLARKEI Excellent herbaceous perennial from Kashmir, related to *G. pratense* but rhizomatous. From the glowing 'Kashmir Purple' clone but likely to vary as we have 'Kashmir White' growing nearby. 50 cm. (10 seeds) B
- SANGUINEUM Seed from the outstanding clone 'Elspeth' named by Max Frei - the larger forms of this species are little-grown in the U.K. Should produce some brilliant purple-reds for the dry, sunny border. 30cm. (10 seeds) B
- TRAVERSII Chatham Is. endemic (see comments under *Aciphylla*) now well established in cultivation in the U.K., where stock comes evenly from seed with distinct, rounded, pale pink flowers all summer on prostrate stems clothed with round, grey leaves. This can be called var. *elegans*. Usually quite hardy in U.K. with good drainage but some seed or cuttings taken in autumn can insure against winter loss. A lovely thing. (10 seeds) C
- WALLICHIANUM 'BUXTON'S VARIETY' Prostrate stems carry a succession of big flowers, pale lavender-blue with a large white centre, from midsummer until frost. A form which comes evenly from seed - not a clone. (10 seeds) B
- GLADIOLUS MACULATUS subsp. MERIDIONALIS Salmon-flowered, winter-grower from the Cape. Frost-free. (10+ seeds) C

#### HELLEBORUS

While we have provided a surfeit of wild collected Hellebore seed in Section II, it has to be admitted that these wild forms are essentially of appeal to the specialist and that for general garden purposes the hybrids, developed and selected over the last century or so, are unrivalled. These plants can be called *H. x hybridus*, rather than *H. orientalis*, which is only one of several species involved. Brian Mathew's 1989 monograph provides all the historical and practical information you could wish for about these, so we can confine ourselves to a few brief comments. Seedlings may vary considerably from the parents and we have kept the seed arranged into general groups only to give you an indication of what is more likely to materialise - no assurances can be given! Though we were involved with propagation of clones for many years, we have to recommend seed as by far the best way to acquire a range of these plants. Seedlings have much more vigour and adaptability than plants propagated vegetatively. Our comments on *Cyclamen* seed and the recommended treatment apply equally to these: in short sow these as soon as you can. They are best stood outside (do protect from mice which love them even more than *Cyclamen* seeds) during early winter; when germination occurs, they will progress more rapidly if brought in to a more protected environment - even a frost-free one - and the seedlings will be large enough to plant out in late spring (if you are prepared to keep them well-weeded and watered) when they have one or two true leaves. If you do not have germination the first season, you can expect it the following winter. Reports on seed sent out from our winter lists have been favourable but the earlier seed is sown the better and sooner it will come up. Seed here is from various sources: for the first time in several years we have some of our own here; Will McLewin provides the mainstay - his policy of selection is an ongoing affair and his seed contribution this year was thinner because he removed the flowers from all the 'sub-standard' ones in his collection; there is also seed here from Melvyn Jope and others. The 'bloodstock' behind the seed here is traceable to every significant enthusiast in the U.K. in recent years - Margery Fish, E.B. Anderson, Eric Smith and ourselves, Helen Ballard, Elizabeth Strangman, Robin White...

- From 'ANDROMEDA' (and similar) Seedlings are fairly reliably good, rounded purples - seldom as fine as mother (15) D
- From 'AQUARIUS' (and similar) Usually an excellent parent. Distinctive finely speckled 'Zodiac type'. (15+ seeds) E
- From 'DRACO' (and similar) Deep purple-pink with merged, solid basal zone of purple-black spots. (10 seeds) E
- From 'ORION' Our greenish-cream with bronze-red nectaries and centre (bottom right-hand on the dust-jacket of Brian's book). Sadly a poor parent - few have a dark centre and none has been better. You might be luckier (15) C
- From 'ZODIAC TYPES' Eric Smith coined the name 'Zodiac Strain' for his favourite group of hybrids - in effect *H. guttatus* with a pink ground. Expect plenty pinks with basal zones of dark maroon-purple spots. (15+ seeds) C
- From GREENS Including yellow-greens. (10 seeds) D      From PINKS Pale to medium; unspotted (15) D
- From DARK PURPLES Including "smoky" purples. (15 seeds) D      From WHITES, CREAMS & YELLOWS (10 seeds) D
- From RED-PURPLES Including wine-shades. (15 seeds) D      'SPECIAL MIXTURE' McLewin's best! (15 seeds) D
- HELLEBORUS X HYBRIDUS - MIXED If you have none, try these for a start; otherwise select from above! (20+ seeds) B
- ARGUTIFOLIUS (*H. corsicus*, *H. lividus* subsp. *corsicus*) An outstanding garden-plant in the U.K. - absolutely hardy in spite of its Mediterranean origins. Evergreen, spiny leaves and massed yellow-green cups. (20+ seeds) B
- FOETIDUS - FRENCH FORM From near Pontarlier. These two forms from Will McLewin are most distinct. (20+ seeds) B
- FOETIDUS - HUNGARIAN FORM Greyer leaves with narrower segments. Large, prominent bracts. Taller. (20+ seeds) B
- NIGER ? X ARGUTIFOLIUS Hand-pollinated by Melvyn Jope but don't expect *H. x nigercors*. The hybrid itself is sterile and the cross is none too easy. You may be lucky! At worst you'll get *H. niger* seedlings. (10 seeds) D

HESPERANPHA MARLOTTII We have not been able to verify the name of this African member of the Iridaceae (over 50 in the genus) but John Blanchard is impressed with it - "remarkable - nearly 1 m. high - seems hardy" (20+) C

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