

BASE-CAMP IS ESTABLISHED

Yes, this is the same 'Jim & Jenny Archibald', long resident in the impenetrable obscurity of 'Sherborne, Dorset, England' (our mail really did reach us!) and now established in what we hope is the equally impenetrable obscurity of rural W Wales. "My God, what an address!" exclaimed one American friend; we assure you it is quite straightforward compared to many Welsh addresses. We only ask you to try to spell it correctly, not to pronounce it. Even if you are not altogether accurate, Welsh post offices seem remarkably efficient at deciphering the mangled versions of Welsh place-names which usually appear on mail from foreign countries, like England. Truth to tell, the Welsh are not always particularly efficient themselves and letters from such Welsh institutions as our suppliers of water and electricity usually have various letters transposed, the 'F', the 'L' and 'S' being particularly unpredictable in their degree of proliferation. We only ask you to do your best! Be assured your order is almost certain to reach us.

ORDERING could not be easier. Prices quoted on each page are in US \$, £ sterling, DM and French Francs; we shall accept your personal cheque in any of these currencies. In the case of cheques in US \$, these must be on a U.S. bank account (banking in the U.S.A. tends to be rather insular and charges for negotiating cheques on foreign accounts are extremely high; please do not send us Eurocheques in US \$). While we have kept our price-structure steady, apart from a few minor currency adjustments, in recent years, we have been forced to increase US \$ prices this year. We resisted doing this last season, in the hope that the status of the \$ might improve. It has not. US customers should blame the politicians responsible for the US budget deficit, not us! To be fair, prices of seeds collected in the U.S.A. in 1987 have not been increased. Apart from personal cheques, payment can be made in bank-notes in any of these currencies (please send registered mail), a bank draft or International Money Order (in sterling for these please). If remitting by sterling cheque, it is a great help to both of us if you send an open cheque, limited to the total value of your order (it obviously cannot be made out for more than the limit but it certainly can be made out for less, avoiding annoying credits or refunds; moreover, you 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. There is no charge for airmail on the seeds or on the seed-lists. Order as soon as you can - the sooner we have your order, the faster the seed can be with you. Remember that we do not pay-in your cheque until after your order has been despatched - it is in our interest, as well as yours, to complete orders quickly. Finally, we ask (your address may be difficult!)

PLEASE PRINT YOUR NAME & ADDRESS CLEARLY

PLEASE UNDERSTAND that there may be a delay of some weeks before you receive your seeds. The majority of orders come in during the first week or so after we send out a list. We receive orders very much more quickly 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 also ordered that same day. We send out our 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 do try not to list collections unless we feel there may be enough seed to satisfy the demand, so there should be no great concern over this, even if you are not ordering by return! Very late orders may not receive every single item, especially if they include some of the cultivated material from Section III, which often really is in short supply, but they are more likely to be despatched quickly. If you 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 an order is despatched. If it has been, let us know immediately - a very few items do become lost or delayed - and you will find us very sympathetic to any such problem. These are very rare occurrences!

THE SITE OF OUR BASE-CAMP lies to the far West of Britain, on the North-facing slope and near the base of one of those little Welsh valleys which plunge steeply down from the uplands. 'Bryn Colleen' sits into the side of the hill, at an altitude of 220 m., 20 m. above the valley bottom, where the little stream of Nant Colleen runs. This would appear to mean Hazel Stream and there are indeed still many Corylus avellana along its banks. The site was named by our predecessors after the stream and means 'Hazel Hill' but the old name, which we were tempted to restore, is more interesting: Bachyrhew Bach. The name could rather improbably be translated as 'Little, little of frost' but our neighbour tells us that a student of older Welsh told him that 'bach' as well as meaning little was also used for a crooked finger. Hence, the name means 'Little Crook of Frost' or 'Little Frosty Bend' - somewhat less suburban than 'Hazel Hill'! Here we have just over 4 acres of land (1.7 hectares), most of it gently sloping N-facing pasture but with over half an acre of sheltered, wooded marshland around the stream in the valley-bottom. While doubtless part of the land will prove to be a frost-pocket, the fact that frost lies late on N slopes and plants start into growth correspondingly late will counteract this and we hope will prove an advantage rather than a disadvantage. The coastal climate of W Wales is mild and we are quite near the coast but far enough away from it to escape the force of the westerly gales which tear in full of salt-spray. All in all it might be an interesting place to grow plants, if we ever have the time! At present, our neighbour's cattle graze the pasture and we can enjoy the massed displays of Galanthus nivalis, followed by Narcissus obvallaris, followed by Hyacinthoides non-scripta! To say nothing of unexpected pleasures such as Lilium pyrenaicum here and there along some roadside banks. Our plans for the next two years are made and we hope they will allow a little time to play with the land here but, next season, we intend to be off quite early to the American West. This season, then, was our last chance for three years to try to bring together as much European and Turkish material as we could in a short space of time. If our plans mature to reality, there will be no new material from either Europe or Turkey before 1991 and, even then, there are some nebulous possibilities for that distant year which would again preclude further collections from these areas. We wanted to try this season to collect enough seed of enough items to be able to carry forward a list of seed-bank material (as we have done this year with 1987 N American collections) which can be made available in both 1989 and 1990 lists. We have been successful up to a point but the early snow in Austria deprived us of much material from the E Alps. Our collecting-season has, therefore been severely squeezed from both ends in 1988. Establishing 'base-camp' here took us up till June. Fortunately we were able to find a property which we could move in to with a minimum of trouble but re-assembling what belongings we had retained during the more nomadic years after 1983, when we started travelling in search of seeds, took quite some time. Before leaving to go abroad in 1988, we also had to try to organise working space so that we could deal with the seed on our return and prepare this list for you. We now have an excellent office and work-room arranged with adequate space to deal with preparation and storage of seeds and despatch of orders. While such arrangements might be considered a necessity by most people, they come as something of a luxury to us and, even with adequate facilities at home, we shall, of course, still have to do a great deal of our work in cramped circumstances in caravans, hotel rooms, backs of Land Rovers and tents, when in the field! The real luxury, however, is the permanence of our base. Although, most of you will not be aware of it, every year we have had to pack everything up and store it before we went off collecting. When we came back, it all came out again. It was like moving house twice a year! At least it instilled us with a great deal of discipline and adaptability. Now the books and the typewriter and the card-files (to say nothing of our personal possessions) can all stay where they are to await our return. All this upheaval and novel domesticity occupied a great deal of time in 1988 and, looking back, we wonder when we might have extricated ourselves from it to go off collecting seed last season, had we not had a definite commitment - a date in Turkey.

ARCHIBALDS ADVENTURE HOLIDAYS were not planned as such. We have up till now done our utmost to avoid becoming involved in the package-tour business. Taking groups of starry-eyed people between 4-star hotels in air-conditioned buses, occasionally looking at pretty wildflowers, is not our idea of either business or pleasure. However, when our old friends, Dr. Hans and Helga Simon, asked us to go to Turkey with a few members of the ISU, of which Hans is currently president, we did give the matter some thought. The ISU is an organisation for those involved with herbaceous perennials professionally, both in botanic gardens and nurseries, and we felt that they might be prepared to tolerate a little inconvenience to see such plants in the wild and also that the possibility of having to explain that this plant is called a Campanula (or, even worse, "Look! The Three-Toothed Bellflower!") might be remote. On the contrary, they struck terror into our ignorant hearts, as they strode across hillsides with specimens of diminutive Cruciferae, Umbelliferae, Compositae and Leguminosae - "Which Astragalus is this?" ; "Is this Jurinella moschus subsp. moschus or subsp. pinnatisecta?" Having succumbed to Hans' persuasion, we flew out to NE Turkey with 30 (the original "few" - estimated at 12 or so - having grown) German, Swiss and Austrian ISU members, all having been duly warned of the possible 'hardships' likely to be encountered, in the way of small-town hotels, food and bad roads. There is, however, a great difference between a bad road and no road at all : two days before we landed at Trabzon, a few thousand tons of earth slid down the mountains near Macka and the road to the Zigana Pass and the interior disappeared. The fact that 6 buses, lorries without number and about 200 villagers also disappeared came second in our selfish minds to the fact that we had to get 30 Europeans across the Pontus Mts. to a hotel, which might no longer be expecting them, in an afternoon. This was actually accomplished (as such things often can be in Turkey) in spite of the resistance of the Turkish drivers of our three Ford Transits (whose initial unwillingness to experiment with the more exciting side-roads was at least cured early), the Traffic Police (conspicuous by their absence) and the Turkish telephone system (as reliably unreliable as ever). We shall not bore you with details of our hurried journey. In the ten days we spent with them, our companions were extremely fortunate in the weather they experienced and in the scale and range of flowers they saw. We should be very fortunate to be able to repeat that journey : whole hillsides of Paeonia arietina, Rhododendron smirnovii and R. caucasicum at their peak of flowering ; high meadows full of Liliium and Geranium ; even the last, high stands of the bulbs, like Tulipa armena and Fritillaria latifolia, in full flower in early July. All this interspersed with a ration of 'adventures' ("You must have one adventure every day!" said Karin Schatzberg), culminating in the great adventure in search of Liliium kesselringianum. Having located and photographed this, we returned to find that heavy rainfall had rendered our 'road' almost impassible. This road to the 'yaylas' behind Ardanuc, is one of the most evil in the world. We turned back on it during a thunderstorm in 1986 - even Land Rovers, with 4-wheel drive, cease to operate in a controlled fashion when each tyre has accumulated a 3 in. coating of liquid glue. The three Transits had to be manhandled back through the glutinous mud, with the result that everyone was generously plastered with filth. This apparently was considered the most successful adventure : "This has been a wonderful day!" said one of our victims.

"COUPLE'S MIDLIFE CRISIS" might well have been an apt description of our days as leaders of the ISU group in Turkey but, in fact, it was how a headline-writer of the 'Chicago Tribune' chose (don't ask us why!) to head-up an article about our seed-collecting by Sandra Ladendorf : "Seeds of Change - Couple's midlife Crisis leads them to hunt and save rare and exotic plants." You can see why we are usually as opposed to newspaper publicity as we are to leading tours to Turkey! The trouble is that we are a very naive and gullible pair, totally unable to say 'No' to our friends. Many of you will know Sandra as Vice President of the American Rock Garden Society but she is also a journalist and asked very persuasively if she could write about our activities for 'The Christian Science Monitor'. What she did not tell us was that her article might be syndicated. It subsequently appeared in a host of local newspapers, not only throughout the U.S.A. but in S Africa, New Zealand and Heaven knows where. Not only did we have Sandra's article to contend with in the U.S.A. but there was also one in Britain by Anna Pavord, who writes for 'The Independent'. The fact that we are dedicated readers of 'The Independent' and have always both thought and said complimentary things about Anna's writing, once again made us 'an easy touch'. As a result of all this publicity, we have had hundreds and hundreds of letters - many quite delightful, many extremely interesting and all emphasising how very pleasant and friendly most people are. If, by any chance, this is read by any of the hundreds and hundreds of people who have not received a personal reply from us, we can only say 'Thank you for the kind letter'. This also applies to many of you closer to our activities, who have written to let us know about the germination and progress of collected seed. Some of your remarks have been included in this list but if yours are not among those it does not mean they have been of less value to us. Thank you all very much. Our seed-lists are very esoteric affairs and we wish to keep them that way. There is no point in our seed going to gardeners who are not yet experienced enough to give it a fair chance. In this respect mass publicity is of no value to us and we should much rather that competent growers find us than we should try to attract them. The propagator at one botanic garden might speak to the propagator at another ; one amateur specialist might mention our list to another. In this way, we hope that it might be possible for the seed we collect to reach those most likely to be able to grow it and to maintain the resulting plants in cultivation. We are reaching the stage where we can feel with reasonable certainty that someone, somewhere is going to be able to grow almost anything we might collect.

A SINGLE SOUR NOTE appeared among the thousand or so letters written either to ourselves or the newspapers concerned. To have received only a single critical letter was surprising to us and we are encouraged that the more voluble and aggressive 'conservationists' must be becoming very much better informed about matters, which they were all too anxious to oversimplify in order to express definite opinions without a knowledge of reality. Thomas Alexander (Hull, England) asked "if consideration has been taken of the ecological damage resulting from the removal of the reproductive capabilities of hundreds of plants in fragile alpine environments." Disregarding, the inaccurate and emotive cliches 'damage' and 'fragile', of course we consider the ecological impact. While we are not so foolish as to argue that collecting some seed might have no ecological significance whatsoever, the impact is so trivial as to be impossible to quantify. If we visited the same square yard of hillside every year to collect seed from the same plants, our influence might be noticeable in that small area. We do not do this but even if we did our lives are short. Nature is profligate (we can assure Mr. Alexander that we have never found it necessary to collect seed from "hundreds" of plants) and both the plants and seed are important food-sources for a multitude of insects, rodents and grazing animals - we are very insignificant and unimportant predators! Mr. Alexander goes on to complain "the seed packets do not even have growing instructions" (nor do they have coloured pictures on them, Mr. Alexander) "implying that they themselves haven't cultivated the plants" (in many cases, very true ; we have probably grown more of them than most people, however. We omit the comments about "a profitable market" but would be pleased to refer Mr. Alexander to our Tax Inspector.)... "why don't the Archibalds cultivate the flowers for their seeds, instead of plundering the Rocky Mountains and Turkey for their stock in trade." I think Mr. Alexander has failed to understand what we do or why we are doing it ; as long as all of you who support our collecting understand, that is what matters.

ATTILA LIVES ON This talk of "plundering" brings us to a sad story on which to finish. About the same time as we received the letter from Thomas Alexander, we were asked by Judy Sellers, Vice Chairman, Endangered Species, Horticulture Committee, Garden Club of America, for some reliable, personal information regarding the large-scale, commercial collection of bulbs in Turkey : "Do you see much of this going on? Are the wild areas being depleted?" Until this year, our answer would have been "No" to both questions. However, when we paid a visit to the archaeological site of Cavustepe near Van, in order to see the very charming, elderly man who is the caretaker, we were met by an equally charming young man, who turned out to be his son. We explained that we had visited his father on previous occasions, when we had come to see Iris paradoxa var. choschab growing in splendid profusion, simply because grazing animals were kept off the site. "Yes, the 'zanbagh'," he said and then told us with some pride, "This year my father had a letter from Mr. Attila at the University. He asked him to send 2000 plants of the 'zanbagh' for medicine." Is this the same Attila who worked with Professor Peter Davis of Edinburgh in 1950 and with Professor Huber-Morath of Basel in 1951 and 1954 ? When we were in Turkey with the ISU, we heard that a large number of bulbs of Fritillaria alburyana had also been removed this year. These are specialised species of specialised habitats ; their location in the wild requires specialised botanical knowledge or access to botanical records. They can only be marketed by a specialist dealer. With so much specialisation about, there is obviously no room for responsibility.

Unless otherwise mentioned, seeds in Section II have been collected by Jim and Jenny Archibald during 1988. A few wild collections have been contributed by others and these are credited to the collector where appropriate. This year quite a large number of species are listed as seed from cultivated plants derived from some of our earlier collections. Where seed has been derived from more than one grower, we have not listed all who have contributed it. In cases where we have been unable to make a fresh collection during 1988 and no cultivated seed is available but we have a sufficient supply in our seed-bank, then we are making the older seed available. Our seed-bank was instituted in 1984 as a simple storage system for seed from particularly good harvests. Storage procedure is similar to that used by commercial seed-producers and the centres involved in extensive seed-banks, such as at Kew in England and Fort Collins in Colorado. Under such conditions of low temperature and extremely low humidity, viability of many seeds can, in theory, be preserved indefinitely. In all cases, however, the precise date of collection is given for all wild-collected material.

REFERENCE NUMBERS in Section II are our permanent references for particular populations within the area of Europe, SW Asia and N Africa. If we re-collect a species from a particular locality, it is listed under the same reference number as previous collections. Seed packets carry only this reference number (or in the case of Section I, the field-number).

NOMENCLATURE, in general, follows the 'Flora Europaea' and the 'Flora of Turkey' but a certain amount of editing has been done to bring these two accounts into line, usually with a bias towards the latter account, which tends to be more in keeping with current concepts. Where the treatment of a particular genus is patently incorrect or inadequate, we try to follow a more satisfactory account but this is not always possible as no satisfactory treatment may be available. Dried material of many of our Turkish collections is sent to the Royal Botanic Garden, Edinburgh, and determinations on most of this have been checked there. Other herbarium material goes to workers specialising in particular genera. While we make considerable efforts to distribute correctly named seeds, the short time which elapses between the collection and the distribution of the seeds makes it impossible to be fully accurate in every case.

SEED-COUNTS for each packet are given for almost all species but are absent for some Compositae and others, where it is possible that seed might be damaged by further cleaning or it is time-consuming to ascertain how many viable seeds are likely to be contained in each packet. Enough material should be expected to raise a reasonable number of plants.

We have used a few abbreviations to compress more details into the available space :

* : indicates seed from cultivated plants of known wild origin. Field data applies to the original collection.

SB : (= Seed Bank) indicates seed collected prior to 1988 and stored in silica gel at about 0°C.

Da. : Dag or Daglari, Turkish for mountain or mountains, pronounced 'dah' or 'dahlari'. The 'g' is silent.

Coll. : collected/collected by/collection R.F. : Reginald Farrer, in 'The English Rock-Garden'

SECTION I : UNIDENTIFIED SEED-COLLECTIONS FROM EUROPE & TURKEY : SEED-COLLECTIONS FROM OTHER AREAS

All our own 1988 collections were made in Europe and Turkey and our increasing familiarity with the flora of the areas we visited has enabled us to list all collections under a full identity. In a very few cases, we have been forced to informed guess-work but we feel able to do this with a fair degree of confidence. It should be remembered that, although we may not have collected seed from a particular species before, we have had the opportunity to see plants in flower and to press herbarium material in previous years. A few errors are inevitable and we take the opportunity in this list to correct one or two mistakes made in previous lists ; any new mistakes will be corrected in due course!

In 1989 we plan to make further fresh collections in North America and this part of the list, where seed is listed under the field-numbers, will once again become the main feature. For the present, we shall include a short Section I Supplement at the end of this list. This offers a selection of 1987 collected American seed from our seed-bank.

SECTION II : IDENTIFIED SEED-COLLECTIONS FROM EUROPE & TURKEY

- 106.500 ACANTHUS DIOSCORIDIS var. PERRINGII Turkey, Adana, above Hasanbeyli. 1100 m. Open, stony areas among oak-scrub on W-facing slopes. 15.7.88 (A magnificent, dwarf, herbaceous perennial with dense spikes of two-toned, rose-pink flowers from clumps of spiny foliage. Will be slow-growing and need a hot site) (5 seeds) D
- 111.300 ACHILLEA OXYLOBA Italy, Veneto, Dolomiti, Tre Cime de Lavaredo. 2400 m. Part-stabilised dolomite scree. 9.9.88 (A refined little plant 9 cm. high. Brilliant green, filigree leaves. Fine white daisies.) B
- 120.502 AJUGA BOMEYCINA Turkey, Konya, NW of Bozkir. 1100 m. Fissures and ledges on limestone cliffs. 12.7.88 (A tremendously exciting saxatile species, endemic to SW Turkey. Prostrate stems and leaves are clad entirely in fleecy, white wool. Heads of lipped, brilliant-yellow flowers in spring. This has remained virtually unknown in cultivation in spite of being much praised in the 1950's by Peter Davis, who records in the 'Flora of Turkey' that it "retained its characters when cultivated in England." The Heldreich type-collection of 1845 and subsequent Davis collection were made near the coastal town of Alanya but, though it is an extremely local plant and never common, it penetrates far inland to the extreme continental climate of the N foothills of the Cilician Taurus range, where our collection was made. Doubtless a challenge.) (8 seeds) F
- 130.100 ALLIUM AKAKA Turkey, Erzurum, Palandoken Da. 2700 m. Steep igneous scree on exposed, S-facing summit ridge. 22.7.88 (Lovely, ribbed, grey foliage lies flat on the ground with round, lilac heads on short stems. Like a miniature version of the well-known *A. cristophii* (*A. albilosum*) but possibly less easy. 9 cm) (15+ seeds) D
- 131.301 ALLIUM CARINATUM subsp. PULCHELLUM Italy, Lombardia, S of Sabbio Chiese. 280 m. Stony, limestone slopes. 7.9.88 (Heads of pendant, purple-pink droplets on 30 cm. stems. A very pretty and easy plant.) (15+ seeds) A
- 134.100 ALLIUM NARCISSIFLORUM France, Hautes-Alpes, Pic de Gleize. 2000 m. Loose, unstable limestone scree along, S-facing side of summit-ridge. 11.8.88 (In spite of being a familiar name in gardening literature, this is barely known in cultivation, where the name is commonly applied to *A. insubricum*, a close, equally local, relative from N Italy. Indeed, few gardeners appear to visit its home in the great limestone massifs S of Grenoble... "high up in the most awesome shelves of the limestone Alps of Piedmont" where Farrer rates it as "the glory of its race, not only in our own European mountains but in all the ranges of all the world." Close clumps of foliage send up 15 cm. stems carrying umbels of erect (not drooping, as in *A. insubricum*) sugar-pink flowers - a very beautiful, choice and garden-worthy species by any standards.) (15+ seeds) D
- 143.200 ALYSSUM LYCAONICUM Turkey, Konya, S of Karaman. 1100 m. Open steppe. 12.7.88 (A delightful little plant with quite large, soft-yellow flowers, with distinctive inflated calyces, on greyish, Draba-like cushions. Has germinated well but, like many steppe species, is difficult in wet, dull climates.) (10+ seeds) D

PRICE CODE A : \$1.50 ; £0.80 ; DM2, - ; FF 8. - PRICE CODE D : \$4.50 ; £2.50 ; DM 8, - ; FF25. -
 B : \$2.50 ; £1.50 ; DM4, - ; FF15. - E : \$6.00 ; £3.50 ; DM10, - ; FF35. -
 C : \$3.50 ; £2.00 ; DM6, - ; FF20. - F : \$7.50 ; £4.50 ; DM13, - ; FF45. -

ASTRAGALUS. Reports on both N American and Turkish collections we have made in recent years indicate that germination is not usually a problem. In fact it can be rapid so sowing might be best delayed until spring to avoid the problem of overwintering seedlings. Traditionally, Astragalus seed should be lightly scarified before sowing. While it does not seem essential, scarification and soaking will do no harm. More problems are likely to occur with transplanting and much later with actually keeping the plants in character. This is still very much a genus for pioneers in cultivation. The genus is so enormous and of such infinite variety that it is hardly surprising that it has produced some of the most distinct and beautiful of all steppe-plants. The challenge they present to the gardener must be met one day. The challenge that the Eurasian species present to the botanist has been partially met but they still await a Rupert Barneby, who has spent most of a lifetime meticulously unravelling the American ones. Our names attempt to follow the 'Flora of Turkey', by far the best account, but material seldom matches descriptions perfectly so all must be taken with some latitude. Be suspicious of anyone who pontificates on any genus but especially this one!

- 210.660 ASTRAGALUS ANGUSTIFOLIUS Turkey, Konya, S of Beysehir. 1100 m. Crevices and ledges on limestone cliffs. 11.7.88 (A very compact, very silvery-leaved form of one of the most wide-ranging species - so it should be more adaptable. Cream-white flowers hide in the rounded silver thorn-cushions.) (10+ seeds) D
- 213.140 ASTRAGALUS DAVISII Turkey, Bitlis, W of Kuskunciran Gecidi. 2200 m. Loose, stony, igneous slope. 17.7.88 (A woody-based, herbaceous plant with tufts of erect leaves and racemes of fragrant, cream flowers, about 20 cm. high. Described as "a very distinct and beautiful species" in the 'Flora of Turkey'.) (10 seeds) E
- 213.320 ASTRAGALUS DEPRESSUS Andorra, above Port d'Envalira. 2500 m. Exposed gravelly area around outcropping limestone. 19.8.88 (Another herbaceous species with prostrate, 5 cm. stems on flat rosettes. Usually white but can be blue-purple. Ranges east from the Pyrenees all the way to the mountains of S Turkey.) (15+ seeds) B
- 215.301 ASTRAGALUS LAGOPODIODES Turkey, Van, SW of Ercek Golu. 1850 m. Open slopes among steppe vegetation. 20.7.88 (Sect. Hymenostegis. Spiny mats of downy, white leaves. Pink rabbit-tail racemes.) (8 seeds) F
- 215.340 ASTRAGALUS LAGURUS Turkey, Van, SW of Ercek Golu. 1850 m. Open slopes among steppe-vegetation. 20.7.88 (Spiny cushions of silky leaves send up dense, oblong spikes with as many as fifty, lemon-yellow flowers. Having seen this in flower in the same locality led us to describe *A. trifoliatum* as yellow in earlier lists - it is white. We did not realise until this season that there are three species of Sect. Hymenostegis growing in the same area! All distinct in habit and habitat, so seed will not be muddled!) (10 seeds) E
- 218.750 ASTRAGALUS SONAMERENSIS Turkey, Agri, between Tutak and Hamur. 1700 m. Very steep, igneous slopes with diverse steppe vegetation. 21.7.88 (A very long-shot at a name; it may be the equally obscure *A. hymenocystis* or something else entirely. All these members of Sect. Hymenostegis are extremely local and grow in isolated colonies, each one of which could constitute a 'species'. Sumptuous, long, fluffy, yellow racemes, held out from the low, spiny shrublets on 15 cm. stems. Very striking.) (10 seeds) E
- 219.570 ASTRAGALUS TRIFOLIATRUM Turkey, Van, SW of Ercek Golu. 1850 m. Open, gravelly slopes. 20.7.88 (Quite small woody tufts, rather than shrubs or cushions, send up dense white spikes - not yellow!) (10 seeds) E
- ASTRANTIA. This small genus of the Umbelliferae is becoming much-appreciated by gardeners who enjoy its elegance and long-lasting, subtle beauty. Most are plants of moist mountain meadows or openings in woodland and adapt readily to gardens where they usually prove very permanent and reliable herbaceous perennials. Unfortunately many names are misapplied in cultivation, where the majority of plants encountered are forms of *A. major*. Seed can take more than one season to germinate so do not discard it hastily.
- 220.200 ASTRANTIA CARNIOLICA Jugoslavia, Slovenija, Julijske Alpe, below Mangrt. 1500 m. Among shaded rocks and on limestone cliff ledges in mixed woodland. 16.9.88 (A very airy, ethereal little species which we have never seen in cultivation and which bears no resemblance to the form of *A. major*, cultivated as *A. "carniolica rubra"*. Among those listed here, it most resembles *A. minor* but is a little taller at about 40 cm., with shorter bracteoles and an overall pinker tinge to the flowers. Rather local in the SE Alps.) (15+ seeds) D
- 220.500 ASTRANTIA MAJOR subsp. CARINTHIACA Italy, Friuli-Venezia-Giulia, below Passo di Predil. 1100 m. Open areas and meadows in *Picea* & *Fagus* woodland. 16.9.88 (The race with the longest bracteoles, to which plants grown as "involucrata", 'Shaggy', 'Margery Fish' and so on appear to belong. This colony does not have bracteoles quite as long as some of these but our recollection is that it was pinkish flowered in 1985. 1 m.) (15+ seeds) B
- * 220.700 ASTRANTIA MAXIMA Turkey, Trabzon, Zigana Da. 1800 m. Open areas in moist *Picea* woodland. 1988 cultivated seed. (The only Turkish species and possibly the most striking in this eastern race, which extends to the Caucasus and NW Iran, with large powder-pink, green-veined bracteoles. Stems usually unbranched to about 60 cm. With its tripartite leaves and stoloniferous habit should not be confused with *A. major*!) (15+ seeds) C
- 221.002 ASTRANTIA MINOR France, Alpes-Maritimes, Vallon de la Gordolasque. 1700 m. Among grasses and *Rhododendron* scrub on open, acid slopes. (The dwarfest species, about 30 cm. or less, with deeply cut and toothed, dark-green foliage and dainty, lacy, parchment-coloured heads. Good in the peat-garden.) 30.8.88 (15+ seeds) C
- 225.150 AUBRIETA CANESCENS Turkey, Konya, NW of Bozkir. 1100 m. Fissures & ledges on limestone cliffs. 12.7.88 (This was a splendid sight when we saw it in spring, 1985, massed with violet flowers.) (30+ seeds) B
- BELLEVALIA. Botanically this is a fascinating genus with many local and little-known species, most of which are of interest only to the specialist grower. Two of the following are in this category but the other three are definitely of much wider appeal - *B. forniculata* must be destined to become very widely known and grown.
- 227.770 BELLEVALIA FORNICULATA Turkey, Agri, Sac Gecidi, W of Eleskirt. 2300 m. Hay meadow with *Gladiolus*, *Primula*, etc. 21.7.88 (A superlative bulb, about 20 cm. high, which, though restricted to the Erzurum area in its distribution, can be so locally abundant as to form wide pools of pure turquoise-blue in spring.) (20+ seeds) D
- * 227.800 BELLEVALIA GRACILIS Turkey, Sivas, Camlibel Gecidi. 1600 m. Exposed, stony areas. 1988 seed from living material coll. 1986. (Anatolian endemic closest to the more widely distributed *B. sarmatica*) (10 seeds) C
- 227.841 BELLEVALIA KURDISTANICA Turkey, Hakkari, NW of Semdinli. 1700 m. Steep, stony slopes. 19.7.88 (Tentatively identified as this species, very seldom collected in Turkey & mainly occurring in N Iraq.) (10 seeds) C
- 228.080 BELLEVALIA PYCNANTHA Turkey, Van, Ispiriz Da., NNW of Baskale. 2800 m. Short turf in alpine meadows. 20.7.88 (Close to *B. forniculata* but with deep, inky, blue-black bells - still very attractive.) (20+ seeds) C
- 228.130 BELLEVALIA RIXII Turkey, Van, above Cuh Gecidi. 2800 m. Loose, unstable scree on open slopes. 20.7.88 (Quite recently discovered by Martyn Rix and described by Per Wendelbo in 1980, this is still only known from this area. We have tried to find enough seed on many previous occasions - there is only one, if any,

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- 228.130 (*BELLEVALIA RIXII* continued) in each, inflated, papery capsule. A most fascinating and distinct, very dwarf species with falcately recurving leaves and 5 cm. stems of purple-brown flowers with violet anthers, opening from bright blue-violet buds. Best appreciated grown in an alpine-house pan.) (8 seeds) E
- 239.200 *BRASSICA REPANDA* France, Hautes-Alpes, Col d'Izoard. 2400 m. Loose, unstable, limestone scree. 31.8.88 (Possibly the only cabbage for the rock-garden. Generous golden-yellow heads on 10-15 cm. stems.) (20+ seeds) B
- 245.001 *BUPLEURUM ANGULOSUM* France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. Steep, loose, limestone scree on S-facing slope (but also grows among shady rocks). 21.8.88 (Flower-arrangers might enthuse about this gorgeous "green *Astrantia*" but it is really far too choice and slow-growing a herbaceous perennial to lend itself to repeated amputation. Tufts of narrowly lanceolate leaves send up branching stems to about 30 cm., The attraction, as with *Astrantia*, is in the petal-like bracteoles, which surround the less conspicuous flowers, but in this they are rounded, not pointed, and of a beautiful jade-green with a bluish sheen. If you like green "flowers", this is irresistible. Needs good drainage, some feeding and patience.) (15+ seeds) C
- 248.000 *CALTHA PALUSTRIS* U.K., Wales, Dyfed, below Ffostrasol. 150 m. Shaded marsh-land with *Alnus*. 21.6.88 (From our own colony of the spectacular, golden Marsh Marigold or Kingcup. For wet places only.) (20+ seeds) A
- CAMPANULA*. We left Turkey too early in 1988 to be able to make a comprehensive collection of *Campanula*. Some, such as the splendid *C. bornmuelleri*, were not even in flower when we visited their habitats. We were however, able to collect two of the finest members of the genus we have seen anywhere as well as making a fresh collection of the incredible *C. troegerae*. Our expectations of gathering such late-flowering European species as *C. zoyisii* were confounded by heavy snowfalls between 13 and 15 September. Still, there is *C. caespitosa* as compensation. Seed from previous collections has germinated profusely and it is encouraging to see that several are now becoming quite widely distributed. This also enables us to list some species as cultivated seed. Our seed-bank has been called on to fill in the blanks, where possible. *Campanula* seed keeps well, even without storage in low humidity and temperature, so we have no qualms about making this available. As we have listed several of the following before, we have in general kept descriptions short.
- 250.300 *CAMPANULA ALLIARIFOLIA* Turkey, Trabzon, above Caykara. 1500 m. Gravelly slopes & cliffs in sun and shade. SB coll. 29.8.86 (Lovely easy herbaceous perennial with 60 cm. stems of pendant, white bells.) (50+ seeds) B
- 250.500 *CAMPANULA ALPESTRIS* France, Vaucluse, Le Mont Ventoux. 1800 m. Loose, limestone scree. 12.8.88 (One of the most spectacular of the European Alpine species: "immense flowers...of the most gorgeous satiny purple" (RF) This collection from a hotter, drier isolated massif may prove easier than higher altitude ones.) (20+ seeds) C
- 250.501 *CAMPANULA ALPESTRIS* (*C. allionii*) France, Hautes-Alpes, Col d'Izoard. 2400 m. Loose, unstable scree on steep slopes. 31.8.88 (Whichever collection you choose, it will be best grown outside in summer.) (20+ seeds) C
- CAMPANULA AUCHERI* Please see our comments under *C. tridentata*.
- 251.702 *CAMPANULA BARBATA* Italy, Veneto, S of Passo di Giau. 2200 m. Peaty soil in alpine turf on open slopes. 10.9.88 (Big, soft-blue, bearded bells up 30 cm. stems - a lovely Alpine meadow-plant.) (50+ seeds) B
- 252.002 *CAMPANULA BETULIFOLIA* Turkey, Gumushane, Vauk Da. 1800 m. Shady igneous cliffs. 28.7.88 (An incomparable Turkish endemic from the Coruh River drainage and its adjacent mountains. A spray of big, white bells, often pink-flushed, from neat, dark, glossy foliage. One of the loveliest for rock-garden or in pots.) (50+ seeds) C
- 252.300 *CAMPANULA BORNMUELLERI* Turkey, Van, W of Yukari Narlica. 2200 m. N & NW-facing conglomerate cliffs. SB coll. 5.8.86 (A magnificent narrow-endemic, only known from the mountainous area S of Lake Van. Distinctive, rich-violet angular bells from rock-hugging rosettes. Possibly a challenge to grow and flower well.) (20+ seeds) E
- * 252.700 *CAMPANULA CARPATHA* Greece, Karpathos. Shady limestone rock crevices. Cultivated seed from Helen & Ivor Barton's 1983 re-introduction. (Endemic to the island of Karpathos, this was introduced by Peter Davis in 1950 but within a few years seems to have been lost to cultivation. Let us take care to see this does not occur again for it is a lovely thing, especially in the alpine-house, where its soft, lilac-blue flowers set against the downy foliage, appear over a very long period. Perennial but not very long-lived.) (50+ seeds) C
- 253.400 *CAMPANULA CAESPITOSA* Jugoslavia, Slovenija, Julijske Alpe, below Mangartski Sedlo. 1500 m. Limestone fissures in sun and part-shade. 16.9.88 (Not an uncommon plant among the mountains where the Austrian, Italian and Jugoslavian borders meet but quite extraordinarily rare in gardens. Wiry, 10-15 cm. stems with showers of "lovely hanging bells...so pulled-in at the mouth that they look like elongated globules of exquisite clear-blue water...one of the daintiest of *Campanulas*." (R.F.) Looks almost like a hybrid between *C. zoyisii* and *C. cochlearifolia*! Possibly better outside in a trough or choice rock-garden crevice.) (50+ seeds) C
- 253.600 *CAMPANULA COLLINA* Turkey, Trabzon, Soganli Da. 2300 m. Open meadows. SB coll. 29.8.86 (One of the most adaptable and worthwhile Turkish species for the rock-garden. Profuse violet bells. About 20 cm. (20+ seeds) B
- 253.800 *CAMPANULA CORIACEA* Turkey, Van, W of Yukari Narlica. 2200 m. Shady, conglomerate cliffs. SB coll. 8.9.86 (Thick, greyish leaves and wide blue-lilac bells. This has germinated well but has not yet proved its worth - possibly only suitable for the drier conditions of alpine-house culture. New & promising.) (50+ seeds) E
- 253.901 *CAMPANULA CRISPA* Turkey, Mus, E of Malazgirt. 1700 m. Crevices on igneous outcrops. SB coll. 3.9.86 (Has germinated profusely but not yet flowered from this collection. We saw this flowering well near Agri on 20.7.88, very like *C. versicolor* in habit but with pure-white flowers packing the stiff 20-30 cm. stems. Sometimes perennial but usually appears to flower itself to death. A very spectacular species.) (50+ seeds) D
- 254.300 *CAMPANULA ELATINOIDES* Italy, Lombardia, S of Sabbio Chiese. 280 m. Fissures on dry limestone cliffs. 7.9.88 (One of the most local Europeans, an ancient relic only known from a small area between Lake Como and Lake Garda. Rosettes of greyish, felted leaves. Stems packed with tiny pale-blue flowers radiate against the rock. An interesting, very late-flowering, long-lived perennial but by no means spectacular.) (50+ seeds) C
- * 254.900 *CAMPANULA FORMANEKIANA* Greece, Imathia, Oros Vermio, below Seli. 1300 m. W-facing limestone cliffs. 1988 cultivated seed from our 1984 collection. (Extremely spectacular but definitely monocarpic. A 30 cm. eruption of sumptuous bells in pale blue as well as the white familiar from Giuseppe's 1931 introduction.) (50+ seeds) B
- 256.001 *CAMPANULA HAWKINSIANA* Greece, Ioanina, Katara. 1700 m. Unstable, S-facing, serpentine scree. SB coll. 8.8.85 (Wiry, tiny leaved stems with wide bells in intense violet with electric-blue centres. Not easy.) (50+ seeds) D
- * 256.800 *CAMPANULA INCURVA* Greece, Magnisia, Oros Pilio above Portaria. 1200 m. Mica-schist cliffs. 1988 cultivated seed from our 1985 coll. (Widely radiating stems of huge, ice-blue bells. Stunning, monocarpic.) (50+ seeds) B
- 257.500 *CAMPANULA LACTIFLORA* Turkey, Trabzon, Zigana Da. 1800 m. Open slopes in *Picea* woodland. SB coll. 27.8.86 (Splendid 150 cm. tall herbaceous perennial in pale-blue, violet and lavender but no whites!) (50+ seeds) B
- 259.700 *CAMPANULA OREADUM* Greece, Pieria, Oros Olimbos. 2000 m. Vertical limestone cliffs. SB coll. 10.8.85 (The incomparable and intractable endemic of Mt. Olympus. Aristocratic, long violet bells.) (20+ seeds) F

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- * 259.800 CAMPANULA ORPHANIDEA Greece, Drama, Falakro. 2000 m. Exposed limestone areas on summit ridge. 1988 garden-seed. (Superb violet-purple species, Colorado-grown from our 1986 coll. Best in alpine-house.) (20+ seeds) D
- * 261.600 CAMPANULA PYRAMIDALIS Jugoslavia, Hrvatska, S of Senj. 100 m. Fissures on bare slabs of sloping limestone. (Cultivated seed from our 1983 collection, foolishly listed as 265.800, *C. versicolor*. Spires of pale-blue flowers tower to 1 m. or more. Perennial but more spectacular as a young plant from seed.) (50+ seeds) B
- 262.250 CAMPANULA RHOMBOIDALIS France, Savoie, below Col du Galibier. 2500 m. Coarse, stabilised scree. 1.9.88 (Giant, 20 cm. high, bright-purple Harebell. Should be a trouble-free rock-garden plant.) (50+ seeds) B
- * 262.300 CAMPANULA RUPESTRIS Greece, Viotia, Oros Parnassos, above Arahova. 1100 m. Fissures on S-facing limestone cliffs. (Cultivated seed from our 1985 coll. Magnificent, prostrate, lavender-blue monocarpic sp.) (50+ seeds) B
- 262.400 CAMPANULA RUPICOLA Greece, Viotia, Oros Parnassos. 1500 m. & above. N & NW-facing limestone cliff fissures. SB coll. 2.8.85 (Peter Davis considered that it "cannot have many peers among the alpine species" with "incredibly lovely flowers ... of a glorious richness" and Farrer described it accurately but it has remained like its close ally *C. oreadam*, a great challenge and virtually unknown in cultivation.) (20+ seeds) E
- CAMPANULA TRIDENTATA group : Sect. Scapiflorae. This is an extremely difficult group of Campanulas as far as names are concerned. They extend from NE Turkey through the Caucasus to N Iran. To paraphrase Damboldt's comments in the 'Flora of Turkey' : "a taxonomically difficult group of closely allied, usually very variable species....completely linked by transitional forms....extensive hybridization seems to occur....the whole group is in need of revision..." As Damboldt is only concerned with the Turkish species, he, of course, does not attempt a revision and his solution is to divide the Turkish plants into two species : *C. tridentata*, in which the corolla is glabrous ; *C. aucheri*, which has the corolla pubescent outside. In our experience, this brings together very different plants and separates very similar plants - hardly a satisfactory solution. For the present, we shall include everything under *C. tridentata* - an action which Farrer with a naive, 'cut and dried' concept of each 'species' called "a despairing movement...a confession of weakness in no way justified."
- 265.400 CAMPANULA TRIDENTATA Turkey, Rize, Ovit Dag. 3000 m. Dryish, stony turf. SB coll. 30.8.86 (We re-run this as a fairly typical representative of the populations from the high, alpine meadows.) (20+ seeds) C
- 265.401 CAMPANULA aff. TRIDENTATA Turkey, Rize, above Ikizdere to Ovit Dag. 2700 m. Fissures & ledges on vertical cliffs by stream. 26.7.88 (From the same area as the above but very different, in size, habit and habitat. We saw this in flower and had to return for seed a month later - one of the most spectacular Campanulas we have seen with enormous violet bells, 40 mm. across and as much in length (almost twice the normal size for this group), elegantly hung-out on stems 10 cm. or more long. A truly sumptuous affair.) (20+ seeds) F
- 265.402 CAMPANULA aff. TRIDENTATA (or, more possibly, *aff. pulvinaris*) Turkey, Gumushane, Kop Da. 2600 m. 28.7.88 (Another stunning plant : small rosettes of narrow, densely hairy leaves packed into firm, grey cushions with upward-facing violet-blue flowers on 1-3 cm. stems. In its hairy foliage and pulvinate habit, this seems close to *C. pulvinaris*, a species which no-one appears to have seen since the Bornmueller coll. of 1889, made quite a long way distant, in Sivas. The flowers here, however, are about twice the size of the Sivas plants and a few other features do not match the description perfectly. There should be Bornmueller isotype herbarium sheets in the U.K. and we hope to be able to have this checked. Very limited in its habitat to an exposed area of limestone gravel - possibly only for the skilled alpine-house grower.) (15+) F
- 265.500 CAMPANULA TROEGERAE Turkey, Artvin, Barhal Valley, NW of Yusufeli to Sarigol. 600-700 m. Crevices in shady, igneous cliffs. 22.7.88 (A fresh collection of this magnificent species, which we first listed two years ago. Described in 1976, we doubt if it really merits more than subspecific status under *Campanula betulifolia* - intergrades can be found in the adjacent Coruh Valley. Horticulturally, however, it is of great importance as the great white bells of *C. betulifolia* are, in this, split down and opened out almost flat to form a breathtaking flower. The thick, greyish, densely pubescent leaves are also very different to the almost hairless leaves of *C. betulifolia*. Has germinated well but not yet flowered.) (50+ seeds) F
- * 265.801 CAMPANULA VERSICOLOR Greece, Lakonia, Oros Taigetos, W of Sparti. 500 m. N-facing limestone cliffs. Cultivated seed from our 1983 coll. (An excellent, late-flowering, soundly perennial species, far too seldom seen. Stiff, upright stems packed with lilac-blue cups with purple centres. Lovely. 30 cm.) (50+ seeds) B
- 266.000 CAMPANULA WALDSTEINIANA Jugoslavia, Hrvatska, Velebit Planina, Mali Halan. 1100 m. Vertical limestone fissures. SB coll. 18.8.85 (Rich-blue stars on wiry, erect, 10 cm. tufts. Exquisite in trough or pan.) (50+) C
- 283.000 CENTAUREA HYPOLEUCA Turkey, Gumushane, Bayburt to Kop Da. 2100 m. Ledges on E-facing, limestone cliffs. 28.7.88 (Arresting, lilac-pink heads on 20-30 cm. stems above segmented, greyish leaves. Generally similar to the cv. grown in British gardens as 'John Coutts' (apparently derived from material introduced by Nancy Lindsay from NW Iran) but differing markedly both from this and the description of *C. hypoleuca* in the appendages on the phyllaries. As these are the most important diagnostic character in *Centaurea*, we guess it may end up as *aff. dealbata*, a Caucasian aggregate recorded as just crossing the border into Turkey. Like the others mentioned, we hope this will prove in time a very worthwhile herbaceous perennial.) (8 seeds) C
- 287.000 CENTAUREA UNIFLORA subsp. NERVOSA Italy, Veneto, Dolomiti, above Passo di Fedai. 2000 m. Open stony slopes among grasses. 10.9.88 (Another splendid herbaceous perennial with stiff, erect stems, about 30 cm. high, carrying single, widely radiate heads of bright violet-pink with black-fringed bracts. Neat, dark basal foliage, toothed but undivided. One of many fine plants which gardeners have not 'discovered'.) (15+ seeds) B
- 293.150 CERINTHE MINOR subsp. AURICULATA Turkey, Konya, NE of Beysehir. 1200 m. In steppe vegetation on open slopes. 11.7.88 (Not so spectacular as some of the annual members of this boraginaceous genus but an intriguing perennial with smooth, glaucous foliage and nodding, pale-yellow, tubular flowers. About 30 cm.) (5 seeds) B
- 306.202 CISTUS INCANUS subsp. CRETICUS Turkey, Mersin, N of Mut. 1000 m. Exposed gravelly ridges. 12.7.88 (Neat, downy-leaved, pink-flowered, 60 cm. shrub - a genus easily and quickly raised from seed.) (50+ seeds) B
- 306.603 CISTUS LAURIFOLIUS Turkey, Afyon, Koroglu Beli, NE of Afyon. 1400 m. Steep slopes in granite grit, with sparse *Pinus*. 7.7.88 (Large white flowers. Dark leathery leaves. The most cold-resistant species.) (50+ seeds) B
- 309.001 CLEMATIS ALPINA Italy, Veneto, Dolomiti, S of Passo di Giau. 2200 m. Steep, stony slopes at base of limestone cliffs. 10.9.88 (Lovely small-growing climber or scrambler with elegant, wide violet-blue flowers.) B
- COLCHICUM. We have been able to make a good number of fresh collections during 1988. Reports on germination from previous years have generally been encouraging and we commend the genus to 'bulb' enthusiasts sated with *Crocus* and *Fritillaria*! There is a considerable amount of variation in many species and they will repay

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(COLCHICUM continued) repay raising from wild seed from different localities. Most of the following names follow Chris Brickell's accounts in the 'Flora Europaea' and 'Flora of Turkey' but we are following another current worker on the genus, Karin Persson, and the earlier monographer, Stefanov, in including Merendera. This is really a matter of choice and, as people normally concerned with material in fruit in the field, we cannot always say with certainty whether or not any remnants of the perianth-segments have been free to the bases - the only characteristic separating the two. This, of course, applies to colonies we have not seen in flower. Most of the following have been seen flowering and some have been determined by either or both Persson and Brickell. The identification, however, is totally our responsibility as not infrequently two species grow in the same area and this is an easy genus with which to make mistakes!

- * 311.401 COLCHICUM AUTUMNALE Yugoslavia, Hrvatska, Istria. 1988 cultivated seed ex D. Hoskins. (The most wide-spread European. Pink. 1987 SB material ex a wild colony in Dorset, England, also available.) (15+ seeds) B
- 312.800 COLCHICUM CILICICUM Turkey, Adana, Nur Da. above Hasanbeyli. 1100 m. Open, stony areas among deciduous *Quercus* scrub on W-facing slopes. 15.7.88 (A large, robust species with many showy lilac to purple flowers in autumn. Not seen in flower here by us and C. kotschyi has been recorded for this area also.) (15+ seeds) B
- * 314.350 COLCHICUM GRAECUM Greece, Ahaia, Ori Aroania, Helmos above Zarouhla. 1200 m. Among Pteridium in clearings in Abies woods. (This was listed in our 1986-87 list under 316.401 *C. parnassicum*. This taxon has been described during 1988 by Dr. K. Persson of the University of Goteborg, Sweden, as a new species, *C. graecum*, differing from the allied *C. parnassicum* (endemic to Parnassos and Elikon) in its chromosome number, also in being a more robust plant with more, larger, duller green leaves and perianth segments which are not distinctly tessellated. Pale to deep pink-purple in early autumn. A few seeds from cultivated stock.) (15+) D
- 314.751 COLCHICUM KOTSCHYI Turkey, Van, Kavussahap Da. 2300 m. Open stony slopes in steppe vegetation. 17.7.88 (A dwarf, early autumn flowering species seldom seen in gardens. Always white-flowered in this area.) (15+) D
- 314.780 COLCHICUM KURDICUM (Merendera) Turkey, Van, Kavussahap Da., below Karabel Gecidi. 2900 m. Open slopes in stony clay, around snow-patch hollows. 17.7.88 (A superlative species, occurring on the higher mountains of Van, Hakkari and N Iraq, where it grows around the latest snow-patches. In July, 1988, it was still in full flower in snow-melt, while we could collect seed from the earlier plants! Possibly the most spectacular snow-melt 'bulb' with pale to deep purple-pink flowers, around 7 cm. across, opening wide and beautifully set against the glossy bronze of the new leaves. Extremely desirable but unlikely to be easy to grow.) (15+) F
- * 317.500 COLCHICUM PYRENAICUM (Merendera) Spain, Rio Aragon valley, N of Canfranc-Estacion. 1300 m. Open stony areas. (Cultivated seed from living material coll. 1984. Accommodating with bright rose flowers in autumn.) (15+) C
- 317.800 COLCHICUM SPECIOSUM Turkey, Gumushane, Zigana Da. 1900 m. Margins of Picea woods. 27.7.88 (One of the showiest species and an excellent garden-plant. Huge goblets in pale to deep pink or purple. Autumn.) (15+) B
- 318.001 COLCHICUM SZOVITSI Turkey, Trabzon, Zigana Da. 2100 m. Alpine turf on grazed slopes with *Vaccinium*, *Daphne*, etc. 27.7.88 (A widespread species in Turkey, often occurring as a snow-melt plant with *Scilla*, *Crocus*, etc. and consequently, very variable. This is an extremely fine form, which we find very growable in Britain, if kept moist and cool when dormant. Pale to deep pink flowers in early spring. Dwarf, narrow-leaved) (15+ seeds) F
- 318.100 COLCHICUM TRICYNUM (Merendera) Turkey, Van, Ispiriz Da. 2800 m. Open, stony slopes in steppe vegetation. 20.7.88 (Small white to pale-pink, spring-flowering species - not so easy to find in fruit - few.) (15+ seeds) C
- 318.600 COLCHICUM UMBROSUM Turkey, Artvin, Genya Da. 1700 m. Open meadow in Picea woods. 23.7.88 (White to purple-pink, starry flowers in autumn. Restricted to the N in Turkey so should be easy in wet climates.) (15+ seeds) C
- 320.030 COLUTEA CILICICA Turkey, Bitlis, E of Tatvan. Open slopes with some *Quercus* scrub. 17.7.88 (Leguminous shrub up to 5 m. high with showy racemes of yellow flowers followed by inflated, papery pods.) (10 seeds) B
- 321.001 COLUTEOCARPUS VESICARIA Turkey, Gumushane, Kop Da. 2500 m. Steep, open slopes in sparse steppe-vegetation. 28.7.88 (Altogether an extraordinary crucifer: cushions of Androsace-like rosettes; white or lilac-tinged *Thlaspi*-like flowers; inflated fruits, most resembling the N. American *Physarias* - pale-green papery balloons shaded white or lilac. Has germinated and grown well from our 1986 coll. but has not yet provided its main performance by covering itself with its show-stopping fruits.) (20+ seeds) E
- 324.302 CONVOLVULUS BOISSIERI subsp. COMPACTUS Turkey, Malatya, WNW of Darende. 1500 m. Shale slopes and ridges. 30.7.88 (An extremely desirable but difficult cushion-plant. Pure silver rosettes with large, stemless, flat white flowers from pink buds. In our experience, very difficult to collect in any quantity - a few.) (5 seeds) F
- CORYDALIS. We have now quite a good number of reports regarding germination of the seed we distributed in 1986. This is very encouraging and we are most grateful to all who have let us know about this. By far the most reports have been of the germination of *C. parnassica* and we offer this again from SB material. We doubt if it might ever be possible to repeat the range of tuberous-rooted species we listed in 1986 but a few should be possible from time to time. They are, however, very difficult plants to collect seed from in the wild. We had hoped to attempt the collection of the blue *C. alpestris*, which we have seen previously on Ovit Da., and arranged a visit there at what would normally have been a suitable time. There had been so much snow during the 1987-88 winter and it had lain so late that the season was not a good one and, moreover, resulted in little upland pasture being available so that grazing was even more intensive than usual. It was quite hopeless! The two we have are available only in small quantities. At best germination should not be expected before spring 1990, if sown winter 1988-89. We have not had any further update on the experiments by Norman Deno, of State College, Pennsylvania, to shorten the period under controlled conditions, so cannot, as yet, offer any short-cut to a combination of conventional sowing and patience as far as collected seed goes.
- 331.600 CORYDALIS CONORHIZA Turkey, Trabzon, Soganli Da. 2300 m. Wet, alpine turf below snow-patches. 28.7.88 (Tiny red-purple or blue-purple snow-melt species, unlikely to be easily grown.) (15+ seeds) F
- 332.070 CORYDALIS PARNASSICA Greece, Ahaia, Ori Aroania, Helmos above Kalavryta. 2000 m. & above. Alpine steppe, often in limestone detritus. SB coll. 15.6.86 (Distinct & handsome Greek endemic. Pale lilac to white.) (15+) E
- 332.300 CORYDALIS RUTIFOLIA subsp. ERDELI Turkey, Van, Kavussahap Da. 2900 m. Stony slopes below snow-patches. 17.7.88 (Red-purple and white flowers. This approaches subsp. *kurdica* in its foliage. According to M. Liden and H. Zetterlund (Bull. Alp. Gard. Soc. Vol. 56, p. 162 (June 1988)), *C. erdelii*, which they restore to specific status, is endemic to S central Turkey and Lebanon and the E Turkish plants should be placed under *C. oppositifolia* subsp. *oppositifolia* or *C. o.* subsp. *kurdica*. As we have not yet had the opportunity to see a full taxonomic treatment of the Turkish species by Liden, we retain the names used in the 'Flora of Turkey' by Davis & Cullen. Dried material from this area, coll. 2.7.86, under our field no. 7635 is at E (15+) F
- CROCUS. We did not leave Britain until late in June in 1988, so the opportunity to make many fresh *Crocus* seed-collections in the field had gone. So, only one wild collection this year. A few others available in small quantities from cultivated material with field data. Cultivated corms, which we were planning to build up with a view to seed-production were badly damaged in pots during the severe winters of 1985 and 1986-87.

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 C : \$3.50 ; £2.00 ; DM6, - ; FF20. - F : \$7.50 ; £4.50 ; DM13, - ; FF45. -

- * 345.200 CROCUS GOULIMYI Greece, Messinia, SSE of Agios Nikonas. 300 m. Humus-filled crevices among stones. (Very fine, long-tubed, lilac-blue in autumn; local in the wild but easy to grow in gardens.) (15+ seeds) B
- 347.101 CROCUS KOTSCHYANUS subsp. SUWOROWIANUS Turkey, Rize, Ovit Da. 3000 m. Dryish, stony ridges. 26.7.88 (A fresh wild collection of this beautiful, white autumn-flowering plant, very little known in cultivation but we see no reason why it should not prove a good garden-plant. In the high mountains of NE Turkey, this prefers the drier slopes with *C. vallicola* in moister sites and *C. scharojanii* near streams.) (15+ seeds) D
- * 348.800 CROCUS NIVEUS Greece, Messinia, S of Stavropigio. 200 m. Limestone crevices in old olive-groves. (10 seeds) C
- * 352.552 CROCUS SIEBERI subsp. SUBLIMIS Greece, Viotia, Oros Parnassos. 1500 m. Slope below *Abies* woods. (15+ seeds) B
- * 353.800 CROCUS VALLICOLA Turkey, Trabzon, Zigana Da. 2100 m. Alpine turf with *Vaccinium*, *Daphne*, etc. (10 seeds) E
- * 354.002 CROCUS VELUCHENSIS Jugoslavia, Srbija-Kosovo, S of Urosevac. 800 m. Humus in *Fagus* woodland. (15+ seeds) D
- CYCLAMEN. We have some interesting seed this year, especially of *C. repandum* forms. Almost all is from cultivated material. We have reasonably full field data for those listed here; seed from plants for which such information is not available to us, though we know several are of wild origin, is included in Section III. All *Cyclamen* seed is from plants cultivated by D. Hoskins (Hants., England) and D. Batterham (Dorset, England), to both of whom we are most grateful for enabling us to list this range of material. We feel that *Cyclamen* is a genus, together with a few others, such as *Lilium*, best distributed from cultivation, where it often sets seed much more freely, especially with hand-pollination, than in nature. Sowing the seed in summer straight from the capsules may be the ideal but it is a counsel of perfection and, in our experience, drier seed sown later germinates well in due course. We have seen some fine germinations from our *Cyclamen* seed. Soaking the seed for about 24 hours in warm water immediately before sowing definitely seems to help.
- * 358.500 CYCLAMEN BALEARICUM Spain, Islas Baleares, Mallorca, N of Andratx. 350 m. In humus among *Quercus*. (Coll. & ex hort. D. & P. Hoskins) (Like most of the lower altitude Mediterranean species, best kept almost frost-free under glass, where it enjoys considerable shade. Elegant, little, delicately pencilled, white flowers in spring with distinctive, lead-green foliage variably marked with white.) (20+ seeds) C
- * 359.000 CYCLAMEN CILICIMUM Turkey, Antalya, N of Akseki, Irmasan Gecidi. 1500 m. Stony humus under *Abies* on limestone (An exceptionally hardy, pink, autumn-flowering species with well-marked, rounded foliage, from cold, inland areas in SW Turkey. Completely hardy in Britain if given a rather dry, well-drained, sunny site.) (15+ seeds) B
- * 363.003 CYCLAMEN GRAECUM Greece, Lakonia, Agios Nikolaos, NW of Githio. 500 m. Steep slopes under olives and among grass. (From plants selected by us in 1983 as having particularly beautifully marked foliage. This pink, autumn-flowering species, is particularly fine and variable in this part of the S Taigetos foothills, the area where the white form in cultivation was originally found. Best under glass kept dry in summer.) (15+ seeds) D
- 363.005 CYCLAMEN GRAECUM Greece, Argolida, near Galatas. Sea-level. Open stony areas. (The only wild coll., fresh 1988 seed from Melvyn Jope, which should produce a good range of leaf forms.) (15+ seeds) C
- * 364.003 CYCLAMEN HEDERIFOLIUM Greece, Evia, above Metohi, W of Karistos. 200 m. N & W-facing sides of gulleys. (An interesting form coll. & ex hort. D. Hoskins, with large flowers and foliage - very like *C. africanum*. We know the spot it grows with *Fritillaria ehrhartii* among oak and *Erica* scrub. Maybe best under glass.) (15+) B
- * 368.003 CYCLAMEN REPANDUM Greece, Lakonia, Oros Taigetos above Paleopanagia. 1400 m. In humus under *Platanus*, *Abies* and *Pinus*. (Although Martyn Rix states that *C. repandum* grows "at altitudes up to 500 m.", in the Peloponnese it can climb to very much higher elevations. We were anxious to introduce forms of this lovely, pale-pink Greek race, with its exceptionally variable and beautiful leaves, which might prove much harder than the earlier, low-altitude introductions, and selected this in 1984 at what seemed the highest site.) (15+ seeds) E
- * 368.004 CYCLAMEN REPANDUM Greece, Ahaia, Ori Aroania, Helmos, E face above Zarouhla. 1500 m. Among *Abies* & *Pinus* scrub in NE-facing gully. (In 1986, we found this still in full flower in mid-June at what has to be the altitudinal limit, up with the high *Aquilegias*, *Saxifragas* and *Violas*, producing the same lovely pale to deep pink, crimson-nosed flowers among the highest, gnarled, dwarfed conifers on the tree-line.) (10 seeds) F
- * 368.005 CYCLAMEN REPANDUM Greece, Lakonia/Arkadia, Oros Parnonas, E of Sparti. c.500 m. (An extraordinary race centred on the hills around Parnon with dull crimson flowers with extremely long, twisted petals and dark-green foliage, frequently with no markings at all. This is from material coll. & given to us almost twenty years ago by Eliot Hodgkin and now maintained by D. Hoskins. Altogether a most distinct plant.) (10 seeds) E
- 382.400 DAPHNE GNIDIODES Turkey, Antalya, Irmasan Gecidi, N of Akseki. 1500 m. Exposed limestone slopes. 11.7.88 (A comparatively high altitude locality - compact shrubs less than 50 cm. Cream flowers. Orange fruits.) (15+) D
- 383.701 DAPHNE LAUREOLA subsp. PHILIPPI France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. Open, stony, limestone slopes. 21.8.88 (Low-growing race endemic to the Pyrenees. Glossy, evergreen leaves.) (8 seeds) C
- 384.002 DAPHNE MEZEREUM France, Alpes-Maritimes, Vallon de la Gordolasque, 1700 m. Among grass on open slopes. 30.8.88 (From low-growing plants, less than 50 cm. high - R. Ruffier-Lanche of Grenoble used to distribute such plants as "var. alpina" and they tend to remain dwarf in cultivation. Purple-pink in spring.) (15+ seeds) B
- 384.004 DAPHNE MEZEREUM Italy, Piemonte, Val di Gressoney. c. 1700 m. (1988 coll. by Will McLewin) (15+ seeds) B
- 384.200 DAPHNE MUCRONATA Turkey, Hakkari, Zap Gorge, below Hakkari. 1300 m. E-facing limestone slope. 18.7.88 (15+) D
- 388.500 DELPHINIUM CARDUOCHORUM Turkey, Van, Ispiriz Da., 2800 m. Among stones by stream. 20.7.88 (A very pretty, 30 cm. high, azure-blue, tuberous-rooted perennial, dormant later in summer.) (20+ seeds) D
- 398.100 DIANTHUS HAEMATOCALYX subsp. PINDICOLA Greece, Ioanina, Katara. 1700 m. SE facing serpentine scree. SB coll. 7.8.85 (The dwarfest race with tight, hard cushions covered with pink flowers - a delight.) (20+ seeds) C
- 401.502 DIANTHUS PAVONIUS (D. neglectus) France, Alpes-Maritimes, Vallon de la Gordolasque. 1700 m. Among grasses on open, acid slopes. 28.8.88 (A lovely species with rose-pink, blue-eyed flowers. We have seen a great range of delightful variations raised from previous collections. Grow them on & make your choice!) (20+ seeds) B
- 405.000 DICTAMNUS ALBUS Germany, Unter-Franken. S-facing, very steep limestone slopes, among grasses. 5.8.88 (A beautiful, slow-growing but very long-lived herbaceous perennial. Deeply cut aromatic leaves and spikes of pale purple, veined flowers in early summer. Up to 1 m. high. Needs good drainage in sun.) (10 seeds) B
- * 407.402 DIGITALIS FERRUGINEA Turkey, Bolu, near Abant Golu. 1000 m. Dryish slopes at margins of woodland. (Perennial with narrow spires densely packed with buff flowers, netted with orange veins. To 1.5 m. high) (100+ seeds) B

- * 408.300 DIGITALIS LAMARCKII Turkey, Gumushane, Vauk Da. 1800 m. Open, stony slopes. (1988 cultivated seed from M. Tucker (Somerset, U.K.). A splendid perennial with soft-brown, baggy flowers, purple-veined within, each with a huge white lip. In the wild, stems rise to about 50 cm. from narrow-leaved clumps and it has remained a dwarf and rather elegant plant in cultivation, though it is still early to judge it.) (100+ seeds) C
- * 408.500 DIGITALIS LANATA Greece, Kavala, Pangeo. 1000 m. Open areas and banks in deciduous woodland. (Another handsome perennial with 1 m. spires of whitish, brown-veined, bells with large white lips.) (100+ seeds) B
- 409.002 DIGITALIS LUTEA France, Alpes-Maritimes, Col de la Couillole. 1600 m. Open limestone slopes. 29.8.88 (Many small, pale-yellow tubular flowers packed into stiff spikes. A pleasant, easy herbaceous plant.) (100+ seeds) A
- * 409.402 DIGITALIS OBSCURA Spain, Soria, Puerto del Pinar. 1100 m. Open, limestone slopes in rock debris. (1988 cultivated seed from D. Hoskins, from our 1984 coll. An utterly distinct, shrubby-based Spanish endemic with dark, narrow foliage and amber-orange foxgloves, yellow marked rust-red within. Reports indicate that the colour can be very variable in cultivation, its native richness coming out in sunnier places, like SE Australia. It can be orange in W Europe but seems to vary more from clone to clone. 60 cm.) (50+ seeds) C
- 415.150 DORONICUM GLACIALE Austria, Salzburg, Hohe Tauern, Hochtor. 2600 m. Stable areas of mica-schist detritus open, N-facing slopes. 12.9.88 (Distinct, dwarf high-alpine. Thick, toothed leaves. Yellow heads. 10 cm.) D
- DRABA. This genus includes some of the most beautiful of alpine, saxatile, cushion-plants, a group especially well-developed in Turkey. While these need some skill to grow to perfection, they are far from being 'impossible' and the choicer members of the genus offer an excellent introduction to the cultivation of cushion-plants in the alpine-house. Keeping the plants 'in character' is the real challenge. In nature these are so much more compact and tighter in habit than one ever sees them in cultivation, where they are so often given too rich and too shaded conditions. A very gritty mixture, low in nutrients, with full light and careful watering all help. Seed retains its viability for a long period and germinates rapidly, usually in 14 days, so delaying sowing until spring avoids the problem of overwintering small, delicate seedlings.
- 418.500 DRABA ACAULIS Turkey, Nigde/Adana, Ala Da. 3500-3700 m. Dolomitic limestone crevices. SB coll. 19.9.86 by Z. Zvolanek and J. Jurasek (The last time we shall be able to make this outstanding re-introduction by our Czech friends available from wild seed - the ultimate development in the tightest of cushions of silver-grey velvet covered with almost stemless yellow flowers. Seedlings we have seen have varied surprisingly in foliage and will be worth growing-on to select the most compact and floriferous forms.) (20+ seeds) F
- 419.250 DRABA BRUNIFOLIA Turkey, Gumushane, Kop Da. 2500 m. Alpine steppe on open slopes. 28.7.88 (Here this is closest to subsp. armeniaca. Cushions covered with yellow flowers in spring. Dormant in summer.) (30+ seeds) B
- * 419.500 DRABA CAPPADOCICA Turkey, Kayseri, Erciyas Da. 1500 m. Fissures in NW facing igneous cliffs. (Cultivated seed from P. Kelaidis (Colorado, USA) from our 1984 introduction, proving, like the others, an excellent yellow-flowered alpine-house plant with rounded, softly hairy, greyish cushions.) (20+ seeds) C
- 421.501 DRABA POLYTRICHA Turkey, Trabzon, Soganli Da. 2300 m. Crevices on outcropping rocks. 28.7.88 (A rare opportunity to raise this fine species from a fresh wild coll. Well-proven as an outstanding alpine-house plant with profuse, short-stemmed yellow flowers on cushions of woolly, grey rosettes.) (20+ seeds) C
- 422.000 DRABA ROSULARIS Turkey, Van, Ispiriz Da., NNW of Baskale. 2700 m. Crevices on gneiss outcrops. 20.7.88 (Another fresh, 1988 coll. of this pale-yellow species with grey, downy cushions. Excellent.) (20+ seeds) C
- 426.002 DRYAS OCTOPETALA Andorra, above Port d'Envalira. 2500 m. Stony areas around limestone outcrops. 19.8.88 (Delightful and easily grown arctic-alpine with white flowers dancing over evergreen mats.) (20+ seeds) A
- EBENUS. This is a small but exciting genus, almost unknown in gardens, which has the steppes of S central Turkey as its centre. There 13 (out of the 19 known species) are narrow-endemics, extremely limited in their distribution, though they can be locally quite abundant. The genus is a member of the Leguminosae, placed along with Hedysarum and Onobrychis in the Hedysareae, - woody-based perennials, varying from prostrate mats to erect, 60 cm. high plants, with dense spherical to ovoid heads of pink or yellow flowers, brilliant and eye-catching in the wild. The tiny fruits, which remain enclosed in the calyx, are indehiscent and single-seeded, making it an extremely difficult genus to collect. This coupled with the extremely local nature of most species has to be the main reason it has escaped the attention of gardeners. The only species we have grown is the Cretan endemic *E. cretica*, a handsome, taller, shrubby rose-pink-flowered plant, which, like many relics has taken to growing on limestone cliffs (all listed here are from open steppe). We grew this for many years in an unheated greenhouse and our friend, Joy Hulme, has also grown this successfully on a sunny rock-garden in Surrey, UK. The Turkish species can be expected to be very much more temperature-hardy than this. During 1988 we have tried to bring together a representative range of these. We are still uncertain as to just how much good seed we have, as not all is cleaned and packeted - we have already dropped one collection, *E. bourgaei*, as being insufficient. It is all a very time-consuming business. Cherish the seedlings!
- 428.200 EBENUS CAPPADOCICA Konya, S of Karaman. 1100 m. Open steppe. 12.7.88 (Close mats of silky, grey, trifoliate leaves. Oblong heads of bright purple-pink flowers on very short stems. Altogether 5-10 cm.) (5 seeds) F
- 428.300 EBENUS DEPRESSA Malatya, WNW of Darende. 1500 m. With steppe vegetation on exposed shale slopes and ridges. 30.7.88 (Extremely compact with densely woolly leaves and rounded, purple-red heads. 5-10 cm.) (5 seeds) F
- 428.400 EBENUS HIRSUTA Konya, S of Karaman. 1100 m. Open steppe. 12.7.88 (A somewhat larger plant with a decumbent habit and spherical, sulphur-yellow heads on 10 cm. stems. Hairy leaves with 3-5 leaflets. 10-20 cm.) (5 seeds) E
- 428.450 EBENUS LAGUROIDES Sivas, W of Gurun. 1700 m. Open, gravelly, limestone slopes. 30.7.88 (Round heads of brilliant carmine-purple. A stunning plant we have tried to collect several times before. 15 cm.) (5 seeds) F
- 428.660 EBENUS PLUMOSA var. SPECIOSA Konya, ESE of Ermenek. 1200 m. Steep clay slope (over limestone). 13.7.88 (A taller species, about 50 cm. high, with 10 cm. oblong heads of pale-yellow and sugar-pink flowers. Leaves with up to 7 leaflets. While most Ebenus were described last century from type-collections by the pioneers of botanical collection in Turkey - Aucher, Balansa, Boissier, Heldreich, etc. - this taxon was only described in 1965. An extraordinary plant, only known from around Ermenek, which must be tried in a hot, dry border. We have already packeted seed of this as uncleaned capsules in their calyces, hence...about 10 seeds) E
- 437.100 EPHEDRA MAJOR Turkey, Erzurum, N of Tortum. 1600 m. Igneous rock-crevices. 22.7.88 (Strange, 60 cm. shrub, a gymnosperm like the conifers, spectacular when laden with crimson fruits. Whippy green stems.) (15+ seeds) B
- EREMOSTACHYS. A comparatively small genus of Labiatae, at its extremity in Turkey and more developed further E in Central Asia. Although botanically closest to *Phlomis*, these are utterly distinct plants, quite unlike anything in cultivation (or indeed each other!). Both are tuberous-rooted, herbaceous perennials, dormant in summer in Turkey, likely to be slow-growing but very permanent where suited. Both are unusual and striking.
- 443.100 EREMOSTACHYS LACINIATA Turkey, Hakkari, Zap Gorge at Bagisli. 1500 m. Among rocks and in loose, igneous scree on steep slopes. 19.7.88 (Clumps of dark-green, deeply cut basal leaves and stiff, erect stems to 1 m.

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- 443.100 (*EREMOSTACHYS LACINIATA* continued) The stems are clothed in dense white wool from which the verticillasters of hooded flowers peep out. We have never seen the plant in cultivation but Graham Thomas states that the "creamy brown sage-like flowers are a disappointment"; Thomas Hay, however, in 'Plants for the Connoisseur', one of our favourite books, rich in personal experience and impressively researched, acknowledges it as a "fine border plant" but describes the flowers as "pale primrose yellow." Where we have seen it in flower in Van vilayet, it was pure white; AGS members whom we met there in 1985 had seen it in a different place and were full of enthusiasm for the "huge white *Salvia*." We have not seen this Hakkari colony in flower but feel reasonably sure it also will be white. The species has a very wide range and the flower colour has been recorded as white, cream and pinkish, with variably marked lips in orange and red. As we know it in Turkey, this is unquestionably one of the most impressive and striking herbaceous perennials.) (10 seeds) D
- 443.200 *EREMOSTACHYS MOLUCCELLOIDES* Turkey, Gumushane, N of Bayburt. 1500 m. Clayey loam in fallow field. 28.7.88 (Large, rounded, downy basal leaves and candelabra-like stems to 50 cm. The lemon-yellow, orange-lipped flowers are surrounded by huge, campanulate calyces, up to 4 cm. across, which are the most arresting feature and stay on the stems for a very long period. They are indehiscent and are eventually wind-dispersed. Both this and *E. laciniata* are very local species and we are delighted to offer both, as we feel sure they are of great appeal to the discriminating plantsman.) (5+ calyces - there should be several seeds in each.) D
- * 460.800 *ERYNGIUM GIGANTEUM* Turkey, Gumushane, Vauk Da. 1800 m. Open, stony slopes. (Magnificent monocarpic plant with large heads and bracts of bluish white drying to parchment shades. Easy in cultivation.) (30+ seeds) A
- 462.201 *ERYNGIUM SPINALBA* France, Hautes-Alpes, below Col de Gleize. 1600 m. Exposed, stony, limestone slopes. 11.8.88 (A superlative plant rather local in the SW Alps. Our 1984 coll. from Mt. Ventoux, where it was still in full flower in August, 1988, germinated well and has now flowered and set seed. Mike Tucker (Somerset, UK) reports that it has proved a neat "low-growing plant, silvery all over, like a dwarf, silver *E. alpinum*." Flowers are an unusual, pale blue-green and the whole plant seldom more than 30 cm.) (20+ seeds) C
- 473.600 *EUPHORBIA ANACAMPSEROS* var. *TMOLEA* Turkey, Izmir, Boz Da. above Odemis. 1800 m. Alpine steppe on schist slopes. 8.7.88 (Subsect. *Myrsiniteae*. A very odd taxon only known from Boz Da. Upright stems to 40 cm. and leaves twice as wide as in typical, decumbent *E. anacampseros*. Round, yellowish raylet-leaves.) (10+ seeds) C
- 477.503 *EUPHORBIA DENTICULATA* Turkey, Van, Kavussahap Da. Open, stony slopes with steppe vegetation. 2300 m. 17.7.88 (Subsect. *Myrsiniteae*. Decumbent or prostrate stems with obovate, glaucous, sometimes purple-tinged, leaves. Greenish yellow raylet-leaves and striking crimson glands. Very attractive in the wild.) (10+ seeds) D
- 478.501 *EUPHORBIA KOTSCHYANA* Turkey, Antalya, N of Akseki. 1300 m. Stony, limestone slopes with sparse *Quercus* scrub. 11.7.88 (Subsect. *Patellares*, allied to *E. characias* and *E. robbiae* - in fact somewhat between them in appearance. Thick leathery leaves, glossy above and glaucous below. Flower stems with yellow cups to 80 cm. A distinct plant, locally quite common in the Taurus, of which a large seed coll. eludes us! Few.) (5) D
- 478.980 *EUPHORBIA MACROCLADA* Turkey, Konya, NE of Beysehir. 1200 m. Steppe vegetation on open slopes. 11.7.88 (Subsect. *Conicocarpaceae*. Rather like the next, especially *E.n.* subsp. *glareosa*. A widespread and typical plant of the Anatolian steppes. Upright, 50 cm. stems with narrow, blue-grey leaves. Yellow rays.) (10+ seeds) B
- * 480.501 *EUPHORBIA NICAENSIS* (subsp. *nicaensis*) Spain, Granada, Sierra Nevada, SE of Granada. 1500 m. Open limestone slopes. (Subsect. *Conicocarpaceae*. A few 1988 seeds from plants grown by M. Tucker (Somerset, U.K.) from our 1984 coll. (not distributed). Thick, narrow, glaucous foliage on 60 cm. stems.) (10+ seeds) C
- FRITILLARIA*. We have two species we have not listed previously plus a few fresh 1988 collections, supplemented with a little cultivated seed of this fashionable genus (see also Section III for material from others). As with many bulbs, seed is unlikely to germinate the first spring after sowing, under natural conditions, and seedlings should not be expected before spring, 1990, from a winter, 1988-89 sowing. When dealing with a small number of valuable seeds, it is worthwhile sowing the flat seeds on their sides to prevent rotting.
- 490.000 *FRITILLARIA ACMOPETALA* Turkey, Antalya, Gullukda., NW of Antalya. 800 m. Grassy, stony areas at margin of *Arbutus* & *Quercus macchie*. 10.7.88 (One of the most easily grown with extremely elegant, pale-green and chestnut-brown flowers. Like most species, this is a variable one and wild seed can be expected to produce flowers quite distinct from clones already cultivated - especially worthwhile in this case.) (20+ seeds) B
- 490.500 *FRITILLARIA ALBURYANA* Turkey, Erzurum, Palandoken Da. 2500 m. Bare patches of rock detritus on open slope. SB coll. 22.7.86 (We have already commented on the commercial collection of bulbs of this species. When we visited this habitat in 1988, during the same week as we had done so two years previously, there was no trace of it at all. We are not so naive as to think it had been eliminated by commercial collection of bulbs but the inclement spring of 1988 coupled with intensive grazing by goats and sheep (cattle were grazed there in 1986) had doubtless led to removal of the top-growth and an early dormancy. Such experiences have underlined the importance of maintaining our seed-bank, which may help to establish such a species in cultivation - a challenge but worth every effort. Incomparable flowers of rich, clear-pink.) (20+ seeds) F
- 490.800 *FRITILLARIA ALFREDAE* subsp. *GLAUCOVIRIDIS* Turkey, Adana, Nur Da., above Hasanbeyli. 1100 m. Open, stony areas on W-facing slopes. 15.7.88 (Endemic to this corner of Turkey near the Syrian border, this is a most graceful and beautiful species with yellow-green flowers with a glaucous sheen. Not at all difficult in the bulb-frame or a pot in the alpine-house but not satisfactory outside in Britain.) (20+ seeds) D
- 493.500 *FRITILLARIA CRASSIFOLIA* subsp. *KURDICA* Turkey, Van, Ispiriz Da., NNW of Baskale. 2800 m. Open stony slopes. 20.7.88 (Another delightful plant, accommodating in the bulb-frame or alpine-house. Incredibly variable in this area with globular bells in yellow-greens and red-browns, chequered and striped.) (20+ seeds) C
- * 494.400 *FRITILLARIA DRENOVSKII* Greece, Drama, Falakro, above Volokas. 1500 m. Subalpine meadow among sparse *Pinus*. (A delicate little plant with narrow, brown bells on slender stems, only found on a few mountains along the Greek/Bulgarian border. Not too easy and best kept cool and not over-dry in summer. A few.) (15+ seeds) E
- * 494.800 *FRITILLARIA EHRHARTII* Greece, Evia, above Metohi, W of Karistos. 200 m. N & W facing sides of gulleys on talc-schist, among *Erica* & *Quercus*. (Bloomy, grape-black bells. Sheltered bulb-frame. A few.) (15+ seeds) D
- * 499.401 *FRITILLARIA MESSANENSIS* (subsp. *messanensis*) Greece, Pieria, Oros Olimbos, above Vrondou. 1000 m. Steep, stony, limestone slopes. (Beautifully elegant, brown-chequered bells. Not difficult in a frame.) (15+ seeds) D
- 500.001 *FRITILLARIA MINIMA* Turkey, Van, Kavussahap Da. 2700 m. Steep, limestone scree on open slope. 17.7.88 (Not at all an easy plant with yellow bells like the N American *F. pudica*. An isolated relic only known from the mountains S of Lake Van and little-tried in cultivation. Heavily grazed in 1988, so only a few.) (15+ seeds) F

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- 500.100 FRITILLARIA MINUTA Turkey, Van, Kavussahap Da. 2900 m. Stony, alluvial silt near snow-melt stream. 17.7.88 (Apricot and amber bells. Jack Elliott (Kent, UK) took us to task for telling you this is "difficult to grow well" in previous lists. He finds it "very easy, at least in a pot." Grazed so only a few.) (15+ seeds) E
- * 502.000 FRITILLARIA PONTICA Turkey, Bolu, near Abant Golu. 1000 m. Deep shade among conifers with *Astrantia*, etc. (Definitely the easiest species to grow outside in wet climates - a plant of cold, wet areas in Turkey! Fine pale-green bells, usually shaded brown. Grows and increases well if not dried in summer.) (20+ seeds) B
- 503.800 FRITILLARIA TUBIFORMIS France, Hautes-Alpes, Pic de Gleize. 1800 m. Steep SE-facing slope among grass. 17.8.88 (We are absolutely delighted to have been able to make this collection - this is a marvellous species, quite easily grown but very seldom offered by even the specialist bulb dealers, as, like several of its relatives, it is not so easy to increase vegetatively - seed is the way! We have tried to gather seed on several previous occasions from colonies we know in other places but they have always been grazed before seed has ripened. The other spots we know are moist meadow habitats and we were surprised to find it thriving here on hot, dry slopes; seed from this locality should present no problem under bulb-frame conditions or in pots. This is a limestone area and a well-drained loam would be much more preferable for this coll. than the peaty mix which might suit those from other places. Splendid, fat, chequered, brown-purple bells on comparatively short stems - irresistible even to 'non-frit.-enthusiasts'.) (20+ seeds) D
- GENTIANA. The diversity of this indispensable genus is such that we can make no introductory generalisations. There is virtually at least one species likely to be growable by anyone gardening outside the tropics. For those who think they cannot grow "*G. acaulis*", we have several interesting members of this group. In nature, true *G. acaulis* is a lime-hater but its allies listed here are all limestone plants; many are plants of cool moist meadow soils but *G. angustifolia* grows on hot, dry slopes and becomes quite dehydrated by late summer. We always hope the field-data we provide will help in cultivation but it is critical for these.
- 515.005 GENTIANA ACAULIS France, Savoie, Col du Mont Cenis. 2000 m. Open, moist areas with diverse meadow-vegetation - calcifuge. 1.9.88 (The classic, great, blue trumpet-gentian of the Alps; the AGS symbol!) (50+ seeds) B
- 515.400 GENTIANA ANGUSTIFOLIA France, Hautes-Alpes, Pic de Gleize. 1900 m. Steep exposed, stony limestone slopes. 11.8.88 (A distinct member of the *G. acaulis* group, limited to the limestone of the SW Alps. Very narrow leaves and its huge blue trumpets held on short stems. Hans Simon tells us that it occurs in especially fine form in this locality. Definitely to be tried by gardeners in warmer, drier localities.) (30+ seeds) C
- 515.602 GENTIANA ASCLEPIADEA Italy, Friuli-Venezia-Giulia, below Passo di Predil. 1100 m. Mixed *Picea* & *Fagus* woods. 16.9.88 (The elegant, deep-blue Willow Gentian, loveliest of autumn-flowering herbaceous plants.) (50+ seeds) B
- 515.801 GENTIANA BAVARICA France, Savoie, E of Col du Galibier. 2600 m. Damp, stony turf on level col. 1.9.88 (Very deep blue, distinctive, later-flowering relative of *G. verna*. Not an easy plant to grow well.) (30+ seeds) D
- 517.201 GENTIANA CLUSII Italy, Lombardia, Monte Tremalzo, WSW of Riva. 1900 m. N & W-facing limestone slopes in stony turf. 6.9.88 (Another splendid member of the *G. acaulis* group. Big, deep sky-blue trumpets from rosettes of shiny leaves - "glossy tufts carrying...celestial goblets." (RF)) (30+ seeds) C
- 518.400 GENTIANA GELIDA Turkey, Gumushane, Kop Da. 2300 m. Meadows in moist to dryish turf (very wet in spring). SB coll. 28.8.86 (A handsome late-flowering species, superficially like *G. septemfida* but with creamy-yellow flowers, darker yellow, striped green outside. Not so easy but worth every effort.) (30+ seeds) D
- 518.803 GENTIANA LUPEA France, Hautes-Alpes, below Col de Gleize. 1600 m. Stony limestone slopes. 11.8.88 (The great statuesque Yellow Gentian with 1 m. stems whorled with flowers. Magnificent but very slow-growing) (30+ seeds) A
- 519.000 GENTIANA OCCIDENTALIS France, Pyrenees-Atlantiques, E of Gourette. 1500 m. Stony turf at base of limestone cliffs. 22.8.88 (Little-known member of the *G. acaulis* group, endemic to the W Pyrenees and seldom seen in cultivation. Very local in the wild, in our experience. Possibly closest to *G. clusii*.) (20+ seeds) E
- 519.200 GENTIANA OLIVIERI Turkey, Hakkari, Zap Gorge, S of Hakkari. 1300 m. Limestone scree on steep, E-facing slope. 18.7.88 (Slow-growing, summer-dormant species - perhaps the only Gentian for the bulb-frame. Narrow-leaved rosettes with clusters of sapphire-blue, white-throated trumpets in spring.) (30+ seeds) E
- 520.402 GENTIANA PYRENAICA Turkey, Trabzon, Zigana Da. 2100 m. Alpine turf on grazed slopes with *Vaccinium*, *Daphne* etc. 27.7.88 (Exquisite alpine with royal-blue trumpets, resembling the autumn-flowering Himalayans. A rather difficult plant for cool, moist conditions in acid, peaty soil. This is the Turkish & Caucasian race, which has been separated as *G. dshimilensis*. We had hoped to list the violet-tinged type-race from the Pyrenees as well this year but, though we found the plants, we could not find a single seed-capsule.) (30+ seeds) F
- 520.900 GENTIANA SEPTEMFIDA Turkey, Artvin, Genya Da., 1800 m. Dryish, open meadows on summit ridge. SB coll. 1.9.86 (A robust, erect version - possibly the taxon described as *G. cordifolia* - of this excellent species, probably the finest and most reliable garden-plant in the genus. Clusters of deep-blue trumpets.) (50+ seeds) B
- 521.402 GENTIANA VERNA Italy, Lombardia, above Passo di Croce Domini, ESE of Breno. 1900 m. Alpine turf on steep slopes. 6.9.88 (The incomparable, little, pure azure-blue Spring Gentian.) (30+ seeds) B
- 530.201 GEUM MONTANUM Andorra, above Port d'Envalira. 2500 m. Open slopes in acid, peaty soil. 19.8.88 (Fine, yellow flowers on tidy clumps. An easily grown alpine - "the most precious of the family." (RF)) (30+ seeds) A
- 530.400 GEUM REPTANS France, Savoie, E of Col du Galibier. 2600 m. Loose slate & schist scree below snow-patches. 1.9.88 ("Undoubtedly the noblest and most gorgeous of high-alpines" (RF) but not the easiest! Clumps, spreading by red stolons, send up huge golden flowers. Has a bad reputation for germination of seed.) (30+ seeds) D
- GLADIOLUS. While they cannot rival the S African species for diversity and brilliance, there are some fine members of this genus in Turkey - rather more than in Europe and often plants of inland areas with severe winters. They are little tried in cultivation and deserve the attention of the bulb-enthusiast.
- 531.802 GLADIOLUS ANATOLICUS Turkey, Adana, Amanus Da., above Hasanbeyli. 1100 m. Among deciduous *Quercus* scrub on W-facing slope. 15.7.88 (Endemic to S Turkey, this can be most striking with bright carmine-pink flowers on 30 - 50 cm. stems. We have not seen this colony in flower and cannot be assured of the colour.) (20+ seeds) D
- 531.902 GLADIOLUS ANTIKIENSIS Turkey, Hakkari, Zap Gorge near Bagisli. 1500 m. Steep, stony clay slopes among sparse *Quercus* scrub. 19.7.88 (Again a colony we have not seen in flower. Those we have seen elsewhere in Hakkari were soft rose-pink with beautifully marked lower segments to the flowers. Near Mardin we have seen pale lavender-blue forms. Possibly best in a place where it is dry in summer or in a bulb-frame.) (20+ seeds) D
- 532.603 GLADIOLUS KOTSCHYANUS Turkey, Agri, Sac Gecidi, W of Eleskirt. 2300 m. Hay meadow with *Primula*, *Muscari*, etc. 21.7.88 (A very variable species in height and colour, widespread in moist meadows in the cold areas of E Turkey. This is quite a dwarf, delicate form from a high locality. Bright crimson. 20-30 cm.) (20+ seeds) C
- 532.604 GLADIOLUS KOTSCHYANUS Turkey, Hakkari, W of Yuksekova. 1400 m. Wet hay meadows. 19.7.88 (Delicate shades of pale mauve and lavender-blue. From an extremely cold area and should prove hardy almost anywhere.) (20+ seeds) C

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- 534.201 GLAUCIUM CORNICULATUM Turkey, Artvin, Barhal valley, NW of Yusufeli. 700 m. Stony, igneous slopes among sparse scrub. 22.7.88 (The Horned Poppies are a small but spectacular genus centred on Turkey. In nature, they are often opportunists of disturbed sites and in cultivation all require the sunniest, best-drained site available. If not actually monocarpic they are at best short-lived perennials but often sow themselves where suited. All are around 40 cm. high with a long succession of flowers - amber-yellow here.) (30+ seeds) B
- 534.403 GLAUCIUM FLAVUM UK, England, Somerset, Stolford Beach. Sea-level. Maritime sands & gravels. (1988 coll. by M. Tucker of this lovely plant. Beautiful, cut blue-grey leaves and soft-yellow 'poppies'.) (30+ seeds) A
- 534.603 GLAUCIUM GRANDIFLORUM Turkey, Sivas, Ziyaret Tepe, 2000 m. Loose, gravel bank. 30.7.88 (Pale amber-orange flowers with dark-stained centres. Definitely perennial here but unlikely to be long-lived.) (30+ seeds) B
- 553.100 HEDYSARUM CANDIDISSIMUM Turkey, Malatya, WNW of Darende. 1500 m. Exposed shale slopes and clay banks. 30.7.88 (An absolutely stunning species, known only from this comparatively small area of inner Anatolia, so rich in fine, endemic steppe-species. The genus is little developed in W Europe but diversifies greatly towards C Asia; half of the 20 or so species in Turkey are endemics. A member of the Leguminosae, it belongs, with Ebenus, in the tribe Hedysareae. We first saw this in flower in 1985 but were too early for seed; at last we have a good collection. The 10-20 cm. procumbent stems and pinnate leaves, densely clad in silky hairs, are topped by oblong spikes of big, bright carmine-pink flowers. Though these are individually beautifully veined and marked with white and yellow, it is the overall impact of the brilliant pink against a background of silver-blue which makes this one of the most arresting plants we have seen.) (15+ seeds) E
- 553.400 HEDYSARUM HEDYSAROIDES subsp. EXALTATUM Italy, Lombardia, above Passo di Croce Domini. 1900 m. Stony, alpine turf on steep slope, over limestone. 6.9.88 (Europe is not be entirely outdone by Asia in producing showy members of this genus. This species is fairly local in the S Alps but extends all the way E to the Caucasus. Anthony Huxley singles it out as a "striking herbaceous perennial" and Farrer enthuses over its "loose spires of hanging pea-flowers, large and brilliant, of rich reddish-violet." These leguminous genera are all little-known in gardens as so many can only be propagated satisfactorily by raising from seed and, even then, need careful handling until established as the seedlings usually resent transplanting and disturbance.) (15+ seeds) B
- HELLEBORUS. Like many of the "bulbs", Hellebores should not be expected to germinate the first spring after sowing but we have both had reports and seen many good germinations from our seed during the subsequent winter/spring. *H. vesicarius* is inherently irregular and *H. foetidus* can even take another season. Like Cyclamen, a soak in warm water for a day before sowing can sometimes be of great help.
- 561.001 HELLEBORUS FOETIDUS France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. Stony, limestone slopes. 21.8.88 (Big heads of many, small, pale-green, purple-rimmed cups over dark-fingered, evergreen foliage.) (20+ seeds) B
- 562.403 HELLEBORUS ORIENTALIS Turkey, Artvin, Genya Da. 1700 m. Open meadows and margins of coniferous woodland. 23.7.88 (The pure, wild species is virtually unknown in gardens; usually white tinged green.) (20+ seeds) C
- 563.000 HELLEBORUS VESICARIUS Turkey, Adana, Amanus Da., above Hasanbeyli. 1100 m. Among deciduous Quercus scrub on W-facing slopes. 15.7.88 (A fresh, 1988 collection of this extraordinary relic, endemic to this part of S Turkey, from one of its highest localities. Unlike any other species in its enormous, inflated seed-capsules, up to 15 cm. long. Seed from our previous collections has germinated well and it can be grown under bulb-frame conditions - remember that true leaves are not produced until the second-year and that it goes dormant in summer. One of those legendary and totally individual plants which always prove irresistible.) (15+ seeds) E
- * 571.000 HYACINTHELLA ATCHLEYI Greece, Evia, mainland opposite Halkida. 200 m. Open limestone slope with Rosmarinus & Erica. (A few cultivated seeds from our 1985 coll. of this very local little bulb. Pale-blue.) (20+ seeds) D
- 571.142 HYACINTHELLA HELDREICHLI Turkey, Konya, S of Karaman. 1100 m. Open, undulating steppe. 12.7.88 (Deep blue-violet. These are delicate little plants, about 10 cm. high, delightful in the alpine-house.) (20+ seeds) C
- 572.201 HYACINTHOIDES NON-SCRIPTA UK, Wales, Dyfed, below Ffostrasol. 150 m. Mixed deciduous woodland. 21.6.88 (The Bluebell, best-loved of British bulbs, which sheets our woods here with blue in spring.) (50+ seeds) A
- 574.500 HYPERICUM CAPITATUM Turkey, Gaziantep, WNW of Nizip. 600 m. Marl slopes between cultivated areas. SB coll. 15.8.86 (Our 1988 attempt to update our material of this proved abortive. The one colony we knew well had been eliminated by cultivation. This is altogether rather an uncommon species, in our experience, much of its natural habitat being either cultivated or grazed and we fear a further fresh collection will be dependant on our going to Turkey at the right time to locate it in flower. This is difficult but not ungrowable and we hope it can be maintained in cultivation somewhere - its sub-shrubby, 15 cm. high stems of flowers in a unique shade of penetrating and intense burnt-orange to scarlet are like nothing else.) (15+ seeds) F
- 577.602 HYPERICUM PALLENS Turkey, Icel, NNE of Gulnar. 1200 m. Limestone fissures. 13.7.88 (A tidy little crevice-plant. Yellow flowers from the leaf-axils all along the wiry, prostrate stems. Fine in a pan.) (30+ seeds) C
- 580.100 IBERIS CANDOLLEANA France, Vaucluse, Le Mont Ventoux. 1800 m. Loose, limestone screes of various aspects along summit ridge. 12.8.88 (The piece de resistance among the fascinating flora of this isolated limestone towering up above the vineyards of Provence. Anyone who sees the photograph of it in the 1938 AGS Bulletin (Bull. Alp. Gard. Soc. Vol. VI, p.224) will instantly fall in love with it. There you can read the account by Dwight Ripley, most erudite and literate of writers about plants, of how he and Rupert Barneby (later to prove our heroes of plant-hunting in the American West) found this here "tucked in among the rocks, its leaves completely hidden by corymbs of lilac flowers." It is a perfectly good perennial and it can be grown - a plant raised by our late friend, Ivor Barton, from a few seeds we culled in October, 1984, thrives outside in a sunny scree in Devon. To grow it to perfection is the challenge, as like other plants of mobile screes, it can become straggly under the artificial stability of cultivation, where loose stones are not continually top-dressing and burying it. It is more than worth some effort and, in spite of being chucked under *I. pruitii* by the Philistine lumpers of the 'Flora Europaea' account, must be regarded as the peak of refinement in this genus and one of the most beautiful of all alpine-plants.) (20+ seeds) E
- 580.900 IBERIS TAURICA Turkey, Erzurum, Askale to Kop Da. 2000 m. Loose, eroded shale slope. 28.7.88 (Not quite in the same class as the above and much less assuredly perennial but a vulgarly cheerful species covering itself with a profusion of flower - in this case pale mauve but it can be white. About 15 cm.) (20+ seeds) B
- 585.600 IRIS CAUCASICA subsp. TURCICA Turkey, Gumushane, Kop Da. 2500 m. Among steppe vegetation on stony, igneous slopes. 28.7.88 (It is a rare event for us to be able to make a worthwhile collection of any of the aristocratic Junos but the extremely late season of 1988 resulted in a good set in this area. This is the dominant race in Turkey, described by Brian Mathew in 1981. Pale, translucent yellow flowers.) (10 seeds) E

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- 590.400 IRIS LATIFOLIA (= *I. xiphoides*) France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. Steep, stony limestone slopes with *Eryngium*, *Asphodelus*, etc. 21.8.88 (The wild species is very seldom seen in gardens, though it can be a reliable border-plant. Bulbous but summer-growing and flowering in June with sturdy, 60 cm. stems of violet-blue flowers, marked yellow on the falls. A splendid plant endemic to the Pyrenees & NW Spain)(15+) B
- * 591.350 IRIS ORIENTALIS (= *I. ochroleuca*) Greece, Lesvos. c. 200 m. Damp meadows. 1988 cultivated seed from living material coll. by Helen & Ivor Barton. (Another excellent garden-plant. Sheaves of sword-like, greyish leaves send up stout stems of about 1 m. with large white flowers. The falls have such an extensive signal-patch of bright yellow that the general appearance is bicoloured. Easy in good soil in sun.) (15+ seeds) B
- 598.400 IRIS SPURIA subsp. MUSULMANICA Turkey, Van, W of Guzelsu. 2000 m. Level meadow, possibly saline. SB coll. 8.8.86 (Like the above a member of Series Spuriae, but little-known in cultivation though there is no reason why it should not prove as satisfactory a garden-plant as others in this Series. In the wild, forms large colonies, spectacular in May when massed with pale to deep blue flowers on stiff, 1 m. stems.) (15+ seeds) B
- 599.803 IRIS TAOCHIA Erzurum, N of Tortum. 1600 m. Steep, open, stony, igneous slopes. 22.7.88 (An extremely interesting compact, bearded Iris, restricted to the hills of the upper Coruh and Oltu valleys and virtually unknown in cultivation. About 30-50 cm. high, the flowers can be pale to deeper yellow or shades of red-purple. Flowers well but sets little seed in nature (we have never seen a single capsule on the allied *I. schachtii*, which we know in several places to the West!). For a hot, dry site or bulb-frame. (10 seeds) D
- 610.500 JURINELLA MOSCHUS (subsp. *moschus*) (= *Jurinea depressa*) Turkey, Gumushane, Soganli Da. 2300 m. Loose, gravel banks in full sun. 28.7.88 (Though known to Farrer from dried specimens and enthused over by John Watson as "spectacularly attractive" in the wild, this has never been established in cultivation. As with most Compositae, there is very little margin in timing a seed-collection but we were very successful in 1988 and hope that it may result in this splendid plant becoming better known. Though of assured appeal to the alpine-house enthusiast, we see no reason why it should not be growable in a sunny scree-bed or trough. The species covers a complex of high-altitude scree-plants from E Turkey, NW Iran and the Caucasus - rosulate, tap-rooted perennials with lyrate leaves, lobed or pinnatisect but always white and densely woolly beneath, lying flat on the ground and encircling a big, stemless head of lilac-pink, deliciously fragrant flowers.) (10 seeds) E
- * 614.000 LALLEMANTIA CANESCENS Turkey, Erzurum, Kop Da. 2400 m. Dryish, stony clay among steppe vegetation. (1988 cultivated seed from our 1986 coll., kindly sent to us by both David Glen (Victoria, Australia) and Panayoti Kelaidis (Colorado, USA). The latter commented that it "bloomed non-stop from May to October." In the wild, a showy, dwarf herbaceous perennial, about 30 cm. high, superficially *Salvia*-like, with toothed grey leaves and spikes of intense blue-violet flowers. Definitely wants a well-drained place in full sun.) (20+ seeds) C
- 627.000 LEUCANTHEMOPSIS ALPINA Andorra, above Port d'Envalira. 2500 m. Acid, stony areas on open slope. 19.8.88 ("Golden-eyed single marguerites of brilliant white" (R.F.); cut, hairy leaves; 10 cm.; rather choice.) B
- * 630.200 LEUCOJUM AUTUMNALE var. PULCHELLUM Morocco, Middle Atlas Range, S of Ifrane. 1700 m. Wet-flushes & shady, grassy ledges. (The Moroccan race of this dainty bulb; pink-flushed white bells in autumn.) (20+ seeds) B
- * 632.001 LILIUM ALBANICUM Greece, Ioanina, Katara. 1700 m. (1987 SB material of Alan Edwards coll. of this most beautiful, yellow-flowered species. Quite dwarf and not too difficult in a good, acid, peaty soil)(20+ seeds) D
- 632.401 LILIUM BULBIFERUM (var. *bulbiferum*) Italy, Friuli-Venezia-Giulia, below Passo di Predil. Open areas in mixed woodland. 1100 m. 16.9.88 (Seldom seen in gardens & not so common in the wild as var. *croceum*.) (5 bulbils) C
- * 633.201 LILIUM CHALCEDONICUM Greece, Magnissia, Oros Pilio. 1500 m. Steep, SW-facing, schist slope among *Pteridium*, *Phlomis*, *Helleborus*, etc. (Hand-pollinated 1988 seed from a single bulb we collected in 1985 and grown by Dave Hoskins (Hants., UK). Not so numerous in this locality, so it is especially satisfying to be able to make this seed available. Pendant flowers of luminous scarlet - perhaps the most brilliant of all)(20+ seeds) D
- * 633.202 LILIUM CHALCEDONICUM Greece, Viotia, Oros Elikonas. 1500 m. Margins of mixed *Quercus* & *Abies* woodland. (1988 seed from a 1986 coll., again hand-pollinated by D. Hoskins. Not listed from this locality before)(15+ seeds) D
- 634.003 LILIUM MARTAGON Italy, Friuli-Venezia-Giulia, below Passo di Predil. 1100 m. Mixed *Picea* & *Fagus* woodland. 16.9.88 (Not seen in flower in this locality so colour unknown - the handsome, 1 m. Turkscap Lily)(15+ seeds) B
- 634.500 LILIUM PONTICUM (var. *ponticum*) Turkey, Trabzon, Soganli Da. 2200 m. Steep slopes among *Rhododendron* and *Vaccinium*. SB coll. 29.8.86 (We saw all the NE Turkish Lilies in flower this year with new spots for the beautiful *L. kesselringianum* and marvellous dark intergrades between this and *L.p.* var. *artvinense*, but sadly we left long before seed of any was ripe. We can only go to our seed-bank for consolation. Butter-yellow flowers, dark-centred and with a few speckles. About 50 cm. Peat-garden conditions.) (20+ seeds) D
- 640.202 LINARIA ALPINA France, Hautes-Alpes, Col d'Izoard. 2400 m. Loose, unstable, limestone scree. 31.8.88 (Rich violet flowers, both orange and white-lipped here; surprisingly easy for a specialised alpine!) (20+) B
- 646.300 LINUM ARBENIOIDES Turkey, Izmir, Boz Da., above Odemis. 2000 m. Crevices on flaking schist with *Juniperus* & *Acantholimon*. 8.7.88 (The ultimate alpine development of *Linum* and one of the world's finest alpine plants - "perhaps the most to be desired of all" wrote Reginald Farrer, who, of course, had never seen a living plant, when writing in 1913. In 1938, Peter Davis attempted the introduction of what he called "the Perfect *Linum*." There is a full and delightfully written account of his travels and the plants in the 1939 AGS Bulletin. Sadly, this and subsequent Davis collections did not result in its satisfactory establishment in cultivation. At last, however, it has been achieved - there is a very complete account by Una Green in the 1987 AGS Bulletin (Bull. Alp. Gard. Soc. Vol. 55, p. 193) of her success in raising and maintaining seedlings from the 1977 collection by Jim MacPhail & John Watson. There is a full-page colour illustration of one of her plants - an exceptional specimen, many times larger than any we have seen in nature. The flowers to us, however, are a disappointment - there is a possible explanation! At present we do not have access to the MacPhail & Watson field-notes but Una Green mentions the seed came from a limestone area. The species is only known from Boz Da. (schist) and Baba Da. (limestone). Of the Boz Da. population, Peter Davis writes - "an even better form than on Baba Dag, with more glaucous leaves and larger flowers." The superb photograph by Edward Gathorne-Hardy of the plant growing wild on Boz Da., which accompanies this 1939 account (Bull. Alp. Gard. Soc. Vol. 7, p. 49) is inspiration enough. For those without access to all this literature, let us simply describe this as just the typical, tight, aretioid mat or hummock you might imagine, covered with stemless clear-yellow flowers - the epitome of all the alpine-house enthusiast desires!) (5+ seeds) F
- 648.103 LINUM HIRSUTUM subsp. ANATOLICUM (var. *anatolicum*) Turkey, Konya, NE of Beysehir. 1200 m. Open slopes among diverse steppe-vegetation. 11.7.88 (A delicate, woody-based perennial with 20-30 cm. stems, clothed in narrow, downy, greyish foliage, producing a long succession of lovely, lilac-pink flowers.) (10+ seeds) D
- 649.202 LINUM MUCRONATUM subsp. ARMENUM Turkey, Kayseri, S of Incesu. 1000 m. Stony clay banks. 30.7.88 (Somewhat stoloniferous, mat-forming perennial - masses of yellow flowers with a purple base to each petal.) (20+ seeds) D
- 657.000 LOISELEURIA PROCUMBENS Andorra, above Port d'Envalira. 2500 m. Acid, stony areas on open slopes. 19.8.88 RF- ("A little alpine Azalea...like a small, glossy, leathery thyme...with waxen cups of soft pink.") (100+ seeds) C

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- 659.200 LONICERA PYRENAICA France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. Steep, loose, limestone scree on S-facing slope. 21.8.88 (Endemic to the E Pyrenees & adjacent NE Spain, about 50-100 cm. high with quite large trumpet-shaped, creamy-white flowers, sometimes pink-flushed, from the leaf-axils in early summer, this is praised by W.J. Bean in his classic work as "a very pretty shrub, perhaps the most pleasing in flower of all the dwarf bush honeysuckles." It is quite easily grown and the reason for its great rarity and obscurity in cultivation does not become apparent until one tries to propagate it from cuttings. Seed is the answer if you can get it! Uncleaned fruits will be sent - seed keeps moister in these - clean before sowing and stratifying - these should give no problem and we hope much pleasure!) (About 6 fruits - about 10 seeds in each) D
- MICHAUXIA. Considering that these are tall plants, quite unsuited to the majority of rock-gardens, Reginald Farrer is extraordinarily effusive in his enthusiasm for these "gorgeous monocarpic Campanulads from the Levant." If you have an appropriate sunny, dry, well-drained site, they can, of course be superb. All the following are tall plants, up to about 1.5 m. with white flowers, profuse and quite easily grown from seed. Incidentally, the photograph of *M. tchihatchewii* in 'The English Rock Garden' looks like *M. laevigata*.
- 677.100 MICHAUXIA CAMPANULOIDES Turkey, Konya, E of Ermenek. 1300 m. Loose, shale slopes. 13.7.88 (Branching stems, "hanging most delicately out a peal of white flowers like small Martagon lilies." The flowers, in fact, are much larger than *L. martagon* but the simile is apt. An eye-catching plant in the wild.) (100+ seeds) B
- 677.200 MICHAUXIA LAEVIGATA Turkey, Hakkari, Zap Gorge below Hakkari. 1300 m. Open stony slopes. 18.7.88 (Only known in Turkey from this area - mainly an Iranian plant. Close-packed spires of flowers.) (100+ seeds) B
- * 677.300 MICHAUXIA TCHIHATCHEWII Turkey, Adana, S of Feke. 800 m. Loose shale slopes. (1988 seed grown from our 1985 coll. by Panayoti Kelaidis (Colorado, USA) - "really loved it" he comments. Endemic to quite a small part of Turkey, this is on the same pattern as *M. campanuloides* but with a less deeply divided corolla.) (100+ seeds) B
- MOLTKIA. These two dwarf herbaceous plants are among the most striking species of the Turkish steppe-vegetation. Writing in 1956, Peter Davis rated them as two of five best Turkish Boraginaceae. We collected seed of both in 1985 but no-one who has reported back on results from our seeds has told us that they have successfully established them. We have made fresh collections in 1988, seed looks in perfect condition and we can but hope that it may result in our seeing these splendid plants in cultivation. We should be grateful for any reports on the germination and progress of these, either from 1985 or 1988 collections.
- 682.000 MOLTKIA AUREA Turkey, Konya, S of Karaman. 1100 m. Open steppe. 12.7.88 (Clusters of brilliant yellow, tubular flowers on 15 cm. stems over mats of bristly, greyish foliage. A unique Turkish endemic.) (10+ seeds) E
- 682.202 MOLTKIA COERULEA Turkey, Konya, NE of Beysehir. 1200 m. In steppe vegetation on open slopes. 11.7.88 (Almost a precise counterpart of the above but with flowers of intense, deep blue. The two can hybridise.) (10+ seeds) E
- * 688.600 MUSCARI CAUCASICUM Turkey, Kars, SSW of Sarikamis. 1800 m. Stony, igneous slopes. (Subgen. *Leopoldia*. 1988 seed from our 1985 coll. Handsome tassels of sterile, blue-violet flowers above brown bells.) (15+ seeds) B
- * 689.300 MUSCARI DISCOLOR Turkey, Sivas, Ziyaret. 2100 m. Exposed, limestone-gravel ridges. (Subgen. *Botryanthus*. From our 1985 coll. under field-number 6686. Tiny alpine version of this little-known species.) (15+ seeds) C
- * 689.450 MUSCARI GRANDIFOLIUM Morocco, Middle Atlas, above Ifrane. 1700 m. Red clay among limestone outcrops. (1988 seed from our 1982 coll. Handsome, distinct species with blue-black flowers from china-blue buds.) (15+ seeds) B
- 689.901 MUSCARI LONGIPES Turkey, Sivas, WSW of Hafik. 1300 m. Calcareous hills with varied steppe-vegetation. 29.7.88 (Subgen. *Leopoldia*. Distinctive Central Anatolian species; elongating pedicels. 20 cm.) (15+ seeds) B
- 690.050 MUSCARI MASSAYANUM Turkey, Erzurum, WNW of Askale. 2000 m. Loose, igneous scree. 28.7.88 (Subgen. *Leopoldia*. We have still not seen this colony in flower but the inflated, indehiscent capsules are so distinct that we can be assured that if not this, with its coma of bright-pink flowers, it is a new species.) (10 seeds) F
- * 691.200 MUSCARI TENUIFLORUM Turkey, Kayseri, S of Pinarbasi. 1200 m. Limestone fissures and pockets. (Subgenus *Leopoldia*. Very tall form, over 60 cm. high, with long racemes topped by showy, sterile flowers.) (15+ seeds) B
- * 696.200 NARCISSUS BULBOCODIUM subsp. NIVALIS (of Maire) Morocco, High Atlas, above Tizi-n-Tichka. 2000 m. In turf. (1988 seed from our 1982 coll., under Archibald, Blanchard & Salmon 4525. Variable, dwarf, snow-melt race of yellow hoop-petticoats, proving an excellent, very hardy garden-plant. Maire's use of this name is probably incorrect but there will be no other available until someone describes it under a new one.) (15+ seeds) B
- * 699.200 NARCISSUS BULBOCODIUM subsp. VULGARIS var. PALLIDUS Morocco, High Atlas, Tizi Gourane above Amizmiz. 1800 m. Schist fissures. (More distinct than might be imagined from Maire's epithets. Primrose.) (15+ seeds) D
- * 705.600 NARCISSUS RUPICOLA subsp. MARVIERI Morocco, Middle Atlas, Tizi-n-Ait Quirra. 1700 m. N-facing slope in Cedrus & Quercus woodland on limestone. (Local and seldom-collected with large, soft-yellow flowers) (10 seeds) D
- * 705.701 NARCISSUS RUPICOLA subsp. WATIERI Morocco, High Atlas, above Tizi-n-Tichka. 2300 m. Rocky, N-facing slopes. (Exquisite, crystalline white race endemic to the highest igneous massifs of the High Atlas.) (10 seeds) D
- * 720.700 ONOSMA ARMENUM Turkey, Adana, N of Saimbeyli. 1200 m. Open, rocky outcrops. (1988 seed from Panayoti Kelaidis (Colorado, USA) from our 1985 coll. White or cream tubular flowers from bristly leaves.) (20+ seeds) C
- 735.000 ORIGANUM ACUTIDENS Turkey, Tunceli, NE of Pulumur. 1500 m. Gravelly places on steep, open slopes. SB coll. 26.8.86 (Pendant spikes stacked with cream bracts. Likely to be a worthwhile hardy perennial.) (20+ seeds) C
- 736.300 ORIGANUM ROTUNDIFOLIUM Turkey, Artvin, Coruh valley near Borcka. 500 m. Sunny, sandstone cliffs. SB coll. 31.8.86 (Smaller version of the above, to 30 cm. high. A garden-plant of proven worth.) (20+ seeds) B
- 738.100 ORNITHOGALUM ARCUATUM Turkey, Van, W of Yukari Narlica. 2200 m. Stony alluvium in river-bed. SB coll. 5.8.86 (Extremely fine long spikes of white flowers - should make a fine border-plant. 60 cm. or more.) (30+ seeds) B
- 744.250 OXYTROPIS HALLERI Andorra, above Port d'Envalira. 2500 m. Stony areas on open, acid slope with Vaccinium. 19.8.88 (A beautiful, rather local, species with a disjunct distribution - it occurs in Scotland. Neat tufts of woolly foliage send up stiff stems with ovoid racemes of blue-purple flowers. About 15 cm.) (20+ seeds) C
- 744.800 OXYTROPIS PERSICA Turkey, Gumushane, Kop Da. 2600 m. Exposed, limestone-gravel patches on open slope. 28.7.88 (Very much a provisional name - while this matches the description of *O. persica* in its habit and particularly in the distinctive, inflated, red-flushed fruits, the flower colour is creamy-white, not the "violet or pinkish" of *O. persica*. In its habitat, this is distinctly pulvinate forming firm cushions with tiny leaves densely clothed in silver silk, against which the heads of flower are folded back on short stems. Unlikely to be easy to keep in character - both these will need *Astragalus* treatment.) (10+ seeds) E

- 746.800 PAEONIA MASCULA subsp. ARIETINA Turkey, Gumushane, Soganli Da. 1800 m. Loose, igneous scree and among scrub on steep slopes. 28.7.88 (Sumptuous, rich-pink, golden-stamened flowers. 60 cm. high. A breathtaking sight when growing en masse in the wild and an easy, very permanent species in good, well-drained soil.) (10 seeds) D
- PAPAVER. All the following are perennial Poppies. Though the seed is tiny, they are generally very easy to raise, if care is taking in the earliest stages to see that damping-off does not occur as a result of sowing too thickly, and flower quite quickly, making them among the most satisfying hardy perennials from seed!
- 751.202 PAPAVER BRACTEATUM Turkey, Hakkari, W of Semdinli. 1600 m. Steep, stony slopes along gully. 19.7.88 (The Oriental Poppies of cultivation are hybrids derived from this and *P. orientale*. This population has especially leafy stems. With their enormous crimson flowers, perhaps the most stunning of wild flowers.) (100+ seeds) A
- 752.100 PAPAVER LATERITUM Turkey, Rize, above Ikizdere to Ovit Da. 2000 m. Stony meadows and among rocks near stream. 26.7.88 (An extremely local Turkish endemic, only known from a small area around the watershed at the headwaters of the Coruh, but a very easily grown garden-plant. Somewhat stoloniferous clumps of cut, hairy leaves send up a long succession of translucent, soft-orange poppies dancing on 50 cm. stems.) (100+ seeds) C
- * 752.250 PAPAVER ORIENTALE Turkey, Kars, Aras Valley near Karakurt. 1500 m. Coarse, igneous scree. (1988 cultivated seed from our 1986 coll. Huge, glossy scarlet poppies with striking black centres on 1 m. stems.) (100+ seeds) A
- 752.500 PAPAVER RHAETICUM France, Vaucluse, Le Mont Ventoux. 1800 m. Loose limestone screes in summit area. 12.8.88 (Delightful, dwarf Alpine Poppy forming cushioned tufts up to 30 cm. across with flowers on 10 cm. stems. Here it occurs both in lemon-yellow and in the coppery-orange form (*f. aurantiacum*)) (50+ seeds) B
- 755.000 PARIS QUADRIFOLIA Italy, Veneto, Dolomiti, below Larzonei. 1400 m. Acid humus in shade of mixed woodland. 10.9.88 (Slow-growing, green-flowered Trillium relative. May take 2 seasons to germinate.) (15+ seeds) B
- PELARGONIUM. One of the features of the Turkish vegetation which makes it so interesting and exciting for the plant-hunter is the extremely high number of endemics and the many relic species which somehow have found there a little ecological niche which has ensured their survival over millions of years. Of the latter, few are more extraordinary than the two species of *Pelargonium* belonging to Sect. *Jenkinsonia*, which is otherwise known only from Cape Province, South Africa. It is extremely difficult to collect seed from the Geraniaceae in any numbers but fortunately this does seem to germinate quite quickly and easily.
- 758.000 PELARGONIUM ENDLICHERIANUM Artvin, Coruh Gorge, E of Yusufeli. 600 m. Loose, igneous scree on steep, open slopes. 22.7.88 (A widespread but always very local plant, which we have long-known from many places but have never seen in flower or seed until this season, when its brilliant carmine-pink flowers screamed out at us from the limestones of Konya and the Taurus up to the volcanic rocks of Erzincan and Artvin. The rhizomes always creep in scree or among stones and the species is absolutely temperature-hardy but it is dormant in late summer and is definitely best protected from excessive rain in the bulb-frame or cold-greenhouse, in wet climates. Downy, rounded basal leaves and umbels on 30 cm. stems.) (8 seeds) E
- 758.100 PELARGONIUM QUERCETORUM Turkey, Hakkari, Zap Gorge S of Hakkari. 1300 m. Limestone scree on steep, E-facing slope. 18.7.88 (Only known in Turkey from this area, this was only discovered and described quite recently from adjacent N Iraq. A much larger, more imposing plant with big, rounded, shiny-green leaves with toothed lobes and stout 1 m. stems, carrying umbels of magenta-carmine flowers, which we have never yet seen in the wild. Seed from our 1986 coll. germinated very well and this appears much hardier than we had expected - our friend Jean Godden (Dorset, UK) is growing a group in a raised bed, facing S, quite unprotected since summer 1987. These have tended to try to be evergreen, however, and it seems likely the species will be more successful if rested and protected from rain during what should be its dormant period in summer.) (8 seeds) F
- 760.190 PETROCOPTIS PYRENAICA France, Pyrenees-Atlantiques, E of Gourette. 1700 m. Fissures on limestone cliffs. 22.8.88 (A very dainty and pretty, pale-pink flowered Pyrenean endemic which should be much better-known. A member of the Caryophyllaceae, satisfactory in an alpine-house pot or rock-garden crevice.) (20+ seeds) B
- 772.001 PHYSOPLEXIS COMOSA (= *Phyteuma comosum*) Italy, Lombardia, Monte Tremalzo. 1900 m. Fissures on N & W-facing, limestone cliffs. 6.9.88 (Famous saxatile species, confined to the limestones of the SE Alps. It can be grown to a superlative standard in the alpine-house but usually survives quite happily in tufa, a trough or choice crevice in the open rock-garden, if slugs permit. One of the plants which induced great rapture in Reginald Farrer, who devoted almost two pages to it: "among the scalloped leaves of sombre greenish-black unfold...amethystine heads of wild pale bottles...deepening to darker tones of translucent purple at their tip...from which the curly stigma goes frisking forth in manner weird and wild. It is indeed the strangest of all children of the cliffs....") (50+ seeds) D
- 773.290 PHYTEUMA GLOBULARIIFOLIUM Austria, Salzburg, Hohe Tauern, Hochtor. 2600 m. Stable areas of mica-schist detritus on open, N-facing slopes. 12.9.88 (An exquisite little plant, which we had not seen before and we are sure will also be new to many specialist alpine-growers. Minute rosettes of basal leaves produce almost stemless heads of tiny flowers, which look as if they were made from royal-blue glass. One of a group of high altitude, calcifuge species, flowering too late to catch the eye of the holiday-maker and eclipsed by the bizarre spectacle of *P. comosa* - doubtless too much more difficult to grow to perfection.) (100+ seeds) D
- 775.230 PINGUICULA GRANDIFLORA France, Pyrenees-Atlantiques, E of Gourette. 1500 m. Wet rocks and limestone cliffs running with water. 22.8.88 (Most spectacular of the European Butterworts. Huge, flat-faced flowers of imperial violet from sticky, yellow-green rosettes. Not difficult in sphagnum or sodden peat.) (100+ seeds) B
- 780.300 POLYGALA PAPHLIONACEA Turkey, Erzurum, N of Tortum. 1600 m. Steep, open, stony slopes in steppe vegetation. 22.7.88 (Dwarf, woody based shrublet, 10-15 cm. high with bright sugar-pink sepals. We shall not be too effusive as these are not only very difficult to collect seed from but also difficult to grow!) (5 seeds) E
- 781.700 POLYGONUM BISTORTA subsp. CARNEUM Turkey, Rize, above Ikizdere to Ovit Da. 2000 m. Moist, stony meadows. 26.7.88 (The attractive, mainly Caucasian, race of this meadow-plant with deeper pink, more globose flower-heads than the type-race. Unlikely to give any problems under border-conditions in cultivation.) (30+ seeds) B
- 783.950 POTENTILLA LIGNOSA Turkey, Van, Kavussahap Da. 2200-3000 m. Shady conglomerate & limestone cliffs. SB coll. 5.8.86 (An extraordinary relic, surviving in a few localities in E Turkey & NW Iran - the only member of Subgen. *Trichothalamus* in Europe or Turkey, apart from *P. fruticosa*. Dwarf and mat-forming, with pinnate, grey, pubescent leaves and white flowers, its ancient, gnarled branches clutch the vertical rock-faces. Has germinated well and grown on but it is too early yet to see if we can keep it in character.) (20+ seeds) F
- 784.101 POTENTILLA NITIDA Italy, Veneto, Dolomiti, SE of Tre Cime de Lavaredo. 2300 m. Exposed gravelly slopes and dolomitic limestone crevices. 9.9.88 ("The glory of the race...huge mats and masses and carpets of small, trefoiled foliage, purely silver and grey...as if that refulgent, moonlit carpet were not enough, it covers all the mass with a close constellation of vivid rose-pink dog-roses, peppered singly over the sheet in such profusion, as only to give a hint of the silver shimmering here and there beneath..." (R.F.). Not at all a great achievement to grow well in a sunny limestone scree or trough but most certainly a considerable and satisfying achievement if you can persuade it to flower as profusely as it does in nature.) (20+ seeds) B

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- PRIMULA. It had been our optimistic intention to confront you with a tour de force, in accomplishing the collection of seed of the great majority of Turkish & European Primulas this season. The first humbling experience was our failure to collect sufficient *P. davisii*. Hardly any seed had been set after the strange weather in E Turkey - when we were in Hakkari on 18 July there was still a huge patch of avalanche snow, lying low-down in the Zap Gorge in spite of the oven-hot, summer heat wafting up from Iraq. Progress in Europe was quite encouraging through the Pyrenees, Alpes-Maritimes and N Italy until the early snowfall in mid-September which deprived us the opportunity of further material from Austria, NE Italy and N Jugoslavia - the prospect of listing such species as *P. wulfeniana*, *P. glutinosa*, etc. literally vanished overnight! The impossibility of being in two places at the same time meant that we had left Turkey for Europe before the higher altitude Turkish species had ripened their seeds. We are offering seed-bank material of three important collections of these. A few years ago, we recollect Ron McBeath of the Royal Botanic Garden, Edinburgh, telling us that sometimes he had better germination from correctly stored *Primula* seed than from fresh sowings, so this is well worth considering. If no germination occurs in Spring, 1989, it will surely do so in Spring, 1990.
- 785.000 *PRIMULA ALGIDA* Turkey, Van, Ispiriz Da., NNW of Baskale. 2800 m. Short turf in moist alpine meadows. 20.7.88 (Choice, dwarf member of Subgen. Aleuritica with neat rosettes and lilac-pink heads. This is a very variable plant over its wide range - in exceptionally fine form in this locality.) (50+ seeds) D
- 785.150 *PRIMULA AMOENA* Turkey, Rize, Ovit Dag. 3000 m. & above. Cool slopes and cliff-ledges, usually in turf among stones. SB coll. 30.8.86 (We were unable to make a fresh coll. of this intense red-violet form so offer SB material of this as well as 1988 seed of the next, as the colour is quite distinct.) (30+ seeds) E
- 785.152 *PRIMULA AMOENA* Turkey, Trabzon, Soganli Da. 2300 m. Turf-filled ledges on rocky outcrops in N-facing meadows. 28.7.88 (We saw this population in flower for the first time in June - a most beautiful violet-blue, quite distinct from the redder tones of the previous, more eastern colony. This is a very beautiful species, surely the most aristocratic of Subgen. *Primula*, but by no means easy to grow well. Consequently, the true plant has always been scarce in gardens. It is a species we look forward to attempting in our acid loam in the cool, wet Welsh climate. If you can also contrive to grow it, don't miss it!) (20+ seeds) E
- 785.301 *PRIMULA AURICULA* Italy, Lombardia, Monte Tremalzo. 1900 m. Fissures on N & W-facing limestone cliffs. 6.9.88 (The progenitor of innumerable garden hybrids but itself a beautiful plant, the only yellow-flowered Alpine member of Subgen. *Auriculastrum* and very seldom seen in cultivation compared to its numerous children. Lionel Bacon states that it is the white-throated var. *albo-cincta* which occurs here.) (30+ seeds) C
- 785.600 *PRIMULA AURICULATA* Turkey, Van, Ispiriz Da., NNW of Baskale. 2800 m. Wet gulleys & stream-sides. 20.7.88 (The most widespread species in E Turkey & Iran, a member of Subgen. Aleuritica with lilac-pink to red-purple flowers on stems of about 30 cm. - a splendid sight when growing massed in wet meadows in spring.) (50+ seeds) C
- 786.500 *PRIMULA ELATIOR* subsp. *PALLASII* Turkey, Artvin, Genya Da. 1700 m. Open summit meadows and woodland margins. 23.7.88 (An eastern race of the lovely Oxslip which dominates from NE Turkey into Soviet Central Asia. One-sided umbels of pale yellow flowers on stems of about 15 cm. Should be quite easily grown.) (30+ seeds) B
- 786.600 *PRIMULA FARINOSA* France, Pyrenees-Atlantiques, E of Gourette. 1500 m. Moist turf in wet-flush. 22.8.88 (A delightful little plant, widespread in the high turf of many European ranges, with lilac-pink, yellow-eyed flowers on stems of about 10 cm. Beautiful but not so easy to maintain in cultivation.) (50+ seeds) B
- 786.800 *PRIMULA GLAUCESCENS* Italy, Lombardia, Passo di Croce Domini. 1900 m. Turf on steep slopes over limestone. 6.9.88 (Section *Auriculastrum*. Tight tufts of distinct, narrow, shiny-green leaves, leathery in texture. Fine heads of purple-pink flowers, quite variable in size and form when we saw them flowering here about ten years ago. Like the other Europeans here this would be worth further selection of seedlings.) (30+ seeds) D
- 787.502 *PRIMULA INTEGRIFOLIA* France, Pyrenees-Orientales, SE of Las Planes to Puigmal. 2000 m. Ledges on wet, shale cliffs. 18.8.88 (This also occurs in the Central Alps but it is a special delight of the Pyrenees, where the forms are especially fine. Neat little mounds of shiny leaves covered with rosy flowers. Plants here looked somewhat 'different' and there may have been some influence of the adjacent *P. latifolia* but it is more feasibly a result of the unusual habitat. They would need growing on to decide the matter) (30+ seeds) D
- 787.802 *PRIMULA LATIFOLIA* (f. *cynoglossifolia*) France, Alpes-Maritimes, Vallon de la Gordolasque. 2000 m. Fissures on W-facing granite cliffs. 30.8.88 (Section *Auriculastrum*. Always a calcifuge species, this is the rather small-leaved SW race, usually a rich red-purple but can be variable (see comments under *P. marginata*) (20+) D
- 788.100 *PRIMULA LATIFOLIA* (f. *pyrenaica*) France, Pyrenees-Orientales, SE of Las Planes to Puigmal. 2000 m. N-facing wet shale cliffs above stream (grows, less happily, to about 2300 m. among *Rhododendron* scrub.). 18.8.88 (A magnificent, large race, a local plant in nature and very little-known in gardens. Broad, toothed, sticky leaves and huge umbels of flowers in intense, velvety reddish-violet, almost 30 cm. tall in seed) (30+) D
- 788.200 *PRIMULA LONGIPES* Turkey, Rize, Ovit Da. 3000 m. & above. Shady rock-crevices, bases of N-facing cliffs and in turf on rocks in melt-water streams. SB coll. 30.8.86 (Section *Crystallophlois*. An exquisite NE Turkish endemic, one of the most beautiful Nivalid *Primulas*, a group renowned for its aristocratic bearing and intractable temperament. White-eyed, soft lavender-blue flowers. Very, very difficult.) (20+ seeds) F
- 788.403 *PRIMULA MARGINATA* France, Alpes-Maritimes, Vallon de la Gordolasque. 1700-2000 m. Fissures on N & W-facing granite cliffs. 30.8.88 (*Auriculastrum* Sect. A distinct and lovely plant endemic to the Maritimes and some adjacent ranges. Violet-blue flowers and beautiful rosettes of toothed, farina-edged leaves. Typically a limestone plant, we are always a little suspicious that the populations on granite have some ancient influence from *P. latifolia* in their background (and vice versa) resulting in great colour variability.) (30+) D
- 788.900 *PRIMULA MINIMA* Italy, Veneto, Dolomiti, SE of Tre Cime de Lavaredo. 2300 m. Open, W-facing slope, in turf. 9.9.88 (Section *Auriculastrum*. Reputedly calcifuge. The tiny rosettes of unmistakable, wedge-shaped, deeply serrate leaves produce seemingly stemless and comparatively enormous flowers, usually in varying shades of rose-pink, with very deeply notched petals. An utterly distinct and delightful plant.) (30+ seeds) D
- 788.901 *PRIMULA MINIMA* Austria, Salzburg, Hohe Tauern, Hocht. 2600 m. Stable areas of mica-schist detritus on N-facing slopes. 12.9.88 ("...from pale blue-mauve to deep magenta-pink" here writes L. Bacon.) (30+ seeds) D
- 789.200 *PRIMULA PEDEMONTANA* France, Savoie, above Col du Petit Mont Cenis. 2200 m. Peaty, turf-filled ledges on granite outcrops, with *Vaccinium*, etc. 2.9.88 (Section *Auriculastrum*. Calcifuge. A "lovely species...easy and rewarding" remark Smith, Burrow & Lowe. Farrer awards it "the highest rank in the brilliant *Erythrodose* group." A local plant in nature but also extraordinarily rarely seen in cultivation. Typically the flowers are deep pink with a white eye but in this locality Smith states that Farrer's *P. x bowlesii* (*P. pedemontana* x *P. latifolia*) "occurs in abundance" with flowers varying to deeper red-violets. We have not seen this colony in flower and can only remark on the great variability in size and height in seed.) (30+ seeds) D

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- 789.400 PRIMULA SPECTABILIS Italy, Lombardia, Monte Tremalzo. WSW of Riva. 1900 m. Stony N & W-facing slopes ; in turf, rock-fissures & stabilised scree. 6.9.88 (Section Auriculastrum. Calcicole. Another local species, restricted to the mountains around Lake Garda. "The most royal of the four royal Arthritic Primulas" (R.F.) Rosettes of broad, shiny, leathery foliage ; umbels of "enormous and comfortable" flowers in shades of pink to rose. Growing from seed should give the chance to select free-flowering clones.) (30+ seeds) D
- 789.650 PRIMULA VERIS subsp. CANESCENS France, Alpes de Haute-Provence. W of Col de la Colle St. Michel. 1300 m. Open slopes at margins of mixed woodland. 27.8.88 (The S European race of the Cowslip, with tomentose undersurfaces to the leaves. Pendant, bright-yellow bells. Should give no trouble in cultivation.) (30+ seeds) B
- 790.203 PRIMULA VULGARIS (subsp. vulgaris) Turkey, Cankiri, Ilgaz Da. 1700 m. Banks & clearings in Abies woodland. 1.8.88 (This is the glabrous form (var. calva) with rather distinct foliage. We have not seen the plants here in flower but the colour is likely to be both sulphur and white. An easy, much-loved plant.) (30+ seeds) B
- 790.401 PRIMULA VULGARIS subsp. SIBTHORPII Turkey, Artvin, Genya Da. 1700 m. Banks in Picea & Fagus woodland. 23.7.88 (The Eastern race, very variable in colour from lilac-pink to rich magenta. Usually a lower altitude plant, in this corner of Turkey, near the USSR border, & in the Caucasus, it climbs much higher.) (30+ seeds) C
- 791.251 PRUNUS PROSTRATA Turkey, Antalya, SW of Korkuteli. 1300 m. Limestone outcrops on open slopes. 10.7.88 (The prostrate cherry, usually pink-flowered but can be white. Treat it hard in cultivation!) (8 seeds) C
- 797.100 PTILOTRICHUM CYCLOCARPUM (= Aurinia rupestris subsp. cyclocarpa) Turkey, Gumushane, Kop Da. 2500 m. Alpine steppe on open slopes. 28.7.88 (White-flowered, 10 cm. high Alyssum relative. Neat grey rosettes.) (15+ seeds) C
- PULSATILLA. In spite of statements we have seen that Pulsatilla seed is "only viable for 10-30 days", we have had excellent germinations from our own winter-sowings in the past and more recently have seen fine results from some of our own collections. If such a short viability were indeed the case, dry-climate species whose seed blows about on a rainless hillside for up to 5 months before being covered by winter-snow and not germinating until almost a year after ripening, would be extinct within a year. Horticulturally, sowing seed of these and many other species, such as Helleborus, Cyclamen, etc., when barely ripe and without being dried, will certainly give the most predictable and even germinations. Once seed is dried, germination will always be more irregular but, as we have mentioned before, can often be greatly helped by either soaking prior to sowing or by retaining sown and moistened seed in a warm atmosphere for a week or so before subjecting it to a period at lower temperatures. This allows the seed to imbibe - there is no point in exposing seed to low temperatures if it has not had the opportunity to take up necessary moisture.
- 800.200 PULSATILLA ALBANA subsp. ARMENA (= P. violacea) Turkey, Gumushane, Kop Da. 2500 m. Open, stony, igneous slopes. 28.7.88 (A charming little plant which should be growable under sunny-scrub conditions. Much-cut, woolly basal leaves and 10 cm. stems with soft violet-blue bells, very silky outside, in spring.) (30+ seeds) C
- 800.302 PULSATILLA ALPINA France, Hautes-Alpes, N of Col d'Izoard. 2200 m. Open areas in coniferous forest, over limestone. 31.8.88 (Superlative speciality of the Alps with its huge, snowy white flowers in spring, handsomely cut clumps of dark-green leaves and silky seed-heads. Slow-growing but permanent.) (30+ seeds) B
- 800.501 PULSATILLA ALPINA (subsp. alpina/subsp. apiifolia) France, Savoie, Col du Mont Cenis. 2000 m. Diverse meadow vegetation in open, moist areas. 1.9.88 (We have these filed under the pale yellow P.a. ssp. apiifolia (= sulphurea) but the Mont Cenis population is rather special. Lionel Bacon describes it as "exceptionally robust - great wide, ferny plants, 70 cm. or more high, with huge flowers" and Farrer records "creamy flowers and pale-yellow flowers and here and there a citron-coloured beauty..." These are obviously hybrids/inter-grades between the two races. P.a. ssp. alpina is usually calcicole and P.a. ssp. apiifolia normally calcifuge. This coll. is from an acid habitat but any shade might be expected - an exciting prospect!) (30+ seeds) B
- RHODODENDRON. These germinate very easily and quickly sown in warmth, preferably around February to give the tiny seedlings as long a growing season as possible. They grow surprisingly quickly in the young stages. No cold period is needed to induce germination. Care taken in the first weeks after sowing uncovered on peat - watering from below, covering the seed as it germinates, ventilating to avoid damping-off - is repaid!
- 822.000 RHODODENDRON CAUCASICUM Turkey, Trabzon, Soganli Da. 2300 m. Rocky outcrops in N-facing meadows. 28.7.88 (coll. from 1987 capsules) (This is a magnificent dwarf shrub, always growing at alpine-levels well above the tree-line and always less than 1 m. at maturity. The true wild species is very little-known in gardens, where a variety of clones of doubtful origin, usually yellow-flowered, are grown under this name. Extremely hardy and compact with leathery, dark-green foliage, rust-red tomentose beneath, and heads of creamy-white flowers, usually from pink-flushed buds. Deserving of much more attention - especially in cold areas.) (100+) D
- 823.000 RHODODENDRON UNGERNII Turkey, Artvin, Genya Da. 1600 m. Picea woods with Rhododendron ponticum undergrowth. 23.7.88 (coll. from 1987 capsules) (An extraordinary relic with huge, spectacular foliage, heavily felted beneath, and large trusses of white bells, more or less pink-flushed. Can grow to 7 m. A most distinct plant flowering in late July, about a month after the other Turkish species are over. Hardier than R. ponticum, which it replaces in frost-pockets and colder slopes. Rare in this area but dominant around Tiryal Da.) (50+) E
- 824.002 RHODOTHAMNUS CHAMAECISTUS Italy, Veneto, Dolomiti, SE of Tre Cime de Lavaredo. 2300 m. Stony areas and crevices on dolomite. 9.9.88 (A beautiful, dwarf Ericaceous shrub with flat, pink flowers. Grows best in an open position in acid soil in cultivation but is not an easy plant. Treat seed as for Rhododendron.) (50+) D
- SALVIA. Turkey is an important centre for this genus with 86 species, about half of which are endemic. It might have been tempting to present you with several pages of Turkish Salvias, as we did last year with the W American Penstemons. There is not, however, the diversity of flower colour in the genus in Turkey, which occurs in Salvia as a whole. There are no gentian-blue or brilliant scarlet species such as occur in Mexico. Softer shades of blue, purple and pink, as well as white, predominate. We have tried to be selective in collecting some of those which are particularly distinct in their appearance - the individualists in this large genus. There are some striking and local plants here, like S. albimaculata, S. kronenburgii, S. macrochlamys and S. blepharochlaena. Most seed has been collected from colonies we have seen in flower over the past five years. Dried specimens from many have been pressed and determined by Ian Hedge, the authority on the genus, at the RBG Edinburgh. In the few cases where we have determined identities ourselves from descriptions, 1988 herbarium material will be checked and any alterations included in a future list. As with many dry-climate seeds, germination of many of the Salvias we have previously collected has been irregular and sometimes sparse but we have had reports of almost all previous collections growing somewhere! Some are already proving garden-plants of potential. Panayoti Kelaidis is growing several in Colorado and container-grown plants of S. hypargeia have already penetrated to Denver garden-centres. David Glen in Victoria, Australia has been successful with S. recognita and the Greek S. ringens. The most gratifying accounts, however, relate to the performance of the giant form of S. solarea in Britain! Elizabeth Bond in Powys, Wales (hardly the hottest, driest part of the world) tells us her plants bloomed from June "well into October. The bracts were the vivid pink as described and the plants 5ft. high and 4ft. across...I even had people knocking on the door to find out what it was..." More of its sensations later...

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 C : \$3.50 ; £2.00 ; DM6, - ; FF20. - F : \$7.50 ; £4.50 ; DM13, - ; FF45. -

- 842.052 SALVIA ALBIMACULATA Turkey, Konya, ESE of Ermenek. 1200 m. Steep clay slope over limestone. 13.7.88 (A very local plant, only known from this area. One of the shrubby-based, cut-leaved group with large, striking flowers - royal-blue with a tidy white blotch on the lower lip. "Very handsome" comments Ian Hedge in his account in the 'Flora of Turkey'. Flowering stems to 20-30 cm. above the greyish leaves.) (10 seeds) E
- 842.351 SALVIA AUCHERI var. CANESCENS Turkey, ESE of Ermenek. 1200 m. Steep clay slope over limestone. 13.7.88 (Growing on the same hillside as *S. albimaculata* and the local *Ebenus plumosa speciosa*, this is a taxonomic-ally isolated Turkish endemic, once again centred on the Ermenek area. Not quite like any other - a somewhat woody-based herbaceous perennial with narrow leaves, white-felted beneath and widely paniculate flower-stems rising to as much as 1 m. carrying innumerable small flowers in pale violet with a darker violet lower lip, initially marked yellow but becoming white. This is a delightfully delicate, airy plant with a long flowering period. We have a reasonable seed-collection for the first time.) (15+ seeds) E
- 843.000 SALVIA BLEPHAROCHELAENA Turkey, Konya, S of Karaman. 1100 m. Open steppe. 12.7.88 (Yet another unlike anything else! A woody-based perennial with greyish, downy, cut basal leaves and erect, 10-30 cm. stems, covered with sticky hairs. Wide, funnel-shaped, purple-tinged calyces surround large flowers, basically white with a pale-yellow upper lip and crimson-veined lower lip - "a very handsome plant" writes Ian Hedge. This is a very local species and we are pleased to see the population has greatly increased in this area since we last saw it here in 1985. This is purely a result of over-intensive grazing having been stopped in order to plant conifers! The steppe-plants can experience a few years of undisturbed life before being shaded-out and destroyed. How the increase has come about is a mystery - most of the few seeds set are eaten by weevils, a common occurrence with Turkish *Salvias*, making them difficult to collect.) (5 seeds) F
- 844.002 SALVIA CRYPTANTHA Turkey, Konya, S of Karaman. 1100 m. Open steppe. 12.7.88 (A widespread steppe-species in C Turkey. Grey-leaved mats with 30 cm. stems of pink or white flowers surrounded by large, pale-green bell-shaped calyces, which later dry to parchment before blowing away with the seeds.) (15+ seeds) C
- 844.202 SALVIA CYANESCENS Turkey, Nevsehir, Between Saraycik & Boyali. 1200 m. Among sparse *Quercus* scrub on volcanic tuffs. 30.7.88. (Something of a mystery and we look forward to Ian Hedge's determination on this. Not really very like our 1985 coll. of *S. cyanescens* from Bolu and Sivas and more like something in the *S. aethiopsis* group in its big, felted basal leaves. Sticky stems to about 1 m. with large flowers (for *S. cyanescens*) with pale lilac hoods and pale yellow lips. Seems a good perennial.) (15+ seeds) C
- 844.450 SALVIA EUPHRATICA Turkey, Malatya, E of Gurun. 1600 m. Shale slopes, often in unstable shale scree. 30.7.88 (One of a small group of very distinct plants (see also *S. kronenburgii*), forming wide, shrubby tufts with rounded, wrinkled, greyish foliage and 20-50 cm. stems of flowers, in this case pale-pink to lilac, surrounded by striking campanulate calyces, sometimes purple-tinged in this race. Local.) (8 seeds) E
- * 844.700 SALVIA FRIGIDA Turkey, Sivas, Camlibel Gecidi. 1600 m. Open slopes among grasses & *Juniperus*. 1988 seed from our 1985 coll. (Single-stemmed pyramidal heads of many small white or pale-lilac flowers.) (20+ seeds) B
- 844.901 SALVIA GLUTINOSA Italy, Friuli-Venezia-Giulia, below Passo di Predil. 1100 m. Open areas in *Picea* & *Fagus* woodland, over limestone. 16.9.88 (Fine, pale-yellow shade-lover, about 80 cm. high. Easily grown)(15+ seeds) A
- 845.051 SALVIA HELDREICHIANA Turkey, Icel, NNE of Gulnar. 1200 m. Stony areas among limestone boulders. 13.7.88 (60 cm. high member of the shrubby, pinnate-leaved group - distinct among these in its spikes of quite deep lilac-blue flowers among large bracts, usually tinged with purple. Taller than most of this group)(15+ seeds) D
- 845.101 SALVIA HUBERI Turkey, Erzurum, N of Tortum. 1600 m. Steep, open, stony slopes. 22.7.88 (We are not quite convinced this merits separation from *S. rosifolia* but it is altogether a smaller, more delicate little plant, quite limited in its distribution to this area rich in other endemics. One of the dwarfest members of the pinnate-leaved, shrubby group variable in colour from pinks to pale blues and violets.) (15+ seeds) E
- * 845.201 SALVIA HYPARGEIA Turkey, Adana, N of Saimbeyli. 1200 m. Open rocky areas. 1988 seed from our 1984 coll. (We are grateful to Panayoti Kelaidis for this, now well established in Colorado - an interesting plant, more or less isolated in Turkey but one of group of five allied species with a disjunct distribution from Morocco to the NW Himalaya. A widespread and distinctive member of the SW Anatolian steppe-vegetation with low tufts of narrow, grey, wool-backed foliage and stiff, herbaceous stems of about 50 cm., encircled with lavender-blue flowers. Seems one of the more easily grown, in a hot dry place, at any rate.) (15+ seeds) C
- 845.500 SALVIA KRONENBURGII Turkey, Van, NW of Gurpinar. 1900 m. Loose, shale scree on W-facing slopes. 18.7.88 (The SE Turkish version of *S. euphratica*, only known from this small area - a most striking species in flower with large white flowers emerging from the huge, thick-textured, greenish-yellow, bell-shaped calyces - imagine a flowering stem of *Euphorbia robbiae* with a big, white *Salvia* in each cup!) (8 seeds) E
- 846.000 SALVIA MACROCHLAMYS Turkey, Hakkari, Zap Gorge near Bagiali. 1500 m. Loose, igneous scree on steep slopes. 19.7.88 (Yet another species with no close allies, extending into neighbouring NW Iran and N Iraq - perhaps the most eccentric of all, justly rated by Ian Hedge as "very handsome and distinctive". Procumbent, leafy stems rise to about 50 cm. to carry large heads composed of huge, papery, greenish-white bracts, almost enclosing the pink or white flowers with their lower lips intricately marked with violet.) (8 seeds) E
- 846.201 SALVIA MULTICAULIS Turkey, Van, hills SW of Ercek Golu. 1850 m. Open slopes in stony clay. 20.7.88 (This is the counterpart of *S. cryptantha* in the steppes of E Anatolia. A somewhat larger plant than this with broader basal leaves, violet-purple flowers and usually a purple tinge to the big, campanulate calyx.) (15+ seeds) C
- 846.900 SALVIA POTENTILLIFOLIA Turkey, Burdur, SE of Tefenni. 1200 m. In steppe vegetation on open, stony slopes. 9.7.88 (Another of the shrubby group with trisect or pinnatisect leaves, which we consider of horticultural potential. The only member of this group widespread in cultivation is *S. caespitosa* (we did try again to collect the yellow form of this we found some years ago in Sivas but the area had been grazed) and, though this is the dwarfest, it might be taken as the pattern for the others. This too can be lilac or yellow but we have not seen this colony in flower. Of the others collected in 1988, *S. albimaculata* has the largest, deepest coloured, most showy flowers; *S. heldreichiana* is the tallest. This, *S. huberi*, *S. rosifolia* and *S. wiedemannii* are all of a superficially similar appearance, varying in height, habit and flower colour and sufficiently distinct and attractive to merit trying all to find the best garden-plants. 30cm)(15+ seeds) D
- 847.050 SALVIA RECOGNITA Turkey, Nevsehir, Between Saraycik & Boyali. 1200 m. Light, deciduous *Quercus* scrub on volcanic tuffs. 30.7.88 (A most distinct plant, unlike any other 1988 coll. Pinnate leaves and widely spaced rose-pink flowers on elegant, sparsely branched, sticky stems. A woody-based perennial to 1 m.) (15+ seeds) C
- 847.250 SALVIA ROSIFOLIA Turkey, Kars, NW of Kagizman. 1600 m. Open, gravelly slopes. SB coll. 11.7.86 (Robust version of *S. huberi*, outstandingly variable here from bright rose to deep violet-blue. 30 cm.) (15+ seeds) D

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- 847.400 SALVIA SOLAREA Turkey, Adana, Amanus Da., below Hasanbeyli. 800 m. In scrub at margins of fields. 15.7.88 (The giant form of this widespread, often weedy, species we first saw in 1985. Seems perennial in this small colony with stout stems over 1.5 m. carrying lilac and white flowers against huge, flat bright-pink bracts. This has more than lived up to our expectations and, though we have already quoted a report of its performance in Wales, we cannot resist giving you the account from Marjorie Watson (Ayrshire, Scotland) : "Last year, while I was enjoying your smaller treasures, the real show-stopper was 847400 - *Salvia solarea*...Cars stopped continuously to ask what it was. This was after the eight plants had been tramped on by 110 cows which got out in the night - 440 hooves. The plants were well manured." (20+ seeds but no cows) B
- 847.900 SALVIA TOMENTOSA Turkey, Icel, NNE of Gulnar. 1200 m. Stony areas among large, limestone boulders. 13.7.88 (Shrubby with lilac-blue flowers. Eastern relative of the Mediterranean *S. officinalis*. To 1m.) (15+ seeds) B
- 849.001 SALVIA WIEDEMANNII Turkey, Eskisehir, SW of Sivrihisar. 1000 m. Among steppe vegetation on low hills. (One of the most western of the cut-leaved, shrubby group, upright growing to about 20 cm. with lilac-blue flowers from red-purple tinged calyces. A neat plant of which we had several favourable reports as a result of our 1984 coll. - we have not been back in its area until this year. Like the others, worthwhile)(15+ seeds) D
- SAXIFRAGA. We have some interesting species with 1988 collections of such outstanding plants as *S. longifolia*, *S. florulenta* and *S. oppositifolia rudolphiana*. As we could not arrange to visit the Balkans this season, we are listing, in addition, some Greek collections from SB material. These are all usually quite easy to raise providing care is taken in the early stages to avoid the tiny seeds drying-out just as they are germinating and to avoid the tiny seedlings damping-off! With some notable exceptions, most are not too difficult.
- 856.080 SAXIFRAGA AQUATICA France, Pyrenees-Orientales, Puigmal above Las Planes. 2100 m. Crevices on very wet shale cliffs. 18.8.88 (A giant 'Mossy' forming huge cushions of cut leaves with upright stems to 60 cm. set with pure-white flowers. A most striking and handsome endemic of the E Pyrenees for a wet place.) (100+ seeds) B
- 856.301 SAXIFRAGA BIFLORA France, Savoie, E of Col du Galibier. 2600 m. Loose scree and stony areas below snow-patches. 1.9.88 (Strange, red-purple relative of *S. oppositifolia*. A prostrate, snow-melt plant.) (50+ seeds) C
- 856.702 SAXIFRAGA CAESIA France, Hautes-Alpes, Col d'Izoard. 2400 m. Part-stabilised, limestone scree. 31.8.88 (Firm, dense cushions of metallic blue-green rosettes send up milk-white flowers on thready stems, quite late in summer. Usually now placed in Section Aizoonia, though it looks like a 'Kabschia'.) (50+ seeds) C
- 858.600 SAXIFRAGA CRUSTATA Italy, Veneto, Dolomiti, S of Passo di Giau. 2200 m. Rock-fissures & at base of dolomite cliffs. 10.9.88 (Section Aizoonia. Very beautiful rosettes "with a brilliant beading of silver.") (50+ seeds) B
- 860.200 SAXIFRAGA FERDINANDI-COBURGI Greece, Drama, Falakro. 1800 m. Limestone cracks. SB coll. 20.6.86 (Section Porophyllum. A beautiful 'Kabschia' with bright yellow flowers on dense, firm, grey cushions.) (100+ seeds) D
- 860.300 SAXIFRAGA FLORULENTA Italy, Piemonte, NW of Colle della Finestra. 2600 m. N & W-facing fissures on siliceous cliffs. 29.8.88 (The extraordinary, high altitude relict of the Maritime Alps. Farrer's Ancient King - "in sombre splendour of the rosette alone, the most exciting spectacle of those or any other Alps." We were pleased to note that the mass-flowering of 1985 had little affected the populations in the places we know and that there were quite a few young plants. This can give rapid, cress-like germination but it can damp-off just as rapidly; not at all easy but we have seen fine plants from earlier colls.) (50+ seeds) F
- 861.000 SAXIFRAGA HOSTII subsp. RHAETICA Italy, Lombardia, Passo di Croce Domini. 1900 m. Stony alpine-turf over limestone. 6.9.88 (Section Aizoonia. Local race with dark-green, lime-encrusted rosettes. White.) (100+ seeds) B
- 861.200 SAXIFRAGA JUNIPERIFOLIA subsp. SANCTA Greece, Kavala, Oros Pangeo. Crevices on N & NE-facing limestone cliffs. SB coll. 26.9.86 (Section Porophyllum. Prickly, dark-green cushions. Yellow flowers.) (50+ seeds) C
- 861.400 SAXIFRAGA KOTSCHYI Turkey, Van, Kavussahap Da. 2200 m. & above. N & NW-facing limestone & conglomerate cliffs. 17.7.88 (Compact, yellow-flowered 'Kabschia' widespread but very local in Turkey & Iran) (100+ seeds) C
- 861.600 SAXIFRAGA LONGIFOLIA France, Hautes-Pyrenees, Vallee d'Ossoue. 1500 m. W & SW-facing limestone cliffs. 21.8.88 (Certainly the most spectacular of Europeans - "one of the grandest in the race...the huge silver star-fish rosette splayed tight and hard against the cliffs is superb enough picture in itself, even without those dominating regal fox-brush spires of white...a splendour almost oppressive to the beholder." (R.F.) A magnificent Pyrenean endemic seldom seen pure in cultivation unless it has been raised from wild seed - cultivated seed has almost always crossed with another of Section Aizoonia.) (50+ seeds) D
- 862.100 SAXIFRAGA MOSCHATA Andorra, above Port d'Envalira. 2500 m. Exposed acid rock-crevices with *Loiseleuria*. 19.8.88 (Tiny, very tight cushions - approaches *S. harti* and *S. nervosa* but these high-altitude Pyrenean 'Mossies' are difficult to name with assurance. Not *S.m. pygmaea* as leaves trifold. Cream flowers.) (50+) B
- 862.402 SAXIFRAGA OPPOSITIFOLIA France, Savoie, above Bonneval. 2800 m. Schist detritus & fissures on N-facing slope. 1.9.88 (This beautiful Arctic-alpine with rose-purple flowered mats from an acid habitat.) (50+ seeds) B
- 862.403 SAXIFRAGA OPPOSITIFOLIA France, Vaucluse, Le Mont Ventoux. 1800 m. Loose limestone scree along N side of summit. 12.8.88 (A remarkable place to find this widespread alpine - must be heat-tolerant here.) (50+ seeds) B
- 862.550 SAXIFRAGA OPPOSITIFOLIA subsp. RUDOLPHIANA Austria, Salzburg, Hohe Tauern, Hochtor. 2600 m. Stabilised mica-schist detritus on N-facing slopes. 12.9.88 (We are inclined to agree with Farrer that this is "a perfectly distinct species." It grows with other members of Section Porophyrium but never appears to hybridise. Certainly it must be considered the ultimate development of this Section, the distillation and condensation of all the best qualities - hard, tight-packed pads of minute rosettes with large, stemless, brilliant carmine-purple flowers. One of the finest alpinists in Europe, indeed in the world, but never successfully tamed - possibly more difficult to grow to perfection than the tightest of *Dionysias* but at least as worthwhile)(50+) E
- 862.850 SAXIFRAGA PEDEMONTANA Italy, Piemonte, NW of Colle della Finestra. 2600 m. Fissures on cold, N-facing, granite cliffs. 29.8.88 (Rare and handsome 'Mossy' with large, sprays of white flowers, less well-known than its Moroccan subsp. *demmatensis*. Not easy but a worthwhile high-alpine relict.) (50+ seeds) C
- 863.901 SAXIFRAGA SCARDICA Greece, Ahaia, Ori Aroania, Helmos. 1300-1500 m. Part-shaded limestone fissures. SB coll. 13.6.86 (Spectacular, cushion-forming 'Kabschia', usually maturing its white flowers to pink.) () C
- 864.003 SAXIFRAGA SEMPERVIVUM Greece, Drama, Falakro. 1800 m. Among limestone rocks. SB coll. 20.6.86 (Section Porophyllum. Dark-red flowers from hairy, pink stems and calyces; tight, prickly cushions.) (100+ seeds) C
- 864.400 SAXIFRAGA STRIBERNYI Greece, Drama, NW of Drama. 300 m. N-facing rock fissures. SB coll. 20.6.86 (Section Porophyllum. Distinctive endemic of the Greek/Bulgarian border. Branched, hairy, red stems.) (100+ seeds) C
- 867.600 SCABIOSA GRAMINIFOLIA France, Hautes-Alpes, Pic de Gleize. 1600-2000 m. Stony, exposed, limestone slopes. 11.8.88 (An absolute delight here, forming great cushions on the limestone. "Most beautiful and a pure joy in a hot sunny place...wide flower-heads of lilac-lavender all the summer through, making a lovely effect above the silver mass." (R.F.) The best, most reliable rock-garden plant in the genus.) (30+ seeds) B

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- 869.000 SCABIOSA PSEUDOGRAMMIFOLIA Turkey, Sivas, W of Gurun. 1700 m. Open, gravelly, limestone slopes. 30.7.88 (A neat little plant, endemic to this area and closer to the equally local Greek *S. hymettia* and SW Turkish *S. hololeuca* than to *S. graminifolia*, though all are in Section *Trochocephalus*. Tufts of linear, silvery leaves and violet-blue heads. Previous colls. have germinated well but it is unlikely to be easy.) (15+ seeds) C
- * 874.800 SCILLA LITARDIERI Jugoslavia, Bosna i Hercegovina, W of Trebinje. 500 m. Fragmented limestone. 1988 seed from our 1984 coll. (Handsome 20 cm. heads of pale-blue flowers, like a miniature *S. peruviana*.) (20+ seeds) B
- * 882.800 SCORZONERA RELIGIOSA Morocco, High Atlas, Moulay Brahim gorge near Asni. 1000 m. Limestone slopes. 1988 seed, ex hort. J. Blanchard & named by M. Salmon from a 1982 coll., AB & S 4616. Pink, tuberous.) (5 seeds) D
- 883.000 SCORZONERA SERICEA Turkey, Gumushane, Kop Da. 2600 m. Exposed area of limestone gravel on open slope. 28.7.88 (We have tried on two previous occasions to collect seed of this dwarf, cushion-forming species but it had always dispersed before we arrived - it is a critical business with many Compositae! At last we have a reasonable collection. A local endemic of high limestones in E Turkey, forming hard cushions of compacted rosettes of linear leaves, entirely silver, rather like *Euryops acraeus* hammered into a hummock. Almost stemless yellow flowers. Altogether it is not unlike a silverier version of *Catananche caespitosa*, endemic to the Moroccan High Atlas, and like it will probably demand year-round alpine-house treatment, unshaded in summer. There its silvered foliage would be reward enough, even if this were never studied with the yellow heads. As far as we know, a species totally untried in cultivation.) (About 15+ seeds) F
- 883.050 SCORZONERA SUBEROSA subsp. CARLENSIS Izmir, Boz Da., above Odemis. 1800 m. Open, schist slopes among *Astragalus*. 8.7.88 (Not seen in flower but possibly this SW Turkish endemic. Probably mauve-pink - These tuberous-rooted, summer-dormant species are growable but do not last very long in flower. 15 cm.) (5 seeds) D
- 884.001 SCUTELLARIA ALPINA France, Hautes-Alpes, below Col de Gleize. 1600 m. Stony, limestone slopes in full sun. 11.8.88 (Creeping mats with heads of blue-violet flowers. A good, trouble-free garden-plant. (20+ seeds) A
- 885.002 SCUTELLARIA ORIENTALIS subsp. ALPINA Turkey, Konya, E of Ermenek. 1200 m. Steep clay slope over limestone. 13.7.88 (Hooded, lemon-yellow flowers on mats of cut, greyish leaves. One of the dwarfest races.) (15+ seeds) C
- 885.800 SCUTELLARIA ORIENTALIS subsp. SOSNOWSKYI Turkey, Erzurum, N of Tortum. 1600 m. Steep, open, stony slopes. 22.7.88 (Distinct race, mainly distributed in Transcaucasia, with deeply pinnatisect leaves, green above and whitish beneath. Soft-yellow flowers among pale-green bracts on woody-based stems to about 15 cm.) (15+ seeds) C
- 886.502 SCUTELLARIA SALVIFOLIA Turkey, Konya, S of Beysehir. 1100 m. Loose, igneous scree among sparse deciduous oak scrub. 11.7.88 (Mat-forming, perennial, Turkish endemic forming wide clumps with little, wrinkled, velvety grey-green leaves and stiff, upright stems packed with lemon-yellow flowers. 10-15 cm.) (20+ seeds) C
- 906.000 SENECIO LEUCOPHYLLUS France, Pyrenees-Orientales, Puigmal above Las Planes. 2300 m. In slate and gneiss scree and detritus on steep, open slopes. 18.8.88 (Famous endemic of the acid scree of the E Pyrenees - one of those plants which has acquired an aura for its beauty and the challenge it offers to the cultivator. It is always sure to attract the attention of judges at AGS shows when it appears in foliage classes! Exquisitely lobed and frilled foliage and stems clothed in pure-white velvet. The tight heads of yellow daisies on 15 cm. stems are of lesser attraction but are better than many. Definitely needs care.) (About 20+ seeds) E
- 917.100 SILENE ELISABETHA Italy, Lombardia, Monte Tremalzo, WSW of Riva. 1900 m. Stony, N & W-facing limestone slopes, in turf, rock fissures and stabilised scree. 6.9.88 (Like the previous species, this is a beautiful aristocrat standing out from a large and largely weedy genus. "Tufts of narrow glossy foliage" from which "stray the stems of downy claret-coloured velvet, wandering along the ground for a few inches and then rising up...to unfold one or two of those enormous ragged flowers of flaming magenta-rose...so much more tropical in the look than alpine." (R.F.). One of the most spectacular of European alpine, an isolated endemic of the mountains between Lakes Como and Garda. Not easy to grow to perfection!) (20+ seeds) D
- 922.000 SOLDANELLA ALPINA Italy, Veneto, Dolomiti, above Passo di Fedaja. 2200 m. Base of N-facing dolomite cliffs. 10.9.88 (Perhaps the most famous and possibly the most lovely of exclusively European alpine. Mats of rounded, leathery foliage and fringed, amethyst-violet bells on stems of 10 cm. or less.) (30+ seeds) B
- 923.100 SOLDANELLA PUSILLA HYBRIDS Italy, Veneto, Dolomiti, S of Passo di Giau. 2200 m. Peaty, acid soil, at base of dolomite cliffs, among *Salix*. 10.9.88 (An extremely variable colony in an odd spot where acid rock butted against dolomite limestone. Appears from the foliage to be derived from *S. pusilla* and *S. alpina* but *S. minima* was growing on ledges on the cliffs. Members of this genus cross readily and hybrids between most of the species in the Alps are named. Anything might be expected from lilacs to whites.) (30+ seeds) D
- 943.000 TCHIHATCHEWIA ISATIDEA Turkey, Erzurum, NW of Askale. 2000 m. Loose, eroded shale slopes and banks. 28.7.88 (Of all the distinct Turkish endemics, this is perhaps the most extraordinary. A monocarpic, monotypic genus of the Cruciferae, not obviously close to anything else anywhere. From the rosette of dark-green leaves, bristly with white hairs, erupts a great, pyramidal head of stunning, pink flowers, famous for the sweetness of their fragrance, each of these is followed by a big, flat, indehiscent fruit, parchment coloured and sometimes purple-tinted. The appearance of these stout, packed, pink pyramids, as much as 30 cm. high but usually rather less, is one of those floral 'events', like the flowering of *Saxifraga longifolia* or *Yucca whipplei*! "In cultivation it has never done any good" says Farrer rather miserably and this may be true of attempts to grow it outside in the wet of the British climate but it was for long a feature of the now-demolished bulb-frame at Wisley, where its roots had free range in the very gritty soil, and it can be grown in a deep pot in the alpine-house. Don't try to clean the fruits and sow on their sides.) (5 fruits) D
- 956.000 THYMUS CILICICUS Turkey, Icel, N of Mut. 1000 m. Exposed gravelly ridges with sparse *Pinus*. 12.7.88 (Yet another distinct Turkish endemic, established in cultivation from a collection by Peter Davis, who justly rated it as one of the finest in the genus. It tends to keep to the coastal sides of the southern ranges, descending almost to sea-level but it can climb to 2000 m. This was the highest inland locality we could find some ripe seed as it does not flower till summer, bearing sparse resemblance to the obese cultivated specimens one all too often sees - overfed in the high-nutrient sludge of a peat-based compost! The dense shrublets of upright, hairy stems are almost crisped by the summer-heat before they cover themselves with the oblong heads of flowers from pale lilac to deep violet-purple. To 15 cm. high) (20+ seeds) C
- 967.000 TROLLIUS EUROPAEUS France, Savoie, Col du Mont Cenis. 2000 m. Damp depressions with rich, diverse meadow vegetation. 1.9.88 (The pale-yellow Globe Flower, one of the loveliest alpine-meadow plants.) (30+ seeds) A
- 967.250 TROLLIUS RANUNCULINUS f. TENUISECTA Turkey, Van, Ispiriz Da., NNW of Baskale. 2800 m. Wet ulleys. 20.7.88 (Race with finely cut leaves - comes up after snow-melt like a yellow *Adonis*. Eventually 50 cm.) (30+ seeds) D

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C : \$3.50 ; £2.00 ; DM6, - ; FF20. -

PRICE CODE D : \$4.50 ; £2.50 ; DM 8, - ; FF25. -

E : \$6.00 ; £3.50 ; DM10, - ; FF35. -

F : \$7.50 ; £4.50 ; DM13, - ; FF45. -

- ACTAEA RUBRA Handsome, slow-growing herbaceous woodlander from N America. Spectacular red fruits. 60 cm. (15+ seeds) B
- ALSTROEMERIA LIGTU HYBRIDS Marvellous, tuberous perennials in pinks, pale yellows and flaming orange. 1 m. (20+ seeds) A
- PSITTACINA (Previously listed as *A. pulchella*, a name currently rejected as "surrounded by confusion.") Crimson-red, tipped with green and intricately marked. We have always found this hardy in S England. 60 cm. (15+ seeds) C
- PULCHRA Superb, pink-flowered species introduced from Chile by Beckett, Cheese & Watson. 1 m. (15+ seeds) D
- ANEMONE RIVULARIS Lovely Himalayan perennial with branching heads of white, blue-backed cups. 50 cm. (20+ seeds) A
- ARISAEMA JACQUEMONTII Himalayan aroid with green, sometimes white-striped, spathes. Purplish spadix. (10+ seeds) D
- TORTUOSUM From a clone of this Himalayan forest species which has proved hardy in Somerset, UK, over recent severe winters, growing to 1.5 m. high with pedate leaves and weird green and purple spathes. (15+ seeds) D
- ARUM. This exceptional range of *Arum* spp. and the above two *Arisaema* spp. are mainly from Mike Tucker (Somerset, U.K.)
- ALBISPATHUM Very hardy with extremely large, membranous, greenish-white spathes. Scarlet fruits. (15+ seeds) B
- CREPICUM Elegant, sweet-scented, yellow spathes. The most beautiful species hardy in the U.K. (10+ seeds) B
- CYRENAICUM Little-known relative of *A. palaestinum* from Libya. Big, purple-lined spathes. Tender. (10+ seeds) C
- CONOPHALLOIDES var. VIRESCENS Green, purple-flushed spathes. Grey spadix. Turkish coll. by N. Stevens. (10 seeds) C
- DIOSCORIDIS AC & W 1965 Upright, yellow-green spathes with purple basal blotches. Coll. W Turkey, 1966. (8 seeds) D
- EUXINUM From a Turkish coll. by Norman Stevens. No no. or data but the species, described in 1983, is widespread in the NE. We have only seen it in flower near Lake Abant and have never collected seed. Robert Mill in the 'Flora of Turkey' comments "an attractive plant worthy of cultivation" - spathes are purplish outside and white with a purple border inside. Mike Tucker comments that these are long-lasting and overtop the leaves. This is dwarf at less than 30 cm. and, knowing the cold, wet area it comes from, completely hardy. An important new plant. (8 seeds) E
- ITALICUM H & S 2291 From S Central Turkey. Narrow, thick-textured, yellowish spathes. Unmarked leaves. (10+ seeds) B
- ORIENTALE Slow to increase vegetatively but one of the finest. Large, boat-shaped, brown-purple spathes. (10 seeds) C
- CIRSIIUM HELENIODES Leaves covered with white wool beneath. Purple heads. Rather local British native. 1m. (15+ seeds) A
- COLCHICUM ARENARIUM KP 400 Coll. near Bunar, N Yugoslavia, 100 m., by Karin Persson. Deep-coloured, dwarf. (8 seeds) D
- COMMELINA COELESTIS C & S American, tuberous species with a succession of gentian-blue flowers. Tenderish. 1 m. (20+) A
- CORDYLINE KASPAR Wild coll. made by Terry Hatch on Three Kings Is. off the N tip of New Zealand. (20+ seeds) C
- CROCUS PELISTERICUS HZ 85-67 From material coll. Yugoslavia, Makedonija, Karadzica Planina. Peaty turf. (8 seeds) F
- SCARDICUS HZ 85-37 From material coll. Yugoslavia, Makedonija, Sar Planina. Both from H. Zetterlund. (8 seeds) F
- CYCLAMEN CYPRIUM Originally from wild material coll. M. Koenen. Autumn-flowering, pink-nosed white. Tender. (15+) C
- HEDERIFOLIUM By far the hardiest and most reliable in the garden. Pink flowers in autumn. Mixed forms. (20+ seeds) A
- HEDERIFOLIUM 'ALBUM' The pure-white form, at least as vigorous and hardy as the pink. Comes quite true. (20+ seeds) B
- HEDERIFOLIUM - from Dave Hoskins 'Highfield' clone - rather distinct, glossy foliage. (20+ seeds) B
- HEDERIFOLIUM - from white-flowered 'Apollo' types. For some years we selected and maintained a strain developed from seed from the original plant of 'Apollo', selected by E.A. Bowles as the best leaf-form and now in Bowles' Corner at Wisley. Among these a white-flowered plant appeared with D. Hoskins. Seed is from this original white and a white seedling from it. Produces plenty whites and superb, silver-patterned leaves. (15+ seeds) E
- INFAMINATUM - plain-leaved form. Hardy, autumn-flowering with white flowers and unmarked leaves. (20+ seeds) B
- LIBANOTICUM Sumptuous, spring-flowering pink from the stock originally grown by C.C. Mountfort. (15+ seeds) C
- PERSICUM Spring-flowering pale-pink or white with red noses. Lovely in a cold or frost-free greenhouse (15+ seeds) C
- PERSICUM - from deep pink form. From a most distinct clone with rather small, very deeply coloured flowers, grown by Dinah Batterham from a coll. by Dr. B. Blount, possibly in Lebanon but maybe Syria. Seldom sets seed. (15+ seeds) E
- REPANDUM - Peloponnese form. Pale-pink, stippled leaves. From a coll. by Manfred Koenen. Tender. Spring. (15+ seeds) C
- DAVALLIA TASMANII Hare's Foot Fern coll. Three Kings Is., New Zealand, by Terry Hatch. Frost-free. (100+ spores) C
- DELPHINIUM - Karl Foerster Hybrids - from dark blues. We have long admired Karl Foerster's named clones of Delphinium, bred for their qualities as garden-plants with more branching, graceful flower-stems than the solid, top-heavy hybrids usually seen in Britain. More recently, German breeders like Kayser & Seibert and Heinz Klose have continued the Foerster tradition. We wanted some for our own garden and, not being too worried about named cultivars, asked our friends Hans & Helga Simon if we could collect seed from their stock-beds. There is more than enough for us! Seed from deep gentian-blues, often shot with violet - may or may not come evenly! 1.5 m. (20+ seeds) C
- Karl Foerster Hybrids - from pale blues. From light azures and ice-blues - 'Ariel', 'Gletscherwasser', etc. (20+) C
- DIERAMA PENDULA We think this is the right name - much dwarfer, more delicate and pinker than *D. pulcherrima*. (8 seeds) C
- DOUGLASSIA IDAHOENSIS Recently described and occurring only on "a very few of the highest peaks" of the great, granite Idaho Batholith. Rose-pink flowered and obviously closest to *D. montana* but perfectly distinct from it - rather more fleshy than other *Douglasias*. Seed from the original introduction by Roy Davidson of Washington, USA) (8 seeds) F
- ECCREMOCARPUS SCABER Chilean climber with showy orange & yellow, tubular flowers. Grows quickly & easily. (50+ seeds) A
- ENKLANTHUS DEFLEXUS The hardier, Chinese form of this rare, Ericaceous shrub. Ivory, red-streaked bells. (20+ seeds) C
- FRITILLARIA EPIROTIKA From material coll. by O. Sonderhausen : OS 908. Endemic to serpentine screes. (10 seeds) F
- EUBOICA OS 620 Extremely local, yellow-flowered species endemic to Evia off E Greece. Limestone. (10 seeds) F
- GIBBOSA Pink-flowered species from N Iran. Cultivated seed of this is of extremely rare occurrence. (10 seeds) F
- MELEAGRIS Easy, hardy W European for a moist, open site. From both purple-chequered and white forms. (30+ seeds) A
- SP. Greece, Andros, Moni Zoodochos Pigi. Coll. M. Jope, 2.6.88 The most likely sp. is *F. ehrhartii*. (10 seeds) D

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GENTIANA ASCLEPIADEA 'ALBA' Pure-white form of the elegant Willow Gentian. Rich soil in shade. 60 cm. (30+ seeds) A

PARADOXA An ancient and extraordinary relict surviving in a few stations on the limestones of Transcaucasia, SE of Sochi and NW of Sukhumi in the Abkhaz ASSR, at altitudes around 1300 m. Hans-Erik Jensen not only sent the seed but also a copy of Alboff's type-description of 1895, where he comments "species insignis pulchra distinctissima, Gentianarum hucus cognitarum nulli proxima." and later "assurance une des especes les plus singulieres du genre Gentiana." It is indeed unlike any other species with erect stems of about 25 cm. clothed in linear, verticillate leaves and each bearing 1 or 2 trumpets, olive-green outside with pale-blue plicae and lobes. (30+) E

GLADIOLUS MACULATUS subsp. MERIDIONALIS Winter-grower from the Cape, S Africa. Salmon. 30 cm. Frost-free. (10+ seeds) C

HAEMANTHUS BURCHELLII S African Amaryllid. Dwarf with white, shaving-brush heads. Velvet leaves. Frost-free. (3 seeds) C

HELLEBORUS. Mainly from specialist Will McLewin (Cheshire, U.K.), whose selection of better seedlings in the Helleborus x hybridus group, mainly derived from H. orientalis, is on-going, with some seed from our own named clones added e.g. our seed of 'Andromeda' has gone with 'Purples'; 'Libra', etc. with 'Zodiac Strain'. Germination seems quite reliable during the winter after sowing, if seed is kept moist. Colours refer to the parents; seedlings may vary.

From 'AQUARIUS' Outstanding pink. (15+ seeds) C ; 'PURPLE STRAIN' From plum-purples to wine. (15+ seeds) C

From 'AQUILA' White, maroon basal stain. (15+ seeds) C ; 'ZODIAC STRAIN' Pink; maroon-spotted zone. (15+ seeds) C

From "GUTTATUS-TYPES" White, crimson spots (15+ seeds) C ; 'SPECIAL MIXTURE' From selected seedlings. (15+ seeds) C

X HYBRIDUS 'STANDARD MIXTURE' If you do not grow these already, this is more than adequate for a start. (20+ seeds) B

ARGUTIFOLIUS (H. corsicus) Splendid evergreen, spiny-edged foliage. Branching heads of yellow-green cups. (20+) A

X STERNII Pink-tinged cups. From selected clones of the hybrid between the above and H. lividus. (20+ seeds) B

HERBERTIA PULCHELLA Little, S American, Iridaceae corm. Violet, Tigridia-like flowers. Summer-growing. (20+ seeds) B

HESPERANTHA PAUCIFLORA Winter-growing S African corm. White, pink-backed flowers. Best kept frost-free. (15+ seeds) B

HEUCHERA 'PALACE PURPLE' Metallic, bronze-purple, ivy-shaped leaves. Strain developed by Brian Halliwell at Kew. (100+) B

HOSTA. Clones do not come 'true' from seed. May produce something worthwhile or, at worst, useful ground-cover.

From 'HALCYON' & 'ERIC SMITH' Fairly reliable parents for dwarfier, neat, blue-leaved seedlings. (20+ seeds) C

From GOLD-EDGED H. SIEBOLDIANA TYPES - 'Frances Williams', 'Squash Edge', etc. Gold-edges unlikely! (20+ seeds) B

From 'ROUGH WATERS' Vigorous and floriferous American hybrid, derived from H. sieboldiana. (20+ seeds) B

IPHEION UNIFLORUM 'FROYLE MILL' From this outstanding and distinct deep violet clone of this long-flowering, 15 cm. S American bulb. Fairly reliably hardy in S Britain. First time we have ever seen seed on this. Lovely. (15+ seeds) C

IRIS AITCHISONII var. CHRYSANTHA From material coll. by Dr. Nasir in the Sirikot Hills, Pakistan. Yellow. (5 seeds) F

ALBOMARGINATA Subgen. Scorpiris (Juno). From a deep blue form of this C Asian species. 20 cm. (5 seeds) F

GRAMINEA var. PSEUDOCYPERUS Series Spuriae. Broad, glossy leaves. Red-purple flowers. 30 cm. (8 seeds) B

KOPETDAGENSIS Subgen. Scorpiris. From the Iran-USSR-Afghanistan border ranges. Yellow. 20 cm. (5 seeds) F

KUSCHAKEWICZII Subgen. Scorpiris. Pale-violet, white-crested C Asian species. Material from Tashkent. (5 seeds) F

MAGNIFICA Subgen. Scorpiris. 50 cm. high stems of pale lilac flowers. Quite easy, even outside in U.K. (15+ seeds) C

SETOSA 'ALBA' Series Tripetalae. White form of this excellent garden-plant from NE Asia & N America. (20+ seeds) B

SINTENISII Series Spuriae. Attractive plant with narrow, dark-blue flowers from grassy tufts. 50 cm. (20+ seeds) B

SUBBIFLORA Splendid Portuguese Bearded Iris with outstanding violet flowers. 50 cm. Hot, dry site. (15+ seeds) C

TROJANA Distinct & beautiful W Turkish Bearded Iris. Pale-blue standards. Red-purple falls. 60 cm. (5 seeds) C

KIRENGESHOMA PALMATA 1 m. stems of pale-yellow, waxen bells in autumn. Beautiful, Japanese woodland-plant. (30+ seeds) B

LEYCESTERIA CROCOTHYRSOS Kingdon Ward's 'Golden Abelia' from Assam - KW 8180 Delei Valley, 2000 m., on gneiss-cliffs. Arching 2 m. stems with yellow racemes. Should be tried by all who garden in mild climates. (50+ seeds) C

LIGULARIA DENTATA 'DESDEMONA' Spectacular branching stems of orange-yellow daisies. 1.5 m. Rich, moist. (20+ seeds) A

LILIUM MARTAGON 'QUARRY WOOD STRAIN' Developed from some of the best colour, dark forms and pinks. (20+ seeds) A

MARTAGON 'ALBUM' Lovely, ivory-white, green-tinged form of this growable species. 1.5 m. (20+ seeds) B

NANUM var. FLAVIDUM From AGS-ES 478: Sikkim, Bikbari Valley, 4100 m. Large-flowered sulphur form. (10 seeds) F

SPECIOSUM var. CLIVORUM Wild seed of this distinct variant, described in 1956, coll. in the type-locality by Don Elick: Japan, S Shikoku, Agawa River gorge, on shady damp cliffs. "Habit like a giant Tricyrtis... stems 6 ft. or longer with up to 20 smaller, light-pink flowers on very long pedicels." Possibly first time available. (10) F

LOBELIA TUPA Extraordinary Chilean, hardy in SW Britain. Spires of downy, crimson tubular flowers. 2 m. (30+ seeds) D

LYCHNIS CORONARIA 'ALBA' Easily grown, herbaceous perennial. Pure-white flowers & grey-white foliage. (30+ seeds) A

MAGNOLIA. Unlike seed of the dry-climate species, these are stored moist to preserve viability. Sow immediately. These two are among the easiest and quickest to flower from seed. This seed, as well as most of the other choice and unusual woody species listed is from the gardens of Helen Barton and Bert Hopwood (both in Devon, U.K.).

SIEBOLDII One of the latest to flower with nodding, creamy-white flowers on wide-spreading shrubs. 3 m. (10+ seeds) C

WILSONII Pendant white saucers with crimson stamens. Superb large shrub from W China. 4 m. (10+ seeds) C

METROSIDEROS BARTLETII Terry Hatch (Pukekohe, New Zealand) always tries to send some seed from his collections of exceptionally local NZ endemics in the hope they might penetrate to some competent gardener who can maintain them. This is recently described, only about 12 trees are known in the North of N Island. White-flowered. (100+ seeds) C

MYOSOTIS PETIOLATA var. POTTSIANA Only known from the type locality on the Otara River, New Zealand. (15+ seeds) E

NARCISSUS. All here from John Blanchard (Dorset, UK) including some wild Moroccan seed. Only small quantities of all.

N. BULBOCODIUM (E. Hodgkin coll. Morocco) (15+) B ; N.B. ? ZAIANICUS (JWB 88-15: Aguelmouss, Zaiane) (10) D

N. BULBOCODIUM (coll. Braganca. Small, flat fls.) (15+) C ; N. JONQUILLA HENRIQUESII (MS 445 - type locality) (10) D

N.B. ROMLEUXII (cult. forms; pale yellows) (15+) B ; N. TAZETTA PANIZZIANUS (C. Stocken coll. Dwarf) (10) C

N.B. ROMLEUXII (JWB 88-14: Khenifra to Mrirt) (10) C ; N. TAZETTA POLYANTHOS (JWB 88-08: near Taza) (10) D

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- NARCISSUS BULBOCODIUM JWB 88-16 Coll. near Oulmes, Zaine Mts., Morocco, wet turf. ? aff. *citrinus*. Distinct. (10+) D
- BULBOCODIUM GRAELLSII JWB coll. Sierra de Guadarrama, C Spain. Most distinct dwarf, greenish-white race. (15+ seeds) D
- BULBOCODIUM TENUIFOLIUS From material coll. C. Portugal : Blanchard & Salmon 204. Good yellow race. (15+ seeds) B
- CORDUBENSIS From both the C. Stocken & JWB colls. made in the Ubrique area, SE Spain. An excellent yellow Jonquil originally distributed as *N. jonquilla henriquesii* (q.v. for a Portuguese coll.), now described as this. (10) B
- PAPYRACEUS JWB 88-21 Coll. near Tangier. Colony of this white Tazetta twice seen flowering in October. (10 seeds) D
- TAZETTA aff. subsp. AUREUS Pale yellow coll. Sardinia by T. Norman. *N. bertolonii* var. *primulinus* fits well. (10) C
- NECTAROSCORDUM SICULUM subsp. BULGARICUM Statuesque with drooping bells of creamy green flushed purple. 1.2 m. (15+) B
- NOTOSPARTIUM CARMICHAELIAE Leafless, lilac-pink New Zealand 'Broom'. Graceful shrub for milder areas. (10+ seeds) C
- PITTIOSPORUM FAIRCHILDII Coll. Three Kings Is. off N New Zealand. Must be frost-free. Dry conditions. (10+ seeds) C
- PRIMULA EDELBERGII From material coll. in Afghanistan by Per Wendelbo : FW 9739. Subgenus *Sphondylia*. Yellow. (50+) D
- HELODOXA The most beautiful pure-yellow Candelabra species for wet sites. Usually comes true. Easy. (100+ seeds) A
- RHODOCHLITON VOLUBILE (= *R. atrosanguineum*) A lovely climber endemic to the mountain forests of Oaxaca in S Mexico. Tubular crimson-black flowers in rose-pink, bell-shaped calyces. Borderline in UK but flowers the first year. (30+) B
- RODGERSIA PINNATA 'ALBA' Cream-white flowered form of this magnificent foliage-plant. 1.5 m. (100+ seeds) B
- PINNATA 'ELEGANS' Raspberry-pink flowers. Wrinkled, bronzer foliage. 1 m. Will not come 100% true. (100+ seeds) B
- SAMBUCIFOLIA Foliage like giant elder-leaves. These three all want rich, moist soil or part-shade. (100+ seeds) B
- ROMULEA BULBOCODIUM - KNIGHTSHAYES FORM Violet, gold-centred, Crocus-like flowers. Hardy in S Britain. (30+ seeds) B
- HIRTA From the A.M. form of this S African with dark-centred, yellow flowers. Unheated greenhouse. (15+ seeds) C
- MACOWANII var. ALPICOLA Fully hardy, summer-grower from high altitudes in S Africa. Yellow flowers. (15+ seeds) B
- ROSEA Pink flowered form of this variable S African. Cold or frost-free greenhouse in U.K. (15+ seeds) B
- SALDANHERNSIS Beautiful, 'varnished', golden, brown-backed 'crocuses'. Hardy in a cold greenhouse in UK (15+ seeds) C
- ROSA GLAUCA (= *R. rubrifolia*) Exquisite foliage - bluish, tinged purple. Seed, stored moist, must be stratified. (30+) A
- RUPICAPNOS AFRICANA Excellent alpine-house plant. Pink *Corydalis*-like flowers. Blue-grey foliage. (15+ seeds) B
- SISYRINCHIUM JUNCEUM BCW 4106 Graceful, pink-flowered, Chilean. Well-drained site or cold greenhouse. (15+ seeds) B
- SORBUS SARGENTIANA Perhaps the finest Rowan. Sticky, crimson, Aesculus-like winter-buds. Marvellous red autumn-tints. Enormous heads of scarlet fruits. Seed has been stored moist but will need stratification to germinate (20+ fruits) B
- STACHYURUS CHINENSIS Superb Chinese shrub. Drooping, pale-yellow racemes before the leaves. In our experience it does not need cold to germinate. Sow under glass. Young plants grow well. Absolutely hardy. Sun. Good drainage. (50+) C
- THALICTRUM DELAVAYI One of the loveliest herbaceous perennials. Airy, lilac sprays. Filigree leaves. 2 m. (50+ seeds) A
- TULIPA SPRENGERI Latest of all Tulips. Elegant orange-scarlet. Grows best outside in U.K. in light shade. (20+ seeds) B
- VERATRUM NIGRUM Majestic spires of maroon-black stars. Pleated basal leaves. Slow-growing but permanent. (20+ seeds) B
- WATSONIA BULBILLIFERA Reddish flowers, marked white, on 1.5 m. stems. Reasonably hardy in SW Britain. (5 bulbils) C
- 'STANFORD'S SCARLET' Originating at Bloem Erf Nursery in S Africa, this has proved the hardiest in S England. Maybe derived from *W. beatricis* with orange-scarlet flowers on 1.5 m. stems. Well-drained, sunny corner. (15+ seeds) C

SECTION I : SEED-BANK SUPPLEMENT : SEED COLLECTED IN NORTH AMERICA, 1987

Having spent our 1988 season in Europe and Turkey, there are no new North American collections. We plan to spend the 1989 season in the American West, concentrating on the Intermountain Area and California, regions rich in fine endemic species, which (apart from brief visits to small parts of E Nevada and Utah) went untouched in 1987. Having 'cut our teeth' on the easier, more accessible areas around the main chain of the Rocky Mountains, we feel a little better prepared for the problems of the Intermountain Area.

We do, however, have a wide range of 1987 seed, stored in our seed-bank. In general, providing one can locate the plants and providing that they have set seed, we found it easier to make adequate seed-collections in North America than in the Middle East, where overgrazing usually removes top-growth and capsules and predation by insects destroys a large percentage of the seed. Consequently, with a good choice of stored material available, it has been difficult to select what we should list again. Selection has been based on three criteria : we have chosen potentially good garden plants, whether well-known or not, giving consideration to herbaceous perennials, often ignored by those only interested in 'alpines' ; we have selected some outstanding local species, which may be difficult to locate and are seldom collected ; we have tried to include material which rarely appears in other lists, often because the seed is extremely time-consuming to collect - we are probably more prepared to spend hours crawling about on a mountain-side in a freezing gale or toiling up desert slopes in temperatures of over 100°F, than most amateurs! Here, then, is a selection of what we consider to be some of the best or most interesting 1987 collections, of which we still have seed available. Obviously, quite a few of the more important 1987 collections were inadequate for the demand last year, but most are here and the remaining quantities should be sufficient for the estimated 1988 requests. Few, however, are likely to be made available again in future seasons and, in many cases, it will not be possible to repeat collections in 1989, as we shall be working in different areas.

US Dollar prices for these 1987 collections do present us with a problem. We try to be fair to both our customers and ourselves - about half the price of the seed is necessary to cover collection-costs and out of the remainder we have to pay for printing, postages and other overheads, apart from hoping there might be enough to provide us with a reasonable standard of living. While the US \$ is not what it was two years ago in Europe or Turkey, we can hardly argue that US customers pay more for seed collected last year in the USA! In this section only, US \$ prices remain the same as 1987.

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Please note : All seed in this section has been stored in low humidity at about 0°C (32°F) to preserve viability.
Field collection numbers in the left-hand column run in the order of collection not in numerical order.

- 9626 ANDROSACE CARINATA Colorado, El Paso Co. (n.b. our 1987 field-notes incorrectly named Teller Co. as the location of Pike's Peak), Pike's Peak, above Elk Park. 4000 m. Open slopes in granite grit. 9.9.87 (Superb plant almost unknown in cultivation. White, yellow-eyed flowers bluish pink with age. Possibly best placed under the Alaskan *A. chamaejasme* subsp. *lehmanniana*. Much tighter than and absolutely distinct from the European race.) (10+ seeds) E
- 9404 AQUILEGIA CAERULEA (var. *caerulea*) Wyoming, Albany Co., Medicine Bow Mts., Snowy Range. 3600 m. Stony slopes in coniferous forest. 8.8.87 (The incomparable blue and white Columbine of the Rockies. 30 - 50 cm.) (20+ seeds) B
- 9267 AQUILEGIA CAERULEA var. OCHROLEUCA Wyoming, Fremont Co., Wind River Mts., SW of Lander. 2500 m. Shady areas among *Populus*. 29.7.87 (Beautiful, more western race in white and creamy shades.) (20+ seeds) B
- 9312 AQUILEGIA JONESII Wyoming, Sheridan Co., Big Horn Mts., between Duncum Mt. & Sheep Mt. 3200 m. Unstable lime-stone scree on steep slopes. 1.8.87 (Lavender-blue Columbines on tufts of cut, blue-grey leaves.) (15+ seeds) E
- 8925 AQUILEGIA MICRANTHA Utah, San Juan Co., Sunbonnet Rock above Bluff. 1550 m. Seepage lines on shady, sandstone cliffs. 5.7.87 (A multitude of tiny flowers in pale-blue, cream or white. 50 cm. Colorado-canyon endemic.) (20+) D
- 9209 AQUILEGIA SAKIMONTANA Colorado, El Paso Co., Pike's Peak, Elk Park. 3700 m. Loose granite grit at bases of boulders. 25.7.87 (Short-spurred, blue and white endemic of the Front Range. 20 cm. Easy in cultivation.) (15+) C
- 8931 ARCEMONE CORYMBOSA Utah, San Juan Co., Valley of the Gods, N of Mexican Hat. 1500 m. Open sites in sandstone gravel. 5.7.87 (Huge, crumpled, white, gold-stamened poppies. Spiny grey leaves. 50 cm.) (20+ seeds) B
- 9259 ASTRAGALUS ARETIOLIDES Wyoming, Fremont Co., SE of Lander. 2100 m. Steep, eroded clay slopes. 28.7.87 (Solid, silky mounds of snowy silver covered with stemless, intense carmine-purple flowers. Very difficult.) (10+ seeds) F
- 8998 ASTRAGALUS CERAMICUS Utah, Garfield Co., NE of Ruby's Inn to Antimony. 2600 m. Gravelly banks in full sun. 9.7.87 (Prostrate, rush-like stems. Inflated capsules of yellowish parchment blotched with crimson.) (10+ seeds) C
- 9615 ASTRAGALUS KENTROPHYTA var. IMPLEXUS Colorado, Park Co., S of Fairplay. 3000 m. Reddish clay. 6.9.87 (Very rich coloured, carmine-pink form. Tiny flowers on flat greyish mats - often nondescript in colour.) (10+ seeds) E
- 8921 ASTRAGALUS ? NEWBERRYI New Mexico, San Juan Co., NW of Aztec. 1900 m. Eroded clay hills. 4.7.87 (Tight mounds of silvery foliage with the most beautiful pods we have ever seen, large and clothed in white velvet) (10+ seeds) E
- 9178 ASTRAGALUS SPATULATUS Wyoming, Albany Co., NE of Laramie to Horse Creek. 2600 m. Exposed, level Artemisia-steppe. 22.7.87 (Neat silver tufts. Racemes on short, wiry stems - especially deep pinks & purples here.) (10+) E
- 9163 ASTRAGALUS TRIDACTYLICUS Wyoming, Laramie Co., S of Cheyenne. 2100 m. Gravel-patches in exposed grassland. 22.7.87 (Pads of trifoliolate leaves clad in dense, white pubescence. Rich pink flowers. Exquisite.) (10+ seeds) F
- 9623 BOYKINIA JAMESII (= *Telesonix jamesii*) Colorado, El Paso Co., Pike's Peak. 4000 m. Crevices among granite boulders. 9.9.87 (The finest form with luminous, deep-pink flowers. Germinates like cress!) (100+ seeds) E
- 9145 CALOCHORTUS GUNNISONII Colorado, Boulder Co., N of Boulder. 2000 m. Shale detritus, among grasses. 19.7.87 (White flowers, intricately purple-pencilled and hairy within. A breathtaking bulb for the specialist.) (20+ seeds) C
- 9429 CALOCHORTUS GUNNISONII Wyoming, Albany Co., W of Centennial. 2800 m. Open, stony areas among *Artemisia*. 9.8.87 (Very large with pale lavender ground-colour here. These montane plants are best overwintered cool & dry.) (20+) D
- 9437 CASTILLEJA INTEGRATA Colorado, Park Co., SW of Fairplay. 3100 m. Open stony steppe with sparse *Artemisia*. 13.8.87 (Brilliant orange-scarlet spikes on upright, grey-leaved stems. 20-30 cm. The genus is difficult but not at all impossible. Has been grown in peat-based 'no-soil' compost with liquid-feeding. Worth experimenting.) (50+ seeds) B
- 9465 CASTILLEJA OCCIDENTALIS Colorado, Park Co., Mosquito Range. 4300 m. Exposed slopes. 15.8.87 (15 cm. alpine-tundra species, often growing isolated in rock-strips. Lemon-yellow bracts and purplish leaves.) (50+ seeds) B
- 9027 COWANIA MEXICANA var. STANSBURIANA Utah, Beaver Co., Wah Wah Mts. 2400 m. Among granite boulders. 11.7.87 (Fine, 1 m., Rosaceous shrub. Creamy-white, gold-stamened flowers and *Dryas*-like seed-heads.) (20+ seeds) C
- 8677 CRYPTANTHA CAESPITOSA Wyoming, Carbon Co., Muddy Gap. 2200 m. Rock detritus. 22.6.87 (Tight, softly hairy, grey mats. 6 cm. flower-stems. Endemic to SW Wyoming and adjacent NE Utah. White flowers.) (8 seeds) D
- 8991 CRYPTANTHA OCHROLEUCA Utah, Garfield Co., NW of Tropic. 2500 m. Bare clay-ridges. 9.7.87 (Very local, Garfield Co. endemic. Densely caespitose, grey, hairy cushions with 4 cm. stems of white flowers. This Boraginaceae genus, close to *Eritrichium*, contains many weedy plants but the best are superlative. These are three of the finest - all untried in cultivation. Try them in as hot, as dry and as poor conditions as practicable.) (8 seeds) D
- 8861 CRYPTANTHA PARADOXA Colorado, Montrose Co., NW of Bedrock. 1800 m. Among *Juniperus* on open, stony slopes. 30.6.87 (Beautiful silver rosettes and 10 cm. stems of especially large white flowers. Very local.) (8 seeds) D
- 9146 DELPHINIUM GEYERI Colorado, Boulder Co., N of Boulder. 2000 m. Rock detritus on steep shale slopes. 19.7.87 (A very fine, rather dwarf 50 cm. form of this widespread, azure-blue species. Summer-dormant.) (30+ seeds) C
- 9542 DODECATHEON ALPINUM Nevada, White Pine Co., Snake Range. 3500 m. Wet, streamside meadows. 24.8.87 (Beautiful lilac-pink flowers with black anthers. Absolutely distinct in its 4-lobed calyx and corolla. 20 cm. (50+ seeds) D
- 9174 DODECATHEON PULCHELLUM Wyoming, Laramie Co., Horse Creek. 2300 m. Moist meadow. 22.7.87 (A magnificent, robust colony of this variable species, up to 1 m. in seed, with especially deep magenta-carmine forms.) (50+ seeds) C
- 8718 DODECATHEON PULCHELLUM subsp. WATSONII (= *D. uniflorum*) Wyoming, Fremont Co., Wind River Mts., NE of Atlantic City. 21.6.87 (Almost certainly this obscure, dwarf, summer-dormant plant from granite grit at 3000m.) (20+ seeds) F
- 9319 DOUGLASIA MONTANA Wyoming, Sheridan Co., Big Horn Mts., Duncum Mt. 3300 m. Open, stony slopes. 1.8.87 (One of smallest *Douglasias*. Little, tight rosettes with big, pink flowers. A tiny plant of exposed tundra.) (10+ seeds) E
- 9479 ECHINOCEREUS TRIGLOCHIDIATUS var. GONACANTHUS Colorado, Costilla Co. (Spectacular, cold-climate cactus can tolerate very low temperatures if dry. Ribbed, 10 cm. stems. Brilliant scarlet, cup-shaped flowers.) (15+ seeds) D
- 8911 ERIGERON ? VAGUS Colorado, San Juan Co., San Juan Mts., Molas Divide. 3800 m. Vertical rock-fissures. (By far the best *Erigeron* we saw in 1987. Lavender-blue heads on pads of dissected, grey leaves. Identity unsure.) E
- 8936 ERIOGONUM SHOCKLEYI Utah, San Juan Co., SW of Mexican Hat. 1700 m. Exposed sandstone ridges. 6.7.87 (Pulvinate-caespitose. Mounds of tiny, white-felt leaves. Stemless cream heads mature to rust-red tones.) F

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- 9197 ERITRICHIMUM NANUM (= *E. aretioides*) Colorado, El Paso Co., Pike's Peak, near Elk Park. 3500 m. & above. Open slopes in granite grit. 25.7.87 (The classic Arctic-alpine of the N Hemisphere. Purest blue flowers on tiny silver-haired cushions. N American races seem marginally easier to grow than those from the Alps.) (10+ seeds) F
- 9400 ERYTHRONIUM GRANDIFLORUM Wyoming, Albany Co., Medicine Bow Mts., above Mirror Lake. 3500 m. Open, stony areas among conifers. 8.8.87 (Exquisite, nodding, yellow Dogtooth Violet - only species in the S Rockies.) (20+ seeds) C
- 9637 EUSTOMA GRANDIFLORUM Colorado, Larimer Co., NW of Fort Collins. 1900 m. Moist depressions. 4.9.87 (The Tulip Gentian - this hardy, northern, perennial race must be tried. Huge, satin flowers in lavender. 50cm.) (100+ seeds) D
- 9018 FRASERA ALBOMARGINATA Utah, Beaver Co., Wah Wah Mts. 2400 m. Open, stony, limestone slopes. 11.7.87 (Beautiful rosettes of leathery, white-edged leaves. White, green-speckled flowers. 20cm. dry-climate perennial.) (15+) D
- 9416 GENTIANA PARRYI Wyoming, Albany Co., Medicine Bow Mts., Snowy Range. 3600 m. Wet, peaty areas with *Salix*. (Not unlike a smaller, wirier version of *G. septemfida*. Handsome clusters of deep-blue trumpets.) (30+ seeds) D
- 9610 GILIA GLOBULARIS (= *Ipomopsis globularis*) Colorado, Park Co., above Hoosier Pass. 4000 m. Gravel patches in tundra. 6.9.87 (Extremely narrow endemic - "One of the most handsome alpine tundra plants, with a heavy fragrance", writes Weber in his recent field-guide. Short-stemmed, woolly heads of amethyst-purple.) (10+ seeds) F
- 9508 HEUCHERA FULCHELLA New Mexico, Sandia Mts., above Albuquerque. 3600 m. Shady fissures on summit cliffs. (Tiny endemic of the Sandias. Dense, 10 cm. spikes of pink bells. Should make a superb pan-plant.) (50+ seeds) E
- 9467 HYMENOXYIS ACAULIS var. CAESPITOSA Colorado, El Paso Co., Pike's Peak. 4000 m. Open slopes in granite grit. 17.8.87 (Tight mats covered with short-stemmed, golden daisies. Fine form of this alpine perennial. Long-lived.) B
- 9316 HYMENOXYIS GRANDIFLORA (= *Rydbergia grandiflora*) Wyoming, Sheridan Co., Big Horn Mts. 3300 m. Open, stony slopes. 1.8.87 (Huge, short-stemmed, golden sunflowers. Usually monocarpic but one of the most stunning of all alpinists.) B
- 9431 IRIS MISSOURIENSIS Wyoming, Albany Co., W of Centennial. 2700 m. Damp meadows. 9.8.87 (Series *Longipetalae*. The only Rocky Mt. Iris - from deep lilac-blue through to pure white. About 70 cm.) (30+ seeds) B
- 9413 KALMIA MICROPHYLLA Wyoming, Albany Co., Medicine Bow Mts., Snowy Range. 3600 m. Wet, peaty areas. (Delightful dwarf, Ericaceous shrublet. Twiggy, 10 cm. hummocks with tiny, narrow leaves and pink flowers.) (50+ seeds) D
- 9591 LEWISIA PYGMAEA Colorado, Clear Creek Co., Front Range, Mt. Evans. 4500 m. Exposed, stony slopes. 30.8.87 (A tiny snow-melt plant, usually bright magenta-pink. Summer-dormant. The true plant is little-known.) (20+ seeds) D
- 9269 LEWISIA REDIVIVA Wyoming, Fremont Co., Wind River Mts. 3000 m. Granite grit among sparse *Pinus*. 29.7.87 (Huge, diaphanous, water-lily flowers, deeper-pink here than many we have seen in gardens. Summer-dormant.) (20+ seeds) D
- 9595 MACHAERANTHERA PATTERSONII Colorado, Clear Creek Co., Front Range. 3800 m. Open slopes with sparse *Pinus*. 30.8.87 (Fine race, apparently endemic to this area. Huge violet asters, to 7 cm. across on 20 cm. stems.) D
- 9630 MERTENSIA ALPINA Colorado, El Paso Co., Pike's Peak. 4500 m. Exposed slopes in granite grit. 9.9.87 (Exquisite with prostrate stems of flat, purest blue flowers. One of the finest of all alpinists. Alpine-house.) (15+ seeds) F
- 8726 MERTENSIA LANCEOLATA var. IVALIS Wyoming, Fremont Co., Wind River Mts. 2700 m. Open, *Artemisia*-steppe in granite grit. 22.6.87 (Heads of azure-blue bells on 15 cm. stems. A good form of a variable group.) (15+ seeds) D
- 9143 OENOTHERA BRACHYCARPA Colorado, Boulder Co., SE of Boulder. 2000 m. Stony clay banks. 19.7.87 (Neat, out, dark-green foliage. Stemless, long-tubed yellow flowers age to orange-red. A fine species. 12 cm.) (10+ seeds) D
- 9551 OENOTHERA CAESPITOSA var. CRINITA Utah, Millard Co., SSE of Garrison. 1500 m. Steep, stony bank. 25.8.87 (Very difficult, dry area race. Grey, hairy leaves. Enormous, white, bowl-shaped flowers on long tubes.) (10+ seeds) E
- 9384 OENOTHERA CAESPITOSA var. MACROGLOTTIS Utah, Rich Co., WSW of Woodruff. 2400 m. S-facing clay banks & loose shale slopes. 6.8.87 (Very large-flowered race. Not difficult outside in UK in a dry, sunny site.) (20+ seeds) C
- 9428 OXYTROPIS LAMBERTII Wyoming, Albany Co., W of Centennial. 2700 m. Open, stony *Artemisia*-steppe. 9.8.87 (Most striking, erect racemes of brilliant carmine-purple from neat clumps of silver-grey leaves. 30 cm.) (30+ seeds) C
- PENSTEMON. If you can find the plants, it is easy (with a few very definite exceptions!) to collect adequate seed of most *Penstemon*s and we are in a position to list most of the 70 collections we made in 1987! As we hope to feature this genus quite heavily among our 1989 collections, we restrict ourselves here! They store well!
- 9101 PENSTEMON ACAULIS (Sect. *Caespitosi*) Wyoming, Sweetwater Co., above Mackinnon. 1900 m. Steep, stony slopes. 15.7.87 (Androsace-like tufts with stemless, sky-blue flowers. The smallest member of the genus.) (10 seeds) F
- 9501 PENSTEMON AMBIGUUS (Sect. *Ambigui*) New Mexico, San Miguel Co., S of Chappelle. 2300 m. Among large boulders on steep slopes. 19.8.87 (Wiry, fine-leaved, 60 cm. stems with a myriad, long-tubed, phlox-like flowers. Pink.) (30+) C
- 9165 PENSTEMON ANGUSTIFOLIUS (Sect. *Coerulei*) Wyoming, Laramie Co., S of Cheyenne. 2100 m. Exposed prairie. 22.7.87 (Compact, 15 cm. form of a superb species. Narrow, blue-grey leaves and pale azure flowers.) (15+ seeds) D
- 8996 PENSTEMON CAESPITOSUS var. DESERTI-PICTI (Sect. *Caespitosi*) Utah, Garfield Co., NE of Ruby's Inn. 2600 m. Gravelly banks. 9.7.87 (The most reduced race. Tight, prostrate mats. Lavender-blue flowers.) (15+ seeds) F
- 9482 PENSTEMON CRANDALLI subsp. GLABRESCENS (Sect. *Caespitosi*) New Mexico, Taos Co., N of Questa. 2500 m. Gravelly clay among *Pinus*. 18.8.87 (Upright, 12 cm., heath-like tufts. Lavender-blue with orange staminodes.) (15+ seeds) D
- 9387 PENSTEMON CYANANTHUS (Sect. *Glabri*) Utah, Rich Co., Wasatch Mts. 3200 m. Meadows with sparse *Artemisia*. 6.8.87 (80 cm. stems with dense cylindrical spikes of rich gentian-blue. A glorious herbaceous perennial.) (30+ seeds) C
- 9086 PENSTEMON DUCHESNENSIS (Sect. *Cristati*) Utah, Duchesne Co., E of Duchesne. 1900 m. Stony slopes. 14.7.87 (A tiny, showy, little plant with greyish leaves and blue-purple, almost stemless heads. A narrow endemic.) (15+) E
- 8929 PENSTEMON EATONII (Sect. *Elmigeri*) Utah, San Juan Co., above Bluff. 1550 m. Steep, sandstone slopes. 5.7.87 (Spectacular, 1 m. wands of tubular scarlet flowers. A brilliant plant we have never seen in UK gardens.) (30+) B
- 9545 PENSTEMON FRANCISCI-PENNELLI (Sect. *Glabri*) Nevada, White Pine Co., Snake Range. 3400 m. Open, stony slopes near conifers. 24.8.87 (Leathery, infolded leaves. Big, blue-violet flowers. 5-15 cm. Very fine & distinct.) (30+) E
- 9249 PENSTEMON LARICIFOLIUS (Sect. *Laricifolii*) Wyoming, Carbon Co., Shirley Mts., NW of Medicine Bow. 2500m. Rock detritus on exposed ridge. 27.7.87 (Neat basal rosettes like tufts of larch-foliage. Branching, wiry, 3-15 cm. stems dance with a succession of salmon-pink flowers. Unlike any other and absolutely lovely.) (30+ seeds) E

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- 9231 PENSTEMON LARICIFOLIUS var. EXILIFOLIUS (Sect. Laricifolii) Wyoming, Albany Co., S of Laramie. 2500 m. Open steppe. 27.7.87 (Reduced, white-flowered race endemic to the Laramie Plains.) (20+ seeds) E
- 9385 PENSTEMON LEONARDII (Sect. Saccanthera) Utah, Weber Co., Wasatch Mts. 3100 m. Stony, exposed areas. 6.8.87 (N Utah endemic, distinct from others here. A mass of gentian-blue flowers on 15 cm. shrubby growth.) (30+ seeds) E
- 8800 PENSTEMON MUCRONATUS (Sect. Coerulei) Utah, Daggett Co., S of Manila. 2250 m. Eroded, clay slopes. 25.6.87 (Type-locality coll. of this lovely plant. Fleshy, blue-grey leaves. Blue streaked purple inside. 20 cm. (20+) C
- 9550 PENSTEMON PALMERI (Sect. Spectabiles) Nevada, White Pine Co., Snake Range. 2200 m. Stony areas. 24.8.87 (2 m. wands of huge, pink flowers. Blue-grey, toothed leaves. Unbeatable for sheer size and impact!) (30+ seeds) B
- 9548 PENSTEMON ROSTRIFLORUS (Sect. Bridgesiani) Nevada, White Pine Co., Snake Range. 2800 m. Loose, gravelly slopes. (Shrubby-based. Narrow, leathery leaves. Scarlet tubular flowers. 30 cm. Must be tried in Europe.) (30+ seeds) C
- 9097 PENSTEMON SCARIOSUS var. GARRETTII (Sect. Glabri) Utah, Daggett Co., Uinta Mts. 2300 m. Stony clay. 15.7.87 (Superlative member of the P. strictus group. 30-40 cm. stems of stunning blue flowers.) (30+ seeds) C
- 8857 PENSTEMON UTAHENSIS (Sect. Gentianoides) Colorado, Mesa Co., Gateway. 1600 m. Steep, loose, clay slopes. 30.6.87 (Pure, brilliant carmine-red, funnel-shaped flowers. Blue-grey leaves. 50 cm. Incredible.) (30+ seeds) D
- 9563 PENSTEMON WATSONII (Sect. Penstemon) Utah, Piute Co., Tushar Range. 2700 m. Open, stony steppe. 26.8.87 (Fine, woody-based, herbaceous plant. Deep blue clusters on clumps of many, erect stems. 30-50 cm.) (50+ seeds) B
- 9504 PENSTEMON WHIPPLEANUS (Sect. Penstemon) New Mexico, Bernalillo Co., Sandia Mts. 3500 m. Open slopes in coniferous zone. 20.8.87 (Type-locality coll. Rich wine-purple - better than the northern forms. 50 cm.) (50+ seeds) B
- 9440 PHLOX CONDENSATA Colorado, Park Co., Mosquito Range, Mt. Sherman. 4200 m. Exposed tundra. 14.8.87 (Tighest and highest-growing of all. Hard pads massed with white, fragrant flowers. Continental Divide endemic.) (8 seeds) F
- 9154 PHLOX MULTIFLORA Colorado, Boulder Co., Flagstaff Mt. above Boulder. 2200 m. Open, grassy slopes among Pinus. 19.7.87 (Mats of needle-leaves with large, pink, white-eyed flowers.) (8 seeds) E
- 9244 PHLOX MULTIFLORA (? subsp. depressa) Wyoming, Carbon Co., Shirley Mts. 2600 m. Stony slopes of various aspects. 27.7.87 (Much tighter mats but almost always pure-white in this area.) (8 seeds) F
- 9076 PHLOX PULVINATA Utah, Wasatch Co., NW of Strawberry Lake. 2600 m. Open gravelly areas. 14.7.87 (Compact but soft cushions. White to pale lilac. Keys out as this but distinct from the Snowy Range population.) (8 seeds) E
- 9457 PHYSARIA ALPINA Colorado, Park Co., Mosquito Range, Mt. Sherman. 4200 m. Screes & mine-tailings. 14.8.87 (The highest-growing, largest-flowered Physaria. Chrome-yellow flowers. Inflated fruits. Mosquito Ra. endemic.) (20+) D
- 9510 POLEMONIUM BRANDEGEEI New Mexico, Bernalillo Co., Sandia Mts. 3600 m. Fissures on summit cliffs. 20.8.87 (The pure species with long-tubed, golden-yellow flowers on 10 cm. stems. An exciting collection.) (10+ seeds) E
- 9389 POLEMONIUM FOLIOSISSIMUM var. ALPINUM Utah, Rich Co., Wasatch Ridge. 3200 m. Meadows. 6.8.87 (Robust, pure-white race of this easily grown, herbaceous perennial. 1 m. high. Handsome and distinct.) (20+ seeds) B
- 9402 POLEMONIUM VISCOSUM Wyoming, Albany Co., Medicine Bow Mts., Snowy Range. 3600 m. Stony turf. 8.8.87 (Very fine form with dense heads of large, azure-blue flowers. Tufts of sticky, cut foliage. 10 cm. Superlative.) (20+ seeds) D
- 9631 PRIMULA ANGSTUFOLIA Colorado, El Paso Co., Pike's Peak. 4500 m. Exposed slopes in granite grit. 9.9.87 (An exquisite, tiny tundra plant. Luminous purple-carmine flowers with yellow eyes. Keep cool in summer.) (20+ seeds) F
- 8769 PRIMULA MAGUIREI Utah, Cache Co., NE of Logan. 1700 m. Mossy fissures in N-facing limestone cliffs. 24.6.87 (Local relict mesophyte which should be established & maintained by specialist Primula & Dionysia growers.) (10) F
- 9543 PRIMULA PARRYI Nevada, White Pine Co., Snake Range. 3500 m. Moist humus in coniferous woodland. 24.8.87 (The most splendid form we saw of this widespread plant. Robust 50 cm. stems of rich red-purple flowers.) (50+ seeds) C
- 8926 PRIMULA SPECUICOLA Utah, San Juan Co., above Bluff. 1550 m. Seepage lines on shady, sandstone cliffs. 5.7.87 (Endemic to the 'hanging gardens' of the Colorado River canyons. Section Aleuritia - like a giant P. farinosa. Clumps of dark-green, white-backed leaves. Umbels of up to 40 flowers. Lavender, pink or white. 15 cm.) (50+) E
- 9495 RATIBIDA COLUMNIFERA New Mexico, San Miguel Co., S of Chapelle. 2300 m. Stony clay among sparse Pinus. 19.8.87 (Cut-leaved, 60 cm., herbaceous perennial. Columnar purple-brown disc and reflexed yellow or mahogany rays.) B
- 9516 RUDBECKIA LACINIATA New Mexico, Sandoval Co., Sandia Mts. 2800 m. Moist areas in Abies woodland. 20.8.87 (An imposing perennial. Lacinate leaves. Showy yellow coneflowers on 2 m. stems. A lovely, easy wild-garden plant.) B
- 9590 SAXIFRAGA CHRYSANTHA Colorado, Clear Creek Co., Mt. Evans. 4500 m. Exposed, stony slopes. 30.8.87 (A superlative alpine. Pads of tiny, lead-green rosettes set with goblet-shaped golden flowers, flushing orange in the centres. Must be tried as a pan-plant by those who can grow the Himalayan Androsaces - same treatment.) (100+) E
- 9454 SENECIO AMPLECHENSIS var. HOLMII Colorado, Park Co., Mosquito Range. 4200 m. Moist, stony slopes. 14.8.87 (Inadvertently omitted last year! Nodding flowers like giant yellow Soldanellas. Rather choice. 20 cm.) (20+ seeds) C
- 9531 SILENE PETERSONII Utah, Garfield Co., Red Canyon, above Butch Cassidy Draw. 2600 m. Loose, unstable, limestone scree. 23.8.87 (Extraordinary relict difficult to grow well. Brilliant pink, notched flowers. 6 cm.) (5 seeds) F
- 8928 STANLEYA PINNATA Utah, San Juan Co., above Bluff. 1550 m. Steep sandstone slopes. 5.7.87 (Crucifer with 1 m. yellow flower-stems which look like Eremurus stenophyllus from afar. Bluish, pinnatifid leaves.) (20+ seeds) B
- 9435 THERMOPSIS DIVARICARPA Colorado, Park Co., Four Mile Creek. 3100 m. Moist depressions in clay. 13.8.87 (Cut leaved, 60 cm. tall herbaceous perennial with stubby, bright-yellow, lupin-like spikes.) (15+ seeds) B
- 9166 TOWNSENDIA GRANDIFLORA Wyoming, Laramie Co., S of Cheyenne. 2100 m. Exposed grassland. 22.7.87 (Exceptionally fine, compact form with huge, white, long-rayed daisies, upward-facing and almost stemless.) (15+ seeds) C
- 9464 TOWNSENDIA ROTHROCKII Colorado, Park Co., Mosquito Range. 4300 m. Stony slopes near late snow-patches. 15.8.87 (The outstanding plant illustrated in Weber's 'Colorado Flora: Western Slope' (Plate 58). A name much misapplied in cultivation & horticultural literature. Enormous pale-lilac daisies on tight rosettes.) (15+ seeds) F
- 9600 TRIFOLIUM NANUM Colorado, Summit Co., Front Range, above Loveland Pass. 4200 m. Exposed slopes. 6.9.87 (The ultimate reduction in clovers. Hard mounds covered with stemless, rose-pink pea-flowers.) (10 seeds) F
- 9141 YUCCA GLAUCA Colorado, Boulder Co., SE of Boulder. 2000 m. Exposed grassland. 19.7.87 (Clumps of erect, very narrow, blue-grey leaves. Lime-green to cream pendant flowers on 1 m. stems. Utterly hardy!) (10+ seeds) C
- 8922 YUCCA HARRIMANIAE Arizona, Apache Co., W of Teec Nos Pos. 1900 m. Stony clay. 5.7.87 (Rosettes of short, wide leaves with curling, white, marginal fibres. Cream flowers, tinged purple. 70 cm. Hardy to -30°C!) (10+ seeds) C

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