

Cover-up plans foiled

Circumstances combined to prevent us from completing the erection of the large polythene tunnel (hoop-house to Transatlantic readers), which we had planned to have up and covered before the start of the 1996-97 winter. Those who have followed our activities in the past will be aware that we never quite realise our plans and are always rushing to catch up. We may get older but we do not seem to get any wiser. Our intention had been to undertake this work as soon as our last list was mailed to you, but within days of this happening Jim was in hospital. A bleeding nose may seem trivial but, confronted with such an entirely novel experience, he tried to endow the event with a certain degree of panache. Jim has achieved a nose-bleed status in local ENT unit history second only to a German visitor who ended up in intensive care. After two operations and ten days in hospital, five of those with nose and throat plugged, sustained by blood transfusions & saline drips, he emerged unbleeding but not in a state to erect polythene tunnels. As no reason for the incident has been found and the septoplasty is settling down, life proceeds as before, though there is a certain feeling of relief that it did not happen on top of a mountain in South America. Still, lots of things can happen anywhere and we cannot take every possibility into account in running our lives. We inflict this saga on you not only to explain why it took even longer than

usual for us to send your order from the last list but also to dispel rumours that Jim was set upon by a dandelion-expert and beaten about the nose with a bunch of *Taraxacum officinale*.

The tunnel is still not completed, though the hoops are now up and ready. Perhaps 1997 will see us achieving what we failed to achieve in 1996. As you may have gathered from the development of our lists, we appear to be entering into a period of consolidation. It is now over 13 years since we started to devote most of our time to collecting and distributing seeds. While we have no intention of turning solely to growing plants and you can be assured that seeds are our primary concern, we can bring you a far greater range of interesting material on a regular basis by producing a proportion of this seed ourselves. Wherever possible, we are establishing parent-stocks of different clones, raised from wild-collected seed with field-data - preferably from our own collections. As we have few pollinators here, hand-pollination is usually essential for good seed-sets, so we can be as sure as we can with cultivated seed that this will represent a microcosm of the original wild population.

The new tunnel will give us about 200sq.m. (2000sq.ft.) of growing area. With netting-sides, we shall have only protection from rain but this is all we need in our climate. A slightly more protected environment with slightly higher summer temperatures and ensured

dry conditions overhead should enable us to produce seed on many of the larger species, which may be unreliable in the open garden. Coupled with our existing glasshouse for 'bulbs', which we shall be able to utilise solely for the smaller, choicer species, we shall have as much as we can hope to keep under control. Chaos exists in an interim state at present but we hope to start to nudge everything into place in 1997.

With our home-produced seeds as a basis for our lists, supplemented with wild-collected material from a variety of areas and sources, we hope that we can continue to expand and develop the range of material available to you. From 1997 on, we plan to set these lists into a more predictable pattern with one, mainly concerned with 'bulbs' and other species which germinate at low-temperatures, being issued each July and another, including most alpine-plants, larger herbaceous perennials and other summer-growers, issued each December-January. Whether this can be achieved remains to be seen but, if it does work out, we shall require the tolerance and patience of our customers so that the time available for collecting wild material does not become more and more eroded. While the days of our spending five or six months abroad collecting, as we did in the early 1980's, are over, we shall be able to offer you a much greater range of high quality seeds than at any time in the past.

From our Celebrity Correspondent in Japan

Don Elick, co-author, with Yorkshire artist Raymond Booth, of 'Japonica Magnifica', surely the most beautiful and authoritative book on Japanese flowers ever published, has been 'discovered' by his adopted country. He writes "I am now on the lecture list - every fancy, oversized, full-color magazine in the country clambers for interviews, their camera-men tramp through the garden - even a couple of nation-wide newspapers want to run a

front-page Sunday Supplement next spring - tourist busses disgorge loads of 'plants people' - the telephone rings every time I get sat down - on and on. I have simply got to get things under control but the Japanese have a way of overdoing everything. With luck the Elick boom will quickly die out. On the good side, various kindly people have disclosed secret colonies of raving rarities that I would never have unearthed on my own."

Poor Pussies ripped-off by Yorkshire Water Fat Cats

We never cease to delight in the utter complexity of the world. While we do not subscribe to a theory of chaos (a butterfly flaps its wings in the Amazonian rain-forest...) it may be that if a water company schemes to increase its profits by an infinitesimally small amount of money, a stray cat goes without its supper. Or, if we collect a few seeds on that South American mountain? Yorkshire Water customer Jo Hanslip of Sheffield tells us : "I have just finished composting the remains of too many favourite plants. Long hours at work over the last couple of years, combined with Yorkshire Water as the water supplier and a second dreadfully hot and dry summer have taken their toll, particularly of anything normally kept in a pot. Sadly, I have not been able to keep up with stocking the plant table that I do for the Cat Protection League, having no surplus seedlings to offer. I go to what you might term an up-market jumble sale in one of the Civic Buildings in Shipley and, whilst many of my

offerings are of the more commonly available kind, you may be pleased to know that your plants have a devoted following there amongst a wide range of people. Many are pensioners, others are unable to get to garden-centres, and all are a tremendous mix from different ethnic groups. All of them are intensely interested in learning as much as possible about the plant, want to know exactly what care they need, in what environment they should be planted and any other advice. There is a regular flow of comments from people about how well their purchases are doing and how pleased they are with them. Some now say that they buy their plants nowhere else because nowhere else has the same range of the unusual and the little known. So, as well as providing some support for indigent felines, I think you would be surprised (and I hope pleased) at the interest that is created amongst a lot of people who otherwise have no chance of growing more unusual plants."

Ordering from this list could not be easier

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

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

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

New customers please understand

There may be a delay of some weeks before you receive your order. Most orders come in during the first week or so after we send out a list. We usually receive orders very much faster than we can despatch them. If you feel your order is too long in arriving, check with your bank to find out if your cheque has been cashed - we do not pay in cheques until orders have been despatched. If it has been cashed, let us know immediately. One or two items are lost or delayed each year. In such an unlikely event, you will find us totally sympathetic. We are glad to say such problems are very rare. Postal services are on the whole reliable. We try to be as reliable ourselves.

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

In addition to home-grown seed, there are a few wild collections made during a short visit to Greece with Norman Stevens & Robert Rolfe in June, 1996. The collections from the republics of the former USSR were organized by Will McLewin or by Janis Ruksans in collaboration with local botanists. There are also one or two 'seed-bank' collections from 1994 & 1995. The collection date is given in all these cases. 1996 cultivated seed is clearly marked (*) and the parents are mainly from known wild populations. Field data given refers to the parent-stock. Some cultivated species without field data are included on a geographical basis and these are marked accordingly : 'no data' after the name. The six-digit reference numbers here, as is the case with the seven-digit numbers covering other regions, are our permanent references for

populations within the area of Europe, N Africa (N of the Sahara) and W Asia (W from Pakistan N through the Pamirs, the Tien Shan & the Altai), a distinct floristic area. While we are progressing with our new labelling system (which we hope you are finding more informative & convenient), it will not cover all items listed until next year. In the meantime, some seed packets may carry only this number but as these run in alphabetical, as well as numerical, order, identification of packets from this list is simple. Nomenclature follows the basic floras, 'Flora Europaea', 'Flora of Turkey' & 'Flora Iranica' with a little editing and updating, if this is felt to be relevant & helpful to gardeners. Collections from the republics of the former USSR are usually listed under the names supplied.

- 106.810 : ACANTHUS MOLLIS *** No data. A bold species from the W & central Mediterranean area with large, lobed, dark green leaves & 1m. high stems packed with pink flowers amid spiny calyces. Tough & immortal in a hot, dry site. (6) A
- 125.205 : ALCEA RUGOSA *** No data. A fine clear-yellow hollyhock with lobed leaves & bristly stems of 1.5m. or more. Well illustrated in Phillips & Rix, Vol. 2, page 41. A very hardy perennial from the steppes of S Russia, SE to Turkmenistan. . . (15+) A
- 127.203 : ALKANNA AUCHERIANA** Turkey, Icel, NNE of Gulnar. 1200m. Limestone fissures. 5.6.94 (Pads of silvery-grey rosettes & azure-blue forget-me-not flowers. The 'Turkish *Eritrichium*' in its finest, bluest form here, in the Gulnar area. A classic alpine-house plant, difficult but by no means impossible to grow & best, in the UK, kept under glass throughout the year.) (10+) E

Allium : get to know your onions

While it has its devotees, many gardeners do not fully appreciate the qualities of this large & diverse genus, spread throughout the N Hemisphere with main centres in Europe & W Asia, as well as in western N America. We list a good range from the latter area later in this list. As well as some little-grown Turkish species, we have wild-collected seed, recently received from Janis Ruksans, of several Central Asian ones. All listed enjoy a situation in a well-drained site in full sun in the UK, if grown in the open garden. Most here tend to be more successful

in alkaline soils in the more continental climate of the E of Britain, rather than in the wetter, more equable climate of the W but this is quite an adaptable genus on the whole. Though strictly speaking winter-growers, most flower so late in the season & mature their seed later in summer, that they fit in with summer-growing species for winter-sowing. Although many of the following are easily grown, accommodating garden-plants, there are no species here likely to become aggressive under average garden conditions.

- 130.500 : ALLIUM ANACOLEUM *** Turkey, Van, Kavussahap Dag. 2500m. Stony slopes in steppe vegetation. (From the highest mountains of SE Turkey & N Iraq. Hemispherical umbels of little, purple-pink bells on 15cm. stems in summer.) (10+) C
- 130.600 : ALLIUM ATROPURPUREUM *** No data. A handsome, 50cm. high plant from SE Europe & Turkey. Linear basal leaves & many-flowered umbels of starry flowers in deep, rich, red-purple on stems of about 50cm. (15+) A
- 130.640 : ALLIUM BORSZCZOWII *** No data. We have been unable to check the application of this name or confirm if it is the same as a Central Asian coll. by Janis Ruksans, distributed as *A. barsezewskii*. Worthwhile, 30cm. high & lilac-purple. (15+) B
- 131.000 : ALLIUM CALLIDICTYON *** Turkey, Agri, near Tutak. 1600m. Ex a N. Stevens coll. (A small, dainty species from E Turkey, N Iran & N Iraq. About 20cm. high with fastigate umbels of narrow, pink flowers with cut segments.) (15+) B
- 131.310 : ALLIUM CARINATUM subsp. PULCHELLUM *** No data. Diffuse, purple-pink umbels. 40cm. No bulbils. (20+) A
- 131.400 : ALLIUM CAROLINIANUM *** No data. Most material in cultivation appears to originate from the KBE 268 coll. at about 4000m. on the limestone of the Razbal Gali pass, Kashmir, in 1983. Attractive & little-known, red-purple species. (15+) C
- 132.000 : ALLIUM DARWASICUM** Tadjikistan, Varzob valley. (Elegant umbels of upturned, white flowers. 50cm.) (20+) C
- 132.950 : ALLIUM JESDIANUM** Tadjikistan, Seravschan ridge, Shing valley. (A fine, variable, Central Asian, bulbous species, usually about 1m. high & long confused with *A. rosenbachianum*. Janis Ruksans has named a most distinct, early flowering clone, 'Shing', from this valley : extremely dense, dark purple umbels on 70cm. stems & yellowish-green foliage.) (20+) C
- 134.060 : ALLIUM MYRIANTHUM *** Turkey, Denizli, Pamukkale. 400m. Ex a N. Stevens coll. (A type-locality coll. of this distinct, E Mediterranean, 80cm. high, plant with dense mop-heads of numerous, tiny, white flowers on purple pedicels.) (20+) A
- 134.801 : ALLIUM ORIENTALE *** Turkey, Antalya, Irmasan gecidi. 1530m. Openings in *Abies*, on limestone. (From a worthwhile form of this variable, 50cm. high species. Rounded umbels of white flowers with lilac-purple anthers & filaments.) (20+) A

- 136.200 : ALLIUM ROSEUM** * Portugal. Ex an A. Edwards coll. (A good form with no bulbils in the umbels. About 30cm. high with many, large, attractive, bright-pink flowers, each with darker stripes along the segments. Best grown in a warm site.) (15+) **A**
- 138.900 : ALLIUM STIPITATUM** Tadjikistan, Varzob. (A wild coll. of this imposing Central Asian, summer-flowering bulb. Ribbed stems of a 1m. or more high carry almost spherical umbels of starry, purple flowers with tapering, twisted segments.) (20+) **C**
- 139.000 : ALLIUM SUBVILLOSUM** * No data. A W Mediterranean plant from maritime sands & grasslands, about 50cm. high, with many-flowered, hemispherical umbels of cup-shaped, pure-white flowers. Warm site or bulb-frame in the UK. (20+) **B**
- 139.200 : ALLIUM TAURICOLA** * Turkey, Sivas, Ziyaret Tepe. 2200m. Limestone fissures. (An autumn-flowering Turkish alpine-endemic. About 15cm. high with fastigate umbels of purple-pink flowers after the thready leaves have gone dormant.) . . . (10+) **C**
- 146.010 : AMSONIA ORIENTALIS** (*Rhazya orientalis*) * No data. Only recorded from one or two lakeside sites in Bursa & Balikesir provinces in NW Turkey & from winter-wet marshes on the coast of Thrace in NE Greece. Thought to be "near extinction" in nature but well established in UK gardens though not so easily obtainable. Woody-based clumps send up 50cm. stems, clad in narrow, grey-green, willow-like leaves & carrying terminal cymes of starry, long-tubed, soft-blue flowers in summer. (10) **C**
- 153.200 : ANCHUSA UNDULATA** * Turkey, Mugla, Gok Tepe. 1500m. Open, stony area with sparse *Pinus*, on limestone. (Pleasing, herbaceous perennial for a sunny, well-drained site ; 30-50cm high with cymes of deep violet-blue flowers.) (20+) **B**
- 157.010 : ANDROSACE VANDELLII** * No data. A classic alpine-house plant from non-calcareous cliffs in the S Alps, the Pyrenees & the Sierra Nevada. Tight, symmetrical, silvered cushions cover themselves with white, yellow-eyed flowers. (15+) **D**
- 163.050 : ANGELICA PACHYCARPA** No data. A very local species from coastal rocks near La Coruna in NW Spain & Ilha Berlenga in Portugal. Described by Tim Ingram as an "unique *Angelica* of compact, sturdy habit & remarkable, varnished, deep-green foliage." A fleshy perennial up to 1m. high according to 'Flora Europaea' - biennial according to Tim. (10+) **C**
- 195.073 : ARUM CONCINNATUM** (*A. nickeltii*) * No data. Ex a 1960 Furse & Syngé coll., presumably in Turkey. (Seldom seen in cultivation, this is a robust species. The foliage can be as much as 1m. high in a well-grown plant & the huge, yellowish spathes, often just rimmed with a purple tint, almost 30cm. long. From Mike Tucker's plant which supplied the material for Ann Farrer's painting, Plate 3 in the 'Genus Arum' by P. Boyce. Needs a warm, sheltered site to thrive outside in the UK.) (10) **C**
- 195.150 : ARUM CYRENAICUM** * No data but from the Libyan population. Large spathes, green outside & purplish rose inside with deep purple spadices. A plant of the scrub along the 'green belt' in Cyrenaica, NE Libya. Safest protected from frosts.) (10) **B**
- 195.157 : ARUM DIOSCORIDIS** (var. *dioscoridis*) * Turkey, Izmir, between Selcuk & Efes. Ex a N. Stevens coll. (From an extremely fine & most unusual form with dark, almost entirely maroon-black, spathes surrounding a contrasting yellow spadix, instead of the normal dull-purple one. A low altitude plant which needs a warm, dry site in the UK - best grown in the bulb-frame.) (10) **C**
- 196.500 : ARUM NIGRUM** * Bosnia & Hercegovina, above Dubrovnik to Trebinje. 500m. Holes & crevices on limestone, usually in oak scrub. (Hardy & compact with shining, rich-green foliage & purple-black, satin spathes. Grow in light shade.) (10) **C**
- 197.150 : ARUM RUPICOLA** var. **VIRESCENS** (*A. conophalloides*) * No data. From several Turkish colls. of this widespread SE Asian species in the form with grey-green spathes, often narrowly purple-bordered, & massive, cylindrical lilac-grey spadices. Withstands very low winter-temperatures but best protected from excess moisture in the UK by a bulb-frame. (10) **B**
- 220.705 : ASTRANTIA MAXIMA** (subsp. *maxima*) * No data. An exquisitely lovely meadow-plant from the Caucasus & neighbouring NE Turkey. A little dwarfier & with much larger heads than *A. major*, in green-veined, soft rose-pink & carried singly on 60cm. stems over a very long period in summer. The running-clumps with three-lobed, basal foliage enjoy a cool, rich soil (20+) **A**
- 224.105 : ATHAMANTA MACEDONICA** subsp. **ARACHNOIDEA** * No data. The race of this Balkan member of the *Umbelliferae*, endemic to the Oras Tayetos of the Greek Peloponnese. Tim Ingram describes this slow-growing, 1m. high perennial as "a remarkable plant" with strong clumps of cut, grey, downy foliage erupting into a much-branched woolly inflorescence of numerous umbels of white flowers. Small basal shoots perennate to repeat the process. For a sunny, very well-drained place. (20+) **B**
- 224.300 : ATHAMANTA VESTINA** * No data. Included under *A. cretensis* in 'Flora Europaea' & considered to be an eastern intermediate of it with *A. turbith* subsp. *haynaldii*, to which Tim Ingram compares it as a robust version. Fine filigree mounds of bright-green foliage & many, fine, pure-white, 60cm. umbels. A good, choice perennial for a dry site. (15+) **B**
- 225.400 : AUBRIETA DELTOIDEA** (var. *delloidea*) Greece, Crete, Omalos. M. Jope 95-042 (One of the parents of the cultivated hybrids. Red-violet to purple flowers cover the low, loose mounds of narrow-leaves in spring.) (20+) **B**
- 245.001 : BUPLEURUM ANGULOSUM** * France, Hautes-Pyrenees, Vallee d'Ossoue. 1500m. Steep limestone scree on S-facing slope. (A choice, slow-growing perennial with neat tufts of narrow leaves & 30cm. branching stems of rounded, *Astrantia*-like heads in an exquisite, glaucous jade-green. Not difficult in a well-drained site in sun or part-shade but needs patience.) (15+) **B**
- 252.700 : CAMPANULA CARPATHA** * Greece, Karpathos. Shady, limestone crevices. Ex a H. & I. Barton coll. (A superlative alpine-house species, seldom without its large, elongated bells in soft blue-violet against downy foliage. Introduced by Peter Davis in 1950, this choice long-lived, Karpathos endemic, has suffered through the similarity of its name to that of *C. carpatica*.) (30+) **D**
- 256.002 : CAMPANULA HAWKINSIANA** * Greece, Ioanina, N of Konitsa. 700m. Loose, unstable serpentine detritus. 10.6.96 (A taller, 30cm. high, more upright race here than the higher altitude forms but with the same intense violet flowers carried on wiry, branching stems. A local serpentine-endemic of the N Pindus, growable outside in a raised bed or scree in the UK.) (50+) **C**

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

- 264.900 : CAMPANULA TOMMASINIANA** Croatia, Istra, Ucka. 1300m. Limestone crevices. (Narrowly endemic to this one mountain in Istria & close to the following but with a profusion of more tubular bells in rich-violet on its 10cm. high tufts. These are two of the finest & choicest dwarf Campanulas which can be grown with care outside in the UK.) (50+) C
- 266.000 : CAMPANULA WALDSTEINIANA *** Croatia, Velebit Planina, Mali Halan between Obrovac & Sveti Rok. 1100m. Fissures in vertical limestone. (Tiny, beautiful Velebit endemic, a few cm. high, with many, wide-open, blue flowers on branching, wiry, fine-leaved stems. Alpine-house, trough or limestone-scrub in the UK ; a great success on the rock-garden at Denver.) (50+) C
- 274.101 : CARLINA ACANTHIFOLIA subsp. CYNARA *** France, Hautes-Pyrenees, SE of Gedre. 1400m. Open, grassy slopes. (The Pyrenean race of this spectacular perennial. Wide rosettes of deeply slashed, dark-green foliage lie flat on the ground with huge central thistle-heads of deep yellow flowers surrounded by papery, clear-yellow bracts. Not difficult in a sunny site.) (8) C
- 309.050 : CLEMATIS ALPINA *** No data. From the outstanding clone, 'Frances Ravis', of this restrained climber for a cool place. Native from central Europe E into Russia, its elegant, rich-blue flowers with white staminodes appear in late spring. (20+) A
- 309.055 : CLEMATIS ALPINA *** From pink-flowered clones which may or may not come 'true' but should vary. (20+) A
- 309.501 : CLEMATIS FLAMMULA** Greece, Lakonia, W of Sparti. 1200m. M. Jope coll., 15.11.96 (A characteristic woody climber of the S European limestones. Up to 5m. high with large panicles of many, small, fragrant, white flowers. Wonderful here in the autumn sunlight with its silvery seed-heads mingled with the scarlet hips of the rose over which it scrambled.) (20+) A
- 372.100 : CYNARA HYSTRIX *** Morocco, Middle Atlas Mts., above Ifrane. 1700m. Open, stony areas on limestone. (Maintained from seed we collected in 1962, this is one of the most striking of thistle-like plants with 50cm. stems of large heads of royal-blue flowers, surrounded by lilac-pink phyllaries, elongated into stiff, curved spines. Very long-lived in a really hot, sunny, dry site.) (5) E
- 392.550 : DELPHINIUM STAPHISAGRIA** Greece, Crete, Anapoli. 750m. Open scrub. M. Jope coll., 17.10.96 (A sturdy biennial from the Mediterranean limestones. Up to 1 m. high with pubescent, palmate leaves & dusky, deep-blue flowers.) (15+) A
- 407.401 : DIGITALIS FERRUGINEA (subsp. ferruginea) *** Greece, Trikala, above Panagia to Katara. 1500m. Margins of *Pinus* woodland. (Long, dense racemes of yellowish, orange-brown-netted flowers with projecting lips, on 1.5m. stems.) (50+) A
- 408.300 : DIGITALIS LAMARCKII *** Turkey, Gumushane, Vauk Dagi, Guvercinlik. 1800m. Open, stony slopes. (An outstanding perennial foxglove endemic to NE Turkey. Clumps of narrow, dark-green leaves send up 50cm. stems of large, soft-brown, baggy flowers with huge, prominent, white lips. Long-lived in a well-drained site in full sun.) (50+) B
- 408.505 : DIGITALIS LANATA *** Bulgaria, Pirin Planina, near Bansko. Ex an A. Edwards coll. (A 1m. high Balkan perennial in Sect. *Globiflorae*, like the preceding two. Densely packed racemes of creamy, brown-veined flowers with white lips.) (50+) A
- 409.402 : DIGITALIS OBSCURA *** Spain, Soria, Puerto del Pinar. 1100m. Among limestone debris on open slopes. (A shrubby perennial with narrow, shiny foliage & amber foxgloves, yellow marked with rust-red inside. This population was only 20-30cm. high in the wild but is somewhat taller in cultivation. A most distinct Spanish endemic for a dry, sunny situation.) (50+) B
- 409.610 : DIGITALIS PARVIFLORA *** No data. A leafy, 60cm. perennial from the mountains of N Spain. In the Sect. *Tubiflorae*, like *D. lutea* & *D. viridiflora*, with long, dense, woolly racemes of tubular, red-brown, purple-veined flowers. (50+) A
- 410.000 : DIGITALIS THAPSI *** Spain, Avila, Sierra de Gredos, Puerto del Pico. 1300m. Granite fissures & in loose, granite grit on steep slopes. (Another Iberian endemic, quite close to *D. purpurea* but a good perennial in a sunny, well-drained place or lime-free scree-bed. Leaves & stems all covered in yellowish indumentum & with many, large, downy, sugar-pink flowers.) (50+) B
- 412.180 : DIONYSIA INVOLUCRATA *** Tadjikistan, Pamir-Alai, Khandar river gorge. 1000m. & over. Ex J. Halda colls. (One of the more amenable of an intractable genus but still a plant only for the experienced alpine-house grower. Cushions of sticky-leaved rosettes with umbels of sugar-pink flowers. A little hand-pollinated seed from Jim Almond) (10+) E
- 424.120 : DRACUNCULUS VULGARIS *** No data. When we were collecting in the E Mediterranean area in the 1980's, we listed this regularly. We have not done so for some years. This is grown in Cambridgeshire, UK. A spectacular aroid, up to 1m. high, with pedately divided foliage & huge, fleshy, brown-purple spathes on maroon-spotted stems. Hot, dry site in UK. (8) B
- 432.300 : ECHIUUM RUSSICUM *** No data. A striking plant, almost 1m. high, from the dry grasslands of E central Europe, N into Russia. Spike-like inflorescences of many rusty-red flowers with the stamens exerted on long, red filaments. A bristly, short-lived perennial, evocatively illustrated, growing in Russian *Stipa*-steppe, in Rix & Phillips 'Perennials' Vol. 1., p. 170. (15+) B
- 461.500 : ERYNGIUM MARITIMUM *** UK, England, Devon, Exmouth. Among grass on stable sand-dunes just above sea-level. Ex a M. Tucker coll. (The Sea Holly itself, maybe the loveliest of the genus but seldom seen in gardens & by no means easy. Spiny basal leaves, 20cm. stems & bracts all in the same matt bluish-grey, a little paler than the blue flower-heads.) (10+) B
- 481.502 : EUPHORBIA RIGIDA** Greece, Fokida, N of Amfissa. 850m. Open, gravelly slope. 6.6.96 (Much esteemed member of Sect. *Myrsiniteae* with erect, sculptured stems of spirally arranged, pointed, fleshy leaves, about 30cm. high. In spring, its flat acid-yellow heads stand out against the blue-grey evergreen foliage. Usually perfectly hardy in a hot, dry site in the UK.) (10+) C

- 515.050 : GENTIANA ACAULIS *** No data. From a very fine garden-form of the classic rich-blue trumpet gentian, reliably floriferous with Alan Edwards in Surrey, UK. Most cultivars in British gardens seem to come closest to *G. dinarica* from the eastern limestones, some may be of hybrid origin but are best-known under this blanket-name. Good, rich, well-drained soil in sun (50+) **A**
- 518.400 : GENTIANA GELIDA *** Turkey, Gumushane, Kop Dag. 2300m. Moist to dryish turf. (A handsome, late-flowering species, superficially rather like *G. septemfida* but with creamy yellow flowers, deeper yellow striped with green outside. Not so easy but but successful with some. This seed is from Dinah Batterham who grows it well outside in Dorset, UK.) (20+) **D**
- 519.500 : GENTIANA PARADOXA *** Georgia, Abkhazia. (An relict surviving in a few places on the limestones between Sochi & Sukhumi at around 1300m. Unlike any other. Erect, 20cm. stems, clothed in linear, verticillate leaves & each bearing 1 or 2 trumpets, olive-green outside with pale-blue plicae & lobes. Not too difficult outside but choice enough for the alpine-house.) (30+) **C**
- 525.750 : GERANIUM IBERICUM** Georgia, Bakuriani area, Tskhra-tskharo pass. 2300m. Alpine meadows. (About 50cm. high with much-divided, hairy leaves, cut into many deep lobes. A multitude of purple-veined, rich violet-blue flowers in summer. Seldom seen in cultivation, where its name is often misapplied to *G. x magnificum*, its sterile hybrid with *G. platypetalum*.) (10+) **B**
- 526.310 : GERANIUM MACRORRHIZUM *** Croatia, Velebit Planina, N of Mali Halan. 900m. Moist, stony humus. (Queen of ground-covers in a very vigorous, fertile form with deep magenta-pink flowers. Aromatic bright-green leaves.) (10+) **A**
- 526.800 : GERANIUM PLATYPETALUM *** Georgia. No further data. Ex a R. Lancaster coll. (From a clone, named 'Georgia Blue', collected by Roy Lancaster, but seems quite typical of this species. Darkly veined, rich violet-blue flowers in midsummer on plants of about 30cm. Rounded, hairy, lobed leaves, much less cut than the allied *G. ibericum*. Excellent & long-flowering.) (10+) **B**
- 526.920 : GERANIUM PRATENSE f. ALBIFLORUM *** No data. From a vigorous, 1m. high, white-flowered form of our native Meadow Cranesbill, a species which extends E to the Himalayas. Fine in the wild-garden with its deeply cut foliage. (10+) **A**
- 527.000 : GERANIUM PSILOSTEMON *** Turkey, Artvin, Genya Dag. 1700m. Wet meadow in *Picea* woodland. (Our favourite among the larger ones with its stunning, luminous, magenta flowers, darkly veined & with glossy black centres. About 1m. high with large, cut, basal leaves, which emerge from shiny, crimson sheaths in spring & colour to orange & scarlet in autumn.) (10+) **B**
- 528.220 : GERANIUM SANGUINEUM *** No data. Mainly from Max Frei's selected clone 'Elspeth'. A long-flowering, reliable species, widespread through Europe to the Caucasus, usually in dryish, limestone habitats but does not resent our acid soil in a wet climate. A bushy growth of much-branched stems, clad in deeply cut leaves, with a profusion on bright magenta-pink flowers. (10+) **A**
- 528.500 : GERANIUM SYLVATICUM *** Greece, Drama, Falakro. 2200m. Moist meadow. (From a fine form of this widespread European species. Rich rose-pink flowers with large white centres on erect, leafy plants, about 1m. high.) (10+) **B**
- 528.520 : GERANIUM SYLVATICUM *** No data. From Amy Doncaster's dwarfed, blue selection - clear lilac-blue flowers with tidy white centres on plants of about 60cm. These two may have crossed but the seedlings should all be worthwhile. (10+) **B**
- 619.010 : LATHYRUS LATIFOLIUS - WHITE FORM *** From the outstanding white version of this vigorous, perennial pea, usually grown as 'White Pearl'. Beloved by Gertrude Jekyll, it climbs to about 3m. with masses of pure-white sweet-peas. (10+) **A**
- 619.510 : LATHYRUS ROTUNDIFOLIUS *** No data. Another excellent perennial climber. From W Asia & more restrained than the preceding, usually with winged stems of 1-2m. & sweet-peas in a distinctive shade of pink in summer. (10+) **A**
- 619.710 : LATHYRUS TINGITANUS - PINK FORM *** Morocco, near Tangier. (Fine, seldom-seen form of this, usually purple-flowered, annual from S Spain & NW Africa. Climbing to over 1m. it sows itself in Harry Hay's Surrey garden.) (10+) **A**
- 619.860 : LATHYRUS VERNUS** From the form with bicoloured, pink & white flowers, called 'Albo-roseus', which can be expected to come quite evenly from seed. This compact, early-flowering perennial, about 30cm. high, is far too little grown - an adaptable delight with such spring flowers as the woodland *Corydalis* spp. & with tidy clumps of foliage later in the season. (10+) **A**
- 632.001 : LILIUM ALBANICUM *** Greece, Ioanina, Katara. 1700m. Ex an F. Baxter coll. (The beautiful, yellow, sparsely speckled race of *L. carnolicum* from the acid mountains around Albania, in Macedonia & NW Greece. About 60cm. high.) (10+) **D**
- 632.600 : LILIUM CANDIDUM *** Greece, Lakonia, W of Sparti. 500m. Steep, limestone slopes among *Euphorbia*, *Phlomis*, etc. (Incomparable, pure-white lily. Older cultivated stock is sterile & full of virus. This is from bulbs maintained here by hand-pollination from our 1983 wild seed coll. It survives outside in our wet climate but we grow it under glass for seed.) (15+) **C**
- 633.202 : LILIUM CHALCEDONICUM *** Greece, Viotia, Oros Elikonas above Evangelistria. 1500m. Margin of *Quercus* & *Abies* woodland. (Stunning, scarlet lily, about 1m. high with up to 15 flowers in mid-summer. Good drainage & sun.) (15+) **C**
- 633.910 : LILIUM KESSELRINGIANUM** No data. Seed from Georgia of this beautiful, creamy-yellow lily with wide-open, outward-facing flowers, distinct from *L. monadelphum* in colour & in its acute, recurved segments, like *L. rhodopeum*. (15+) **E**
- 633.950 : LILIUM LEDEBOURII *** Iran, Gilan, Talish. 1700-1900m. Openings in degraded *Fagus* forest. Ex an A. Ala coll. (Only known from one locality in Iran & one or two in Azerbaijan. A superlative plant, proving accommodating in several British gardens. Up to 15, white flowers, banded with yellow-green & lightly speckled with purple, with deep orange anthers.) (15+) **E**
- 634.040 : LILIUM MARTAGON *** No data. From a wide range of forms of this widespread Euro-Siberian turkscap lily. Stems of about 2m., whorled with dark leaves carry speckled, pendant flowers in pale pink to maroon. Easy in UK in light shade. (20+) **A**
- 634.050 : LILIUM MARTAGON f. ALBUM *** No data. From some fine green-tinged whites. Usually comes 'true'. (20+) **B**

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

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

- 634.810 : LILIJUM PYRENAICUM** * UK, Wales, below Ffostrasol. 200m. Mixed deciduous woodland on acid soil. (May or may not be native, though the distribution fits other Pyreneans, but certainly now wild. Dwarfier than populations we have seen in the Pyrenees, at about 60cm., with bright yellow, brown-spotted, turkscap flowers above close-packed, narrow leaves.) (15+) **B**
- 635.210 : LILIJUM SZOVITSIANUM** Georgia, Bakuriani area. Woodland. (Doubtfully separable from *L. monadelphum* & others in this group of beautiful, fragrant, pale yellow Transcaucasian lilies, mainly distinguished by the flower proportions.) (15+) **C**
- 635.220 : LILIJUM SZOVITSIANUM** * No data. UK grown seed. Usually one of the best garden-plants in the genus. (15+) **B**
- 709.010 : NECTAROSCORDERUM SICULUM** (subsp. *siculum*) * No data. Tall, handsome *Allium*-relative from the W Mediterranean area. Stems of about 1.2m. carry umbels of drooping creamy bells, tinged with green & flushed with pink. Easy. (15+) **A**

Paeonia : fresh from the steppes of Central Asia

We list fresh 1996 seed collected from natural populations in the republics of the former USSR but, even if sown promptly, this may not show leaf-growth until spring, 1998. Like some lilies, many peonies will germinate hypogeaally, forming a root-system underground during the first cool period before sending up true leaves the following season. There are some exceptional wild collections here. As most peony-enthusiasts will appreciate, these are all too often unique opportunities. Many

are very local plants in nature, occurring, sometimes in large numbers, in isolated colonies. It can be a lot of trouble to arrange to collect seed from them, especially as the anarchic situation in several of these areas compounds both the difficulties of collection and the problems of communication & transport. Our thanks to Will McLewin for his painstaking collaboration with the botanists in the republics of the former USSR, who have made most of these collections.

- 745.801 : PAEONIA ANOMALA** Russia, Kemerovo district, Tisul, foothills of Kuznetsk Altai. 450m. Forest meadow. (From N of the Mongolian border, a wild coll. of this fine species, widespread in the cold areas of N Asia. Foliage cut into narrow segments, beautiful even without the flat flowers, up to 9cm. across, in deepest rose-pink. Well depicted in Rix & Phillips, Vol. 1.) (6) **C**
- 745.802 : PAEONIA ANOMALA** Russia, Khakassia, Shirinsky district. (Another central Siberian coll. Variation unknown.) (6) **C**
- 746.020 : PAEONIA BROTEROI** * No data. A fine species, confined to the Iberian peninsula. Smooth, much cut foliage, glaucous on the undersides & deep-pink bowls with a mass of yellow stamens around densely woolly follicles. (6) **C**
- 746.100 : PAEONIA CAMBESSEDESII** * The dwarfest species, endemic to the limestones of the Balearic Islands and best with some protection, in cyclamen-conditions, in the UK, though most of this seed is from a plant grown outside in Hampshire. About 30cm. high with beautiful, smooth, grey-green foliage, crimson beneath, & big, rosy flowers, up to 10cm. across in spring. (6) **C**
- 746.150 : PAEONIA CAUCASICA** (*P. mascula* group) SE Georgia, Daba area. (The fine Caucasian representative of the widespread & variable *P. mascula* group, distributed through S Europe eastward to N Iran. About 50cm. high with dissected, flat, smooth foliage, glaucous beneath, & big rosy-red flowers with woolly follicles & purple filaments to the yellow anthers.) (6) **C**
- 746.500 : PAEONIA DAURICA** (*P. triternata*) (*P. mascula* group) Ukraine, Krim (Crimea). (Close to *P. mascula* but distinct in its few, rounded leaflets with undulate margins. This name has been applied to plants in SE Europe & Turkey which approach the Crimean ones but for the purist this is the only 'real thing'. The valid name is an unfortunate misspelling of "*P. taurica*".) (6) **D**
- 746.640 : PAEONIA LITHOPHILA** (*P. tenuifolia* group) Ukraine, Krim (Crimea). (Much dissected leaves finely cut into a mass of filiform segments. Glossy, brilliant crimson bowls hold bright yellow stamens in early summer. This is the race we grew as *P. tenuifolia* in our Dorset nursery years ago from seed received from what was then the Nikita Botanic Garden in Yalta.) (6) **D**
- 747.100 : PAEONIA MLOKOSEWITSCHII** (*P. wittmanniana* group) Georgia, Kakheti, Lagodekhi, near Shirati. (We have again a small quantity of seed collected in the Lagodekhi Nature Reserve by the Georgian Academy of Sciences. This is one of the world's classic rarities and there are certainly many more plants in cultivation than in the wild. This wild collection is of great importance in increasing the genetic diversity of our cultivated stock & will be of interest to enthusiasts curious to see what, if any, variation there might be from the plants we have. If you just want this for general garden purposes, choose the next listing.) (5) **F**
- 747.110 : PAEONIA MLOKOSEWITSCHII** * No data. "A sovereign among Paeonies" according to Farrer. Large, pale lemon-yellow flowers with deeper yellow stamens above 60cm. clumps of rounded, greyish-green leaves. Excellent seed this season (6) **C**
- 747.850 : PAEONIA STEVENIANA** (*P. wittmanniana* group) (possibly the same as *P.w.* var. *nudicarpa*) Georgia, Bakuriani area. (Likely to be wholly different to *P. mlokosewitschii* & Will McLewin thinks it may produce deeper yellows. We still know little of the variation of these local Caucasian populations & suspect that Russian 'splitting' is fully justified.) (5) **F**
- 747.900 : PAEONIA TENUIFOLIA** Georgia, Igoeti area. Steppe. (We are uncertain as to how this population differs from the more western ones segregated by Russian botanists as *P. biebersteiniana* & *P. lithophila* (*q.v.*) but we are obviously dealing with a very small isolated colony at the SE extremity of the distribution of this group. Described by the collector as 'scarce'.) (6) **F**
- 747.960 : PAEONIA TOMENTOSA** (*P. wittmanniana* group) Azerbaijan, Lerik, Sinabad, Talysh. (Very little-known. Plants from seed collected in the Iranian Talysh in the 1960's (as *P. wittmanniana*) were compact with white flowers & most distinct.) (5) **F**

- 751.202 : PAPAVER BRACTEATUM *** Turkey, Hakkari, W of Semdinli. 1600m. Steep, stony slopes. (Sumptuous, big Oriental Poppies in crumpled scarlet silk with glossy black centres, on bristly 60cm. stems from stout, perennial clumps. Easily grown & permanent in a good, well-drained soil. Would that all its E Turkish compatriots were so accommodating in the UK.) (50+) **A**
- 752.300 : PAPAVER PAUCIFOLIATUM *** Turkey, Kars. Ex an E. Pasche coll. (AHEP 83-65). (A slightly more slender version of *P. orientale* with unblotched, brick-red flowers. A Transcaucasian plant, just entering Turkey in the NE corner.) (50+) **B**
- 761.000 : PETROMARULA PINNATA** Greece, Crete, Hania, Platanias. M Jope 95-50 (One of the strangest Cretan endemics, a monotypic genus of the *Campanulaceae*, perhaps nearest to *Asyneuma* or *Phyteuma*, only found on the island's limestone cliffs. Saxatile it may be but it is too tall for most rock-gardeners & is most likely to appeal to hardy-plant enthusiasts, growing it in a raised-bed or other well-drained site, where it seems hardy & accommodating. Robust rosettes of deeply cut, long-stalked, smooth, dark leaves produce a stem almost 1m. high with a few side-branches - "practically from top to bottom this is one mauve raceme of hundreds of small starry flowers - the effect is striking, as they all seem to open at once" wrote Peter Davis.) (30+) **C**
- 790.204 : PRIMULA VULGARIS** (subsp. *vulgaris*) Greece, Ioanina, E of Eptahori. Mixed woodland. 10.6.96 (The populations of primroses in N Greece are often white-flowered rather than pale yellow but we have not seen these in flower.) (20+) **A**
- 808.020 : RAMONDA MYCONI *** No data. From several forms of this beautiful Pyrenean endemic, with its flat rosettes of wrinkled, hairy leaves, including whites & pinks, as well as the classic violet one. By far the easiest of this trio of relic members of the *Gesneriaceae* & the best for garden-purposes, unrivalled in a N-facing dry-stone wall. Though utterly hardy, these have not forgotten their tropical ancestry & are best raised from their very fine seeds sown, like *Rhododendron*, uncovered on the surface of a sterile, peaty soil, in gentle warmth, watered from below, covered with a pane of glass or kept in a plastic bag.) (100+) **B**
- 808.200 : RAMONDA NATHALIAE** Greece, Imathia, Oros Vermio above Naoussa. 1200m. N-facing limestone outcrop. 8.6.96 (Usually rated as the best of this small genus - "it wipes out all the rest" writes Farrer. Comparisons are unjust but still a magnificent plant with wrinkled, glossy leaves & usually (not invariably) 4-lobed flowers in lilac with orange-yellow centres.) (50+) **D**
- 808.401 : RAMONDA SERBICA** Greece, Ioanina, Farangi Vikou. 800m. Limestone fissures. 12.6.96 (Least well-known & maybe the most temperamental of the three in cultivation, best grown in the alpine-house in shade. Rosettes of rather greyish, hairy leaves & more bell-shaped, violet flowers, approaching those of *Jankaea* in form, with distinctive dark purple anthers.) (50+) **E**
- 823.000 : RHODODENDRON UNGERNII *** Turkey, Artvin, Genya Dag above Artvin. 1600m. *Picea* woodland with *R. ponticum* undergrowth. (Grown from seed we collected in 1986, this will be at least as 'pure' as wild seed, as there are no other species in flower here in late July & early August, when its big trusses of white bells appear. Up to 7m. high with large, spectacular foliage, felted beneath. Hardier than *R. ponticum*, which it replaces in frost-pockets & on colder slopes.) (30+) **D**
- 843.200 : SALVIA CADMICA *** Turkey, Konya, Sultan Daglari, SW of Aksehir. 1750m. Open sites in stony clay over limestone. (First found here, on Sultan Dag, by Bommüller in 1899, we saw this fine plant in flower in 1994. Norman Stevens established it from cuttings & this seed is from in his Cambridge garden. A W Turkish endemic, which might belong with such as *S. caespitosa* in the woody-based, pinnate-leaved group, except that the hairy, wrinkled basal leaves are entire. The 30cm. stems are ringed with pure-white flowers, each surrounded by a large, campanulate greenish-yellow calyx, which persists & expands in fruit.) (10) **D**
- 844.201 : SALVIA CYANESCENS *** Turkey, Bolu, W of Goynuk. 800m. Loose, exposed shale slopes. (A delightfully airy perennial with flat rosettes of felted leaves and diffuse, branching stems, about 50cm. high, of lovely pale-violet flowers. One of several species now well-established in Colorado gardens from collections we made in the early 1980's. Hot, dry site in the UK.) (20+) **B**
- 845.201 : SALVIA HYPARGEIA *** Turkey, Adana, N of Saimbeyli. 1200m. Open rocky areas. (Neat clumps of narrow, grey-green, wool-backed leaves & 50cm. herbaceous stems whorled with lilac-blue flowers. Now a standard plant in Denver garden-centres but quite accommodating in the UK with good drainage in full sun - used to do well on the RBG Edinburgh rock-garden.) (20+) **B**
- 847.051 : SALVIA RECOGNITA *** Turkey, Nevsehir, W of Urgup. 1200m. Base of cliffs in light shade. (A most distinct, woody-based perennial, up to 1m. high & sticky with glandular hairs. Pinnate leaves & large, widely spaced, rose-pink flowers on elegant, sparsely branched stems. Seed from Richard Riedy in New Mexico but successful with many growers in the UK & Australia.) (15+) **C**
- 961.260 : TRACHELIUM JACQUINII subsp. RUMELIANUM *** No data. A lovely species, characteristic of Greek limestone cliffs, with dense corymbs of soft bluish lilac flowers on 15cm. stems from rosettes of leathery, toothed leaves. Not grown by UK gardeners as much as it should be, an excellent late-summer flowering plant for the alpine-house or a warm rock-garden crevice.) (50+) **B**
- 980.200 : VERBASCUM ARCTURUS *** Greece, Crete, Rethimno, gorge near Selia. Ex an A. Edwards coll. (Long-flowering & long-lived, woody-based perennial chasmophyte, endemic to the Cretan limestone gorges. Downy, grey foliage & 30cm. stems of bright-yellow flowers with violet filaments. Easy if protected from wetness - sows itself in our unheated greenhouse.) (50+) **B**
- 982.105 : VERBASCUM RORIPFOLIUM *** No data. A tall, airy biennial from NE Greece & adjacent Bulgaria. Around 1m. high with branched inflorescences of lots of little, yellow flowers. Like the preceding, originally in the genus *Celsia*. (50+) **A**
- 982.950 : VERBASCUM WIEDEMANNIANUM *** Turkey, Gumushane, WNW of Bayburt. 1600m. Stony clay in fallow-fields. (An outstanding purple-flowered exception among over 200 yellow-flowered Turkish *Verbascum* spp. A very local N Turkish endemic without any close relatives, still sadly confused in gardens with the widespread *V. phoeniceum*. Monocarpic or a short-lived perennial, with stout, narrow spires, up to 2m. high, packed with scented, violet-purple flowers with the filaments covered in purple hairs. Seed from Richard Riedy in New Mexico but successfully grown from Wales to Cambridge in the UK, though it can be temperamental and we suspect will always remain a connoisseurs' plant. It needs a long cold period to germinate well.) (50+) **C**

We were not in N America in 1996. For a number of reasons, John Andrews & Mike Broder were unable to make any collecting trips during the past year. Jim & Georgie Robinett were also less active in 1996. There is, however, some interesting 1996 cultivated seed & a couple of important Canadian colls. but most seeds listed here were collected by ourselves & others during 1995. The date of collection is almost always given. All seed collected in 1995 has been stored in low humidity under refrigerated conditions. Experience over several years has convinced us that little, if any, deterioration in viability will have occurred. In some cases, such as *Penstemon*, such storage appears to enhance the capacity for germination. Nomenclature for Californian species follows 'The Jepson Manual', published in 1993, in most cases. This is "good in

parts" but no way approaches the outdated 'A Californian Flora' by Munz & Keck (1959), which remains our primary reference. The incomplete but superlative 'Intermountain Flora' and 'A Utah Flora' (Welsh, 1987) are used for taxa occurring within their areas. We edit with gardeners' interests in mind. North American reference numbers, printed against names here, are now permanent population references, just as in the other sections. North American species have seven-digit population references, all starting with 1. These numbers run in alphabetical, as well as numerical, order so identification of packets from this list will be simple. Cultivated material is denoted by * and field data in this case applies to the original parent collection. 'No data' material is included on a geographical basis.

Allium : get to know some worthwhile western onions

With about 50 species, western North America (California in particular) is an important secondary centre for this genus. Most of these Americans are little-known in cultivation but many should be no trouble in a dry, sunny, raised bed or in a bulb-frame in the UK. There are many dwarf, montane species worthy of the alpine-house. As with the Eurasian species, their

tendency is to flower a little later than most of the spring-flowering bulbs, often after leaf-growth is fully developed but there are some very early-flowering, snow-melt bulbs among them. For an overview of the genus in the West and its cultivation, see the article by Jim & Georgie Robinett in the 1993 issue of 'Herbertia' (Vol. 49).

- 1.030.003 : ALLIUM ACUMINATUM** Idaho, Butte Co., SW of Arco. 1400m. Among *Artemisia* on open, level steppe. 20.7.95 (One of the most showy of the more eastern species. Round, brilliant purple-pink umbels on 15-20cm. stems.) (15+) **B**
- 1.030.301 : ALLIUM BISCEPTRUM** Cal., Alpine Co. 2520m. Granite sand in part-shade in aspen-grove. J. & G. Robinett coll. 2.9.95 (Open, 3cm. umbels of starry pink flowers. Occurs on the higher ranges across to Idaho & Utah.) (15+) **B**
- 1.030.451 : ALLIUM CAMPANULATUM** Cal., Fresno Co. 1700m. Sandy, granitic soil in open woodland. J. & G. Robinett coll. 1.9.95 (Rose-pink, spreading, starry flowers in loose umbels, 4-5cm. across, on 15-20cm. stems.) (15+) **B**
- 1.030.551 : ALLIUM CRATERICOLA** Cal., Lake-Colusa Co. line. 1090m. Serpentine scree in full sun. J. & G. Robinett coll. 26.5.95 (Dense umbels of white to pink flowers nestle, almost stemless, on the one or two, thick, channeled, falcate leaves. A desirable dwarf of exposed volcanic or serpentine habitats but a little difficult and needs patience.) (15+) **C**
- 1.030.702 : ALLIUM DICHLAMYDEUM** * Cal., Sonoma Co. 10m. Coastal bluff in fog-belt. (One of the best of the larger species with fine, bright-pink heads on 20-30cm. stems. Very satisfactory & trouble-free in a frame in UK.) (15+) **B**
- 1.030.800 : ALLIUM FALCIFOLIUM** Cal., Humboldt Co., SSW of Willow Creek. 1580m. Stony openings among conifers on serpentine. 30.7.95 (Red-purple flower-heads on 5cm. stems between two little, thick, falcate leaves in early spring.) (15+) **B**
- 1.031.050 : ALLIUM FIMBRIATUM var. PURDYI** Cal., Lake Co. 635m. Gravelly serpentine clay in full sun. J. & G. Robinett coll. 14.7.95 (White to pale lavender, open, 3-4cm. umbels. Occurs in a few dense colonies in a very small area.) (15+) **B**
- 1.031.600 : ALLIUM JEPSONII** * Cal., Butte Co. 455m. Moss layer above serpentine cliff in full sun on N-facing slope. (Extremely local in the N Sierran foothills. Dense, white, 3-4cm. umbels on 30-50cm. stems.) (15+) **C**
- 1.031.700 : ALLIUM LACUNOSUM** (var. *lacunosum*) Cal., San Luis Obispo Co. 730 m. Gravelly serpentine clay in open woodland. J. & G. Robinett coll. 20.7.95 (Umbels of white stars on 10-15cm. stems. From lower elevation serpentines.) (15+) **B**
- 1.031.800 : ALLIUM LEMMONII** * Cal., Modoc Co., N of Canby. 1500m. Among volcanic debris on open, clay 'flats'. (Hardy, 20cm. high species in pink to white from the cold, dry uplands of the north all the way across to Idaho.) (15+) **B**
- 1.032.600 : ALLIUM PLATYCAULE** * Cal., Modoc Co., Warner Mts. E of Davis Creek. 1750m. Open, gravelly areas. (Round umbels of deep rose with dark anthers on short flat stems between two thick, falcate leaves. A spectacular 'tumble-weed' species, resembling the SW Asian Sect. *Acanthoprason*, flowering very early, just after the snow has melted. Not too easy to germinate and grow on, it needs cold winters & is all but impossible with Jim & Georgie in low-altitude, W California. This is seed from Norman Stevens (Cambridge, UK), who finds it fits in well with those from similar climates in E Turkey, Iran & Central Asia.) ... (10+) **D**
- 1.032.800 : ALLIUM SANBORNII** (var. *sanbornii*) Cal., Yuba Co. 635m. Serpentine scree in full sun. J. & G. Robinett coll. 27.8.95 (Bright pink flowers in very dense, 3-6cm. umbels on 15-40cm. stems. About a month later than the next and usually the last of the Californian onions to flower. Both this and the following race are very local serpentine plants.) (15+) **C**

- 1.032.850 : ALLIUM SANBORNII var. CONGDONII** Cal., Nevada Co. 1060m. Serpentine scree in chaparral. J. & G. Robinett coll. 27.8.95 (Dense umbels of white to pink flowers on 20-40cm. stems in June & July.) (15+) **C**
- 1.033.602 : ALLIUM VALIDUM** Cal., Placer Co. 1400m. Wet mountain-meadow. J. & G. Robinett coll. 23.9.95 (A big wet-grower, up to 75cm. high, with dense, pale-pink umbels in summer. Should be no trouble outside in the UK.) (15+) **B**
- 1.060.210 : AQUILEGIA CHAPLINEI** * New Mexico, Eddy Co. Ex a S. Walker coll. (A close relative of *A. chrysantha*, endemic to the Guadalupe Mts., E of El Paso on the border of Texas & New Mexico, where its delicately cut, ferny foliage sheets the moist cliff-faces around Sitting Bull Falls. Long-spurred, pale yellow flowers on stems of around 30cm.) (20+) **C**
- 1.061.200 : AQUILEGIA LARAMIENSIS** * Wyoming, Albany Co., Laramie Mts. above Friend Creek. 2280m. Granite fissures and ledges. (Pure white flowers with short, incurved spurs. 10cm. Closest to the Rocky Mt. *A. saximontana*.) (15+) **D**
- 1.061.350 : AQUILEGIA aff. MICRANTHA** Colorado, Montrose Co., Dolores River Canyon NW of Uravan. 1700m. Sandstone detritus on steep, shaded slope. 9.7.95 (From a very beautiful colony we found in 1989. Perhaps the result of hybridization between *A. micrantha* and *A. elegantula* but maybe another is involved. Not very variable in the flowers - soft, creamy yellows with long spurs tinged with apricot - but leaves and the 30-50cm. stems vary greatly in their glandular pubescence.) (20+) **C**
- 1.061.850 : AQUILEGIA SCOPULORUM** Nevada, White Pine Co., Snake Range. 3440m. Exposed limestone talus up to the summit. J. Andrews coll. 14.10.95 (The one the alpine-plant specialist will demand. Reduced races occur on a few of the highest limestones of the Great Basin. Acutely difficult to collect, we grew one many years ago from a Carl Worth coll. It remained compact. Imbricate, blue-grey foliage. Flowers, on stems of a few cm., are entirely rich-blue and long-spurred.) (10+) **E**
- 1.101.800 : ASTRAGALUS CHAMAELEUCE** Utah, Uintah Co., WSW of Maeser. 2000m. Open, sandstone slopes. 11.7.95 (Tiny grey tufts with huge, spongy, purple-mottled pods, following the loose racemes of pale lavender flowers.) (10+) **D**
- 1.102.100 : ASTRAGALUS COCCINEUS** Cal., Inyo Co., White Mts., near Toll House Springs. 1980m. Loose, stony, clay slope. 25.6.95 (An incredible species, unsurpassed in the brilliance of its elongated, glowing scarlet flowers against the low tufts of woolly white foliage. Amazing, horned, white-velvet pods. It has been grown, flowered and shown in the UK.) (10) **D**
- 1.110.200 : ASTRAGALUS UTAHENSIS** Utah, Salt Lake Co., Parley's Canyon E of Salt Lake City. 1400m. Open, gravelly areas. 12.7.95 (Marcus Jones, pioneer of Utah botany, thought this the most beautiful flower in the state. Mats of white-felted leaves, brilliant carmine-purple racemes and pods clad in long, shaggy silver-white hairs. Not difficult in the UK.) (10+) **C**
- 1.192.500 : CAMPANULA SCABRELLA** Cal., Trinity-Siskiyou Co., Mt. Eddy. 2740m. Loose serpentine talus on summit slopes. J. Andrews coll., 1995 (Only Californian site for this local alpine, allied to *C. shelteri* & *C. piperi*. Upright, 3-10cm. tufts with a characteristic rough pubescence on the narrow leaves. Starry, pale-blue flowers. Possible in skilled hands.) (30+) **E**
- 1.215.150 : CENTAUREA ROTHROCKII** * Originally from a coll. in southern New Mexico. Seed from Richard Riedy, who tells us this is both gorgeous and impressive. With only two species in this genus in N America, this has remained surprisingly obscure. From 50cm. to about 1m. high, if in good soil in sun, with enormous, flattish heads, about 12cm. across, lavender round the edge grading to yellowish white in the centre. An annual, it will probably be best started under glass in spring.) (15+) **B**
- 1.230.500 : CLEMATIS HIRSUTISSIMA** * Colorado, Front Range, Independence Mt. 2700m. Ex an A. Pierce coll. (Herbaceous, with thick-textured, urn-shaped, nodding flowers, downy outside & blue-purple within, on erect stems of 30cm. or more. The species ranges from Canada SE to Colorado & its sprawling relative, *C. scottii*, is sometimes grown in UK gardens.) (10+) **D**
- 1.305.001 : DENDROMECON RIGIDA** Cal., Tulare Co., NE of Springville. 1150m. Among scrub on steep slopes. 2.8.95 (Woody poppy, about 2m. high with brilliant yellow, four-petalled flowers & narrow, bluish, leathery leaves. Usually a success in the UK in a dry, sunny site. Seed is difficult to germinate - try burning over it or put it in an oven for an hour or so.) (20+) **B**
- 1.305.020 : DENDROMECON RIGIDA** Cal., Santa Barbara Co., Point Sal Ridge. 300m. Exposed, steep, seaward W-facing slope. 22.6.95 (Extremely compact, only 30cm. high here, with very thick, leathery leaves. The result of the Pacific gales and may not be fixed but most prostrate *Ceanothus* in cultivation come from similar sites & retain their character.) (15+) **D**
- 1.306.001 : DICENTRA CHRYSANTHA** Cal., Lake Co., SE of Hull Mt. 1800m. Steep open slope. 31.7.95 (Californian endemic & a classic fire-follower. Stiff, erect stems of about 1m. from a stout perennial root. Blue-grey, dissected leaves and panicles of upward-facing, bright-yellow bleeding-heart flowers. Treat like *Dendromecon* to germinate - burn it over!) (20+) **C**
- 1.312.500 : DRABA QUADRICOSTATA** Cal., Mono Co., N of Conway Summit. 2300m. Rock fissures on volcanic ridge. J. Andrews coll., 1995 (Narrow Sierra Nevada endemic, separated into *Cusickiella quadricostata* in 'Jepson'. One of the most densely caespitose of Californian cushions with pale yellow flowers. Enthusiastically recommended by John.) (20+) **D**
- 1.314.900 : EPIGAEA REPENS** Canada, Nova Scotia, near Lunenburg, SW of Halifax. S-facing bank in heavy, sandy soil & broken shale at edge of pine-forest - sun & part-shade. J. Weagle coll., 1996. (Freshly collected seed, received promptly & kept refrigerated should give good germination but this is not an easy plant in the UK, where the climate is too soft for it & premature growth can be damaged by late frosts. The representative in eastern N America, from Canada S to Georgia, of a trio of widely disjunct relics in the *Ericaceae*. Its relatives are in Japan & NE Turkey. A beautiful, creeping, evergreen shrub, strictly for lime-free soils. About 10cm. high, with large, bristly, dark-green leaves & dense heads of tubular, white or rose-tinted flowers in spring.) (50+) **E**

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

Species from North America : Seeds from Jim & Jenny Archibald

- 1.315.500 : EPILOBIUM SISKIYOUENSE** Cal., Siskiyou Co., Mt. Eddy. 2630m. Exposed, serpentine slope. J. Andrews coll. 1995 (Now sensibly separated from *E. obcordatum* in 'Jepson', this is very local on the high serpentines in this area and is more or less intermediate between *E. obcordatum* & *E. rigidum* - a superlative trio of alpines for the specialist. Caespitose, woody-based & compact, about 10cm. high, it covers itself with comparatively huge flowers of intense rose-purple.) (10+) E
- 1.330.250 : ERIOGONUM CAESPITOSUM** Cal., Mono Co., White Mts. 2300m. Open, stony, limestone slope. 5.8.95 (One of the best of the tightly pulvinate ones. Compact mats of tiny, spatulate, white-felted leaves. Yellow heads flush to red.) (20+) C
- 1.330.850 : ERIOGONUM HOLMGRENII** Nevada, White Pine Co., Snake Range. 3400m. Exposed limestone talus. J. Andrews coll. 14.10.95 (Endemic to this range, above the bristlecone pines with *Aquilegia scopulorum* & *Primula nevadensis*. Never in cultivation. In Sect. *Capitata* with other desirable narrow endemics like *E. gracilipes*. Raspberry-pink heads.) (15+) E
- 1.331.500 : ERIOGONUM OVALIFOLIUM** Cal., Mono Co., White Mts., Westgard Pass. 2230m. Level, gravelly steppe. 5.8.95 (A widespread, extremely variable group of local taxa, defying all attempts to split it into 'species' - all are beautiful. Woody mats of oval, grey-white leaves send up many 10cm. stems with round heads of flowers, creamy-white maturing to pink.) (20+) C
- 1.332.500 : ERIOGONUM SISKIYOUENSE** Cal., Trinity Co., Mt. Eddy. 2070m. J. Andrews coll. 1995 (Narrowly endemic to the Mt. Eddy serpentines. Tight, woody-based mats of woolly-backed leaves, rather like a compressed version of *E. umbellatum*. Slender stems of about 5 cm. with a whorl of bracts below the heads, which open yellow & age to red.) (15+) D
- 1.375.100 : GILIA AGGREGATA** (*Ipomopsis aggregata*) Colorado, Mesa Co., SW of Whitewater. 1800m. Among Artemisia on stony sandstone slope. 9.7.95 (Always a spectacular species. Monocarpic with flat rosettes of exquisitely cut rich-green leaves. Branching, 50cm. stems massed with starry trumpets in scarlet-red. Much enjoyed the hot, dry 1995 UK summer.) (20+) A
- 1.376.500 : GILIA FORMOSA** New Mexico, San Juan Co., NW of Aztec. 1900m. Ridgetops of eroded clay hills. 8.7.95 (Close, woody-based tufts of tiny, hair-thin, bright-green leaves send up wiry-stemmed panicles of long-tubed flowers in clear pink shot with violet-blue. "The special glory of Aztec...known only from here and as beautiful as it is rare" wrote Dwight Ripley after visiting it in 1943. Now being successfully grown from our 1993 coll. - it even set set in the UK with Jim Lever in 1995. If we could see species like this established & maintained in cultivation, it would be a great reward for our efforts.) (20+) E
- 1.428.100 : HULSEA NANA** Cal., Siskiyou Co., Mt. Eddy - S side. 2600m. Loose serpentine talus. J. Andrews coll. 1995. (High alpine of distinction with mounds of fascinating, pinnately lobed, woolly foliage and huge, many-rayed, yellow 'daisies' on stems of under 15cm. Not easy but we have grown & flowered it in the past. Maybe best outside in scree.) (10+) D
- 1.492.000 : LEPIDIUM NANUM** Nevada, Eureka Co., W of Eureka. 2100m. Gravelly bare-patches among sparse *Juniperus*. 4.7.95 (Classic Great Basin endemic. "Its hummocks look like those of some extra tight Dionysia, of a peculiarly intense shade of sap-green... this is the Draba to end all Drabas..." wrote Dwight Ripley in 1944. Now being successfully grown, it becomes more compact as it ages in cultivation and can even produce its stemless, straw-yellow flowers quite generously.) (20+) E
- 1.493.600 : LESQUERELLA TUMULOSA** Utah, Kane Co., SE of Cannonville. 1500m. Shale ridges. 6.7.95 (Another pulvinate-caespitose crucifer, perhaps the most condensed of the genus, forming dense hard mounds of downy leaves with yellow flowers on 1-4cm. stems. Extremely local on "white bare shale knolls" in this small area of Kane Co.) (15+) E
- 1.496.500 : LEWISIA COTYLEDON var. HECKNERI** * Cal., Trinity Co., N of Junction City. 1640m. Fissures on vertical, shaded, serpentine cliffs. (Thrives unprotected in our deep-scrub bed. A disjunct taxon limited to this area with the largest, most sumptuous flowers, twice the diameter of the type-race, in white richly striped pink. This gave size to the garden-hybrids.) (20+) C
- 1.496.700 : LEWISIA KELLOGGII** Cal., Placer Co., Monumental Ridge. 2060m. J. Andrews coll. 1995 (Extremely to very local (almost all are) & mainly from the decomposed granites of the N Sierra Nevada above 2000m. Dense rosettes of leathery, spoon-shaped leaves, withering in summer, on which sit the pink or white flowers on 3cm. stems.) (20+) E
- 1.496.800 : LEWISIA LEANA** Cal., Trinity Co., Mt. Eddy. 2400m. Stony serpentine alopes with sparse *Pinus*. J. Andrews coll., 1995 (Rosettes of succulent, linear leaves, flat or cylindrical, send up many-flowered panicles. Here, about 15cm. high & mainly with bright magenta-pink flowers. A seldom-collected plant of high altitudes, up to 3300m., in N California & SW Oregon, usually on serpentine but with an outlier on the Sierra Nevada granite of Fresno Co. Mature seed is dark-brown, not black.) (20+) E
- 1.497.000 : LEWISIA OPPOSITIFOLIA** Oregon, Josephine Co., Waldo Hill. 600m. Among serpentine detritus along gully. 13.6.95 (Type locality coll. of this summer-dormant species, in its 'pure' form an Illinois Valley endemic. Narrow, blunt, succulent leaves and 15cm. umbels of up to 6 white flowers with red-fringed sepals. A plant of stony areas, very wet in spring.) (20+) D
- 1.497.200 : LEWISIA REDIVIVA** Wyoming, Albany Co., E of Centennial. 2700m. In granite grit of open, stony 'flats'. 15.7.95 (Perhaps the most beautiful of all N American plants. Tiny fleshy, linear leaves are hardly noticeable under the huge, diaphanous, water-lily flowers on the shortest of stems. The Wyoming colonies are generally a richer pink than seen in gardens.) (20+) C
- 1.497.202 : LEWISIA REDIVIVA** Idaho, Butte Co., NE of Carey. 1520m. E & SE-facing slopes of stony ridge. 20.7.95 (From a splendid site, which we found in 1989 and where almost all the flowers are white. Not collected by us before.) (15+) D

Lilium : the capricious western aristocrats

Most of the following are 1995 collections from Jim & Georgie Robinett, who know this genus well and can be relied on to collect top-quality, correctly named material. The species fall very roughly into two groups : the dry-growers with ovoid bulbs with longer, unjointed scales and the wet-growers with rhizomatous bulbs with shorter, jointed scales. Obviously the wet-growers are going to be much more amenable to the open-

garden in cool temperate climates, seldom needing the very wet conditions of their natural habitats. These are suited to the peat-bed or similar humus-rich conditions. In all cases, the westerners are plants of lime-free soils. Seed sown in winter should give no problems. We had great success from sowing our 1989 refrigerated, seed-bank seed in January, 1995, so the collections made pre-1996 need give no concern.

- 1.498.500 : LILIUM COLUMBIANUM** Cal., Humboldt Co. 500 m. J. & G. Robinett coll. (The spectacular lily of the redwood glades, extending N from here up into Canada. Up to 30 or so golden orange turkscap flowers, speckled with maroon on stems as much as 2m. high. Segmented bulb-scales but not a plant of really wet sites, often out in the open on N slopes.) (15+) **B**
- 1.498.800 : LILIUM 'ELDORADO DITCH LILY'** Cal., Eldorado Co. 1000m. J. & G. Robinett coll. 8.9.95 (A mysterious, apparently natural hybrid from along a few man-made watercourses in the N Sierra Nevada. 20-30 upright, flaring bells, usually pink but also sometimes in orange or brick-red. Stems whorled with bright-green leaves can reach 1.5 m.) (15+) **C**
- 1.498.900 : LILIUM HUMBOLDTII** (subsp. *humboldtii*) Cal., Yuba Co. 550m. J. & G. Robinett coll. 10.95 (Local northern race of this dry-grower from the N Sierra Nevada. Up to 40 strongly recurved, maroon-speckled flowers in orange-yellow. 2m.) (15+) **D**
- 1.499.100 : LILIUM KELLEYANUM** Cal., Tulare Co., E side of Moses Mt. 2070m. J. Andrews coll. 1992 (An obscure, high altitude wet-grower from the S Sierra Nevada, collected where Wayne Roderick considers the 'true' species grows - further N it intergrades with *L. parvum*. Up to 25 fragrant, uniformly yellow, pendant, wide bells with dull-red anthers. 1m.) (15+) **D**
- 1.499.200 : LILIUM KELLOGGII** Cal., Humboldt Co. 800m. J. & G. Robinett coll. 30.9.95 (A dry-grower from around the California-Oregon line, usually in openings among conifers. Can have 15-20 fragrant, turkscap flowers in pink, striped yellow on the basal third of each segment & speckled purple along the edges. Greyish, crinkled leaves. Usually under 1m.) (15+) **D**
- 1.499.400 : LILIUM MARITIMUM** Cal., Sonoma Co. 30m. Open woodland. J. & G. Robinett coll. 18.8.95 (An uncommon, little lily, reputed always to grow within the sound of the Pacific - almost frost-free in winter & cool in summer. Red-orange, funnel-shaped, slightly nodding flowers, spotted basally. Anything from 1-13 flowers on stems from 25cm. to 1m. or more.) (15+) **D**
- 1.499.700 : LILIUM PARDALINUM** Cal., Placer Co. 1400m. Open, wet mountain meadow. J. & G. Robinett coll. 23.9.95 (Most widespread wet-grower, extremely variable but distinct in its very long filaments & capacity to form wide clonal rhizomatous mats. Red-orange turkscap flowers with maroon spots margined with yellow towards the recurving segment-tips.) (20+) **B**
- 1.499.750 : LILIUM PARDALINUM HYBRID** Cal., Placer Co. 1350m. J. & G. Robinett coll. 23.9.95 (Possibly hybrids here with yellow *L. parvum*, which grows in the area. Nodding flowers on some plants are flatter and golden-orange.) (20+) **B**
- 1.499.900 : LILIUM PARRYI** Cal., Los Angeles Co., San Gabriel Mts., along Little Rock Creek. 1990m. J. Andrews coll. 1993 (The most southern species, like no other in its strongly fragrant, bright yellow, trumpets, with a few tiny, sparse maroon dots, held horizontally or slightly nodding - up to 30 on stems of about 2m. A plant of wet meadows & stream-sides.) (20+) **D**
- 1.499.920 : LILIUM PARRYI *** Arizona, Santa Cruz Co., Huachuca Mts., S of Tucson. 1996 seed ex an S. Walker coll. (10+) **D**
- 1.500.000 : LILIUM PARVUM** Cal., El Dorado Co. 1800m. Wet meadow. J. & G. Robinett coll. 23.9.95 (The high altitude wet-grower of the N Sierra Nevada. Upward-facing, bell-shaped flowers, mostly in orange shades here - it tends to vary to yellows lower down and reds higher up. The stems, whorled with leaves can be 2m. high with 40 flowers but are usually a lot less.) (20+) **C**
- 1.500.050 : LILIUM PARVUM** Cal., Placer Co., Monumental Ridge. 2030m. J. Andrews coll. 1994 (John saw these in flower on his way to collect *Lewisia* seed & returned in September. This seems quite an even, distinct local race with more open, flatter flowers in yellow to clear orange-yellow, fragrant & sometimes with a few crimson spots. A wet-grower, on granite here.) (20+) **D**
- 1.500.400 : LILIUM RUBESCENS** Cal., Humboldt Co. 500m. N edge of woodland. J. & G. Robinett coll. 19.8.95 (A dry-grower with stems of up to 2m., whorled with crinkled, grey-green leaves & carrying 20 or more upward-facing, extremely fragrant, white trumpets opening white with minute purple dots, which suffuse over the surface until it is wine-coloured.) (15+) **D**
- 1.500.500 : LILIUM SHASTENSE** Cal., Shasta Co. 1400m. Wet meadow, along a creek across old lava-flow. J. & G. Robinett coll. 29.9.95 (Wet-grower, currently placed as a subsp. of *L. pardalinum* but does not increase clonally to the same extent. Nearest to *L. vollmeri* with similar two-toned, red-orange flowers but has yellow to orange pollen. Up to 1.8m. with 30 flowers.) (20+) **C**
- 1.500.900 : LILIUM VOLLMERI** Oregon, Josephine Co. 500m. Along wet ditch. J. & G. Robinett coll. 29.9.95 (Wet-grower near the preceding but has purple anthers with red pollen. A really splendid, 2m. high population here. The yellow lily, from this area, which we listed in 1989 as *L. vollmeri* was *L. wigginsii* or an intergrade. Both are local serpentine-species.) (15+) **C**
- 1.501.001 : LILIUM WASHINGTONIANUM** (subsp. *washingtonianum*) Cal., Butte Co. 1100m. J. & G. Robinett coll. 28.9.95 (Marvellously fragrant, great flaring white trumpets, up to 12cm. across, face out or nod slightly on stems of 40-120cm., whorled with crinkled, grey-green leaves. A dry-grower, usually in open scrub or woods, and reputedly difficult to grow well.) (15+) **D**

Species from North America : Seeds from Jim & Jenny Archibald

- 1.501.100 : LILIUM WASHINGTONIANUM subsp. PURPURASCENS** Cal., Humboldt Co. 1200m. Among scrub on steep slope. J. & G. Robinett coll. 30.9.95 (The type-race is restricted to N California but this extends to Mt. Hood in Oregon. The bulb-scales are rather different and the flowers slightly smaller but, most obviously, they flush to pink-purple with age.) (15+) **D**
- 1.515.300 : LUPINUS ALBIFRONS** (var. *albifrons*) * Cal., Contra Costa Co., above Orinda. 450m. (A fine shrubby perennial, about 1m. high. Silky, silvery foliage & 30cm. racemes of pale to deep lavender-blue flowers with yellow to white banner-patches, maturing to purple. Has proved a successful garden-plant from the UK to Australia. Tim Ingram (Kent, UK) considers this the most reliable silver-leaved lupin, hardy to -10 C or less - remarkable considering its comparatively low altitude origin.) (15+) **B**
- 1.517.010 : LUPINUS BICOLOR** * Cal., Butte Co, N of Oroville, Table Mountain. 400m. (An extremely variable dwarf, annual species, about 20cm. high. Petals are usually blue with a white banner spot, maturing to magenta, & the keel is white. Alan Edwards commends this form as a first-rate garden-plant. It sows itself where suited & attracts the attention of all who see it.) (15+) **A**
- 1.533.350 : LUPINUS LEPIDUS** var. *SELLULUS* Cal., Mendocino Co., ESE of Covelo. 1980m. Steep slope in loose serpentine scree. 31.8.95 (Dwarf, 20cm., & woolly with grey-white leaves and close-packed racemes of pale violet flowers. The white or yellow banner-patches turn red. This keys-out in Munz as *L. sellulus* subsp. *ursinus* & approaches *L. constancei*.) (8) **D**
- 1.533.800 : LUPINUS MONTANUS** * No data. We cannot trace this name - it may be from Mexico. A 2m. high herbaceous perennial, proving reasonably hardy with Tim Ingram in Kent, UK. Large, palmate leaves & narrow spires of deep-blue flowers. (10) **B**
- 1.534.350 : LUPINUS POLYPHYLLUS** (var. *polyphyllus*) * Canada, BC, Vancouver Is., S of Port Renfrew. Sea-level. Ex a N. Macer coll. (A fine herbaceous perennial from moist sites and marshy areas, distributed S into California & E into Idaho. Densely whorled 1.5m racemes of purple-blue flowers. An excellent, very hardy, wild-garden plant, much less formal than its children.) . . . (15+) **B**
- 1.535.000 : LUPINUS VARIICOLOR** * Cal., Sonoma Co., above Shell Beach. 20m. Ledges on coastal cliffs. (A woody based perennial about 60cm. high. Downy, greyish leaves & short racemes of beautiful, blue & creamy-white flowers (it can vary to yellow to pink & purple). "One of the best shrubby lupins in the garden, hardy to at least -10 C" writes Tim Ingram (Kent, UK). (10) **B**
- 1.622.000 : MIMULUS CARDINALIS** Cal., El Dorado Co. 1300m. Streamside in open woodland. J. & G. Robinett coll. 3.9.95 (A glandular-hairy, rhizomatous perennial with a multitude of striking orange-scarlet flowers streaked with dark red. An eye-catching, hardy (it grows up to 2400m.) wet-grower, surprisingly seldom seen in Europe. 50-90cm. high here.) (100+) **B**
- 1.650.600 : OENOTHERA CAESPITOSA** var. *CRINITA* Utah, Millard Co., SSE of Garrison. 1600m. Steep, loose, stony slope. 5.7.95 (An important race of this spectacular species for the alpine-house grower. The dry climate development with downy, grey leaves. A succession of long-tubed, white flowers mature to rosy shades. Takes all the sun going under glass in the UK.) . . (15+) **C**
- 1.650.800 : OENOTHERA CAESPITOSA** var. *MARGINATA* Cal., Inyo Co., White Mts. 1980m. Stony clay on loose slope. 5.8.95 (A better one to try outside in sunny scree - some prove quite easy. Similar, huge, white, pink-flushed bowls.) (15+) **B**
- 1.702.000 : PENSTEMON CALCAREUS** (Sect. *Cristati*) Cal., San Bernardino Co., Providence Mts., Bonanza King Mine. 1400m. NE-facing, limestone screes. J. Andrews coll., 1994. (Only known from here & limestone fissures in the Grapevine Mts. above Death Valley, 100 miles to the N. Leaves grey with ashy hairs & 15cm. stems of brilliant pink to rose-purple, funnel-shaped flowers with densely hairy, yellow staminodes. The first & maybe the last collection. A challenge for the alpine-house grower.) (15+) **E**
- 1.702.300 : PENSTEMON CARNOSUS** (Sect. *Coerulei*) Colorado, Rio Blanco Co. 2000m. Exposed slopes in loose, fragmented shale. 10.7.95 (Rosettes of fleshy, blue-grey leaves with lavender-pink to blue-violet flowers on 15cm. stems. Supposedly endemic to Utah but a lot of species cross the line on the oil-shales here. A neat plant for really hot, dry conditions.) (15+) **C**
- 1.702.400 : PENSTEMON CENTRANTHIFOLIUS** (Sect. *Gentianoides*) Cal., Ventura Co., Wagon Road Canyon. 1450m. Among scrub & sparse *Pinus* on stony slopes. 2.8.95 (Western cousin of *P. utahensis* from the southern Californian Coast ranges. Luminous scarlet, tubular flowers on 60cm. stems above blue-grey basal leaves. Will need cool, dry winters & hot, dry summers.) . . . (20+) **C**
- 1.703.600 : PENSTEMON CYANOCAULIS** (Sect. *Glabri*) Colorado, Montrose Co., NW of Bedrock. 1800m. Among *Pinus* & *Juniperus* on open, sandstone slopes. 9.7.95 (A seldom-collected & extremely local species only known from this uranium-mining area. Most distinct, leathery, basal leaves with crisped edges & 30cm. high stems of violet-blue flowers.) (20+) **C**
- 1.706.000 : PENSTEMON HUMILIS** (Sect. *Penstemon*) Idaho, Butte Co., NE of Carey. 1520m. (Woody-based mats send up erect, wiry 20cm. stems with whorls of little, very deep blue, tubular flowers. One of the best of this less spectacular section.) . . . (20+) **B**
- 1.707.500 : PENSTEMON LINARIOIDES** (Sect. *Caespitosi*) Colorado, San Miguel Co. SW of Slick Rock. 2150m. Open, gravelly 'flats' with *Pinus*. 8.7.95 (Neat, heath-like shrublets with numerous, erect, 15-20cm. stems, each with up to 30, soft lilac-blue flowers with white throats. The members of this section have proved quite amenable to UK alpine-house cultivation.) (20+) **D**
- 1.708.200 : PENSTEMON NANUS** (Sect. *Cristati*) Utah, Millard Co., SSE of Garrison. 1980m. Open slope in calcareous gravel. 5.7.95 (The first we have been able to make a reasonable coll. of this restricted Utah endemic, here in its type-locality. Maybe nearest *P. duchesnensis* with ashy foliage & rose-purple flowers. Orange-bearded staminodes. 7cm. or less.) (15+) **E**

- 1.708.500 : PENSTEMON NEWBERRYI** (Sect. *Erianthera*) Cal., Madera Co. 1900m. Granite. J. Andrews coll., 1995 (Woody mats of little, toothed, leathery leaves with 15cm. stems of vivid rose-red flowers - "baggy bugles of a ferocious aniline red-mauve most terrible and breathtaking" wrote Farrer. The type-race from the Sierra Nevada. An excellent, hardy, rock-garden plant.) . . . (20+) **B**
- 1.709.450 : PENSTEMON PAYSONIORUM** (Sect. *Glabri*) Wyoming, Lincoln Co., N of Opal. 2050m. Bare areas in open grassland, in sandy clay. 14.7.95 (Endemic to the 'barrens' of SW Wyoming with showy, rich blue flowers on 20cm. stems.) (20+) **C**
- 1.709.600 : PENSTEMON PETIOLATUS** (Sect. *Petiolati*) Nevada, Clark Co., Charleston Mts., Indian Ridge. 1615m. E-facing limestone cliffs. J. Andrews coll., 1993 (A very local, dwarf, gnarled, saxatile shrub with "flowers of intense turquoise and small leaves sharply toothed", according to Dwight Ripley & John. All other 'authorities' say "magenta", which we guess applies only to the Utah population. Collected after many attempts & much effort by John, it should be treasured in the alpine-house.) (15+) **E**
- 1.712.700 : PENSTEMON UTAHENSIS** (Sect. *Gentianoides*) Colorado, Mesa Co., Gateway. 1600m. Steep clay slope in full sun. 9.7.95 (Spectacular wands of brilliant carmine-red, funnel-shaped flowers. Leathery, blue-grey leaves. 50cm.) (20+) **C**
- 1.751.000 : PHLOX SPECIOSA** Washington, Klickitat Co., summit of Dalles Mt. 700m. G. Burrell coll., 1995 (Handsome, shrubby-based species. In this form with loose cymes of blush-white to light-pink flowers. About 20cm.) (10+) **B**
- 1.751.100 : PHLOX STANSBURYI** Cal., Mono Co., N of Conway Summit. 2200m. J. Andrews coll., 1995 (From the pinyon-juniper zone of the Sierra Nevada. Usually very large & full, pink to white flowers here. Woody based to 15cm.) (10+) **C**
- 1.760.300 : POLEMONIUM CHARTACEUM** Cal., Trinity Co., Mt. Eddy. 2740m. Exposed summit area. J. Andrews coll. 1995 (A remarkable disjunct population here. Otherwise known only from above 4000m. in the White Mts. In effect, a miniature *P. viscosum* but distinguished from this & *P. eximium* by its exerted stamens & the papery (chartaceous) base of the petioles. Little tufts of glandular foliage and heads of blue flowers, usually with yellow throats. Should be growable in skilled hands.) (10+) **E**
- 1.768.400 : PRIMULA NEVADENSIS** Nevada, White Pine Co., Snake Range. 3440m. Limestone fell-field. J. Andrews coll. 1995 (Endemic to the summit of this Great Basin Range but now being cultivated from John's 1991 coll. Large, violet-purple, yellow-eyed flowers on short stems. It can make quite large clumps in this site. Probably nearest the Rocky Mt. *P. angustifolia*, it will need similar careful cultivation by the alpine-plant specialist. Possibly best plunged outside in summer in the UK.) (20+) **E**
- 1.768.600 : PRIMULA SPECUICOLA** Utah, San Juan Co., above Bluff. 1550m. Seepage lines below overhangs on shady sandstone cliffs. 7.7.95 (A very beautiful relic, endemic to the 'hanging gardens' of the Colorado River canyons. Like a giant *P. farinosa* with clumps of dark-green leaves, backed with dense, white farina. Umbels of up to 40 flowers in lavender, pink or white on 15cm. stems. It has been grown magnificently in some UK alpine-houses but is not easy - rich *Dionysia*-treatment.) (50+) **D**
- 1.770.000 : PRUNUS ANDERSONII** Cal., San Bernardino Co., Providence Mts. 1400m. Exposed, limestone slope. J. Andrews coll. 1994 (The desert peach - a splendid small shrub. Can reach 2m. but is usually dwarf & of stiff, spiny habit. Deep-pink to red flowers followed by orange-red, downy fruits. Probably not in cultivation in Europe but merits the alpine-house.) (5) **C**
- 1.836.001 : SARRACENIA PURPUREA** (subsp. *purpurea*) Canada, Nova Scotia, near Ferguson's Cove. Sea-level. J. Weagle coll. 7.10.96 (This fascinating carnivorous plant at about its NE limit. Clumps of beautifully veined traps and weirdly wonderful flowers. This is totally hardy in N Europe in seriously wet, nutrient-free sphagnum-peat in full sun.) (30+) **C**
- 1.855.400 : SILENE HOOKERI** * Oregon, Josephine Co., E of Takilma. 850m. Openings among conifers, in stony turf. (We have our cultivated stock rolling now under glass - one of our favourite plants. Decumbent stems with downy, greyish leaves & a very long succession of flowers with deeply cut petals, soft salmon-pink in this form. Eventually summer-dormant.) (10+) **C**
- 1.855.501 : SILENE HOOKERI** subsp. **BOLANDERI** Cal., Trinity Co., W of Weaverville, Munger Gulch. 760m. J. Andrews coll. 1995. (Utterly distinct horticulturally, though all subspecific divisions are currently disregarded. Large, pure-white flowers with the petal blades deeply cut into linear segments. A plant raised from our 1993 coll. was awarded a PC, when exhibited in the UK in 1995 - full write-up in the Dec., 1995, AGS Bulletin. Reputedly more difficult to maintain than the type-race.) (8) **E**
- 1.870.250 : SPHAERALCEA** aff. **CAESPITOSA** Utah, Millard Co., SSE of Garrison. 1900m. Open slope in calcareous gravel. 5.7.95 (Very variable & probably grading into *S. ambigua* here, though this must be virtually next-door to the type-locality. Woody-based dwarf perennials, 5-25cm. high with tightly clustered orange flowers but foliage is often deeply cut. Typically it should be thick, grey-white & crenate, barely if at all lobed. Our 1993 coll. has produced some good compact plants.) (15+) **C**
- 1.915.500 : TOWNSENDIA JONESII** (var. *jonesii*) Utah, Millard Co., SSE of Garrison. 1980m. Open slopes, in calcareous gravel. 5.7.95 (The almost stemless daisy of the Great Basin. Narrow grey-green leaves & heads with white, pink-backed rays.) . . . (15+) **B**

Don't forget that you can still order seed from our previous lists

Seed from most bulbs, corms & tubers, along with other species which germinate at low-temperatures, was featured in our summer 1996 list. It may be relevant to southern hemisphere growers to note that seed of many is still available. Obviously we have no seed left from many of the rarer items, so avoid price-code F when ordering (such species would not be expensive, if we had plenty!). More information on N American species is in our January 1996 list, which specialized in these. Our April 1995 list concentrated on S American collections. We shall be glad to send any of these lists to old or new customers & to supply seed-bank material, if we can still do so.

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

Most of the following collections were made during a visit to the summer rainfall mountains of South Africa with Panayoti Kelaidis of Denver Botanic Garden, during 1996. Intended mainly as an educational introduction to the flora, this yielded more than enough material to make this area the main feature of the current list. We have supplemented these collections with additional seed from summer-growers collected by Rachel & Rod Saunders, mainly in the Merrivale area of Kwa-Zulu Natal, to the NW of Pietermaritzburg. We are eternally grateful to Panayoti for introducing us to these plants, as well as for his knowledge & stimulating company ; to the various farmers & land-owners, who not only allowed us access to their property to collect but sometimes insisted on driving us around in their Landrovers & providing accommodation ; to all those we met at Kirstenbosch for their hospitality & kindness and particularly to P. Goldblatt of Missouri Botanical Garden & J.P. Roux of the

Compton Herbarium for helping to identify some pressed specimens. No completed standard flora exists for this area but there are many superlative monographs. We have tried to put names in line with these and with the excellent "Botany of the Southern Natal Drakensberg" by O.M. Hilliard & B.L. Burtt. This & some monographs are easily obtainable but there is virtually no source of cultural information for gardeners. Though it covers only a representative range of species, by far the best information & illustrations are in "Perennials" Vol.2 by Roger Phillips & Martyn Rix, (in the 'The Pan Garden Plants Series'). Inevitably, it was not possible to identify some collections made out of flower beyond generic level & these are listed under field numbers. In field-notes we have abbreviated the Orange Free State to OFS. Permanent seven-digit population references (starting with 3) have been given to identified collections.

The summer-growers of southern Africa & their hardiness

With two distinct rainfall patterns in southern Africa, we have the disconcerting fact that there are both summer-growers & winter-growers in the same genus : think of *Gladiolus*. This makes it impossible to generalise. Nowhere have we come across anyone who stresses this all-important dichotomy. Generalisations about most genera in reference books are usually based on low altitude, winter-growers from the small winter rainfall area in the SW Cape. From now on we shall try to help by listing only the summer-growers in our winter lists. While most summer-growers are going to enjoy the comparatively cool, moist conditions of an average British summer, their tolerance of wet winter conditions may be

another matter. Altitude may be no guide to 'hardiness'. There is little or no snow in the Drakensberg &, though winter temperatures may sink far below anything experienced in the UK, winter is the dry-season. We stress throughout this list that a well-drained, open site may be necessary to counteract winter wetness. Low altitude plants from wet habitats (like many of those already well-established in the UK) might be more tolerant of the British climate than high dry-growers. It will be a matter for experiment. Our next list in summer, 1997, will include only winter-growing S Africans along with all the other better-known low-temperature winter-growers : hellebores, cyclamen, most of the northern hemisphere 'bulbs', etc.

Agapanthus : blue lilies in the summer rain

The only one native to the area, in the E Cape ranges & the Drakensberg, which we visited in 1996, is *A. campanulatus* subsp. *patens*, much grown & reliable in UK gardens, even if often disguised under a cultivar name. Most of the following summer-growing species & geographical races are offered as South African cultivated seeds collected from correctly named parents but their propensity for hybridization is such that we cannot guarantee how authentic all the seedlings will be. For

this reason, we have not dwelt on the details distinguishing them nor on their precise distributions. These should produce plenty distinct plants & most should be hardy in the UK. Give them all full sun in a good, rich soil & keep them well watered in a dry summer. The best information on these & illustrations of several can be found in Phillips & Rix 'Perennials' Vol. 2. Seed, from the cultivars we grow, is included in the section on garden-hybrids at the end of this list.

- 3.001.110 : AGAPANTHUS CAMPANULATUS (subsp. *campanulatus*) * The dwarfest, usually about 50cm. high (15+) B
- 3.001.150 : AGAPANTHUS CAMPANULATUS subsp. PATENS KwaZulu Natal, Drakensberg, SW of Njesuthi valley. 2200m. Moist, grassy slope. 23.3.96 (Usually smaller than the type-race with spreading segments to the blue flowers flowers.) ... (15+) C
- 3.001.151 : AGAPANTHUS CAMPANULATUS subsp. PATENS Orange Free State, Drakensberg, Mont-aux-Sources. 2900m. Open, stony & grassy slopes. 25.3.96 (From above the habitat illustrated on page 180 of Phillips & Rix 'Perennials' Vol. 2.) (15+) C
- 3.001.152 : AGAPANTHUS CAMPANULATUS subsp. PATENS KwaZulu-Natal, near Merrivale. 1500m. RRS. coll. (15+) B
- 3.001.210 : AGAPANTHUS CAULESCENS (subsp. *caulescens*)* Distinct in its leek-like habit with glossy leaves from a basal stem. Dense umbels of rather drooping, rich-blue flowers with widely spreading lobes, on stems of about 1m. (15+) B
- 3.001.260 : AGAPANTHUS CAULESCENS subsp. ANGUSTIFOLIUS * Not so tall with narrower foliage. (15+) B
- 3.001.510 : AGAPANTHUS INAPERTUS (subsp. *inapertus*) * Long, tubular, dark blue flowers on stems of over 1.5m. (15+) D
- 3.001.910 : AGAPANTHUS NUTANS * Long, elegant, pale-blue flowers. About 80cm. high. Erect, glaucous leaves. (15+) C

Albuca : giant snowdrops on the rocks

This neglected genus of the *Liliaceae* has about 70 species with most in the SW Cape. The following are all summer-growers which should be temperature-hardy in most of the UK. The general pattern of the flowers is of a *Galanthus*-shape but they are usually carried upright in terminal racemes, rather than

drooping, & are most often heavily banded with green on the spreading outer segments, as well as the erect inner ones. The ground-colour is either white or yellow and we have indicated the colour of the flower-remains, where we can, but we have seen none of the following in flower.

- 3.006.410 : ALBUCA SHAWII** * No data. A species of many synonyms (*A. elliottii*, *A. minima*, *A. trichophylla*) from between 1800m. & 2400m. in the Drakensberg. Up to 50cm. high with bright yellow flowers. Flowers & foliage are very aromatic. (15+) C
- 15600 : ALBUCA SP.** E Cape, Drakensberg, NE of Rhodes. 2250m. Fissures on rock-slabs. 16.3.96 (Yellow. 30cm.) . . . (15+) C
- 15612 : ALBUCA SP.** E Cape, Drakensberg, NE of Rhodes. 2300m. Stony slope. Stony slope. 16.3.96 (50cm.) (15+) C
- 15680 : ALBUCA SP.** E Cape, Witteberg, E of Lady Grey. 2200m. Diorite fissures. 18.3.96 (Yellow. 60cm.) (15+) C
- 15686 : ALBUCA SP.** E Cape, Witteberg, Joubert Pass. 2350m. Gravelly diorite cliff-ledge. 18.3.96 (Yellow. 3cm.) . . . (15+) E
- 15821 : ALBUCA SP.** Orange Free State, Platberg E of Harrismith. 2350m. Among rocks. 24.3.96 (20cm.) (15+) C
- 15845 : ALBUCA SP.** Orange Free State, Drakensberg, Mont-aux-Sources. 2900m. Stony slope. 25.3.96 (50cm.) (15+) C
- 15856 : ALBUCA SP.** Lesotho, Drakensberg, Mont-aux-Sources. 3000m. Gravelly cliff-ledges. 25.3.96 (5cm.) (15+) D
- 3.007.050 : ALEPIDEA AMATYMBICA** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (This genus of summer-flowering, herbaceous perennials in the *Umbelliferae* mirrors *Astrantia*. One of the tallest from damp gullies to 2100m. Bristle-edged, basal leaves & branching stems to 2m. high, carrying many, starry greenish-white to pale yellow flower-heads.) . . . (20+) C
- 3.007.250 : ALEPIDEA NATALENSIS** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (A dwarfer species, about 40cm. high, not uncommon on damp, grassy slopes, up to 2500m. in the Drakensberg & illustrated in Phillips & Rix Vol. 2. Hairy, basal rosettes many *Astrantia*-like flower-heads, each surrounded by thick-textured, petal-like, mauve-tinted white bracts.) (15+) D
- 3.007.320 : ALEPIDEA PUSILLA** OFS, Drakensberg, Mont-aux-Sources. 2900m. Moist turf on open slopes. 25.3.96 (A little, dainty plant, 10-20cm. high, for all the world like *Astrantia minor* with stiff, white bracts. A high Drakensberg endemic.) (10+) D
- 3.007.400 : ALEPIDEA THODEI** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Moist, stony turf below E & SE-facing basalt cliffs. 21.3.96 (One of the 2 or 3 high Drakensberg endemics, which ascend above 2500m. Flat basal rosettes send up a few, large, *Astrantia*-like heads with greenish white bracts tipped with carmine-pink, on stiffly branching, 20-30cm. stems.) (10+) D
- 3.012.500 : ANDROCYMBIUM STRIATUM** E Cape, Drakensberg, NE of Rhodes to Naudesnek. 2200m. Loose, sandy clay. 16.3.96 (A summer-grower in this genus of *Colchicum*-relatives, with about 30, mainly winter-growing, species distributed S from the Mediterranean, through E Africa to the Cape. Many, stemless white flowers from leaf rosettes flat on the ground.) (20+) B
- 3.015.100 : ANEMONE FANNINII** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (The highest grower among the 3 S Africans in this cosmopolitan genus but does not ascend above 2000m., along streams or in wet depressions on grassy slopes. A big plant with large, lobed leaves & stems up to 1m. high carrying several floppy, white or cream flowers.) (15+) B
- 3.016.200 : ANISODONTEA ELEGANS** N Cape, N of Matjiesfontein to Sutherland. c. 1200m. R.& R. Saunders coll. (This small, mainly Cape, genus of shrubs or woody-based perennials in the *Malvaceae* includes many spectacular members from dryish habitats. This 1m. high shrub with showy magenta flowers comes from the cold, dry, interior mountains S of the Great Karoo.) (15+) C
- 3.016.400 : ANISODONTEA JULII** * Cultivated seed of this, the only species of the Natal Drakensberg, growing among boulders & scrub up between 1800m. & 2300m. Another 1m. high shrub with beautiful, large, pink mallow-flowers. Certainly temperature-hardy in the UK but those we saw were in dry, exposed sites, so only likely to be possible in similar places in gardens. (15+) B
- 3.018.500 : APTOSIMUM INDIVISUM** W Cape, N of Beaufort West, S of Trapvoetkop. 1600m. Sandy clay on open 'flats'. 12.3.96 (The southern African genus *Aptosimum*, the 'Karoo Violets', is in the *Scrophulariaceae* & somewhat recalls *Penstemon*. This is the ultimate reduction with rock-hard mounds of grey-green rosettes & stemless flowers in velvety, imperial-violet. The climate here resembles that of the N American Great Basin & this should need the same treatment as, say, *Lepidium nanum*.) (15+) E

Aristea : gentian-blue perennials from the high grasslands

A genus of around 50 species of rhizomatous perennials, in the *Iridaceae*, confined to subsaharan Africa, about 80% of them in the winter rainfall area of the SW Cape. A few ascend to high altitudes in the summer rainfall area & one, the handsome *A. grandis*, is illustrated in Phillips & Rix 'Perennials' Vol.2. Most of these are on a similar pattern, forming clumps of linear, sometimes falcate, iris-like leaves. Erect stems carry stemless

clusters of many flowers, always blue, notably intense gentian-blue in many cases. Peter Goldblatt identified fruiting material of 15632 as possibly *A. woodii*, but Hilliard & Burt give the altitudinal limit of this as 1800m. & state it is replaced higher up by *A. montana*. Under the circumstances, we feel it best not to assign possible names until everyone has flowering material to look at. Try most of them in sunny, well-drained sites

Species from Southern Africa : Seeds from Jim & Jenny Archibald

- 15632 : ARISTEA SP.** E Cape, Drakensberg, Naudesnek. 2450m. Among grass on steep slope. 17.3.96 (15cm.) (20+) C
- 15744 : ARISTEA SP.** KwaZulu-Natal, Drakensberg, SE of Sani Pass. 2800m. Steep, grassy slope. 21.3.96 (30cm.) (20+) C
- 15759 : ARISTEA SP.** KwaZulu-Natal, N of Himeville. 1200m. Among grass in gravelly soil. 22.3.96 (20cm.) (20+) C
- 15812 : ARISTEA SP.** Orange Free State, Platberg E of Harrismith. 2350m. Open, stony grassland. 24.3.96 (20cm.) (20+) C
- 3.030.500 : BULBINE NARCISSIFOLIA** E Cape, Witteberg, E of Lady Grey. 2200m. Fissures on diorite outcrops. 18.3.96 (These are among the few summer rainfall, higher altitude plants in this genus of the *Liliaceae*, which is mainly African, mostly in the SW Cape & usually yellow-flowered. Fleshy glaucous leaves & racemes of flowers on erect stems of about 30cm.) (15+) B
- 15643 : BULBINE SP.** E Cape, Drakensberg, Naudesnek. 2400m. Among grasses on steep, stony, moist, SE-facing slope. 17.3.96 (Certainly likely to be the hardiest collected & should be easily grown outside in the UK. About 30cm. high.) (15+) B
- 3.032.100 : CEPHALARIA NATALENSIS** KwaZulu-Natal, Drakensberg, Cathedral Peak. c.2000m. R.& R. Saunders coll. (With about 14 species, S Africa is a secondary centre for these scabious-relatives in the *Dipsaceae*, mainly from the Mediterranean into central Asia. A 1-2m. high perennial from valley scrub in the Transvaal & Drakensberg between 1800m. & 2600m.) (20+) B
- 3.032.200 : CEPHALARIA OBLONGIFOLIA** E Cape, Amatole Mts., W of Stutterheim. c.1200m. R.& R. Saunders coll. (A 60cm. high, grassland perennial collected in the same area & at about the same altitude as *Dierama pulcherrimum*, which thrives in UK gardens. This species grows up to 2500m. in the Natal Drakensberg. White scabious-flowers in summer & autumn.) (10+) C
- 15560 : CHASMATOPHYLLUM SP.** E Cape, N of Tarkastad. 1200m. Gravelly ledges & pockets on sandstone slabs. 15.3.96 (Panayoti insists on our listing at least a few cold-climate succulents. This member of the *Mesembryanthemaceae* from the edge of the Karoo has tight pads of fleshy, greyish leaves & bright yellow 'daisies', opening in the evening.) (20+) B
- 3.034.100 : CHIRONIA PEGLERAE** KwaZulu-Natal, Drakensberg, Cathedral Peak. c. 2000m. R.& R. Saunders coll. (A pink, 30cm. herbaceous perennial in the *Gentianaceae* from damp, grassy slopes, to 2300m. in the Natal Drakensberg area.) (30+) D
- 3.035.000 : CLEMATIS BRACHIATA** W Transvaal, near Wolmaransstad. c. 1200m. R.& R. Saunders coll. (From both summer & winter rainfall regions. Among scrub up to 2000m. in the Drakensberg. Small, scented, cream, pink-tinted flowers.) (20+) B
- 3.035.050 : CLEMATOPSIS SCABIOSIFOLIA** E Transvaal, Johannesburg area. c. 1200m. R.& R. Saunders coll. (The small genus comprising elegant relatives of *Clematis* is mainly developed at high altitudes on Madagascar. A 60cm., silver-haired, woody-based, herbaceous perennial, clad in pinnate leaves & carrying nodding, somewhat *Pulsatilla*-like, pink flowers in summer.) (15+) C
- 3.036.500 : COTYLEDON ORBICULATA** W Cape, NNW of Beaufort West. 1550m. Ledges & crevices on igneous rock outcrops. 12.3.96 (A member of a species-group of spectacular saxatile plants with large, fleshy, grey rosettes, widespread in the drier areas of S Africa. A splendid, scarlet-flowered representative from the dry, winter-cold mountains of the Karoo. 50cm.) (50+) B
- 3.036.550 : COTYLEDON ORBICULATA var. OBLONGA** KwaZulu-Natal, S of Sani Pass. 2850m. Ledges on E-facing basalt cliffs. 21.3.96 (The Natal Drakensberg race well-illustrated in Phillips & Rix 'Perennials' Vol. 2, p. 57. Large rosettes of succulent, blue-white foliage produce 30cm. stems of elongated, pendant bells. Whether in the soft apricot of the illustration or scarlet, we do not know but it stands a good chance of proving one of the most exotic-looking species hardy in the UK.) (50+) C
- 3.060.550 : CRASSULA SETULOSA var. CURTA** E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Moist, gravelly area. 17.3.96 (One of the few true high-alpines in this mostly S African genus of about 300 species. Tight, *Saxifraga*-like mats of tiny, fleshy, bright-green leaves with small, flat panicles of pink-budded, white flowers on 5cm., downy, red stems.) (50+) C
- 3.100.000 : CROCOSMIA AUREA** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (Though with an altitudinal limit of 1800m. in the Drakensberg, usually in the shade of forest remnants, this is considered the most tender. Maybe garden-stock came from a very low altitude. About 1m. high with spikes of large, outward-facing flowers, usually in soft orange-yellow.) (15+) B
- 3.100.500 : CROCOSMIA POTTSH** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (Crosses between this & *C. aurea* form the basis of the older garden hybrids. Ribbed leaves & erectly branched spikes of orange to scarlet flowers.) (20+) A
- 3.106.000 : CYRTANTHUS EPIPHYTICUS** E Cape, Drakensberg, Naudesnek. 2400m. Cliff fissures. 17.3.96 (For standard high-alpine treatment : cool & moist in summer ; dryish & cold in winter. Large, thick-textured flowers, with 4cm. long, arching tubes, in eye-burning scarlet on 30cm. stems. *Cyrtanthus* seed is normally of short viability. This has been kept refrigerated) (15+) E
- 3.110.500 : DELOSPERMA ASHTONII** E Cape, Drakensberg, NE of Rhodes. 2300m. Fissures & ledges on diorite outcrop. 16.3.96 (This species, in the *Mesembryanthemaceae*, with its pads of succulent foliage & big, brilliant pink 'daisies', comes with Panayoti's recommendation that it is even larger flowered & more spectacular than the splendid but commoner *D. lavisiae*.) (30+) C
- 3.130.800 : DIASCIA INTEGERRIMA** E Cape, Drakensberg, NE of Rhodes. 1900m. Open, gravelly banks & among rocks. 16.3.96 (This is one of the higher growers, attaining almost 3000m. in the Drakensberg & forming, spreading, stoloniferous clumps of 30cm. erect, wiry stems, clad in little, linear leaves & with racemes of twin-spurred, soft-pink, darker-throated flowers.) (20+) B

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

Dierama : the hairbells from mountain marsh and grassland

The 1991 publication of the beautifully illustrated Hilliard & Burt monograph stimulated interest in this exquisitely graceful genus of the *Iridaceae*. With over 40 species spread from the Cape to Ethiopia, it is most unusual in that it is absent from the winter-rainfall area of the SW Cape. Its centre of diversity is in the summer-rainfall area of KwaZulu-Natal with 26 species there. We were far too late in the season to collect seed from most of the Natal species, which grow at lower altitudes, but the high Drakensberg species are listed. We are not over optimistic of the potential of many of the lower altitude species from winter-dry grassland. A low altitude plant from a winter-wet habitat may well prove more tolerant of UK garden conditions than a drier-grower from a higher altitude. This is borne out by the only two species (or their hybrids) well-known in

cultivation. *D. pendulum* (from very low altitudes) & *D. pulcherrimum* (from between 900m. & 1700m.) both from areas at the edge of the winter-summer rain divide must experience wetter winter conditions than most. The key species might be *D. robustum*. This must experience lower temperatures than almost any other but it is a plant of drier habitats. Panayoti is rightly optimistic that it might be the species for Colorado gardeners. It will be interesting to see how tolerant it is of wet British winters. We have emphasised the need for a sunny well-drained site where we feel it might be necessary to alleviate winter-wetness and in an attempt to counteract the disinformation disseminated by some "experts" that Dieramas are all "bog-plants". They may like to be cool & moist in summer but few would last a week in a British bog in winter.

- 3.140.400 : DIERAMA ARGYREUM** KwaZulu-Natal, near Underberg. 1700m. R. & R. Saunders coll. (About 1m. high with pure-white to ivory-white pendulous bells from among silvery-white bracts. Variable both in size & colour, it is occasionally pink-tinged & very rarely pink. From moist grassland between 420m & 1700m. in S KwaZulu-Natal, give it a well-drained site.) (15+) **D**
- 3.141.100 : DIERAMA DRACOMONTANUM** OFS, Drakensberg, Mont-aux-Sources. 2900m. Among grasses on open, moist, stony slopes. 25.3.96 (The highest altitude species & an excellent, hardy garden-plant in the UK, forming compact, grassy tufts, sometimes spreading by stolons with us, with pendant clusters of wide-open flowers between brown bracts, dancing on wiry stems of about 60cm. in late summer. All the late flowers seen here were of beautiful coral-red & terracotta-pink shades.) (15+) **B**
- 3.141.101 : DIERAMA DRACOMONTANUM** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Among grass tussocks on broad ledges of E-facing cliffs. 21.3.96 (Not seen in flower here. It can also be light to dark rose-pink or purple-pink.) (15+) **B**
- 3.141.120 : DIERAMA DRACOMONTANUM *** Our Welsh-grown seed from a CD & R coll. Loves our cool summers. . . (30+) **B**
- 3.141.900 : DIERAMA GRANDIFLORUM** E Cape, Ouberg NNW of Graaff-Reinet. 1700m. Among sandstone rocks. 13.3.96 (A little-known species, only recorded from here & the Bosberg to the SE. It is not common here & very little seed had been set. Tufts of tough, narrow foliage. Whippy, 1.5m. stems hang out pendulous clusters of rich pink flowers with blue-violet perianth-tubes, among the largest in the genus. This is a cold, dry, interior area & it may be vulnerable to winter-wetness in the UK.) (8) **E**
- 3.142.000 : DIERAMA IGNEUM *** S African cultivated seed. (A middle-altitude species from the central coastal region of KwaZulu-Natal S into the E Cape at altitudes up to 1500m. About 1m. high with bells in pale to deep lilacs & rose-pinks.) (15+) **B**
- 3.142.500 : DIERAMA LATIFOLIUM** KwaZulu-Natal, WSW of Nottingham Road, Soutar Hill. 1700m. Open, grassy slopes. 22.3.96 (A tall plant from the grasslands E of the Drakensberg, reaching 2100m. Large clumps of grassy leaves send up many tough stems to as much as 3m., with arching sprays of pale to deep-pink, or occasionally wine-red, flowers among papery, white bracts. A magnificent plant, used to drier winter conditions, so best tried in a well-drained, sunny site in winter-wet climates.) (10+) **D**
- 3.142.800 : DIERAMA MEDIUM *** S African cultivated seed of this fairly local species from the E Transvaal & neighbouring Swaziland. An extremely dainty plant of seasonally marshy grassland between 1300m & 2000m., it should be suited to UK gardens. About 70cm. high with clustered bells in pale-mauve to magenta-pink, among brown bracts, on the finest of stems. (15+) **C**
- 3.143.500 : DIERAMA PAUCIFLORUM** E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Among grasses on open slope, in moist, peaty soil. 17.3.96 (An outstanding garden-plant in the UK. Tolerant of winter-wetness (it sometimes grows in standing water with sphagnum) but survived the 1995 drought. Dwarfier than *D. dracomontanum*, it flowers earlier than any other we have. Many, wiry, 40cm. stems from dense grassy tussocks, with wide-open, bright purple-pink flowers amid rust-brown bracts.) (15+) **C**
- 3.143.501 : DIERAMA PAUCIFLORUM *** E Cape, Drakensberg, Naudesnek. 2500m. Wet, peaty soil. Ex CD & R 192. (From our cultivated stock of the original Compton, D'Arcy & Rix introduction, collected in the same area as our wild seed.) (15+) **B**
- 3.144.200 : DIERAMA ROBUSTUM** E Cape, Drakensberg, NE of Rhodes. 2000m. Among grasses on open slopes. 16.3.96 (Reaching higher altitudes, between 1600m. & 2900m., than any other except *D. dracomontanum* & the commonest Lesotho species. A close clump of 1m. long leaves sends up a single, occasionally more, 2m. arching stem with many pendant clusters of large bells, usually pink but variable from cream to deeper shades. A plant of drier slopes so give it a well-drained, open site in the UK.) (15+) **B**
- 3.144.201 : DIERAMA ROBUSTUM** E Cape, Witteberg, E of Lady Grey. 1900m. Among rocks & scrub. 18.3.96 (15+) **B**
- 3.144.202 : DIERAMA ROBUSTUM** E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Open, grassy slope. 17.3.96 . . . (15+) **C**
- 15555 : DIERAMA SP.** E Cape, N of Tarkastad, SW of Toorberg. 1400m. Among rocks on steep, grassy slope. 15.3.96 (From the farm, 'Glenlex', where the Drakensberg grade into the Stormberg & Bamboesberg & no *Dierama* spp. are recorded. The nearest are *D. grandiflorum* to the W with *D. jucundum* & *D. robustum* far to the NE. May resent winter-wetness. About 2m. . . . (10+) **D**

Species from Southern Africa : Seeds from Jim & Jenny Archibald

- 3.171.500 : DISSOTIS CANESCENS** Zimbabwe, Chimanimani Mts. c. 1500m. R. & R. Saunders coll. (A striking, erect, shrubby member of the *Melastomataceae*, about 50cm. high with deep mauve-pink flowers. A wet-grower, commended by Rod Saunders as comparatively hardy. Though these ranges along the Mozambique border are of a fair altitude, we could not expect material from them to be fully hardy in the UK. On the other hand, such species should be happy outside in a UK summer, needing only minimal frost-protection under glass in winter - no more than we afford to many Mexicans & low altitude S Africans already.) (50+) **D**
- 3.210.750 : ERICA MAESTA** E Cape, Drakensberg, NE of Rhodes. 2300m. Fissures & ledges on diorite outcrop. 16.3.96 (With over 600 S African species, mostly congregated in the winter rainfall area of the SW Cape, it is hardly surprising that the comparatively few, hardier species from the summer-rainfall ranges have been totally neglected by gardeners. These 20 to 30 species should have potential for gardeners in wetter, cold to temperate climates but there was no seed on most that we saw. For the present we list two introductory collections. This is an erect, pink-flowered species about 40cm. high - should be hardy in the UK.) (30+) **C**
- 3.212.500 : ERICA SCHLECHTERI** OFS, Drakensberg, Mont aux Sources. 2900m. Diorite rock crevices. 25.3.96 (An upright, conifer-like shrub, about 50cm. high, with appressed, needle-like foliage & clusters of urn-shaped, pink flowers.) (30+) **D**

Eucomis : alpine pineapple lilies enjoy a cool, wet summer

This small genus of 10 species has already shown remarkable hardiness & tolerance of UK garden conditions & we do not yet have the truly alpine species in general cultivation. As even the one species from Zimbabwe can be grown outside in the UK, we need say no more about the hardiness of the following mountain-plants. Give them a well-drained site in full sun in the UK with plenty water in a hot, dry summer. There is nothing like these with their broad, lush, basal leaves & stout stems

carrying a dense, cylindrical raceme of flowers, topped with the striking tuft of bracts, which gives them their popular name of pineapple lilies. There is no complete monograph on the genus & the most comprehensive account we have access to is that by James Compton in 'The Plantsman' (Vol.12, Part 3 : Dec., 1990). We have used the names in this but Compton does not provide a key & we have had some difficulty in matching his descriptions to one or two collections.

- 3.230.050 : EUCOMIS AUTUMNALIS subsp. AMARYLLIDIFOLIA** Orange Free State, Platberg E of Harrismith. 2350m. Moist, stony slope on summit plateau. 24.3.96 (May not be correctly name but not one of the others listed here. It was identified for Panayoti by J.P. Roux of Kirstenbosch as *E. nana*, a name we cannot trace. Apart from *E. schijffii*, the dwarfest here at about 15cm. high. Its small, papery capsules would appear to place it in the above taxon, though we'd rather call it "*E. nana*".) (8) **E**
- 3.230.100 : EUCOMIS AUTUMNALIS subsp. CLAVATA** Orange Free State, Drakensberg, Mont-aux-Sources. 2800m. Steep, moist, grassy, SW-facing slope. 25.3.96 (A dwarf, broader-leaved race of *E. autumnalis*, ascending to above 3000m. Its rosette of wide leaves lies flat on the ground, with the dense, cylindrical head packed with fleshy, yellow-green flowers & topped with the characteristic pineapple tuft rising to 30cm. here. Compton thinks this is probably not in cultivation in the UK.) (8) **D**
- 3.230.105 : EUCOMIS AUTUMNALIS subsp. CLAVATA** E Cape, Drakensberg, NE of Rhodes to Naudesnek. Grassy areas on diorite outcrop. 16.3.96 (A 20cm. high, green-flowered pineapple lily. We're not too happy this is the same as the above.) (8) **D**
- 3.230.200 : EUCOMIS BICOLOR** Orange Free State, Drakensberg, Mont-aux-Sources. 2900m. Open stony slopes. 25.3.96 (Long, wavy-edged leaves & purple-spotted stems, up to 60cm. high, with cylindrical racemes of creamy green flowers, each neatly edged with deep purple. Quite widespread along the E slope of the Natal Drakensberg at up to 2300m. according to Hilliard & Burt but we found it at almost 3000m., as high as *E. schijffii* & the preceding, in this locality on the Lesotho border.) (8) **C**
- 3.230.510 : EUCOMIS MONTANA *** S African cultivated seed. Endemic to Swaziland on moist, grassy slopes at around 1500m. Semi-erect foliage, purple-tinged & purple-speckled below, & stems of about 30cm. with short, dense racemes of green flowers with purple anther-filaments. Almost certainly never grown in the UK, it should be as hardy as any other listed here.) (8) **C**
- 3.230.800 : EUCOMIS SCHIJFFII** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Ledges on E-facing basalt cliffs. 21.3.96 (Dwarfest in the genus & from the highest altitudes. One of those alpine which make you flip. A rosette of broad, glaucous leaves, purple tinged or speckled, lies flat on the ground with the fat, purple-spotted stem of 4-10cm. rising from the centre, packed with deep purple-red flowers & topped with the coma of purplish bracts. The inflated spongy stem, tapering to a thready base where it joins the bulb, dries & detaches to blow away like a tumbleweed with the ripe seed in autumn. We await its appearance on the show-bench, though we have no doubt it will be perfectly easy in a scree-bed outside in the UK & elsewhere.) (8) **E**
- 3.230.801 : EUCOMIS SCHIJFFII** Lesotho, Drakensberg, Mont-aux-Sources. 3000m. Gravelly cliff-ledges. 25.3.96 (8) **E**
- 3.235.100 : EURYOPS ACRAEUS** KwaZulu-Natal, Drakensberg, N of Sani Pass. 2850m. Fissures in cold, S & SE-facing cliffs. 20.3.96. (Possibly the finest in the genus for UK rock-gardeners, its stiff, platinum-plated bushes with aristocratic, bright-yellow daisies are well-known from Helen Milford's 1939 introduction, long-grown incorrectly as *E. evansii*. A species of cold, moist, shaded, basalt cliffs to 3300m., not the sunny scree where UK gardeners put it because they think that is where S Africans should grow but where, nevertheless, it thrives, as long as the summer is not too dry, & is more compact than in nature.) (10+) **D**
- 3.235.200 : EURYOPS CANDOLLEI** E Cape, Drakensberg, NE of Rhodes. 2300m. Fissures & ledges on diorite outcrops. 16.3.96 (A 30cm. shrub with bright-green, somewhat *Santolina*-like, foliage and profuse, tiny, yellow heads.) (10+) **B**

- 3.235.300 : EURYOPS DECUMBENS** Lesotho, Drakensberg, Sani top. 2900m. Open stony areas & depressions on rock-slabs. 20.3.96. (A tiny species, ascending to 3400m. on the summit rock-sheets, where it forms hard, greyish pads.) (8) E
- 3.237.100 : FELICIA FILIFOLIA** N Cape, Namaqualand. R. & R. Saunders coll. (A dwarf, twiggy shrub, about 60cm. high, from altitudes up to 2400m., where it grows in cliff-crevices & colonises eroded areas. Seldom without its little, mauve-blue daisies & often massed with them. No Drakensberg material available & this coll. may be less hardy but it is worth trying.) (20+) B
- 3.240.000 : GARULEUM WOODII** OFS, Platberg E of Harrismith. 2300m. Rock fissures & gravelly ledges. 24.3.96 (Another blue-flowered shrubby member of the *Compositae*, which could pass for a *Felicia*, with an intriguing distribution, seemingly following the Cave Sandstone right round the high Drakensberg from SE Lesotho to here on the Platberg but absent from the main range. Should certainly be temperature-hardy in the UK but may resent winter-wetness. A distinguished, stiffly compact, saxatile shrub, about 20cm high but more across, with fine, rich-blue, yellow-centred 'daisies'. Worthy of the alpine-house.) (10) D
- 3.241.500 : GAZANIA KREBSIANA** W Cape, Cederberg, near Clanwilliam. c. 1500m. R. & R. Saunders coll. (The only one in this small genus, concentrated in the W Cape, which climbs to great heights - up to about 3000m. - in the Drakensberg, where we saw it as a low-growing perennial with huge, yellow 'daisies' in stony turf. Sadly, we could collect no good seed & list Rod & Rachel's lower, western collection as compensation. Distributed S from the tropical mountains of E Africa into the Cape.) (20+) B
- 3.252.000 : GLADIOLUS AURANTIACUS** KwaZulu-Natal, N of Pietermaritzburg, near Albert Falls dam. 1300m. R. & R. Saunders coll. (A summer-grower, flowering at the start of the rainy season in spring, before its leaves appear, with 60cm. spikes of up to 12, large, long-tubed, orange-yellow flowers, usually speckled with red. From quite low altitudes in Natal & SE Transvaal, it should be little trouble to overwinter it dry & frost-free, planting it outside in summer, but it may prove relatively hardy.) (20+) B
- 3.257.200 : GLADIOLUS CRASSIFOLIUS** KwaZulu-Natal, near Underberg. 1600m. R. & R. Saunders coll. (A summer-growing, grassland species, widespread through the summer rainfall area from E Cape up through Lesotho into the Transvaal & climbing to about 2000m. in the Drakensberg. Spikes about 1m. high with up to 40, curved, bell-shaped flowers, usually in pink or mauve with long, dark blotches on the lower segments. Should be hardy & growable outside in a dry site in most of the UK.) (15+) B
- 3.257.800 : GLADIOLUS DALENII** E Cape, Witteberge, E of Lady Grey. 2000m. Among grasses & scrub in deep, moist soil. 18.3.96 (A very showy member of a species group which extends N from the E Cape to Ethiopia & Arabia. Summer-growing, from altitudes up to 2500m. in the Drakensberg, this must be growable & totally hardy in most of the UK. About 60cm. high in this form with hooded, brilliant scarlet-orange flowers, large bright yellow blotches almost occupying their lower segments.) (20+) B
- 3.257.850 : GLADIOLUS DALENII** (var. *primulinus*) KwaZulu-Natal, near Nottingham Road. 1500m. R. & R. Saunders coll. (The clear yellow form, best known in the Victoria Falls population (*G. nebulicola*). May succeed in the S & W of Britain. Under Goldblatt's revision absorbed into *G. dalenii* subsp. *dalenii* but we are as yet uncertain where the preceding will fit in.) (20+) B
- 3.258.700 : GLADIOLUS ECKLONII** (subsp. *ecklonii*) KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (From foothill grassland along the summer rainfall, Drakensberg escarpment from E Cape to the Transvaal up to 2300m. & should be fairly hardy. Funnel-shaped flowers, among big, glaucous bracts, densely speckled with red or maroon on a whitish ground. 40cm.) (15+) B
- 3.261.900 : GLADIOLUS GUEINZII** W Cape, near Nature's Valley. Sea-level. R. & R. Saunders coll. (An odd 50cm. species from sea-side sands on the summer-rainfall Cape & Natal coasts. Thick, fleshy leaves & pink flowers, blotched with red & striped white on the lower segments. Definitely frost-free when dormant in winter but maybe possible outside in summer in the UK.) (20+) B
- 3.270.850 : GLADIOLUS PERMEABILIS** subsp. *EDULIS* E Cape, N of Tarkastad. 1200m. Among grasses on rock-slabs. 15.3.96 (Widespread in the dry, continental climate of the interior, ascending to almost 3000m. Slender 50cm. stems with 12 or so flowers, in late summer here. Cream, usually tinged with muted pink or mauve-grey, blotched with purple-edged yellow.) (10) C
- 3.276.500 : GLADIOLUS SAUNDERSII** E Cape, Drakensberg, NE of Rhodes to Naudesnek. 2200m. Diorite outcrops & on steep, rocky slopes. 16.3.96 (Brilliant scarlet flowers marked with white on the lower segments. Well-drained site in the UK.) (10) D
- 3.277.700 : GLADIOLUS SERICEO-VILLOSUS** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A summer-grower, widespread in montane grassland up to 2100m. from the E Cape to the Transvaal. Distichous spikes, as much as 2m. high, with up to 40 cream to lavender, funnel-shaped flowers with elongated, yellow, dark-edged markings on the lower lobes.) (15+) C
- 3.300.200 : GLUMICALYX GOSELOIDES** KwaZulu-Natal, Drakensberg, N of Sani Pass. 2850m. Base of SE-facing cliffs. 20.3.96 (In a small genus of 6 herbaceous perennials in *Scrophulariaceae*, endemic to the alpine region of the Drakensberg. Hardy in cultivation in the UK & illustrated growing in Kent in Rix & Phillips Vol. 2. Aromatic, leafy clumps of creeping stems rising to carry dense, nodding heads of long-tubed, pale-yellow flowers, bright orange inside. Demure rather than flamboyant.) (20+) C
- 3.305.000 : GOMPHOSTIGMA VIRGATUM** E Cape, Witteberge, SE of Lady Grey. 1900m. Among rocks at edge of fast-flowing stream. 18.3.96 (A suffrutescent perennial, named by Panayoti "The White Wonder of the Witteberge", as we were both at a loss to identify it. In a genus of 2 species (the other is tropical) in the *Loganiaceae* & endemic to rocky stream-beds in the SE African mountains. If growable, it should be perfectly hardy & certainly moisture-tolerant in the UK. Bushes of whippy, dark-green stems, about 2m. high, wreathed with white, crucifer-like flowers - try to imagine a cross between a *Cytisus* & a *Crambe*.) (20+) B
- 3.348.000 : HEBENSTREITIA COMOSA** Zimbabwe, Inyanga Mts. 1600m. R. & R. Saunders coll. (A 30cm. high, herbaceous perennial in the *Scrophulariaceae* (or the *Selaginaceae*, if you want to split). Narrow-leaved with dense heads of little, white, orange-throated flowers. Recommended as frost-tolerant by Rod Saunders but note our comments under *Dissotis*.) (20+) C

Helichrysum : silver cushions in the mist

No genus is more characteristic of the African mountains than *Helichrysum*. Though the genus as a whole, with around 500 species, ranges from S Europe across SW Asia into S India, Australia & New Zealand, the majority are African with approaching 100 in the Drakensberg & adjacent ranges alone. Their mounded, silvery-leaved shrubs rise above the cropped grasslands of the high plateaux and their grey cushions nestle into the dark basalt cliffs as the summer clouds drift and settle over them in a soaking mist. It would take a whole season to collect seed from all the species in a single small area, as they flower & mature their seeds at quite different times. Sadly, we were far too late to collect seed from the saxatile *H. sessilioides*

& too early for the even tighter *H. pagophilum*. Nevertheless, we list a good representative range of mountain species, both those with potential in the alpine-house & rock-garden as well larger herbaceous & shrubby perennials. This is not an easy genus from which to collect the fine seeds. All too often most heads have been eaten by predators. Frequently very little has been set in the first place. Consequently seed of several is in very short supply. It can also be difficult to clean the seed of some out from the fluffy pappus. So, where no seed count is given, while we have checked with a lens that there is some seed in each packet, the numbers will vary greatly & may be far fewer than the 20-50 counts given for the cleaned seeds.

- 3.350.300 : HELICHRYSUM ADENOCARPUM** OFS, Platberg E of Harrismith. 2350m. Rocky places in open, stony grassland on summit plateau. 24.3.96 (A plant of stony grassland climbing to about 3000m. in the Drakensberg but nowhere there did we see such a splendid population as here on the Platberg, where almost all had the exterior of the shining, silvery phyllaries, painted with brilliant carmine-pink. Tidy & compact with neat, greyish basal foliage & big heads on erect, 10-15cm. stems.) **D**
- 3.350.400 : HELICHRYSUM ALBUM** Lesotho, Drakensberg, Sani top. 2900m. Fissures on rock-slabs. 20.3.96 (A dwarf, alpine with rosettes of very woolly leaves & heads on stems a few cm. high. Papery, pure-white phyllaries with crimson-tinted backs.) **D**
- 3.350.500 : HELICHRYSUM APPENDICULATUM** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (A plant of the Natal grasslands growing up to 2200m. in the Drakensberg. An herbaceous perennial, about 30cm. or more high with woolly leaves & creamy, pink-flushed flower-heads in late summer & autumn. Should be possible in a hot, dry site in the UK.) (50+) **B**
- 3.350.700 : HELICHRYSUM AUREO-NITENS** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (A widespread species of the high grasslands of SE Africa, extending N into Zimbabwe & reaching 2450m. in the Drakensberg. About 30 cm. high with narrow, silver-grey foliage & many, tiny, bright yellow, 'everlasting' flower-heads.) (50+) **B**
- 3.350.800 : HELICHRYSUM AUREUM** * Lesotho. Ex a P. Kelaidis coll. (Colorado-grown seed from one of Panayoti's 1994 collections, now well established & totally hardy at Denver. A 50cm. high, herbaceous perennial. Showy heads with bright yellow, 'everlasting' bracts. Temperature-hardy in the UK, of course, but should be tried in a sunny, well-drained site.) (30+) **B**
- 3.351.200 : HELICHRYSUM BELLUM** E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Open, dryish, stony areas. 17.3.96 (A plant of grassy slopes up to 3300m. Large heads with long, pure-white, papery phyllaries on stems of under 10cm.) **D**
- 3.351.800 : HELICHRYSUM CONFERTIFOLIUM** OFS, Platberg E of Harrismith. 2350m. Open, stony grassland & rocky places on summit plateau. 24.3.96 (Mats of narrow, grey-felted foliage send up 10cm. stems, each with a large flower-head with white phyllaries. This coll. at a high altitude for the species should be fully hardy in a well-drained, sunny site in the UK.) (20+) **D**
- 3.355.500 : HELICHRYSUM MARGINATUM** E Cape, Drakensberg, Naudesnek. 2450m. In short turf & among rocks on steep slope. 17.3.96 (Usually a cliff-dweller, recorded up to 2800m., its name was usurped for a long time by the following species. They grow in similar habitats on cold, shaded cliffs and are extremely worthwhile species in their own rights. Both are well illustrated, side by side, on Plate 33 in Hilliard & Burt. Basically, a very dwarf shrub with lead-green, white-felt edged foliage & large, rather tousled heads with shining, snow-white phyllaries on 5cm. stems, it should be as well suited to UK gardens as the next.) **D**
- 3.355.800 : HELICHRYSUM MILFORDIAE** KwaZulu-Natal, Drakensberg, N of Sani Pass. 2850m. Fissures in shaded, S & SE-facing basalt cliffs. 20.3.96 (Also from cold cliff-fissures, up to 3100m., this was successfully established & persists in the UK from the 1939 Milford collection. Its mats of grey-white velvet rosettes produce the short-stemmed, silvery heads from crimson-tinted buds, more freely in an open, sunny scree in the UK but, as might be expected, it resents summer droughts.) **D**
- 3.356.500 : HELICHRYSUM NITENS** Zimbabwe, Vumba Mts. c. 1500m. R.& R. Saunders coll. (A 50cm. high shrub with leaves of silver-grey velvet & bright yellow, everlasting heads. Recommended by Rod Saunders as both worthwhile & frost-tolerant but note our comments on such montane species from these Mozambique border-ranges under *Dissotis*.) (30+) **C**
- 15724 : HELICHRYSUM SP.** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Broad ledges on E-facing cliffs. 21.3.96 (A robust member of the complex *H. aureum* group, about 40cm. high with spectacular heads of papery, brilliant yellow, 'everlasting' flowers, each over 3cm. across. Should prove a showy, hardy perennial for a well-drained site.) (30+) **C**
- 15523 : HERMANNIA SP.** E Cape, NNW of Graaff-Reinet, Ouberg. 1700m. Shallow pockets of flat sandstone of summit. 13.3.96 (This largely tropical, southern hemisphere genus in the *Sterculiaceae* has about two-thirds of its species in S Africa. A few have climbed to higher altitudes & there are some intriguing species to look forward to. Among those we saw, only this had enough seed to collect. A tiny herbaceous perennial with intriguing violet-pink flowers. Alpine-house in full sun at all times.) (20+) **C**

Hesperantha : flowers of the west go east into the rain

With about 60 species, all in southern Africa, this cormous genus of the *Iridaceae* follows the standard distributional pattern, with the majority winter-growers from the SW Cape, but over a dozen ascend to high altitudes in the summer rainfall area. These will be temperature-hardy in the UK but the saxatile ones & others from well-drained habitats are unlikely to tolerate wet British winters when they are dormant. Wet-growers may well prove good gardeb-plants. All will be best outside in a

British summer, kept well watered if the weather is hot & dry. This is a diverse genus with many lovely things in it, variable in height & form from *Crocus*-like to *Gladiolus*-like plants, usually with white or pink flowers, often more deeply coloured on the exterior. The summer-rainfall species have been well investigated recently by Hilliard & Burt, so there should be no trouble in supplying names as soon as we can make some flowering material available.

- 3.415.500 : HESPERANTHA TYSONII** E Cape, Drakensberg, Naudesnek. 2400m. Among grasses on steep, moist, SE-facing slope. 17.3.96 (A few late flowers here so we have a determination from Peter Goldblatt. One of the highest alpinists in the genus, recorded up to 3300m. About 30cm. high with large, deep-pink flowers, vaguely like a wiry-stemmed *Schizostylis*, though first described by Baker in *Acidanthera*. This is likely to be tolerant of wet British winters & as well as very low temperatures.) (15+) **D**
- 15711 : HESPERANTHA SP.** Lesotho, Drakensberg, NE of Sani Pass. 2900m. Shallow, gravel-filled depressions on rock-slabs. 20.3.96 (A tiny plant, a few cm. high, with minute, falcate leaves. Possibly *H. glareosa* or *H. hygrophila*.) (20+) **D**
- 15737 : HESPERANTHA SP.** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Fissures on vertical, SE-facing, basalt cliff. 21.3.96 (About 15cm. high or less. There are several saxatile species adapted to this type of habitat.) (15+) **D**
- 15741 : HESPERANTHA SP.** KwaZulu-Natal, S of Sani Pass. 2850m. Steep, grassy slope. 21.3.96 (30cm. high) (20+) **C**
- 15792 : HESPERANTHA SP.** KwaZulu-Natal, Drakensberg, SW of Njesuthi valley. 2200m. Steep, moist, grassy slope. 23.3.96 (Flower remains pink on wiry stems 30-50cm. high. Similar habit & habitat to *H. tysonii* but seeds are very different.) (20+) **C**
- 15838 : HESPERANTHA SP.** Orange Free State, Drakensberg, Mont-aux-Sources. 2900m. Diorite rock crevices. 25.3.96 (About 3-10cm. high. Flower remains deep pink. Of similar habit & habitat to *H. scopulosa*, seen in flower elsewhere.) (15+) **D**
- 15879 : HESPERANTHA SP.** W Cape, Groot Swartberge, S of Prince Albert. 1500m. Gravelly soil on open slopes. 28.3.96 (About 30cm. Remains possibly of pale pink flowers, crimson outside. Unlikely to be as hardy as others in the UK) (15+) **C**
- 3.420.000 : HIRPICTIUM ARMERIOIDES** E Cape, Drakensberg, NE of Rhodes. 2300m. Fissures & ledges on diorite outcrop. 16.3.96 (A alpine, saxatile cousin of *Gazania*, recorded up to 3200m. & of great potential in the rock-garden or as an alpine-house plant. Appropriately named, woody-based *Armeria*-like cushions of small, rich-green leaves & very large, short-stemmed, many-rayed daisies in pure-white. A plant of considerable quality - illustrated in Hilliard & Burt, p. 217.) (5) **E**
- 3.430.200 : HYPOXIS COSTATA** E Cape, Drakensberg, NE of Rhodes. 2000m. Shallow soil on & around, steeply sloping rock-sheets. 16.3.96 (If not *H. costata*, something near it. This is a confusing genus with about 50 species in S Africa. Broad, greyish, downy leaves & big, yellow flowers on 20cm. stems. Should be fairly hardy in UK but may need to be dry in winter.) (15+) **B**
- 3.439.500 : INDIGASTRUM ARGYREA** E Cape, NNW of Graaff-Reinet, Ouberg. 1500m. Loose, gravelly soil on sandstone slopes. 13.3.96 (A pretty, little pea of the Karoo mountains. Prostrate with silvery leaves & lots of bright carmine-pink flowers) (15+) **D**
- 3.440.300 : INDIGOFERA FOLIOSA** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (This large, cosmopolitan genus of shrubs & woody-based perennials in the *Leguminosae* (*Fabaceae*) has almost one-third of its members in S Africa, where a few ascend to sufficient altitudes in the summer-rainfall areas to make them worth considering for sunny well-drained sites in the UK & similar climates. A 50cm., orange-flowered perennial of boulder beds & rocky slopes to about 2000m.) (15+) **C**
- 3.440.500 : INDIGOFERA HEDYANTHA** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (A 30cm. perennial with sweet-scented, red pea-flowers in summer. A plant of rocky sites up to 2100m. in the Natal Drakensberg.) (15+) **C**

Kniphofia : redhot poker cool off by the streams

Collecting seed from this splendid genus of herbaceous perennials was our particular aim during our 1996 visit to S Africa. The genus of about 70 species, spread from the Cape N through E Africa into the Yemen, with over 40 of them in S Africa, is particularly relevant to gardeners in cool temperate climates as they are mainly plants of the mountains & moister habitats, much more prevalent in the summer rainfall area than in the SW Cape. Writing in 1914, the botanist N.E. Brown, a specialist in S African plants, commented "that in a very great majority of cases plants of this genus raised from seed produced in any garden where more than one kind is grown, whether that garden be in South Africa or Europe, will not be true to name."

We hope we can help to start to sort out the confusion with some wild collections. We have not seen all of the following in flower, so some names are a little tentative, especially in the *K. rufa*, *K. laxiflora*, *K. ichopensis* group, though one of the main diagnostic characters, the floral bracts, is still evident in fruiting material. Nomenclature follows the 1968 monograph by L.E. Codd. Unfortunately, easily accessible information for gardeners does not exist. There is an excellent account by Jane Taylor in 'The Plantsman' Vol.7, Part 3 (Dec., 1985) but the best reference once again is Phillips & Rix 'Perennials' Vol. 2, pages 160-163, where several of the following are illustrated, along with reliable, accurate information.

Species from Southern Africa : Seeds from Jim & Jenny Archibald

- 3.460.500 : KNIPHOFIA CAULESCENS** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Ledges on E-facing cliffs. 21.3.96 (A splendid species of proven indestructible nature & garden worth in the UK. From up to 3000m. in the E Cape, the Stormberg & Winterberg, up through the Drakensberg of Lesotho & KwaZulu Natal, usually in rocky, seepage areas or on wet cliffs. Clumps of fine blue-grey foliage send up dense inflorescences of pale greenish yellow to cream flowers from coral to flame buds. More variable in colour in nature than we have seen it in gardens but its caulescent habit is more developed in cultivation.) (20+) C
- 3.461.900 : KNIPHOFIA HIRSUTA** E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Among grasses on open, moist slope. 17.3.96 (Virtually endemic to Lesotho but we're right on the border here. A wet-growing alpine, immediately identifiable by its solitary crowns of broad-based, dull-green foliage, distinctly hairy along the nerves on both sides. Dense heads of pendulous buds in shades of dull orange, coral or salmon open to greenish yellow flowers, a rather lurid combination, on stems of about 50cm. From such a cold, wet habitat, this should be one of the most important species for gardeners in cold, wet climates) (20+) C
- 3.462.010 : KNIPHOFIA ICHOPENSIS** (var. *ichopensis*) KwaZulu-Natal, Carters Hill E of Mkhomazi. 1600m Among grasses & scrub on steep, moist slope. 22.3.96 (A grassland plant of central KwaZulu-Natal, running up to about 2000m. in the Drakensberg. Long, lax heads of widely spaced, arcuate, cylindrical flowers, variable in colour from cream & yellowish green to salmon, on stems of 1m. or less. In a group including *K. laxiflora* & (the true) *K. rufa*, unfamiliar in gardens. This is can be distinguished from *K. laxiflora*, even in seed, by its lanceolate, acuminate bracts. Maybe safest from winter-wetness in a well-drained site.) (15+) C
- 3.462.011 : KNIPHOFIA ICHOPENSIS** KwaZulu-Natal. 1500m. R. & R. Saunders coll. (Possibly green-flowered form.) (15+) C
- 3.462.012 : KNIPHOFIA ICHOPENSIS** KwaZulu-Natal, Drakensberg, SW of Njesuthi valley. 2000m. Steep, grassy slope below sandstone cliffs. 23.3.96 (We are not altogether happy about this name. It may be the same as the possible *K. rufa* coll.) (15+) D
- 3.462.210 : KNIPHOFIA LAXIFLORA** KwaZulu-Natal, Soutar Hill, WSW of Nottingham Road. 1700m. Among grasses on open, rocky slope. 22.3.96 (Allied to *K. ichopensis*, *K. rufa*, etc., a variable species, quite widespread in the summer rainfall area from near Mt. Currie in the N of E Cape, through KwaZulu-Natal, just into Transvaal, from near sea-level to over 1500m. Higher colls. should give no trouble in a well-drained, sunny site in the UK. Erect buds become deflexed as the long, tubular, widely spaced flowers open in shades of pale-yellow, coral, salmon or orange. We have no idea what colour these colls. made out of flower will produce. This & the next would appear to be likely to correspond to what Codd designates as Form B of this species : "graceful inflorescences in various shades of colour make this one of the most attractive members of the genus.") (15+) C
- 3.462.211 : KNIPHOFIA LAXIFLORA** KwaZulu-Natal, N of Himeville to Mkhomazi. 1200m. Among grasses on open, rocky slope. 22.3.96 (Narrow, greyish leaves with narrow spikes on 1m. stems. A greenish yellow form, photographed in this area, is illustrated in Rix & Phillips 'Perennials' Vol.2, p. 163, but colour can vary in adjacent plants within a single colony.) (15+) C
- 3.462.300 : KNIPHOFIA LINEARIFOLIA** E Cape, Witteberge, SE of Lady Grey. 1500m. Among long grasses in marshy area. 18.3.96 (A member of the *K. uvaria* group with a northern & eastern distribution. A robust plant with fairly broad & erect, green foliage. Large, dense, very showy heads of yellow flowers opening from orange-red buds, on 1.5m stems.) (20+) B
- 3.462.600 : KNIPHOFIA NORTHIAE** E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Open sites along margins of streams. 17.3.96 (Certainly the most arresting foliage-plant in the genus, distinct from all others in its very broad, grey-green, leathery, arching, shallowly channelled leaves without a distinct keel, forming a large, evergreen rosette. Rightly described by G.S. Thomas as "very rare" in cultivation, the name has been misapplied in UK gardens to *K. caulescens*, the other caulescent species, to which this is somewhat similar in flower. Stout stems, anything from 20cm to 1.5m. high, with very large dense inflorescences, likely to be of creamy-white flowers from pale red buds in this E Cape race. Distributed here & there in the Cape & Natal Drakensberg at up to 3000m., always in wet peaty places along fast-flowing mountain streams or down seepage lines.) (20+) C
- 3.462.700 : KNIPHOFIA PARVIFLORA** (*K. modesta* - not the hybrid *K. "modesta"* of gardens) E Cape, Drakensberg, Naudesnek. 2400m. Among grasses on steep, stony, SE-facing slope. 17.3.96 (An odd plant, unique in the genus in its one-sided racemes of short, tubular, green-cream flowers from greenish or brownish buds. Not much seed but not very exciting.) (10) C
- 3.462.900 : KNIPHOFIA PORPHYRANTHA** Orange Free State, Drakensberg, Mont-aux-Sources. 2800m. Steep, moist, grassy, SW-facing slope. 25.3.96 (A superb, little, mid-summer flowering, high altitude species which must be hardy anywhere in the UK. Short, yellow-green leaves & 30-60cm. stems carrying stubby heads of pendulous, lemon-yellow flowers from buds often tipped with orange. Panayoti saw this in flower here in January, 1994, & enthuses over it. Illustrated in Rix & Phillips page 162.) (15+) D
- 3.463.000 : KNIPHOFIA PRAECOX** (subsp. *praecox*) W. Cape, near Nature's Valley. Near sea-level. R. & R. Saunders coll. (Almost certainly one of the greatest influences on the European garden hybrids. The name was long confused with *K. uvaria* & *K. alooides* & the plant with *K. linearifolia*. The true species is limited to a few wet sites & stream banks in the extreme SE of Western Cape. Robust with dark green leaves & dense heads of pale yellow flowers from orange or scarlet buds on 1-2m. stems.) (10+) C
- 3.463.300 : KNIPHOFIA RITUALIS** Lesotho, Drakensberg, Mont-aux-Sources. 3000m. Among rocks at base of cliffs. 25.3.96 (Possibly the highest alpine in the genus. From the Lesotho border-ranges, usually in sandstone crevices. Closest to the western *K. sarmentosa*. At 40-80cm., taller than *K. porphyrantha* with longer, glaucous leaves & ovoid heads of pendulous yellow-green flowers opening from coral to orange buds. Illustrated in this area in Rix & Phillips, page 162. Certainly as hardy as any S African but used to being dry & frozen all winter so may be vulnerable to wetness then & need a very well-drained site.) (15+) D

- 3.463.520 : KNIPHOFIA aff. RUFa** KwaZulu-Natal, Drakensberg, SW of Njesuthi valley. 2200m. Steep, wet grassy slope. 23.3.96 (Having seen a photograph of this plant, taken here some months earlier by the Hales & O'Byrnes of Oregon, USA, Panayoti was determined to try to collect some seed but there was only a small amount available. We hope this is what we sought. If so, it will be a most striking thing with large, widely spaced white flowers opening from coral-red buds. Genuine *K. rufa* can be seen in a yellow form in Phillips & Rix, Vol.2, p. 162, where you can see also a form of *K. thodei* in this colour combination.) (10) E
- 3.463.600 : KNIPHOFIA SARMENTOSA** W Cape, Komsberg. 1800-2000m. R.& R. Saunders coll. (A distinct 60cm. species from along mountain streams in the W Karoo. Introduced to the UK in 1789 but not recorded again until found in the Roggeveldberge 130 years later. Jane Taylor writes "worth growing for its good glaucous foliage & easy temperament alone...a thoroughly good garden plant...a fairly lax spike of spreading, greenish cream to soft coral-pink flowers" opens "from a dense cone of green buds." Codd describes the flowers as "pendulous, salmon to creamy-buff" & the buds as "coral-scarlet with a greyish bloom.") . . . (15+) C
- 3.463.700 : KNIPHOFIA SPLENDIDA** Zimbabwe, Nyanga Mountains. 1600m. R.& R. Saunders coll. (A very tall, robust, autumn-flowering species from the summer rainfall area in the ETransvaal, extending N into the high mountains of E Zimbabwe, along the Mozambique border, & Malawi. It should be fairly hardy in the UK in an open, well-drained site. Clumps of long, stiff, dull-green to glaucous leaves & stems, up to 2.5m. high, with extremely dense heads of pendulous, lemon-yellow flowers, opening from yellow-green buds, usually tipped with scarlet. A rare opportunity to acquire material from a seldom-collected area.) (15+) D
- 3.463.800 : KNIPHOFIA STRICTA** E Cape, Drakensberg, SW of Rhodes. 1700m. Among rocks. 18.3.96 (A species from the little-collected ranges E of the Karoo, the Sneeuwberg, Stormberg & Witteberge, just reaching the Cape Drakensberg & SW Lesotho, at up to 2500m. Like no other in its narrow, rigid foliage, U-shaped in cross-section. About 1m. or less high with dense pokers of yellow flowers opening from orange to coral buds, usually pale yellow from soft-red buds here. Often growing among rocks, this may prefer a drier site than most in gardens but these can be bleak mountains & we do not doubt its hardiness.) (15+) C
- 15692 : KNIPHOFIA SP.** KwaZulu-Natal, W of Kokstad, SW of Mount Currie. 1500m. Among grasses on open slopes. 19.3.96 (Possibly the variable *K. laxiflora* but there are other species in the Mount Currie area. About 1m. high.) (15+) C
- 15636 : KNIPHOFIA SP.** E Cape, Drakensberg, Naudesnek. 2400m. Steep, stony, SE-facing slope. 17.3.96 (Should have been named as it was one of the few we saw in flower but no herbarium specimen was pressed. Field-note says "acid yellow-green & harsh orange, 60cm.". *K. parviflora* & *K. caulescens* were also growing here. *K. hirsuta* is in the area & it may be this.) (20+) B
- 3.500.000 : LEDEBOURIA COOPERI** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (Several species in this confused & confusing, mainly S African genus of bulbs, most of which were described under *Scilla*, climb to high elevations in the mountains of the summer rainfall region. This occurs in the Natal Drakensberg on grassy hillsides up to 2100m. & should be temperature-hardy in the UK. Purple-spotted leaves flat on the ground & racemes of small, nodding, purplish flowers) (15+) B
- 3.502.000 : LEDEBOURIA OVATIFOLIA** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (Widespread S from the Transvaal up to 1980m. A single, oval leaf, purple below, & 10cm. raceme of purple and white flowers in late summer.) . . . (15+) B
- 3.510.000 : LEONOTIS DUBIA** (*L. ocymifolia* var. *ocymifolia*) E Cape, NNW of Graaff-Reinet, Ouberg. 1500m. Loose gravelly soil on sandstone slope. 13.3.96 (This genus in the *Labiatae* appears to involve numerous races which have been 'lumped' or 'split' by different botanists. They are all on a general, somewhat *Phlomis*-like pattern with woody-based, stoloniferous stems & wrinkled leaves. Erect flower-stems, of about 1m. in this case, are whorled with elongated, velvet-covered, orange flowers.) (10+) C
- 3.510.100 : LEONOTIS DYSOPHYLLA** (*L. ocymifolia* var. *raineriana*) E Transvaal, Johannesburg area. R.& R. Saunders coll. (A 1.5m., grassland plant, illustrated in Rix & Phillips, Vol. 2, p.212, this & the preceding will be likely to withstand much lower temperatures than the better-known *L. leonurus* but all will need hot, dry, well-drained positions in the UK.) (15+) B
- 3.510.200 : LEONOTIS LEONURUS** W Cape, Lion's Head near Cape Town. R.& R. Saunders coll. (The least hardy but maybe the most spectacular, this can still be a great success in the UK against a S-facing wall - pictured thriving at Sissinghurst in Rix & Phillips, Vol. 2. About 2m. high with narrower leaves than the above & whorls of scarlet-orange velvet flowers.) (20+) B
- 3.512.500 : LESSERTIA PERENNANS** KwaZulu-Natal, near Merrivale. 1500m. R.& R. Saunders coll. (This exclusively African genus in the *Leguminosae* includes a few summer-growers from high altitudes. A beautiful woody-based species from gulleys & boulder beds up to 2400m. in the Drakensberg. About 60cm. high with narrow leaves & a multitude of cerise flowers.) . . . (10+) C
- 15551 : LOTONONIS SP.** E Cape, SW of Cradock, Swaershoek. 1500m. Fissures & gravelly ledges on rock outcrops. 14.3.96 (A delightful dwarf shrub, 20-30cm. high, somewhat *Helichrysum*-like in appearance, with narrow, silver leaves, but with violet pea-flowers. This genus of the *Leguminosae* is mainly S African & none too easy to name. Although we have herbarium sheets of both these collections at the Compton Herbarium at Kirstenbosch, identities were only confirmed to generic level.) (5) C
- 15581 : LOTONONIS SP.** E Cape, Drakensberg, NE of Rhodes. 1900m. Gravelly banks & among rocks. 16.3.96. (An attractive, erect, silver-leaved shrub, about 30cm. high, with lots of lilac-blue pea-flowers. From a w inter-cold area) (5) C
- 15710 : MASSONIA SP.** Lesotho, Drakensberg, NE of Sani Pass. 2900m. Gravel-filled depressions on rock-slabs. 20.3.96 (Maybe the only summer rainfall species in this small genus of liliaceous bulbs (otherwise winter-growers from the W & N Cape). Listed in Hilliard & Burt as an unidentified species, "perhaps a small form of *M. echinata*... 2800-3000m., summit plateau only." Tiny, with sessile heads (we assume of the usual white shaving-brush type) between 2 flat, ground-hugging, smooth, oval leaves. Certainly hardy in the UK & to be tried in a trough or alpine-house pan - kept wet outside in summer, dry & cold in winter,) (20+) C

- 3.545.200 : MELIANTHUS MAJOR** W Cape, near Porterville. 100m. R. & R. Saunders coll. (One of the most spectacular foliage-plants grown in British gardens collected in an inland locality at the foot of the Winterhoekberge. In mild areas of the UK this is a 2-3m. high, spreading shrub, as it is in nature. In colder gardens, such as ours, it will survive being cut to the ground by frost annually, making over 1m. of growth each summer.. Huge, deeply cut & serrated, grey leaves. Deep crimson flowers.) . . . (10+) **B**

Moraea : the diverse African irises climb high

Restricted to Africa S of the Sahara, *Moraea* mirrors the northern hemisphere genus *Iris*, with almost precisely similar flowers, but its underground rootstock is a corm & its closest northern relatives are in the small genus *Gynandriris*, itself distinct in its long, tubular ovary. With just over 100 species, the diversity of form may not be quite so great as in the larger genus, *Iris*, with about 250 species, but it greatly exceeds the limited concept of it which most northern hemisphere gardeners will have. As with so many S African genera, the greatest concentration of species is in the winter-rainfall area of the SW Cape but a considerable number occur in the summer-rainfall

areas of KwaZulu-Natal & the Transvaal, several climbing to the highest elevations, at well over 3000m. in the Drakensberg. While many of the winter-growers might prove well-suited to culture in the bulb-frame or unheated greenhouse, we are concerned only with some summer-growers in this list Most of the following should show the same range of tolerance to open garden conditions, in cool temperate areas with wet summers, such as the UK, as the better-known S African genera, like *Kniphofia* & *Eucomis*, from the same areas. Nomenclature follows Peter Goldblatt's sumptuous monograph on this genus (1986).

- 3.550.301 : MORAEA ALTICOLA** E Cape, Drakensberg, NE of Rhodes. 2200m. Moist, grassy slope. 16.3.96 (Characteristic of the alpine, summit plateau of the Drakensberg, between 2200m. & 3000m., & by far the largest & most robust species. Unique, netted cataphylls enclose the leaf & stem bases. Imposing, 1m. high clumps of broad, leathery leaves & stout erect stems of large, pale-yellow flowers with deeper yellow nectar-guides. Singularly iris-like, this is hardy & easily grown in UK gardens.) (15+) **B**
- 3.551.500 : MORAEA BREVISTYLA** KwaZulu-Natal, Drakensberg, SW of Njesuthi valley. 2200m. Steep, open, moist, slope, among grass tussocks. 23.3.96 (Tentatively identified as this floriferous species : it may be *M. albicuspis* or *M. trifida*. These grassland members of Section *Vieusseuxia* cannot be satisfactorily identified out of flower & both seeds & seed capsules of the high altitude ones are often unknown. All 3 species have white to cream flowers, are 30-50cm. high & should be hardy in the UK.) (15+) **C**
- 3.552.600 : MORAEA DRACOMONTANA** Lesotho, Drakensberg, NW of Sani Pass. 2900m. Among grass tussocks along stream. 20.3.96 (Not in flower but may be this little-known species. Could be another member of Section *Vieusseuxia* but habitat is right & few others reach this altitude. Fine stems about 30cm. high, possibly with blue-purple flowers with yellow guides.) (10+) **D**
- 3.554.400 : MORAEA INCLINATA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A tall, slender, summer-growing plant, occurring among grasses & sedges on wet slopes up to 2500m. in KwaZulu-Natal & the adjacent Drakensberg. Branching stems, 50cm. or more high, with violet-blue flowers, blotched with yellow & white on the falls.) (15+) **C**
- 3.557.800 : MORAEA ROBUSTA** OFS, Drakensberg, Mont-aux-Sources. 2700m. Among grasses on open slope. 25.3.96 (This occurs quite widely, if locally, in mountain-grassland, from SE Transvaal into KwaZulu-Natal & Lesotho. In the Subgenus *Grandiflora*, like *M. alticola*, & with similar large flowers, pale-yellow to cream in this case, but a much dwarfer plant, about 30cm. high. Not in cultivation as far as we know, this will be perfectly hardy & should prove a satisfactory plant in most UK gardens.) (10+) **C**
- 3.558.205 : MORAEA SPATHULATA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (Closely allied to *M. alticola* but widespread through the summer-rainfall area, usually at much lower altitudes, though it climbs high enough to make it hardy in many UK gardens. Fine yellow flowers, marked with deeper yellow on the falls, on stems of 60 cm. or more.) (15+) **B**
- 3.558.210 : MORAEA SPATHULATA** * UK seed from Norman Stevens' Cambridge garden, where it is fully hardy. (15+) **B**
- 3.558.500 : MORAEA STRICTA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (From grasslands N from the E Cape & Lesotho all the way to N Ethiopia, this usually produces its lilac to violet-blue flowers, blotched with orange, in spring, before the first rains. Quite dwarf at about 20cm., it merits pot-cultivation, dryish in winter & stood outside during summer.) (15+) **B**
- 3.559.100 : MORAEA TRIFIDA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A grassland plant from moist sites in the Drakensberg to 2500m. Wiry, 30cm. stems with a thready leaf, carry creamy flowers, marked brown or green.) (15+) **B**
- 15853 : MORAEA SP.** OFS, Drakensberg, Mont-aux-Sources. 3001m. Fissures on cliffs. 25.3.96 (About 30cm. high with pale violet flowers. We can be excused for failing to identify this. We were able to confront Peter Goldblatt, sorting herbarium collections, at Kirstenbosch with a miserable specimen & an apologetic "We're afraid we could not name this from your monograph." After a moment he replied, "That's because it's not in it." and chucked it in a heap of pressed plants. More anon ?) (15+) **C**
- 3.590.200 : NEMESIA CAERULEA** OFS, Drakensberg, Mont aux Sources. 3000m. Gravelly ledges below sandstone cliffs. 25.3.96 (A fine form of this alpine perennial, collected at the altitudinal limit for the species. More compact, with larger flowers in deeper blue-violet than the one photographed on the Sani Pass in Rix & Phillips, Vol. 2, page 111, & better than anything we have seen in cultivation under this name, though, of course, it may not live up to our expectations in gardens. Stems about 20cm. high from creeping mats of toothed leaves with a succession of spurred, flat-faced flowers with white, red-rimmed throats.) (20+) **C**

- 3.602.500 : OSTEOSPERMUM JUCUNDUM** OFS, Drakensberg, Mont aux Sources. 2900m. Open stony & grassy slopes. 25.3.96 (Highest alpine in the genus, recorded up to 3200m., & only likely to be lost through winter-wetness, not cold, in the UK. Here with neat, mat-forming clumps & a multitude of brilliant deep-pink daisies on 20cm. stems. More compact than the clone distributed as 'Compacta' but not so diminutive as that described by Vera Higgins in 1946 as *Dimorphotheca barberiae* f. *compacta* from a H. Milford coll. Those prepared to interpret the name *Dimorphotheca* will appreciate seeds are of two different forms.) (10+) **C**
- 15522 : PACHYCARPUS SP.** E Cape, NNW of Graaff-Reinet, Ouberg. 1700m. Shallow pockets on flat sandstone of summit. 13.3.96 (A member of the *Asclepiadaceae* with leafy decumbent stems. The genus usually has mottled, bell-shaped flowers, as fascinatingly complex as most members of this family but we have seen neither of these two colls. in flower.) (10) **B**
- 15557 : PACHYCARPUS SP.** E Cape, N of Tarkastad. 1400m. Among rocks on steep, grassy slope. 15.3.96 (10) **B**
- 3.605.000 : PAPAVER ACULEATUM** E Cape, Drakensberg, NE of Rhodes to Naudesnek. 2200m. Disturbed areas in loose, sandy clay. 16.3.96 (The only S African in this genus, this ascends to almost 3000m. Annual or monocarpic & rather like the Spanish & Moroccan taxa around *P. rupifragum*. A many-stemmed, bristly plant about 50cm. high with lots of orange flowers.) (50+) **B**
- 3.610.500 : PELARGONIUM ABROTANIFOLIUM** E Cape, NNW of Graaff-Reinet, Ouberg. 1700m. Shallow pockets on flat sandstone of summit. 13.3.96 (One of the most beautiful foliage-plants we have seen. Compact, shrubby hummocks, about 20cm. high, with leaves like silver parsley. White flowers blotched with purple are hardly spectacular but demurely compliment the exquisite filigree-foliage. From the drier mountains of the Karoo, so unlikely to tolerate exposure to the wet British climate. We hope some alpine-house growers might admit a saxatile *Pelargonium*, which will relish full sun at all times.) (5) **E**
- 3.610.650 : PELARGONIUM ALCHEMILLOIDES** * No data. A plant of stony, grassy slopes up to 2500m. or so in the Natal Drakensberg. About 30cm. high with airy umbels of small, pink-white, mauve-blotched flowers intermittently throughout the year. The few here belong to the 12 or so species (out of about 250 in this mainly S African genus), which frequent altitudes above 1500m. in the summer rainfall area & might have some potential in sunny, well-drained sites in cool-temperate gardens.) (5) **B**
- 3.611.950 : PELARGONIUM MULTICAULE** E Cape, Langkloofberge. 1200m. R.& R. Saunders coll. (Trailing stems with deeply cut, lacy foliage & many, little, magenta flowers with darker markings rising to 30cm. Distributed from the mountains of the E Transvaal to here at its southern limit on the borders of W Cape & attaining almost 2000m. in the Drakensberg.) (5) **B**
- 3.612.500 : PELARGONIUM SIDIFOLIUM** E Cape, Drakensberg, NE of Rhodes. 2000m. Shallow pockets on & around sloping rock-slabs. 16.3.96 (Close tufts of rounded foliage with 20-30cm. stems carrying umbels of elegant, crimson-black flowers. A local plant, recorded up to 2600m., & rather striking, if you free your mind from association with large scarlet hybrids.) (5) **E**
- 3.620.200 : PEUCEDANUM THODEI** E Cape, Drakensberg, Bastervoetpad. 2000m. R.& R. Saunders coll. (As we have several *Umbelliferae* in this list, we include this Drakensberg species from wet gulleys & streamsides, up to 2600m. Much-cut, glossy green foliage & 2m. tall, rounded umbels of a myriad, tiny lime-yellow flowers. Should be easy in the UK.) (15+) **B**
- 3.630.010 : PHYGELIUS AEQUALIS** * No data. Distributed in wet, montane sites from central Natal N to E Transvaal, at 1200-2200m., this woody-based, 1.5m. high, perennial has inflorescences of many, curved, tubular flowers in a delightful shade of dusky strawberry-pink. Hardy almost anywhere in the UK in good, well-drained soil in sun, with plenty summer moisture.) (30+) **A**
- 3.630.012 : PHYGELIUS AEQUALIS - YELLOW FORM** * KwaZulu-Natal, Mahwaqa hills, E of Underberg. c. 1500m. Ex a B.L. Burt coll. (From the distinct pale-yellow clone grown as 'Yellow Trumpet'. Seems reliably hardy in the UK.) (30+) **B**
- 3.630.150 : PHYGELIUS CAPENSIS** E Cape, Drakensberg, Naudesnek. 2400m. Among grasses on steep, wet, stony, SE-facing slope. 17.3.96 (Absent from the Natal Drakensberg, this is native to the E Cape & Lesotho, attaining higher altitudes than *P. aequalis*, along mountain streams & on wet slopes up to 2900m. Beautifully illustrated, in the site where this seed was collected, in Phillips & Rix, Vol. 2, page 114. Woody-based, 2m. stems with pyramidal inflorescences of scarlet, tubular flowers.) (30+) **B**
- 3.635.000 : PLEXIPUS NAMAQUANUS** E Cape, Swaershoek, SW of Cradock. 1500m. Fissures & gravelly ledges on rock outcrops. 14.3.96 (A woody-based, clump-forming *Zaluzianskya*-like perennial, 20cm. high by 30-40cm. across, with profuse large, white flowers with deeply notched petals. From the inland, continental climate of the mountains SW of the Cape Drakensberg, this may be most relevant to gardeners in Colorado-type climates with cold, dry winters but is worthy of trial in the UK.) (15+) **C**
- 3.650.500 : PROTEA DRACOMONTANA** KwaZulu-Natal, Drakensberg, W of Oliviershoekpas. 1500m. *Themeda*-grassland on open NW & NE-facing slopes. 26.3.96 (The vast majority of this famous genus from subsaharan Africa, with over 100 species, is concentrated in the winter-rainfall area of the SW Cape. These really need a Mediterranean-type climate to succeed. We list 3 of the half-dozen or so high altitude, summer-rainfall species, which realistically are the only ones which might be possible in the UK. This & the next are the dwarfest, low shrubs 30-60cm. high with large, leathery leaves. Both have enormous, complex flower-heads. Panayoti saw this colony flowering in January, 1994, varying from pale pinks & lilacs to deeper, rosy shades. From up to 2400m., on thin, stony soils overlying Cave Sandstone, & it might be tried in well-drained, low-nutrient, lime-free soil in full sun.) (8) **C**
- 3.658.000 : PROTEA SIMPLEX** KwaZulu-Natal, N of Himeville to Mkhomazi. 1500m. Gravelly places & crevices on rock outcrops. 22.3.96 (Similarly dwarf at about 60cm., this is a local species of the Cave Sandstones up to about 1800m. in Natal.) (8) **C**
- 3.658.500 : PROTEA SUBVESTITA** KwaZulu-Natal, Drakensberg, SE of Sani Pass. 2400m. Open, rocky slopes. 21.3.96 (The highest collection at about the altitudinal limit for the species but, like the remaining Drakensberg species, a large shrub or small tree. Distinct from the others in its more elongated not widely cup-shaped, white flower-heads with red anthers.) (8) **C**

- 3.670.000 : RANUNCULUS BAURII** OFS, Drakensberg, Mont-aux-Sources. 2800m. Among rocks down steep, wet gulley. 25.3.96 (A big, handsome buttercup, rather like a giant celandine, illustrated (in spring at an early stage of growth) in Phillips & Rix, Vol. 1, page 23. This grows in wet sites at up to 3000m. in the Drakensberg, from the E Cape into the Transvaal, so should be very hardy & easy outside in the UK. Eventually about 60cm. high with large, glossy, rounded leaves & bright-yellow flowers.) (20+) **C**
- 3.704.050 : ROMULEA LUTEOFLORA var. SANISENSIS** Lesotho, Drakensberg, NW of Sani Pass. 2900m. Peaty turf along stream. 20.3.96 (Bright yellow flowers. This is an extraordinary disjunction, only known in this locality. A high-alpine, summer-grower though the type-race is winter-growing, from high cold habitats in the Cedarberg & Bokkeveld of the N Cape.) (10+) **C**
- 3.704.150 : ROMULEA MACOWANII var. ALTICOLA** (*R. longituba* var. *alticola*) * Lesotho, no further data. (Ex the H. Milford type-collection, long grown & totally hardy outdoors in UK gardens. Long-tubed flowers (the longest in the genus) in yellow, shading to orange-yellow inside & tinged with brown or purple externally. Known only from this & one other coll.) (15+) **B**
- 3.720.500 : RUSCHIA PUTTERILLII** E Cape, Drakensberg, ESE of Ben Macdhui. 2900m. Exposed rock-fissures. 17.3.96 (Certainly the highest alpine in this large S African genus & possibly in the entire *Mesembryanthemaceae*. Compacted, shrubby pads squeezed into crevices with hard, succulent, greyish leaves & stemless, carmine-pink flowers. A few seeds only.) (20+) **E**
- 3.750.000 : SCILLA DRACOMONTANA** E Cape, Witteberg, E of Lady Grey. 2200m. Fissures & pockets on diorite outcrops. 18.3.96 (This mainly Eurasian genus of bulbs has only a few species in S Africa. The 3 here are the summer-growing, Drakensberg representatives. They are all plants of rocky areas & best kept dry during their winter dormancy but should be temperature-hardy in the UK. This was about 15cm. high in seed & its blue flowers are well illustrated in Hilliard & Burt, Plate 11.) (15+) **C**
- 3.750.500 : SCILLA NATALENSIS** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (The tallest, up to 1m. high but usually nearer 50cm., with long racemes of starry, blue flowers. A plant of cliff-ledges, recorded up to about 2000m.) (20+) **B**
- 3.750.600 : SCILLA NERVOSA** KwaZulu-Natal, near Merrivale, 1500m. R. & R. Saunders coll. (A wide ranging species of the E African mountains. In shallow soil over rock-sheets at altitudes approaching 2000m in the Natal Drakensberg.) (20+) **B**
- 3.766.000 : SEBAEA SEDOIDES** (var. *sedoides*) KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A variable species distributed down through the summer-rainfall ranges of E Africa, attaining about 2500m. on the Drakensberg grasslands. Here, about 30cm. high with the brilliant yellow flowers typical of this mainly African, herbaceous genus in the *Gentianaceae*.) (50+) **C**
- 15608 : SEBAEA SP.** E Cape, Drakensberg, NE of Rhodes. 2300m. In turf on ledges of diorite outcrop. 16.3.96 (About, 10cm. high, with heads of *Daphne*-like bright yellow flowers. We were surprised to find so little ripe seed of this genus.) (50+) **D**
- 3.770.400 : SENECIO BARBATUS** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (An intriguing, blue-flowered member of this cosmopolitan genus, about 30cm. high & somewhat thistle-like in appearance. From the montane grasslands of E. Transvaal into the E Cape & recorded from well over 3000m. in the Drakensberg.) (15+) **C**
- 3.777.050 : SILENE BURCHELLII** * E Cape, Drakensberg, Bastervoedpad. Ex CD & R 192. (A member of a species-group extending to 2400m. in the Drakensberg grasslands. An attractive & satisfactory 20cm. perennial with large pink flowers.) (15+) **C**
- 3.777.500 : SILENE UNDULATA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A tall, lush species, up to 1m. high, from steep, wet slopes up to about 2800m. in the Drakensberg. White flowers from spring to autumn.) (15+) **B**
- 3.790.200 : STREPTOCARPUS DUNNII** Swaziland, Malolotja Reserve. 1400m. R. & R. Saunders coll. (From a seldom-collected locality in the Ngwenya & Silotwane ranges along the E Transvaal border, where the Saunders tell us it experiences frequent winter-frosts. A single, very long, silver-haired leaf & many-flowered, 20cm. stems of funnel-shaped, brick-red flowers.) (50+) **E**
- 3.790.400 : STREPTOCARPUS GARDENII** KwaZulu-Natal, Drakensberg, SW of Njesuthi valley. 1400m. In moss on boulders in deep shade. 23.3.96 (Endemic to wet, shaded rocks, sometimes epiphytic on mossy tree trunks, in the high Natal woodlands, up to about 1800m. A beautiful, little plant with rosettes of narrowly ovate leaves & pale violet flowers, with pale-green tubes & purple-lined lobes, on 10cm. stems. One of the 3 species which ascend above 1500m. in the Natal Drakensberg, these are all well-suited to such alpine-house treatment as accorded to the hardy European & SE Asian *Gesneriaceae*. Moist & shaded in summer, cool & dryish in winter. For seed-sowing see comments under the European *Ramonda*.) (50+) **D**
- 3.790.401 : STREPTOCARPUS GARDENII** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (50+) **D**
- 3.790.700 : STREPTOCARPUS PENTHERIANUS** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (While this is also a plant of mossy rocks & fissures on sandstone cliffs up to 2000m., from our limited experience of these two, this seems to prefer somewhat more open, drier sites. Distinct flat rosettes of 2-3, large, almost square, ribbed, deeply veined leaves & elegant, little, butterfly-like white flowers, sometimes flushed lilac-pink, with yellow throats and long, curved tubes.) (50+) **D**
- 3.810.200 : SUTERA BREVIFLORA** E Cape, Drakensberg, NE of Rhodes. 1900m. Open, gravelly banks. 16.3.96 (This is a fine member of a fine African genus in the *Scrophulariaceae*, with about 130, mainly S African, species & quite a few montane plants. Masses of flat-faced, bright orange-red flowers on 20cm. clumps. Much better than the pallid thing in Phillips & Rix.) (50+) **B**

- 3.812.000 : SUTERA HALIMIFOLIA** E Cape, NNW of Graaff-Reinet, Ouberg. 1500m. Loose, gravelly soil on open sandstone slopes. 13.3.96 (A pretty, diffuse, grey-leaved perennial of the Karoo mountains with 20cm. high clumps of upright, wiry stems bearing a profusion of dainty, little pink flowers over a long period. Maybe possible in a sunny scree or raised-bed.) (50+) **B**
- 3.820.010 : SUTHERLANDIA FRUTESCENS** W Cape, N of Cape Town, near the coast. R. & R. Saunders coll. (The widespread, low-altitude core of a trio of seemingly intergrading "species" of showy, scarlet-flowered shrubby Bladder Peas. This coll. will not be hardy in the UK but can be easily grown in the cool-greenhouse. Striking & exotic planted out for the summer.) (15+) **A**
- 3.820.510 : SUTHERLANDIA MICROPHYLLA** * UK grown seed ex S. Hannay 1991 colls. (SH56 from Lesotho & SH61 at 2600m. in E Cape) (With erect stems of over 1m., this may differ in foliage & pod characters but not the scarlet pea-flowers.) (10+) **B**
- 3.820.600 : SUTHERLANDIA MONTANA** E Cape, Drakensberg, NE of Rhodes to Naudesnek. 2200m. Disturbed areas in loose, sandy clay. 16.3.96 (In 1994 we listed seed from the 1988 CD & R coll. from this same area. This had attracted considerable publicity in the UK : illustrated in 'The Plantsman' of September, 1992, & featured in the 'The Garden' of September, 1994. Certainly the hardiest of this genus & temperature-hardy in the UK but doubtless resentful of winter-wetness. The soft, shrubby stems, clad in pinnate leaves, do not reach much more than 30cm. in the wild & the display of scarlet pea-flowers in summer is spectacular, as are the large, inflated, pale-green, red-tinged seed-capsules which follow them.) (10) **C**
- 3.820.601 : SUTHERLANDIA MONTANA** E Cape, Witteberge, E of Lady Grey. 2200m. Diorite gravel-pockets. 18.3.96 (10) **C**
- 3.841.010 : TRITONIA DISTICHA** subsp. **RUBROLUCENS** * No data. Distributed through the summer-rainfall mountains up to 1900m. in the Drakensberg, on grassy slopes or sometimes in sandstone crevices. We have found this hardy over many years. A pink "Montbrieta" with late-summer flowers in a soft, warm shade of the same salmon-pink as *Dierama dracomontanum*. (15+) **B**
- 3.850.750 : TULBAGHIA LUDWIGIANA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A small, mainly S African, genus of about 20 species. This African version of *Allium* is currently rather trendy, so it is surprising that we have not seen this summer-rainfall species grown more widely in the UK. Surely one of the hardiest, recorded up to 1900m. Altogether *Allium*-like, with 30cm. stems of pendant flowers in which green-white segments surround a fleshy yellow corona.) (10+) **C**
- 3.851.011 : TULBAGHIA VIOLACEA** * No data. The best-known in the UK & fairly reliably hardy in a well-drained site, though not a species from any great altitude. This seed is from a large form, originating from the RBG Edinburgh. Large both in stature with stems of about 60cm. & flower-size with heads of up to 20 big pale violet flowers, each with 3 white corona scales.) (10+) **B**
- 3.861.000 : URGINEA MACROCENTRA** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2800m. Grassy slope below basalt cliffs. 21.3.96 (A weird member of this large but little-grown bulbous genus of *Scilla*-relatives with about 30 species in S Africa. A single, hollow, cylindrical leaf & a cylindrical stem up to 1m. high packed with small, white flowers.) (15) **C**
- 3.870.900 : URSINIA TENUILOBA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (One of 3 species in this genus of the *Compositae*, concentrated in the SW Cape, which grows in the stony turf of the summer-rainfall Drakensberg, up to 2200m. in this case. About 20cm. high with finely cut foliage & bright yellow 'daisies' with deeply-lined backs to the rays.) (20+) **B**
- 3.880.500 : VERNONIA HIRSUTA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (This large, mainly tropical genus of the *Compositae* is known to UK gardeners through the 2m. high species from eastern N America, *V. crinita* & *V. novaboracensis*. About 5 climb high into the Drakensberg. This one on wet grassy slopes to 2000m. About 1m. high with sessile, twisted, two-toned foliage & massed heads of bright crimson-purple flowers. Close to *V. flanaganii* (Hilliard & Burt Plate 31 (p. 205).) (15+) **B**
- 3.881.000 : VERNONIA OLIGOCEPHALA** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A drier grower from montane grassland up to 2400m. Less than 20cm. high with silver-backed leaves & heads of rich purple flowers.) (15+) **C**
- 3.899.500 : WACHENDORFIA THYRSIFLORA** W Cape, near Bredasdorp. 50m. R. & R. Saunders coll. (This species, a member of the *Haemodoraceae*, is something of a feature in Cornish & other mild, UK gardens. It comes from marshy areas at low altitudes in the winter-rainfall area of the W Cape. Described by G.S. Thomas as "most handsome", this is a 2m. perennial with arresting, ribbed foliage & tall, branching stems, packed with rich-yellow flowers in summer.) (15+) **B**

Watsonia : spectacular summer-growers from the grasslands

While a large & important genus of the *Iridaceae*, *Watsonia*, with over 50 species, is not so daunting as *Gladiolus* or even *Moraea*. Their clumps of sword-like leaves & spikes of showy, *Gladiolus*-like flowers place them among the most striking of S African plants, especially characteristic of South Africa itself, as they do not extend beyond the N border of the Transvaal. 34 species occur in the winter rainfall area of the SW Cape ; 21 come from the summer rainfall areas of Natal & the Transvaal. The winter-growers are in the main too large for most gardeners in colder climates to accommodate under glass but this leaves us with about 20 potentially worthwhile garden-plants for summer-wet, temperate areas. Of these, we seem to have a

single one (albeit under a variety of names) in wide cultivation. The reason is largely the usual one of a failure to understand their needs. Gardening reference books do not distinguish between summer-growers & winter-growers. Most gardeners in the UK & similar climates can just forget the winter-growers, as we have done in this list. All the summer-growers are worth trying. The other problem has always been obtaining seed to try them. We make a start by listing an introductory range here. Although remarkably few species have made their homes in the Drakensberg, many come from cold areas elsewhere in Natal & the Transvaal & will prove hardy garden-plants. Nomenclature follows Peter Goldblatt's recent (1989) revision of the genus.

- 3.950.400 : WATSONIA ANGUSTA** W Cape, Cederberg. 1000m. R. & R. Saunders coll. (Unusual in that it grows in both winter & summer rainfall areas, extending N well into the E Cape. The paradox is explained by the fact that it grows in permanently wet habitats : marshes, seeps & along streams. Not a plant of any great altitudes, it should be tried in a sheltered site in the UK & may be well-suited to SW English & Irish gardens. Lax spikes of scarlet flowers with black-purple anthers on 1-2m. stems.) . . . (15+) **B**
- 3.951.310 : WATSONIA DENSIFLORA** KwaZulu Natal, near Merrivale. 1500m. R. & R. Saunders coll. (In no way allied to the SW Cape, winter-growing *W. borbonica* (*W. pyramidata*) as stated in Graham Stuart Thomas' 'Perennial Garden Plants' but the central species of a group of summer-growers from the grasslands of Natal with dense spikes of pink flowers appearing from between imbricate, brown bracts. Clump-forming & up to 1.5m. high, this is the low altitude member of the group, often below 1000m. but at similar elevations in the same area as *W. pillansii* of proven hardiness in the UK, so well worth trying there.) . . . (15+) **B**
- 3.952.100 : WATSONIA GLADIOLOIDES** KwaZulu-Natal, N of Himeville to Mkhomazi. 1200m. Among grasses on open, rocky slope. 22.3.96 (A dwarf plant, 30-40cm. high here, apparently related to the pink-flowered *W. densiflora* group, in spite of its bright red, long-tubed flowers in spikes of up to 25, on unbranched, single stems. A species of the mountains of southern Lesotho & Natal, up to 2200m., maybe closest to the other dwarf species, *W. lepida*, which has a range to the N of Lesotho.) . . . (15+) **D**
- 3.952.800 : WATSONIA LEPIDA** KwaZulu-Natal, Drakensberg, W of Oliviershoekpas. 1700m. *Themeda*-grassland on open, NW & NE-facing, sandstone slopes. 26.3.96 (This should be in theory the hardiest species in the genus, from between 2000m. & 2500m. in the N Natal Drakensberg & Lesotho. In the *W. densiflora* complex & sometimes growing with another member, *W. confusa*, which tends to be a taller, clump-forming plant of wetter habitats. Usually with solitary 20-60cm. stems carrying dense spikes of pink flowers. Possibly best tried in a well-drained sunny site, in the rock-garden or in a scree-bed in the UK.) . . . (15+) **D**
- 3.953.000 : WATSONIA MARLOTHII** W Cape, Groot Swartberge, S of Prince Albert. 1700m. Gravelly soil on open slopes. 28.3.96 (Endemic to the Swartberg in the S of W Cape, above 1200m., this should be comparatively hardy in the UK in a well-drained site. These mountains catch a proportion of both winter & summer rain (it was raining when we were there in early autumn). Branching spikes of many, short-tubed crimson flowers, occasionally pink or purple, on stems up to 1m. high in summer.) . . . (15+) **D**
- 3.953.600 : WATSONIA PILLANSII** (*W. beatricis*, *W. socium*, etc.) KwaZulu-Natal, N of Himeville to Mkhomazi. 1200m. Gravelly soil & crevices on rock outcrops. 22.3.96 (The growability & hardiness of this species in UK gardens gives us a criterion to judge the potential of others. The only summer-grower generally cultivated in the UK & also the only *Watsonia* of proven reliability in the UK, this is widely distributed through the E part of S Africa, usually in grassland, from the S Cape coastal area in a curve along the Natal coast into the Drakensberg, at low to middle elevations. Whether or not we have material from the higher altitudes in cultivation is irrelevant, as almost all others listed here occur in colder areas than this. For a species with such a wide range, it varies little. Spikes of 30 or so, bright orange-red, long-tubed flowers on 50-120cm. stems in late summer or autumn.) . . . (15+) **C**
- 3.953.601 : WATSONIA PILLANSII** KwaZulu-Natal, WSW of Nottingham Road. 1700m. Open grassy slopes. 22.3.96 . . . (15+) **C**
- 3.955.200 : WATSONIA WILMANIAE** W Cape, Groot Swartberge, S of Prince Albert. 1500m. Seeps on rocky slopes & along stream. 28.3.96 (A tall wet-grower endemic to streamsides & marshes in the Swartberg & Kamanassie ranges of the S Cape. Flowering in late summer with spectacular spikes, up to 1.5m. high, of large flowers, unusually variable in colour. According to Goldblatt, the Swartberg populations range from deep red to orange, pink & cream. We see no reason why this should not be every bit as hardy as *W. pillansii* and should be as successful in ordinary garden conditions in the UK as other S African wet-growers.) . . . (15+) **C**
- 3.980.000 : WURMBEA ANGUSTIFOLIA** E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Among grasses in wet-flush on open slope. 17.3.96 (A member of a small S African genus of about 12 species. Somewhat *Scilla*-like & in the *Liliaceae*, a corm, about 10cm. high with narrow, channelled leaves & starry, white flowers. A crimson-brown scale on each segment gives these a distinct appearance & it will be well worth alpine-house cultivation (kept dry in winter), though it will be totally hardy.) . . . (20+) **C**
- 15709 : WURMBEA SP.** Lesotho, Drakensberg, NW of Sani Pass. 2900m. Seasonally flooded, shallow, gravel-filled depressions on rock-slabs. 20.3.96 (Of similar habit & may be the same as the preceding or may be *W. burttii* or *W. pusilla*.) . . . (20+) **C**
- 3.988.000 : XYSMALOBIMUM STOCKENSTROMENSE** KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (A weird, 60cm. high herbaceous perennial in the *Asclepiadaceae*, which produces a such a diversity of fascinating species in S Africa. From open grassland in E Transvaal down into E Cape, up to 2400m. in the Drakensberg, with large, wavy-edged, dull-green foliage & rounded heads of complex cream & red flowers. Illustrated in Hilliard & Burtt Plate 24 (page 175).) . . . (15+) **B**
- 15620 : ZALUZIANSKYA SP.** E Cape, Drakensberg, Naudesnek. 2450m. Shallow pockets of gravelly soil on exposed col. 17.3.96 A tiny, pulvinate species with small, hard, pads of rosettes & almost stemless flowers. We saw none of this small, mainly S African, genus in *Scrophulariaceae* in full flower. Though flowers can be yellow it is to be expected that these colls. will have long-tubed, white flowers, bright red in bud & on the reverse of the petals. These three 3 are all suitable for the alpine-house.) . . . (20+) **E**
- 15665 : ZALUZIANSKYA SP.** E Cape, Drakensberg, SW of Rhodes. 1700m. Among rocks in open site. 18.3.96 (Tight clumps of ground-hugging rosettes. Erect, 5-8cm. stems, apparently with large, white, red-backed flowers.) . . . (20+) **D**
- 15758 : ZALUZIANSKYA SP.** KwaZulu-Natal, N of Himeville to Mkhomazi. c.1500m. Gravelly soil & crevices on rock outcrops. 22.3.96 (A caespitose perennial with a few large rosettes of stiff foliage. Flower stems to about 10cm.) . . . (20+) **C**

While we have no collections of our own from this important area - nor do we plan to make any - we can grow many E Asian species well in our cool, wet Welsh summers & hope to make more available from cultivated seeds in future, as we expand the facilities we have for this purpose. The past decade or so has seen a lot of material entering cultivation in Europe & North America from this area. In China, most collections have been

made by visitors packaged by Kunming. The present situation there could alter & we are anxious to see material preserved. While we have many KGB, ACE & other collections growing now, we are always interested in obtaining correctly named seed, (particularly of the larger herbaceous plants, *Arisaema*, *Codonopsis*, etc.) from any of the recent collections while the original parents with field-numbers or data are still in existence.

- 4.005.510 : ACONITUM HEMSLEYANUM** * No data. A very fine, climbing aconite, with herbaceous stems twining to 3m. or more. Densely clad in deeply cut, rich-green foliage & massed with violet-blue, helmet-shaped flowers in autumn. Splendid in a draughty, NE-facing corner here & much more impressive than the climber we have previously grown as *A. volubile*. (20+) **B**
- 4.060.210 : AQUILEGIA BUERGERIANA subsp. OXYSEPALA** * No data. A NE Asian plant, spread from E Siberia, N China & Korea down into Japan. Purple sepals surround the creamy petals with incurved spurs. About 50cm. high. (15+) **B**
- 4.061.100 : AQUILEGIA PUBIFLORA** India, Garhwal Himal, SW of Josimath. 3500m. Alpine meadow. (Material we have had previously from this area has had flowers rather like those of the more western *A. nivalis* - bicoloured with paler violet sepals surrounding the purple-black, short-spurred petals - on taller, more robust plants of 30-50cm. but it can vary.) (15+) **C**
- 4.080.500 : ARISAEMA AMURENSE** * No data. Appears to be the genuine species, an extremely hardy NE Asian plant, originally grown from seed received from the former USSR by Christoph Ruby. Impressively large, deeply veined foliage with broad leaflets of irregular size. Green spathes, striped with a paler shade, with elongated deflexed tips. Red autumnal fruits. (10+) **C**
- 4.081.500 : ARISAEMA CONSANGUINEUM** * China, Yunnan, Dali, Cang Shan. 3050m. Ex E. Needham 2459. (From a high altitude wild coll. of this elegant, widespread species, distributed from the Himalaya into SW China.) (8) **C**
- 4.081.510 : ARISAEMA CONSANGUINEUM** * No data. About 1m. tall with elegant, cut leaves & hooded green spathes, followed by nodding heads of scarlet fruits. Quite easily grown in good, rich soil & comparatively hardy in most forms. (10+) **B**
- 4.082.210 : ARISAEMA EXAPPENDICULATUM - Green Form.** * Nepal, Sheopuri ridge. Ex an E. Needham coll. (Endemic to the forests of central & E Nepal between 2000m. & 3000m. Comparatively recently discovered & described in 1965. About 60cm. high with large divided leaves on chocolate-striped petioles. Somewhat more open spathes than the typical brown form.) (5) **D**
- 4.099.010 : ARISAEMA TORTUOSUM** * No data. One of the tallest in the genus, up to 1m. high or more. Stout, purple-mottled stems with 2 or 3, large, pedate leaves carry green spathes above the foliage. From these an extraordinary, tapering, green or purple, S-shaped spadix-appendage snakes outwards then upwards. Distributed through the Himalayan woodlands from the Punjab E into SW China at altitudes between 1400m & 2800m., this seems to be a fairly reliably hardy species in the UK (10+) **C**
- 4.099.901 : ARISAEMA YAMATENSE var. SUGIMOTOI** Japan, Honshu, Shizuoka Pref., Tenryu River Gorge. D. Elick coll., November, 1996. (From selected forms with very prominent silver splashes on the 7-11 leaflets of the pedate leaves. A very local species, confined to the Tokaido district of Honshu, with long-acuminate, green spathes, yellowish inside.) (8) **F**
- 4.170.010 : CARDIOCRINUM GIGANTEUM** * No data. The giant Himalayan woodlander with immense, white trumpet-lilies on stems 2-3m. high. Must have sheltered half-shade in cool, moist, very rich humus - "a most gluttonous feeder." (20+) **B**
- 4.170.110 : CARDIOCRINUM GIGANTEUM var. YUNNANENSE** * No data. The race from central & W China. Dwarfier, usually about 2m., with horizontally held flowers & bronze tints on the large cordate leaves when they unfold in spring. (20+) **B**
- 4.192.500 : CIRSIUM PURPURATUM** Japan, Honshu, Fujisan, SW slope on lava-slides. 2600m. D. Elick coll. November, 1996 (Don writes : "This is an immense alpine thing restricted to Mt. Fuji & some neighbouring volcanic slopes...easily reaches a yard by a yard or taller in size...it cannot be moved - ever - and is best put where it is to grow as soon as the seedlings have made 3-4 leaves...the flowers are virtually everlasting...I think it has a great future..." Wide clumps of huge, slashed, bright-green leaves & branched, 1m., cobwebby stems carrying big, nodding thistle-heads of bright crimson-purple flowers, emerging from purple-tinted involucre. Coarse but very classy indeed & of certain impact in bold but naturalistic perennial-plantings.) (10+) **C**
- 4.220.705 : CODONOPSIS CONVULVACEA** * No data. A twining perennial, up to 2m. high, retiring to a tuber when dormant in winter, when it can be stored cold & dry if pot-grown. Perfectly temperature-hardy but can resent winter wetness & new growth is liable to slug-damage. Rather leathery, entire leaves & wideopen *Campanula*-flowers in clear, rich, blue. (30+) **B**
- 4.221.905 : CODONOPSIS OVATA** * No data. A dainty perennial, 20-30 cm. tall, from the W Himalaya, up to 4200m. in Pakistan & Kashmir. Long, elegant, flaring, soft-blue bells, veined with purple-blue, rise from decumbent stems clad in small, downy leaves. A choicer plant than *C. clematidea*, with often masquerades as this in gardens, needing a well-drained situation. (20+) **C**
- 4.222.805 : CODONOPSIS VINCIFLORA** * No data. A less vigorous ally of *C. convolvulacea*, (like it, from the E Himalaya & SW China and needing similar conditions), with smaller, thinner-textured, toothed leaves & saucer-shaped, lilac-blue flowers. Twines delicately to no more than 1m. in height. Seedlings are best left to tangle the first season : sort out the dormant tubers. (20+) **B**

- 4.250.610 : DAPHNE GIRALDII** * No data. A beautiful, temperamental, deciduous shrub, about 60cm. high, from W China, in Shaanxi & Gansu, with terminal clusters of fragrant, rich yellow flowers in late spring. Seed from Dinah Batterham (Dorset, UK), who gardens on a limy clay but it also thrives in Dorset on acid sand. When we were in Dorset we could not grow it well! (5) C
- 4.251.010 : DAPHNE TANGUTICA** * No data. A fine, evergreen shrub also from W China, about 1m. high, with clusters of fragrant flowers, rose-purple outside & lilac-tinged white inside. Close to *D. retusa* but the two are distinct enough in gardens. (5) B
- 4.271.510 : DELPHINIUM TATSIENENSE** * No data. Recorded up to 4000m. in S Sichuan & a delight in a raised bed, scree or other well-drained, sunny site with flights of azure-blue butterfly-flowers on widely branching, 30cm stems in summer. (20+) B
- 4.300.000 : ENKIANTHUS CAMPANULATUS** * No data. A magnificent 2-3m., Japanese shrub from the mountains of Hokkaido & Honshu. Racemes of red-veined, cream bells. Scarlet & gold autumn colour. Rich, moist, acid soil. (30+) A
- 4.418.810 : GENTIANA FARRERI** * No data but the parents of this seed are as near traceable as any to the material brought back in 1914 by Farrer & Purdom from the Gansu-Tibet border-ranges, where it "burns in the alpine turf like an electric jewel, an incandescent turquoise." Maintained at Edrom in SE Scotland by the Misses Logan-Home (who received their original stock from the great man himself), then Alex Duguid & now Jim Jermyn. From late summer into winter, its mats of "flopping, slender shoots... clad in very narrow foliage" produce upturned trumpets "of an indescribably fierce luminous Cambridge blue with a clear white throat." Not difficult for those, like us, who garden on acid soil in climates with cool moist summers. (20+) C
- 4.432.010 : GERANIUM SINENSE** * No data. A late-flowering, 60cm., woodland-plant of SW China, in Yunnan & Sichuan, long grown in gardens as the allied *G. delavayi* &, as such, extolled as a "connoisseur's plant" by such writers as A.T. Johnson & Will Ingwersen. Successions of many, small, inverted flowers with reflexed petals in ruby-black around a coral-pink base (10+) A
- 4.432.500 : GERANIUM WALLICHIANUM** * India, Garhwal Himal. Ex an Udai Pradhan coll. A very vigorous, wide-spreading form of this variable species. Bright pink flowers with distinct white centres produced from midsummer until the first severe frosts on prostrate, trailing stems 60cm. or more long from a stout, compact rootstock with no basal leaves. New & excellent. (10+) B
- 4.432.550 : GERANIUM WALLICHIANUM 'BUXTONS VARIETY'** * No data. Called after E.C. Buxton, who gardened in N Wales, this comes so evenly from seed that it may be a geographical race. More compact than the preceding, the long succession of soft lavender-blue flowers with large white centres is unrivalled. "A pearl beyond price" wrote G.S. Thomas (10+) A
- 4.445.550 : HEDYCHIUM DENSIFLORUM** * India, Assam, Phutang-Balipara Frontier track. 2000m. Ex a 1938, F. Kingdon-Ward coll. (KW 13785). (A ginger lily, which is hardy in most of the UK, if planted out in rich soil in a warm, sheltered, part-shaded site. Of exotic aspect with lush foliage on stout, 1.5m. stems & small, dense spikes of deep-orange flowers in late summer.) . . . (10+) D
- 4.461.010 : HOSTA MONTANA** * No data. A handsome species from N Honshu & Hokkaido in Japan. with large, lustrous, cordate, green leaves & fine pale purple flowers on stems of 60cm. or more. Foliage appears earlier than any other here. (20+) B
- 4.461.560 : HOSTA SIEBOLDIANA** * No data. The classic, big, blue-leaved hosta from Honshu in Japan. Slowly forms great clumps of cordate leaves, deeply veined & wrinkled, in a characteristic blue-grey. Palest lavender flowers on 60cm. stems. (20+) B
- 4.470.805 : HYDRANGEA PANICULATA** * No data. A fine 3m. high, deciduous shrub from Japan & SE China. Pyramidal panicles of creamy-white fertile flowers interspersed with showy sterile ones. Seed from the late-flowering cv. 'Tardiva' (50+) A
- 4.471.210 : HYDRANGEA SERRATA** * No data. A small, twiggy bush from Japan & S Korea. About 1m. high, with thin-textured, pale-green leaves & flat, lacecap corymbs of pink or pale-blue flowers. Seed from the cvs. 'Diadem' & 'Miranda'. (50+) A
- 4.476.200 : HYPERICUM REPTANS** * No data. Prostrate thready stems with large, rich-yellow flowers from scarlet buds in late summer. One of the best mat-formers, reputedly from over 3000m. in the Himalaya but vulnerable in a severe winter. . . . (20+) A
- 4.481.905 : IRIS MILESHII** * No data. An 1m. tall 'Evansia' (Sect. *Lophiris*) from N India, in the W Himalayan region, up to 2700m. Fans of pale-green foliage & branched stems of yellow-crested flowers in lilac-pink mottled with purple, from spreading, green rhizomes. "Beautiful but rarely seen" writes Martyn Rix. Hardy & trouble-free in an open, well-drained site. (10+) B
- 4.482.800 : IRIS SETOSA** * Japan. No further data. Ex an AGS expedition to Japan coll. (A very hardy, wet-growing species widely distributed from NE Asia across N America. Beautifully veined, blue-purple flowers with broad, rounded falls. 50cm.) . . . (20+) A
- 4.516.000 : LILIUM AURATUM** (var. *auratum*) Japan, Honshu, Shizuoka Pref., Tochu River gorge. D. Elick coll., November, 1996. (The "Queen of Lilies", a spectacular Honshu endemic, with huge, heavily scented, horizontally held flowers in waxy white, banded with gold & spotted with crimson, on stems of 1m. or more in late summer. A species of hill-slopes at quite low altitudes & likely to thrive best in good, loose, sandy loam in a warm, sunny site in the UK - definitely not in a cool, wet, peaty place.) (10+) D
- 4.518.110 : LILIUM FORMOSANUM** var. *PRICEI* * Taiwan. 2600m. (A dwarf, alpine ecotype of this species with big, scented, white trumpets, purple-tinted outside. All cultivated stock appears to be derived from seed collected by W. Price in 1912 near "Arisan" on "Mount Morrison". Recorded as not exceeding 45cm. in the wild, it has remained dwarf (or dwarfer by selection) in gardens. Comparatively hardy in the UK, it can be flowered quickly from seed, if sown in gentle warmth in winter.) (20+) B

- 4.520.010 : LILIUM MACKLINIAE** * India, Manipur, Sirhoi near Ukhrul. 2300-2450m. (All cultivated stock is from colls. made here by Frank Kingdon-Ward in 1946 & 1948. Approaching *Nomocharis*, with nodding, white, bowl-shaped flowers, flushed with rose-pink outside, on stems of about 50cm. Perfectly hardy with us - enjoys an acid soil & cool, moist summers.) (20+) **C**
- 4.520.400 : LILIUM NANUM** India, Garhwal Himal, above Fula Narayan. 3000m. Meadow. D. Roberts coll. 29.8.95 (A dwarf, 30cm. high species, which has been included in *Nomocharis*. Usually with lilac to purplish, drooping, bell-shaped flowers but sometimes yellowish. Collected in fruit, these may be the allied pale lemon-yellow *L. oxypetalum* which also grows in this area.) (15+) **D**
- 4.522.220 : LILIUM SPECIOSUM var. CLIVORUM** * Japan, S Shikoku, Agawa river gorge. Damp shady cliffs. Ex a D. Elick coll. (From Don's 1988 type-locality coll. of this very local race, described in 1956. Hanging out of the cliffs "like a giant *Tricyrtis*...stems 6ft. or longer with up to 20 smaller, light-pink flowers on very long pedicels." A truly sumptuous plant, growing successfully here in rich, peaty soil, both under glass & outside, with gloriously scented, crimson-speckled flowers in late summer.) (10+) **D**
- 4.572.800 : MERTENSIA SIMPLICISSIMA** (*M. asiatica*) * No data. More easily grown, NE Asian version of *M. maritima*. Like it, a plant of sea-shore shingles. Prostrate with the most beautiful, fleshy, grey-blue foliage & sky-blue flowers. (10+) **B**
- 4.579.810 : PAEONIA DELAVAYI** * No data. This is from the 1-2m. high, Chinese shrub with drooping, mahogany crimson cups, currently considered by some botanists to include *P. lutea* & *P. potaninii*, as a variable intergrading species. Distinct enough horticulturally, if pure, though seed from gardens where *P. lutea* is grown can produce flowers in orange to copper tones. (5) **B**
- 4.581.000 : PAEONIA OBOVATA** Russia, Sakhalin. (We assume this wild collection will be from the pale-rose race, which we have never seen in cultivation & which is the only one we can find recorded from this island immediately N from Japan, & not from the white-flowered race, sometimes segregated as *P. japonica*. These are also supposed to differ in their stigmas & follicles. All this group, about 50cm. high, have beautiful, lobed foliage. An unique opportunity to acquire seed from an obscure locality.) (6) **E**
- 4.581.500 : PAEONIA SUFFRUTICOSA subsp. ROCKII** (*P. rockii*, *P. s.* 'Rocks Variety') No (intelligible) data. 1996, wild-collected seed of this mythical tree-peony. Introduced to western gardens by Joseph Rock with seed collected in 1925 from plants cultivated at the Choni lamasery in Gansu at 2600m., where it had first been seen by Farrer. Since recorded wild in several remote areas of Gansu, Shaanxi & Hubei. A account of this group, beautifully illustrated with photographs & paintings, is in 'The New Plantsman' (Vol. 1, Part 4, Dec. 1994). There appears to be some variation between wild colonies but the huge flowers, "refulgent as pure snow and fragrant as heavenly roses" are always, as described by Farrer, "with a heart of gold, each stainless petal flamed at the base with a clean and definite feathered blotch of maroon." The holy grail to many plantsmen - we hope your search is over. (5) **F**
- 4.581.600 : PAEONIA VEITCHII var. WOODWARDII** * No data. Wide, dense clumps of shiny green, deeply cut foliage & slightly drooping, bowl-shaped flowers, usually in soft rose-pink. From up to 3000m. in SW China & excellent in the UK (8) **C**
- 4.584.010 : PARAQUILEGIA GRANDIFLORA** India, Garhwal Himal, SW of Josimath. (A W Himalayan coll. of this challenging, classic cliff-plant, distributed in a variety of races from Afghanistan to China. An exquisitely cut filigree of grey-green leaves topped by diaphanous, gold-stamened flowers, likely to be in lavender-blue, though many western forms are white.) (15+) **E**
- 4.699.600 : RHEUM PALMATUM** - from red-leaved clone * One of the most imposing of herbaceous perennials but it needs space for its very large, deeply cut leaves, which in the parent are crimson, flushed with scarlet, as they emerge in spring, remaining crimson-tinted below well into summer, when a panicle of brilliant cerise flowers soars to about 3m. high. This is from 'Red Herald', selected, when we were at Buckshaw Gardens, as the best out of hundreds of seedlings from the variable plants circulated as 'Atrosanguineum', 'Bowles' Variety', etc. Sow the seed promptly, select the best but please don't call them 'Red Herald' (20+) **B**
- 4.699.601 : RHEUM PALMATUM** - from green-leaved clone * From our other selected clone 'Green Knight', raised from a plant we had as *R.p.* var. *tanguticum*. Green-leaved but, if anything, larger & more spectacular in its soaring stems of vivid cerise-red flowers. The very fine, jaggedly cut foliage tends to remain in better condition in recent hot summers &, on the whole, we prefer it in W Wales. Anyway, the two will probably have crossed. These "germinated in 5 days" according to a NZ customer! (20+) **B**
- 4.830.505 : ROSCOEA CAUTLEIODES** * An arresting, SW Chinese relative of the gingers with hooded, orchid-like, cool-yellow flowers in late summer. Slow-growing but permanent in well-drained, humus-rich or peaty soil in light shade. (20+) **A**
- 4.835.600 : RUBUS NEPALENSIS** India, Garhwal Himal, S of Kuari pass. *Rhododendron* forest. 12.9.95 (A variable, creeping, thornless shrub - it may differ from cultivated material. Purple-bristled stems & white flowers from reddish calyces.) (10+) **B**
- 4.865.010 : SELINUM TENUIFOLIUM** * No data. "The queen of umbellifers...the most beautiful of all fern-leaved plants" according to E.A. Bowles. From Himalayan meadows at up to 4000m. between Kashmir & Bhutan. Over 1m. high with slow-growing clumps of very finely cut, soft-green foliage & lacy, flat, white heads. No trouble in a good, moist soil in sun or part-shade. (15+) **B**
- 4.870.050 : SHORTIA SOLDANELLOIDES var. INTERCEDENS** Japan, Honshu, Shizuoka Pref., Tenryu River gorge near Kunma village. D. Elick coll. in late November, 1996 (A very few more seeds further to Don's 1994 coll. of this extremely local race from "dark damp serpentine cliffs" in a few river-gorges of a small area of Honshu - "at least half if not more of its sites have been drowned in hydroelectric schemes." Very much for the skilled specialist, who will need a lens to count the tiny seeds.) (20+) **F**
- 4.870.600 : SILENE DELAVAYI** China, Yunnan, Lijiang, Yulong Shan. 3200m. Ex CLD 778. (Dark violet flowers.) (15+) **B**
- 4.878.900 : THALICTRUM UCHIYAMAI** * Korea. From a coll. by P. Cave. (New Zealand seed from Ray Freeman, who describes this exciting, new, hardy plant, as a larger version of lilac *T. delavayi*, both in flower-size & height - up to 2.5m.) (10+) **D**

- 5.030.220 : ANIGOZANTHOS FLAVIDA** * No data. From red-flowered selections of this variable W Australian species, received years ago from Terry Hatch in NZ. Stems of over 2m. carry dozens of curved, tubular flowers covered outside in scarlet-orange velvet, opening with jade-green interiors, all summer in our unheated (but virtually frost-free) lean-to greenhouse. (15+) C
- 5.065.110 : ARTHROPODIUM CIRRATUM** * No data. A robust, 1m. tall New Zealand species, also originally grown from seed sent by Terry Hatch. Evergreen, Yucca-like clumps & panicles of white flowers. Needs frost-protection in the UK. (10+) B
- 5.125.000 : BLANDFORDIA PUNICEA** (*B. marginata*) Tasmania, South Bruny Island, Jetty Beach. M. Harvey coll. (Possibly the hardiest member of this small Australian genus in the *Liliaceae*. Reputedly difficult, this is no trouble in the sandy, peaty soil of our unheated greenhouse & it is worth trying outside in milder parts of the UK. Racemes of up to 25, tubular flowers, in scarlet tipped with orange-yellow, on stems of about 60cm. from tufts of narrow, leathery, dark-green leaves. Spectacular.) (30+) C
- 5.252.005 : CLEMATIS MARMORARIA** * No data. Open pollinated seed from Jim Almond, which may involve back crosses with the hybrid *C. x cartmanii*. Jim finds germination good if this is sown fresh. His seedlings have all been compact & dwarf, even if they cannot be guaranteed as 100% pure *C. marmoraria*. Recently collected seed, kept refrigerated. (10+) D
- 5.300.100 : DIANELLA TASMANICA** Tasmania, Cockle Creek. M. Harvey coll. (We have long found this *Phormium*-relative from moist woodland hardy in the UK in a sheltered, shady place. Stoloniferous clumps of tough, leathery, bright-green foliage about 1m. tall with panicles of pale-blue flowers, which later develop into the most striking, glossy, violet-blue berries.) (15+) C
- 5.305.000 : DIPLARRENA LATIFOLIA** Tasmania, Mt. La Perouse. M. Harvey coll. (This Tasmanian alpine endemic in the *Iridaceae* may have fans of narrow leaves up to 1m. high, overtopped by the flower-stems, though it can be much dwarfer. White *Moraea*-like flowers, marked with yellow & sometimes purple in early summer. Quite hardy & adaptable in the UK.) (20+) C
- 5.305.020 : DIPLARRENA MORAEA** * No data. More widely distributed in SE Australia, generally dwarfer & with narrower foliage. White flowers, marked yellow on the inner segments, but we include seed from 'Amethyst Fairy', distributed in 1991. (20+) B
- 5.630.000 : MYOSOTIDIUM HORTENSIA** * New Zealand, Chatham Islands, Pitt Is. Beach, at tide line. Ex a T. Hatch coll. (We have the first of our own seed from plants, raised from this wild collection & overwintered in a bed against a N-facing wall. Huge, ribbed, shining leaves & a long succession of giant forget-me-not flowers in celestial blue. Seed is irregular in germination but definitely comes up at lower temperatures, in spring or autumn, so do not cook it in a 'propagator'. Hates greenhouse conditions.) (6) C
- 5.728.250 : PARAHEBE PERFOLIATA** (*Derwentia perfoliata*) * No data. A lax, 50cm. shrubby perennial, reaching high altitudes on the ranges of SE Australia. Very tolerate of drought & perfectly hardy in the UK in a well-drained site. Leathery, blue-grey perfoliate foliage, purple-tinged when young, with racemes of violet-blue *Veronica*-flowers in early summer. (20+) B
- 5.730.700 : PATERSONIA FRAGILIS** (*P. glauca*) Tasmania, Cockle Creek. M. Harvey coll. (A Tasmanian coll. of the one species in this attractive genus of the *Iridaceae*, which is near-hardy in the UK. Iris-like clumps of foliage & purple-blue flowers opening flat with 3, showy segments. About 30cm. high, this may succeed in mild parts of the UK. No trouble if protected.) (20+) C
- 5.740.050 : PHORMIUM TENAX** * No data. A New Zealand native, well-known as one of the most spectacular foliage-plants hardy in the UK. Clumps of tough, leathery, 2m. long evergreen leaves, overtopped by 3-5m. high inflorescences of bizarre, dull-crimson flowers. From a very hardy form with erect, somewhat greyish foliage, narrowly margined with maroon. (30+) A
- 5.830.100 : RICHEA DRACOPHYLLA** Tasmania, Mt. Wellington. M. Harvey coll. (This & the next belong to a small, almost wholly Tasmanian genus, in *Epacridaceae* but somewhat resembling *Cordyline* in its foliage. *R. scoparia* is the only one of proven hardiness in the UK but these two colls. are from reasonable altitudes & will be worth trying in milder areas, in full sun in a moist, lime-free soil. This is a large shrub, near *R. scoparia*, with leaves to 30cm. long & branched panicles of white flowers.) (30+) B
- 5.830.200 : RICHEA PANDANIFOLIA** Tasmania, Hartz Mts. M. Harvey coll. (The tallest of the genus, up to about 9m. high. Seed of both these is from the 1996 harvest & has been kept refrigerated. It should be sown as soon as possible.) (30+) B
- 5.875.005 : SOLLYA HETEROPHYLLA** No data. A beautiful, Australian, evergreen twiner in the *Pittosporaceae*. Wiry stems, leafy with narrow, dark-green foliage, twine to about 2m. carrying dainty sky-blue bells from summer into autumn. Borderline hardiness in the UK, where it is reputedly possible in mild areas but no trouble in an unheated or frost-free greenhouse here. (20+) B
-
- 2.990.000 : WORSLEYA RAYNERI** (*W. procera*) * We have not included South American species in this list & also temporarily discontinued our 'Backyard', featuring rare species preserved through the skill of gardeners. Here is a candidate for both missing sections: the mythical "Blue Amarylis" from crevices on sheer, granite cliffs, at about 1000m. in the Serra dos Orgaos, 120km. NE of Rio de Janeiro in S Brazil. Falcate leaves emerge from extraordinarily long-necked bulbs, over 1m. high (yes, the bulbs), curving down to the ground. Up to 8, huge, pale-blue amarylis-flowers, edged with deeper-blue. Grown successfully in parts of the USA, Australia & New Zealand, obviously it needs to be more or less frost-free. Grow it hard with plenty air & sunlight. Underpotting in fibrous, orchid-type compost & liquid-feeding are recommended. A little more New Zealand seed just harvested by Terry Hatch might give those optimistic & patient enthusiasts, who missed out last season, another chance to acquire this. (3 seeds) F

A few garden hybrids & selections : Seeds from Jim & Jenny Archibald

While we are mainly involved with seeds either from the wild plants themselves or from cultivated plants grown from wild seeds, we derive much pleasure in our own garden from cultivars which have been selected from the species or are of hybrid origin. Those listed here are too far removed from the wild plants to be included elsewhere but they should certainly yield some worthwhile children.

- 6.002.500 : AGAPANTHUS - FROM DEEP BLUE HYBRIDS** From a wide range of named, rich-blue hybrid clones, hardy in the UK, mostly near *A. campanulatus* : 'Podge Mill', 'Kingston Blue' & several L. Palmer clones. (20+) **B**
- 6.002.510 : AGAPANTHUS - FROM PALE BLUE HYBRIDS** Mainly from our outstanding pale blue, 'Blue Moon' (15+) **B**
- 6.002.520 : AGAPANTHUS - FROM WHITE HYBRIDS** From tall 'Ardernei' to dwarfier 'Snow Baby' & 'Lady Moore'. (15+) **B**
- 6.025.000 : ALLIUM X HOLLANDICUM** Seed collected by Janis Ruksans in Latvia, from such clones as 'Purple Sensation' & 'Purple Surprise'. Seedlings may vary from 50-100cm. but all should have large umbels of deep purple-violet flowers. (20+) **A**
- 6.035.000 : ANDROSACE CYLINDRICA X HIRTELLA** Much cultivated stock of the cushion-forming, saxatile *Androsace* spp. in Section *Aretia* is of hybrid origin. Characteristics are often only preserved in nature because of isolation. With their compact mounds covered in white flowers, all remain superlative alpine-house plants to challenge the skilled grower. (15+) **D**
- 6.035.100 : ANDROSACE PUBESCENS HYBRID** From a more widespread version of the above two Pyreneans. (15+) **D**
- 6.223.000 : BERGENIA - FROM RED HYBRIDS** From some of the best modern crimson flowered hybrids : German ones like 'Abendglocken' & 'Admiral' as well as some of our own, like 'Bartok'. Good, tough foliage colours well in winter. (50+) **B**
- 6.223.100 : BERGENIA - FROM WHITE HYBRIDS** From our compact white-flowered hybrids, bred from *B. stracheyi* 'Alba', such as 'Britten', 'Bach' & 'Beethoven'. Most seedlings will be apple-blossom pinks. Bronze weather-resistant winter-leaves. (50+) **B**
- 6.415.000 : DIERAMA - FROM 'SLIEVE DONARD HYBRIDS'** Genuine material of the selected clones & hybrids developed by Slieve Donard Nursery in Co. Down, N Ireland between 1923 & 1960 no longer exists. Their capacity to self-seed in Irish gardens makes it highly dubious that any cultivar name can now be authentically applied. Initially, *D. pulcherrimum* & *D. pendulum*, were involved. In previous lists we kept seed gathered from plants approximating to the first two separate but the use of specific names for such material is misleading. There is no assurance what the seedlings will be like. Some of our stock, apparently almost pure *D. pulcherrimum*, was actually raised from Slieve Donard seed in the 1960's. We also include seed purporting to originate from 'Blackbird', as well as a range of pinks nearer *D. pendulum*. All supremely elegant plants about 2m. high. (30+) **A**
- 6.500.100 : GENTIANA - FROM ASIATIC HYBRIDS** From named clones of a wide range of hybrids between the SW Chinese *G. sino-ornata* and allied species. Particularly , which set seed well here. These are surely the most superlative of autumn-flowering alpine-plants, forming wide mats of rooting, narrow-leaved, decumbent stems covered with trumpets in the richest of penetrating blues. No trouble in cool climates in lime-free, humus-rich soils, kept moist in summer ; worth every effort elsewhere. (20+) **C**
- 6.501.500 : GERANIUM SANGUINEUM - FROM 'INSHRIACH SEEDLINGS'** From the two outstanding, compact, magenta-pink clones, 'Shepherd's Warning' & 'Jubilee Pink', (the only variant of this species to receive an FCC), selected by Jack Drake & John Lawson at Inshriach in the 1960's, out of a batch of seedlings from *G. sanguineum* var. *striatum* (*G.s.* var. *lancastrense*). Jack Drake tells us these can produce seedlings very similar to the parents, as well as reduced, even more compact variants. (10) **C**
- 6.747.850 : PAEONIA SUFFRUTICOSA 'CHINESE HYBRIDS'** Cultivated tree-peony seed from China collected from a wide range of named hybrid clones : mainly doubles, in purple, pink, white & green. What might result from seed is unpredictable. (6) **C**
- 6.898.500 : SEMIAQUILEGIA ECALCARATA 'FLORE PLENO'** An odd form of this summer-flowering Chinese Columbine, which reputedly comes 'true' from seed. Spurless, double, pale maroon-purple flowers on 30cm., branching stems. (20+) **A**
-

Thanks for your help and support in 1996. Our best wishes to all of you for 1997.

We aim to offer you seeds collected or grown by ourselves but a vast amount of help from friends in Britain and abroad is always much in evidence in our lists. It is not possible to name sources in all cases. We are grateful to : John Andrews & Mike Broder, Jim & Georgie Robinett (all California, USA), Jim Almond (Shropshire, UK), Dinah Batterham (Dorset, UK), Galen Burrell (Washington, USA), Peter Chappell (Hants., UK), Alan Edwards (Surrey, UK), Don Elick (Japan), Terry Hatch (NZ), Marcus Harvey (Tasmania), Dave Hoskins (Hants., UK), Richard Hancock (Hereford, UK), Tim Ingram (Kent,

UK), Melvyn Jope (Surrey, UK), Panayoti Kelaidis (Colorado, USA), Nick Macer (Glos., UK), Will McLewin (Cheshire, UK), Jimmy Persson & Henrik Zetterlund (Sweden), Richard Riedy (Arizona, USA), Christoph Ruby (Germany), Janis Ruksans (Latvia), Rachel & Rod Saunders (South Africa), Norman Stevens (Cambridge, UK), Geoff Taylor (Dyfed, UK), Lyn & Len Toms (Dyfed, UK), Mike Tucker (Somerset, UK), John Weagle (Nova Scotia, Canada). Our apologies to anyone omitted. Sincere thanks to all and to all our customers for continuing to support our work.

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