

## A Gateway to Paradise

It is over twelve years since we moved to west Wales. That is quite long enough to make a garden, if you have nothing else to do. Most of us do have other things to do. In our case, we have been travelling for a significant period during those years and when we are at home we spend much of our time in the office. When we are involved with plants, it is most often a very practical association. We have concentrated on establishing stocks from wild seeds, collected both by ourselves and others. Providing suitable facilities for these plants and looking after them takes much of our time. At present, we spend over an hour every day hand-pollinating the bulbs in flower. One hour may not seem much but it adds up to about one normal working-day each week. Progress with what we could call self-indulgent gardening has been slow. It tends to come in frenetic spasms.

### a broken, rotting, wooden gate

The first year we were here, fired by the enthusiasm that novelty inspires, we started to clear brambles along the long-neglected hedge which separates our field from our woodland. As we hacked away, we uncovered a broken, rotting, wooden gate, which had once secured a gap in the hedge. Cutting and sawing, we pushed the

immense ball of scrub and brambles before us until it collapsed down the steep bank between the hedge and the stream to become the first of many bonfires. We were into the wood. That day we cleared and cut a simple path above the southern bank of the stream as far as the big beech tree. To the north beyond the stream was what might become a new world.

### beautifying the bog

It was a world we were not to enter for several years. Wet woodland may seem an attractive place to make a garden but there are degrees of wetness. Our woodland was very, very wet. Below the dominating tall alders, it was a wilderness of willows, which had fallen and rooted along their trunks ; of seedling ashes and sycamores, keeled over and dying in the waterlogged soil ; of lush, surface-rooting brambles and nettles. Water seeping into the valley-bottom ran over the surface for most of the year. It was not possible to walk on it without sinking to unknown depths. Progress through it involved jumping between fallen tree-trunks. It was a perilous place. A long, iron rod we used to measure the squelching depth could be thrust in up to 3m. before it touched the boulder-clay. The bog lies in a great depression carved out by a river of melt-water flowing from the last retreating glacier to occupy our valley. Up until this year we

called it 'the bog'. Our Welsh, farming neighbour, when we first moved to the area, referred to our activities there as 'beautifying the bog' and no doubt thought of them as a futile eccentricity, though he had the good manners never to say so.

At first we thought we could grow little more than kingcups, royal ferns and *Lysichiton* there but as time went on, we came to know 'the bog' better. Now the willows and weeds have gone ; trees have been thinned to let more sunlight in ; deep ditches have been dug by hand, some going right down to the boulder clay ; the spoil has been mounded up between ; paths have been made and surfaced. We may be only about half-way through the creation of this new ecosystem but last year we started to plant and to see the realization of our vision. Perhaps we shall never fully realize what might be achieved but we can always dream.

### sellers of dreams

We dream of a jungle of mature *Rhododendron*, *Enkianthus*, *Eucryphia*, *Clethra*, and *Hydrangea villosa* with an undergrowth of *Primula*, *Meconopsis*, *Lilium*, *Trillium* and *Arisaema*. We are sellers of dreams. We sell dreams to ourselves and hope to pay for their reality by work and knowledge. We sell dreams to you. What are seeds but dreams in packets ?

# Ordering from this list could not be easier

We shall accept your personal cheque in US \$ or £ sterling 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 usually sell you a US \$ cheque drawn on one of their US branches). Please do not now send Eurocheques, which are no longer acceptable to UK banks. While we price in DM & FF, we must ask customers not to send cheques in these currencies and especially not to use cheques on 'La Poste'. A Giro payment in sterling is used by many customers : you can price in DM or FF and have the current equivalent sent to us in £ sterling. 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 US \$ or £ 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 a great help both to you and to us, if you send us an open cheque, limited to the total value of your order. It cannot be made out for more than the limit but it can certainly be made out for less : you will only pay for what we have sent after the order is despatched. If you do not wish to do this, a list of some possible substitutes will be very helpful : we shall not use them unless we have to and, if we do, we always try to send more than the value of the items not supplied. We shall not pay in your cheque until after your order has been sent.

**PLEASE HELP US BY PRINTING YOUR NAME & ADDRESS CLEARLY.**

**THERE IS NO CHARGE FOR POSTAGE, BY AIRMAIL IF ABROAD, ON SEEDS OR LISTS.**

## New customers please understand

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

## Our population reference numbers . . . . .

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

Identified species from Europe, W Asia & N Africa have six-digit numbers here, though they have an 0. before them on our records and you will see this on a label. The seven-digit numbers start with a 1. for North America, 2. for South America, 3. for Southern Africa (S of the Sahara), 4. for Eastern Asia and 5. for Australasia. Garden hybrids and selections start with 6.

Cultivated seed, which has become increasingly evident in our lists, as we build up stocks raised from seed of wild origin, is marked with an asterisk (\*). The field-data given in these cases refers to the parents. Almost all cultivated seed was collected in 2000. Most is hand-pollinated but as parent-stocks represent samples of wild populations, seedlings will show the variation present in the wild. We attempt to preserve the genetic diversity of the wild plants not to impose our concepts on them.

**welcome to our first 2001 list :**

**wild collections from Greece, Russia, Iran, Kyrgyzstan, Georgia, Western USA, South Africa, New Zealand and China**

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

A : \$2.00 ; £1.50 ; DM4,- ; FF14.- C : \$4.00 ; £2.50 ; DM7,- ; FF23.- E : \$7.00 ; £4.50 ; DM12,- ; FF41.-  
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# Species from Europe, W Asia & N Africa : Seeds from Jim & Jenny Archibald

- 113.309 : ACONITUM ORIENTALE** Kyrgyzstan, Kyrgyz Alatau, Ala Archa, S of Bishkek. 2290m. A. Dickerson 00-03 (A moist-grower, distributed NE from Turkey & the Caucasus. Dense 1.5m. racemes, usually in smoky lilac or pinkish shades.) (15+) C
- 113.611 : ACONITUM SEPTENTRIONALE from WHITE FORM** (*A. vulparia* group) \* No data. From the creamy white clone, grown as 'Ivory', of this subarctic species, distributed from Norway into Russia. Earliest of all monkshoods, starting to flower here towards the end of May, with stiff upright stems, less than 1m. high, densely set with deflexed, narrow helmets, rising above the neat clumps of darkest green, coarsely cut leaves. Seedlings may produce the normal, deep violet form as well as whites. . . (20+) B
- 130.110 : ALLIUM AKAKA** \* No data. From a particularly good, deep pink form grown by Alan Edwards. One of the dwarfers & most western members of Sect. *Acanthoprason*, distributed from E Turkey & NW Iran, N into Armenia & Azerbaijan, frequently on loose shale or scree slopes. One or two, broad, glaucous leaves & short, stout stems with splayed shaving-brush umbels of many, campanulate flowers. Always attractive but often a pale or grubby shade of mauve. Bulb-frame or pot in the UK. . . . (10+) D
- 132.810 : ALLIUM INSUBRICUM** \* No data. This is "*A. narcissiflorum* of gardens". Both species are closely related and equally local in the wild : *A. narcissiflorum* with sugar-pink, erect flowers in the French Alps ; *A. insubricum* from above Lake Como in N Italy with drooping bells in a lovely soft, dim wine-purple. Choice, slow-growing but not difficult in limestone scree. (10) C
- 134.100 : ALLIUM NARCISSIFLORUM** \* France, Hautes-Alpes, Pic de Gleize. 2000m. Unstable, limestone screes along S-facing side of summit-ridge. (In gardens, this name is still frequently applied to *A. insubricum*, its close, equally local relative from N Italy. From "high up in the most awesome shelves of the limestone Alps of Piedmont," this is "the glory of its race" according to Farrer. Close clumps of foliage & 15cm. stems carrying umbels of erect (not drooping as in *A. insubricum*) sugar-pink flowers.) (8) D
- 134.200 : ALLIUM NEVSKIANUM** \* Tadjikistan, Varsob Gorge, near Chinoro. Ex RM 82-72 (In Sect. *Acanthoprason* (like *A. akaka* & *A. karataviense*) with umbels of rich, dusky, pinkish-red flowers. Satisfactory outside with some UK growers.) (10) E
- 134.410 : ALLIUM OBLIQUUM** \* Russia, Siberia, Sajan range. (A fine, ball-headed species distributed through Central Asia into S Siberia. One of the last of the taller species to flower, up to 1m. high with dense, almost spherical, umbels of many, cup-shaped, pale-yellow flowers with projecting yellow stamens. A delicate contrast to the purple usual in this group.) . . . . . (20+) C
- 137.010 : ALLIUM SENESCENS** \* No data. An excellent, hardy garden-plant, spread in the wild from SW Europe E into Siberia. Close clumps with flat foliage send up hemispherical umbels of lilac flowers on stems of about 30cm. . . . . (20+) A
- 146.010 : AMSONIA ORIENTALIS** (*Rhazya orientalis*) \* No data. "Near extinction" in the wild : only recorded from a few lakesides in Bursa & Balikesir provinces in NW Turkey & from winter-wet marshes on the coast of Thrace in Greece. A long-lived perennial, easily grown in a well-drained, sunny site in the UK. 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 over a long period in summer. . . . . (10) C
- 171.560 : AQUILEGIA ATROVINOSA** Kyrgyzstan, Kyrgyz Alatau, Ala Archa, S of Bishkek. 2335m. A. Dickerson 00-01 (We have never seen this dark-flowered Central Asian species grown in cultivation.) . . . . . (15+) D
- 171.910 : AQUILEGIA BERTOLONII** \* No data. The 15cm. high, rich violet-blue columbine from the Alpes-Maritimes of France & adjacent N Italy. Not common in the wild but not difficult in the rock-garden or trough in cultivation in the UK . . . (20+) B
- 172.409 : AQUILEGIA DISCOLOR** \* Spain, Picos de Europa. Ex a V. Horton coll. (An exquisite endemic of this limestone-range. One or two, bicoloured flowers on unbranched 10cm. stems., blue sepals surrounding the spurred white petals.) . . . (20+) B
- 194.752 : ARUM ALPINUM** \* Greece. Ex Christian, Elliott & Hoog 806. (Hardy European species with green spathes.) . (10) B
- 194.780 : ARUM APULUM** \* No data. A relative of *A. nigrum*, endemic to the hills of Puglia at 300-400m. near the southern heel of Italy. "Attractive but little-known" writes Peter Boyce. Erect green spathes with purple interiors. . . . . (8) D
- 195.074 : ARUM CONCINNATUM** (*A. nickelii*) \* Greece, Crete, above Agios Nikolaos. Ex a P. Boyce coll. (A robust species with foliage, in this form splashed with white, as much as 1m. high in a well-grown plant. Huge, yellowish spathes, often just rimmed with a purple tint, almost 30cm. long. Needs a warm, sheltered site to thrive outside in the UK.) . . . . . (8) D
- 195.111 : ARUM CRETICUM** \* Greece, Karpathos. (Perhaps the most beautiful in the genus. Native to Crete & some adjacent islands, touching its toes on the Turkish mainland on the Marmaris peninsula, this is a plant of stony, scrub-covered, limestone slopes. Clumps of bright-green, hastate leaves overtopped by the 30cm high stalks carrying large, sweet-scented, wholly yellow spathes, reflexing, twisting & elegantly pointed, surrounding the curved, compressed spadix. From the outstanding coll. made by Mark Ogilvie-Grant on the island of Karpathos in the 1950's ("particularly reliable" writes Peter Boyce) : the FCC form.) . . . (8) E
- 195.130 : ARUM CYRENAICUM** \* Libya, Cyrenaica. Ex a M. Koenen coll. (Glossy, rich-green, sagittate leaves & large spathes, pale-green outside & purplish rose inside with deep purple spadices. A plant of the scrub along the 'green belt' in NE Libya. Perhaps safest protected from frosts but never damaged here & grows well with minimal protection, planted out under polythene.) . . . (8) C
- 195.140 : ARUM CYRENAICUM** \* Greece, Crete. Ex a D. Drummond coll. (Only recently recognized as growing outside Libya & of very limited distribution on Crete. Differs a little (but not substantially) from the North African plants.) . . . . . (8) C

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- 195.159 : ARUM DIOSCORIDIS** (var. *dioscoridis*) Greece, Simi, NW of Emporios. 110m. Terra rossa on limestone. M. Denney 612 & 613. (Peter Boyce mentions *A.d.* var. *cypricum*, a plant of Cyprus & Syria, occurring on Rhodes & Simi, along with *A.d.* var. *dioscoridis*. *A.d.* var. *cypricum* has a blackish spadix and pale-green spathes stained purple only in the basal part.) . . . . (10) C
- 195.310 : ARUM DIOSCORIDIS** var. **SYRIACUM** \* No data. Seldom-seen race from the Amanus range (Nur Daglari) in S central Turkey & adjacent NW Syria. Pale-green spathes with small, scattered purple blotches surround purple spadices. . . . . (8) D
- 195.510 : ARUM ELONGATUM** (ssp. *elongatum*) \* No data but definitely authentic material from the plant used for the illustration in the Peter Boyce monograph, 'The Genus Arum', where the author comments that "virtually none of the material offered ...is correctly identified". "An attractive species", distributed around the Black Sea & hardy in the UK. Related to *A. orientale* with an elegant, elongated pale-green spathe, stained with purple inside around a maroon spadix . . . . . (8) D
- 195.809 : ARUM IDAEUM** Greece, Crete, Omalos plateau. M. Jope 2024. (Long confused with *A. creticum* & thought to be a montane form of it, this is a very distinct high altitude species endemic to the mountain-ranges of central Crete at altitudes up to 1,750m., often growing along the melting snow-line. Although likely to be intolerant of year-round wet conditions this is a very hardy plant, seldom happy grown under glass. Deep green, sagittate leaves & 20cm, purple-stained stems carrying white, hooded spathes surrounding a contrasting, deep purple spadix : altogether most striking in flower & little-known in cultivation.) (5) E
- 196.010 : ARUM ITALICUM** subsp. **ALBISPATHUM** \* No data. A handsome eastern race, which has been included under *A. orientale*, distributed round the NE corner of the Black Sea, from the Crimea through Georgia into NE Turkey. Unmarked dark-green, hastate leaves and particularly large, translucent white spathes with pale yellow spadices. . . . . (8) C
- 196.610 : ARUM ORIENTALE** (subsp. *orientale*) \* No data. Mike Tucker's fine form of the genuine species with extremely large, erect, boat-shaped, dark purple-brown spathes with dull purple spadices and deep-green, floppy leaves. The species as a whole, widely distributed in E Europe & around the N of the Black Sea, is accordingly variable. It is seldom seen in cultivation in any form though most are excellent garden-plants in the UK, being native to similar habitats to *A. maculatum* in cold climates. . . (8) E
- 196.860 : ARUM PALAESTINUM** \* No data. A magnificent species from Syria, Lebanon & Israel but unsuited to the cold, wet climate outdoors in most of the UK. No trouble here with unheated protection, forming large clumps of rich-green, sagittate leaves with huge, 50cm. high spathes, solid, velvety darkest maroon-purple inside & reflexing back around the erect, stout, black-purple spadices. Sweet-scented & more or less like a large, maroon-black version of *A. creticum*. . . . . (5) E
- 200.020 : ASARUM EUROPÆUM** \* No data. A woodlander with running underground stems sending up rounded leaves with strange flowers at ground-level, not so large as some N American or E Asian species but still intriguing. . . . . (15+) B
- 245.050 : BUPLEURUM BENOISTII** \* Morocco. Collected by the Gothenburg expedition to the Atlas Mts. A small clump-forming perennial with narrow, glaucous, evergreen leaves and stems, about 30cm. high, with sprays of little, *Astrantia*-like, yellow umbels, which deepen to orange shades as they age. Intriguing and hardy with Tim Ingram (Kent, UK) . . . . . (15+) D
- 245.090 : BUPLEURUM FRUTICOSUM** \* No data. A shrubby, Mediterranean species. About 2m. high, it can be particularly fine on chalky soils & in maritime areas with its umbels of acid-yellow flowers against the leathery, blue-green foliage. . . . (20+) B
- 245.180 : BUPLEURUM SALICIFOLIUM** \* No data. Endemic to cliffs at up to 1000m. in the western Canary Islands, this will be considered tender in most of the UK. A small shrub with linear, grey-blue leaves and umbels of green-yellow flowers. (20+) C
- 252.700 : CAMPANULA CARPATHA** \* Greece, Karpathos. Shady, limestone crevices. Ex a H.& I. Barton coll. (A superlative alpine-house species, seldom without a profusion of its large, elongated bells in soft blue-violet against its downy foliage. Introduced by Peter Davis in 1950 & rapidly lost, this is from the Barton's 1983 re-introduction which we maintain here. This choice long-lived, Karpathos endemic, has been disadvantaged through the similarity of its name to that of the easy *C. carpatica*.) . . . . (30+) D
- 253.600 : CAMPANULA COLLINA** \* Turkey, Trabzon, Soganli Dag. 2300m. Open meadows. (One of the most adaptable & worthwhile Turkish species for the open rock-garden in the UK. About 20cm. high with profuse, violet bells.) . . . . (20+) B
- 294.550 : CHAEROPHYLLUM HIRSUTUM** from **PINK FORM** From the raspberry-pink form of this umbellifer from the mountain-meadows of S Europe. A robust perennial with cut, downy, soft-green basal foliage and 1.2m. stems with flat umbels of many tiny pink flowers. In character in the wild-garden or cottage-garden & well-behaved here in good, moist soil. . . (15+) B

## Chorispora bungeana : King of the Central Asian high-alpine screes

- 299.000 : CHORISPORA BUNGEANA** Kyrgyzstan, Terskey Alatau, S of Barskoon. 3115m. A. Dickerson 00-10 (A compact mound of smooth, spatulate, fleshy leaves surmounted by a succession of almost stemless, sweet-scented flowers, proportionately enormous purple wallflowers, succeeded by "a remarkable display" of erect, linear seed-pods. "A good form...will be almost without peer in the garden scree", wrote Sampson Clay in 1937. Maybe never an open-garden plant but very successfully cultivated in the alpine-house in the UK by the expert grower Jim Almond, who created a stir when he exhibited it a few years ago.) . . . . . (8) F
- 309.710 : CLEMATIS INTEGRIFOLIA** \* No data. An attractive, very hardy, herbaceous species distributed through the grass-steppe of E Europe & Central Asia. A strong, compact rootstock sends up lax stems, up to 1m. long but usually much less, clothed in ovate leaves & carrying large, long-stemmed, lavender-blue flowers, each with four, reflexing sepals, in summer. . . . . (10+) C

- 309.911 : CLEMATIS RECTA f. PURPUREA** \* The purple-leaved form of this fragrant, white-flowered, 1.5m. high, herbaceous species, distributed from S Europe to C Russia, comes reasonably 'true' from seed. Striking grown in full sun. . . . . (10+) **B**
- 331.700 : CORYDALIS GORTSCHAKOVII** Kyrgyzstan, Talas Alatau, Kara Bura pass S of Klyuchevka. 3040m. A. Dickerson 00-13. (A robust, yellow-flowered, rhizomatous perennial, near the Tibetan *C. moorcroftiana*, possible in scree in the UK.)(15+) **D**

## **Crepis incana : fertile seed of the pink dandelion**

- 338.510 : CREPIS INCANA** \* No data. Classiest of composites, easily grown & perennial in sunny, limestone scree, this endemic from limestone crevices on the mountains of southern Greece between 1050 and 2400m., has never set a good seed (only lots of fluff) with us in over 30 years. Simon Bond has worked hard to acquire different clones & develop a fertile strain. Compact mounds of greyish green leaves covered with a succession of gentle pink dandelion-flowers on 20cm. stems all summer.) . . . . . (10+) **C**
- 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 & distinct from *D. lanata* in this area. Clumps of narrow, dark leaves & 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**
- 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. For a dry, sunny site) . . (50+) **B**
- 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.) . . . (30+) **B**
- 412.180 : DIONYSIA INVOLUCRATA** \* Tadjikistan, Pamir-Alai, Khandar river gorge. 1000m. & over. Ex J. Halda colls. (One of the most amenable but still only for the experienced alpine-house grower. Cushions with umbels of sugar-pink flowers.)(15+) **E**
- 412.190 : DIONYSIA INVOLUCRATA from WHITE FORM** \* From the excellent Goteborg, white-flowered form. (10+) **F**
- 432.300 : ECHIUM 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. . . . . (20+) **B**
- 443.500 : EREMOSTACHYS SPECIOSA** Kyrgyzstan, Kyrgyz Alatau, Too Ashuu pass S of Kara Balta. 2350m. A. Dickerson 00-18. (This genus of splendid & amazing labiates (with a similar distribution & requirements to *Eremurus*) are mainly tall perennials but high altitude *E. speciosa* "sometimes produces its great yellow flowers in woolly white calyces almost at ground level.") (5) **E**

## **Eremurus : spectacular & imposing foxtail lilies**

The giant asphodels, a magnificent genus of hardy plants spread from the Lebanon & Turkey through to the W Himalaya but centered on Central Asia, are not the easiest of perennials to manage in UK gardens. These are steppe-plants, adapted to a dry climate of extreme cold in winter and extreme heat in summer. While tolerant of very low temperatures when dormant their new growth is vulnerable if their noses emerge too early, so spring growth may need some protection both from late

frosts and slugs. While best suited to gardens in the drier, more continental climates of central Europe or the Rocky Mountain states of the USA, they can be very successfully grown in a well-drained, sunny situation in the UK, especially in the drier east. Several species provide well-established displays at the RBG, Edinburgh, in Scotland. Best planted young, their massive, fleshy, octopus-like roots need time to develop & establish but most will flower in 3-4 years from seed.

- 444.060 : EREMURUS HIMALAICUS** \* No data. A magnificent NW Himalayan species with 2m. spires packed with white flowers. This is one of the earliest of this genus to flower in UK gardens, where it is usually one of the more reliable ones. . . . (10+) **B**
- 444.067 : EREMURUS OLGAE** \* No data. Latest to flower here with 2.5m. cylindrical racemes of soft-pink flowers. . . (10) **C**
- 444.085 : EREMURUS ROBUSTUS** \* No data. Equally imposing Central Asian with towering, pink racemes. 2.5m. . . . (10) **B**
- 444.086 : EREMURUS ROBUSTUS from WHITE FORM** \* No data. Flowers later than white *E. himalaicus*. 2.5m. . . (10) **B**
- 444.101 : EREMURUS SPECTABILIS** \* Turkey, Kahramanmaras, SSE of Goksun. 1550m. (Spires of green-white flowers with exerted orange-brown anthers. 1.5m. In spite of its name, not actually so spectacular as some but fascinating.) . . . . . (10) **C**
- 444.150 : EREMURUS STENOPHYLLUS** (subsp. *stenophyllus*) (*E. bungei*) \* No data. Cylindrical racemes of brilliant yellow flowers, about 1m. high. A species spread from N Iran through Central Asia to W Pakistan & usually the easiest. . . . . (10+) **B**

# Eremurus : unidentified collections from Iran

- 16712 : **EREMURUS SP.** Iran, Zanjan, NW of Zanjan. 1250m. Sandy clay & gravel hills in river valley. . . . . (10) **E**
- 16858 : **EREMURUS SP.** Iran, Kordestan, S of Saquez. 1670m. Steppe vegetation on open, stony slope. . . . . (10) **D**
- 16975 : **EREMURUS SP.** Iran, Lorestan, SE of Aligudarz. 2250m. SE-facing clay & shale slopes. . . . . (10) **D**
- 481.503 : **EUPHORBIA RIGIDA** Turkey, Antalya, Bey Da., between Kemer & Ovacik. Ex a N. Stevens coll. (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 hardy in a hot, dry site in the UK.) . . . . (10+) **C**
- 485.510 : **FERULA TINGITANA** \* No data. The giant fennel of SE Spain & NW Africa. Close to the more widespread *F. communis* but less robust in habit & the lobes of the dissected basal foliage are much shorter & with revolute margins, rather than thread-like. One of the most spectacular members of the *Umbelliferae*, towering to 2m. high with its huge, yellowish umbels on stout stems rising above the great mounds of finely-cut glossy, almost varnished, leaves. Spectacular in a hot, dry site. . . . . (10) **C**
- 515.652 : **GENTIANA ASCLEPIADEA** from **PALE BLUE FORM** \* From a beautiful paler, turquoise-blue form of the elegant willow gentian, one of the loveliest of autumn-flowering, herbaceous plants, well-suited to semi-shade in UK gardens.) (50+) **B**
- 515.653 : **GENTIANA ASCLEPIADEA** from **PINK FORM** \* A substantial number of seedlings will flower pink. . . . (50+) **B**
- 517.620 : **GENTIANA DINARICA** \* No data. A classic "*G. acaulis*" in the limestone race from central Italy & the Balkans. From Simon Bond's splendid form, which originated as either a collection or selection by the unacknowledged Scottish king of these European alpine, trumpet species, Jimmy Stitt. Generously reliable with its stunning blue flowers on glossy-leaved pads. (20+) **B**
- 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 too easy to grow but but successful with some. This seed is from Dinah Batterham who grows it well outside in Dorset, UK.) . . . (20+) **D**
- 519.201 : **GENTIANA OLIVIERI** Iran, Kordestan, SW of Negel (between Sanandaj & Marivan). 1350m. Openings among *Quercus* scrub on shale. (The most western member of the mainly Central Asian Sect. *Aptera* : a beautiful, spring-flowering species with clustered heads of white-throated, sapphire-blue flowers on erect 20cm. stems from neat rosettes of strap-shaped leaves. It goes completely dormant in summer and needs bulb-frame treatment or a rest in the alpine-house, if grown in the UK.) . . . (50+) **D**
- 519.500 : **GENTIANA PARADOXA** \* Georgia, Abkhazia. (A 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.) . . (50+) **C**

## Geranium : a pain to collect but a pleasure to grow

Collecting wild *Geranium* seed in sufficient quantity to list is exceptionally difficult, as only one or two seed-heads ever seem to be ripe at a time. In cultivation, regular visits, every day or so, over a period of weeks solve the problem. The existence of a large number of (often very similar) cultivars testifies to the current popularity of the genus and to its capacity for

hybridization. All of the following are open-pollinated and some seedlings may show variation through hybridization but these are likely to be rare exceptions rather than a general rule. The majority of the hardy, perennial, herbaceous ones are easily grown, long-flowering garden-plants in the UK and almost all the following fall into this category.

- 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**
- 526.400 : **GERANIUM MADERENSE** \* No data but our stock is traceable back to material sent from Madeira by Major Pickering to our old friend Trevor Crosby, at that time Curator of the Leeds University Botanic Garden. At 1.5m. high, the largest *Geranium*, with trunk-like stems, propped up by the old, reflexed leaf-stalks, bearing an immense mound of purple-pink flowers. Essentially a winter-growing plant & safest, frost-free under glass in the UK but worth attempting in milder coastal areas. . . . . (10+) **B**
- 526.800 : **GERANIUM PLATYPETALUM** \* Georgia. No further data. Ex a R. Lancaster coll. (Darkly veined, rich violet-blue flowers in midsummer. Rounded, hairy, lobed leaves, 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**
- 526.925 : **GERANIUM PRATENSE** from **PINK FORMS** \* Delicate, milky pinks. . . . . (10+) **A**
- 526.926 : **GERANIUM PRATENSE** from **PALE BLUE FORMS** \* Soft ice-blues. . . . . (10+) **A**
- 527.000 : **GERANIUM PSILOSTEMON** \* Turkey, Artvin, Genya Dag. 1700m. Wet meadow in *Picea* woodland. (This compact NE Turkish coll. is outstanding : 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**

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

- 528.220 : **GERANIUM SANGUINEUM** \* No data. Mainly from Max Frei's selected clone 'Elspeith'. 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**
- 528.221 : **GERANIUM SANGUINEUM** from **WHITE FORM** \* From the garden cv. 'Album', quite a tall, loose-growing clone with pure-white flowers over a long period. This grew better on our alkaline soil in Dorset than here in Wales. . . . . (10+) **B**
- 528.300 : **GERANIUM SANGUINEUM** var. **STRIATUM** (*G. sanguineum lancastricense*) \* From a good, compact form of this local race native to Walney Island off the Cumbrian coast of England. Blush-pink flowers diffusely veined with red-purple. (10+) **B**
- 528.500 : **GERANIUM SYLVATICUM** \* Greece, Drama, Falakro. 2200m. Moist meadow. (From a fine form of this widespread European species. Good 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 dwarfier, blue selection : rich lavender-blue flowers with tidy white centres on plants of about 60cm. These two may have crossed but the seedlings should all be worthwhile. . . (10+) **C**
- 553.300 : **HEDYSARUM FEDTSCHENKOANUM** Kyrgyzstan, Talas Alatau, Kara Bura pass S of Klyuchevka. 2320m. A. Dickerson 00-4 (A superlative Central Asian high-alpine scree-plant. Close tufts of intensely glaucous leaves, reduced to the single, large, oval, terminal leaflet, send up short-stemmed, oblong spikes of pinkish pea-flowers sunk in projecting whiskery calyces.) . . . . (5) **E**
- 566.600 : **HERACLEUM MINIMUM** from **PINK FORM** \* No data. A rhizomatous perennial in *Umbelliferae*, endemic to calcareous screes in SE France. Smooth, cut foliage & pinkish umbels under 30cm. high. Well-drained sunny site . . . . (20+) **B**
- 582.510 : **INULA MAGNIFICA** \* No data. A splendid 2m. high Caucasian, which needs space in moist, rich soil. "Superb and dignified" with "heads of brown buds opening to large, vivid deep-yellow daisies" writes Graham Stuart Thomas. . . . (20+) **B**

## Iris : bearded dwarves among others

- 583.900 : **IRIS ATTICA** (Sect. *Iris*) \* Greece, Viotia, Oros Parnassos. 1200m. Clay in limestone pockets. (Mainly from pale yellow forms with some blues & purples. The dwarfest bearded iris, ideal for an alpine-house pan with frequent repotting.) . . (10+) **C**
- 590.100 : **IRIS JUNONIA** (Sect. *Iris*) \* Turkey, Antalya, Gidengelmiz Dag, S of Madenli. 1900m. Fissures on limestone-cliff. (A very local bearded iris from high altitudes in the Taurus. Here, in the W of its distribution it inclines towards the W Turkish *I. purpureo-bracteata*, in its somewhat inflated, purple-finged bracts. Pale yellow, tinged with purple in this form. 30-40 cm. high.) . (8) **C**
- 590.210 : **IRIS KERNERIANA** (Ser. *Spuriae*) \* No data. An elegant N Turkish endemic forming clumps of very narrow leaves, above which rise creamy-yellow flowers on stiff, slender, 30cm. stems. Choice but reliable in a sunny, well-drained site.) . . . (10+) **C**
- 590.405 : **IRIS LACTEA** (Ser. *Ensatae*) Russia, near Tomsk. (Wild, Siberian seed of this widespread species. Variable and rejoices in many synonyms (this seed was collected as *I. biglumis*). Clumps of tough, narrow foliage and several, fragrant, purple-blue flowers on stems of about 30cm. in early summer. A very hardy, drought-resistant species, usually easy in an open site.) . . . . (15+) **B**
- 590.651 : **IRIS LOCZYI** (Ser. *Temuifoliae*) Kyrgyzstan, Terskey Alatau, S of Barskoon. 2930m. A. Dickerson 00-21 (Leaves 15-30cm. high & almost stemless, long-tubed, blue-purple flowers, the falls veined with purple on a creamy ground.) . . . . (8) **E**
- 597.800 : **IRIS SINTENISII** (subsp. *sintenisi*) (Ser. *Spuriae*) \* Greece, above Konitsa. Balkan & NW Turkish species, about 30cm. high & an excellent garden-plant. Clumps of grassy leaves & rich violet-blue flowers, rather like a large *I. reticulata*. . (10+) **B**
- 599.610 : **IRIS SUBBIFLORA** (Sect. *Iris*) \* No data. Bearded iris, about 30cm. high, from Portugal. Upright leaves and flowers in a silky, imperial violet. Said to be satisfactory outside in the UK but we give it a warm summer-rest under glass here. . . (8) **B**
- 599.805 : **IRIS TAOCHIA** (Sect. *Iris*) \* Turkey, Erzurum, N of Tortum. 1600m. Steep, stony slopes. Ex a R. & R. Wallis coll. (A choice, 30cm. iris from igneous slopes in a small area NE of Erzurum. Pale yellow or dusky purple with yellow beards.) (5) **D**
- 599.905 : **IRIS TIMOFEJEWII** (Sect. *Iris*) \* Russia, Dagestan. (A dwarf bearded iris, endemic to the Caspian republic of Dagestan & very little-known in cultivation. It needs some care in the UK but we find it appreciates quite a lot of water during and after flowering. About 10cm. high in flower with narrow, curved, pale-green foliage and red-purple flowers with white beards on long perianth-tubes. Our stock was brought back in the 1960's by Eliot Hodgkin from the (then) Leningrad Botanic Garden.) . (5) **E**
- 600.100 : **IRIS TROJANA** (Sect. *Iris*) \* No data. W Turkish bearded iris with distinctive, bicoloured flowers. Pale blue standards & red-purple falls with beards of white, yellow-tipped hairs. 60cm. Usually good outside in a hot, dry site in the UK. . . . (10+) **B**
- 618.800 : **LATHYRUS JAPONICUS** subsp. **MARITIMUS** UK, England, Suffolk, near Aldeburgh. Sea-level. Shingle beach. D. Stephens coll. (A 'classy' rhizomatous perennial with procumbent stems, clad with pale glaucous-green, pinnate leaves & carrying many stalked racemes of up to 12 purple flowers, fading to blue. The species occurs from Japan to the N Pacific & N Atlantic coasts of America, hence to the shores of NW Europe. It is known only from a few sites in SE England, around Aldeburgh.) (10+) **B**

- 619.860 : LATHYRUS VERNUS** from **PINK & WHITE FORM** 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 other early spring flowers & with tidy clumps of foliage later in the season. (10+) **A**
- 627.801 : LEUCANTHEMOPSIS RADICANS** (*L. pectinata*) \* Spain, Granada, Sierra Nevada, SE of Pico del Veleta. 3000m. Open, stony areas on schist. (Choice alpine endemic of the Sierra Nevada. Mats of tiny, much-cut, greyish leaves produce sulphur-yellow daisies, which flush crimson as they age. Spartan acid scree-mix in sun in the alpine-house or a trough.) . . . . (possibly 20+) **E**
- 631.650 : LIGUSTICUM LUCIDUM** \* No data. A striking, monocarpic member of the *Umbelliferae* from the mountains of S Europe, from Spain to Greece. Clumps of finely cut foliage & solid, 1.5m. high stems with umbels packed with white flowers.) (20+) **B**

## Lilium : grow them from seed for fertile, virus-free plants

- 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 stock 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.) . . . . . (10+) **D**
- 633.950 : LILIUM LEDEBOURII** \* Iran, Gilan, Talish. 1700-1900m. Openings in degraded *Fagus* forest. Ex an A. Ala coll. (A very local species, known from one site in the Caspian forest of Iran & one or two in neighbouring Azerbaijan. A superlative plant, now well-established & proving accommodating in several British gardens from Anne Ala's original coll. in the 1970's. Stems about 1m. high with up to 15, white flowers, banded with yellow-green & lightly speckled with purple, with deep orange anthers.) (10+) **E**
- 634.030 : LILIUM MARTAGON** Russia, near Tomsk. (An interesting Siberian wild coll. of this very variable, widespread & usually easily grown species. The race from this area has been considered a distinct taxon & separated at specific, subspecific and varietal levels, the last possibly being the most acceptable, as *L.m.* var. *pilosusculum*, distinguished by its narrower leaves and sparsely spotted, vinous-purple flowers, covered outside with long hairs and opening from cobwebby buds.) . . . . . (15+) **C**
- 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**
- 634.401 : LILIUM POMPONIUM** \* France, Alpes-Maritimes, Montagne de Maurel, NE of La Mure. 1000m. Among scrub in steep-sided limestone gully. (This is perhaps the most restricted & local of the European lilies in the wild. Its purplish stems set with many, twisting, linear leaves rise only to about 50cm. and can carry up to 10 scarlet flowers. For a well-drained, sunny site.) (10+) **D**
- 634.810 : LILIUM 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.) . (10+) **C**
- 635.220 : LILIUM SZOVITSIANUM** \* No data. UK grown seed. Usually one of the best garden-plants in the genus. Doubtfully consistently separable from *L. monadelphum* & others in this intergrading group of beautiful, fragrant, pale yellow Transcaucasian lilies, which are mainly distinguished by the dimensions & proportions of their flowers. All are beautiful. . . . . (10+) **C**
- 673.005 : MELITTIS MELISSOPHYLLUM** (subsp. *melissophyllum*) \* UK, England, Sussex. Ex an R. Wallis coll. (About 60cm. high with wrinkled, toothed leaves & verticillasters of fragrant, long-tubed white flowers with large, pale-purple lips.) (10+) **B**
- 681.510 : MOLOSPERMUM PELOPONNESIACUM** (*Molopospermum cicutarium*) \* No data. A magnificent perennial, distributed sporadically from the Pyrenees through the southern Alps down to Greece. Slow-growing but eventually makes imposing clumps of huge, smooth, deeply incised leaves. Robust, 2m. stems with head-high umbels of creamy flowers. "Wonderful & unique" writes Tim Ingram of this monotypic genus in *Umbelliferae* deserving of a prominent, well-drained site. . . . . (10+) **C**
- 713.410 : OMPHALODES LUCILIAE** \* No data. One of the most beautiful limestone chasmophytes, widespread very locally on high-alpine cliffs from Greece through Turkey to Iraq & Iran. Most, if not all, UK-cultivated material seems to belong to *O. l.* subsp. *scopulorum* from Greece & SW Anatolia, with its blue-grey foliage exquisitely offsetting the milky-blue flowers. . . . (10+) **C**

## Paeonia : wild seed from Azerbaijan, Georgia & Russia

As we write, *Paeonia* seed sown in March, 2000, is germinating well. So, sow these immediately & expect germination the following spring. These are plants for the dedicated and patient grower. Always keep ungerminated seed : it is large enough to check that it is sound. Like some lilies, most peonies germinate hypogaeally, forming a root-system underground before sending

up true leaves the following season. Most species are very local in nature & it can be a lot of trouble to arrange to collect seed from them. Our thanks to Will McLewin for his painstaking efforts to continue collaboration with the botanists in the republics of the former USSR, who have made many of these collections. The logistics are not at all easy.

- 745.802 : PAEONIA ANOMALA** Russia, Khakassia, Shirinsky district. (A central Siberian coll. of this fine species, widespread in the colder areas of N Asia. Foliage cut into narrow segments, beautiful even without the flat flowers, up to 9cm. across, in deepest rose-pink. Well depicted in the wild in Rix & Phillips, Vol. 1. We do not know how much this varies in different sites.) . . . . (6) **C**

**A** : \$2.00 ; £1.50 ; DM4,- ; FF14.-    **C** : \$4.00 ; £2.50 ; DM7,- ; FF23.-    **E** : \$7.00 ; £4.50 ; DM12,- ; FF41.-  
**B** : \$3.00 ; £2.00 ; DM5,- ; FF18.-    **D** : \$5.00 ; £3.50 ; DM9,- ; FF32.-    **F** : \$9.00 ; £6.00 ; DM16,- ; FF55.-



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

- 745.850 : **PAEONIA ANOMALA** \* Russia, Siberia. (From a tall, 1m. high form, originally from a wild Siberian coll.) . . . . (6) C
- 745.950 : **PAEONIA BIEBERSTEINIANA** (*P. tenuifolia* complex) Russia, Stavropol area. (Dissected leaves but less finely cut than *P. lithophila* foliage & bright red flowers. Distinct from the others in this disjunct complex in its greyish, hairy foliage.).. (6) F
- 746.100 : **PAEONIA CAMBESSEDESII** \* The dwarfest, endemic to the Balearic limestones & needs some protection in the UK. About 30cm. high with beautiful, smooth, grey-green foliage, crimson beneath, & big, rosy flowers, up to 10cm. wide. . (6) C
- 746.130 : **PAEONIA CARTHALINICA** (*P. tenuifolia* complex) Georgia, Dampalo hills, Kartli. An obscure entity & a very local plant indeed, only known from the one colony this area. Apparently the most robust of the *P. tenuifolia* complex.. . . . . (6) F
- 746.150 : **PAEONIA CAUCASICA** (*P. mascula* complex) SE Georgia, Daba area. (The fine Caucasian representative of the widespread & variable *P. mascula* complex, distributed through S Europe E 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
- 746.305 : **PAEONIA CORIACEA** (*P. mascula* complex) Spain, Granada, near Alhama de Granada. (Only known in Europe from S Spain, though it extends into Morocco & Algeria. We do not know the peonies in this locality, only the *P. broteroi* colonies in the Sierra Nevada, about 60km. to the E : a German friend tells us he has only found *P. broteroi* here also.) . . . . . (6) E
- 746.500 : **PAEONIA DAURICA** (*P. triternata*) (*P. mascula* complex) Ukraine, Krim (Crimea). (Close to *P. mascula* but distinct in its few, rounded leaflets with undulate margins. 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* complex) Ukraine, Krim (Crimea). (The Crimean race, which probably constitutes most plants cultivated in the west as "*P. tenuifolia*", is distinct in its light-green, much dissected leaves finely cut into a mass of filiform segments. Glossy, brilliant red bowls hold bright yellow stamens in early summer on compact 50cm. plants.) . . . (6) D
- 746.750 : **PAEONIA MASCULA** (subsp. *mascula*) \* No data. A widespread species, occurring sporadically through southern Europe. Hairless foliage, glossy & red-tinted in spring, cut into very few segments. Magnificent large, rosy-red flowers. . . . . (6) C
- 746.850 : **PAEONIA MASCULA** subsp. **ARIETINA** \* No data. The more eastern race, extending from the Balkans into Turkey. Woolly follicles & much more divided foliage, cut into narrower segments & downy on the undersides. . . . . (6) C
- 747.110 : **PAEONIA MLOKOSEWITSCHII** \* No data. "A sovereign among Paeonies" according to Farrer. Few would disagree. Large, pale lemon-yellow flowers with deeper yellow stamens above 60cm. clumps of rounded, greyish-green leaves. In the soft climate of the UK, the crimson-tinted, young foliage sometimes develops early and can be scorched by cold winds. . . . (6) C
- 747.151 : **PAEONIA OFFICINALIS** (subsp. *officinalis*) France, Alpes-Maritimes, Caussols. (The type-race of this splendid species, which is distinct in its very deeply divided foliage. Big deep-pink to red, single flowers in late spring.) . . . . . (6) D
- 747.160 : **PAEONIA OFFICINALIS** (subsp. *officinalis*) \* Italy, Trentino-Alto Adige, Monte Baldo. From a fine pink selection of this variable S European species, originally made in the wild. Seedlings will vary but should all be worthwhile. . . . . (6) E
- 747.210 : **PAEONIA OFFICINALIS** subsp. **BANATICA** \* No data. The eastern race, mainly from Romania. . . . . (6) D
- 747.310 : **PAEONIA OFFICINALIS** subsp. **HUMILIS** \* No data. The peony of the Pyrenees & much of N Spain. . . . . (6) D
- 747.510 : **PAEONIA OFFICINALIS** subsp. **VILLOSA** \* No data. Predominantly a central Italian race distinct in its felty stems & petioles and downy follicles. A plant of continental climates, more reliable in cold areas than the Mediterranean species. . (6) D
- 747.720 : **PAEONIA PEREGRINA** from **ROMANIAN FORM** (*P. romanica*) \* No data. A magnificent plant, which does not vary greatly over its wide range, from Italy through the Balkans. One of the most distinct & spectacular in the genus with large, glossy flowers in eye-burning scarlet over deeply cut, shiny, bright-green foliage. Usually trouble-free in UK gardens. . . . . (6) E
- 747.850 : **PAEONIA STEVENIANA** (*P. wittmanniana* complex) (possibly the same as *P.w.* var. *rudicarpa*) Georgia, Bakuriani area. (Likely to be wholly different to *P. mlokosewitschii* : Will McLewin thinks these may give deeper yellows.) . . . . . (6) E
- 747.851 & 747.852 : **PAEONIA STEVENIANA** High altitude forms coll. at 2000m. in the Caucasus of SE Georgia. . . . . (6) F
- 747.900 : **PAEONIA TENUIFOLIA** Georgia, Igoeti area. Steppe. (This type-race should have rich-green, glabrous foliage, less finely cut than *P. lithophila*, & crimson flowers. This collection is from a very small isolated colony : only a handful of plants.) . (6) F
- 747.960 : **PAEONIA TOMENTOSA** (*P. wittmanniana* complex) Azerbaijan, Lerik, Sinabad, Talysh. (Very little-known. Plants from seed collected in the Iranian Talysh in the 1960's (as *P. wittmanniana*) were compact with white flowers & most distinct. However, a colony Jim saw in full flower in the Iranian Talysh during May, 2000, were also most distinct but in deep yellow with thick, extremely glaucous foliage. There is still much confusion & complexity in these Transcaucasian yellows. ) . . . . . (6) F
- 747.961 : **PAEONIA TOMENTOSA** From a locality in the the main body of the Caucasus, in NE Azerbaijan. . . . . (6) F

A : \$2.00 ; £1.50 ; DM4,- ; FF14,- C : \$4.00 ; £2.50 ; DM7,- ; FF23,- E : \$7.00 ; £4.50 ; DM12,- ; FF41,-  
B : \$3.00 ; £2.00 ; DM5,- ; FF18,- D : \$5.00 ; £3.50 ; DM9,- ; FF32,- F : \$9.00 ; £6.00 ; DM16,- ; FF55,-

- 752.605 : PAPAVER SPICATUM** (var. *spicatum*) (*P. heldreichii*) \* No data. An aristocratic endemic of the SW Turkish limestones and a long-lived perennial. Clumps of grey-white, hairy foliage send up 1m. high racemes of delicate, soft-apricot flowers from silvery buds. Shy in producing seed in cultivation, which probably accounts for the fact it remains so little-known in gardens. (20+) **D**
- 758.001 : PELARGONIUM ENDLICHERIANUM** \* Turkey, Erzincan, E of Refahiye. 1500m. Igneous scree. (Butterfly-like flowers with two large, upper petals, in this form, bright-pink with crimson veins. Spectacular in the bulb-frame, creating a brilliant patch of colour in mid-summer, Absolutely temperature-hardy & possible outside in the UK in a very sunny, dry site.) . . . . . (5) **C**
- 760.160 : PETROCOPTIS PSEUDOVISCOZA** \* Spain, Huesca, Rio Esera valley. 800-1000m. Crevices on vertical, limestone cliffs. Ex a H. & W. Bevington coll. (Only described in the 1970's, this is an excellent alpine-house plant, typical of this small genus of local chasmophytes in *Caryophyllaceae*, from the limestones of N Spain & the Pyrenees. A woody-based perennial forming loose mounds, up to 30cm. across, of glaucous basal rosettes. Stems, 10-15cm. high, carry cymes of white flowers over a long period in late spring. Still little-known in cultivation but, according to two specialists, "reliably floriferous" in scree or a trough in the UK.) (20+) **C**
- 764.800 : PHELYPAEA COCCINEA** Iran, Kordestan, ESE of Sanandaj. Steep, rocky slopes with diverse steppe-vegetation. (The ultimate parasite : the whole visible plant, mainly composed of a low cluster of huge, black-throated 'gloxinia'-like flowers on short fleshy stems is intense scarlet. This species is parasitic only on *Centaurea*, so if you do not have a host, forget it (or rush out and buy a perennial one from the garden centre) : Fritz Kummert told us he grew this successfully, so it can be done.) . . . (100+) **C**
- 784.121 : POTENTILLA NITIDA** \* No data. From the splendid selection 'Rubra' with rich, deep pink flowers, exquisitely studding tight pads of silvered foliage. An endemic of the limestones of the E Alps & one of the loveliest European alpins. . . . (20+) **B**
- 785.681 : PRIMULA AURICULATA** subsp. **TOURNEFORTII** (Sect. *Oreophlomis*) Iran, Mazandaran, Elburz Mts., Kandavan pass, north side. 2500m. Among grasses in wet-flush. (A dainty N Iranian & Transcaucasian race of this widespread & extremely variable SW Asian species. Heads of lilac-pink flowers on stems which reached 30cm. in seed.) . . . . . (50+) **C**
- 786.501 : PRIMULA ELATIOR** subsp. **PALLASII** Iran, Gilan, Talesh, between Asalem & Khalkhal. 2000m. Grazed alpine turf. (The most eastern race of this widespread species. Umbels of drooping, pale-yellow flowers above smooth, toothed leaves.) (30+) **B**
- 790.350 : PRIMULA VULGARIS** subsp. **HETEROCHROMA** (Sect. *Primula*) Iran, Gilan, Talesh, above Astara. 1000m. Openings in moist deciduous woodland. (There "seems to be little news" of these Caspian primroses in cultivation, according to John Richards. Those seen in the 1960's lowdown near Chalus, the flowers were every shade from rich red to pink & cream to white.) (20+) **D**
- 800.601 : PULSATILLA CAMPANELLA** Kyrgyzstan, Talas Alatau, Kara Bura pass, S of Klyuchevka. 2350m. A. Dickerson 00-25 (A delightful, Central Asian species with neat, very finely cut, basal foliage and drooping bells in a lovely deep violet.) (10+) **C**
- 800.800 : PULSATILLA HALLERI** subsp. **TAURICA** Ukraine, Krim. (Wild seed of the Crimean race, which opens its, usually dark violet, flowers on very short, 5cm. stems. Foliage much more finely cut & woollier than the preceding.) . . . . . (15+) **C**
- 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. Sow on a sterile, peaty soil, in gentle warmth.) (100+) **B**
- 808.401 : RAMONDA SERBICA** \* Greece, Ioanina, Farangi Vikou. 800m. Limestone fissures. (Grows happily here outside in a shaded trough. Rosettes of greyish, hairy leaves & bell-shaped, violet flowers with dark purple anthers.) . . . . . (50+) **D**
- 820.480 : RHEUM RETICULATUM** Kyrgyzstan, Talas Alatau, Kara Bura pass. 2955m. A. Dickerson 00-28 . . . . . (5) **D**
- 820.501 : RHEUM RIBES** Iran, Kordestan, WNW of Sanandaj. 2100m. Loose talus on steep slopes. (A splendid summer-dormant rhubarb. Illustrated in flower in Rix & Phillips 'Perennials' but it is at its best when the bristly, reddish foliage unfolds in spring or when the erect, branched 50cm. stems are set with shiny, scarlet seeds. Try this & the above in sunny scree in the UK.) . (6) **C**
- 843.380 : SALVIA CANARIENSIS** \* No data. A handsome, 2m. high, shrubby species endemic to the Canary Islands, where it quite widely in the lower, drier areas. Narrow, sagittate, grey leaves, woolly white below, and branched stems of small, pink flowers among showy, papery, purple bracts. Unlikely to be hardy in the UK but worth overwintering with protection. . . . . (20+) **C**
- 844.201 : SALVIA CYANESCENS** \* Turkey, Bolu, W of Goynuk. 800m. Loose, exposed shale slopes. (A delightfully airy perennial. Flat rosettes of felted leaves & diffuse, branching stems, 50cm. high, with pale-violet flowers. Hot, dry site in the UK.) (20+) **B**
- 844.300 : SALVIA DAGHESTANICA** \* Russia, North Ossetia, Dzavgiss. 1000m. Ex H. Zetterlund 82-49 (The Caucasian representative of the disjunct species-group, which includes Turkish *S. hypargeia* & Moroccan *S. phlomoides*, but very much dwarfer than these : only 10-15cm. high in flower with rich lavender-blue whorls from rosettes of superlative, white-felted foliage. Successful with Jack Elliott in Kent but strongly resents the damp atmosphere of our Welsh winters. An outstanding new plant.) (15+) **D**
- 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 with glandular hairs. Pinnate leaves & large, widely spaced, rose-pink flowers.) . . . . . (15+) **C**
- 967.109 : TROLLIUS DZHUNGARICUS** Kyrgyzstan, Kyrgyz Alatau, S of Bishkek. 2290m. A. Dickerson 00-40 . . . . . (20+) **D**

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 B : \$3.00 ; £2.00 ; DM5,- ; FF18.- D : \$5.00 ; £3.50 ; DM9,- ; FF32.- F : \$9.00 ; £6.00 ; DM16,- ; FF55.-

- 1.010.050 : **ACONITUM COLUMBIANUM** from **YELLOW FORM** Cal., Plumas Co., Taylor Lake. 1980m. Moist, N-facing slope. G. Greger coll. (A yellow form of this fine 2m. high, usually purplish, monkshood, which should be easy in UK.) . . . . (20+) **C**
- 1.011.010 : **ACTAEA ALBA** (*A. pachypoda*) \* No data. From eastern woodlands : surely the finest of fruiting herbaceous plants. The small, fluffy racemes of white flowers, followed, by striking white fruits, 'doll's eye' fruits on thickened red pedicels.) (10+) **B**
- 1.011.190 : **ACTAEA RUBRA** f. **NEGLECTA** \* Distinct white-fruited form of this excellent western woodlander. . . . (15+) **B**
- 1.025.200 : **AGASTACHE URTICIFOLIA** Cal., Plumas Co., Homer Lake. 1830m. Moist, N-facing slope. G. Greger coll. (An erect, woodland perennial with whorls of sessile, rose-purple flowers on stems about 1m. high clad in lanceolate leaves.) . . . (50+) **B**
- 1.035.000 : **AGAVE PARRYI** Arizona, Yavapai Co. M.& P. Stone 99-202 (Hardy & dwarf. Possible outside in the UK) (10) **D**
- 1.030.602 : **ALLIUM CRISPUM** \* Cal., San Benito Co. Ex an R. Ratko coll. (Large, dense umbels of deepest pink to maroon flowers with flaring segments, the three inner ones with crisped, white edges, on 15 cm. stems. Endemic to heavy serpentine-derived soils in the central coast-ranges & "one of the most striking" according to Jim Robinett. Seed from Robert Rolfe's Farrer Medal winning stock, which he describes as "almost bicoloured, with the inner segments notably darker than the lilac-pink outers.") . (20+) **C**
- 1.030.800 : **ALLIUM FALCIFOLIUM** Cal., Humboldt Co., SSW of Willow Creek. 1580m. Stony openings among conifers on serpentine. (Red-purple flower-heads on 5cm. stems between two little, thick, falcate leaves in early spring.) . . . . . (15+) **B**
- 1.032.251 : **ALLIUM OBTUSUM** var. **CONSPICUUM** Cal., Plumas Co., Keddie Ridge. 1460m. SW-facing slope. G. Greger coll. (A very local plant from the granitic grits of the northern Sierras. Dense heads of pale pink flowers on 15cm. stems.) . (15+) **C**
- 1.032.601 : **ALLIUM PLATYCAULE** \* Cal., Modoc Co., Warner Mts., Cedar Pass. 1600m. Steep, loose, gravelly slopes. (Round umbels of deep rose with dark anthers on short flat stems between two thick, falcate leaves. A spectacular, cold-climate, 'tumbleweed' species, resembling the SW Asian Sect. *Acanthoprason*, flowering very early, just after the snow has melted.) . (10+) **D**
- 1.048.210 : **AMSONIA TABERNAEMONTANA** var. **SALICIFOLIA** \* No data. Widespread but local in wooded areas of SE North America, E to Kansas & S into Texas & Georgia. Cymes of starry, pale-blue flowers with darker blue tubes. 1m. . . . (10+) **B**
- 1.060.000 : **AQUILEGIA BARNEBYI** \* Colorado, Rio Blanco Co., above Piceance Creek NW of Rio Blanco. 1980m. Steep-sided gully in loose fragmented shale. (Endemic to the oil-shale barrens of the Uinta Basin. Pink & cream flowers.) . . . . (20+) **D**
- 1.060.819 : **AQUILEGIA FORMOSA** Cal., Plumas Co., Eisenhimer Ridge. 2130m. G. Greger coll. (The most widespread western columbine. A plant of moist habitats with many nodding, spurred scarlet flowers dancing on branched 60cm. stems.) . (20+) **B**
- 1.061.350 : **AQUILEGIA** aff. **MICRANTHA** \* Colorado, Montrose Co., Dolores River Canyon NW of Uravan. 1700m. Sandstone detritus on steep, shaded slope. (From a very beautiful colony we found in 1989. Perhaps the result of hybridization between *A. micrantha* and *A. elegantula*. Soft, creamy yellows with long spurs tinged with apricot on 30-50cm. glandular stems) (20+) **C**
- 1.061.800 : **AQUILEGIA SCOPULORUM** Utah, Garfield Co., above Butch Cassidy Draw. 2600m. Loose limestone talus on steep slopes. (Exquisite bluish foliage and flowers with very long spurs, wholly in a deep gentian-blue. A taller form, 20-30cm. here, easier to grow & more suitable for a very sunny site in a raised bed or the rock-garden than the next two tiny variants.) (15+) **D**
- 1.061.850 : **AQUILEGIA SCOPULORUM** Nevada, White Pine Co., Snake Range. 3440m. Exposed limestone talus up to the summits. J. Andrews coll. (The much-reduced forms which delight the alpine-plant enthusiast occur near the summits of a few of the highest limestones of the Great Basin. One we grew many years ago from a Carl Worth coll. remained compact in cultivation with imbricate, blue-grey foliage. Extremely long-spurred flowers, entirely in rich-blue, on stems of only a few cm.) . (10+) **E**
- 1.061.851 : **AQUILEGIA SCOPULORUM** Nevada, White Pine Co., Mt. Moriah Table. 3475m. Limestone. . . . . (10+) **E**
- 1.068.000 : **ARCTOMECON CALIFORNICA** Nevada, Clark Co., SE of Valley of Fire. 500m. Exposed ridgetops on eroded clay & gravel hills. (An extraordinary Nevadan poppy enthused over by Dwight Ripley in 1942 : "bluish leaves, clothed in long pale hairs" and 25cm. "smooth stems, almost leafless, each branching into a corymb of fabulous gold poppies." Strictly for the sunniest, best ventilated alpine-house in cold, wet climates - may be ungrowable but worth every effort.) . . . . . (20+) **D**
- 1.068.050 : **ARCTOMECON HUMILIS** Utah, Washington Co., Bloomington Hills S of St. George. 920m. Tops & sides of ridges on eroded clay hills. J. Andrews coll. (To Dwight Ripley this was "one of the most startling plants in all Utah." Rosettes of lobed, blue leaves, clad in long, soft, white hairs ; up to 70 white poppies on branching stems to 20cm. but usually 10cm. 'Threatened' here by a housing-development and 'off-road' vehicles. Unpredictable in germination and so far proving very "difficult".) . (15+) **E**
- 1.070.201 : **ARENARIA HOOKERI** Utah, Emery Co., Molen Reef E of Moore. 1930m. Sandstone detritus & rock-slabs. (Seldom seen in gardens but a classic, dense, cushion-plant, covered with fine, stemless, white flowers.) . . . . . (15+) **C**
- 1.075.301 : **ARGEMONE MUNITA** subsp. **ARGENTEA** Cal., Inyo Co., White Mts. 2000m. Stony, gravelly banks. (A Prickly Poppy best sown direct in a hot, dry site. Masses of diaphanous, white *Romneya*-flowers. 60cm.) . . . . . (20+) **A**

- 1.075.400 : ARGEMONE MUNITA subsp. ROTUNDATA** Cal., Plumas Co., E of Chilicoot. 1520m. Open, SW-facing slope. (A very prickly Prickly Poppy from a coll. made at the northern limit of the species distribution. A short-lived perennial.) . (20+) **A**
- 1.076.710 : ARISAEMA TRIPHYLLUM subsp. STEWARDSONII** \* Canada. No further data. (A plant of acid, humus-rich soils in distinctly wet, deciduous woodland. Green spathe, striped with purple in the throat. Scarlet fruits in autumn.) . . . . (10+) **C**
- 1.084.201 : ASARUM HARTWEGII** Cal., Plumas Co., E of Greenville, along Lights Creek. 1280m. G. Greger coll. (A weird, shade-loving member of the *Aristolochiaceae*, forming low clumps from a deep rhizome. Decorative cordate leaves, marbled with white along the veins, below which lurk the flowers surrounded by large, brown-purple calyces with 3 long-attenuate lobes.) . (15+) **C**
- 1.102.100 : ASTRAGALUS COCCINEUS** (Sect. *Argophylli*) Cal., Inyo Co., White Mts., near Toll House Springs. 1980m. Loose, stony, clay slope. (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 exhibited in the UK. ) (10+) **D**
- 1.108.650 : ASTRAGALUS PURSHII var. TINCTUS** (Sect. *Argophylli*) Cal., Kern Co., E of Mt. Pinos. 2530m. Open granite-gravel slope. (The Western race with clustered, vivid purple-pink flowers on its mats of downy, grey, dissected leaves, followed by the marvellous pods, densely clothed in white wool, which are characteristic of this outstanding section of the genus.) . . . (10+) **C**
- 1.115.450 : BALSAMORRHIZA MACROLEPIS var. PLATYLEPIS** Cal., Plumas Co., Lone Rock Valley. 1680m. G. Greger coll. (Imposing yellow daisies on 60cm. stems from stout, fleshy, long-lived perennial rootstocks. The leaves, pinnately divided into lobes, are grey with fine hairs in this race from the drier slopes of NE California & adjacent Nevada.) . . . . . (15+) **C**
- 1.130.150 : BLOOMERIA CROCEA var. AUREA** Cal., San Luis Obispo Co. 170m. Among grass on open, heavy clay slope. (The central Coast Range race of this seldom-seen corm near *Brodiaea*. Umbels of delicate, golden stars on 30cm. stems.) (20+) **B**
- 1.140.100 : BRODIAEA CALIFORNICA** Cal., Yuba Co. 630m. Serpentine scree in chaparral. (Largest of the genus, about 50cm. high here, with loose umbels of violet flowers with contrasting white staminodes. For the bulb-frame in the UK.) . . . . (20+) **B**

## Calochortus : an unrivalled range

The scope and diversity of this amazing genus is still little appreciated by the skilled growers of Eurasian bulbs, who have developed in recent decades. The following listing may be the most extensive ever offered. We were able to replenish seed of many during our 2000 visit to the USA but we now grow an extensive range from wild-collected seed. We shall be able to

update wild collections of many in 2001. Species from the cold, dry climates of the Great Basin and further east are proving the most difficult to maintain. We suspect these may be best left unwatered until later winter. We are convinced that most need little further watering after the first flowers open. The quality of the dormant bulbs will be much better.

- 1.150.001 : CALOCHORTUS ALBUS** \* Cal., Tuolumne Co., NE of Columbia, Italian Bar. 750m. Steep scrub-covered slopes. (The Sierran foothill race of this Fairy Lantern with pendant, globular, pearly-white flowers on 20cm. stems.) . . . . . (20+) **B**
- 1.150.002 : CALOCHORTUS ALBUS** \* Cal., San Luis Obispo Co., W of Paso Robles. 550m. Steep banks in deciduous woodland. (Very variable here from ruby to opalescent pinks and whites. This population grades into the York Mt. reds.) . . . . (20+) **B**
- 1.150.050 : CALOCHORTUS ALBUS from DWARF COASTAL FORM** \* Cal., San Luis Obispo Co. 660m. Steep, windswept, N-facing serpentine slope. Ex a J. & G. Robinett coll. (A reduced fairly stable, ecotype from a few sites exposed to the Pacific gales. Mounds of nodding pink-blushed, pearly globes, virtually on the ground. Only 5-10cm. high.) . . . . . (10+) **E**
- 1.150.100 : CALOCHORTUS ALBUS var. RUBELLUS** \* Cal., San Luis Obispo Co., W of Templeton. 400m. Steep, shaded banks. (From a famous & outstanding population with translucent, ruby-pink lanterns. Awarded a PC in the UK in 1995.) . . (20+) **C**
- 1.150.500 : CALOCHORTUS AMABILIS** \* Cal., Solano Co., NW of Vacaville, Mix Canyon. 550m. Steep, scrub-covered slopes. (Another Fairy Lantern. Branching, 20-30cm. stems with nodding flowers in clear, deep yellow.) . . . . . (20+) **B**
- 1.151.000 : CALOCHORTUS AMOENUS** \* Cal., Tulare Co., NE of Springville. 1100m. Among scrub on steep granite slopes. (Like the preceding, in Subsect. *Pulchelli* but with purple-rose nodding flowers. Limited to the western foothills of Sierras.) (20+) **B**
- 1.151.500 : CALOCHORTUS ARGILLOSUS** \* Cal., San Luis Obispo Co., NE of San Luis Obispo. 180m. Among grasses in heavy clay on open slope. (The Reservoir Canyon population originally listed under "*C. simulans*". Extremely 'growable', setting seed well. A lovely, rather dwarf, white Mariposa, more or less flushed lilac, with variable dark basal stains & markings.) (20+) **C**
- 1.152.000 : CALOCHORTUS AUREUS** Arizona, Coconino Co., WSW of Kayenta. 1980m. Open areas among *Artemisia*. (Southern race of *C. nuttallii*, distributed across N Arizona into NW New Mexico. Like the others in Subsect. *Nuttaliani*, not easy in temperate areas. Rich soft-yellow 'tulips' with maroon-purple crescents.) . . . . . (20+) **D**
- 1.153.000 : CALOCHORTUS BRUNEAUNIS** Cal., Inyo Co., White Mts., Westgard Pass. 2230m. Openings among *Artemisia*. (Near the more eastern *C. nuttallii* but distinct in its green-striped segments. Pure solid-white with clean purple spots.) . . . (20+) **C**
- 1.154.000 : CALOCHORTUS CATALINAE** Cal., Los Angeles Co., Santa Monica Mts. 550m. Coastal chaparral. J. Andrews coll. (Erect, white flowers edged with lavender & with dark basal blotches. Once widespread in the seaward-facing canyons around Los Angeles, little of its habitat, some of the most valuable land on earth, remains. Fortunately, not too difficult to grow.) (20+) **C**

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- 1.155.003 : **CALOCHORTUS CLAVATUS** (subsp. *clavatus*) \* Cal., San Luis Obispo Co., La Cuesta Ridge. 665m. (A big Mariposa, local on coastal serpentines. Huge yellow bowls, red-brown lined & hairy inside on zig-zag stems of 30-50cm.) . . . . (20+) C
- 1.155.200 : **CALOCHORTUS CLAVATUS** var. **AVIUS** \* Cal., El Dorado Co., ENE of Pollock Pines. 1280m. (A disjunct race, so local on the granites of the Sierra Nevada as to be thought all but extinct, until it exploded into flower after a brush-fire in 1993. One of the most spectacular with umbel-like inflorescences of sumptuous butter-yellow bowls on stems of up to 1m.) (20+) D
- 1.156.001 : **CALOCHORTUS CONCOLOR** \* Cal., San Diego Co. 1060m. Sandy soil in chaparral. (The huge Goldenbowl Mariposa from the far south. Big bright-yellow 'tulips' marked inside with dark red, up to 7 on 20-40cm. stems.) . . . . (15+) C
- 1.156.500 : **CALOCHORTUS COXII** \* Oregon, Douglas Co., W of Myrtle Creek. 450m. Among grasses & sparse conifers on steep serpentine slopes. (Narrow endemic described in 1988. About 15cm. high with up to 7, bowl-shaped flowers, white with red striae, densely covered & fringed with yellow to white hairs & with a broad lavender chevron above the green gland.) . . . . (15+) E
- 1.158.000 : **CALOCHORTUS EURYCARPUS** \* Idaho, Butte Co., W of Craters of the Moon. 1520m. E & SE-facing slopes of stony ridge. (Wiry, 30-50cm. stems carry elegant, bowl-shaped flowers in white or lilac-pink, blotched with maroon and striped with green. A steppe species, in Subsect. *Nitidi*, spread around the N rim of the Great Basin from E Oregon to Montana.) (20+) B
- 1.158.009 : **CALOCHORTUS EURYCARPUS** Nevada, Elko Co., Ruby Mts., SE of Lamoille, along Thomas Creek. Among grasses in meadow. J. Andrews coll. (A type-locality coll. A much less common plant here than further N in Idaho.) . . . . (20+) B
- 1.158.500 : **CALOCHORTUS EXCAVATUS** \* Cal., Inyo Co., Owens Valley S of Bishop. 1350m. Among *Rosa* & *Salix* scrub in clay (dry in summer). (An extremely local Mariposa from a few vernal damp sites in this cold area. In Subsect. *Nuttaliani* with up to six, widely bell-shaped flowers in pale lavender to white, dark purple at the base.) . . . . (20+) D
- 1.159.000 : **CALOCHORTUS FLEXUOSUS** Cal., Inyo Co., Amargosa Range, Daylight Pass. 1315m. Along dry gullies. (Sinuous stems twist and spiral. Up to 6 erect, white, lilac-tinged flowers, purple-spotted & yellow-banded inside.) . . . . (20+) D
- 1.159.005 : **CALOCHORTUS FLEXUOSUS** Utah, Millard Co., SSE of Garrison. 1900m. Calcareous gravel. J. Andrews coll. (A very dwarf form of this desert Mariposa, local but widespread all the way across to here & S to SW Colorado.) . . . . (15+) E
- 1.163.001 : **CALOCHORTUS HOWELLII** Oregon, Josephine Co., Eight Dollar Mt. SW of Selma. 500m. Among sparse *Arctostaphylos* scrub on open, S-facing slope. (Utterly distinct until *C. umpquaensis* surfaced. Beautiful, erect flowers on 30-50cm. stems : white, covered with hairs and darkening centrally to smokey brown. Now growing well with us & sets seed.) . (15+) D
- 1.163.500 : **CALOCHORTUS INVENUSTUS** Cal., Ventura Co., Mt. Pinos. 2680m. Alpine steppe, in granite grit. (15cm. high here, with 1-2, erect, pale lavender flowers, basally stained deep purple. A montane species in Subsect. *Nuttaliani*.) . . . . (20+) B
- 1.164.000 : **CALOCHORTUS KENNEDYI** Cal., Inyo Co., SW of Gilbert Summit. 1620m. Open stony slope with sparse *Artemisia*. (Incomparable & quite unrivalled in the brilliance of its colour : here tending to luminous orange. In California, a plant of high, cold steppe. Intolerant of superfluous water at any time but several of us have flowered it from seed in the UK.) . . . . (20+) B
- 1.164.200 : **CALOCHORTUS KENNEDYI** var. **MUNZII** Cal., Inyo Co., Panamint Range. 2130m. Gravelly soil. (The high altitude race from over 1850m. in the Clark, Providence & Panamint Mts. : intense yellow with black-purple basal markings.) (20+) D
- 1.164.506 : **CALOCHORTUS LEICHTLINII** Cal., Plumas Co., N of Greenville. 1100m. G. Greger coll. (A cold-climate mariposa from the high Sierra Nevada N to Modoc Co. Maroon-blotched white flowers, sometimes tinged pink or smoky-blue.) (20+) C
- 1.166.000 : **CALOCHORTUS LUTEUS** \* Cal., Lake Co., N of Clear Lake. 410m. Among grasses on open slope. (Clear yellow, tinged green basally and with extremely variable brown internal markings. One of the most easily grown Mariposas.) (20+) B
- 1.166.100 : **CALOCHORTUS LUTEUS** X **SUPERBUS** \* Cal., Lake Co., Walker Ridge. 600m. Open grassy area, in heavy clay. (Some fine ivories, creams and soft yellows to deep yellow, very variably marked inside.) . . . . (20+) B
- 1.167.005 : **CALOCHORTUS MACROCARPUS** Canada, British Columbia, N Okanagan Valley. 625m. C. Bailey coll. (In a section on its own : about 50cm. high with large, elegant, erect, purple flowers with median green stripes on the segments.) . (20+) C
- 1.168.000 : **CALOCHORTUS MONOPHYLLUS** \* Cal., Tuolumne Co. 750m. N-facing clay bank. (The only yellow in Subsect. *Eleganti*. A plant of coniferous woods in the N Sierra Nevada & S Cascades. A little 'sweetie', a few cm. high.) . . . . (15+) D
- 1.169.503 : **CALOCHORTUS NUDUS** \* Cal., Trinity Co., W of Mt. Eddy. 2080m. Wet mountain-meadow. Ex a J. Andrews coll. (In a few moist alpine-meadows on the high serpentines of the N superlative rich blue-purple populations occur : some think these are the only 'pure' *C. nudus* (see below). A 15cm. high alpine species but fits in well with the others under glass here.) (15+) D
- 1.169.599 : **CALOCHORTUS NUDUS** Cal., Plumas Co., Long Valley. 1680m. G. Greger coll. (Since we have seen the more northern, high altitude, Trinity Co. populations of *C. nudus*, we have not been entirely comfortable about how "ethnically pure" these Plumas Co. populations are. Super little dwarf plants, anyway, and ones we find easy to grow in cultivation in the UK.) . . . . (20+) C

- 1.169.600 : CALOCHORTUS NUDUS X MINIMUS** \* Cal., Plumas Co., N of Spanish Ranch. 1220m. Coniferous woodland. (These are in effect pinkish versions of *C. minimus*. Ownbey writes at length on these intergrading populations, easily distinguished in seed as their capsules droop, whereas *C. nudus* has upright ones. Always grows in much drier places than pure *C. nudus*.) . (15+) C
- 1.170.003 : CALOCHORTUS NUTTALLII** Colorado, Mesa Co., SW of Whitewater. 1800m. Among *Artemisia* on stony, sandstone slopes. (Almost certainly the amazing sugar-pink form of this species, which flowers early in the Uintah Basin area.) . (20+) C
- 1.170.500 : CALOCHORTUS OBISPOENSIS** \* Cal., San Luis Obispo Co., NE of San Luis Obispo. 150m. Fissures on loose, serpentine cliffs. (In Sect. *Cyclobothra*, Subsect. *Weediani* but unlike anything else in the genus. Many small flowers on stiff, branching, 30cm. stems : hairy tufted, purple-tipped yellow segments, like a piece of miniature, feather millinery.) . . . (15+) D
- 1.171.000 : CALOCHORTUS PALMERI** \* Cal., Los Angeles Co., San Gabriel Mts., Bandido Camp. 1770m. Open slopes with *Artemisia* & sparse *Pinus*. (A dainty, little Mariposa from the ranges E of Los Angeles. Pink with occasional whites.) (15+) D
- 1.171.101 : CALOCHORTUS PALMERI var. MUNZII** \* Cal., Riverside Co. 1300m. Sandy clay in open woodland. Ex a J. & G. Robinett coll. (Lacks the stem-bulbils of the type. Little-known and very local with bright lavender-pink flowers.) . . . (15+) E
- 1.171.500 : CALOCHORTUS PANAMINTENSIS** Cal., Inyo Co., Panamint Mts. 2300m. Stony openings among *Pinus* & *Juniperus*. (An isolated endemic in Subsect. *Nuttaliani*, stranded on the top of this desert range. Immaculate, white flowers.) . . (15+) E
- 1.171.510 : CALOCHORTUS aff. PANAMINTENSIS** Cal., Kern Co., W of Walker Pass. 1650m. Open stony areas among *Artemisia*. (A puzzling population from the SE limits of the Sierra Nevada, WSW of the Panamints but separated by about 120km. of desert. Unspotted, white, green-striped flowers key-out as *C. panamintensis* but a few are flushed rose or lavender.) (15+) E
- 1.173.200 : CALOCHORTUS PERSISTENS** \* Cal., Siskiyou Co., W of Yreka. 1750m. Loose serpentine talus. (The first few cultivated seeds from our 1992 coll. of this remarkable species, unlike any other : tulip-like in its big, broad, fleshy, basal leaf & two large, bowl-shaped flowers on a 10cm. stem. Bright-pink with yellow hairs. For the skilled alpine-bulb specialist.) . . . . (10) F
- 1.173.504 : CALOCHORTUS PLUMMERAE** \* Cal., Riverside Co. 580m. Dry chaparral. Ex a J. & G. Robinett coll. (Superlative, large, late-flowerer in Subsect. *Weediani*. Great pink bowls, densely golden hairy inside, on branching 60cm. stems.) (20+) C
- 1.174.500 : CALOCHORTUS PULCHELLUS** \* Cal., Contra Costa Co., Mt. Diablo NE of Danville. 520m. Steep, wooded slopes. J. Andrews coll. (A charming, 20cm., bright lemon-yellow Fairy Lantern, only known from Mt. Diablo. Distinct from *C. amabilis* in its greener leaves and larger, spherical flowers but just as easy to grow in the bulb-frame or alpine-house in the UK.) (15+) C
- 1.175.800 : CALOCHORTUS SIMULANS** Cal., San Luis Obispo Co. 660m. Among chaparral on gritty clay bank. J. & G. Robinett coll. (The true plant, which inhabits, usually granitic, sands in a very limited, hot, dry zone of the inner S Coast Ranges. Flowers are superficially similar to *C. catalinae* with dark nectaries but can vary to pale yellow edged with rose-pink.) . . . . (15+) E
- 1.176.000 : CALOCHORTUS SPLENDENS** \* Cal., Ventura Co., Lockwood Valley. Openings among *Artemisia* in sandy clay. (Beautiful Mariposa, easily grown in our experience. Soft lavender with white, wispy hairs and dark anthers.) . . . . (20+) B
- 1.176.001 : CALOCHORTUS SPLENDENS** \* Cal., Lake Co., Walker Ridge. 600m. Openings in scrub over serpentine. (From near the northern limit for this species, in a form marked basally with deep purple. 30-50cm. high.) . . . . . (20+) B
- 1.177.000 : CALOCHORTUS SUPERBUS** \* Cal., Mariposa Co., NNW of Hell Hollow. 700m. Open, stony, serpentine slope. (From the type-locality of this classic Mariposa, distinct from *C. venustus* in its linear, inverted V-shaped gland. Almost invariably white here with purple-brown blotches & basal markings. Easy to grow with us and now setting seed well. 30-50cm.) . . . . (20+) B
- 1.177.006 : CALOCHORTUS SUPERBUS** \* Cal., El Dorado Co., N of Placerville. 720m. Openings among *Pinus*. (From the famously spectacular Spanish Flat colony with lilac, lavender & purple flowers, rich shades of faded antique fabrics.) . (15+) D
- 1.178.002 : CALOCHORTUS TOLMIEI** \* Oregon, Josephine Co., Eight Dollar Mt. SW of Selma. 450m. Open S-facing slope, among volcanic detritus. (A little, hairy Cat's Ear, most widespread in the genus & impressively robust here. 20cm.) . (20+) B
- 1.178.020 : CALOCHORTUS TOLMIEI** \* Cal., Humboldt Co. 900m. Open, grassy meadow. Ex a J. & G. Robinett coll. (A beautiful violet-centred form of this pale lavender species, arguably the most variable in this genus. 20cm.) . . . . . (15+) C
- 1.179.500 : CALOCHORTUS UNIFLORUS** \* Cal., Lake Co., NE of Middletown. 290m. Open meadow in heavy clay. (A dwarf, lilac flowered member of Subsect. *Nudi*, easily grown in Europe, where it fits in well with Mediterranean bulbs. 15cm.) (15+) B
- 1.179.501 : CALOCHORTUS UNIFLORUS** \* Oregon, Josephine Co., SW of O'Brien. 550m. Wet depressions among sparse conifers. (One of the northern populations : the species has a wide range well into Oregon, always in vernal wet places. This may be possible outside in the UK. Flowers much later than the preceding : lilac with purple markings above the nectaries.) (15+) B
- 1.180.507 : CALOCHORTUS VENUSTUS** \* Cal., Fresno Co., Stump Springs Road (Sierra Nevada NE of Fresno), 1740m. Sparsely wooded slope in sandy, granitic soil. From a J. & G. Robinett coll. (The species, distinguished by its rather square nectary, is the ultimate in variability of ground-colour and markings. This population exceeds imagination in shades of pink, purple, red and orange with every combination of these and of the complex blotches and basal markings.. A truly wonderful species.) . . . . . (15+) D
- 1.180.550 : CALOCHORTUS VENUSTUS** \* Cal., Kern Co., Cuddy Valley. 1840m. Openings among *Pinus*. (A very restricted & unique colony in a series of subtle red shades, like crimson & scarlet velvet, faded to varying degrees. Superlative.) . . (15+) D

A : \$2.00 ; £1.50 ; DM4,- ; FF14.- C : \$4.00 ; £2.50 ; DM7,- ; FF23.- E : \$7.00 ; £4.50 ; DM12,- ; FF41.-  
 B : \$3.00 ; £2.00 ; DM5,- ; FF18.- D : \$5.00 ; £3.50 ; DM9,- ; FF32.- F : \$9.00 ; £6.00 ; DM16,- ; FF55.-

- 1.181.500 : CALOCHORTUS VESTAE** Cal., Mendocino Co., SW of Covelo. 390m. Among grasses on heavy clay slope. (Double crescent nectaries & a different chromosome number distinguish this from *C. superbus* & *C. venustus*. Spectacular, solid-white flowers with big brown-purple blotches in yellow zones & purple-pencilled bases. A splendid northern mariposa.) . . . (20+) **B**
- 1.182.003 : CALOCHORTUS WEEDII** (var. *weedii*) \* Cal., San Diego Co. 750m. Chaparral, in rocky clay. (A big, southern *Cyclobothra* in Subsect. *Weediani*, with up to 6, erect, rich-yellow bowls, rimmed with brown & intricately marked.) (15+) **C**
- 1.182.200 : CALOCHORTUS WEEDII** var. **VESTUS** Cal., Monterey Co., Monterey Range, Lottie Potrero. 700m. Serpentine outcrops. J. Andrews coll. (An seldom collected, little-known, odd, northern disjunct race, considered to have some affinities to *C. obispoensis*. Squarish bowls in creamy, brownish or purplish shades with dark hairs instead of yellow ones.) . . . . . (15+) **E**
- 1.182.500 : CALOCHORTUS WESTONII** Cal., Kern Co., S of Alta Sierra. 2050m. Coniferous woodland. (A little subalpine Cat's Ear stranded a long way from any relatives, on top of the Greenhorn Mts. at the S end of the Sierra Nevada. About 15cm. with hairy, lilac-tinged bells. In spite of its restricted habitat, it is easier than many in the UK, where it enjoys the cool summers.) (15+) **E**

## Calochortus : Confused? Let us choose!

### CALOCHORTUS : COLLECTION No. 1 : FAIRY LANTERNS & CAT'S EARS

Eight members of Section *Calochortus*. If you grow Mediterranean bulbs, you can grow these : *C. albus*, *C. albus rubellus*, *C. amabilis*, *C. amoenus*, *C. nudus*, *C. pulchellus*, *C. tolmiei*, *C. uniflorus* . . . . . List value at least \$20.00 or £17. - for only \$15.00 or £10.

### CALOCHORTUS : COLLECTION No. 2 : MARIPOSAS

Eight members of Section *Mariposa*. Some of the 'classic' later-flowering species : *C. argillosus*, *C. clavatus*, *C. luteus*, *C. splendens*, *C. superbus*, *C. venustus* in two variants, & *C. vestae*. . . . . List value at least \$20.00 or £17. - for only \$15.00 or £10.

### CALOCHORTUS : COLLECTION No. 3 : INTERMOUNTAIN SPECIES

For the serious enthusiast : some of the most difficult to grow : *C. aureus*, *C. bruneaunis*, *C. eurycarpus*, *C. excavatus*, *C. flexuosus*, *C. invenustus*, *C. kennedyi*, *C. kennedyi munzii* and *C. nuttallii* . . . . . List value at least \$37.00 or £25. - for only \$20.00 or £15.00

- 1.184.200 : CALTHA HOWELLII** Cal., Alpine Co., above Winnemucca Lake. 2750m. Moist areas in turf among granite boulders. (The Sierra Nevada representative of a species-group.. White flowers, 2 on each 15cm. stem, as the snow melts.) . . (30+) **B**
- 1.191.104 : CAMASSIA QUAMASH** Cal., Plumas Co., Long Valley. 1680m. G. Greger coll. (Imposing racemes packed with starry, blue-violet flowers on 40-80cm. stems. Its meadow-habitats are often flooded after snow-melt but dry-out later.) . . . . (20+) **A**
- 1.199.500 : CASSIOPE MERTENSIANA** Cal., Alpine Co., S of Carson Pass, above Winnemucca Lake. 2750m. In turf & among granite boulders in moist areas. (Exquisite little ericaceous shrublet with profuse white bells. For the peat-garden.) . . . (50+) **C**
- 1.211.050 : CEANOOTHUS INTEGERRIMUS** var. **CALIFORNICUS** Cal., Plumas Co., Indian Falls. 1220m. G. Greger coll. (A variable, deciduous shrub, about 3m. high. "One of the most elegant" writes Bean, "producing its long, graceful panicles in great profusion" in mid-summer. Colour can grade from white through to blue or occasionally pink. Seed from a cold area.) (30+) **B**
- 1.213.005 : CEANOOTHUS PROSTRATUS** Cal., Lassen Co., N of Westwood. 1580m. G. Greger coll. (A prostrate, evergreen shrub, forming wide mats, usually in open pine-forest. With its little, toothed holly-leaves & clusters of flowers in pale to deep blue, it has been described as "one of the most showy & desirable of alpine shrubs". Temperature-hardy but needs a hot, dry site.) (20+) **B**
- 1.225.105 : CIMICIFUGA ARIZONICA** (*Actaea arizonica*) \* Arizona. Ex a J. Compton coll. (A local, relict species from moist woodland in a few shaded canyons. Possibly new to cultivation in the UK, this has settled in well in our Welsh moist woodland. Cut basal foliage & upright, branching stems, 1-1.5m. high, with erect spires of white flowers in late summer.) . . . . . (20+) **D**
- 1.229.810 : CLEMATIS COLUMBIANA** (var. *columbiana*) Utah, Garfield Co., Red Canyon. 2600m. Limestone. M.&P.Stone 99-013 (A woody climber with nodding violet-blue bells which fade to purplish shades. One of the two western American members of the circumpolar Section *Atrageneae* & long confused with the allied, ternate-leaved *C. occidentalis*.) . . . . . (15+) **C**
- 1.231.810 : CLEMATIS VIORNA** \* No data. A semi-woody, pinnate-leaved, eastern species, climbing to 2-3m. Little, nodding, leathery, narrow-mouthed bells with recurved tips to the sepals, in red-purple, followed by feathery, brown seed-heads. (15+) **B**
- 1.299.001 : DARLINGTONIA CALIFORNICA** Cal., Trinity Co., Scott Mountain summit. 1650m. Open, wet meadow in coniferous forest. (A monotypic genus of insectivorous plants, restricted to S Oregon & N California. Great, winged translucent pitchers, about 50 cm. high, overtopped by bizarre yellow-green & dull purple flowers on stems of almost 1m. A montane plant.) . . . (50+) **C**

- 1.300.000 : DELPHINIUM ANDERSONII** (var. *andersonii*) Nevada, White Pine Co., NW of Ely. 2200m. Openings among Juniperus in gravelly clay. (From the winter- cold, summer-dry interior steppes. Rich pure-blue flowers. 30-50cm.) . . (20+) C
- 1.300.700 : DELPHINIUM CARDINALE** \* Cal., Ventura Co., NW of Ojai. 650m. Among scrub above dry stream-bed. (This has no affinities with *D. nudicaule*, in spite of its red flowers. A big plant, well over 2m. high, from a massive rootstock. A branched stem carries a long succession of opulent flowers in brilliant scarlet-red. If foliage appears early, it needs protection.) . (20+) D
- 1.300.900 : DELPHINIUM DEPAUPERATUM** \* Cal., Sierra Co., SE of Sierraville. 1870m. Open, gravelly areas among sparse *Pinus*. (From our 1989 coll. 10949 & 1992 coll. 12728, distributed as *D. nuttallianum* but it seems to fit in better with this. A pretty, summer-dormant species with flights of rich purple flowers on branching 20cm. stems over a long period in spring.) . (20+) C
- 1.302.500 : DELPHINIUM LUTEUM** \* Cal., Sonoma Co., SW of Bodega. Ex a W. Roderick coll. (A species hovering on the verge of extinction, known from two small populations on seasonally wet cliffs NW of San Francisco. Branching stems, of about 30 - 50cm., packed with large, waxy, shining, clear-yellow flowers in early summer. Dormant in late summer.) . . . . . (20+) D
- 1.302.700 : DELPHINIUM NUDICAULE** Cal., Plumas Co., S of Greenville. 1370m. Among conifers on steep, gravelly slope. (A high altitude inland form, about 30cm. high, of this scarlet-orange species. Distinct from widely grown coastal material) (20+) B
- 1.302.750 : DELPHINIUM NUDICAULE** \* Cal., Mendocino Co., Etsel Ridge ESE of Covelo. 1980m. Among rocks on serpentine outcrop. (A distinct, tall race from the high serpentines of the inner N Coast Ranges. Up to 1m. high with the long-spurred, brilliant scarlet flowers held out on long pedicels. A superb plant, very successful outside with Dinah Batterham (Dorset, UK). (20+) D
- 1.303.100 : DELPHINIUM PARISHII** Cal., Inyo Co., SW of Gilbert Summit. 1620m. With sparse *Artemisia* on open, stony slope. (Cold-desert species with 50cm. racemes of downy, white-eyed flowers in a beautiful pale azure-blue.) . . . . . (20+) C
- 1.304.300 : DELPHINIUM TROLLIIFOLIUM** Cal., Humboldt Co., SSW of Willow Creek. 1070m. Steep, moist, part-shaded banks. (A magnificent wet-grower distributed in the N Coast Range from Humboldt Co. N into W Oregon. About 2m. high with large, laciniately lobed leaves & spires of rich, deep blue flowers. It should be easily grown in the UK in rich, moist soil.) . . (20+) C
- 1.304.500 : DELPHINIUM VARIEGATUM** (subsp. *variegatum*) \* Cal., Mendocino Co., SW of Covelo. 390m. Heavy clay on open, grassy slope. (A spectacular species around 50cm. high with racemes of flowers in rich, deep royal-blue. This has grown very well with us, flowering for a long period & setting seed well. Should be easy in a bulb-frame anywhere in the UK.) . . . . . (20+) C
- 1.305.001 : DENDROMECON RIGIDA** Cal., Tulare Co., NE of Springville. 1150m. Among scrub on steep slopes. (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
- 1.306.350 : DICENTRA NEVADENSIS** Cal., Tuolumne Co., Pilot Ridge (Sierra Nevada E of Oakdale). 1340m. Steep, NE-facing metamorphic rock outcrops in conifer-oak forest. J. Andrews coll. (A very narrow Sierra Nevada endemic more or less confined to a few 'gravel bars' to the S in Tulare Co. between 2200 & 3000m. It has been included under *D. formosa*.) . . . . . (20+) D
- 1.308.300 : DICHELOSTEMMA IDA-MAIA** \* Cal., Humboldt Co., NNE of Orleans. 180m. Stony slope at woodland margin. (Pendant, tubular flowers in pure glowing red with greenish-cream segments surrounding the white staminodes. 1m.) . (20+) C
- 1.308.409 : DICHELOSTEMMA MULTIFLORUM** Cal., Plumas Co., near Greenville. 1100m. G. Greger coll. (Dense, rounded umbels of pinkish to bluish purple flowers on 60cm. stems above clumps of glaucous leaves. Easily grown.) . . . . . (20+) B
- 1.309.510 : DISPORUM TRACHYCARPUM** No data. The Rocky Mt. representative in this genus of woodlanders, related to *Polygonatum*. Greeny cream bells on branching 30cm. stems are followed by orange berries. Good, moist soil in shade. (10) B
- 1.310.500 : DODECATHEON CLEVELANDII** (subsp. *clevelandii*) \* Cal., Santa Barbara Co. 1150m. Sunny serpentine meadow. Ex a J. & G. Robinett coll. (Summer-dormant : for the bulb-frame. Showy pink flowers with yellow noses.) . . . . . (20+) B
- 1.311.000 : DODECATHEON HENDERSONII** Cal., Plumas Co., S of Greenville. 1370m. Among conifers on steep, stony slope. (Characteristic species of northern woodlands. Summer-dormant. Magenta to deep lavender.) . . . . . (20+) B
- 1.311.200 : DODECATHEON JEFFREYI** Cal., Trinity Co., Scott Mt. Summit. 1650m. Open, wet meadow in coniferous forest. (Always in marshy meadows & along streams in the mountains. Varying shades of lavender pink.) . . . . . (30+) B

## Epilobium rigidum : an aristocrat among willowherbs

- 1.315.450 : EPILOBIUM RIGIDUM** Oregon, Josephine Co., SW of O'Brien. 700m. Open, stony areas on serpentine. (Our late-season trip to the West enabled us to collect some excellent seeds of this outstanding species, the finest in the genus, & choicest of the trio centred on *E. obcordatum*. Confined to a few sites on the serpentines along the California-Oregon line, this tiny, woody-based perennial carries extremely large, rich-pink flowers for a long period in late summer, over neat, fleshy, blue-green leaves. Not at all impossible to grow in an alpine-house pan, or even a sunny trough, in the UK but difficult to propagate, though it has set a few seeds with us. Very difficult indeed to collect in any quantity but fortunately it usually germinates quickly & well.) . (5) E
- 1.320.200 : ERIGERON ARGENTATUS** Cal., Inyo Co., Westgard Pass. 2230m. Openings among *Artemisia* in gravelly soil. (One of the best medium-sized species. Generous, lilac-blue daisies from narrow-leaved, silvery-grey clumps. 20cm.) . . . . (20+) B

A : \$2.00 ; £1.50 ; DM4,- ; FF14.-    C : \$4.00 ; £2.50 ; DM7,- ; FF23.-    E : \$7.00 ; £4.50 ; DM12,- ; FF41.-  
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## Erigeron nanus : something special from Idaho

- 1.322.300 : ERIGERON NANUS** Idaho, Cassia Co., Albion Range, Mt. Harrison. 2800m. Exposed, gritty, rocky, S-facing summit slopes. B.J. Lowry coll. (Several years ago Ned & Betty Lowry, exploring the southern Idaho ranges, came on this superlative alpine in flower. They were at last able to return for seed in 2000. Betty (one of the most skilled alpine-growers in N America, so we'll certainly take her word for this) rates this as "a marvellous plant...compact...very dwarf habit (about 5cm.) and fine color (a good lavender-blue - no pallid daisy here)." It appears to be endemic to windswept ridges at elevations between about 2100m. & 3300m. in the mountains around the borders of N Utah, SE Idaho & SW Wyoming. The name, applied nowadays to some cultivated material in the UK, was first published by Nuttall in 1841. It was subsequently used for a horticulturally unimportant E European species in the *E. alpinus* complex by Schur in 1866 & appears in 'Flora Europaea' under the guise of validity. To compound the confusion, the British 'Index Hortensis' lists *E. nanus* Nuttall as a synonym of the entirely different *E. radicans* Hooker 1834. This distinct Mt. Harrison *Erigeron* has almost certainly never been in cultivation and is something very special indeed.) . . . . . (15+) **E**
- 1.330.250 : ERIOGONUM CAESPITOSUM** Cal., Mono Co., White Mts. 2300m. Open, stony, limestone slope. (One of the best & also one of the easiest to grow among the tightly pulvinate buckwheats. A widely distributed species forming compact mats of tiny, spatulate, white-felted leaves. Clustered yellow heads, opening almost stemless, flush to red as they mature.) . . . (20+) **C**
- 1.330.850 : ERIOGONUM HOLMGRENII** Nevada, White Pine Co., Snake Range. 3400m. Exposed limestone talus. J. Andrews coll. (Endemic to this range, above the bristlecone pines with *Aquilegia scopulorum* & *Primula nevadensis*. Introduced to cultivation by John in 1995. In Sect. *Capitata* with local rarities like *E. gracilipes* & *E. kingii*. Raspberry-pink heads.) (15+) **E**
- 1.331.000 : ERIOGONUM KINGII** Nevada, Elko Co., Ruby Mts., Thomas Creek Canyon. 2880m. J. Andrews coll. (Another desirable, narrow endemic in Sect. *Capitata*, isolated here with *Primula capillaris*. New to cultivation.) . . . . . (15+) **E**
- 1.331.500 : ERIOGONUM OVALIFOLIUM** Cal., Mono Co., White Mts., Westgard Pass. 2230m. Level, gravelly steppe. (A widespread, 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 here.) . . . . . (20+) **C**
- 1.332.500 : ERIOGONUM SISKIYOUENSE** Cal., Trinity Co., Mt. Eddy. 2050m. (A very fine, dwarf alpine species, 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**
- 1.335.550 : ERIOGONUM UMBELLATUM var. SPECIOSUM** Oregon, Jackson Co., Carberry Creek, W of Applegate Lake. 1220m. Dry, rocky, S-facing serpentine slope. P. Gustafson coll. (Spectacular variant of this widespread species. A robust, dwarf shrub, about 30cm. high with rich-green leaves, massed with brilliant yellow flowers, maturing to scarlet & rust-red.) (15+) **C**
- 1.373.901 : GENTIANA SETIGERA** Oregon, Josephine Co., SW of O'Brien. 550m. Among grass tussocks in wet flushes with *Darlingtonia* on serpentine slopes. (A beautiful, late-flowering gentian of squelching wet habitats in SW Oregon with one locality in NW California. Up to 4, big, uniformly pure-blue flowers with fringed throats, on decumbent 20-30cm. stems from perennial rosettes of spoon-shaped basal leaves. Possibly best grown in sun in wet peat-garden conditions outside in the UK) . . (30+) **C**
- 1.404.001 : HASTINGSIA ALBA** Cal., Trinity Co., Scott Mountain summit. 1650m. Open, wet meadow in coniferous forest. (A N Californian, liliaceous bulb, allied to *Schoenolirion* from the SE States. Narrow basal leaves & spires of densely packed, yellow-white flowers on stems of about 60cm. A plant of wet meadows and seeps, which should do well outside in the UK.) . . . . . (10+) **C**
- 1.422.009 : HESPEROCHIRON CALIFORNICUS** Cal., Plumas Co., Dry Flat. 1680m. Open, seasonally wet flat. G. Greger coll. (A beautiful, little, summer-dormant member of the *Hydrophyllaceae*. In all, about 5cm. high with tiny, narrowly spoon-shaped, hairy leaves and bell to funnel-shaped flowers, usually in white, tinged with lavender and veined with purple. Both these inhabit wet meadows & flats, inundated after snow-melt but drying later, & make delightful pan-plants for the alpine-house.) . . . (30+) **C**
- 1.422.109 : HESPEROCHIRON PUMILUS** Cal., Plumas Co., Bellas Flat. 1370m. G. Greger coll. (Mainly differs in its smooth leaves & flat, rounded, wide-open flowers. It is all but impossible to find the small, dormant roots of these, so sow thinly &, if you have to repot, spread most of the contents of the seed-pot over a larger pan.. They deserve every effort but need little.) . . . (30+) **C**
- 1.428.100 : HULSEA NANA** Cal., Siskiyou Co., Mt. Eddy - S side. 2600m. Loose serpentine talus. (High alpine of distinction with mounds of fascinating, pinnately lobed, woolly foliage and huge, many-rayed, yellow 'daisies' on stems under 15cm.) (10+) **D**
- 1.460.000 : IRIS BRACTEATA** Oregon, Josephine Co., Waldo Hill. 650m. Open, stony, serpentine areas, among scrub. (From near Howell's 1884 type-locality for this very local & distinct species. Thick, broad, leathery leaves & large, showy flowers, always in pale yellow, veined with maroon or brown, in the 'true' species. We doubt if much, if any, cultivated stock is 'pure'.) . . (15+) **C**
- 1.460.009 : IRIS aff. BRACTEATA** Cal., Del Norte Co., Little Jones Creek Road SW of Oregon state line. P. Gustafson coll. (From an outstanding colony of dwarf irises apparently derived from the larger *I. bracteata*, described by Phyllis as "really beautiful small plants, usually with 2 flowers on each 10-15cm. stem, in cream and white with red, purple or violet-blue markings.") . (15+) **D**

- 1.460.202 : IRIS DOUGLASIANA** Cal., Sonoma Co., Irish Hill. 150m. grassy slopes with coastal exposure. (Tough & vigorous, although a low-altitude, coastal plant. Rich purples here. Easy with no particular soil preferences in gardens.) . . . . . (15+) **B**
- 1.460.600 : IRIS HARTWEGII subsp. COLUMBIANA \*** Cal., Tuolumne Co., NE of Columbia. 650m. Steep, stony slope. (Only known from around the type-locality here and "much more attractive" than the type-race according to Victor Cohen. Virtually, a pale-yellow version of splendid *I. munzii*, which grows 225km. to the S. Well established with us in our polytunnel.) . (15+) **C**
- 1.460.701 : IRIS HARTWEGII subsp. PINETORUM** Cal., Plumas Co., near Greenville, 1100m. Openings in coniferous forest. G. Greger coll. (A Plumas Co. endemic, according to Lenz, the only taxon on the E slope of the Sierra Nevada. Usually much dwarfer than the long-stemmed type-race, it often opens two of its creamy yellow flowers simultaneously. Very cold here.) . . (15+) **C**
- 1.461.105 : IRIS MISSOURIENSIS** Cal., Alpine Co., S of Carson Pass. 2700m. Among grasses in moist meadow. (The only *Iris* listed here not from Series *Californicae* : in *Longipetalae* and very widespread through the mountainous regions of western North American. Usually plant of open meadows, moist, especially in spring. Pale-blue to lavender-blue. 50cm. or more high.) (15+) **C**
- 1.461.650 : IRIS TENUISSIMA** Cal., Humboldt Co., SSW of Willow Creek. 1580m. Stony areas in openings among conifers. (The species of the N Californian serpentines. Creamy white flowers with horizontal falls. Here it may show influence of *I. purdyi* : very fine large, flat flowers with much broader falls than normal, in rich, creamy shades variably veined with purple.) . . . . . (15+) **C**
- 1.461.701 : IRIS TENUISSIMA subsp. PURDYIFORMIS** Cal., Butte Co., Butte Meadows. 1220m. G. Greger coll. (A very local and somewhat obscure, pale yellow race from the shade of yellow pine woodland in the northern Sierra Nevada.) . . . (10+) **E**
- 1.461.800 : IRIS THOMPSONII** Cal., Del Norte Co., SW of Gasquet. 530m. Stony openings among *Arctostaphylos* & sparse conifers. P. Gustafson coll. (Boyd Kline considers this 'true' : you can call it *I. inominata* 'Dwarf Purple Form'. The smallest iris we have seen in this series : tight tufts of leathery, grassy leaves & short stems. It ranges through rich, deep blues & purples.) (15+) **D**
- 1.469.100 : KALMIA POLIFOLIA** Cal., Alpine Co., S of Carson Pass. 2750m. In turf & among granite boulders in moist areas. (A delightful twiggy, 15cm., ericaceous alpine shrublet distributed both in N America & NE Asia with pink flowers. Peat.) (50+) **C**
- 1.470.601 : KUMLIENIA HYSTRICULA** Cal., Plumas Co., North Fork Feather River Canyon, near Storrie Bridge. 600m. Wet moss-sheets on west-facing granite cliffs. G. Greger coll. (*Ranunculus hystriculus*, if you like, but the latest Californian flora, 'The Jepson Manual', follows Greene and splits it into a separate genus. Endemic to moss-sheets on vernal wet granites in the coniferous forest zone of the Sierra Nevada, where, according to Dwight Ripley, "it is so local that collectors have been known to spend a lifetime in that range without ever setting eyes on it." The rounded leaves are crenate or lobed and the buttercup-flowers are carried away from the basal rosettes on decumbent stems of about 15cm. The large white petaloid sepals are the prominent feature, surrounding the central cluster of stamens and small, yellow-green, gland-like petals or honey-leaves, as in *Helleborus*.) . . . . . (30+) **E**
- 1.495.009 : LEUCOCRINUM MONTANUM** Cal., Plumas Co., Dry Flat. 1680m. Seasonally moist open areas among *Artemisia*. G. Greger coll. (A very beautiful, dwarf member of the *Liliaceae*, in a genus on its own. A bit like a thinner version of the Moroccan *Asphodelus acaulis* in its tufts of linear leaves rising from a clump of deep, fleshy, roots but the big, starry, fragrant, white flowers rise up from the centre on long tubes, originating well below the ground, where each may mature one or two seeds.) . (10+) **E**
- 1.496.100 : LEWISIA CANTELOVII** Cal., Plumas Co., above N Fork Feather River at Belden. 710m. Among moss on shaded serpentine cliff. (Only known from a few cliffs around here. Many-flowered panicles of small, pale-pink flowers.) . . . (20+) **E**
- 1.496.701 : LEWISIA KELLOGGII** Cal., Madera Co., Shuteye Peak (Sierra Nevada E of Merced). 2310m. Granite. J. Andrews coll. (Dense rosettes of leathery, spoon-shaped leaves, withering in summer ; pink or white flowers on 3cm. stems.) . . . . . (20+) **E**
- 1.496.801 : LEWISIA LEANA \*** Cal., Shasta Co., Castle Crags, SW of Castle Lake. 1700m. Gravelly areas between serpentine outcrops. (Rosettes of succulent, linear leaves ; many-flowered 15cm. panicles of bright magenta-pink flowers.) . . . . (20+) **E**
- 1.497.000 : LEWISIA OPPOSITIFOLIA \*** Oregon, Josephine Co., Waldo Hill. 600m. Among serpentine detritus along gully. (Narrow, blunt, succulent leaves : 15cm. umbels of up to 6, rounded, white flowers with red-fringed sepals.) . . . . . (20+) **D**
- 1.497.200 : LEWISIA REDIVIVA \*** Wyoming, Albany Co., E of Centennial. 2700m. In granite grit of open, stony 'flats'. (The tiny clusters of fleshy, linear leaves are hardly noticeable under the huge, diaphanous, water-lily flowers, appearing successively on the shortest of stems. The Wyoming colonies, variable in flower-shape & colour, are generally of a richer pink than many.) (20+) **C**
- 1.497.202 : LEWISIA REDIVIVA \*** Idaho, Butte Co., NE of Carey. 1520m. E & SE-facing slopes of stony ridge. (From a splendid site of sumptuous whites, which we found in 1989 : rather similar to the Californian plants separated as var. *minor*.) . (20+) **D**
- 1.497.230 : LEWISIA REDIVIVA** Cal., Napa Co., N of Calistoga, The Palisades. 840m. J. Andrews coll. (The first coll. we have listed seed from the Central Valley of California, west of the Sierra Nevada. Expect especially large pink flowers.) . . . . . (20+) **D**
- 1.497.301 : LEWISIA REDIVIVA var. MINOR** Cal., Kern Co., Mt. Pinos. 2680m. In granite grit on open slopes in summit area. (A high altitude race, worth at least subspecific rank, from 2000-2700m. Local on the drier interior ranges from the San Bernardino, the Panamint & White Mts. & W Nevada. An exquisite plant, with rounded, pearl-white flowers and bronze sepals.) . . (20+) **D**
- 1.497.401 : LEWISIA STEBBINSII \*** California, Mendocino Co., ESE of Covelo, Hell's Half Acre. 1600m. Open, gravelly slope. J. Andrews coll. (The most recently discovered member of this genus only known from this area. Short, radiating, ground-hugging stems, each carrying up to 5, upward-facing, rose-pink flowers, veined with deep rose. Summer-dormant.) . . . . . (20+) **E**

1.497.610 : **LEWISIA TWEEDI** \* No data. The famous endemic of the Wenatchee granites, in Washington, & queen of the genus to some (we prefer *L. rediviva*). Rosettes of smooth, fleshy, obovate leaves and immense, silky flowers in palest tea-rose shades of salmon, apricot and cream. Not difficult with care in a very gritty, lime-free mix, dryish from late summer to spring. . . (20+) C

## Lilium : some excellent 2000 collections

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. In the latter group, *L. pardalinum*, the equivalent of the eastern *L. superbum*, is the focus of a number of taxa. These have been placed under it at subspecific level by Mark Skinner in "Jepson" but we keep them at specific level here, as we feel this is of

more use to gardeners. There is a great deal of introgression and hybridization. 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 well-suited to the peat-bed or similar humus-rich conditions. Dry growers can be a challenge. In all cases, the westerners are plants of lime-free soils.

- 1.498.100 : **LILIUM BOLANDERI** Cal., Humboldt Co. 1200-1500m. In chaparral on serpentine. (Maybe the most beautiful & maybe the most difficult. A dry-growing, serpentine-endemic from the Coast Ranges near the California-Oregon line. It can reach 1m. with up to 7 flowers but is often dwarf. Stems whorled with thickish, blue-grey leaves carry horizontal to half-nodding, funnel-shaped flowers in muted crimson, glaucous outside & purple-dotted inside, with dark purple anthers & orange pollen.) . . . . (15+) E
- 1.498.501 : **LILIUM COLUMBIANUM** Cal., Del Norte Co. 350 m. Redwood forest. (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+) C
- 1.499.100 : **LILIUM KELLEYANUM** Cal., Tulare Co., E side of Moses Mt. 2070m. J. Andrews coll. (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
- 1.499.209 : **LILIUM KELLOGGII** Cal., Humboldt Co., near Kneeland. 1150m. B. Kline coll. (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 on the edges. Narrow, greyish, crinkled leaves. Usually under 1m.) (15+) E
- 1.499.211 : **LILIUM KELLOGGII** from **WHITE FORM** \* Cal., Humboldt Co. Ex a B. Kline coll. . . . . (10+) F
- 1.499.701 : **LILIUM PARDALINUM** Cal., Plumas Co., W of Canyon Dam. 1370m. Among *Salix* & grasses in wet meadow. G. Greger coll. (Most widespread wet-grower, very variable but distinct in its long filaments & capacity to form clonal rhizomatous mats. Red-orange turkscap flowers with maroon spots, margined with yellow near the recurving segment-tips.) . . . . (20+) C
- 1.499.702 : **LILIUM PARDALINUM** Cal., Humboldt Co., SSW of Willow Creek. 1580m. Wet gully at woodland margin. (From a magnificent small colony at the edge of *L. columbianum* territory : possibility of some introgression here.) . . . . . (20+) C
- 1.499.900 : **LILIUM PARRYI** \* Cal., Los Angeles Co., San Gabriel Mts., along Little Rock Creek. 1990m. Ex a J. Andrews coll. (Except for *L. humboldtii ocellatum*, the most southern species and a distinct one : like no other in its strongly fragrant, bright yellow, trumpet-shaped flowers, with a few tiny, sparse maroon dots, held horizontally or slightly nodding : up to 30 on stems of about 2m. A local plant of wet meadows & streamsides in coniferous forest in SW California & S Arizona.) . . . . . (20+) D
- 1.499.920 : **LILIUM PARRYI** \* Arizona, Santa Cruz Co., Huachuca Mts., S of Tucson. Ex an S. Walker coll. . . . . (10+) D
- 1.500.001 : **LILIUM PARVUM** Cal., Alpine Co., Hope Valley. 2100m. Among *Salix* scrub in moist area. (The spectacular high altitude wet-grower of the N Sierra Nevada. Upward-facing, bell-shaped flowers, mostly in orange shades here. The stems, whorled with leaves can be 2m. high with 40 flowers but are usually a lot less. Splendid but not so easy to grow in the UK.) . . . . . (20+) D
- 1.500.009 : **LILIUM PARVUM** Cal., El Dorado Co., Fallen Leaf Lake. 2000m. Wet meadow. B. Kline coll. . . . . (20+) D
- 1.500.050 : **LILIUM aff. PARVUM** Cal., Nevada Co., Sierra Nevada, Monument Ridge. 2010m. Wet sites on granite. J. Andrews coll. (This seems a consistent, distinct local race with much wider flowers, opening out flat, in yellow to clear orange-yellow, fragrant & sometimes with a few crimson spots. John has applied Purdy's name *L. parvum* var. *luteum* to this. This name is not recognized by Mark Skinner in the current "Jepson" but is given as a synonym of *L. kelleyanum* by Munz, following Stearn, who published a new name, *L. parvum* f. *crocatum* to cover the yellow phase of *L. parvum*. Stearn states, however, that this has campanulate flowers, like typical *L. parvum*. John's plant may well deserve recognition as a distinct taxon.) . . . . . (20+) E
- 1.500.401 : **LILIUM RUBESCENS** Cal., Humboldt Co. 1000m. Among *Gaultheria* & *Rhododendron* scrub at edge of coniferous forest. (A beautiful Coast Range endemic, closest to *L. washingtonianum*, though they can grow together & remain distinct. Apparently it "has unique chromosomes for the genus." A dry-grower with stems of up to 2m. carrying 20 or more upward-facing, extremely fragrant, trumpets opening white with minute purple dots, which suffuse over the surface until it is wine-coloured.) . . (15+) D

- 1.500.900 : LILIUM VOLLMERI** Oregon, Josephine Co. 500m. Along wet ditch. (A wet-grower in the *L. pardalimum* group. Near *L. shastense* but distinguished by its 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
- 1.501.002 : LILIUM WASHINGTONIANUM** (subsp. *washingtonianum*) Cal., Plumas Co., N of Greenville. 1220m. G. Greger coll. (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
- 1.501.004 : LILIUM WASHINGTONIANUM** (subsp. *washingtonianum*) Cal., Nevada Co. 1890m. J. Andrews coll. . . (20+) D
- 1.501.101 : LILIUM WASHINGTONIANUM** subsp. **PURPURASCENS** Cal., Humboldt Co. SSW of Willow Creek. 1580m. Among *Arctostaphylos* scrub on steep, E-facing side of ridge. (The type-race is restricted to N California but this extends to Mt. Hood in Oregon. The bulb-scales are different and the flowers are slightly smaller, flushing to pink-purple with age.) . (15+) D
- 1.501.200 : LILIUM WIGGINSII** Cal., Del Norte Co., ENE of Gasquet. 500m. Margin of stream in serpentine gully. (A wet-grower in the *L. pardalimum* group, listed in 1989 as *L. vollmeri*. Many, nodding orange-yellow flowers on 2m. high stems.) . (15+) D
- 1.501.201 : LILIUM WIGGINSII** Oregon, Jackson Co. B. Kline coll. . . . . (15+) D
- 1.550.210 : LOBELIA CARDINALIS** No data. Canadian seed of this utterly & indestructibly hardy species, sadly confused by UK gardeners with the tender Mexican *L. fulgens* & its hybrids. Spires of lipped, brilliant scarlet flowers reach 1m. . . . (100+) B
- 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 despite its low altitude origin.) . . . . . (15+) B
- 1.516.150 : LUPINUS ARGENTEUS** var. **MEIONANTHUS** (*Lupinus meionanthus*) Cal., Plumas Co., E of Chilicoot. 1520m. Open ridge-top. G. Greger coll. (A sub-shrubby perennial, the continental climate race of this variable species, from the drier, N Sierra Nevada E into Nevada. Leaves appressed with silver-grey hairs & racemes, anything from 20cm. to 90cm. high, of dull-blue to lilac flowers with yellow banner-patches. Adapted to extremely low temperatures but likely to be intolerant of wetness.) . . . (10) C
- 1.534.350 : LUPINUS POLYPHYLLUS** (var. *polyphyllus*) \* Canada, BC, Vancouver Is., S of Port Renfrew. Sea-level. Ex N. Macer 94- (A fine large herbaceous perennial from moist sites and marshy areas, distributed S into California & E into Idaho. Lush, palmately compound foliage & densely whorled racemes of purple-blue flowers can rise to as much as 1.5m. high.) . . (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, with downy, greyish leaves & short racemes of beautiful, blue & creamy-white flowers.) . . (10) B
- 1.625.000 : MIMULUS TILINGII** Cal., Alpine Co., S of Carson Pass. 2750m. Moist, shaded granite crevices. (A mat-forming, high alpine perennial with almost stemless, big yellow flowers emerge from baggy calyces strongly speckled with crimson.) (100+) C
- 1.708.150 : PENSTEMON MORIAHENSIS** (Sect. *Glabri*) Nevada, White Pine Co., Snake Range, Mt. Moriah. 2670m. In pinyon-juniper-sagebrush associations. J. Andrews coll. (A local species, only discovered in 1977 & limited to this county. Erect stems of about 30cm. carry cymes of large flowers, in a rich penetrating blue, with white-hairy anthers in their throats.) . . . . . (20+) D
- 1.708.501 : PENSTEMON NEWBERRYI** (var. *newberryi*) (Sect. *Erianthera*) Cal., Plumas Co. 1370m. E-facing, granite slope. G. Greger coll. (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. An excellent, hardy, rock-garden plant.) . . . . . (20+) B
- 1.710.300 : PENSTEMON PURPUSII** (Sect. *Saccanthera*) Cal., Mendocino Co. 2040m. (Choice alpine-endemic of the N Coast Range serpentines. Mats of little round, ash-grey leaves & big, baggy, flowers in a rich, luminous imperial-purple.) . . (20+) D
- 1.710.600 : PENSTEMON ROSTRIFLORUS** (Sect. *Bridgesiana*) Cal., Mono Co., S of Bridgeport. 2750m. Exposed, steep, loose, gravelly slope. (Neat & shrubby based with narrow, leathery leaves surmounted by spectacular scarlet tubes. 50cm.) . (20+) B
- 1.710.704 : PENSTEMON RUPICOLA** (Sect. *Erianthera*) Cal., Siskiyou Co., SW of Castle Lake. 1750m. Granite crevices on open slopes. (The classic, saxatile, alpine species of the Cascades, southward from Washington to N California. Shrubby mats with small, rounded, glaucous-grey leaves and large, woolly-anthered flowers, here in shades from pale to deep pinks.) . . . . . (20+) C
- 1.712.100 : PENSTEMON THOMPSONIAE** (subsp. *thompsoniae*) (Sect. *Caespitosi*) Nevada, White Pine Co., Hamilton Road. 2050m. In calcareous clay on open 'flats'. J. Andrews coll. (A shrubby, caespitose mat-former, the Great Basin cousin of *P. caespitosus*. Prostrate stems set with tiny, ashy-white leaves carry violet-blue flowers with orange-gold staminodes.) . (20+) D
- 1.760.200 : POLEMONIUM CARNEUM** Oregon, Jackson Co., Siskiyou Mts., S of Ashland. 1400m. P. Gustafson coll. (An unusual & handsome, taller species, up to 50cm. high, with clusters of rather flat, bell-shaped flowers in apricot-pink.) . . . . . (20+) B
- 1.760.755 : POLEMONIUM PULCHERRIMUM** Oregon, Jackson Co., Siskiyou Mts., S of Ashland. 2150m. Moist, shaded areas at tree-line. (A dwarf, alpine perennial with tufts of compound foliage & 15cm. stems with open bells in blue or white.) (20+) C
- 1.760.950 : POLEMONIUM VISCOSUM** Nevada, White Pine Co., Snake Range, Mt. Moriah Table. 3475m. J. Andrews coll. (From an intriguing, disjunct population, isolated on top of a Great Basin range. Its flowers approach those of *P. chartaceum*. Tufts of sticky, dissected basal leaves with 15cm. stems carrying dense heads of flowers in a famously intense violet-blue.) . . (20+) D

## Primula : exciting western primroses

- 1.768.000 : **PRIMULA CAPILLARIS** Nevada, Elko Co., Ruby Mts., Thomas Creek Canyon. 2835m. J. Andrews coll. (A *P. cusickiana* relative endemic to this single locality on a cold, N-facing slope of the Rubies, where it grows in turf & moss-mats. "Not known in cultivation" writes John Richards in his monograph of the genus. John could collect very little seed in 2000.) (20+) **F**
- 1.768.100 : **PRIMULA DOMENSIS** Utah, Millard Co., House Range, Notch Peak. 2450m. Ledges on & at base of limestone cliffs in part-shade. J. Andrews coll. (Endemic to this one site. Recently discovered : the largest flowered of the *P. cusickiana* group with rose to lavender flowers. Difficult but possible under *Dionysia*-conditions in the UK, it tends to summer dormancy.) . (20+) **E**
- 1.768.400 : **PRIMULA NEVADENSIS** Nevada, White Pine Co., Snake Range. 3440m. Limestone fell-field. (Endemic to the summit of this Great Basin Range but now being grown from John's 1991 coll. Large, violet-purple, yellow-eyed flowers on short stems. It can make quite large clumps in this site. Probably nearer the Rocky Mt. *P. angustifolia* than to *P. cusickiana*. For careful cultivation by the alpine-plant specialist. Needs care but possibly best plunged outside in summer in the UK.) . . . . . (20+) **E**
- 1.768.459 : **PRIMULA PARRYI** Nevada, White Pine Co., Snake Range, Mt. Moriah Table. 3500m. J. Andrews coll. (A large, magnificent plant, mainly based on the Rockies & usually with its feet in snow-melt streams or seeps. Robust rosettes send up stout, 50cm. stems carrying large, rich red-purple flowers. Though widespread in the Rockies, seldom seen in cultivation.) . (30+) **B**
- 1.768.650 : **PRIMULA SUFFRUTESCENS** Cal., Alpine Co., S of Carson Pass, above Winnemucca Lake. 2750m. In granite talus & among boulders on N-facing slope. (A superlative, high altitude endemic of the Sierra Nevada. In Section *Cuneifolia* & unlike any other N American species. Shrubby mats of toothed leathery leaves in neat rosettes with generous heads of bright rose to red-purple flowers. Growable in cool conditions in a scree-bed or the alpine-house (outside in summer) in the UK.) . . . . . (20+) **D**
- 1.770.001 : **PRUNUS ANDERSONII** Cal., Lassen Co., near Milford. 1340m. G. Greger coll. (The desert peach : can reach 2m. but usually much dwarfer with a stiff, spiny habit. Deep-pink to red flowers followed by orange-red, downy fruits.) . . . . . (5) **C**
- 1.811.100 : **ROMNEYA TRICHOCALYX** Cal., Ventura Co., NW of Ojai. 1000m. Loose, stony slopes. (The genus is split into two species in "Jepson" : who are we to disagree. This is the race with hairy sepals. Divided, glaucous foliage & profuse, huge, crinkled white poppies on branching stems up to 2m. high. Seed of these chaparral plants can be very reluctant to germinate.) . (30+) **C**
- 1.813.500 : **RUBUS NEOMEXICANUS** Arizona, Cochise Co., Huachuca Mts. Below Moist seep. M. & P. Stone 99-226 (15+) **B**
- 1.829.510 : **SALVIA APIANA** \* No data. A SW Californian endemic, mainly a plant of coastal scrub from near Los Angeles south into Mexico. A grey-white, shrubby perennial about 2m. tall with lanceolate basal leaves & clusters of lavender-white flowers. Reasonably hardy with Tim Ingram (Kent, UK), it will certainly tolerate as much sun & drought as the UK can offer. . (20+) **B**
- 1.831.560 : **SALVIA PACHYPHYLLA** \* No data. A low-growing, grey-leaved, shrubby native to S California, Nevada & Arizona, at 1400-2500m., which comes with a high recommendation from Panayoti Kelaidis at Denver : "a souped up *S. dorrii* - flowers all summer" Blue-purple to rose flowers among dark, purplish calyces & bracts. About 50cm. high. Hot, dry situation.) . (15+) **D**
- 1.832.100 : **SALVIA SPATHACEA** \* Cal., Solano Co., NW of Vacaville, Mix Canyon. 300m. Openings in scrub & on wooded slopes. (A stout, aromatic herbaceous perennial with large, green, woolly-backed, wrinkled, hastate leaves & sticky, 60cm. stems, whorled with dusky red flowers from sticky calyces. Can be grown in a sheltered, very well-drained site in the UK.) . . . . . (8) **D**
- 1.834.010 : **SANGUINARIA CANADENSIS** \* No data. The bloodroot from the rich, rocky woodlands of eastern N America, extending locally as far W as Manitoba & N Dakota & S to Oklahoma & Florida. Sturdy, subterranean, red-juiced rhizomes send up exquisite, evanescent white poppy-flowers on 10cm. stems above unfolding glaucous leaves in spring . . . . . (15+) **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**
- 1.885.800 : **SWERTIA RADIATA** (*Frasera speciosa*) Cal., Alpine Co., S of Carson Pass. 2700m. Among grasses & *Salix* in moist meadow. (One of the most striking mountain-plants of the West. Usually monocarpic with stout, statuesque stems up to 2m. high, whorled with countless starry flowers in pale green dotted with purple. Splendid rosettes of smooth leaves.) . . . . . (20+) **B**
- 1.925.119 : **TRITELEIA BRIDGESII** Cal., Butte Co., SE of Chico. 150m. G. Greger coll. (A spectacular N Californian species in this neglected genus of late-flowering corms. Wide umbels of translucent, purple-blue flowers on 50cm. stems.) . . . . . (20+) **B**
- 1.925.120 : **TRITELEIA BRIDGESII** from 'ROBINETT SELECTIONS' \* 12cm. wide umbels of starry flowers, 2cm. across, in pink, rose & lavender, with lighter centres & a glassy appearance. Selected in various N Californian locations. . . . . (20+) **B**
- 1.925.300 : **TRITELEIA CROCEA** Cal., Siskiyou Co., W of Yreka. 1750m. Loose serpentine talus on N & W-facing slopes. (A little-known local plant, confined to the Klamath Ranges on the Oregon line. About 20cm. high with bright yellow flowers.) (15+) **D**

- 1.926.300 : TRITELEIA HENDERSONII** Oregon, Douglas Co., above Callahan Creek. 460m. Among *Pinus* on serpentine. (A SW Oregon endemic, superficially not unlike *T. crocea*. Yellow flowers with a central inky-blue stripe on each segment.) . (15+) **D**
- 1.926.409 : TRITELEIA HYACINTHINA** Cal., Butte Co., Butte Meadows. 1220m. G. Greger coll. (A big, hardy, handsome *Brodiaea*, up to 60cm. high with umbels of many, bowl-shaped, white flowers, sometimes flushed with purple externally. A plant of grassland & vernal wet meadows, distributed from British Columbia, S to central California & E to Idaho.) . . . . . (20+) **A**
- 1.926.700 : TRITELEIA IXIODES subsp. SCABRA \*** Cal., Fresno Co. 1740m. Steep granite-sand slope in open woodland. Ex a J. & G. Robinett coll. (Light yellow flowers striped grey on the reverse on 25cm. stems. Originally from an outstanding colony with much larger flowers than normal, carried in wide umbels, over 15cm. across, of about 50 flowers.) . . . . . (20+) **B**
- 1.926.820 : TRITELEIA LAXA from 'GIANT LAVENDER' \*** Cal., Tulare Co. 600m. (Robinett selection from the southern Sierra Nevada. The lavender flowers are very large, 4-5cm. across in umbels up to 35cm. wide on stems up to 75cm. high.) (20+) **B**
- 1.926.850 : TRITELEIA LAXA from 'HUMBOLDT STAR' \*** Originally selected in Humboldt Co. at 700m. on an open, grassy, S-facing clay bank. Densely packed, 20cm. wide umbels of 50 plus very dark purple flowers. Up to 40cm. high.) . . . . . (20+) **B**
- 1.926.860 : TRITELEIA LAXA var. NIMEA \*** Cal., Marin Co., SSW of Tomales. 15m. Fissures & ledges on W-facing coastal cliffs. (A local race from the Marin Co. coast with large heads of luminous, deep violet-blue flowers on long stipes.) . . . . . (20+) **C**

## Viola : violets from serpentine-woodland & sagebrush-steppe

The twenty or so summer-dormant *Viola* spp. of the American West are difficult to collect seed from & many are a challenge to grow well. We outline a few pointers under *V. beckwithii*, which we have grown successfully. Seed is not always easy to germinate &, in addition, several species produce only

cotyledons in the year of germination : an uncommon but widespread stratagem of some dry-climate species (e.g. *Helleborus vesicarius*). So, do not think seedlings have died if they go dormant without producing true leaves. Keep the seedlings growing as long as possible & do not dry too much.

- 1.981.150 : VIOLA BAKERI** Cal., Plumas Co., near Greenville. 1100m. G. Greger coll. (A dwarf, more or less summer-dormant, tap-rooted perennial from openings in the coniferous forests of N California up to Washington. Tufts of entire, lanceolate basal leaves and bright yellow flowers, often backed with purple and veined with brown on the lower three petals.) . . . . . (10+) **D**
- 1.981.205 : VIOLA BECKWITHII** Cal., Plumas Co., N of Lake Davis. 1830m. G. Greger coll. (A summer-dormant species from the northern rim of the Great Basin. A very lovely thing with greyish leaves palmately cut into linear segments & two-toned flowers : the 2 upper petals deep red-purple ; the 3 lower ones pale lilac, yellow at the base. We maintained this for many years without any great trouble in an alpine-house in the UK. While the fleshy roots survive drought in nature, a well-drained mixture can result in overdrying in cultivation. We had no problem with a clay pot plunged in sand. There is a lot underground & a deep pot is necessary. We always potted very low & topped up with grit, building this up to a depth of about 8cm. over a few years.) . . . . . (10+) **E**
- 1.981.370 : VIOLA DOUGLASHII** Cal., Plumas Co., N of Greenville. 1100m. G. Greger coll. (A plant of vernal moist grassland, often on serpentine. Like them all, very difficult to locate in seed. Erect stems around 10cm. high with dissected, bipinnate leaves carry dark-veined, golden-yellow violets, with the upper two petals, usually stained brown-purple on the backs.) . . . . . (10+) **D**
- 1.981.450 : VIOLA GLABELLA** Cal., Plumas Co., along Light's Creek. 1220m. G. Greger coll. (A 20cm. tall, rhizomatous species, which grows N to Alaska & E to the Rockies. From moist, shady habitats so doubtless much easier to grow outside in the UK than the dry-growers. Heart-shaped basal leaves and rich yellow violets, veined with purple on the lower petals.) . . . . . (15+) **C**
- 1.981.500 : VIOLA HALLII** Cal., Humboldt Co., SSW of Willow Creek. 1420m. Stony turf in opening of coniferous woodland over serpentine. (Very close to *V. beckwithii* but the cut leaves are more glabrous & the flowers usually less elongated & more rounded. They have darker, velvety purple upper petals & cream lower ones. From a cooler habitat than the *V. beckwithii*.) . . . (10+) **E**
- 1.981.900 : VIOLA PINETORUM (subsp. pinetorum)** Cal., Plumas Co., Dixie Canyon. 1370m. G. Greger coll. (In a complex group of tap-rooted, Californian endemics occurring sporadically from here S to the San Jacinto Mts. near Mexico. A plant of rather dry habitats, usually under pines, with tufts of narrow, more or less linear, wavy-edged leaves and lemon-yellow flowers with purple-brown veining & backs to the petals. We have no experience of this in cultivation : it is probably difficult to grow.) . . (10+) **E**
- 1.998.209 : ZIGADENUS ELEGANS** Nevada, White Pine Co., Mt. Moriah Table. 3410m. J. Andrews coll. (A handsome liliaceous bulb with stems of large, greenish white to cream flowers from rosettes of rather broad, basal leaves. Good in UK.) . . (20+) **B**

We shall be making more North American collections during 2001. Our next list will be issued in summer. It will include summer-dormant genera, such as *Erythronium* & *Fritillaria*, as well as a wide range of European & SW Asian species. Fresh 2001 seed of *Helleborus* will be listed then. If hellebores or 'bulbs' are your interests, if you are not a regular customer & are not ordering from this list, ask us to send the summer list.

A : \$2.00 ; £1.50 ; DM4,- ; FF14.- C : \$4.00 ; £2.50 ; DM7,- ; FF23.- E : \$7.00 ; £4.50 ; DM12,- ; FF41.-  
 B : \$3.00 ; £2.00 ; DM5,- ; FF18.- D : \$5.00 ; £3.50 ; DM9,- ; FF32.- F : \$9.00 ; £6.00 ; DM16,- ; FF55.-

## The summer-growers of southern Africa

Though it is simple in theory to appreciate the precisely opposite rainfall patterns of southern Africa, it is not quite so simple to understand the plants which grow in the two very different climates. There are both summer-growers & winter-growers in the same genus : think of *Gladiolus*. We list only

summer-growers in the present list. Some hardier winter-growing 'bulbs' will be in our summer list, along with the Mediterranean & SW Asian species. A generalisation on South African species for UK gardeners might be that the summer-growers are the ones you may be able to grow outside.

- 3.001.209 : AGAPANTHUS CAULESCENS** (subsp. *caulescens*) KwaZulu-Natal, E of Vryheid, Ngome Forest. Distinct in its leek-like habit with glossy leaves from a basal stem. Umbels of drooping, rich-blue flowers with spreading lobes, on 1m. stems. (15+) **D**
- 3.001.510 : AGAPANTHUS INAPERTUS** (subsp. *inapertus*) \* Long, tubular, dark blue flowers on stems of over 1.5m. (15+) **C**
- 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. Exotically aromatic flowers & foliage. . . (15+) **C**
- 3.100.000 : CROCOSMIA AUREA** \* KwaZulu-Natal, near Merrivale. 1500m. R. & R. Saunders coll. (This has an altitudinal limit of 1800m. in the Drakensberg, usually in the shade of forest remnants. About 1m. high with spikes of large, outward-facing flowers, usually in soft orange-yellow. Rachel & Rod's seed of this, listed in 1996, producing some outstanding forms) . . . . . (15+) **B**
- 3.100.210 : CROCOSMIA MASONORUM** \* No data. From the richly coloured clone, 'Flamenco'. Pleated foliage & 1m. arching spikes of spectacular, upward-facing flowers in luminous orange-scarlet. Absolutely hardy in the UK. . . . . (15+) **B**
- 3.141.120 : DIERAMA DRACOMONTANUM** \* The highest altitude species & a very hardy garden-plant in the UK. Compact, grassy tufts, sometimes spreading by stolons. Pendant clusters of wide-open flowers, in beautiful coral-red & terracotta-pink shades, between brown bracts, dance on 60cm. wiry stems. Loves our cool summers : Welsh-grown seed from a CD & R coll. (30+) **B**
- 3.141.709 : DIERAMA GALPINII** Eastern Transvaal, near Wakkerstroom. (A species of open grassland up to 1600m. altitude. Erect stems about 1m. high from small, tufted clumps. Pale to rich magenta-pink bells among translucent bracts.) . . . . . (15+) **C**
- 3.142.000 : DIERAMA IGNEUM** \* A low to middle-altitude species, quite widespread from the central coastal region of KwaZulu-Natal S into E Cape at altitudes up to 1500m. About 1m. high with bells varying from pale to deep lilacs & rose-pinks.) (15+) **B**
- 3.142.110 : DIERAMA INSIGNE** \* S African cultivated seed. (Almost confined to rocky grassland on the Highveld of the SE Transvaal, just entering Swaziland and Natal. Arching 1.5m. stems of beautiful, pendulous pink flowers) . . . . . (15+) **B**
- 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. (An outstanding garden-plant in the UK. Tolerant of winter-wetness (it sometimes grows in standing water with sphagnum in the wild), this also survived the 1995 drought here unharmed & was untouched by the recent severe winter. Dwarfier than *D. dracomontanum*, it flowers earlier than any other we have at present with many, wiry, 40cm. stems from dense grassy tussocks, with wide-open, sometimes upward-facing, bright purple-pink flowers amid rust-brown bracts.) . . . . . (15+) **C**
- 3.143.909 : DIERAMA PULCHERRIMUM** Eastern Cape, Amatole Mts. (The true species is one of the most distinct & richly coloured with arching stems almost 2m. high dripping with long, conical flowers, often in deep purplish red.) . . . . . (15+) **C**
- 3.144.109 : DIERAMA REYNOLDSII** Eastern Cape, near Maclear. (According to Hilliard & Burt "a strikingly beautiful species, its wine-red flowers contrasting effectively with the pure white, silvery bracts" on solitary, 2m. high stems.) . . . . . (15+) **D**
- 3.144.201 : DIERAMA ROBUSTUM** E Cape, Witteberg, E of Lady Grey. 1900m. Among rocks & scrub. (Reaching higher altitudes, between 1600m. & 2900m., than any other except *D. dracomontanum*, this is the commonest Lesotho species. A close clump of 1m. long leaves sends up a 2m. arching stem with pendant clusters of large bells, usually pink but variable from cream to deeper shades. This is a plant of drier slopes & though temperature-hardy may be intolerant of winter-wetness in the UK.) . . (15+) **B**
- 3.230.106 : EUCOMIS AUTUMNALIS** subsp. *CLAVATA* E Cape, Amathole Range, W of Stutterheim. (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 around 30cm. in height). (8) **C**
- 3.230.220 : EUCOMIS BICOLOR** \* No data. One of the easiest & most reliable pineapple lilies for UK gardens. 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 alpine *E. schiffii* & the preceding, in a locality on the Lesotho border. . . . . (10) **B**

# Geranium : the Drakensberg cranesbills are tough

- 3.243.300 : GERANIUM MAGNIFLORUM** \* E Cape, Witteberge, SE of Lady Grey. 1500m. Among long grass in marshy area. (A very fine, green-leaved, pink flowered species, about 30cm. high, which Panayoti Kelaidis & Jim collected in 1996. "Superb" and "indestructibly hardy" at Denver says Panayoti. It is the highest growing S African in this genus, recorded up to 3200m., always in moist sites, so should prove every bit as worthwhile in European gardens when it is more widely grown.) . . . . . (10+) **D**
- 3.243.410 : GERANIUM PULCHRUM** \* No data. A tall, handsome, sturdy, subshrubby species, over 1m. in height, with lobed, silky foliage and masses of large pink to purple flowers. From marshes and streamsides up to 2400m. in the Drakensberg. . . (10+) **C**
- 3.243.460 : GERANIUM ROBUSTUM** \* No data. Most British-grown stock probably originates from S.& S. Hannay 14 collected in the E Cape. We are told we have a particularly fine, compact form, which makes mounds about 50cm. high and 1m. or more across. Branching, stiff, sticky stems set with deeply cut soft-green leaves carry masses of flowers in a pleasing pinkish purple over a long period in summer. Excellent, trouble-free and hardy here over three winters in a sunny, well-drained bed. . . . . (10+) **B**
- 3.257.201 : GLADIOLUS CRASSIFOLIUS** Eastern Cape, ENE of Rhodes, Naudesnek. c.2000m. (A summer-growing, grassland species, widespread through the summer rainfall area from E Cape up through Lesotho into the Transvaal reaching about 2000m. in the Drakensberg. Spikes about 1m. high with up to 40, curved, bell-shaped flowers, usually in pink or mauve.) . . . . (15+) **B**
- 3.257.800 : GLADIOLUS DALENII** \* Eastern Cape, Witteberge, E of Lady Grey. 2000m. Among grasses & scrub in deep, moist soil. (A variable group which extends N from the E Cape to Ethiopia & Arabia. Under Goldblatt's revision these are all absorbed into *G. dalenii* subsp. *dalenii*. Summer-growing, from altitudes up to 2500m. in the Drakensberg, many must be growable & hardy in most of the UK. This form has hooded, brilliant scarlet-orange flowers with large bright yellow blotches.) . . . . . (20+) **B**
- 3.257.847 : GLADIOLUS DALENII** Eastern Cape, NW of Maclear, Pot River Pass. c.1500m. (Rich red form) . . . . . (20+) **B**
- 3.257.848 : GLADIOLUS DALENII** Mpumalanga, near Wakkerstroom. (Described as an outstanding colour-form) . . . (20+) **B**
- 3.258.701 : GLADIOLUS ECKLONII** (subsp. *ecklonii*) KwaZulu-Natal, near Underberg. 1500m. R.& R. Saunders coll. (From foothill grassland along the summer rainfall, Drakensberg escarpment 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**
- 3.264.009 : GLADIOLUS LONGICOLLIS** (subsp. *longicollis*) Eastern Cape, ENE of Rhodes, Naudesnek. c.2000m (An elegant, 50cm. high, grassland species with very long-tubed white or cream flowers, sometimes brown-speckled along the mid-veins and purple-flushed outside. Opens in the evenings with a heavy, spicy fragrance to attract its hawkmoth pollinators.) . . . . (15+) **C**
- 3.268.209 : GLADIOLUS MORTONIUS** Eastern Cape, Amathole Mts., near Stutterheim. (A spectacular, 50cm. high plant of open, stony grassland in the mountains of the Eastern Cape. Up to 16, magnificent, long-tubed, pink flowers with red nectar-guides. Not unlike *G. oppositiflorus* but differs substantially in the floral bracts. Should be reasonably hardy in the UK) . . . . . (15+) **C**
- 3.270.101 : GLADIOLUS OPPOSITIFLORUS** subsp. **SALMONEUS** Eastern Cape, NW of Maclear, Pot River Pass. c. 1500m (One of the loveliest of all. About 60cm. high with, one-sided spikes of big, salmon-pink flowers, sparsely marked with crimson in their throats. The high altitude, inland race of the species which has contributed much to the large hybrids. If breeders had used this subspecies, they could have produced the desired second spike & given us really hardy hybrids. Our 1996 Naudesnek coll. of this summer-grower, is so far proving a good, hardy garden-plant in a well-drained site in the UK.) . . . . . (10+) **C**
- 3.270.509 : GLADIOLUS PAPILIO** Mpumalanga, near Wakkerstroom. c.1500m. (A summer-growing, wetland species of proven hardiness throughout most of the UK, in a 1m. high, pale grey-purple form. A species of wide distribution (from the E Cape to N Province) & variable colour (from pale green & pink to yellow & purple, darkly blotched on two lower segments.) . . (10+) **C**
- 3.276.502 : GLADIOLUS SAUNDERSII** Eastern Cape. No further data. (A startlingly spectacular species distributed from the Witteberge & Cape Drakensberg N through Lesotho up to 2900m. but absent from the Natal Drakensberg. Brilliant scarlet flowers marked with white on the lower segments.. Almost certainly hardy in a well-drained site in the UK.) . . . . . (10+) **C**
- 3.277.700 : GLADIOLUS SERICEO-VILLOSUS** \* Ex KwaZulu-Natal, near Merrivale. 1500m. (A summer-grower, widespread in rich, moist, montane grassland up to 2100m. from the E Cape to S Mpumalanga. Distichous spikes, up to 1m. high, of up to 40 cream to pale lavender, funnel-shaped flowers with elongated, yellow, dark-edged markings on the lower lobes.) . . . . (15+) **C**
- 3.410.320 : HESPERANTHA BAURII** \* No data. A lovely, rich-pink species from wet grassland, reaching 3000m. in the Drakensberg. Up to 75cm. high and flowering in late summer. Hardy & growable in a cool, moist site in almost all UK gardens.) . . (20+) **B**
- 3.415.709 : HESPERANTHA WOODII** KwaZulu-Natal. No further data. A beautiful Natal endemic from wet sites, so may be possible outside in the UK. Around 30cm. high with starry, deep-pink flowers & long, slender leaves. . . . . (20+) **C**
- 3.460.069 : KNIPHOFIA ANGUSTIFOLIA** KwaZulu-Natal, Drakensberg, Cathedral Peak. (The genuine plant is illustrated in Phillips & Rix, Vol. 2, p.162. A species of wet grassland and streamsides, climbing to over 2000m. in the Drakensberg. Most distinct fine, bluish, grassy foliage and 60cm. high, rather open, spikes of pendulous flowers in creamy white, yellow or coral-red.) (15+) **D**
- 3.460.109 : KNIPHOFIA BAURII** Eastern Cape. No further data. (From moist sites between 600m. & 1200m. Compact, 50cm. high, clumps of soft, glaucous leaves & globose heads of dull red buds opening to pendant, greenish yellow flowers.) . . . . (15+) **B**



- 3.460.209 : KNIPHOFIA BRACHYSTACHYA** Lesotho, Drakensberg. No further data. (A strange, dwarf plant of moist, high mountain grassland. About 30cm. high with a dense, inflorescence of stubby, dull yellow flowers from brownish buds.) (15+) C
- 3.460.309 : KNIPHOFIA BREVIFLORA** KwaZulu-Natal. No further data. (Another little plant, about 50cm. high, in a group of allied whitish-flowered species, including *K. buchananii* & *K. albescens*. Stubby spikes of cream flowers.) . . . . . (15+) C
- 3.460.409 : KNIPHOFIA BUCHANANII** KwaZulu-Natal. No further data. (Closely allied to *K. breviflora* & generally similar but with shorter flowers & a more eastern distribution in the KwaZulu-Natal midlands up to 1200m.) . . . . . (15+) C
- 3.461.509 : KNIPHOFIA CAULESCENS** Eastern Cape, NW of Maclear. c. 1500m. (A splendid species of a proven indestructible nature & garden worth in the UK. It grows at up to 3000m. in the high mountains of 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 stout stems with inflorescences of pale greenish yellow to cream flowers from coral to flame buds.) . . (20+) C
- 3.461.109 : KNIPHOFIA ENSIFOLIA** (subsp. *ensifolia*) Eastern Cape. No further data. (A robust, striking plant with long, glaucous leaves. Stems up to 1.8m. high carrying dense heads of white to greenish-white flowers opening from pink-tinted buds.) (15+) C
- 3.461.409 : KNIPHOFIA FIBROSA** KwaZulu-Natal, Drakensberg. Near *K. breviflora* with longer, pale yellow flowers.) (15+) D
- 3.461.900 : KNIPHOFIA HIRSUTA** \* E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Among grasses on open, moist slope. (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. About 50cm. high.) . . . . . (20+) C
- 3.462.212 : KNIPHOFIA LAXIFLORA** \* Cultivated South African seed. No data. Worth trying in a well-drained, sunny site in the UK. Erect buds deflex as the long, tubular, widely spaced flowers open in shades of pale-yellow, salmon or orange.) . . . (20+) B
- 3.462.600 : KNIPHOFIA NORTHIAE** \* E Cape, Drakensberg, ESE of Ben Macdhui. 2750m. Open sites along margins of streams. (Very hardy & 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.) . . . . . (20+) 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. Illustrated in this area in Rix & Phillips, page 162. Certainly as hardy as any S African but used to being dry & frozen all winter.) . . . . . (15+) D
- 3.463.600 : KNIPHOFIA SARMENTOSA** W Cape, SE of Sutherland, Komsberg. 1800-2000m. (A most distinct species which grows along mountain streams in the arid ranges of the W Karoo. Introduced to the UK in 1789 but not recorded again until it was found in the Roggeveldberge 130 years later. Jane Taylor considers it "worth growing for its good glaucous foliage & easy temperament alone...a thoroughly good garden plant" with "a lax spike of spreading, greenish cream to soft coral-pink flowers".) . . (15+) C
- 3.463.800 : KNIPHOFIA STRICTA** \* E Cape, Drakensberg, SW of Rhodes. 1700m. Among rocks. (Like no other in its narrow, rigid blue-grey foliage, U-shaped in cross-section. About 1m. or less high with dense pokers of pale yellow tubular flowers, opening from coral-red buds. Often growing among rocks, this will need a much drier site than most in UK gardens.) . . . . . (15+) C
- 3.464.060 : KNIPHOFIA THOMSONII** var. **SNOWDENII** \* No data. South African cultivated seed of this elegant species from the highest mountains of Uganda & Kenya, up to 3900m. in wet grassland. Hardy in a sheltered site in most of the UK. (15+) C
- 3.464.310 : KNIPHOFIA TYPHOIDES** \* No data. A bizarre species from moist grassland. Clumps of glaucous, distichous leaves, sometimes spirally twisted. Stems, of 1m. or more, carry dense pokers of many, short, purple-brown, scented flowers (15+) D
- 3.464.409 : KNIPHOFIA TYSONII** (subsp. *tysonii*) \* Eastern Cape, Amatole Mts., near Stutterheim. (Big clumps of distinctively folded, yellowish-green leaves and dense inflorescences of greenish-yellow flowers from spreading, red buds. 2m.) . . . . (15+) C
- 3.545.201 : MELIANTHUS MAJOR** W Cape, near Hermanus. 100m. R. & R. Saunders coll. (One of the most spectacular foliage-plants possible in UK gardens. A 2-3m. high shrub with huge, deeply cut, serrated, grey leaves. Deep crimson flowers.) (10+) B
- 3.545.709 : MELIANTHUS VILLOSUS** KwaZulu-Natal, Drakensberg, Cathedral Peak. (A shrubby species, up to 2m. high, from streamsides and forest margins up to 2000m. in Natal & Lesotho. Arresting, grey, hairy, pinnate leaves overtopped by stems of purplish-black flowers followed by inflated, pale-green fruits. Unlike the preceding, a summer-rainfall plant.) . . . . . (10+) C
- 3.550.301 : MORAEA ALTICOLA** \* E Cape, Drakensberg, NE of Rhodes. 2200m. Moist, grassy slope. (Imposing, 1m. clumps of broad, leathery leaves & stout erect stems of large, pale-yellow flowers. Hardy in UK gardens.) . . . . . (15+) B
- 3.552.600 : MORAEA DRACOMONTANA** \* Lesotho, Drakensberg, NW of Sani Pass. 2900m. Among grass tussocks along stream. (UK cultivated seed from our 1996 coll. Fine stems, with blue-purple flowers with yellow guides.) . . . . . (15+) D
- 3.557.609 : MORAEA RETICULATA** Eastern Cape, Amathole Mts., W of Stutterheim. Steep, grassy slopes. (Near to the tall, Drakensberg *M. alticola*. Bright yellow flowers with orange nectar-guides on stems around 50cm. high.) . . . . . (15+) C

- 3.605.000 : PAPAVER ACULEATUM** \* E Cape, Drakensberg, NE of Rhodes to Naudesnek. 2200m. Disturbed areas in loose, sandy clay. (The only S African in the genus. A many-stemmed, bristly plant, about 50cm. high with lots of orange flowers.)(100+) **B**
- 3.790.400 : STREPTOCARPUS GARDENII** \* KwaZulu-Natal, Drakensberg, SW of Njesuthi valley. 1400m. In moss on boulders in deep shade. English seed from our 1996 coll. (Endemic to wet, shaded rocks, sometimes epiphytic on mossy tree trunks, in the high Natal woodlands, to about 1800m. Pale violet flowers, with pale-green tubes & purple-lined lobes, on 10cm. ) . . (50+) **D**
- 3.790.710 : STREPTOCARPUS PENTHERIANUS** \* Ex KwaZulu-Natal. No further data. (From sandstone cliffs up to 2000m. Flat rosettes of 2-3, large, square, ribbed leaves & elegant, little, butterfly-like white flowers with long, curved tubes.) . . . (50+) **D**
- 3.850.660 : TULBAGHIA GALPINII** \* No data. A little-known, very dwarf species from comparatively high altitudes in a small area on the southern edge of the Karoo, in the E Cape, S of Queenstown. Very fine, grassy leaves & rose-pink flowers with a distinct, 6-lobed corona on 15cm. stems. Temperature-hardy with us, if kept dryish in winter. . . . . (15+) **D**
- 3.850.710 : TULBAGHIA LEUCANTHA** \* No data. A handsome montane plant, distributed from the E Cape N into Zimbabwe, occurring in the Drakensberg between 1800m. & 2400m. on wet cliffs & steep, rocky sites. Grassy leaves & flowers with brilliant orange-yellow coronas, surrounded by green-white outer-segments, on stems about 25cm. high. . . . . (15+) **C**
- 3.850.759 : TULBAGHIA LUDWIGIANA** KwaZulu-Natal, Drakensberg. (Surely one of the hardest, recorded up to 1900m. *Allium*-like, with 30cm. stems of pendant flowers in which green-white segments surround a fleshy yellow corona.) . . . . . (10+) **C**
- 3.899.501 : WACHENDORFIA THYRSIFLORA** Western Cape, near Hermanus. (A member of the *Haemodoraceae* : something of a feature in Cornish & other mild, UK gardens. From marshy areas in the W Cape. Described by G.S. Thomas as "most handsome" 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

- 3.950.409 : WATSONIA ANGUSTA** Western Cape, Kouebokkeveldberge. (Unusual in that it grows in winter & summer rainfall areas, extending N into the E Cape. Spectacular 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. (Central species of a group from the grasslands of Natal with spikes of pink flowers appearing from between imbricate, brown bracts.) . . . . . (15+) **C**
- 3.952.100 : WATSONIA GLADIOLOIDES** \* KwaZulu-Natal, N of Himeville to Mkhomazi. 1200m. Among grasses on open, rocky slope. (A dwarf plant, 30-40cm. high here, 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.) . . . . . (10+) **D**
- 3.952.709 : WATSONIA LATIFOLIA** KwaZulu-Natal, near Utrecht. (A most distinct summer-grower from a comparatively small area in the SE Mpumalanga, adjacent W Swaziland & N Natal, usually at altitudes above 1800m., in open grassland on thin, stony soils around the bases of granite outcrops. Like no other in its very broad foliage & its long-tubed, dark maroon-red flowers, up to 25 on stems to 1.5m. high. An exciting plant which should be hardy in a well-drained, sunny site in the UK.) . . . . . (15+) **D**
- 3.952.809 : WATSONIA LEPIDA** KwaZulu-Natal, Drakensberg. (This should be in theory the hardest species, 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 grown in a well-drained sunny site, in the rock-garden or a scree-bed in the UK.) (15+) **C**
- 3.952.850 : WATSONIA LONGIFOLIA** Eastern Cape, near Grahamstown. (Considered by Goldblatt to have originated as a hybrid between *W. knysnana* and *W. pillansii*. Individual clones may have inherited the hardiness of *W. pillansii*, as well as its liking for damp sites. Varies in colour through oranges, pinks and reds. Between 1m. and 2m. in height.) . . . . . (15+) **C**
- 3.953.609 : WATSONIA PILLANSII** (*W. beatricis*, *W. socium*, etc.) Eastern Cape. (The hardiness of this species in UK gardens gives us a criterion to judge the others. The only summer-grower generally cultivated in the UK, this is distributed through the E part of S Africa, usually in moist grassland, from the S Cape in a curve through Natal into the Drakensberg, at low to middle elevations. Spikes of 30 or so, bright orange-red, long-tubed flowers on 50-120cm. stems in late summer or autumn.) . (15+) **B**
- 3.953.809 : WATSONIA PULCHRA** Mpumalanga, Saddleback Mts., near Barberton. (Distributed from NE KwaZulu-Natal northwards through the Swaziland border-ranges, usually in moist, montane grassland. Clumps of broad foliage with distinctive, thick, hyaline margins send up stems, 60-120cm. high, with up to 60, pink to purple flowers.) . . . . . (15+) **C**
- 3.955.109 : WATSONIA WATSONIODES** Mpumalanga, Saddleback Mts., S of Barberton. (A most distinct plant, unlike any other in the genus. Up to 1m. high with close spikes of as many as 50, narrow, somewhat bell-shaped flowers, usually in pale yellow but varying to cream or maroon. First described by Baker as a *Tritonia*, hence its odd specific name, this is limited to stony grassland between 1300m. & 1800m. in a comparatively small area in SE Mpumalanga & adjacent Swaziland.) . . . . . (15+) **C**
- 3.955.200 : WATSONIA WILMANIAE** \* W Cape, Groot Swartberge, S of Prince Albert. 1500m. Seeps on rocky slopes & along stream. (A tall wet-grower endemic to the Swartberg & Kamanassie ranges. Flowering in late summer with spectacular spikes, up to 1.5m. high, of large flowers. According to Goldblatt, the Swartberg populations range from deep red to orange, pink & cream. UK-grown seed from plants raised from our 1996 coll. & grown outside in Hampshire by Dave Hoskins.) . . . . . (15+) **D**

While we continue to be reliant on cultivated material from this area, much of this is now derived from wild seed collected by western travellers and also from living material received direct from China. The latter is now starting to establish and set seed. We have, however, just received some seed collected from wild plants in 2000 by resident Chinese botanists. Some of this is from areas unvisited by westerners and we hope for some interesting results from this seed. Data & nomenclature will no doubt continue to be problematical.

- 4.005.210 : ACONITUM CARMICHAELII var. WILSONII** (*A. wilsonii*) \* No data. A magnificent, summer-flowering, Chinese perennial. Deeply cut foliage and erect, 2m. high branching stems, distinct with their many, 40cm. long, axillary branches, forming pyramids, massed with deep blue and violet, helmet-shaped flowers. Permanent in rich, moist soil in sun or part-shade. (20+) **B**
- 4.005.510 : ACONITUM HEMSLEYANUM** \* No data. A fine Chinese perennial with herbaceous stems twining to 3m. or more. Densely clad in deeply cut, rich-green foliage & massed with long racemes of spurred, violet helmet-shaped flowers in autumn. Splendid in a draughty, NE-facing corner here & more impressive than other climbers we have grown as *A. volubile*. . (20+) **B**
- 4.022.810 : ALLIUM MAIREI** \* No data. A charming, small, late-flowering species from SW China. It is hardy and clumps up well in sunny scree in West Wales. Umbels of bright, deep-pink bells on stems about 20cm. high in summer. . . . . (15+) **B**
- 4.023.000 : ALLIUM PRATII var. LATIFOLIATUM** \* China, Sichuan, Emei Shan. 2600m. Cliff ledges. Ex E. Needhan 981 (Tentatively identified by Jill Cowley at Kew as this or perhaps *A. ovalifolium* : the names may be conspecific. Choice and very slow-growing but proving hardy with Mike Tucker (Somerset, UK) in his shady *Arisaema*-bed. Clumps of bulbs with reticulate tunics, their necks above the ground, send up, in early spring, big, broad, shiny-green, aspidistra-like leaves, which look good well into the autumn. In midsummer, large, rounded umbels of purple-pink flowers rise above them on 30cm. stems.) . . . . . (10+) **D**
- 4.024.710 : ALLIUM THUNBERGII** \* No data. A very late-flowering, hardy, little species from Korea and the mountains of central & S Japan. The umbels of many, rosy purple bells on 20cm. stems remain attractive until the first severe frost. . . . . (20+) **B**
- 4.045.007 : ANEMONE RIVULARIS** \* China, Yunnan. Ex ACE 1698 (A lovely, 60cm. high meadow-plant, widespread from Kashmir to Yunnan. Long-stalked, cup-shaped flowers, white inside & heavily tinged with purplish-blue outside.) . . . . . (15+) **B**
- 4.045.008 : ANEMONE RIVULARIS** \* Nepal. Ex MECC 49 (Both are easy in the UK in a good, moist soil in sun.) . . (10+) **B**

## Arisaema : Chinese newcomers set seed

- 4.080.500 : ARISAEMA AMURENSE** \* No data. Appears to be the genuine species, an very hardy NE Asian plant, originally grown from seed received from the Russian Far East. Green spathes, striped with a paler shade, with elongated deflexed tips. (10) **C**
- 4.081.111 : ARISAEMA CANDIDISSIMUM** \* No data. A superlative species from SW China, prerequisite for all who appreciate hardy plants of distinction, not just for "lovers of the curious". Appearing very late in spring, the unfolding trifoliolate leaves rise up with the large spathes, elegantly peaked & ribbed arabesques, exquisitely sculptured in jade and rose-tinted alabaster. Not difficult if moist & well-fed in humus-rich soil in light shade, though it may resent too wet a site in winter, and maintained in UK gardens since the Forrest introduction from Yunnan early this century. Increases vegetatively but sets seed less frequently. . . . . (6) **E**
- 4.081.300 : ARISAEMA CILIATUM var. LIUBAENSE** \* China, Sichuan. 3600m. Ex C. Theune 369. (Recently described as a new var. after some years of oscillating between *A. ciliatum* & (improbably) *A. consanguineum*. An elegant, accommodating, hardy plant with parasols of many narrow leaflets and attenuated, hooded spathes striped in chestnut-brown and white.) . . . . . (8) **D**
- 4.081.510 : ARISAEMA CONSANGUINEUM** \* No data. About 1.5 m. tall with parasols of elegant, cut leaves & hooded green spathes, followed by nodding heads of scarlet fruits. One of the most widespread species growing through the Himalaya E into China. This is probably a race of Indian origin. A striking & very satisfactory plant outside in UK gardens. . . . . (10+) **B**
- 4.081.550 : ARISAEMA aff. CONSANGUINEUM** \* China, Yunnan. Ex CLD 1519. (A distinct, dwarf (30cm. high) plant, grown in the UK as *A. fraternum* until it was identified as *A. consanguineum* at the RBG Edinburgh. Remember *A. ciliatum* var. *liubaense* was also attributed to *A. consanguineum*! This is a confusing group from which we are growing some striking plants, recently received from China. Expect a lot of name-changes. This has translucent, pale-yellow spathes rimmed with purple.) . . . . (8) **D**
- 4.081.551 : ARISAEMA aff. CONSANGUINEUM** \* Received from China as "*A. brevipes* (purple)", which it is not. . . . . (8) **D**
- 4.081.859 : ARISAEMA DILATATUM** \* China, Yunnan. 2800m. (The shiny, bright-green spadix curves in a S-shaped arabesque out of the glossy, translucent spathe striped with white & rich plummy brown. Large-leaved, arresting & distinct.) . . . . . (8) **F**
- 4.082.259 : ARISAEMA FARGESII** \* China, Gansu. 1200m. (A fine species in the outstanding group with trifoliolate leaves (like *A. candidissimum*). Shining green foliage & big, hooded spathes, striped in brown & white, around rich brown-purple spadices.) Hardy & adaptable with us so far, this should be as satisfactory in UK gardens as *A. candidissimum*.) . . . . . (5) **E**
- 4.082.310 : ARISAEMA FLAVUM** \* No data. A widespread species, native to the Himalayan region from Afghanistan to W China, & quite easy in a sheltered, shaded site in the UK. About 50cm. high with pedately cut leaves & small, chubby, pale yellow spathes, sometimes purple-flushed, striped or netted & usually followed by tight clusters of scarlet fruits. . . . . (10) **B**

- 4.082.550 : ARISAEMA GRIFFITHII var. PRADHANII** \* No data. From a small area in Lachung, Lachen & Jeluk, in Sikkim, above 3000m, in *Rhododendron* scrub & in more open, rocky places, this is, in effect, the largest & most spectacular race of an extraordinary species. Two big leaves with 3 segments overtop the large spathe with broad, lateral lobes, up to 20cm. wide & purple-brown netted with creamy white. The purple spadix-appendage snakes out, tapering to a flagellate tail, 50cm. long.) . (10+) E
- 4.083.309 : ARISAEMA JACQUEMONTII** \* No data. The most western & possibly the hardest Himalayan species, distributed between 2800-4000m., among the alpine & subalpine scrub of drier areas from Afghanistan to SE Tibet. The elegant, elongated spathes, striped longitudinally in green & white, with their extended, tortuous tips rise up well above the foliage. . . . . (10+) D
- 4.086.910 : ARISAEMA PROPINQUUM** (*A. wallichianum*) \* No data. A variable, hardy species, widely distributed through the Himalaya from Kashmir to Bhutan & SE Tibet between 2500 & 4000m. One or two trifoliate leaves emerge from brown-mottled cataphylls & deep purple, or occasionally green, hooded spathes, striped with white, surround the spadix, which tapers & extends at an angle from the mouth. The spadix-appendage is shorter than in the allied, rather similar, Nepalese *A. costatum*. . (10+) E
- 4.087.109 : ARISAEMA RHOMBIFORME** \* China, Yunnan. 2500m. (This is settling down in UK garden conditions from material recently received from China, noticeably attractive and already increasing vegetatively. Large, trifoliate leaves with a broad, hooded, attenuated, rich brown spathe, strikingly striped with translucent white, surrounding a dark, purplish grey spadix.) . . . . . (5) E
- 4.097.610 : ARISAEMA SPECIOSUM** \* No data. An eastern Himalayan, growing from Nepal into W China. A distinct, cylindrical tuber produces a single, large, trifoliate, red-margined leaf, rising to about 50cm. above the chocolate-purple & white, striped spathe, from whose elegantly attenuated hood the spadix appendage writhes out as a purple filament up to 50cm. long . . . . . (5) D
- 4.099.009 : ARISAEMA TORTUOSUM** \* Nepal, Dudh Khosi valley. 2700m. Degraded forest. Ex a J. Grimshaw coll. (A particularly hardy, vigorous, giant form, well established with Mike & Polly Stone (Inverness-shire, UK). The species is 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.) . . . . . (10+) C
- 4.099.310 : ARISAEMA URASHIMA** (*A. thunbergii* var. *urashima*) \* No data. A Japanese species, close to *A. thunbergii* but kept separate by Ohwi. Usually with a single leaf with up to 15 leaflets. Spathe, greenish white flushing to red-purple & arching over the purple-brown spadix, which is drawn out into a filiform appendage up to 60cm. long & dangling to the ground . . . . . (8) E
- 4.099.975 : ARISAEMA YUNNANENSE** \* China, Yunnan, Gholigan Shan. 2400m. Rough grassland near stream. Ex I. Stokes 46. 190 (Listed last year without a specific name, we are now fairly confident that this is the correct determination. A tall, elegant plant with one or two trifoliate leaves, greatly overtopped by stems of 50cm. or more, carrying a green & white striped spathe with a long, attenuate tip arching over the curved yellow-green spadix-appendage. Likely to be reasonably hardy in the UK.) . . . . . (8) E
- 4.190.550 : CIMICIFUGA SIMPLEX** \* Russia, Sakhalin. (One of the finest species in this outstanding genus of late-flowering herbaceous perennials. A meadow-plant native from Japan N to Kamschatka with cut foliage & arching, purple-brown flushed stems about 1m. high carrying fine heads of white flowers in autumn. Thrives best in rich, moist soil in partial shade.) . . . . . (20+) C
- 4.190.605 : CIMICIFUGA SIMPLEX** from 'BRUNETTE' ('Atropurpurea') \* A spectacular tall form, reaching 3m. or more, with deep, rich purple foliage and stems. It varies a little in intensity of colour from seed though this is derived from Robin White's selected stock, which now produces seedlings virtually 100% 'true'. . . . . (20+) C
- 4.200.810 : CLEMATIS FUSCA** \* No data. A more or less herbaceous climber, less than 3m. high, with urn-shaped flowers, characteristic of the N American *C. viorna* group, in dark purple, covered in red-brown wool & carried on short, densely hairy stalks. A fascinating but hardly spectacular species from the Russian Far East through N China to N Japan. . . . . (20+) B
- 4.201.060 : CLEMATIS KOREANA f. LUTEA** \* No data. A NE Asian representative of the circumpolar Sect. *Atragene*, allied to the European *C. alpina* &, most closely, to the N American *C. verticillaris*. A trailer or small climber, less than 3m. high, with coarsely toothed leaflets & pale yellow flowers in this form, in contrast to the dull violet of the type-race. . . . . (20+) B

## Codonopsis : the climbing Campanulas

- 4.221.210 : CODONOPSIS GREY-WILSONII** (*C. nepalensis* Grey-Wilson non Hara, most *C. convolvulacea* & *C. forrestii* of gardens) Widespread & maybe endemic in Nepal, this is superficially similar to *C. convolvulacea* but more vigorous, twining to 3m., and with a striking crimson-ringed centre to the wideopen, lavender-blue flowers. According to Chris Grey-Wilson, most material grown as *C. convolvulacea* & *C. forrestii* belongs under this species, which he described in 1990 as *C. nepalensis*. . . (20+) C
- 4.221.211 : CODONOPSIS GREY-WILSONII** from **WHITE FORM** (*C. convolvulacea* 'Alba', *C. nepalensis* 'Himal Snow') \* From the superlative white form, originally selected out of a batch of seedlings from a 1954 Stainton, Sykes & Williams coll. in Nepal (possibly SSW 7765). Currently, advisedly, labelled 'Himal Snow' in the UK. A beautiful plant whatever its name. . . . (20+) D
- 4.221.420 : CODONOPSIS LANCEOLATA** \* No data. A hardy climber (especially distinct in its winged seeds, unlike any other we know) from N China through E Russia & Korea to Japan. Though with such a wide geographical range it is variable, this seed is from specialist Paul Kneebone, who describes it as "one of the best...covered in largish green bells with purple markings", growing about 2.5m. high. Don Elick sent us seed from Japan some years ago & described it as reaching 5m., often in alluvial soil along streams, where "wide open bells reminiscent of a richly coloured *Fritillaria graeca* dangle in profusion." . . . . . (15+) D

A : \$2.00 ; £1.50 ; DM4,- ; FF14.-    C : \$4.00 ; £2.50 ; DM7,- ; FF23.-    E : \$7.00 ; £4.50 ; DM12,- ; FF41.-  
 B : \$3.00 ; £2.00 ; DM5,- ; FF18.-    D : \$5.00 ; £3.50 ; DM9,- ; FF32.-    F : \$9.00 ; £6.00 ; DM16,- ; FF55.-

- 4.221.850 : CODONOPSIS OBTUSA** \* Afghanistan, Panjshir Valley. 2400m. Beside stream. Ex P. Furse 8643. (A dubious, obscure name, considered to be a synonym for *C. clematidea* or *C. ovata*. Near *C. clematidea* but the big, ice-blue bells lack the internal markings and shade into glossy yellow-green instead. Hardy & reliable with us in a raised bed over many years. . . . . (30+) **C**
- 4.222010 : CODONOPSIS PILOSULA** \* No data. A climber, close to *C. tangshen*, from montane scrub in N China. The true plant is allegedly in cultivation but, the confusion of names is such that we cannot give a total guarantee this is it. Seed from Dinah Batterham (Dorset, UK) who has grown it outside for many years & describes it as having shiny, yellow-green bells. . . (20+) **B**
- 4.222.300 : CODONOPSIS ROTUNDIFOLIA** \* India, Kumaon. Ex C. Chadwell 1770. (A tuberous perennial, vigorously twining to about 3m. with yellow-green bells, veined with vinous purple. A plant of montane scrub recorded up to 3800m.) . . (20+) **B**
- 4.222.510 : CODONOPSIS TANGSHEN** \* No data. Another vigorous perennial climber reaching 3m. Big pale-green bells intricately marked with purple, often chequered inside. Native to SW China, in Sichuan & Hubei, up to 2500m. . . . . (20+) **B**
- 4.222.750 : CODONOPSIS TUBULOSA** \* China, Yunnan, Dali. 2400m. Ex Compton, D'Arcy & Rix 2025. (Twining to about 1m. with bright yellow-green elongated bells, marked inside with maroon. "Much admired by visitors" to Harry Hay.) . . (20+) **D**
- 4.222.805 : CODONOPSIS VINCIFLORA** \* No data. A less vigorous member of the *C. convolvulacea* group from the E Himalaya & SW China 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 & replant in winter.. . . . (20+) **B**
- 4.225.500 : CORTUSA MATTHIOLI var. YEZOENSIS** \* A race of this charming subarctic shade-lover endemic to the mountains of Hokkaido in N Japan. Particularly densely downy, lobed, rounded leaves & umbels of pendant rosy purple bells on 20cm. stems in summer. Like a little *Primula* in Sect. *Cortusoides* & thriving in a cool, peaty, part-shaded position. . . . . (20+) **C**

## Deinanthæ caerulea : "curious and lovely"

- 4.264.010 : DEINANTHE CAERULEA** \* No data. One of the most distinct & choicest of hardy plants. A herbaceous relative of *Hydrangea*, about 30cm. or a little more high. In late summer, reddish stems carry downward-facing flowers, whose cup-shaped petals look as if they have been moulded out of pale lavender-blue wax around the central cluster of violet stamens, overtop the bristly, soft-green foliage. Known only from wet, shaded cliffs in Hubei, W China, it is certainly not impossible to please as it has been maintained in cultivation since Wilson's collection made almost 100 years ago but it is very particular in its needs. It must have almost complete shade and total shelter from cold or drying winds in a moist but well-drained, humus-rich compost. . . (50+) **E**
- 4.265.310 : DELPHINIUM BRUNONIANUM** \* No data. A variable species, widespread in nature above 4000m. from the Pamirs through the Himalaya to SE Xizang in China. This is from the form well-established in British gardens and close to *D. cashmerianum*. About 30cm. high with rounded, lobed foliage and chubby, downy black-eyed flowers of dusky purple with stubby spurs over a long period in summer. A good dwarf perennial for an open, well-drained site which is not dry in summer. (20+) **B**
- 4.266.100 : DELPHINIUM DELAVAYI** \* China, Yunnan, Lijiang, Yulong Shan, between Bai Shui and Hei Shui. 2900m. Ex CLD 895. (Clumps of deeply divided basal leaves and branching stems about 60cm. high carrying a succession of long-spurred, deep blue-violet, white-eyed flowers from late summer into autumn. So far, seems a good, reliable garden plant.) . . . . . (15+) **C**
- 4.285.500 : DRABA OREADES** \* No data. One of the most worthwhile E Asian species for the alpine-house enthusiast. A high-alpine, widespread from Central Asia, through the Himalayas to SW China, at altitudes between 3500m. & 5500m. Tiny, hairy rosettes compressed into pads or cushions with heads of yellow flowers on 2cm. stems. Not too difficult with care . . . . . (20+) **D**
- 4.361.410 : EUPHORBIA SCHILLINGII** \* Nepal, Dudh Kosi valley. 2500-3000m. (An excellent late-season species, which can reach about 1m. in height but is usually half that. Bright green foliage with the characteristic pale mid-rib of these Himalayan species and branching stems carrying a profuse display of brilliant greenish yellow bracts. Good, moist soil in sun.) . . . . . (10+) **C**
- 4.390.110 : FRITILLARIA CAMTSCHATCENSIS** \* No data. A marvellous plant with stems of 30cm. or more, whorled with rich-green leaves, carrying nodding, thick-textured bells in darkest brown-purple. Distributed from Japan in a N Pacific arc through Sakhalin & Kamchatka into Alaska & Canada. Utterly hardy & quite easy outside in the UK in a cool situation. . . . . (20+) **C**
- 4.430.510 : GERANIUM CLARKEI from PURPLE FORMS** \* No data. A beautiful relative of *G. pratense* from the mountain meadows of Kashmir between 2000 & 4000m. Mats of creeping rhizomes send up deeply cut leaves and 50cm. stems with large, veined flowers, blue-purple in these forms, usually grown in the UK as 'Kashmir Purple', over a long period in summer. (10+) **B**
- 4.430.511 : GERANIUM CLARKEI from WHITE FORM** \* India, Kashmir, Gadsar Valley. This pale phase, basically white, pencilled with pink veins & grown as 'Kashmir White', seems to be the geographical race dominant in this area. A lovely plant & not quite so vigorous as the blue-purple here. These different colour forms may have crossed and seedlings may vary. . . . (10+) **B**
- 4.430.512 : GERANIUM CLARKEI from PINK FORM** \* From 'Kashmir Pink', which occurred in cultivation on Robin & Sue White's Hampshire nursery. The parent has large, clear-pink flowers. We have no idea what seedlings will be like. . . . (10+) **B**

- 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+) **B**
- 4.432.500 : GERANIUM WALLICHIANUM** \* India, Garhwal Himal. Ex an Udai Pradhan coll. A vigorous, wide-spreading form of this variable species, which dies back annually to a stout, compact rootstock. Bright pink flowers with distinct white centres produced from midsummer until the first severe frosts on prostrate, trailing stems 60cm. or more long. . . . . (10+) **C**
- 4.432.501 : GERANIUM WALLICHIANUM** \* Nepal, Trisuli Valley, near Syrabru. 2450m. Ex an E. Needham coll. (Rich pink flowers almost identical to the Garhwal coll. but, grown in full sun, it is much more compact with us than this or the following. Elizabeth Strangman, however, finds it "stronger growing & longer flowering than 'Buxton's Variety'" . . . . . (10+) **D**
- 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 Garhwal form, the long succession of soft lavender-blue flowers with large white centres is unrivalled. "A pearl beyond price" wrote G.S. Thomas . . . . . (10+) **B**

## Incarvillea : sumptuous Sino-Himalayan alpiners

- 4.478.150 : INCARVILLEA DELAVAYI from WHITE FORM** \* From a good white form (called 'Snowtop' by some in the UK) of this splendid, hardy, herbaceous perennial in *Bignoniaceae*. Beautiful, cut, basal foliage appears from stout, permanent tuberous roots & sturdy, 50cm. stems carry tropical-looking trumpet-shaped flowers. Comes reasonably evenly from seed & will be a reliable perennial in good soil in a well-drained, sunny site in the most of Britain. . . . . (15+) **B**
- 4.478.205 : INCARVILLEA EMODI** (Subgen. *Amphicome*) \* Pakistan, Rawalpindi, Margalla Hills. Crevices of limestone rocks. Ex an A. Paterson coll. (A woody based saxatile perennial from the drier western Himalayan regions, E from the Afghan border through Nepal. Pinnate basal foliage & spectacular one-sided clusters of brilliant pink, yellow-throated trumpets. A beautiful photograph of this, taken by Andrew Paterson in the site of his original seed coll., is in Phillips & Rix 'Perennials' Vol. 1. p. 178. Not difficult under alpine-house conditions with Alan King (Northants. UK) who maintains it from this 1987 coll.) . . . . . (20+) **D**
- 4.478.850 : INCARVILLEA SINENSIS var. PRZEWALSKII** China, Gansu, S of Lanzhu. 1700m. ("This interesting plant does not appear to be in cultivation" comments Chris Grey-Wilson in a review of the genus. A local race from Gansu & Shensi, in a variable species-group. Quite unlike the familiar *incarvilleas* in subgenus *Pterocleris*. A woody-based perennial, about 30cm. high, with erect, loose racemes of long-tubed, yellow bells. Farrer saw it here : "...set with finely feathered ferny foliage & bearing...a steady flight of lovely citron-yellow Allamandas...on the hottest & driest & barest exposures on the hot, bare, dry loess hills...") . . . (15+) **D**
- 4.478.951 : INCARVILLEA ZHONGDIANENSIS** \* China, Yunnan, S of Zhongdian. 3215m. Dry grassy banks on eroded hillsides. Ex ACE 1600. (A spectacular species described in 1998. Possibly allied to *I. mairei* but with smooth, thin-textured leaves and eventually forming clumps with many 20cm. flower-stems, each carrying about 3 huge bright magenta-crimson trumpets with white flares around their yellow throats. Flowering in early summer and proving to be an excellent garden plant in the UK.) (15+) **D**
- 4.479.610 : INULA RACEMOSA** \* No data. An imposing W Himalayan, spread from Afghanistan & W Nepal, N into NW China, at altitudes between 2000m. & 3000m. Tall stems, over 2m. high, rise from clumps of large, elliptic leaves & carry a long succession of yellow flower-heads, opening from dark-scaled buds, in leafy racemes through late summer. . . . . (50+) **B**
- 4.480.520 : IRIS CHRYSOGRAPHES from DARK FORMS** (Ser. *Sibiricae*) \* No data. A fine wet-grower in Series *Sibiricae* from SW China. We doubt if many named stocks are indeed vegetatively propagated. A good range of velvety purple-blacks can be expected from seed, though hybrids can occur with other members of Ser. *Sibiricae* & even Ser. *Californicae* . . . . . (20+) **A**
- 4.480.750 : IRIS DELAVAYI** (Ser. *Sibiricae*) \* China, Sichuan. Ex an I. Stokes coll. (A tall, handsome plant from damp sites in Sichuan & neighbouring Yunnan. Clumps of erect sword-leaves about 1m. high, overtopped by the stout 1.5m. stems carrying several, large violet-purple flowers with white, dagger-like signals on the broad blades of the falls. Easy in normal border-conditions in our wet clayey loam but can be grown as a marginal plant beside a pond in dry gardens.) . . . . . (15+) **B**
- 4.481.905 : IRIS MILESI** (Sect. *Lophiris*) \* No data. An 1m. tall 'Evansia' 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**
- 4.482.809 : IRIS SETOSA** (Ser. *Tripetalae*) \* Japan. No further data. Ex an AGS expedition to Japan coll. A handsome species, spread from N China across into Alaska & E to Newfoundland. This & the next are very hardy & best in a rich, moist site. . . (20+) **A**
- 4.482.850 : IRIS SETOSA from WHITE FORM** \* From a beautiful, white form. We guess this is of Asian not N American origin. About 50cm. high with broad, flat falls, yellow-tinged at the base, in summer. Almost all, seedlings will be white. . . . (15+) **B**
- 4.490.010 : KIRENGESHOMA PALMATA** \* No data. A most distinct, choice, slow-growing, hardy perennial in *Hydrangeaceae*, endemic to the mountain-woodlands of S Japan, where it occurs locally on Kyushu & Shikoku. About 1.5m. high here with erect, purple-black stems, clad in soft-green, palmately lobed, maple-like foliage & ending in branched cymes of waxy, pale-yellow bells in autumn. Flowers with us until cut down by the first severe frosts and loves our acid soil & cool, moist summers, though Bob Brown (Worcestershire, UK) tells us that he has no problems growing it on his very alkaline soil (pH 8.5) as well.) . . (15+) **C**

- 4.516.001 : LILIUM AURATUM** (var. *auratum*) \* Japan, Honshu, Shizuoka Pref. Ex a D. Elick coll. (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 sandy loam in a warm, sunny site in the UK : definitely not in a wet, peaty place. We have flowered this in less than 2 years) . . . . . (15+) **D**
- 4.516.030 : LILIUM AURATUM** var. **PLATYPHYLLUM** \* No data. Apparently the southern race & rated to be hardier & an easier plant to grow in UK gardens. Broader leaved with enormous flowers with fewer, more central crimson spots. . . . . (15+) **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. Almost 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 even dwarfer by selection) in gardens. Fairly hardy in the UK, it flowers quickly from seed, if sown in gentle warmth in winter.) . . . . . (20+) **B**
- 4.520.009 : LILIUM MACKLINIAE** from **BLACKTHORN SELECTIONS** \* All the cultivated stock seems to stem from the collections made by Frank Kingdon-Ward on one mountain in 1946 & 1948 (India, Manipur, Sirhoi near Ukhrul. 2300-2450m. Steep, grassy slopes.) This seed is from some outstanding clones selected by Robin & Sue White (Hampshire, UK). An exquisite species in the group approaching *Nomocharis* with nodding, white, bowl-shaped flowers, flushed with rose-pink outside, on stems of about 50cm. Perfectly hardy, it enjoys an acid soil & the cooler, moister summers of the North & West of the UK.) (15+) **D**
- 4.520.910 : LILIUM PHILIPPINENSE** \* No data. Slender, 1m., grassy-leaved stems with very long-tubed, horizontally carried, pure-white, scented trumpets, sometimes tinged green or brown outside. One of the most southern Asian lilies, from the mountains of Luzon in the N Philippine but recorded as hardy over several years in N England. Flowers quickly from seed. . . . . (20+) **C**
- 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 cliff's "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 in the UK, in rich, peaty soil, both under glass & outside, with gloriously scented, crimson-speckled flowers in late summer.) (10+) **D**
- 4.542.500 : LYSIMACHIA DECURRENS** \* China, Yunnan, Dali, Cang Shan. 3000m. Loose gravel in road-cut. Ex I. Stokes 46.092. (An attractive species proving most adaptable. Of mounded habit, about 50cm. high with spreading side-shoots producing upright racemes of white flowers, with a darker lilac tinge in their throats, opening over a very long period in summer.) . . . . . (50+) **C**

## Meconopsis : wild seed from Qinghai

- 4.550.311 : MECONOPSIS BETONICIFOLIA** from **WHITE FORMS** \* No data. From white 'blue poppies' ! . . . . . (50+) **A**
- 4.550.315 : MECONOPSIS BETONICIFOLIA** from **TAYLOR SELECTIONS** \* From our own second generation selections of particularly good, floriferous classic blues, derived from the finest, late-flowering plants selected by those legendary Scottish plantsmen, Henry & Margaret Taylor. The ultimate in blue poppies and the parents are good perennials here. . . . . (50+) **C**
- 4.550.510 : MECONOPSIS DELAVAYI** \* A superlative dwarf species, the ultimate alpine poppy, unlike any other in the genus & placed in a section of its own. Confined to limestone screes & stony turf in NW Yunnan, between 3,000m. & 4,300m., it has been in an out of cultivation since Forrest's original introduction of 1913. This seed is derived from several collections made in recent years, raised by Ian & Margaret Young in Aberdeen with a view to establishing a strain more adapted to cultivation. We have found the problem is finding the right degree of moisture to keep the overwintering buds in good condition without rotting them or drying them out. It is possible and it is perennial. Diminutive rosettes of glaucous, entire, more or less hairless, leaves & large half-nodding, usually 4-petalled, flowers in the richest, most luminous imperial purple on stems of about 15cm. Truly exquisite. . . (20+) **E**
- 4.551.500 : MECONOPSIS HORRIDULA** China, Qinghai, Nan Shan, NW of Maqin. 4500m. (From the NW limit of the distribution of this species-complex, this will differ from collections made in Yunnan (*M. prattii*), Sichuan (*M. rudis*) & the Himalaya ('true' *M. horridula*). It might be better placed under *M. racemosa*, described from neighbouring Gansu. Glaucous grey, bristle-leaved rosettes send up erect stems with axillary pale-blue poppies with charcoal-grey anthers. From an extremely cold & dryish part of Central Asia, this will need scree-conditions (optimum drainage) and a sunny site (in cool climates). . . . . (50+) **C**
- 4.551.800 : MECONOPSIS INTEGRIFOLIA** (subsp. *integrifolia*) China, Qinghai, Nan Shan, NW of Maqin. 4300m. (This sumptuous, spectacular yellow poppy, collected at the NW extremity of its distribution, up near the borders of Sinkiang & Mongolia & likely to differ somewhat from recent, southern collections made in Sichuan. This will need perfect drainage (see comments on climate under *M. horridula*), an acid soil & cool, moist summer conditions. Dense rosettes of oblanceolate to linear, softly hairy basal leaves : "magnificent and portly...with its huge lemon-pale globes" wrote Farrer on seeing it in Gansu in 1914 . . . . . (50+) **D**
- 4.552.449 : MECONOPSIS NAPAULENSIS** from **RED FORMS** \* These cultivated colour-forms mainly originate from the confusing natural hybrids with *M. regia* & *M. paniculata* introduced under SSW numbers from Nepal in 1954. . . . . (50+) **B**
- 4.552.450 : MECONOPSIS NAPAULENSIS** from **YELLOW FORMS** \* No data. Both have superb winter rosettes . . (50+) **B**

- 4.565.010 : MORINA LONGIFOLIA** \* Bright green, aromatic, thistle-like rosettes send up, in late summer, stiff, erect, 1m. stems whorled with long-tubed pink flowers, opening from white buds & maturing to crimson. This Himalayan meadow species is the only member of this fine genus which has proved to be a reliable garden-plant in the UK. Good, well-drained soil. . . . . (10+) **B**
- 4.574.100 : NEPETA CLARKEI** \* No data. A W Himalayan species from wet habitats in high, dry areas of N Pakistan into Kashmir. Quite accommodating in cultivation here, forming clumps with many, erect, 1m. stems whorled with blue flowers. . . . (20+) **B**
- 4.574.310 : NEPETA GOVANIANA** \* No data. One of our favourite plants for a cool site. A pale yellow-flowered, W Himalayan woodlander from N Pakistan & adjacent NW India, it enjoys our moist acid soil, flowering all through late summer and autumn with airy flights of long-tubed flowers carried on long pedicels from widely branching, velvety-leaved stems about 1m. high. (20+) **B**
- 4.574.500 : NEPETA SUBSESSILIS** \* No data. A pleasant perennial, growing easily here. From moist mountain slopes in N Japan, on Hokkaido & Honshu. Stout, erect stems, about 60cm. high, with toothed, downy leaves carry densely verticillate, terminal spikes of lavender-blue flowers, individually large for the genus & like little penstemons. Late-season & long-flowering. . . . (20+) **B**
- 4.576.509 : NOTHOLIRION BULBULIFERUM** (*N. hyacinthinum*) \* Ex Cox 5074. (A beautiful lily-relative, which can reach 1m. high with racemes of up to 30 horizontal, lilac trumpets, tipped with green. Distributed in alpine meadows from Nepal into W China, it is most likely to succeed in the UK in a cool, part-shaded site in moist but well-drained, humus-rich soil.) . . . . . (15+) **C**
- 4.580.501 : PAEONIA LACTIFLORA** Russia, E Siberia. The wild species is virtually unknown in gardens, where its influence is manifest only in the multitude of hybrid herbaceous species. Should have large white flowers with golden stamens. . . . (6) **D**
- 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 around 3000m. in W China, in Gansu & NW Sichuan, & an excellent grower in the UK. This ill-defined variety is said to be distinguished by the longer hairs on the leaf-veins. . . . . (8) **C**
- 4.581.610 : PAEONIA VEITCHII** from **WHITE FORM** \* This appears to be a white variant of *P. veitchii* var. *woodwardii*, a lovely plant, very rarely seen in cultivation, with pure-white flowers against cut, bright-green foliage. Our past experience indicated that a reasonable proportion will come white from seed with the balance in a very pale pink. . . . . (6) **E**
- 4.594.020 : PODOPHYLLUM HEXANDRUM** (*P. emodi*) \* No data. From several forms of this slow-growing, herbaceous, woodland species, widespread through the Himalaya into China. Pink or white, cup-shaped flowers top the mottled parasols of the expanding leaves as they appear in spring to be followed by big, squashy, scarlet fruits, dangling below in autumn. . . . . (8) **B**
- 4.598.120 : POLYGONUM AMPLEXICAULE** var. **PENDULUM** (*Persicaria amplexicaulis* var. *pendula*) \* Nepal, Arun Valley. From the excellent & distinct form introduced in 1971 by Beer, Lancaster & Morris and grown as 'Arun Gem'. Close clumps of foliage & a profusion of dangling, rich rose-pink lambs-tails on 40cm. stems all late summer & autumn. Very classy.) . . (20+) **B**
- 4.599.710 : POTENTILLA NEPALENSIS** \* India, Himachal Pradesh, Kulu, Parasher. 2100m. Open meadows. Ex R. McBeath 1698 (A really excellent new form, now well established in the UK from Ron's 1985 coll. Wiry, branching, 40cm. stems curve upwards from the compact, central crowns of strawberry-leaves to carry a succession of flowers in rich, deep cherry-pink with darker centres, on & on from late summer until ended by the first severe frost. Much daintier & wilder-looking than 'Miss Willmott'.) (20+) **B**
- 4.604.009 : PRIMULA BULLEYANA** (Sect. *Proliferae*) \* China, Yunnan, Hei-Shui. 2800m. Marshy meadow by riverside. Ex ACE 2484 (White-mealy stems up to 1m. high with superimposed whorls of yellow to orange flowers from scarlet buds.) . (50+) **B**
- 4.607.000 : PRIMULA CHUNGENSIS** (Sect. *Proliferae*) \* No data. Native to China in SW Sichuan, NW Yunnan & adjacent Assam & SE Tibet. Wet areas in coniferous forest around 3000m. Candelabra of deep yellow to orange flowers.) . . . . . (50+) **B**
- 4.617.410 : PRIMULA HELODOXA** (Sect. *Proliferae*) (*P. prolifera* group) \* No data. Originally introduced by Forrest from Yunnan but now probably crossed with some of its allies, like Bhutanese *P. smithiana*, in gardens. Nevertheless, it remains the finest yellow candelabra primula with bright, clear-yellow whorls on 50cm. stems from evergreen rosettes of rich-green leaves. . . . (50+) **B**
- 4.830.505 : ROSCOEA CAUTLEOIDES** \* 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+) **B**
- 4.838.049 : SALVIA BULLEYANA** \* China, Yunnan. Ex CLD 801 (A dry-meadow plant, easily grown in the UK. Bold, cordate leaves and 1m. stems with paired, soft-yellow flowers with brown-purple lower lips, over a long period in summer.) . (15+) **B**
- 4.838.150 : SALVIA CAMPANULATA** from **YELLOW FORM** \* China, Yunnan. (A handsome, 50cm. tall, robust, dry-meadow plant with a tuberous rootstock. Distributed from N India to SW China up to 4000m. and accordingly variable. The paired flowers emerging from large calyces can be cream, yellow, pink or blue. For a well-drained sunny site in the UK.) . . . . . (10+) **D**
- 4.838.800 : SALVIA PRZEWALSKII** \* China, Yunnan, Zhongdian. 3300m. Ex ACE 1157 (Large greyish leaves with reddish petioles and branching, 1m. stems of soft rose-purple flowers in summer. A plant of dryish areas for a sunny site in the UK.) . (10+) **D**
- 4.867.000 : SEMIAQUILEGIA ADOXIOIDES** \* China, Qinghai. Ex SBQE 1157. (Airy flights of little, pale rose-purple, spurless columbines on wiry, branching stems dance above daintily dissected foliage over a long period in early summer.) . . . . (20+) **B**
- 4.878.210 : THALICTRUM DELAVAYI** (*T. dipterocarpum* of gardens) \* No data. An exquisitely elegant & airy, 2m. high perennial from Yunnan. Maidenhair fern foliage & wiry, 2m. stems dividing into a multitude of branches to carry a myriad clear lavender-purple flowers, the petal-like sepals surrounding the bunch of hanging stamens. Cool site in good, humus-rich soil. . . (20+) **A**

**A** : \$2.00 ; £1.50 ; DM4,- ; FF14,-    **C** : \$4.00 ; £2.50 ; DM7,- ; FF23,-    **E** : \$7.00 ; £4.50 ; DM12,- ; FF41,-  
**B** : \$3.00 ; £2.00 ; DM5,- ; FF18,-    **D** : \$5.00 ; £3.50 ; DM9,- ; FF32,-    **F** : \$9.00 ; £6.00 ; DM16,- ; FF55,-



## Unidentified wild seed-collections from China

In addition to some of the preceding specifically identified Chinese collections, the following have been received named only to generic level. All were collected in late September, 2000, by Chinese botanists. While reasonable field data has been supplied, we have no field numbers nor do we know the identities of the collectors. When ordering, please order by name & province e.g. *Iris* sp. (Sichuan).

ARISAEMA SP. Yunnan, 10km. S of Lijiang. ....	(8)	E
ARISAEMA SP. China, Gansu, SE of Tianshui. 1400m. ....	(10)	E
INCARVILLEA SP. China, Sichuan, 450 km. NE of Chengdu. 3700m. (Subgenus <i>Pterocleris</i> .) ....	(15+)	D
INCARVILLEA SP. China, Sichuan, 50 km. N of Daocheng. 4400m. (Subgenus <i>Pterocleris</i> .) ....	(10+)	D
IRIS SP. China, Yunnan, 15km. NE of Zhongdian. 3100m. ....	(20+)	D
PRIMULA SP. China, Sichuan, 300km. W of Chengdu. 4500m. ....	(50+)	D

We offer New Zealand seeds from the 2001 harvest, mostly in small quantities but almost all wild-collected. Most are from collections made by Simon Bond in January & February, supplemented with material from some NZ residents & a few cultivated 2000 UK seeds.

5.010.209 : ACIPHYLLA AUREA NZ, Otago, Old Man Range. (Stiff, yellowish-edged, spine-tipped foliage. 1.5m.) ...	(20+)	C
5.011.000 : ACIPHYLLA FEROX NZ, Marlborough, Black Birch Range. 1100m. Tussock grassland. (2m.) ...	(20+)	C
5.012.400 : ACIPHYLLA MONROI NZ, Marlborough, Black Birch Range. 1400m. Open, stony ridge. (30cm. high.) ...	(10)	D
5.013.009 : ACIPHYLLA SCOTT-THOMSONII NZ, Canterbury, Torlesse Range, Porter's Pass. (3m. tall) ...	(10+)	C
5.013.200 : ACIPHYLLA SIMPLEX NZ, Central Otago, Pisa Range. 1700m. Exposed, stony fell-field. (In a trio of compacted, high-alpine species, forming hard hummocks : compressed domes like a complex carving in stained, polished walnut-wood.) ...	(15+)	E
5.013.409 : ACIPHYLLA SQUARROSA No data. Much divided, glaucous foliage. Flower stems under 1m. ....	(20+)	C
5.035.109 : ANISOTOME AROMATICA NZ, Mt. Dobson. (Tap-rooted rosettes of dissected leaves. White flowers.) .	(10+)	B
5.035.209 : ANISOTOME FILIFOLIA NZ, Lake Lindon Road. (Red-tinted, greyish thread-like leaves. White heads. 15cm.) (8)	(8)	C
5.035.310 : ANISOTOME HAASTII * No data. Finely divided, fresh-green foliage. Red-stemmed, white heads. 20cm. ....	(20+)	B
5.125.000 : BLANDFORDIA PUNICEA ( <i>B. marginata</i> ) Tasmania, South Bruny Island, Jetty Beach. M. Harvey coll. (Hardest in this small Australian genus in <i>Liliaceae</i> . Racemes of up to 25, tubular flowers, in scarlet tipped with orange-yellow.) ...	(30+)	C
5.160.200 : BULBINELLA HOOKERI NZ, Canterbury, N of Hanmer Springs, above Jack's Pass. Moist depressions. .	(15+)	B
5.160.220 : BULBINELLA HOOKERI NZ, Nelson, Cobb Valley. (Distinct glaucous-leaved form from NW Nelson.) .	(10)	C
5.180.509 : CELMISIA ARMSTRONGII NZ, Otago Valley (Large tufts of narrow, leathery, white-backed foliage.) .	(10+)	C
5.181.609 : CELMISIA DENSIFLORA NZ, Central Otago, Rock & Pillar Range. (Rosettes of wavy-edged leaves.) .	(10+)	C
5.184.809 : CELMISIA SEMICORDATA NZ, Mt. Dobson. (Spectacular. Silvery leaves & huge white daisies. 40cm.) (10+)	(10+)	C
5.184.909 : CELMISIA SESSILIFLORA NZ, Central Otago, Rock & Pillar Range. (Cushions of grey-needled rosettes.) (10+)	(10+)	C
5.185.301 : CELMISIA SPECTABILIS NZ, Canterbury, Torlesse Range, Porters Pass. 1050m. (Silvery tufts. 20cm.) .	(10+)	C
5.185.809 : CELMISIA VISCOSA NZ, Central Otago, Rock & Pillar Range. (Much-branched ; narrow leaves.) ...	(10+)	C
5.250.009 : CLEMATIS AFOLIATA NZ, Marlborough, Lake Summers. (Rush-like : green stems & white flowers.) .	(15+)	B
5.250.909 : CLEMATIS FOETIDA NZ, Nelson, Cobb Valley. (Soft-green flowered, climbing forest species.) ...	(15+)	B
5.252.005 : CLEMATIS MARMORARIA * No data. Cultivated, 2001 NZ seed. Endemic to marble-crevices between 1280m. & 1460m. in the Arthur range of NW Nelson. Spreading stems up to 30cm. long with profuse, creamy white flowers. .	(10+)	E
5.254.009 : COPROSMA ATROPURPUREA NZ, Nelson, Lake Tennyson area. (Deep purple fruits on creeping mats.) (10+)	(10+)	C

- 5.265.100 : **CRASPIDIA LANATA** NZ, Central Otago, Pisa Range. 1500m. Snow tussock grassland. (Grey-white.) . . (20+) B
- 5.270.200 : **CYATHODES COLENSOI** NZ, Nelson, Clarence River valley, S of Lake Tennyson. Open, stony areas. . . (10+) B
- 5.270.409 : **CYATHODES EMPETRIFOLIA** \* No data. Creeping, needle-leaved shrublet with red, fleshy fruits. . . . (10+) B
- 5.300.100 : **DIANELLA TASMANICA** Tasmania, Cockle Creek. M. Harvey coll. (Stoloniferous clumps of tough, leathery, bright-green foliage about 1m. tall with panicles of pale-blue flowers & the most striking, glossy, violet-blue berries.) . . . . (15+) C
- 5.345.500 : **ELYMUS SOLANDRI** No data. From a really excellent, blue-leaved form of this NZ grass,, about 50cm. . . (15+) C
- 5.402.600 : **GAULTHERIA DEPRESSA** var **NOVAE-ZELANDIAE** from **WHITE-FRUITED FORM** NZ, Nelson. (50+) B
- 5.402.620 : **GAULTHERIA DEPRESSA** var **NOVAE-ZELANDIAE** from **RED-FRUITED FORM** \* No data. . . . (50+) B
- 5.403.109 : **GAULTHERIA PARVULA** (*Pernettya nana*) NZ, S of Tekapo. (Creeping mats ; big, rosy fruits.) . . . . (50+) B
- 5.405.600 : **GENTIANA DIVISA** NZ, Central Otago, Pisa Range. 1650m. Seeps and stony slopes. (White mounds.) . . (30+) C
- 5.406.509 : **GENTIANA PATULA** NZ, Nelson, Cobb Valley. 850m. (White, bell-shaped flowers, veined with purple.) (30+) C
- 5.470.000 : **ISOPHYSIS TASMANICA** Australia, Tasmania, Mt. Sprent above Strathgordon. 1200m. Crevices. M. Harvey coll. (Spectacular Tasmanian endemic alpine, usually placed in *Iridaceae*. Wide open, glossy red stars up to 8cm. across.) . (20+) E
- 5.475.010 : **JOVELLANA REPENS** \* No data. A dwarf herbaceous *Calceolaria*. Creeping stems with rosettes of downy foliage & airy inflorescences of white flowers speckled with maroon. Thrives in a shady, peat-bed in our unheated greenhouse. . (50+) C
- 5.489.809 : **LEPIDOTHAMNUS LAXIFOLIUS** NZ, Nelson, Cobb Valley. (Dwarf form of this prostrate alpine conifer) . (5) C
- 5.580.110 : **LEUCOGENES LEONTOPODIUM** \* No data. 2001 cultivated NZ seed of the N Island 'edelweiss'. . . . (15+) C
- 5.604.100 : **LIGNOCARPA CARNOSULA** (*Anisotome carnosula*) NZ, Nelson, Crimea Range, Mt. Southey. 1600m. Mobile, greywacke scree. (A mounded filigree, a few cm. high, of finely cut, fleshy foliage, smooth & grey & glaucous.) . . . . (8) E
- 5.606.909 : **LOBELIA LINNAEOIDES** NZ, Mt. Dobson. (White flowers on thready stems ; mats of tiny reddish-leaves) (30+) C
- 5.607.000 : **LOBELIA ROUGHII** NZ, Nelson, Crimea Range, Mount Southey. 1600m. Mobile, greywacke scree. . . . (20+) E
- 5.630.000 : **MYOSOTIDIUM HORTENSIA** \* New Zealand, Chatham Islands, Pitt Is. Beach, at tide line. Ex a T. Hatch coll. (Huge, ribbed, shining leaves & a long succession of giant forget-me-not flowers in celestial blue. Seed germinates irregularly.) . (6) C
- 5.631.900 : **MYOSOTIS TRAVERSII** NZ, Nelson, Crimea Range, Mt. Southey. 1600m. Stabilised, greywacke scree. . . (10) E
- 5.635.000 : **MYRSINE NUMMULARIA** NZ, Nelson, Lake Tennyson area. (Prostrate alpine shrub ; violet-blue fruits.) . (5+) C
- 5.690.100 : **NOTOTHLASPIROSULATUM** NZ, Nelson, Crimea Range, Mt. Southey. 1600m. Mobile, greywacke scree. (Exquisitely formed, flat rosettes in grey, tinged with brown send up a mound large, beautifully fragrant, creamy flowers.) . . . . (30+) D
- 5.710.700 : **OURISIA SESSILIFOLIA** (subsp. *sessilifolia*) NZ, Central Otago, Pisa Range. 1650m. Moist turf. . . . . (20+) D
- 5.720.000 : **PACHYSTEGIA INSIGNIS** \* NZ, Marlborough, NW of Kaikoura. Ledges on cliffs. (A low, shrub with large, very thick, rhododendron-like, glossy leaves, densely felted below, and huge white daisies, from woolly-scaled buds.) . . . . . (20+) C
- 5.730.700 : **PATERSONIA FRAGILIS** (*P. glauca*) Tasmania, Cockle Creek. M. Harvey coll. (Purple-blue. 30cm.) . . . (20+) C
- 5.735.000 : **PELARGONIUM AUSTRALE** \* Tasmania, Rheban Beach, North Point. Cliffs. Ex an M. Harvey coll. (Umbels of up to 25, small flowers in white with pronounced crimson markings. 30cm. Proving fairly hardy outside in Kent, UK) . . . . (8+) D
- 5.736.000 : **PENTACHONDRA PUMILA** NZ, Marlborough, Black Birch Range. 1400m. Open, stony ridge. . . . . (10+) C
- 5.739.900 : **PHORMIUM COOKIANUM** (*P. colensoi*) NZ, Nelson, SW of Lewis Pass. 950m. (2m. high) . . . . . (20+) B
- 5.740.000 : **PHORMIUM TENAX** NZ, W Coast, NE of Bruce Bay. Sea-level. (Bizarre, dull-crimson flowers. 3-5m.) . (20+) B
- 5.749.010 : **PIMELEA PROSTRATA** \* Prostrate grey shrub fragrant ; white flowers & white fruits like rice-grains. . . . (20+) B
- 5.749.309 : **PIMELEA SERICEO-VILLOSA** NZ, Nelson, Cobb Valley. (Prostrate, grey-leaved shrublet. Orange fruits.) (15+) C
- 5.786.500 : **RANUNCULUS INSIGNIS** NZ, Marlborough, Black Birch Range. 1400m. Moist, stony areas. (A spectacular alpine. Thick, rounded, evergreen basal leaves ; stout, branched, 20cm. stems with huge, glossy bright-yellow buttercups,) . . (20+) C
- 5.787.200 : **RANUNCULUS PACHYRRHIZUS** NZ, Central Otago, Pisa Range. 1650m. Moist turf and stony seeps.) . . (20+) C
- 5.940.009 : **UTRICULARIA MONANTHOS** NZ, Lake Lindon Road. Permanently wet, streamside gravel. (A minute, creeper of montane peat-bogs. Comparatively large, lipped, violet-blue flowers on thready stems, about 5cm. high.) . . . . . (50+) D
- 5.970.500 : **WAHLENBERGIA CARTILAGINEA** NZ, Nelson, Crimea Range, Mt. Southey. 1600m. Mobile & part-stabilized, greywacke talus. (Small, starry rosettes of thick, leathery, glaucous-grey leaves ; wide-open bells in pale lilac-blue.) . . (20+) E

A : \$2.00 ; £1.50 ; DM4,- ; FF14.- C : \$4.00 ; £2.50 ; DM7,- ; FF23.- E : \$7.00 ; £4.50 ; DM12,- ; FF41.-  
 B : \$3.00 ; £2.00 ; DM5,- ; FF18.- D : \$5.00 ; £3.50 ; DM9,- ; FF32.- F : \$9.00 ; £6.00 ; DM16,- ; FF55.-