

News from

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NEWSLETTER & SEED LIST

MARCH, 2005

▶ ALLIUM

2004 seeds from an exciting range of species from Turkey, Iran and Central Asia

▶ EREMURUS

2004 seeds from many Central Asians

▶ PAEONIA

2004 hand-pollinated seeds from authentic wild species

▶ CALOCHORTUS

an unrivalled range

▶ LILIUM

2004 seeds from an extensive selection of European, Asiatic & American species

UK government warns :

'Foreign invaders threaten British natives'

Amid the British pre-electoral hysteria regarding asylum-seekers, immigrants, Gypsies, Shylock-lookalikes and flying pigs, Ben Bradshaw, British Nature Conservation Minister, recently found a comfortable niche in one of the few socially acceptable refuges for those wishing to indulge their xenophobic or totalitarian inclinations. He warned the Annual Forum on Non-native Species that these species "can transform eco-systems and threaten native and endangered species. They can damage economic interests, such as agriculture, forestry and infrastructure, and can threaten public health." Mr. Bradshaw assured the British electorate that the present government's "robust code of practice" will "help prevent problems" and that these "shouldn't happen now or in future." He warned, however, that there is "increasing risk" and that "invasions such as these are likely to increase in the future".

If only you knew what Mr. Bradshaw knows. Sources indicate that the leading molecular biologists engaged in Saddam Hussein's 'weapons of mass destruction' programme may have been abducted by Al Quaida, during the war. They are now believed to be held in a secret complex of caves, deep within the mountains on the border between Afghanistan and Pakistan. Guarded by local tribesmen, they are alleged to be close to genetically modifying Himalayan balsam to disperse anthrax spores from its explosive seed-capsules in considerably less than 45 minutes. Attempts to stitch octopus DNA into Japanese knotweed to create a Boston Strangler Weed have reportedly met with less success. Early indications that large tracts of Afghanistan were being devoted to the cultivation of the giant hogweed have been disproved by recent surveys of the area. Only a vast increase in areas devoted to opium poppies has been observed, though North American invasion biologists fear that the purple patches are actually areas of purple-loosestrife production. This "aggressive invader" is rated among the top ten by the U.S. National Invasive Species Council and a paper published in 'Bioscience' in 2000 gave it 'top billing' claiming that it is already costing the U.S. \$45,000,000 annually. Lucrative contracts for herbicide production and aerial spraying may be awarded soon by the U.S. government. Following the Rose, the Cedar and the Tulip Revolutions, the U.K. government had endorsed a U.S. 'counter-terrorism' proposal, formulated by the C.I.A., for the mass-production of 'freedom flowers' for use in Iran and other 'rogue states' until it learned that there were plans for a homegrown British Bluebell Revolution, if there was a recurrence of vote-rigging in the forthcoming U.K. election.

For a well-researched appraisal of the claims made by invasion biologists and their underlying philosophy : 'Invasion Biology : Critique of a Pseudoscience' by David I. Theodoropoulos, published by Avvar Books, Blythe, California in 2003.

Ordering from this list could not be easier

We shall accept your personal cheque in US \$ or £ sterling. Cheques in US \$ must be on a US bank account, as charges on negotiating cheques on foreign accounts are very high in the USA (foreign banks can sometimes sell you a US \$ cheque drawn on a US branch). Apart from personal cheques in these two currencies, payments can be made in US \$, £ sterling or € bank-notes (please send by registered mail), a bank draft or International Money Order (in US \$ or £ sterling for these please). Personal € cheques are at present a problem as there is, as yet, no central bank clearing system within the eurozone. This makes it disproportionately expensive for us to have cheques for comparatively small amounts cleared. We hope this difficulty will be resolved in time. In the meantime we should be grateful if eurozone customers send payment in € by cash by registered mail or use a bank draft in US \$ or £ sterling : just convert at the

current exchange rate. We do not operate a Giro account to enable direct transfers. Credit card payments can be made only online through PayPal in US \$. A handling charge of \$5 is added to each order made online. 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. Obviously, it cannot be made out for more than the limit but it can certainly be made out for less, avoiding annoying credits or refunds : you will only pay for what we have sent after the order is despatched. If you do not wish to do this, a list of some possible substitutes will be very helpful : we shall not use them unless we have to and, if we do, we always try to send more than the value of the items not supplied. We shall not pay in your cheque until after your order has been sent : it is in our interest, as well as yours, to complete your order as quickly as we can.

**PLEASE HELP US BY PRINTING YOUR NAME & ADDRESS CLEARLY.
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. While we are ready to send out orders by return, most come in during the first few weeks after we send out a list. We receive orders 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. A few 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.

Customers in the USA and New Zealand

Some customers in the United States have expressed concern as to the threat, made by the USDA a few years ago, to apply regulations regarding the importation of seeds. The regulations are not new but the authorities have previously adopted a realistic, pragmatic approach in applying them to small quantities. It is not practical for this to change. One or two orders go missing in transit every year but this is not due to the USDA. We were not told of any failing to arrive in the USA during 2004 but a few disappeared in the mail within the UK and elsewhere in Europe. We always replace, credit or refund if an order does not arrive for whatever reason and are happy to continue to take any risk ourselves until we see how things work out. Packets to the USA will be labelled honestly and accurately "Dried botanical specimens." Phytosanitary certificates, even if we can persuade our local office to issue them for tiny quantities of seeds, will be meaningless but they do not come cheaply in Britain. New Zealand customers have a more serious problem. With a much smaller volume of mail entering the country and, we suspect, an overstuffed agricultural inspectorate, it is best to stick to the list of permitted species, which is now quite extensive and includes most species in our lists.

Our population reference numbers

The species in our lists are divided into five geographical areas. Within these areas they run in alphabetical order. The numbers appearing before the names run in numerical order (which means we do not much like generic 'splitting'). These numbers refer to particular populations, mainly in the wild, though cultivated material without data is given a number also. Wild collections which cannot be fully identified will be found under a five-digit field number. This number refers to a collection made by us on a particular date only. Both sets of numbers are permanent. The use of population references is to avoid seed from the same population of plants being distributed under a proliferation of field-numbers. 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 (they have an 0. before them on our records and you will see this on labels). 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 or 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. Much is hand-pollinated but it will not necessarily produce similar-looking seedlings. As our parent-stocks represent samples of wild populations, seedlings will show the variation present in the wild.

118.510 : ADONIS VERNALIS * No data. One of the most beautiful of spring-flowering perennials. A northern steppe-plant from the severe continental climates of central Europe through Russia, suited to an open, well-drained site in the garden. Large, glossy, yellow buttercup-bowls open with the unfurling, bright-green foliage, finely cut into linear segments, initially on short stems of about 10cm., gradually elongating to over 30cm. Irregular in germination & slow from seed. (15+) C

Allium : onions from the Alps to the Tien Shan

130.120 : ALLIUM aff. AKAKA (Sect. *Acanthoprasum*) * Turkey, Kars, Kagizman to Pasli gecidi. 1800m. Limestone scree on W-facing slope. (From the Georgian border, it may be closer to another Transcaucasian species. Attractive, dwarf, pinkish, ball-heads on 15cm. stems, with about 3, grey-green leaves, narrower & more upright than typical *A. akaka.*). (10+) D

130.530 : ALLIUM AROIDES (Subgen. *Melanocrommyum*) * Uzbekistan, Samarkand, Seravshan. (One of the last species in this subgenus to flower. Lax umbels, about 10cm. across, of greenish white flowers with purple-brown midveins held on 20cm. tall stems. The specific name refers to the very large spathes. Needs dry conditions as soon as flowering starts.) (10+) C

130.550 : ALLIUM ASCHERSONIANUM (Subgen. *Melanocrommyum*) Jordan, W of Kerak. (Robust & broad-leaved with tight, hemispherical umbels of starry, deep purple flowers on 30cm. stems. Endemic to N Egypt, Israel and W Jordan. Probably not tried in cultivation, it will only be possible under glass in dry conditions with as much sun as possible.) (10+) E

130.641 : ALLIUM BARSCZEWSKII * Uzbekistan, Pskem range, Urungachsai. Ex ARJA 97-46. (According to Janis Ruksans this is a particularly fine form of this 30cm. high Central Asian. Splendid, upward-facing, red-purple flowers.) . . . (20+) C

130.670 : ALLIUM BODEANUM (Sect. *Acanthoprasum*) * No data. Not recollected recently, this is from an Anne Aja coll. made in Iran in the 1970's and maintained in cultivation in the UK by Martyn Rix. A splendid endemic of Khorasan, in NE Iran, & adjacent Turkmenistan. Related to *A. cristophii* but with fewer, shorter, wider, falcate, blue-grey leaves & a shorter, fatter scape carrying a huge, spherical umbel of large, starry, violet-purple flowers with whitish perigonia. Rated as highly garden-worthy by Per Wendelbo, who considered it to be "certainly one of the more remarkable species of its genus." (10+) E

130.968 : ALLIUM CAESIUM * Kazakhstan, Kurti. An ice-blue form of this Central Asian species. (15+) B

130.970 : ALLIUM CAESIUM * No data. From an excellent, richly coloured, bulbil-free form of this attractive plant, originally received from Tashkent Botanic Garden. About 30cm. high with umbels of many, violet-blue flowers (15+) B

131.185 : ALLIUM CAPITELLATUM * Iran, Mazanderan, near Siabishe. 1900m. (Tight umbels of starry flowers, bright pinkish violet in this form, atop a slender, 30cm. tall stem, open in late summer after the leaves are dormant.) (15+) C

131.278 : ALLIUM CARDIOSTEMON (Sect. *Melanocrommyum*) * Turkey, Trabzon, S of Of. 1150m. (A robust Turkish form of an adaptable species from Turkey, N Iraq, Armenia & NW Iran. Dense many-flowered hemispherical umbels of darkest maroon-purple flowers on 60cm. stems, later in summer than most tall, ball-headed species.) (20+) C

131.520 : ALLIUM CASSIUM var. HIRTELLUM * Turkey, Icel, N of Gülek Boğazi. c. 2000m. (A attractive, dwarf species from S Turkey, Syria & Lebanon. Rounded umbels of campanulate, white flowers with pink midveins, which suffuse the segments with rose as they age, on 15cm. stems above a few linear leaves, in this case pubescent.) (20+) B

131.560 : ALLIUM CHELOTUM Iran, Elburz, Kuh-i-Abr. Ex a P. Wendelbo coll. (A handsome, ball-headed species, confined to a few localities in the eastern Elburz. Near *A. jesdianum* & *A. rosenbachianum* with similar rounded umbels of violet-purple flowers but the perianth-segments are more membranous and the foliage almost elliptic.) (10+) D

131.590 : ALLIUM COLCHICIFOLIUM Turkey, Tunceli, NW of Tunceli to Ovacik. 1000m. Openings among deciduous scrub on steep slopes. (Related to *A. orientale* and *A. kharputense* with 2 broad basal leaves. Hemispherical umbels of widely campanulate white flowers, usually with purple midveins on the segments, carried on sturdy, 15cm. stems.) (20+) C

131.595 : ALLIUM CONVALLARIOIDES (Sect. *Codonoprasum*) * Iran, N of Sardasht. (An eastern relative of *A. flavum* and *A. carinatum*, similar to these in general aspect but with rounder, denser umbels, comprising a larger number of white, slightly pink-tinged, flowers with brown midveins. For a sunny, well-drained site in the UK.) (20+) C

131.850 : ALLIUM CUPULIFERUM * Tajikistan, Hissar range. (Distinct, arresting & very little known, 50cm. high species with dense umbels of large, purple, cup-shaped flowers carried on elongating pedicels, which extend to different lengths as the flowers open. "One of the most attractive Alliums" writes Latvian allium-enthusiast, Janis Ruksans) (20+) D

132.001 : ALLIUM DARWASICUM * Tajikistan, Peter I range, near Tovil-Dora. (Elegant umbels of upturned, narrowly cup-shaped white flowers on stems between 30cm. and 40cm. tall. Worthwhile and a good grower in cultivation.) . . . (15+) C

132.005 : ALLIUM DARWASICUM from YELLOW FORM (Subgenus *Melanocrommyum*) * Tajikistan, near Iol. (A rare colour in this subgenus. Dense umbels of upturned, narrowly cup-shaped flowers in slightly greenish yellow, rather than the usual white, carried on stems between 30cm. and 40cm. tall. Comes 'true' from seed. Dry rest in summer.) (15+) D

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Allium fedtschenkoi : an exciting introduction from the Iraqi border

- 132.280 : ALLIUM FEDTSCHENKOI** (Sect. *Melanocrommyum*) * Turkey, Hakkari, Altin Daglari, NNW of Cukurca. 2500m. Ex a N. Stevens coll. (As far as we know, new to cultivation and little-known in the wild, where it has been recorded only a very few times in this corner of Turkey right on the Iraqi border and in Kermanshah province of western Iran. Large, almost hosta-like, basal leaves, about 8cm. wide, and 70cm. tall stems with umbels, about 10cm. in diameter, of lilac flowers. A striking & choice plant, possibly best given the protection of a bulb-frame in the UK because of its rarity.) (8) E
- 132.309 : ALLIUM FETISOWII** * Kazakhstan, Chu-Ili range near Chopkar. Ex RSK 77-17 (A Janis Ruksans coll. from Kazakhstan of this attractive species. Dense, tight umbels of violet-pink, star-shaped flowers on 40cm. stems.) . . . (10+) C
- 132.700 : ALLIUM HELDREICHII** (Sect. *Allium*)* Greece, Pieria, Oros Olimbos. 1200m. Shady limestone fissures in *Fagus* woodland. (A attractive, easily grown endemic of northern Greece, well suited to UK rock garden conditions. Forms cumps of blackish bulbs with tall with hemisphaerical umbels of pink, campanulate flowers on 30cm. stems.) (15+) B
- 132.750 : ALLIUM HIRTIFOLIUM** (Sect. *Melanocrommyum*) * Iran, Lorestan, WNW of Dorud. 2000m. Seasonally moist gully. (A tall , ball-headed species. Over 1m. high with rounded umbels of starry, pale-purple flowers.) (15+) D
- 132.760 : ALLIUM HISSARICUM** * Tadjikistan, N of Dushanbe, Harangon valley. (Related to and not dissimilar to *A. winklerianum* with cup-shaped violet-purple flowers but its distinctive, stiff, almost leathery perianth segments mean the flowers last in good condition for a very long time. A rare plant in cultivation. Intolerant of excess moisture.) (20+) C
- 132.810 : ALLIUM INSUBRICUM** * No data. This is "*A. narcissiflorum* of gardens". Both species are related and 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. Slow-growing but not difficult in limestone scree. (10) C
- 133.949 : ALLIUM JESDIANUM** * Iran, Yazd, Kuh-i-Barfkhane. (From the southern, type-locality collection of this showy species at one time wrongly attributed to *A. rosenbachianum*. More widely distributed far to the North in Central Asia. Rounded umbels, about 15cm. in diameter, packed with purplish violet flowers on stems rising to as much as 1m.) (10+) D
- 133.007 : ALLIUM KARATAVIENSE** (Sect. *Acanthoprason*) * Kazakhstan, Karzhantau, SE of Chimkent, Burguluk. 1300m. Loose stone-slides on open slopes. (The best-known member of this outstanding section & a well-established garden-plant of proven worth. We hope our collections will show the much greater diversity of the species than appears in standard Dutch stock and produce clones with more richly coloured flowers & even more striking foliage. This coll. is from a range where bright red-purple flowered forms are reputed to occur & whence Janis Ruksans' 'Red Globe' came.) (15+) C
- 133.011 : ALLIUM KARATAVIENSE from WHITE FORM** * No data. From the beautiful variant, 'Ivory Queen', of this splendid species, unrivalled in its broad basal foliage in grey with metallic purple tints. 20cm. (15+) B
- 133.030 : ALLIUM KAZEROUNI** * Iran, Zagros Mts., Zardeh Kuh massif. (Barely in cultivation and extremely local in nature, confined to the Bakhtiari country of the highest Zagros. From the same mountain as *Dionysia archibaldii*. This is, in effect, a reduced dwarfed version of its close relatives, such as the better-known *A. hollandicum* and *A. jesdianum*. Rounded umbels of violet-purple flowers on stems about 30cm. tall, rising above narrow, strap-shaped, glossy green leaves.) (10) E
- 133.059 : ALLIUM KHARPUTENSE** (Sect. *Melanocrommyum*) * Iran, W Azerbayejan, Disaj to Agh Bolagh, near Sangar. Ex N. Stevens 1862. (A 40cm. high species from E Turkey, N Iraq & NW Iran, allied to *A. nigrum* & *A. orientale*. Dense, many flowered umbels of flowers with white segments reflexing around either green or black-maroon ovaries.) (20+) B
- 133.070 : ALLIUM KOMAROWII** (Sect. *Melanocrommyum*) * Tadjikistan, Seravschan, Antara-Sara valley. (A most distinct & striking species. The 2, narrowly elliptical leaves, in shape & colour recalling *A. karataviense*, remain in good condition through flowering. A 30cm. scape carries a dense hemisphaerical umbels of brilliant violet-purple flowers.) (10+) D
- 133.250 : ALLIUM LORATUM** * Pakistan, Quetta province. (Seldom collected and an extreme rarity in cultivation, this is a ball-headed species with pale lilac flowers, related to *A. elatum* (syn. *A. macleanii*) and *A. giganteum*.) (10+) E
- 134.200 : ALLIUM NEVSKIANUM** (Sect. *Acanthoprason*) * Tajikistan, Varsob Gorge, near Chinoro. 1200m. Ex RM 82-72 (A splendid, choice, dwarf endemic of Tajikistan & N Afghanistan. Large, round umbels of rich, dusky, pinkish-red flowers between two broad, blue-green leaves. Satisfactory outside with several growers in the UK.) (15+) D
- 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 tall species to flower, up to 1m. high with dense umbels of many, cup-shaped, pale-yellow flowers with projecting yellow stamens. A delicate contrast to the purple usual in this group.) (20+) C
- 134.700 : ALLIUM OREOPHILUM** (Sect. *Porphyroprason*) * Uzbekistan, Seravschan, Agalik valley near Samarkand. (A magnificent, tall, early flowering form of this variable species, best known in gardens in the commercial stock grown as "*A. ostrowskianum*". This is an outstanding garden-plant with large umbels of purple flowers on 40cm. stems.) (15+) C
- 134.701 : ALLIUM OREOPHILUM** (Sect. *Porphyroprason*) * Uzbekistan, Tashkent, Kuramin range. Ex a J. Ruksans coll. (An exceptional, extremely dwarf form, only about 6cm. high, with large, eye-catching flowers in deep, rich purple. Quite recently introduced from the Kuramin mountains, along the border of Uzbekistan with the Fergana and Tajikistan.) (10+) D

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- 134.702 : ALLIUM OREOPHILUM** (Sect. *Porphyroprason*) * Kirghizstan, Fergana range, near Kugart. 2800m. Ex ARJA 97-19. (A distinct variant of this well-known species, which is widely distributed from NE Turkey to W Pakistan. From a seldom visited locality in what is currently an inaccessible 'security zone'. Fine rosy purple flowers.) (15+) C
- 134.703 : ALLIUM OREOPHILUM** (Sect. *Porphyroprason*) * Tajikistan, upper Kusavli-sai valley. 3200m. Ex a J. Ruksans coll. (Another distinct and outstanding, very dwarf, geographical variant. Umbels of rich red-purple flowers on short stems above 2-3 spirally curled, grey-green leaves which twist on the ground. Not so easy to grow as the trade form) (10) D
- 134.820 : ALLIUM ORIENTALE** Jordan, Madaba, E of Macherus. (Dense, rounded umbels on 20-30cm. tall stems. Each white flower has a striking, central, dark ovary, suffused with intense purple. Foliage of the Jordanian populations is more similar to the ones on Cyprus than those in Turkey. Full sun and good drainage.) (15+) B
- 135.900 : ALLIUM PROTENSUM** (Sect. *Kaloprason*) * Uzbekistan, Samarkand, Seravshan, S of Amankutan. 1800m. Loose talus. (Rather like a more compact (and much hardier) version of the E Mediterranean *A. schubertii*. Similar, very large heads of pink flowers on pedicels of varying lengths, the whole starburst exploding on a 30-40cm. stem.) (15+) D
- 136.000 : ALLIUM PSKEMENSE** * Uzbekistan, Pskem range, Akbulak valley. (A most splendid, exotic, late-flowering, giant onion, robust and up to 1m. tall, with huge, rounded umbels of green-white flowers. Like nothing else when its green fingers of foliage, up to 3cm. in diameter, push through in spring. Rare & local in nature but quite easy to grow.) (15+) C
- 136.150 : ALLIUM ROBUSTUM** Kazakhstan, Tarbagatai range. (From northern Central Asia near the border with China. Tight umbels of dark purple flowers on 50cm. stems. This flowers early and lasts in good condition for a long time.) . . . (15+) C
- 136.180 : ALLIUM ROSENBACHIANUM** (subsp. *rosenbachianum*) Tajikistan, Darwas range, Baldshuan. (This superlative species is local in S Tadjikistan & N Afghanistan. It is rare in cultivation, where its name has been much misapplied to *A. hollandicum* and several cultivars of the much more widespread *A. jesdianum*. Violet-purple flowers carried in large, well-balanced umbels, about 15cm. in diameter, on 70cm. tall stems. Spreading, glossy, green basal leaves.) (15+) C
- 136.185 : ALLIUM ROSENBACHIANUM** subsp. **KWAKENSE** * Tadjikistan, Harangon range. (Distinguished by its broad, more erect leaves, barely tapering at the bases. Large round heads of wine-red flowers on 1m. tall stems.) (15+) D
- 136.507 : ALLIUM SARAWSCHANICUM** (Sect. *Melanocrommyum*) * Uzbekistan, Samarkand, Seravshan, Agalik . 1100m. (Stout, erect stems, about 80cm. in height, carry large, airy, globular umbels of green-centred, violet flowers on green pedicels. One of the finest tall, ball-headed species. Quite rare in the wild but spectacular in the garden.) (20+) C
- 137.038 : ALLIUM SEWERZOWII** Kazakhstan, Boroldaitau, ENE of Chimkent. 950m. (A more robust version of *A. fetisowii* with wider leaves and umbels of lilac-pink flowers on stems up to 1m. tall. Little-known in gardens.) (15+) C
- 137.050 : ALLIUM SHELKOVNIKOVII** (Sect. *Acanthoprason*) * Iran, Ardabil, W of Ardabil, Kuh-e-Sabalan. 2400m. Steppe vegetation. (From our 2000 reintroduction of this N Iranian endemic. A dense, rounded umbel of starry, lilac flowers on a fat, 5-10cm. stem between two broad, prostrate, grey leaves. Small & choice enough for an alpine-house pan.) (10+) E
- 137.400 : ALLIUM SPHAEROCEPHALON** (subsp. *sphaerocephalon*) (Sect. *Allium*) * Turkey, Icel, NNE of Anamur. 950m. (Intense amethyst-pink flowers in globose umbels on stout stems of 60cm. or more in height. A fine geographical variant from the Cilician Taurus of this widespread species. "Nice indeed ! My colleagues were much fascinated of it." comments Arnis Seisums. A splendid leek which should be no trouble to grow in a well-drained, sunny site in the UK.) (15+) C
- 138.600 : ALLIUM STATICIFORME** (Sect. *Codonoprasum*) * No data but originally from a coll. in southern Greece. Dense umbels with a multitude (up to 200) of tiny white flowers, eventually drooping from erect buds, on 30cm. tall stems. Related to the Turkish *A. myrianthum* & in the same section as *A. carinatum* & *A. flavum*. Hot, dry site. (15+) C
- 138.900 : ALLIUM STIPITATUM** Tadjikistan, Varzob. (An imposing Central Asian, summer-flowering bulb. Ribbed stems of a 1m. or more high carry almost spherical umbels of starry, purple flowers with tapering, twisted segments.) (20+) C
- 139.150 : ALLIUM TAENIOPETALUM** Tajikistan, Mogoltau range. (A most attractive species and one that is rare in cultivation. Comparatively large, star-shaped, violet-purple flowers carried in loose, airy, globose umbels, about 10cm. in diameter on stems up to 50cm. in height. It should be possible outside in the UK in a well-drained site.) (15+) E
- 139.180 : ALLIUM TASCHKENTICUM** (Sect. *Melanocrommyum*) * Uzbekistan, Tashkent, Chimgan area. (Recently described, robust species with glossy, green leaves and 1m. tall umbels of green flowers, suffused with bronze.) (20+) D
- 139.600 : ALLIUM TSCHINGANICUM** Uzbekistan, Tashkent, Chimgan. (From a type-locality collection of this rare and local species. Tight, dense umbels, about 7cm. in diameter, of violet-purple flowers, on stems up to 1m. tall.) (15+) D
- 139.621 : ALLIUM UMBILICATUM** * Iran, Khorasan, Bojnurd, E of Tang Rah to Chesmeh Khan. 1200m. Steep, loose limestone slopes. Ex N. Stevens 1957. (From two colls. by Norman of what we think is most likely to be this pretty little species with clumps of bulbs, grassy leaves & rounded umbels packed with lilac-pink flowers on 15cm. stems.) (20+) B

A : \$3.00	;	£1.50	;	€ 2. -		C : \$5.00	;	£2.50	;	€ 4. -		E : \$8.00	;	£4.50	;	€ 7. -
B : \$4.00	;	£2.00	;	€ 3. -		D : \$6.00	;	£3.50	;	€ 5. -		F : \$10.00	;	£6.00	;	€ 9. -

- 156.010 : ANDROSACE CYLINDRICA** * No data. An extremely local, saxatile alpine from shaded limestone cliffs in the W Pyrenees. Cushions of dark-green rosettes with short-stemmed white flowers. Alpine house in UK. (15+) C
- 156.810 : ANDROSACE PUBESCENS** * No data. A white-flowered, aretian cushion for the alpine-house. Distributed locally from the Pyrenees to the eastern Alps, it crosses with *A. helvetica*. Cultivated forms are mostly hybrids. (15+) C
- 156.910 : ANDROSACE PYRENAICA** * No data. Narrowly endemic to the high granites of the central Pyrenees. Tight, mossy, green hummocks, studded with stemless, white, primrose-flowers. Alpine-house but best outside in summer. . . . (15+) C
- 157.010 : ANDROSACE VANDELLII** * No data. Classic alpine-house plant from non-calcareous cliffs in the mountains of SW Europe. Tight, symmetrical, silvered cushions cover themselves with white, yellow-eyed flowers. (15+) C

Arum : hardy summer-dormant aroids

- 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. (10+) D
- 194.809 : ARUM BALANSANUM** * Turkey, Bursa, between Tavşanlı & Dursunbey. Ex an A.J. Willis coll. (Allied to *A. orientale* but with a limited, inland distribution in the deciduous woodlands of W Anatolia, this is growable outside in the UK. In this form, the yellowish spadix contrasts with the deep purple interior of the short-stemmed spathe.) (5) E
- 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 spadix. From the outstanding coll. made by Mark Ogilvie-Grant on Karpathos in the 1950's ("particularly reliable" writes Peter Boyce) : the F.C.C. 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. Safest protected from frosts but never damaged here with minimal protection, planted out under polythene.) (10+) 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 African plants.) (10+) C
- 195.160 : ARUM DIOSCORIDIS** (var. *dioscoridis*) (syn. *A.d.* var. *spectabile*) * Turkey, Balikesir. Ex Albury, Cheese & Watson 1965. (Large spathes heavily blotched with velvety black-purple. The species as a whole tends to be a plant of lower altitudes & needs a warm, dry site in the UK. It is perhaps best grown in the bulb-frame so it can have a summer rest.) (10) C
- 195.509 : ARUM ELONGATUM** (subsp. *elongatum*) * Russia, Krasnodar district, near Enem. ("An attractive species" writes Peter Boyce. Distributed around the Black Sea & hardy in the UK. Related to *A. orientale* with an elegant, elongated spathe, in this case stained with red-purple around a maroon spadix. Only about 20cm. high in flower.) (8) D
- 196.200 : ARUM KOROLKOWII** * Turkmenistan, Kopet Dag, Arvaz valley. Moist soil among dense scrub. Ex a J. Ruksans coll. (A Central Asian species from among scrub on rocky hillsides between 1,100 and 2,500m. along the borders of NE Iran and Afghanistan. The spathe is described by Janis as "chamois green & brown", rising above the leaves to 50cm..) (8) E
- 196.202 : ARUM KOROLKOWII** * Uzbekistan, Tashkent, Chatkal range, above Beldersai. 1500m. Under *Juniperus* (We provisionally include our more northern Central Asian collections under *A. korolkowii* but suspect many such populations may be or be intermediate with *A. jacquemontii*. In his monograph, Peter Boyce is vague about this area.) (8) E
- 196.510 : ARUM NIGRUM** * No data. Seed from Hermann Fuchs of this hardy species. We know it well in Bosnia & Hercegovina, growing above Dubrovnik towards Trebinje at about 500m. in holes and crevices of limestone, usually among oak scrub. Compact with shining, green foliage & purple-black, satin spathes. Grow in light shade. (8) D
- 196.611 : ARUM ORIENTALE** (subsp. *orientale*) * No data. From Herman Fuch's stock of this fine species. Extremely large, erect, boat-shaped, dark purple-brown spathes with dull purple spadices and deep-green, floppy leaves. The species, widely distributed in E Europe & around the N of the Black Sea, is variable. Seldom seen in cultivation in any form though most are excellent garden-plants in the UK, native to similar habitats to *A. maculatum* in cold climates.) (8) D
- 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
- 196.910 : ARUM PICTUM** * No data. Native to the Balearic Islands, Corsica & Sardinia & the only member of the genus to flower in autumn. Short-stemmed, velvety, dark purple spathes with black-purple spadices appear with the superb, dark, lustrous-green, pale-veined foliage. Dwarf enough for a pot but successful outdoors in several parts of the UK. . . . (10) D
- 197.000 : ARUM PURPUREOSPETHUM** * Greece, Crete, Samaria gorge. Below 100m. Ex P. Boyce 51. (From the type collection of this very local species, described in 1987 : "one of the most attractive members of the genus yet found" comments Peter Boyce. Very large, uniformly rich purple spathe with a black-purple spadix. Reasonably hardy.) (8) D

A : \$3.00 ; £1.50 ; € 2. -	C : \$5.00 ; £2.50 ; € 4. -	E : \$8.00 ; £4.50 ; € 7. -
B : \$4.00 ; £2.00 ; € 3. -	D : \$6.00 ; £3.50 ; € 5. -	F : \$10.00 ; £6.00 ; € 9. -

- 245.020 : BUPLEURUM AUREUM** (*B. longifolium* subsp. *aureum*) * No data. A very hardy, erect, 60cm. tall perennial from central Russia. Foliage and stems are yellowish green and the *Astrantia*-like heads of small flowers are surrounded by conspicuous, rounded, veined bracts, which are bright golden-green and almost translucent. (15+) **B**
- 247.010 : CALLIANTHEMUM ANEMONOIDES** * No data. A beautiful, dwarf member of the *Ranunculaceae*, endemic to Austria, in the open coniferous woods of the NE Alps, usually on limestone. The complex white or pink-tinged flowers, almost double in appearance, open near the ground in early spring before the much-divided foliage expands. (10+) **D**
- 253.800 : CAMPANULA CORIACEA** * Turkey, Van, W of Yukari Narlica. 2200m. Shady, conglomerate cliffs. (A most distinct species, restricted to the Van area of SE Turkey & of great promise for the alpine-house. Rosettes of thick-textured leaves with wide lilac-blue bells. Seed from plants maintained in Germany from our 1986 introduction.) (50+) **E**
- 257.721 : CAMPANULA LATIFOLIA** from **WHITE FORM** * From the outstanding white form of this easily grown, 1m. tall, clump-forming herbaceous perennial with profuse, large, elongated bells in summer. Native to most of Europe, eastward to W Siberia & N Iran, this is glorious in the wilder parts of the garden in sun or shade (50+) **A**
- 262.750 : CAMPANULA SCHEUCHZERI** * Pyrenees. No further data. (A delightful, little, creeping harebell from the mountain meadows of southern Europe. Mats of little rounded leaves and lots of violet bells on slender 20cm. stems.) (50+) **B**
- 331.950 : CORYDALIS NOBILIS** * No data. A sturdy, long-lived, tap-rooted perennial about 50cm. high. Dense heads of yellow, black-tipped flowers rise above the lush, deeply divided, glaucous foliage in late spring. By late summer the whole plant is dormant. A very hardy Siberian plant, distributed from the Altai to the Tien Shan, this is suited to severe continental climates. Seldom seen in UK gardens but perfectly growable. Dried seed stores well but it needs a really cold period to germinate satisfactorily. Seedlings will not progress beyond the cotyledon stage in their first season.. . . . (20+) **C**
- 338.510 : CREPIS INCANA** * No data. A composite with class, 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 with us in over 30 years. Simon Bond 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**
- 372.010 : CYNARA CARDUNCULUS** * One of the most striking and statuesque perennials growable in UK gardens. Great upright clumps of deeply slashed, grey foliage. Stout, branching, stems rise to 2m. or more, with big, royal-blue thistle-flowers opening from broad, spiny bracts. A Mediterranean species, which seldom sets much good seed in the UK. (10) **C**
- 392.310 : DELPHINIUM SEMIBARBATUM** (*D. zalil*) * Uzbekistan, Baisun-tau, Pulkhakim. (Seed from a typical form, about 1m. tall, sent by Janis Ruksans (Latvia). Absolutely temperature-hardy, we have seen this doing very well as a border-plant in Colorado but it resents both summer & winter wetness in the milder UK, where, if you cannot provide it with a hot, dry, well-drained site, it will be best in the bulb-frame. Unique with its tall, branching, yellow spires.) (50+) **C**
- 392.509 : DELPHINIUM SPECIOSUM** (*D. caucasicum*) * Russia, Caucasus, Elbrus. (A handsome, showy plant, usually over 50cm. tall with many blue-purple, almost bell-shaped flowers. Received from Herman Fuchs as *D. caucasicum* but the two species, though both most distinct from other delphiniums, seem to differ little from each other.) (20+) **C**

Digitalis dubia : a delightful dwarf foxglove

- 407.300 : DIGITALIS DUBIA** * Spain, Mallorca. Ex a P. & P. Watt coll. (A choice, dwarf species, endemic to the limestones of the Balearics. Neat rosettes of narrow, downy, grey-green leaves. Many erect, 30cm. stems with spaced, down-turned foxgloves in pale sugar-pink with speckled white palates. Small & dainty enough for the shaded alpine-house.) (50+) **C**
- 407.403 : DIGITALIS FERRUGINEA** (subsp. *ferruginea*) Turkey, Denizli, Kizilcaboluk. 1100m. (A stout perennial or biennial with long, dense racemes of yellowish, orange-brown-netted flowers with projecting lips, on 1.5m. stems.) (50+) **B**
- 408.300 : DIGITALIS LAMARCKII** * Turkey, Gumushane, Vauk Dagi, Guvercinlik. 1800m. Open, stony slopes. (An outstanding perennial endemic to NE Turkey & perfectly distinct from *D. lanata*. Clumps of narrow, dark-green leaves & 50cm. stems of large, soft-brown, baggy flowers with huge, prominent, white lips. Well-drained site in full sun.) (50+) **B**
- 409.310 : DIGITALIS MARIANA** * No data. A beautiful relative of *D. purpurea* endemic to igneous rock-fissures in the Sierra Morena. The broader leaves are clad in soft, silky, white wool, contrasting with the purple foxgloves. (50+) **C**
- 409.402 : DIGITALIS OBSCURA** * Spain, Soria, Puerto del Pinar. 1100m. Among limestone debris on open slopes. (A shrubby perennial with narrow, shiny foliage & amber foxgloves, yellow marked with rust-red inside. This population was only 20-30cm. high in the wild but is taller in cultivation. A most distinct Spanish endemic for a dry, sunny situation.) . . . (50+) **B**
- 410.000 : DIGITALIS THAPSI** * Spain, Avila, Sierra de Gredos, Puerto del Pico. 1300m. Loose, granite grit on steep slopes. (Another Iberian endemic, quite close to *D. purpurea* but a good perennial in a sunny, well-drained place or lime-free scree-bed. Leaves & stems all covered in yellowish indumentum & with many, large, downy, sugar-pink flowers.) (50+) **B**

A : \$3.00	;	£1.50	;	€ 2.-	C : \$5.00	;	£2.50	;	€ 4.-	E : \$8.00	;	£4.50	;	€ 7.-
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- 411.020 : DIONYSIA ARETIOIDES** * No data. One of the most easily grown of this genus of saxatile cushion plants, closely related to *Primula*, but still needs some care under glass, in the hands of the experienced alpine-house grower. Endemic to shaded, limestone cliffs on the N-facing slopes of the Elburz range along the Caspian coast of northern Iran. Rounded cushions of soft, downy pale-green rosettes covered with long-tubed, yellow, primula-flowers. Seeds of this species are very small and almost impossible to collect 'clean'. Sow the detritus thinly on top of a thin grit layer and let it wash down between. . . . E
- 412.180 : DIONYSIA INVOLUCRATA** * Tadjikistan, Pamir-Alai, Khandar river gorge. 1000m. & over. Ex J. Halda colls. (This & *D. aretioides* have proved the most amenable of an intractable genus. Still a plant only for the experienced alpine-house grower. Cushions of sticky-leaved rosettes with umbels of sugar-pink flowers.) (15+) E
- 432.300 : ECHIUM RUSSICUM** * No data. A striking plant, more than 1m. high, from the dry grasslands of E central Europe, N into Russia. Spikes of rusty-red flowers with the stamens exerted on long, red filaments. A bristly, short-lived perennial, evocatively illustrated, growing in *Stipa*-steppe, in Rix & Phillips 'Perennials' Vol. 1., p. 170. (20+) B

Eremurus : the giant asphodels of Central Asia

- 443.809 : EREMURUS ALTAICUS** * Kazakhstan. No further data. (A comparatively dwarf species with quite slender, erect stems about 1m, tall carrying racemes of pale yellow flowers with projecting yellow anthers carried on dark brown filaments. Fairly close to *E. spectabilis* & the most northern species, extending along the Chinese border to the Altai.) (10+) C
- 444.029 : EREMURUS CRISTATUS** * Kirghizstan, near Bishkek. (One of the dwarfest species in the genus. Seldom more than 60cm. tall with stubby spires. Each segment of the bell-shaped, chocolate-brown flowers has a broad white margin & the colourful, orange anthers are thrust out widely on long, dark filaments. We have never seen it grown in the UK.) . (10+) C
- 444.043 : EREMURUS FUSCUS** * Uzbekistan, Kusalvli-sai. 2000m. (The 1m. high racemes of pale yellow flowers with projecting anthers turn brown as they mature. Close to *E. altaicus*, whose flowers do not turn brown.) (10+) C
- 444.060 : EREMURUS HIMALAICUS** * No data. A magnificent NW Himalayan species with 2.5m. spires solidly packed with starry white flowers : it touches the roof of our 3m. high polytunnel. The earliest to flower in UK gardens (10+) C
- 444.075 : EREMURUS LACTIFLORUS** Kazakhstan, Karzhantau, SE of Chimkent, Burguluk. 1300m. Stable stone-runs on open slopes. (A beautiful species quite widespread in SE Kazakhstan & the adjacent Central Asian republics though local & restricted in its habitats. Rosettes of broad, blue-green leaves & stems about 1m. tall carry racemes of large, spaced-out, milk-white flowers opening widely from yellow buds & followed by large, inflated seed-capsules.) (10+) E
- 444.067 : EREMURUS OLGAE** * No data. Distributed from western Iran into Afghanistan & Central Asia, this is perhaps our favourite species : the more so since we have seen it in full flower in late June, growing by the thousand on the steppes of SE Uzbekistan. By far the latest to flower in cultivation also with 2m high, tapering, cylindrical racemes of soft-pink flowers, carried on long, dark, wiry pedicels in summer. Essentially a steppe-species, it does very well with us, protected from rain in our polytunnel but it less likely to tolerate excess moisture than many when dormant. (10+) C
- 444.080 : EREMURUS REGELII** Uzbekistan, Tashkent, Chatkal range, SE of Parkent. 1000m. Open, stony slopes. (Narrow, 2m. high spires packed with mahogany-brown flowers, followed by distinctive wrinkled seed-capsules.) (10+) C
- 444.084 : EREMURUS ROBUSTUS** * Uzbekistan, Tashkent, Chimgan. (As imposing as related *E. himalaicus* but later flowering with racemes of soft-pink flowers towering to 2.5m. A plant of rich, mesic, montane habitats in the wild, where it grows on damp slopes & even along streams with roses & willows. One of the best for the UK.) (10+) C
- 444.102 : EREMURUS SPECTABILIS** * Turkey, Gumushane, Kop Dag. 1300m. Ex a N. Stephens coll. (Spires of green-white flowers with exerted orange-brown anthers. 1.5m. In spite of its name, not so spectacular but fascinating.) (10+) C
- 444.090 : EREMURUS SOGDIANUS** * Uzbekistan, Aktau, above Langar. 1500m. Open, stony slope. (Possibly this 1.5m tall species with airy racemes of white flowers carried on long pedicels, elongating further in fruit.) (10+) D
- 444.150 : EREMURUS STENOPHYLLUS** (subsp. *stenophyllus*) (*E. bungei*) * No data. Cylindrical racemes of brilliant yellow flowers, about 1m. high. A showy species from N Iran through southern Central Asia to W Pakistan. The main influence on the hybrids grown for cutting & one of the easiest to grow in the UK, in spite of its dry, steppe habitats in nature. (15+) B
- 444.155 : EREMURUS STENOPHYLLUS** * Uzbekistan, Sangardak valley. (In this local variant from a northern locality, the bright yellow flowers are carried on very short pedicels, resulting in an elegant, very slender raceme.) (15+) C

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461.500 : ERYNGIUM MARITIMUM * UK, England, Devon, Exmouth. Among grass on stable sand-dunes just above sea-level. Ex a M. Tucker coll. (The Sea Holly itself, maybe the loveliest of the genus but little-known in gardens & by no means easy. Spiny basal leaves, stems & bracts all in the same matt bluish-grey, a little paler than the blue flower-heads. Less than 30cm. high & slow-growing, it merits every care in sunny scree or a raised bed, where it never fails to attract attention.) (10+) **B**

Euphorbia : a diversity of hardy spurges

475.500 : EUPHORBIA CHARACIAS (subsp. *characias*) (Sect. *Esula*) * Spain, Granada, Sierra Nevada, Puerto de la Ragua. 1900m. Open stony shale slopes. (From a collection we made in 1990 & which has proved a surprising success in our cool, wet garden. The black-eyed western type-race is distinct from the more familiar eastern, yellow-eyed *E. characias* subsp. *wulfenii* (which is not a satisfactory plant with us) not only in its red-black, short-horned glands but in its more compact habit. It rarely exceeds 1m., whereas the latter can tower to 2m. Plants from this Spanish population have proved very hardy, tolerant of our wet acid clay, remained compact with outstanding blue-green foliage and carried striking, yellow-green, flowering columns, which rival the best '*wulfenii*' in girth, if not in height. We can recommend this unreservedly.) (20+) **B**

475.620 : EUPHORBIA CHARACIAS subsp. **WULFENII** * (Sect. *Esula*) No data. A fine form of this splendid, shrubby perennial, mainly distributed on the limestones down the Adriatic coast. Striking, cylindrical heads of greenish yellow rise above the evergreen, blue-grey foliage in spring. Usually reliable in a well-drained, sunny site in most UK gardens. (15+) **B**

477.505 : EUPHORBIA DENTICULATA (Sect. *Myrsiniteae*) Turkey, Tunceli, NW of Tunceli to Ovacik. 950-1000m. Among deciduous *Quercus* scrub on steep slopes. (An arresting relative of *E. myrsinites* with prostrate stems clad with broad blue-grey leaves, often tinged with purple. Terminal heads of flowers with large crimson glands. The yellow-green raylet leaves, like those of *E. rigida*, are sometimes suffused with orange. Not so easy to grow as *E. myrsinites* in the UK.) (10) **E**

477.950 : EUPHORBIA GLABRIFLORA (Sect. *Helioscopia*) * Greece. Ex MESE 519. (A little, woody-based Balkan endemic from stony mountain-slopes. About 15cm. tall with glaucous, linear leaves and yellow raylet-leaves.) (10+) **C**

478.210 : EUPHORBIA HYBERNA (subsp. *hyberna*) (Sect. *Helioscopia*) * No data. An easily grown, western European species from moist, shady sites. About 60cm. tall with fresh-green foliage often tinted with pink or red. (10+) **B**

480.508 : EUPHORBIA NICAENSIS (subsp. *nicaensis*) (Sect. *Paralias*) France, Pyrenees-Orientales. M. Tucker coll. (Blue-grey stem leaves and yellow-green raylet leaves. A fine species, about 50cm. tall, from southern Europe, widespread and variable. This Pyrenean form is taller and bushier than the 480.509 coll. Dry, sunny site in the UK.) (10+) **C**

480.509 : EUPHORBIA NICAENSIS (subsp. *nicaensis*) (Sect. *Paralias*) France, Aude, Maury to Quembus. 300m. Limestone. M. Tucker coll. (From compact, red-stemmed plants growing on the hot limestones of the Corbieres.) (10+) **C**

481.504 : EUPHORBIA RIGIDA (Sect. *Myrsiniteae*) * Turkey, Icel, NE of Gulnar. 800m. Limestone slopes. (Much esteemed species 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. In this area of Turkey it often has the raylet leaves flushed with orange and pink in bud and again later, as they mature. Usually perfectly hardy in a hot, dry site in the UK.) (10+) **C**

482.180 : EUPHORBIA SERRATA (Sect. *Carunculares*) France, Pyrenees-Orientales, between Tautavel & Vingrau. M. Tucker coll. (Most distinct with its narrow, sharply toothed foliage. About 30cm. tall & native to SW Europe.) (10+) **C**

482.410 : EUPHORBIA STYGIANA (Sect. *Pachycladae*) * No data. An erect, shrubby species, which has proved remarkably hardy in a well-drained site in W Wales. Endemic to the Azores, in the craters of extinct volcanoes at between 500m. & 800m. altitude. In the same section as the tender Mediterranean *E. dendroides* & somewhat like a more compact version of the Canary Is. *E. mellifera* with beautiful, fresh-green foliage and wide, much branched umbels of flowers. (10+) **D**

485.110 : FERULA COMMUNIS subsp. **GLAUCA** * No data. A distinct variant of the giant fennel of the Mediterranean area with greyish leaves, silvery glaucous beneath. One of the most spectacular members of the *Umbelliferae*, towering to 2m. or more high with its huge, yellowish umbels on stout stems rising above the great mounds of finely-cut foliage. (10+) **B**

485.510 : FERULA TINGITANA * No data. The giant fennel of SE Spain & NW Africa. Close to *F. communis* but less robust in habit & the lobes of the the dissected basal foliage are much shorter & with revolute margins, rather than thread-like. Giant yellow umbels above finely-cut glossy, almost varnished, leaves. Impressive in a hot, dry site. (10+) **B**

515.650 : GENTIANA ASCLEPIADEA * No data. The elegant willow gentian, one of the loveliest of autumn-flowering, herbaceous plants. Slow from seed but gradually builds up clumps of 60cm. stems carrying clusters of rich-blue trumpets in the axils of the pointed, lanceolate leaves from late summer until the frosts. A species of moist woodland in the mountains of central Europe, E along N Turkey to the Caucasus and well-suited to semi-shade in UK gardens.) (50+) **A**

515.651 : GENTIANA ASCLEPIADEA var. **ALBA** * From the white form. Usually we find white gentians disappointing anomalies but this, with its paler foliage, stands out even more in the shady places which it enjoys. (50+) **B**

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- 515.653 : GENTIANA ASCLEPIADEA from PINK FORM** * Croatia, near Plitvice. (From 'Pink Cascade', selected in the wild by Robin & Sue White in 1987. A substantial number of seedlings should flower pink.) (50+) **B**
- 517.620 : GENTIANA DINARICA** * No data. A classic "*G. acaulis*" in the limestone race from central Italy & the Balkans. From a 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 rich-blue flowers on glossy-leaved pads. (20+) **B**
- 518.400 : GENTIANA GELIDA** * Turkey, Gumushane, Kop Dag. 2300m. Moist to dryish turf. (Creamy yellow flowers, deeper yellow striped with green outside. Beautiful but not too easy to grow but successful with some.) (20+) **D**
- 519.201 : GENTIANA OLIVIERI** * Iran, Kordestan, SW of Negel. 1350m. Openings among *Quercus* scrub on shale. (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. Dormant in summer and needs bulb-frame treatment in the UK.) (50+) **D**

Geranium : the reliable, hardy cranesbills

- 525.459 : GERANIUM COLLINUM** * Uzbekistan. A Central Asian form of this bushy perennial, distributed in moist meadows from SE Europe to Siberia & the NW Himalaya. Deeply divided foliage & red-veined, pink flowers in summer. . (10+) **C**
- 525.750 : GERANIUM IBERICUM** * Georgia, Bakuriani area, Tskhra-tskharo pass. 2300m. Alpine meadows. (About 50cm. high with much-divided, hairy leaves, cut into many deep lobes. Purple-veined, violet-blue flowers in summer. Seldom seen in cultivation. Its name is often misapplied to *G. x magnificum*, its sterile hybrid with *G. platypetalum*.) (10+) **B**
- 525.900 : GERANIUM LIBANI** * Syria, Nusairi range, above Slunfeh. 1200m. Among deciduous *Quercus* scrub. Ex R. & R. Wallis 96-17 (A most distinct, very early-flowering plant, which goes dormant in summer. In Subsect. *Mediterranea*, the *G. platypetalum* group, and rather like this : 40cm. high with large violet-blue flowers. Hardy in W Wales.) (10+) **D**
- 526.800 : GERANIUM PLATYPETALUM** * Georgia. No further data. Ex a R. Lancaster coll. (From a clone collected by Roy Lancaster & named 'Georgia Blue' but seems quite typical of this species. Darkly veined, rich violet-blue flowers in midsummer on plants of about 30cm. Rounded, hairy, lobed leaves, much less cut than the allied *G. ibericum*.) (10+) **B**
- 526.801 : GERANIUM PLATYPETALUM** * Turkey. No further data. (From stock received as *G. ibericum* but it is definitely *G. platypetalum*. Though the two both grow in the mountain-meadows of NE Turkey and the Caucasus, their hybrid is sterile. They are perfectly distinct in foliage alone. This is an especially compact form. Excellent & long-flowering.) (10+) **B**
- 526.920 : GERANIUM PRATENSE f. ALBIFLORUM** * No data. From a 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** (10+) **A**
- 526.926 : GERANIUM PRATENSE from PALE BLUE FORMS** (10+) **A**
- 527.000 : GERANIUM PSILOSTEMON** * Turkey, Artvin, Genya Dag. 1700m. Wet meadow in *Picea* woodland. (Our favourite among the larger ones with its luminous, magenta flowers, darkly veined & with glossy black centres. About 1m. high with cut leaves, which emerge from shiny, crimson sheaths in spring & colour to orange & scarlet in autumn.) (10+) **B**
- 527.005 : GERANIUM PSILOSTEMON** * Georgia, Bakuriani area, Tskhra-tskharo pass. 2300m. Meadows. (Taller than our Turkish form & with larger flowers. Jenny calls this the "the good form". Jim thinks the Turkish one better.) (10+) **B**
- 527.410 : GERANIUM RENARDII** * No data. Beautiful low mounds of lobed, wrinkled, grey-green velvet leaves & dense, 20cm. high clusters of flowers with notched white petals feathered with violet. An unmistakable Caucasian endemic for a sunny, well-drained site. Not a satisfactory plant in our wet, acid soil, we suspect it needs lime as well as sun. (10+) **B**
- 528.220 : GERANIUM SANGUINEUM** * No data. From Max Frei's selected clone 'Elspeth'. A long-flowering, reliable species, widespread through Europe to the Caucasus, usually in dryish, limestone habitats but does not resent our wet, acid soil. 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*)** * A 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+) **C**
- 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 dwarfed, blue selection. Rich lavender-blue flowers with tidy white centres on plants of about 60cm. These two may have crossed. (10+) **C**
- 532.360 : GLADIOLUS IMBRICATUS** Lithuania. Wet meadow. (A hardy species from eastern Europe through Russia to the Ukraine. Dense, one-sided spikes with up to 12, purple flowers on 80cm. stems. Like the somewhat more southern *G. palustris*, a species of seasonally wet habitats in cold climates. It should be well suited to British gardens.) (15+) **B**

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- 532.601 : GLADIOLUS KOTSCHYANUS** * Turkey, Van, NNW of Baskale. 2800m. Along seasonal, snow-melt stream. (A soft-lilac, 30cm., alpine-meadow form of this species of spring-wet, grassland habitats in cold E Anatolia.) (15+) **B**
- 532.602 : GLADIOLUS KOTSCHYANUS** * Turkey, Erzurum, Kop Dag. 2400m. Among *Salix* in wet-flush. (A good deep-crimson montane form, originally collected as a dwarf variant but it now reaches 40cm. in cultivation.) (15+) **B**
- 532.810 : GLADIOLUS PALUSTRIS** * No data. An attractive plant very seldom seen in UK gardens, though it is utterly hardy and well-adapted to the climate. Distributed in moist meadows, here and there though central & E Europe, from SE France to the Ukraine. About 30cm. high with a loose, secund spike of up to 6 purplish red flowers in early summer. (15+) **B**
- 534.300 : GLAUCIUM FIMBRILLIGERUM** Kazakhstan, Djambil, Karatau, WSW of Taras. 900m. Loose gravelly slopes. (A horned poppy from Central Asian steppes. Branching 30cm. stems with a multitude of soft-yellow flowers.) (20+) **B**
- 534.901 : GLAUCIUM LEIOCARPUM** Turkey, Burdur, N of Altıyayla. 1000m. (A biennial or short-lived perennial, the inland version of coastal *G. flavum*. About 30cm. tall with lots of orange-yellow poppies with darker centres.) (20+) **B**

Iris : bearded & beardless ones from the East

- 590.100 : IRIS JUNONIA** (Sect. *Iris*) * Turkey, Antalya, Gidengelmez Dag, S of Madenli. 1900m. Limestone cliff. (A bearded iris from high in the Taurus. In the W of its distribution it inclines towards the W Turkish *I. purpureo-bracteata*, in its somewhat inflated, purple-tinged 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. Clumps of very narrow leaves, above which rise creamy-yellow flowers on stiff, slender, 30cm. stems. Reliable in a sunny, well-drained site.) (10+) **C**
- 591.120 : IRIS MESOPOTAMICA** (Sect. *Iris*) Syria, Jebel Nusairia, NW of Misyaf. Deciduous oak-scrub. Ex R.& R. Wallis 96-27. (A very tall, robust bearded *Iris* with branched stems reaching 1.2m. or more above large clumps of pale grey-green leaves. Pale lavender, yellow-bearded flowers. A southern plant likely to be vulnerable outside in the UK.) (8) **D**
- 591.350 : IRIS ORIENTALIS** (Ser. *Spuriae*) (*I. ochroleuca*) * No data. Easily grown & imposing, 1.5m tall native of saline marshes from NE Greece into Turkey. Pure-white flowers with striking yellow blotches on the rounded falls (10+) **A**
- 597.800 : IRIS SINTENISII** (subsp. *sintenisii*) (Ser. *Spuriae*) * Greece, above Konitsa. (A Balkan & NW Turkish species, about 30cm. high & an excellent garden-plant. Grassy leaves & rich violet-blue flowers.) (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 it has a summer-rest under glass here. (8) **B**
- 599.806 : IRIS TAOCHIA from PURPLE FORM** (Sect. *Iris*) * Turkey, Erzurum, N of Tortum. 1600m. Open, stony slopes. (A choice, compact, local iris from igneous slopes in a small area NE of Erzurum. Broad foliage & branched stems reaching about 30cm. with flowers in dusky shades of both yellow & purple with yellow-haired beards. From a vigorous, floriferous form. Although seed is hand-pollinated, these clones grow together & may produce a range of colours.) (5) **D**
- 599.807 : IRIS TAOCHIA from YELLOW FORM** (Sect. *Iris*) * Data as above. Flowers in smoky, pale-yellow. (8) **D**
- 599.905 : IRIS TIMOFEJEWII** (Sect. *Iris*) * Russia, Dagestan. (A dwarf bearded iris, endemic to Dagestan & little-known in cultivation. Needs some care but appreciates being dryish in winter with quite a lot of water during and after flowering. About 10cm. high with narrow, pale-green foliage and red-purple flowers with white beards on long perianth-tubes.) (8) **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 in a hot, dry site in the UK. (8) **B**
- 619.860 : LATHYRUS VERNUS from PINK & WHITE FORM** * From the form with bicoloured, pink & white flowers, called 'Albo-roseus', which comes quite evenly from seed. This compact, early-flowering perennial, about 30cm. high, is too little grown. An adaptable delight with other early spring flowers. Tidy clumps of foliage later in the season. (10+) **A**
- 632.010 : LILIUM ALBANICUM** (*L. carnolicum* subsp. *albanicum*) * No data. The lovely, 60cm. tall, yellow, sparsely speckled lily of the acid mountains around Albania, in Macedonia & NW Greece. Cool, peaty soil in sun. (10+) **E**
- 632.110 : LILIUM ARMENUM** (*L. monadelphum* var. *armenum*) * No data. Distributed from NE Turkey to Armenia, this is the most southern race of these beautiful, fragrant, pale yellow, lime-tolerant, Transcaucasian lilies. The flowers have narrower, pointed segments and are more funnel-shaped than *L. szovitsianum* but it is not so easy to grow as this. (10+) **E**
- 633.950 : LILIUM LEDEBOURII** * Iran, Gilan, Talish. 1700-1900m. Openings in degraded *Fagus* forest. Ex an A. Ala coll. (A superlative species, known from one site in the Caspian forest of Iran & one or two in neighbouring Azerbaijan. Now well-established in several British gardens from Anne Ala's coll., made 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**

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- 634.015 : LILIUM MARTAGON var. CATTANIAE** (*L. m. var. dalmaticum*) * No data. This name, of horticultural relevance only, covers the very dark-coloured forms of this widespread, lime-loving turkscape lily. They originated in the Balkans and tend to be tall, as well as having the characteristic deep burgundy-red to almost black flowers. (10+) **E**
- 634.020 : LILIUM MARTAGON var. DAUGAVENSE** Latvia, Daugava river valley. (An isolated population (maybe a naturalized escape) in this Baltic republic, where it grows in part-shade on calcareous soils. Flowers vary from mid-purple-pink to very pale pink, heavily spotted with deep purple. Reportedly an outstanding form of this 2m. high, Euro-Siberian species with its heads of turkscape flowers above whorled, dark leaves, usually easily grown in the UK.) (20+) **C**
- 634.401 : LILIUM POMPONIUM** * France, Alpes-Maritimes, Montagne de Maurel, NE of La Mure. 1000m. Among scrub in steep-sided limestone gully. (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 carry up to 10 scarlet flowers. As Woodcock & Stearn remark, "no-one who has suddenly come across this jewel in the Maritime Alps, flaunting it brilliant little sealing-wax-red turkscape blooms, with minute black spots, like fairy lamps, is ever likely to forget that moment." Good drainage & sun.) (10+) **D**
- 635.220 : LILIUM SZOVITSIANUM** * No data. Lime-tolerant & usually one of the best garden-plants in the genus. Doubtfully consistently separable from *L. monadelphum* & others in this intergrading group of spectacular, scented, pale yellow Transcaucasian lilies, which are mainly distinguished by the dimensions & proportions of their flowers. (10+) **C**
- 667.210 : MANDRAGORA OFFICINARUM** * No data. A weird member of the *Solanaceae*, wrapped in myths and fables. Greenish flowers followed by large, rounded fruits nestle in the basal rosette of big, wrinkled leaves. (5) **C**
- 673.005 : MELITTIS MELISSOPHYLLUM** (subsp. *melissophyllum*) * No data. A handsome, shade-loving, hardy perennial member of the *Labiatae*, surprisingly neglected by British gardeners, though it is a very local British native. About 60cm. high with wrinkled, toothed leaves & verticillasters of fragrant, long-tubed white flowers with pale-purple lips. (10+) **B**
- 709.109 : NECTAROSCORDUM TRIPEDALE** * Armenia. (A choice & beautiful *Allium* relative, rare in the wild and seldom seen in cultivation. Stems about 1m. high carry terminal umbels of numerous, large, bells, basically white but veined with purple to give a bright-pink effect. Flowers much earlier than *N. siculum* & may need a dryish summer rest.) (15+) **E**
- 713.410 : OMPHALODES LUCILIAE** * No data. A most beautiful limestone chasmophyte, 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. Blue-grey foliage exquisitely offsets the milky-blue flowers. (10+) **C**
- 738.100 : ORNITHOGALUM ARCUATUM** * Turkey, Van, W of Yukari Narlica. 2200m. Stony alluvium in dried river bed. (A tall, handsome species, in effect a giant version of *O. narbonense*, distributed from E Turkey into NW Iran & N Iraq. Cylindrical racemes of many white flowers, with green fascia outside, on 1.5m. stems.) (20+) **B**
- 738.230 : ORNITHOGALUM BUNGEI** * Iran, Mazanderan, near Siabishe. 1900m. Ex SLIZE 98-71. (A very fine Persian endemic, restricted to the Elburz Mts. & recently introduced. Up to 25 big, white flowers with grey-green-tinged exteriors arranged in a fairly dense raceme on a 30cm. tall scape. Best given a long, dry rest in summer.) (15+) **C**
- 738.510 : ORNITHOGALUM EXSCAPUM** * No data. A dwarf, Mediterranean species with almost stemless inflorescences of white flowers, striped with green on the backs of the segments, sitting on the ground. (20+) **B**
- 738.660 : ORNITHOGALUM MONTANUM** * No data. A very variable species from SE Europe & SW Asia. About 20cm. tall with racemes of white flowers in late spring. Hardy & easily grown outside in the UK but never a nuisance. (20+) **B**
- 739.170 : ORNITHOGALUM PONTICUM** * Ukraine, Krim (Crimea), near Yalta. (A handsome, showy species about 60cm. tall. Quite recently described and related to the central European *O. pyramidale*. Its natural habitat & dense heads of pure-white flowers should ensure it a future as a worthwhile garden-plant in the UK.) (20+) **C**

Paeonia : hand-pollinated seeds from authentic parents

Most species are very local in nature, occurring in large, isolated colonies. It can be a lot of trouble to arrange to collect seed from them and availability of such material will always be irregular. Our efforts to establish parent stocks in cultivation, derived from authentic, wild-collected material, are now yielding seeds for our lists and will, we hope, ensure reliable seed supplies of an expanding range in future years.

Even if sown promptly, these may not show leaf-growth until spring, 2006, or even 2007. These are plants for the dedicated and patient grower. Always keep ungerminated seed : it is large enough to check that it is sound. Like some lilies, many peonies will germinate hypogeally, forming a root-system underground during the first cool period before sending up true leaves the following season.

745.850 : PAEONIA ANOMALA * Russia, Siberia. (From a tall, 1m. high form, originally from a wild Siberian coll. of this fine, very hardy 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.) (6) **D**

745.950 : PAEONIA BIEBERSTEINIANA (*P. tenuifolia* complex) Russia, Stavropol, Beketovaya. (Much dissected leaves but less finely cut than *P. lithophila* & bright red flowers. Distinct from others in this disjunct complex in its greyish, hairy foliage. Like the Georgian populations, it seems to be a very local plant. A few seeds collected in the type-locality.).. . . . (6) **F**

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- 746.100 : PAEONIA CAMBESSEDESII** * The dwarfest species, endemic to the limestones of the Balearic Islands and best with a little protection in the UK. About 30cm. high with beautiful, smooth, grey-green foliage, crimson beneath, & big, rosy flowers, up to 10cm. across in spring. Our parent stock-plants are always a breathtaking sight when in flower. (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 in this area. The most robust of the *P. tenuifolia* complex, it can reach over 1m. in height with bright red flowers & foliage less finely cut than some of the others.) (6) F
- 746.500 : PAEONIA DAURICA** (*P. triternata*) (*P. mascula* complex) Ukraine, Krim (Crimea). (Near *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 'real thing'. The valid name is a misspelling of "*P. taurica*".) (6) D
- 746.640 : PAEONIA LITHOPHILA** (*P. tenuifolia* complex) * Ukraine, Krim (Crimea). (The Crimean race, which probably covers 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. Brilliant red bowls hold bright yellow stamens in early summer on compact plants, about 50cm. high. Maybe the most striking of this complex. We grew this as "*P. tenuifolia*" in our nursery years ago from seed received from what was then the Nikita Botanic Garden in Yalta. Our own 2004 hand-pollinated seed) (6) E
- 746.706 : PAEONIA MASCULA** (subsp. *mascula*) * Cyprus, Mt. Adhelfi. Ex A. King 224. (A big robust plant, which Mike Sinnott, currently working on a Kew Monograph of *Paeonia*, considers may have some affinities to *P. kesrouanensis* from the adjacent Syrian mainland, though, unlike it, this has tomentose carpels. Plants from this island have always been placed under *P. mascula*. Almost blue-tinged, hairless foliage, cut into few segments & magnificent rosy-pink flowers.) (6) C
- 746.750 : PAEONIA MASCULA** (subsp. *mascula*) * No data. A widespread & variable species, occurring sporadically through southern Europe. Hairless foliage, 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 & more divided foliage, cut into narrower segments & downy on the undersides. (6) C
- 746.909 : PAEONIA MASCULA subsp. HELLENICA** (var. *hellenica*) * Greece, no further data but possibly the Evia population. ("The large flowers...with their spreading, lightly crinkled pure white petals and red and yellow stamens, arising out of bold foliage, place it among the most beautiful of wild peonies," comment Stearn & Davis in their monograph 'Peonies of Greece'. Quite recently described, in 1977, we should prefer to have seen it placed at specific level.) (6) F
- 746.951 : PAEONIA MASCULA subsp. HELLENICA var. ICARICA** * Greece, Ikaria, foothills of Atheras. 400-650m. On schist. (Endemic to the island of Ikaria, where it grows in mixed deciduous and *Abies* woodland, and distinguished from the type race by the very downy undersides to the more divided foliage. Otherwise similar.) (6) F
- 747.002 : PAEONIA MASCULA subsp. RUSSI** * Italy, Sardinia. Ex J.Persson 92-1 (Beautiful, distinctive, smooth, red-backed foliage, which is usually just expanding as the glorious pink, bowl-shaped flowers open. At 20-45cm. high, the dwarfest race of the *P. mascula* group. Like other Mediterranean island species, it needs a sheltered site outside in the UK.) (6) E
- 747.110 : PAEONIA MLOKOSEWITSCHII** * No data. A restricted Georgian endemic & a "a sovereign among Paeonies" according to Farrer. 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 but that is the fault of our climate not the species. Open-pollinated English-grown seed. (6) C
- 747.150 : PAEONIA OFFICINALIS** (subsp. *officinalis*) * Croatia, Istria. We are told this is a fine pink form of this variable South European species. We have tentatively placed this under the type race until we can see the foliage & flowers. (6) D
- 747.720 : PAEONIA PEREGRINA from ROMANIAN FORM** (*P. romanica*) * No data. From the eastern end of the species distribution but does not differ substantially from other races of this magnificent plant from Italy through the Balkans. Distinct & spectacular with large, glossy flowers in eye-burning scarlet over deeply cut, shiny, bright-green foliage. (6) E
- 747.850 : PAEONIA STEVENIANA** (*P. wittmanniana* complex) (possibly the same as *P.w.* var. *nudicarpa*) * Georgia, Bakuriani area. (A yellow-flowered peony, wholly different to *P. mlokosewitschii*. Paler flowers, just tinged with citron-yellow, holding stamens with reddish filaments, over larger, thinner textured foliage. Our own hand-pollinated 2004 seed.) (6) E
- 747.900 : PAEONIA TENUIFOLIA** * Georgia, Igoeti area. Steppe. (This type-race has richer green, glabrous foliage, less finely cut than *P. lithophila*, & crimson flowers. The original collection was from an isolated colony.) (6) F
- 747.961 : PAEONIA TOMENTOSA** * Azerbaijan. (Our own hand-pollinated 2004 seed from this little-known, yellow-flowered species with woolly white carpels. Distinct from both *P. mlokosewitschii* & *P. steveniana*. There appear to be three distinct taxa of *Paeonia* at this south-western corner of the Caspian.. We have seen another yellow-flowered one in the Iranian Talysh and there is also a white-flowered plant in Iran. The original collection from which the parents of this seed was raised was made somewhat to the North, up towards Armenia, in the main body of the Caucasus, in NE Azerbaijan.) (6) F

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- 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. Unlike many poppies it is not always generous in producing seed in cultivation (20+) C
- 754.210 : PARADISEA LUSITANICA** * No data. From the wet, mountain meadows of N Portugal & W central Spain, this is a much more robust version of the graceful inhabitant of alpine meadows, *P. liliastrum*. Stout stems can exceed 1m. in height & carry denser racemes of up to 25 white, campanulate flowers. An open site in decent soil suits it in the UK. . . . (15+) C
- 758.001 : PELARGONIUM ENDLICHERIANUM** * Turkey, Erzincan, E of Refahiye. 1500m. Igneous scree. (An extraordinary, disjunct relict stranded in Turkey, thousands of miles from its relatives in Sect. *Jenkinsonia*, in the Cape. Butterfly-like flowers with two large, upper petals. This is from a bright-pink form with crimson veins. Spectacular in the bulb-frame. A brilliant patch of colour from mid-summer. Possible outside in the UK in a very sunny, dry site.) (5) C
- 781.320 : POLYGONATUM ROSEUM** * No data. A Siberian Solomon's Seal, distributed from Central Asia into W. China. Stems about 50cm. tall with erect, tubular, usually paired, soft-pink flowers in the axils of the linear leaves, which can be alternate, opposite or whorled. A very hardy plant for rich soil in semi-shade. (10) C
- 784.121 : POTENTILLA NITIDA** * No data. From the selection 'Rubra' with rich, deep pink flowers, exquisitely studding tight pads of silvered foliage. Endemic to the limestones of the E Alps & one of the loveliest European alpinses. (20+) B
- 786.500 : PRIMULA ELATIOR subsp. PALLASII** (Sect. *Primula*) * Turkey, Artvin, Genya Dag above Artvin. 1700m. Open summit meadows & woodland margins. (The most eastern race of this widespread species, the oxlip. Generous with its umbels of drooping, pale-yellow flowers on 15cm stems, above smooth, toothed leaves in early spring.) (20+) B
- 800.550 : PULSATILLA ALPINA subsp. APIIFOLIA** * No data. The lovely, sulphur-yellow species of acid, peaty meadows in the Pyrenees & Alps. Finely cut foliage & large flowers open low down but when in seed, stems may be 60cm. or more. Takes time to establish & build up the long-lived clumps from seed. Be patient and leave it undisturbed. (15+) B
- 801.009 : PULSATILLA MONTANA** * No data. A handsome thing, opening bells of intense black-violet with a cone of golden anthers on 15cm. stems. Distributed in steppe & dry meadow habitats from SW Switzerland across SE Europe to E Romania, this is a characteristic species of the plant-rich meadows on the exposed limestone-karsts of Slovenia. (15+) C
- 801.410 : PULSATILLA PRATENSIS** (subsp. *pratensis*) * No data. Cylindrical, nodding flowers open on 10cm. tall stems, elongating to almost 50cm. in fruit above the clumps of downy, tripinnate, basal leaves. The central European type-race of this continental-climate meadow-plant is usually pale violet in colour. (15+) C
- 802.060 : PULSATILLA VULGARIS subsp. GOTLANDICA** * Sweden, Gotland. (An isolated and disjunct population of this very variable species-complex, more closely resembling the Central European race, *P.v.* subsp. *grandis*, than the western type-race. Broader perianth segments to the big violet flowers, which appear before less finely cut leaves develop.) . . . (15+) C
- 802.110 : PULSATILLA VULGARIS subsp. GRANDIS** * No data. The splendid eastern race, distributed from central Europe to the Ukraine. Its big, violet-purple goblets open before the cut leaves appear. (15+) C
- 808.000 : RAMONDA MYCONI** * Spain, Catalunya, Sierra de Montserrat. 900m. Cracks in part-shaded, conglomerate rocks. Ex a P. & P. Watt coll. (Hand-pollinated seeds from the 'true' *R. myconi*. It is a little different to the Pyrenean plants, which grow quite a distance away & were originally separated botanically as *R. pyrenaica*. Flat rosettes of wrinkled, hairy leaves & violet flowers with yellow anthers. This species is by far the easiest of this trio of relic members of the *Gesneriaceae* & the best for garden-purposes, unrivalled in a N-facing dry-stone wall. Though utterly hardy, these have not forgotten their tropical ancestry & are best raised from their very fine seeds sown uncovered on the surface of a sterile, peaty soil, in gentle warmth, watered from below, and covered with a pane of glass or kept in a plastic bag.) (50+) D
- 808.401 : RAMONDA SERBICA** * Greece, Ioanina, Farangi Vikou. 800m. Limestone fissures. (Least well-known & reputedly the most temperamental of the three species in cultivation. Considered to be best grown in the alpine-house in shade though this seed is from plants, growing happily in a trough outside in a NW-facing corner. Rosettes of rather greyish, hairy leaves & more bell-shaped, violet flowers, approaching those of *Jankaea* in form, with dark purple anthers.) (100+) D
- 809.500 : RANUNCULUS ABNORMIS** * Spain, Avila, Sierra de Gredos, NE of PicoAlmanzor. 1800m. Among rocks in melt-water gulleys. (A choice, tuberous-rooted species, which goes dormant as the ground dries. Branching, 10cm. stems with varnished, lemon-gold buttercups, each with up to 10 'petals', from tufts of grassy foliage.) (20+) D
- 813.400 : RANUNCULUS CADMICUS** * Turkey, Denizli, Honaz Dag. 1700m. Exposed limestone ridge. (From a type-locality coll. of this diminutive, summer-dormant, snow-melt species. Neat, glossy, yellow buttercups on 5cm. stems.) . . . (15+) D
- 816.011 : RANUNCULUS GRAMINEUS** * No data. Seeds from the splendid, large-flowered selection 'Pardal', presumably collected near Pardals in SE Portugal. This very local SW European species is surely the best garden-plant among the summer-dormant buttercups. Neat tufts of linear, greyish leaves & bright-yellow flowers. 30cm. Hot & dryish.) (20+) C
- 836.110 : RUPICAPNOS AFRICANA** * No data. A choice, saxatile member of the *Fumariaceae*, widespread in Morocco, though cultivated stock is probably, *R.a.* subsp. *decipiens*, the local European race from limestone cliffs near Cadiz in S Spain. Racemes of spurred, pale-pink, ruby-tipped flowers beautifully set against cut, filigree foliage in grey-blue. Easy & long-lived in the alpine-house in the UK, if grown hard. If overfed & overwatered, it grows out of character & is short-lived.) . . . (10+) C

A : \$3.00	;	£1.50	;	€ 2. -	C : \$5.00	;	£2.50	;	€ 4. -	E : \$8.00	;	£4.50	;	€ 7. -
B : \$4.00	;	£2.00	;	€ 3. -	D : \$6.00	;	£3.50	;	€ 5. -	F : \$10.00	;	£6.00	;	€ 9. -

- 836.200 : RUPICAPNOS AFRICANA from WHITE FORM** * Morocco, no further data. This probably represents one of the 10 or more North African taxa of this polymorphic species, which Maire separates mainly at subspecific level, but we do not have enough information available to express an opinion. Should prove to be a very beautiful new alpine-house plant, for which we are grateful to the German alpine-plant enthusiast George Brückner (10+) **D**
- 844.201 : SALVIA CYANESCENS** * Turkey, Bolu, W of Goynuk. 800m. Exposed shale slopes. (A delightfully airy perennial with flat rosettes of felted leaves and diffuse, branching stems, about 50cm. high, of lovely pale-violet flowers. One of several species well-established in Colorado gardens from collections we made in the 1980's. 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*. Very much dwarfier than this: only 10-15cm. high in flower with rich lavender-blue whorls from rosettes of superlative, white-felted foliage. Successful 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. tall, herbaceous stems whorled with lilac-blue flowers. Stocks derived from our collections, made in the 1980's, have now become standard plants in Denver garden-centres but it can be quite accommodating in the UK with good drainage in full sun. It used to do well on the RBG Edinburgh rock-garden.) (20+) **B**
- 846.410 : SALVIA PACHYSTACHYS** * No data. A shrubby, pinnate-leaved species from E Turkey, Transcaucasia & NW Iran, like a larger version of *S. caespitosa*. Stems about 30cm. tall whorled with large white flowers. (10+) **D**
- 847.051 : SALVIA RECOGNITA** * Turkey, Nevsehir, W of Urgup. 1200m. Base of cliffs in light shade. (A distinct, woody-based perennial, up to 1m. high & sticky with glandular hairs. Pinnate leaves & large, widely spaced, rose-pink flowers on elegant, sparsely branched stems. Successful with many growers in the UK, western North America & Australia.) (15+) **C**
- 923.310 : SOLDANELLA VILLOSA** * No data. A rare plant in the wild, confined to a few sites in the W Pyrenees, but the easiest of the genus to grow well. Mats of rounded, evergreen leaves with little, deep violet, pendant, fringed lampshade-flowers on 20cm. stems, covered in dense, red velvet, as they unfurl. Likes damp, shady places. (50+) **C**
- 940.900 : TANACETUM HARADJANII** (*Chrysanthemum haradjanii*) * Turkey, Adana, NNW of Saimbeyli. 1100m. Fissures on sandstone cliffs. (The true plant, virtually unknown in cultivation and rare in the wild, recorded from only two localities in the northern Amanus range. The name was misapplied by Davis in the 1950's to *Tanacetum densum* subsp. *amani*. We introduced the genuine plant in 1986 and sowed some 15 year-old seed a few years ago to give us our present stock. A woody based perennial, about 20cm. tall, with superb, silvery white, tomentose, much cut foliage.) (about 20+) **C**
- 941.400 : TANACETUM PRAETERITUM** * Turkey, Antalya, Bey Dag. 2000m. Limestone slopes. Ex a P. & P. Watt coll. (A woody, 20cm. tall, high-altitude, SW Turkish endemic, originally introduced by Peter Davis, but never so widespread in gardens as more eastern *T. densum* (long grown under the misapplied name *Chrysanthemum haradjanii*). The two are superficially similar, though the intricately cut leaves are harder & more silver in *T. praeteritum*, but distinct in flower as this has white ligules, whereas *T. densum* has none. Hardy in full sun with good drainage in a scree-bed.) (about 20+) **C**
- 950.010 : THALICTRUM AQUILEGIFOLIUM** * No data. 1-2m. tall, fluffy, lilac-pink panicles. (15+) **A**
- 950.360 : THALICTRUM FLAVUM subsp. GLAUCUM** (*T. speciosissimum*) * No data. An excellent, tall species for good, moisture-retentive soil. Fluffy, soft-yellow flowers on 2m. stems open over a long period in summer. (15+) **B**
- 950.510 : THALICTRUM LUCIDUM** * No data. A hardy, robust species, over 1m. high, from wet meadows in E Europe & W Russia. Narrow, shiny green leaflets & long-branched inflorescences of slightly greenish, yellow flowers. (30+) **B**
- 950.603 : THALICTRUM ORIENTALE** * Greece, Messinia, near Kardamili. 20-50m. Dense shade in leafsoil. (The small, very restricted population of this dainty, 30cm. high shade-lover with delicately cut foliage in the S Peloponnese is far removed from the better-known S Turkish plants & is always white-flowered. This & the next are the only two species in Europe with showy, petaloid perianth-segments, like some of the SE Asian ones. Both are summer-dormant perennials.) (10+) **D**
- 950.700 : THALICTRUM TUBEROSUM** * Spain, Huesca, W of Anzanigo. 600m. Steep limestone banks (This coll. has proved to be taller & more spectacular than other examples of this Pyrenean endemic we have seen. Planted out under glass, it is about 40cm. high with airy panicles of big, ivory flowers over a very long period. Ideal for the bulb-frame.) (10+) **D**
- 968.110 : TUBERARIA LIGNOSA** * No data. An attractive, woody-based, perennial in *Cistaceae*, native to scrub & woodland in the W Mediterranean area from Portugal to SE Italy. Plantain-like, basal rosettes of dark-green, 3-veined leaves, downy & grey beneath, send up 20cm. stems with terminal cymes of yellow flowers. Needs a hot, dryish site in the UK. (50+) **B**
- 979.040 : VERATRUM ALBUM** * No data. A magnificent, variable species ranging from W Europe to Siberia in moist, montane grassland. It grows extremely slowly but seems immortal, forming great clumps of striking, pleated leaves, the most distinct & arresting foliage in the garden, above which the flower-spikes of green-white stars rise to around 2m. (20+) **C**

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- 979.250 : VERATRUM NIGRUM** * No data. "One of the rarest & most striking of garden plants" comments Graham Stuart Thomas. Just as spectacular as *V. album*, with equally fine, pleated foliage but the starchy flowers are maroon-black. Distributed from central & SE Europe into Russia. These both need a moist, rich soil & perhaps a little shade. (20+) C
- 980.050 : VERBASCUM DUMULOSUM** * Turkey, Antalya, Gullukdagi. 900-1000m. Crevices in ruins. (Only known from the ancient walls of Termessos, where it has been all but eliminated by herbicides. The finest, dwarf, saxatile member of the genus. Outstanding as an alpine-house & dry-stone wall plant. Woody based mounds of grey-felt rosettes cover themselves with stubby 15cm. spikes of bright yellow flowers. Quite variable in size & shape of the leaves) (50+) C
- 993.150 : VIOLA SCHARIENSIS** * Macedonia, Sar Planina, Popova Sapka above Tetovo. 2000m. Alpine turf & among *Vaccinium*. (An alpine species endemic to the Albanian border mountains. We first collected it in 1964 &, in the absence of an acceptable name, it has been distributed as both the allied *V. albanica* & *V. grisebachiana*. It has been described as a new species at last. Profuse lavender flowers. Not difficult in a very well-drained site in the UK.) (15+) E

Received too late for inclusion in our October list of bulb seeds

We suggest sowing these 2004 seeds between June and September, 2005, in the northern hemisphere. Southern hemisphere growers should sow these as soon as they are received, if before May ; after May, store dry until January to ensure an adequate cold period.

- 340.410 : CROCUS AUTRANII** * No data. One of the rarest of species in cultivation and one of the most local in nature. Limited in its distribution to alpine-meadows at about 2100m in a small area at the tail-end of the Caucasus range in the troubled, breakaway, autonomous region of Ap'khazet'i (Abkhazia) in NW Georgia, where it is impossible to travel freely at present. In Series *Kotschyani* and related to *C. vallicola*, it flowers before the leaves appear in autumn with rich violet flowers with a large white centre and with a trifid, orange style. It should be treated like other alpine species : plenty water in early spring, kept moist and cool in summer but drier in winter though never dried out at any time. (5) F
- 345.100 : CROCUS GILANICUS** * Iran, Azerbaijan, between Heroabad & Asalem. 2400m. Ex Shirdelpur & Wendelbo 14910. (From a type-locality coll. of this little-known plant of the S Talysh, with white flowers in autumn. In Series *Kotschyani* & most resembling *C. kotschyanus* subsp. *suworowianus*, though possibly not closely related to it. A plant of pastures & the margins of beech forest in a comparatively high rainfall area, so must not be dried off too thoroughly when dormant.) (5) F
- 493.600 : FRITILLARIA CRASSIFOLIA** subsp. **POLUNINII** * Iran, Kordestan, pass between Daraki & Nowsud (S of Marivan). 2500-2600m. Ex P. Wendelbo 78-01. (Known only from Oleg Polunin's type coll. from limestone screes at 2400m., above Suleimaniya in Iraqi Kurdistan, until Per Wendelbo collected it on the Iranian side of the border. The two races are different and may be best regarded at infraspecific level under *F. poluninii* as a full species. This is the smaller - the dwarfest 'frit.' - and reputedly the easier to grow. Tiny with large, whitish, brown-veined bells.) (8) F
- 501.411 : FRITILLARIA PALLIDIFLORA** from **SELECTED YELLOW** * From Mike & Polly Stone's good lemon-yellow form of this 30cm. tall Central Asian. One of the finest & most satisfactory to grow outside in the UK) (15+) C
- 504.581 : FRITILLARIA VERTICILLATA** * Kazakhstan, Tarbagatay Range, near Urdzhar. (From a collection of this quite variable but little-known species made in eastern Kazakhstan where this mountain-range runs on into Chinese Xinjiang. Distinct from the Kara-Sumbe valley form, from further N in the Altai, listed in our earlier list, in its straighter, narrower, white bells. Janis Ruksans considers this "very beautiful" and suggests there may be several taxa involved in our concept of this species, which, of course, has little to do with plants familiar in cultivation under this name or *F. thunbergii*.) (10) F
- 595.798 : IRIS RETICULATA** (var. *reticulata*) (Subgen. *Hermodactyloides*) * Turkey, Tunceli, Pülümür Çay valley S of Kirmizi-Köprü. 1000m. Open areas among sparse deciduous scrub. Ex JJA 17872. (A little seed from a fine red-purple form of this incomparable early-flowering bulb, originally collected in a seldom-visited locality.) (10+) D

Don't miss this exciting new, dwarf, yellow Juno Iris

As we write this we have a few voucher bulbs of a dwarf Juno flowering for the first time. These came from an extraordinary colony, like nothing any of us have seen previously in Turkey. In seed, it resembled the Syrian *I. nusairiensis* & grew in a similar habitat. It had 1 to 3 flowers but the details & colour were unknown. Arnis Seisums suggested we provisionally place it close to *I. nusairiensis*. We have *I. nusairiensis* flowering at present and the two are indeed similar except for flower-colour. The new plant is soft yellow with a large round, rich egg-yolk yellow patch on the falls. Whether this ends up as a new species or is placed under *I. nusairiensis* will depend on the results of the cytological work Arnis is undertaking at present. It will be some time before it is scientifically described and also some time before we have enough cultivated seed to list. We do still have some 2003 wild collected seeds left. Juno seeds retain their viability for a long period. Though germination is always irregular, old seed can be better than new.

- 591.311 : IRIS aff. NUSAIRIENSIS** (Subgen. *Scorpiris*) Turkey, Malatya, ESE of Malatya. 1850m. Growing among sparse *Acantholimon* & *Astragalus* in gravelly soil on exposed summit ridge, & forming large clumps of bulbs. (5) F

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A great many more species from North America are listed on our web-site : www.JJaseeds.com

- 1.031.210 : ALLIUM GOODINGII** * No data. "A lovely plant" : a rhizomatous, moisture-loving from a few sites in Arizona & New Mexico. Glaucous-grey foliage and 50cm. stems with umbels of glossy purple or pink flowers. (15+) **C**
- 1.032.251 : ALLIUM OBTUSUM var. CONSPICUUM** Cal., Plumas Co., Keddie Ridge. 1460m. SW-facing slope. G. Greger coll. (A very choice, local plant from the granite grits of the northern Sierra Nevada. Dense heads of up to 60, pale pink flowers with purple midveins on stems of 15cm. or less above 1 or 2 channelled leaves, flat on the ground.) (15+) **C**
- 1.032.601 : ALLIUM PLATYCAULE** * Cal., Modoc Co., Warner Mts., Cedar Pass. 1600m. Steep, loose, gravelly slopes. ("The most beautiful California species" according to Jim Robinett. Dense, round umbels of deep rose flowers with much-exserted, dark anthers appear on short flat stems between two thick, glaucous, falcate leaves.) (15+) **C**
- 1.047.710 : AMSONIA ILLUSTRIS** * No data. A widespread eastern member of this attractive genus in *Apocynaceae*, most diverse in the SW states. An erect, woody-based perennial up to 1m. tall with leathery, lanceolate, shiny, dark green leaves and cymes of light blue flowers carried on darker tubes. Distributed from the Great Plains S into Texas and growing in stream-beds and flood-plains, seasonally wet habitats similar to those of the rare Eurasian species, *A. orientalis*. (10+) **C**
- 1.047.760 : AMSONIA JONESII** * No data. A local, dry-climate species from scrub and sagebrush up to 2150m. in E Utah, W Colorado and N Arizona. A glabrous perennial up to 50cm. tall with lanceolate leaves and cymes of blue flowers. (10+) **C**
- 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* but maybe another is involved. Finely cut leaves, sticky with glandular pubescence & many flowers in soft, creamy yellows with long spurs tinged with apricot on 40cm., branching stems. Almost certainly the colony illustrated in Plate 35 of Robert Nold's book 'Columbines' as a yellow form of *A. micrantha*.) (20+) **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. Cordate leaves, marbled with white, 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., Toll House Springs. 1980m. Loose, stony, clay slope. (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**

Calochortus : A complete range of 2004 & 2005 seeds will be available at www.JJaseeds.com

- 1.150.006 : CALOCHORTUS ALBUS** Cal., Butte Co., Jarbo Gap. 550m. SW-facing slope. G. Greger coll. (The Sierran foothill race of this Fairy Lantern with pendant, globular, pearly-white flowers on 20cm. stems.) (20+) **B**
- 1.150.100 : CALOCHORTUS ALBUS var. RUBELLUS** * Cal., San Luis Obispo Co., W of Templeton. 400m. Steep, shaded banks. (From a famous population with translucent, ruby-pink lanterns. Awarded a PC in the UK in 1995.) (20+) **C**
- 1.150.501 : CALOCHORTUS AMABILIS** * Cal., Lake Co., Walker Ridge. 600m. Among scrub on serpentine slope. (Branching, 20-30cm. stems with nodding flowers in clear yellow. Widespreading outer and incurved inner segments.) (20+) **B**
- 1.151.000 : CALOCHORTUS AMOENUS** * Cal., Tulare Co., NE of Springville. 1100m. Among scrub on granite slopes. (Like the preceding, in Subsect. *Pulchelli* but with purple-rose flowers. Limited to the W foothills of Sierras.) (20+) **B**
- 1.151.500 : CALOCHORTUS ARGILLOSUS** * Cal., San Luis Obispo Co., NE of San Luis Obispo. 180m. Heavy clay on open slope. (The Reservoir Canyon population originally listed under "*C. simulans*". Extremely 'growable', setting seed well. A rather dwarf, white Mariposa, more or less flushed lilac, with variable dark basal stains & markings.) (20+) **C**
- 1.155.509 : CALOCHORTUS COERULEUS** Cal., Plumas Co., W of Quincy. 1370m. W-facing slope. G. Greger coll. (A beautiful, tiny species from cold inland areas of N California : a few cm. high, with hairy, pale lilac-blue flowers. Misunderstood by Ownbey & by Ness in 'Jepson'. For careful cultivation, kept cool in summer.) (20+) **D**
- 1.158.009 : CALOCHORTUS EURYCARPUS** Nevada, Elko Co., Ruby Mts. 2380m. Meadow. J. Andrews coll. (Wiry, 30-50cm. stems carry elegant, bowl-shaped flowers in white or lilac-pink, neatly blotched with maroon and striped with green. A steppe species spread around the N rim of the Great Basin from E Oregon to Montana.) (20+) **C**

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- 1.161.509 : CALOCHORTUS GUNNISONII** Utah, Uintah Co., E of Lapoint, Halfway Hollow. 1670m. J. Andrews coll. (Pale lavender flowers, intricately & heavily purple-pencilled & hairy inside. Definitely needs a cold, dry winter rest.) . (20+) **D**
- 1.163.001 : CALOCHORTUS HOWELLII** * Oregon, Josephine Co., Eight Dollar Mt. SW of Selma. 500m. Among *Arctostaphylos*. (Beautiful, erect, white flowers, covered with hairs & centrally smokey brown. 30-50cm tall) . . . (15+) **D**
- 1.164.000 : CALOCHORTUS KENNEDYI** Cal., Inyo Co., SW of Gilbert Summit. 1620m. Open stony slope. (Incomparable & unrivalled in the brilliance of its colour : here tending to luminous orange. A plant of high, cold steppe.) (20+) **B**
- 1.164.506 : CALOCHORTUS LEICHTLINII** Cal., Plumas Co., N of Greenville. 1100m. G. Greger coll. (A cold-climate mariposa from the high Sierra Nevada. 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. Extremely variable brown internal markings. One of the most easily grown Mariposas.) . . . (20+) **B**
- 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. (A 15cm. high alpine species with soft, blue-purple flowers. Fits in well with the others under glass here.) . . (15+) **D**
- 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 tiny feather millinery.) (15+) **D**
- 1.171.000 : CALOCHORTUS PALMERI** * Cal., Los Angeles Co., San Gabriel Mts., Bandido Camp. 1770m. Open slopes with sparse *Pinus*. (A dainty Mariposa from the ranges E of Los Angeles. Pink with occasional whites.) (15+) **D**
- 1.174.500 : CALOCHORTUS PULCHELLUS** * Cal., Contra Costa Co., Mt. Diablo NE of Danville. 520m. Wooded slopes. (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. Quite easy to grow in the bulb-frame or alpine-house in the UK.) (15+) **C**
- 1.176.000 : CALOCHORTUS SPLENDENS** * Cal., Ventura Co., Lockwood Valley. Among *Artemisia* in sandy clay. (A beautiful Mariposa, easily grown in our experience. Soft lavender with white, wispy hairs and dark anthers.) (20+) **B**
- 1.176.500 : CALOCHORTUS STRIATUS** Cal., Los Angeles Co., N of Lancaster. 760m. Open sites among alkaline desert scrub. (A distinct Mariposa endemic to a few alkaline seeps in the Mojave. Many, pale-lavender flowers veined with maroon-purple, just like the petals of *Geranium* 'Ballerina'. Probably difficult but growing on here slowly but well so far.) (20+) **D**
- 1.177.007 : CALOCHORTUS SUPERBUS** Cal., Butte Co., Jarbo Gap. 550m. G. Greger coll. (A classic Mariposa, distinct from *C. venustus* in its linear, inverted V-shaped gland. Usually white with purple-brown blotches & basal markings but the ground colour can vary to pinks, lilacs, lavenders and purples. Easy to grow with us and sets seed well.) (20+) **B**
- 1.177.800 : CALOCHORTUS TIBURONENSIS** * Cal., Marin Co., Tiburon, Ring Mt. 140m. Rocky serpentine hillside. Ex a J. Andrews coll. (This extraordinary species is known only from this single urban, locality above San Francisco Bay. About 20cm. tall with up to 8, erect bells, extremely hairy inside & with ciliate margins to the pale greenish yellow segments, densely peppered with purplish brown. It will not appreciate low winter or high summer temperatures.) (20+) **E**
- 1.178.002 : CALOCHORTUS TOLMIEI** * Oregon, Josephine Co., 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**
- 1.179.001 : CALOCHORTUS UMPQUAENSIS** * Oregon, Douglas Co. S of Tiller. 460m. Open, rocky, serpentine slope in coniferous forest zone. (A beautiful and very local serpentine-endemic, described in 1989. Extremely hairy flowers, creamy white with a large maroon-black centre. About 20cm. high, very striking and not too difficult so far in the UK.) . . (15+) **E**
- 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*, easy in Europe, where it fits in well with Mediterranean bulbs.) (15+) **B**
- 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.) (15+) **D**
- 1.225.105 : CIMICIFUGA ARIZONICA** (*Actaea arizonica*) * Arizona. Ex a J. Compton coll. (A very local, relict species from moist woodland in a few shaded canyons at 1500-1800m. altitude. Relatively new to cultivation in the UK., Cut basal foliage & upright, branching stems, 1-1.5m. high, with erect spires of white flowers in late summer.) (20+) **D**
- 1.229.310 : CLEMATIS ADDISONII** (Subsect. *Viorna*) * No data. A slender, scrambling subshrub, endemic to the Blue Ridge Mts. & distributed down the range from SW Virginia to N Georgia, usually along wooded riverbanks. Thick-textured, nodding, urn-shaped flowers with pointed, recurving tips, rose-purple outside and creamy white within. (10+) **C**
- 1.231.510 : CLEMATIS TEXENSIS** (Subsect. *Viorna*) * No data. A small, slender climber with little, narrow bells, scarlet outside and flaring at their mouths to show the creamy insides. Endemic to eastern Texas, often on limestone, and not easily grown in UK gardens, where can be very slow to establish and prone to mildew in late summer. (10) **E**

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- 1.231.810 : CLEMATIS VIORNA** (Subsect. *Viorna*) * No data. A semi-woody, pinnate-leaved species, quite variable & widely distributed in the eastern USA. Climbing to 2-3m. with little, nodding, leathery, narrow-mouthed bells with recurved tips to the sepals, in red-purple, opening in late summer & followed by feathery, brown seed-heads. (10+) **B**
- 1.240.010 : CLINTONIA ANDREWSIANA** * No data. The most beautiful in the genus. A plant of damp shade in the redwood forests of NW California & SW Oregon, where it slowly forms mats of broad, shiny leaves. There used to be large stands in the peat-beds of the RBG, Edinburgh. Umbels of pink to rose flowers followed by glossy, blue fruits. 50cm. . . . (10+) **C**
- 1.302.500 : DELPHINIUM LUTEUM** * Cal., Sonoma Co., SW of Bodega. Ex a W. Roderick coll. (A beautiful & distinct species only known from two small populations on seasonally wet cliffs NW of San Francisco. Branching stems, about 30 - 50cm., packed with large, waxy, shining, clear-yellow flowers in early summer. Dormant in late summer.) (20+) **D**
- 1.302.709 : DELPHINIUM NUDICAULE** Cal., Plumas Co., near Greenville. 1100m. Gravelly, S-facing clay slope. G. Greger coll. (A very hardy, perennial, inland form, about 30cm. high of this eye-catching, scarlet-orange species.) (20+) **B**
- 1.310.600 : DODECATHEON CLEVELANDII subsp. INSULARE** * No data. Robust race from the Channel Islands off the Californian coast. Distinguished from the type-race by its maroon-black anther connective & from the other subspecies by the absence of the yellow-blotch on the filament-tube. A splendid thing but not so easy as some in the UK.) (20+) **C**
- 1.310.710 : DODECATHEON CONJUGENS** * A cold-climate species of seasonally wet sites in the drier, colder interior ranges from British Columbia to Alberta in the North & NE California to Wyoming in the South. Smooth, rounded basal leaves & 20cm. stems with umbels of up to 7, magenta flowers, usually with black pollen-sacs.) (20+) **B**
- 1.311.000 : DODECATHEON HENDERSONII** Cal., Plumas Co., S of Greenville. 1370m. Among conifers on steep, stony slope. (The characteristic species of northern woodlands in the western states, often in rather dry habitats and reliant on snow-melt for its spring-growth. Summer-dormant with magenta to deep lavender flowers in spring.) (20+) **B**
- 1.311.209 : DODECATHEON JEFFREYI** * No data. Ex R.Ratko 98-207 (An alpine species, always growing in marshy meadows & along streams in the mountains. A dainty summer-dormant plant in varying shades of lavender pink.) (30+) **B**
- 1.315.450 : EPILOBIUM RIGIDUM** * Oregon, Josephine Co., SW of O'Brien. 700m. Open areas on serpentine. (The finest in the genus & choicest of the trio centred on *E. obcordatum*. Confined to a few sites on the serpentines on the California-Oregon line, this tiny, woody-based perennial carries very large, rich-pink flowers over neat, blue-green leaves.) (5) **E**
- 1.335.180 : ERIOGONUM UMBELLATUM var. HUMISTRATUM** * No data. An uncommon, compact race of very limited distribution between 1700m. and 2800m., on the serpentine mountains, like Mt. Eddy, along the California-Oregon line. Bright yellow flower-heads on dense, ground-hugging mats. A plant for the alpine-house or trough. (15+) **E**

Erythronium : A complete range of 2004 & 2005 seeds will be available at www.JJAseds.com

- 1.350.200 : ERYTHRONIUM CALIFORNICUM** * Cal., Humboldt Co., SSW of Willow Creek. 1580m. Stony serpentine areas in openings among conifers. (Beautifully mottled leaves. Creamy white flowers with yellow throats.) (20+) **C**
- 1.351.201 : ERYTHRONIUM HELENAE** * Cal., Lake Co., SE of Middletown, Butt's Canyon. 450m. Among *Arctostaphylos* chaparral on serpentine slope. Ex a J. Andrews coll. (A beautiful, very local species only known from around Mt. St. Helena, in Napa, Lake & Sonoma Cos. With mottled leaves, it is quite near *E. californicum* but has yellow anthers.) (15+) **D**
- 1.352.100 : ERYTHRONIUM MULTISCAPOIDEUM (E. "cliftonii")** * Cal., Butte Co., S of Pulga. 640m. Steep, open, serpentine scree. (More or less a giant form (in the wild) only known from this one site. Never described botanically but grown in the UK as *E. "cliftonii"*. Adaptable and reputedly accommodating in the open garden in the UK.) (15+) **D**
- 1.352.400 : ERYTHRONIUM OREGONUM subsp. LEUCANDRUM** Oregon, Douglas Co., S of Tiller. 460m. Among *Pinus* on steep serpentine slopes. (The white flowers, often maturing to pink, have markings in orange or brown.) (15+) **C**
- 1.352.802 : ERYTHRONIUM PURPURASCENS** Cal., Plumas Co., N of Greenville. 1100 m. G. Greger coll. (Plain green leaves & yellow-centred white flowers, purple-tinged with age. A collection made more or less in the type-locality.) (15+) **D**
- 1.353.120 : ERYTHRONIUM REVOLUTUM** * No data. From the vigorous stock in Peter Chappell's Hampshire garden at 'Spinners'. These will be in shades of pink & may show some hybrid influence. A species of the wet Pacific NW with beautiful, brown-marbled, lush, green foliage. If you are not a specialist & just want some good, hardy garden-plants for the moist, mild climate of the UK, where this will usually sow itself in shady conditions, this is what you should have. (15+) **B**
- 1.353.250 : ERYTHRONIUM TAYLORI** Cal., Tuolumne Co., Pilot Ridge. 1340m. NE-facing. outcrops. (10+) **E**

A : \$3.00 ; £1.50 ; € 2. - C : \$5.00 ; £2.50 ; € 4. - E : \$8.00 ; £4.50 ; € 7. -
 B : \$4.00 ; £2.00 ; € 3. - D : \$6.00 ; £3.50 ; € 5. - F : \$10.00 ; £6.00 ; € 9. -

- 1.370.301 : FRITILLARIA AGRESTIS** * Cal., Alameda Co., ESE of Livermore. 450m. Clay slopes. (An adobe-clay plant, the valley-grassland version of *F. biflora*. Green-cream bells, purple-brown inside. Up to 50 cm.) (15+) C
- 1.370.403 : FRITILLARIA ATROPURPUREA** Cal., Plumas Co., N of Greenville. 1100m. G. Greger coll. (Creamy bells mottled in purple-brown on stems of about 20cm. More or less an alpine or steppe version of *F. affinis*.) (15+) D
- 1.370.500 : FRITILLARIA BIFLORA** * Cal., San Luis Obispo Co., above San Simeon Bay. 10m. Coastal grassland. (About 20cm. high with darkest, brown-purple, green-striped bells. Maybe best grown frost-free & cool in summer.) (15+) C
- 1.370.800 : FRITILLARIA GLAUCA** * Cal., Humboldt Co., SSW of Willow Creek. 1580m. Unstable, serpentine talus on steep, N-facing slope. (Thick, glaucous leaves & nodding bells in yellow through to red-browns in this site.) (10+) D
- 1.371.100 : FRITILLARIA LILIACEA** * Cal., Marin Co., NW of Nicasio. 15m. Among scrub on low, grassy, coastal hills. (A beautiful species with a limited distribution in the coastal mist-belt, N & S of San Francisco. Perhaps best kept almost frost-free in winter & cool in summer. Pendant, creamy white bells on 30cm. stems. Seldom sets seed in the UK.) (10+) D
- 1.371.600 : FRITILLARIA PLURIFLORA** Cal., Lake Co., Walker Ridge. 600m. Open, grassland in heavy clay. (One of the most beautiful, 10-30cm. tall with up to 7, conical bells in a rich unmarked pink. A classic adobe-clay plant.) (15+) D
- 1.371.700 : FRITILLARIA PUDICA** * Idaho, Butte Co., NE of Carey. 1520m. E & SE-facing slopes of stony ridge. (Unlike any other N American. Nodding, clear-yellow bells, sometimes maturing to orange-red shades, on 20cm. stems. Usually a plant of montane steppe, N into Canada & SE to Colorado. Not always easy : likes a cold winter.) (20+) C
- 1.371.800 : FRITILLARIA PURDYI** * Cal., Trinity Co., S of Bear Creek Trailhead. 960m. Open, serpentine slope. (Local on N Coast Ranges (here at its NE limit). Leaves crowd on the ground below the wide, waxy, nodding bells on 10cm. stems, "the shiniest, most delectable fritillaria flowers," brown veined & tinted on a green-white ground.) (20+) C
- 1.371.919 : FRITILLARIA RECURVA** Cal., Plumas Co., near Belden. 670m. G. Greger coll. (One of the the most striking in the entire genus. Incomparable & unique with pendant, orange-scarlet trumpets on stems up to 50cm. high, whorled with narrow leaves. We do not find this species a problem if it is not kept too hot & dry in summer.) (15+) D
- 1.372.100 : FRITILLARIA STRIATA** Cal., Kern Co., Greenhorn Mts., NE of Bakersfield. 760m. (Pendant bells with recurved tips. Described by Alan Galloway, the discoverer, as "white to creamy with purplish dotted striae" - appearing pink - and "with the most delicious fragrance". An adobe-clay species : extremely difficult but definitely not impossible.) (15+) F
- 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*, 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.) (30+) C
- 1.460.000 : IRIS BRACTEATA** * Oregon, Josephine Co., Waldo Hill. 650m. Stony, serpentine areas, among scrub. (A superb and distinct species with broad, leathery leaves & large, showy flowers, always in pale yellow, veined with maroon or brown. Our hand-pollinated seed from parents derived from this type-locality collection) (15+) C
- 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.) (15+) B
- 1.460.600 : IRIS HARTWEGII subsp. COLUMBIANA** * Cal., Tuolumne Co., NE of Columbia. 650m. Stony slope. (Only known from around the type-locality. Virtually, a yellow version of *I. munzii*, which grows 225km. to the S.) (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, 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
- 1.461.007 : IRIS MACROSIPHON** * Cal., Lake Co., NW slope of Mt. St. Helena. 700m. Grassy opening among *Pinus* & *Arctostaphylos* on serpentine. (A delightful species from the foothills to the North of the Central Valley. As dwarf as *I. innominata* and as variable in colour. The beautifully marked, long-tubed flowers in our parent plants are all in shades of lavender-blue to purple. Tufts of very narrow, grassy, grey-green leaves send up 20cm. stems.) (15+) C
- 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. Granite grit of open, stony 'flats'. (Huge, diaphanous, water-lily flowers, appear successively on short stems. Generally 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 population entirely composed of sumptuous whites, which we found in 1989. Grows well with us.) (20+) D
- 1.497.301 : LEWISIA REDIVIVA var. MINOR** * Cal., Kern Co., Mt. Pinos. 2680m. In granite grit in summit area. (A high altitude race, worth at least subspecific rank. Exquisite rounded, pearl-white flowers with bronze sepals.) (20+) D

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Lilium : temperamental western beauties

- 1.498.409 : **LILIUM CANADENSE** Canada, Quebec, N of Quebec City. (From the most northern population of this widespread N American, distributed from Quebec down to Alabama. Stems of about 1.5m., whorled with lanceolate leaves carry umbels up to 20, large, nodding, flaring bells in yellow to orange-yellow, speckled inside with black-purple.) (20+) C
- 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
- 1.498.550 : **LILIUM COLUMBIANUM from DWARF FORM** * No data. Seed sent to us by Mike & Polly Stone. (10+) D
- 1.499.100 : **LILIUM KELLEYANUM** Cal., Tulare Co., Middle North Fork Tulare River, E side of Moses Mt. 2070m. In wet meadows & along streams & gulleys in gravelly, granitic soils. 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 seems to intergrade with *L. parvum*. Up to 25 fragrant, uniformly yellow, pendant, wide bells with dull-red anthers on 1m. stems.) (15+) D
- 1.499.401 : **LILIUM MARITIMUM** Cal., Sonoma Co., Salt Point. 80m. Openings in coastal woodland. J. Andrews coll. (A very uncommon, little lily, reputed always to grow within the sound of the Pacific : mild in winter & cool in summer. Brilliant red, funnel-shaped, slightly nodding flowers, spotted basally, 1-13 flowers on stems from 25cm. to 1m.) (15+) 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, 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 tips.) (20+) C
- 1.499.901 : **LILIUM PARRYI** Cal., Los Angeles Co., San Gabriel Mts., Kratka Ridge, Buckhorn Camp. 1980m. Wet meadow. J. Andrews coll. (Like no other in its 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 SW California & S Arizona.) . . . (20+) D
- 1.500.050 : **LILIUM aff. PARVUM** Cal., Nevada Co., Sierra Nevada, Monument Ridge. 2010m. Wet sites on granite. J. Andrews coll. (Seems a consistent local race : wider flowers, not campanulate & opening out flat, in yellow to clear orange-yellow, fragrant & sometimes with a few crimson spots. John's plant may deserve recognition as a distinct taxon.) (20+) E
- 1.500.900 : **LILIUM VOLLMERI** Oregon, Josephine Co. 500m. Along wet ditch. (A wet-grower in the *L. pardalinum* group. Near *L. shastense* but distinguished by its purple anthers with red pollen. A splendid, 2m. high population here.) . (15+) C
- 1.501.002 : **LILIUM WASHINGTONIANUM** (subsp. *washingtonianum*) Cal., Plumas Co., N of Greenville. 1220m. G. Greger coll. (Fragrant, great 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
- 1.501.101 : **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. The bulb-scales are different and the flowers are slightly smaller, flushing to pink-purple with age.) . . . (15+) D
- 1.550.209 : **LOBELIA CARDINALIS** Canada, Ontario, Georgian Bay. Wet acidic soil. B. Wilkins coll. (An utterly & indestructibly hardy species, confused by UK gardeners with the tender Mexican *L. fulgens* & its hybrids. Spires of many, lipped, brilliant scarlet flowers open in summer on stems reaching 1m. in height. Moist, rich soil.) (100+) B

Penstemon : An extensive range of 2004 & 2005 seeds will be available at www.JJaseeds.com

- 1.855.400 : **SILENE HOOKERI** * Oregon, Josephine Co., E of Takilma. 850m. Openings among conifers. (We have our cultivated stock thriving now under glass. One of our favourite plants. Decumbent stems with downy, greyish leaves & a very long succession of flowers with deeply cut petals, soft salmon-pink in this form. Eventually summer-dormant.) . . (10+) C
- 1.855.500 : **SILENE HOOKERI subsp. BOLANDERI** * Cal., Trinity Co., S of Hayfork. 750m. Among conifers. (A very local plant, limited to this area. Large, pure-white flowers with the petal blades deeply cut into linear segments.) (10+) D
- 1.975.020 : **VERATRUM CALIFORNICUM** (var. *californicum*) * No data. A magnificent herbaceous perennial distributed in moist, montane habitats from Washington to Mexico, eastwards to Montana. Clumps of huge, pleated, bright-green leaves. Dense panicles with ascending branches crowded with white starry flowers with rich-green bases. 1.5m.) (15+) C
- 1.981.550 : **VIOLA LANCEOLATA** (subsp. *lanceolata*) Canada, Ontario, Georgian Bay. Mossy crevices. (A neat little, stoloniferous easterner. White flowers with purple veins on the lower petals, carried on 10cm. tall reddish stems.) (15+) C

A : \$3.00 ; £1.50 ; € 2.-	C : \$5.00 ; £2.50 ; € 4.-	E : \$8.00 ; £4.50 ; € 7.-
B : \$4.00 ; £2.00 ; € 3.-	D : \$6.00 ; £3.50 ; € 5.-	F : \$10.00 ; £6.00 ; € 9.-

Alstroemeria : A complete range of 2004 & 2005 seeds will be available at www.JJaseeds.com

- 2.026.410: ALSTROEMERIA AUREA** * Chile, IX, Cautin, W of Vilcun. 200m. Woodland margins. (The widespread brilliant yellow race from higher altitudes & into the colder, wetter South. An excellent, hardy garden-plant in our cool, wet climate & no doubt elsewhere in the UK. From wild seedlings : variable in rich, egg-yolk yellow shades) (15+) **B**
- 2.026.950 : ALSTROEMERIA aff. EXSERENS** * Chile, VI, Cachapoal, NE of Coya. Ex an A. Brinck coll. (as *A. exserens*) (Much taller, about 60cm., than the alpine type-race. Big heads of rose-pink flowers, banded bright yellow.) (10+) **B**
- 2.027.000 : ALSTROEMERIA GARAVENTAE** * Chile, V, Cerro Vizcacha. Ex a J. Watson coll. (Large flowers speckled on the inner segments with broken lines of crimson dots on a salmon-pink ground, ageing to ruby shades.) (10+) **D**
- 2.027.110 : ALSTROEMERIA HOOKERI** (subsp. *hookeri*) * No data. A beautiful dwarf species, 15-20cm high. One of the best for cultivation in the alpine-house. Green-tipped, pastel pink flowers, blotched with gold & speckled. (10+) **D**
- 2.027.800 : ALSTROEMERIA LIGTU** subsp. **INCARNATA** * Chile, VII, Cerro de los Cipreses (Rio Teno valley E of Curico). 1500m. Ex an A. Brinck coll. (A spectacular local race, about 1m. high, always with a pink ground-colour.) (10+) **C**
- 2.028.109 : ALSTROEMERIA MAGENTA** * Chile, Region V, Coquimbo, Ovalle, Fray Jorge. 500m. Ex Beckett, Cheese & Watson 4683. (All the inner segments, not just the upper 2, of the lilac flowers are heavily streaked with maroon-red. We have maintained this stock from John's 1972 coll. Historically, this may have been grown as "*A. violacea*".) (10+) **E**
- 2.028.300 : ALSTROEMERIA MAGNIFICA** subsp. **MAXIMA** * Chile, IV, Choapa, Pichidangui. Ex an A. Brinck coll. (Indeed magnificent with very large, flat, lilac flowers heavily marked on the upper segments with dark red.) (10+) **C**
- 2.028.500 : ALSTROEMERIA PALLIDA** * Chile, Reg. Metro., Lagunillas, ENE of San Jose de Maipo. 2200m. Open, stony slopes. (A spectacular alpine with umbels of large flowers in palest pink to white with the upper, inner segments blotched with gold & streaked with crimson, on 20cm. tall stems. Limited to the ranges S & W of Aconcagua.) (10+) **C**
- 2.028.610 : ALSTROEMERIA PATAGONICA** * Chile, XII, Magallanes, near Punta Arenas. Ex an O. Magen coll. (Compact, twisted, blue-grey foliage. Little, upward-facing, orange-yellow flowers on 5cm. stems. Very dwarf & hardy.) . . . (10+) **D**
- 2.028.811 : ALSTROEMERIA PELEGRINA** from **WHITE FORMS** * No data. *A. pelegrina* is the type species for the genus & long-cultivated. A plant of cliffs along the north Chilean coast. Very large, beautiful, pure white flowers. (10+) **D**
- 2.440.000 : HERBERTIA LAHUE** (subsp. *lahue*) * Argentina, Buenos Aires Prov. Ex a J.A. Castillo coll. (Hardy in our unheated greenhouse. A delightful little corm in *Iridaceae* with a succession of violet flowers on 10cm. stems.) (20+) **B**
- 2.470.010 : IPHEION DIALYSTEMON** * Argentina. Ex a J.A. Castillo coll. (Perfectly hardy with us in an unheated glasshouse. Prostrate, narrow, glossy-green foliage and profuse brilliant-yellow, upward facing flowers on 5cm. stems.) (15+) **E**
- 2.659.000 : NOTHOSCORDUM OSTENII** * Uruguay. Ex a J.A. Castillo coll. (A choice, little 'sweetie', very scarce and local in nature. Delicate, thready leaves and wiry stems, about 10cm. high, with umbels of rich chrome-yellow, freesia-scented flowers, opening wide and striped green on the outside. Temperature-hardy here & only increases by seed.) (20+) **E**
- 2.780.800 : RHODOPHALA ELWESII** * Argentina, Neuquen, Lacar, E of Lago Lolog. 1100m. Open areas, among scrub, in sandy soil. (The true species from Argentina (not *R. advena*). Very beautiful with large, upward-facing, soft-yellow flowers with wine-coloured throats on 30cm. stems. Growable, planted out in a bulb-frame or a raised bed.) (10+) **D**
- 2.840.100 : SCHIZANTHUS GRAHAMII** * Argentina, Mendoza, Malargue, Valle de las Lenas. 2200m. Loose, stony soils on steep slopes & along gulleys. (Much-cut, rich-green, glandular foliage. Branching 50cm. stems carry successions of 'upside-down', butterfly-like flowers in shocking pink & luminous orange. An improbable & spectacular alpine.) (20+) **D**
- 2.940.010 : TECOPHILAEA CYANOCROCUS** * No data. The famous blue Chilean crocus, one of the most spectacular 'bulbs'. Its crocus-like flowers in spring have no equal in the purity & intensity of their gentian-blue (10) **E**
- 2.940.011 : TECOPHILAEA CYANOCROCUS 'LEICHTLINII'** Exquisite paler blue form with a white centre. . . . (10) **D**
- 2.940.012 : TECOPHILAEA CYANOCROCUS 'VIOLACEA'** From the dusky, violet-blue form (10) **E**
- 2.970.200 : TROPAEOLUM AZUREUM** * Chile, Reg. Metro., near Polpaico. 500m. Hot, dry hillslopes. Ex S. Pern & J. Watson 6055. (A lovely, fragile, tuberous-rooted climber. Flat-faced flowers in soft violet-blues with white centres.) (5) **D**
- 2.971.200 : TROPAEOLUM POLYPHYLLUM** * Argentina, Mendoza, Puente de Inca. 2720m. Steep, loose, clay slopes. (Flowers in the usual bright yellow to creams & orange-red tints, all along the 1m. long trails of deeply cut, blue-grey leaves. Trouble-free & vigorous when settled in UK gardens. Try sowing it direct to avoid disturbance.) (5) **D**

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We list a selection of hardy, summer-growing species suitable for sowing in spring & summer in the northern hemisphere.

- 3.005.550 : ALBUCA FASTIGIATA var. FLORIBUNDA** Free State, Drakensberg, Mont-aux-Sources. 2900m. Stony slopes & fissures in sloping rock-slabs. (A robust plant with 50cm. tall stems carrying terminal racemes of upright white flowers, heavily banded with green on the spreading outer segments, as well as the erect inner ones. The general pattern of the flowers is of a *Galanthus*-shape & is characteristic of this genus in *Liliaceae* with about 70 species spread from Arabia down through Africa to the Cape, where most species occur. The two listed are hardy, high altitude summer-growers.) (15+) C
- 3.006.200 : ALBUCA RUPESTRIS** E Cape, Witteberge, E of Lady Grey. 2200m. Diorite fissures. (Terminal racemes of quite large, upward-facing bright yellowflowers, heavily striped with green on the exterior, carried on 30cm. stems. Endemic to the Drakensberg and, like several species, an inhabitant of fissures on cliffs and sloping rock-slabs.) (15+) C
- 3.141.101 : DIERAMA DRACOMONTANUM** * KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Among grass tussocks on broad ledges of E-facing cliffs. (The highest altitude species & an excellent, very hardy garden-plant in the UK, forming compact, grassy tufts, sometimes spreading by stolons with us, with pendant clusters of wide-open flowers, in beautiful coral-red & terracotta-pink shades, between brown bracts, dancing on wiry stems of about 60cm. in late summer.) (20+) B
- 3.142.501 : DIERAMA LATIFOLIUM** KwaZulu-Natal, Kamberg Valley W of Rosetta. 1700m. Open grassland. (From the grasslands E of the Drakensberg up to 2100m. Large clumps of grassy leaves. Many tough stems, as much as 3m. tall, with arching sprays of pale to deep-pink, or occasionally wine-red, flowers among papery, white bracts. A magnificent plant, used to drier winter conditions, so best tried in a well-drained, sunny site in winter-wet climates.) (15+) D
- 3.165.500 : DIMORPHOTHECA JUCUNDA** (*Osteospermum jucundum*, *Dimorphotheca barberiae*) Free State, Drakensberg, Mont aux Sources. 2900m. Open stony slopes. (Highest alpine in the genus, recorded up to 3200m. Here in a very neat race with mat-forming clumps bearing a multitude of brilliant daisies, with rich purple-pink, copper-backed rays and yellow discs, on stems of about 20cm. More compact here than clones distributed in the UK as *Dimorphotheca barberiae* f. *compacta* but not quite so diminutive as the original one described by Vera Higgins in 1946 under this name from a Helen Milford collection. Those prepared to interpret the name *Dimorphotheca* will appreciate seeds are of two different forms.) (10+) C
- 3.230.220 : EUCOMIS BICOLOR** * No data. Long, wavy-edged leaves & purple-spotted stems, up to 60cm., with cylindrical racemes of creamy green flowers, each neatly edged with deep purple, topped by a large tuft of bracts. Quite widespread along the E slope of the Natal Drakensberg at up to 2300m. according to Hilliard & Burt but we have found it on exposed rock-slabs at almost 3000m. on the Lesotho border. Cultivated seed from stock grown outside in Wales, UK. (10) B
- 3.230.510 : EUCOMIS MONTANA** * Distributed in Mpumalanga & Swaziland on stony, grassy slopes at around 1500m. Semi-erect, wavy-edged foliage, purple-tinged & purple-speckled below. Stems of about 30cm. with short, dense racemes of green flowers with purple anther-filaments. Not a species we have seen in cultivation in the UK. S African seed. (8) D
- 3.230.610 : EUCOMIS POLE-EVANSII** (*E. pallidiflora*) * No data. The tallest, most robust species, which can reach 2m. in height. Basal rosettes of undulate, strap-shaped leaves with white cartilaginous margins & long, dense racemes of spirally arranged, wideopen, creamy-green flowers topped by a coma of up to 30 bracts. A species from grassy marshes and wet gulleys in the higher, montane areas of E Mpumalanga and W Swaziland. Cultivated S African seed. (8) C
- 3.231.010 : EUCOMIS ZAMBESIACA** * No data. Seeds from the most attractive, dwarf, summer-growing bulb cultivated in the UK under this name. The species is native to tropical East Africa but this has proved reliably hardy over many years in a well-drained, sunny site About 20cm. tall with dense, erect racemes of creamy-white flowers in late summer (8) D
- 3.243.409 : GERANIUM PULCHRUM** KwaZulu-Natal, Drakensberg, SE of Sani Pass. 2600m. (A handsome, sturdy, shrubby-based species, up to 1m. in height, with lobed, silky foliage and masses of large pink to purple flowers. From moist rock-slides & streamsides up to 2400m. in the Drakensberg, this is of proven reliability in many UK gardens.) (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 and absolutely hardy here in a sunny, well-drained bed. (10+) B
- 3.261.000 : GLADIOLUS FLANAGANII** * KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. Fissures on S & SE-facing, basalt cliffs. (The 'Suicide Gladiolus', an alpine chasmophyte, almost always out of reach on inaccessible cliff-faces at the highest altitudes in Lesotho & the Natal Drakensberg, up to 3300m. Rounded, thick-textured, scarlet flowers with neat, narrow, white guide-lines on the lower segments. We now have this striking species established from our 1996 coll.) (10+) F
- 3.276.501 : GLADIOLUS SAUNDERSII** E Cape, Witteberge, E of Lady Grey. 2000m. Diorite outcrops. (A startlingly spectacular species distributed from the Witteberge & Cape Drakensberg N through Lesotho at altitudes up to 2900m. but absent from almost all of the Natal Drakensberg. Brilliant scarlet flowers marked with white on the lower segments. Temperature-hardy in a well-drained site in the UK but flowers too late to set seed with us.) (10+) D

A : \$3.00	;	£1.50	;	€ 2.-	C : \$5.00	;	£2.50	;	€ 4.-	E : \$8.00	;	£4.50	;	€ 7.-
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- 3.300.200 : GLUMICALYX GOSELOIDES** KwaZulu-Natal, Drakensberg, N of Sani Pass. 2850m. In turf & among stones at base of SE-facing cliffs. (In a small genus of 6 herbaceous perennial species in *Scrophulariaceae*, endemic to the alpine region of the high Drakensberg. Aromatic, leafy clumps of creeping stems rising to carry dense, nodding heads of long-tubed, pale-yellow flowers with bright orange interiors. In spite of the colour, demure rather than flamboyant.) (20+) 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, this should be growable in a cool, moist site in almost all UK gardens. This does well in Mike & Polly Stone's Inverness-shire garden, so don't say it's not hardy. (20+) B
- 3.445.101 : JAMESBRITTENIA BREVIFLORA** (*Sutera breviflora*) KwaZulu-Natal, Drakensberg, SE of Sani Pass. 2500m. Open, rocky slopes. (This is a fine member of a fine African genus in the *Scrophulariaceae*, recently split from *Sutera*. Masses of flat-faced, 2-lipped, brilliant orange-red, yellow-centred flowers flowers on 20cm. clumps.) (50+) C
- 3.460.503 : KNIPHOFIA CAULESCENS** E Cape, NW of Rhodes. 2600m. Open marshy areas. (A splendid species of a proven very long-lived, indestructible nature & garden worth in the UK. Clumps of fine blue-grey foliage send up stout stems with dense inflorescences of pale greenish yellow to cream flowers from coral to flame buds.) (20+) C
- 3.462.600 : KNIPHOFIA NORTHIAE** * E Cape, Drakensberg, WSW of Ben Macdhui. 2750m. Open sites along margins of streams. (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. Stout stems, anything from 20cm to 1.5m. high, carry very large dense inflorescences early in the summer. Flowers are likely to be cream from pale red buds in this E Cape race. A very hardy, high altitude plants distributed at up to 3000m. in wet peaty places.) (20+) C
- 3.520.500 : LOBELIA PRESII** E Cape, Witteberg, E of Lady Grey. 2200m. Among rocks at base of diorite cliffs. (Perennial, basal clumps or mats of little, toothed leaves send up many erect, wiry stems with 2-lipped flowers in deep gentian-blue with white, yellow-ridged throats. Distributed locally up to 2400m. in the E Cape & Natal Drakensberg.) (50+) D
- 3.545.201 : MELIANTHUS MAJOR** W Cape, near Hermanus. 100m. (One of the most spectacular foliage-plants it is possible to grow in British gardens. 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, Arresting, grey, hairy, pinnate leaves overtopped by stems of purplish-black flowers followed by inflated, pale-green fruits. Unlike the preceding, a plant from the summer rainfall area and hardier in the UK.) (10+) C
- 3.550.300 : MORAEA ALTICOLA** (Subgen. *Grandiflora*) Lesotho, NW of Sani Pass. 2900m. Moist, grassy slope. (Typical of the summit plateau of the Drakensberg, between 2200m. & 3000m., & by far the largest, most robust species. Unique, netted cataphylls enclose the leaf & stem bases. Imposing, 1m. high clumps of broad, leathery leaves & stout erect stems of large, pale-yellow flowers with deeper yellow nectar-guides. Hardy & easily grown in UK gardens.) (15+) C
- 3.557.800 : MORAEA ROBUSTA** (Subgen. *Grandiflora*) Free State, Drakensberg, Mont-aux-Sources. 2700m. Among grasses on open slopes. (Near *M. alticola* with similar large flowers in very pale-yellow or cream but on a much dwarfer plant, about 30cm. high. Perfectly hardy & we have high hopes of it proving an outstanding plant for UK gardens.) (15+) C
- 3.704.150 : ROMULEA MACOWANII** var. **ALTICOLA** (*R. longituba* var. *alticola*) * Lesotho, no further data. (Totally hardy outdoors in UK gardens. Long-tubed flowers in yellow, tinged with brown or purple externally.) (15+) B
- 3.772.009 : SENECIO MACROSPERMUS** KwaZulu-Natal, Drakensberg, S of Sani Pass. 2850m. (This is rated as "a great border perennial" by Panayoti Kelaidis at Denver. It needs a cool, moist site in Colorado but does well in full sun in the UK. Stems about 1m. tall carry heads of large yellow daisies above striking clumps of big, grey leaves. Endemic to the Drakensberg & adjacent ranges on steep scree or grass slopes between 2300 & 3000m. Wild, 2004 seed.) (15+) D
- 3.772.509 : SENECIO POLYODON** var. **SUBGLABER** * Lesotho. Ex a P. Kelaidis coll. (An excellent little daisy, about 30cm. tall, with branching stems carrying lots of small heads with bright purple rays (the type-race, *S.p.* var. *polyodon*, is rayless & of no garden-value). A plant of marshland and seasonally wet seeps, it sows itself outside with us.) (30+) B
- 3.950.400 : WATSONIA ANGUSTA** W Cape, Cederberg. 1000m. (Unusual in that it grows in both winter & summer rainfall areas, extending N well into the E Cape. The paradox is explained by the fact that it grows in permanently wet habitats : marshes, seeps & along streams. Lax spikes of scarlet flowers with black-purple anthers on 1-2m. stems.) (15+) B
- 3.952.800 : WATSONIA LEPIDA** KwaZulu-Natal, Drakensberg, W of Oliviershoekpas. 1700m. *Themeda*-grassland on open, NW & NE-facing, sandstone slopes. (This should be in theory the hardiest species in the genus. Usually with solitary 20-60cm. stems carrying dense spikes of pink flowers. Possibly best tried in a sunny rock-garden or scree-bed in the UK.) . (15+) D
- 3.955.109 : WATSONIA WATSONIODES** Mpumalanga, Saddleback Mts., S of Barberton. (A distinct plant, unlike any other. 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. Limited to stony grassland between 1300m. & 1800m. in a comparatively small area.) (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 streamsides & marshes in the Swartberg & Kamanassie ranges of the S Cape. Flowering in late summer with spectacular spikes, up to 1.5m. high, of large flowers. According to Goldblatt, the Swartberg populations range from deep red to orange, pink & cream. UK-grown seed from plants raised from our 1996 coll.) (15+) D

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- 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 grown as *A. volubile*. (20+) **B**
- 4.023.000 : ALLIUM PRATTII var. LATIFOLIATUM** * China, Sichuan, Emei Shan. 2600m. Cliff ledges. Ex E. Needham 981 (Provisionally identified by Jill Cowley at Kew as this or perhaps *A. ovalifolium*. It forms clumps of bulbs with reticulate tunics, their necks above the ground, like orchid pseudo-bulbs. These send up, big, broad, shiny-green, aspidistra-like leaves. In midsummer, rounded umbels of purple-pink flowers rise above them on 20cm. stems.) (20+) **D**
- 4.025.010 : ALLIUM WALLICHII** * China, Yunnan. Ex CLD 1500. A clump-forming species with 40 cm. tall stems carrying umbels of rich-purple flowers in late summer. A fine plant, easily grown outside in a well-drained site. (20+) **B**
- 4.030.200 : ANDROSACE BULLEYANA** * China, Yunnan, Diqing, Tang Dun, N of Zhongdian. 3120m. Ex KGB 267 (The scarlet-flowered *Androsace*, a spectacular monocarpic species, almost *Primula*-like with big, dense umbels of large flowers on erect, 15-20cm. stems from neat basal rosettes. Not particularly difficult under alpine-house conditions in the UK and well worth the small trouble of maintaining from seed : it really is striking in a rich, velvety vermilion.) (10+) **E**
- 4.055.000 : ANISODUS LURIDUS** (*Scopolia lurida*, *S. stramonifolia*) * No data. An intriguing, eastern relative of the European genus *Scopolia*, in *Solanaceae* and previously listed by us as *S. stramonifolia*. Distributed from Kashmir to SW China between 2700m. & 4300m., this is taller than the E European *S. carniolica*, reaching about 1m. in height. It often has downy, white undersides to the large leaves. The drooping, wide bells are much larger than those of *S. carniolica* in pastel-shades of pale apple-green tinged with brownish purple. Hardy & trouble-free in rich, well-drained soil in semi-shade. (15+) **D**
- 4.060.109 : AQUILEGIA ADOXIOIDES** (*Semiaquilegia adoxioides*) * China, Qinghai. Ex SBQE 1157. (A dainty delight from the mountains of N Japan, S Korea & N China. Flights of spurless maroon flowers on 30cm. stems.) (20+) **B**
- 4.060.411 : AQUILEGIA FLABELLATA var. PUMILA from WHITE FORM** * This species was originally described from cultivated stock, selected from the wild phase, *A. flabellata* var. *pumila*, smaller than the 50cm. tall type-race & native to alpine elevations on the Japanese island of Hokkaido, extending N to Sakhalin and N Korea. This beautiful white form has possibly been further selected in cultivation, as *A. flabellata* 'Nana Alba', but its compact habit places it close to the wild *A. flabellata* var. *pumila*. Dissected, glaucous foliage and stems about 20cm. tall carrying fat, creamy white columbines. (20+) **B**
- 4.060.510 : AQUILEGIA FRAGRANS** * No data. A fine W Himalayan species, distributed from N Pakistan to Uttar Pradesh in subalpine scrub up to 2600m. Big, creamy columbines, sometimes tinged greeny blue, on 50cm. stems. (20+) **B**
- 4.063.009 : AQUILEGIA VIRIDIFLORA** * China, Qinghai. Ex an SBQE coll. (Fascinating, sombre species. Conical, spurred black-maroon flowers held in grey-green sepals on branching 30cm. stems. Some sun & good drainage.) (20+) **C**
- 4.080.500 : ARISAEMA AMURENSE** * No data. Appears to be the genuine species, an extremely hardy NE Asian plant, originally grown from seed received from the former USSR. Impressively large, deeply veined foliage with broad leaflets of irregular size. Green spathes, striped with a paler shade, with elongated deflexed tips. Red autumnal fruits. (10+) **C**
- 4.081.111 : 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". Appears very late in spring with large spathes, peaked & ribbed arabesques, exquisitely sculptured in jade and rose-tinted alabaster. Not difficult if moist & well-fed in humus-rich soil in light shade. Maintained in UK gardens since the Forrest introduction from Yunnan early last century. (6) **E**
- 4081300 : 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, hardy plant with parasols of many narrow leaflets and attenuated, hooded spathes striped in chestnut-brown and white.) (10+) **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. Distributed through the Himalaya into China. From a fine form we raised from seed from Mike & Polly Stone. It has extremely long, thread-like drip-tips to the leaf-segments. (20+) **B**
- 4.081.859 : ARISAEMA DILATATUM** * China, Yunnan. 2800m. (A 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.) (10+) **F**
- 4.082.100 : ARISAEMA ELEPHAS** * China, Yunnan, Cangshan. 3200m. Ex E. Needham 1024. (Ron McBeath writes "one of my favourites...striking & handsome..." Large, trifoliate, rugose leaves, often flushed purple & margined with red. Elongated black-purple spadices snake out from hooded spathes striped with purple & translucent white lines. 40cm.) (10+) **E**
- 4.082.501 : ARISAEMA GRIFFITHII** * Nepal, Modi Khola valley towards Annapurna sanctuary. 2600m. Ex E. Needham 389. (A striking thing from the forests of central Nepal into Bhutan. Very large, broad spathes, curving over on themselves and with big, broad side-flaps, all netted with greeny white on a dark purple ground. The purple spadix-appendage narrows to a tail and extrudes. Two large, trifoliate leaves rise above this. Hardy when established in rich soil in shade in the UK.) (10+) **D**

- 4.082.550 : ARISAEMA GRIFFITHII var. PRADHANII** * No data. From a small area, in Sikkim, growing above 3000m, in *Rhododendron* scrub & in more open, rocky places. Reputedly the largest & most spectacular race.) (10+) **E**
- 4.083.305 : ARISAEMA JACQUEMONTII** * Pakistan, Hazara, Kaghan valley, above Shogran Forest Resthouse. 2050-2670m. Ex SEP 263. (The most western & the hardiest Himalayan species, distributed between 2800-4000m., among the subalpine scrub of drier areas from Afghanistan to Bhutan & SE Tibet. Leaves with 6 tapering leaflets and elegant, elongated spathes, striped longitudinally in green & white, with their extended, tortuous tips rising up well above the foliage.) (10) **D**
- 4.096.610 : ARISAEMA SERRATUM** (subsp. *serratum*) Russia, Primorskiy Kray. (A form from the Russian Far East of this variable species distributed through Japan & adjacent NE Asia. About 80cm. high, with 2 leaves, each with about 10 leaflets, and green spathes, longitudinally striped with white, around a stout spadix. Very hardy & a good garden plant.) . . . (10) **D**
- 4.099.007 : ARISAEMA TORTUOSUM** * Nepal, Khumbu Himal. 1800-3000m. Cloud-forest floor and open stony places. Ex C.Chadwell 3211. (One of the tallest in the genus. Stout, brown-mottled stems with 2 or 3, large, pedate leaves carry green spathes above the foliage. An extraordinary, tapering,, S-shaped spadix-appendage, usually purple in this form, snakes outwards then upwards. Distributed through the Himalayan woodlands from the Punjab E into SW China.) (10) **C**
- 4.111.720 : ASTILBE RIVULARIS var. MYRIANTHA** * China, Yunnan. Ex I.T. Stokes 163 (The splendid SW Chinese race of this imposing Himalayan perennial for a moist site. Large, beautifully textured, deeply veined, burnished bronze-green foliage alone. Immense branching heads of tiny creamy flowers on 2m. stems very, very late in the season.) (50+) **D**
- 4.113.010 : ASTILBOIDES TABULARIS** (*Rodgersia tabularis*) * No data. Native to woodland in Korea & NE China, in Jilin & Liaoning, this is one of the finest herbaceous plants for a rich, moist site. Plume-like panicles of many, tiny, white flowers rise to about 1.5m above the huge, round, roughly hairy, parasol-like, apple-green leaves in summer. (50+) **C**
- 4.162.550 : CAMPANULA PUNCTATA f. ALBIFLORA** * No data. The white-flowered form of this excellent 60cm. tall, rhizomatous perennial species from Japan. Lots of big, pendant bells over a very long period in summer. (100+) **A**

Cardiocrinum : giant lilies of the East

These giant woodlanders with immense, trumpet-lilies on stems 2-3m. high are certainly the largest and most spectacular bulbous plants which can be grown outside in the UK. Recent seed-collections in China have produced some spectacular variants which have confounded the received wisdom that the Chinese plants are less spectacular than the Himalayan ones. In fact, these races from central & W China

have proved much more reliable garden plants with us than the imported Indian stocks of *C. giganteum*, which are usually offered in the trade. The Indian plants come into leaf earlier and are much more vulnerable to late spring frosts with us. All of them, however, must have sheltered half-shade in cool, moist, very rich humus. All are "most gluttonous feeders." Protect seedlings from slug-damage.

- 4.169.960 : CARDIOCRINUM CORDATUM** No data. The Japanese species with creamy white, trumpets. Distributed in moist woods on Honshu, Shikoku & Kyushu, at between 1m. & 2m. tall, this is dwarfed than Himalayan *C. giganteum*. Particularly notable for the crimson tints of the young, cordate foliage but is not usually so accommodating in the UK (20+) **C**
- 4.169.970 : CARDIOCRINUM CORDATUM var. GLEHNII** No data. The hardy northern race from N Honshu, Hokkaido & Sakhalin. A stouter plant with broader leaves and up to 20 flowers in a more elongated raceme. (20+) **C**
- 4.170.010 : CARDIOCRINUM GIGANTEUM** * No data. The giant Himalayan woodlander with immense, white trumpet-lilies on stems 2-3m. high. Must have sheltered half-shade in cool, moist, very rich humus. (20+) **B**
- 4.170.109 : CARDIOCRINUM GIGANTEUM from LIME-GREEN FORM** * China, Yunnan, Ciojian. 2500m. Ex I. Stokes 46.009. (This would key-out in the latest 'Flora of China' as the Himalayan *C. giganteum* var. *giganteum* (only recorded there as just entering Tibet). The Chinese plants are usually described as dwarfed than the Indian forms but both this and the following reached over 3m. in height in our woodland. The parent of this seed carried 35, horizontally held flowers in a cylindrical raceme : great trumpet lilies in a incredible shade of creamy lime-green, exquisitely marked with vinous purple inside. It was hand-pollinated (with the aid of a stepladder) using another of similar colour so seed should have a high viability.) . . . (20+) **C**
- 4.170.110 : CARDIOCRINUM GIGANTEUM var. YUNNANENSE** * China, Yunnan. From stock received from China but with no further data. This is closer to the text-book description of *C. giganteum* var. *yunnanense*. Up to 20, white trumpet-lilies, very heavily marked inside with maroon, cluster atop the 3m. stem. Rich bronze tints on the large cordate leaves when they unfold in spring. Our own seed, hand-pollinated between several different, similar clones. (20+) **C**
- 4.200.270 : CLEMATIS CHIISANENSIS** (Subgen. *Atragene*) * No data. A most distinct relative of *C. alpina*, endemic to the Chisan area of South Korea & to Cheju-do island, growing in mixed woodland between 1300m. & 1900m. Nodding, pale yellow, bell-shaped flowers with ribbed sepals, spurred and tinged with red at the base. (15+) **D**
- 4.200.810 : CLEMATIS FUSCA** * No data. An herbaceous climber from the Russian Far East through N China to N Japan. Less than 3m. high, with dark purple, urn-shaped flowers, covered in red-brown wool. (20+) **B**
- 4.201.810 : CLEMATIS NAPAULENSIS** * No data. A winter-flowering climber, up to about 10m. high, from N India into SW China. Clusters of flowers with cream-white sepals surrounding purple stamens. Deciduous in late summer. (20+) **B**

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Codonopsis : the climbing campanulas

- 4.221.100 : CODONOPSIS FORRESTII** * China, Yunnan, Dali, Tsang Shan, Huadianba. 2900m. Ex CLD1409. (Quite narrowly distributed in Dali & Lijiang, SW Yunnan, between 1500 & 3600m. This is an extremely fine, climbing species allied to *C. convolvulacea* and the latest to flower in this group with a succession of large, clear-blue flowers continuing well into late autumn. These lack the crimson, central ring of *C. grey-wilsonii* but are at least as large and last longer.) (20+) C
- 4.221.210 : CODONOPSIS GREY-WILSONII** (*C. nepalensis* Grey-Wilson non Hara, most *C. convolvulacea* & *C. forrestii* of gardens) No data. Widespread & maybe endemic in Nepal, this is superficially similar to *C. convolvulacea* but more vigorous, twining to over 3m., and with a striking crimson-ringed centre to the wideopen, lavender-blue flowers. (20+) C
- 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. Variable in its 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." (20+) C
- 4.221.850 : CODONOPSIS OBTUSA** * Afghanistan, Panjshir Valley. 2400m. Beside stream. Ex P. Furse 8643. (We acquired this long ago as *C. obtusa* & no other positive, alternative determination has been suggested. Near *C. clematidea* but the big, ice-blue bells lack the internal markings and shade into glossy yellow-green instead. Hardy & reliable.) (20+) C
- 4.222.301 : CODONOPSIS ROTUNDIFOLIA** * Pakistan, Hazara, Kaghan Valley. Scrub. 2000-3000m. Ex C. Chadwell 2015. (A tuberous-rooted "rambling, herbaceous climber" twining to about 3m with large, broad bells, green or purple outside, "greenish yellow mottled with red-purple on the inside." A plant of montane scrub recorded up to 3800m.) (20+) B
- 4.222.510 : CODONOPSIS TANGSHEN** * No data. Another vigorous 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
- 4.222.805 : CODONOPSIS VINCIFLORA** * No data. A less vigorous member of the *C. convolvulacea* group from the E Himalaya & SW China with smaller, thinner, toothed leaves & saucer-shaped, lilac-blue flowers. Twines delicately to no more than 1m. Seedlings are best left to tangle the first season : sort out the dormant tubers & replant in winter.. . . . (20+) B
- 4.228.210 : CORYDALIS LINSTOWIANA** * No data. A Sichuan endemic described as "charming" and "a good garden-plant" by Liden & Zetterlund. Usually biennial with an overwintering rosette of bright green leaves & racemes of blue to purple-blue flowers in spring. This 2004 dry seed should germinate well & it should sow itself where suited in light shade. . . . (30+) C
- 4.250.610 : DAPHNE GIRALDII** * No data. A beautiful, deciduous shrub, about 60cm. high, from W China, in Shaanxi & Gansu. Terminal clusters of fragrant, rich yellow flowers in late spring. Can thrive on soils from limy clay to acid sand but can also be rather temperamental. When we were in Dorset we never grew it well & W Wales is too wet for it (8) C
- 4.251.010 : DAPHNE TANGUTICA** * No data. A fine, dwarf, evergreen shrub from W China, under 1m. high, with clusters of fragrant flowers, rose-purple outside & lilac-tinged white inside. Almost always a good grower in UK gardens. . . . (8) B
- 4.265.310 : DELPHINIUM BRUNONIANUM** * No data. From the form established in British gardens & close to *D. cashmerianum*. About 30cm. high with downy black-eyed flowers of dusky purple with stubby spurs. (20+) B
- 4.266.100 : DELPHINIUM DELAVAYI** * China, Yunnan, Lijiang, Yulong Shan. 2900m. Ex CLD 895. (Branching stems about 60cm. high carry a succession of long-spurred, deep blue-violet flowers from late summer into autumn.) (20+) B
- 4.267.210 : DELPHINIUM PYLZOWII** * No data. A more northern species than *D. tatsienense*, dwarfer and with larger, rich-blue flowers. Seductively illustrated in 'The English Rock Garden' from a photograph taken by Bill Purdom in Gansu, where Farrer describes it as growing only about 15cm. tall but expect it to be about twice this in cultivation. (20+) D
- 4.267.810 : DELPHINIUM TATSIENENSE** * No data. Recorded up to 4000m. in S Sichuan & a delight in a scree or other well-drained, sunny site with flights of azure-blue butterfly-flowers on branching, 30cm stems in summer. (20+) B
- 4.275.450 : DICENTRA MACROCAPNOS** * No data. A slender Himalayan, herbaceous perennial, climbing to about 2m. by tendrils on its compound leaves and hanging out clusters of deep yellow, 2-lipped, heart-shaped flowers over a long period in summer. It scrambles among scrub between 1500m. and 3000m. in N India, from Uttar Pradesh into E Nepal. . . . (30+) C
- 4.285.500 : DRABA OREADES** * No data. A worthwhile E Asian species for the alpine-house enthusiast (not to be confused with the similarly named Moroccan *D. oreadam*). A high-alpine, widespread from Central Asia, through the Himalayas to SW China, in rocky places at altitudes between 3500m. & 5500m. Tiny, hairy rosettes compressed into pads or cushions with heads of yellow flowers on 2cm. stems. Not too difficult given careful cultivation by experienced growers. (20+) D
- 4.351.610 : EUONYMUS PHELLOMANUS** * No data. A deciduous shrub, 2-3m. high, from China in Gansu & Shensi. Stems with conspicuous corky wings and angular, rosy-red, four-lobed fruits showing seeds with rich-red arils. (10+) C

- 4.361.110 : EUPHORBIA JACQUEMONTII** * No data. A first-class Himalayan species forming a close, steadily expanding clump of bushy, 60cm. tall stems in a moist site with us. Fresh green foliage and heads of greenish gold. (10+) C
- 4.361.610 : EUPHORBIA SIKKIMENSIS** * No data. Beautiful foliage, crimson-tinted as the shoots emerge in spring, with flat acid-yellow heads on 1.5m tall stems in late summer. An aristocrat for rich, moist soil. (10+) C
- 4.361.410 : EUPHORBIA SCHILLINGII** * No data. Perhaps the finest of the Himalayan herbaceous perennials split out of *E. wallichii*. Clumps of erect, 1m. tall stems with apple-green leaves & brilliant yellow heads in summer. (10+) C
- 4.390.108 : FRITILLARIA CAMTSCHATCENSIS** * Russia, Sakhalin, near Tomari. (A tall, vigorous, markedly stoloniferous form from the southern part of this island between the Russian mainland & Japan. Up to 6, virtually black flowers on stems which can reach 60cm. in height. This grows well outside with us in our gravelly peat-bed.) (15+) D
- 4.390.110 : FRITILLARIA CAMTSCHATCENSIS** * No data. A marvellous plant. Stems of 30cm. or more, whorled with rich-green leaves, carry nodding, thick-textured bells in darkest brown-purple. Distributed from Japan through Sakhalin & Kamchatka into Alaska & Canada. Utterly hardy & quite easy outside in the UK in a cool situation. (20+) C
- 4.390.250 : FRITILLARIA CIRRHOSA** * No data. Widely distributed from W Nepal to SW China between 3000m. and 4000m., this highly variable East Himalayan species is one of the least well-known in cultivation. It has long been the preserve of Scottish growers, whose cooler summers and colder winters seem to suit it, and this seed is from Mike and Polly Stone in Inverness-shire. A slender plant, between 15cm. and 50cm. tall with narrow foliage, often with the curled leaf-tips which give it its name, and pendant bells in varying shades of yellow-green, more or less chequered with brown. It flowers late and will be better kept drier in winter than in summer, when it might be best grown outside & kept as cool as possible. . . . (20+) E
- 4.390.251 : FRITILLARIA CIRRHOSA from SELECTED BROWN-CHEQUERED FORM** * (15+) E
- 4.392.108 : FRITILLARIA USSURIENSIS** * Russia, Primorskiy Kray, near Vladivostok. (Slender 50cm. tall stems with linear leaves, the uppermost with cirrhose tips, carry about 5, nodding bells in dark reddish-brown, dimly chequered with yellow. Distributed in moist, shady places through the Russian Far East to Korea, just entering the northernmost provinces of China. Do not dry out the dormant bulbs. It should be growable outside in the UK but it is still little-known.) (15+) F
- 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', 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. These 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 but seedlings may vary.. (10+) B
- 4.430.920 : GERANIUM ERIOSTEMON** * China, Quinghai. Ex an SBQE coll. (Distributed through NW China, Korea & Japan. About 60cm. tall with downy, lobed soft-green leaves & nodding, muted violet flowers with reflexing petals.) . . . (10+) C
- 4.431.060 : GERANIUM HIMALAYENSE** * No data. A ground-covering, western Himalayan plant, distributed from NE Afghanistan to Nepal. Easily grown in UK gardens with profuse, large, violet-blue flowers in summer. (10+) B
- 4.431.150 : GERANIUM KISHTVARIENSE** * India, Kashmir, Gulmarg above Srinagar. Ex R.Lancaster 159. (A distinct woodland plant 50cm. tall, spreading by slender underground stolons. Wrinkled, cut, fresh-green foliage & rich crimson-purple flowers, marked centrally with white, in late summer. A fine colour but not so easy to maintain in our experience, though we have at last induced it to grow well in a bed of rich soil in the shade of our moist woodland.) (10+) D
- 4.432.109 : GERANIUM SOBOLIFERUM** * Russia, near Vladivostok. Ex a M. Wickenden coll. (A fine pink-flowered race of this species from Ussuri, Manchuria & central Japan. Branching stems about 40cm. high carry a many of small magenta-pink flowers over a long season. The deeply cut, ferny foliage is orange-tinted in spring & autumn.) (10+) C
- 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 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 much more compact with us than this or the following. Elizabeth Strangman, however, finds it "stronger growing & longer flowering than 'Buxton's Variety'". Fine autumn leaf-colours (10+) C
- 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 1987 seed coll., is in Phillips & Rix 'Perennials' Vol. 1. p. 178. Not difficult under alpine-house conditions with Alan King (Northants. UK).) (20+) D

A : \$3.00	;	£1.50	;	€ 2.-	C : \$5.00	;	£2.50	;	€ 4.-	E : \$8.00	;	£4.50	;	€ 7.-
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- 4.478.603 : INCARVILLEA MAIREI** (var. *mairei*) (Subgenus *Pteroscleris*) * China, Yunnan, Da Xue Shan. 4015m. Ex ACE 1602. (A fine species, about 30cm. high, usually successful in a well-drained, sunny site in the open garden in the UK. Deeply veined leaves in dark, glossy green & up to 4, large, deep-pink, white-throated flowers on each stem.) (10+) **C**
- 4.478.850 : INCARVILLEA SINENSIS var. PRZEWALSKII** (Subgenus *Incarvillea*) * China, Gansu, S of Lanzhou. 1700m. (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 : "...on the hottest & driest & barest exposures...") (15+) **D**
- 4.478.951 : INCARVILLEA ZHONGDIANENSIS** (Subgenus *Pteroscleris*) * China, Yunnan, Diqing, S of Zhongdian. 3215m. Dry grassy banks on eroded hillsides. Ex ACE 1600. (A spectacular species described in 1998. 20cm. flower-stems, each carrying about 3 huge bright magenta-crimson trumpets with white flares. Well-drained site in the UK.) (15+) **D**
- 4.480.200 : IRIS BULLEYANA** (Ser. *Sibiricae*) China, Yunnan, SE of Zhongdian, Bi Ta Hai. 3400m. Semi-open positions from stream-edges to dry hillsides. Ex T. Smyth 96-209. (About 50cm. tall with rich violet-blue flowers, with the falls intricately streaked and dotted with violet on a white ground. Easily grown in a moist site in the UK.) (10+) **C**
- 4.480.750 : IRIS DELAVAYI** (Ser. *Sibiricae*) * China, Yunnan. Ex an Ivor 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.) (20+) **B**
- 4.482.850 : IRIS SETOSA from WHITE FORM** * From a beautiful, white form, which we guess is of Asian origin. About 50cm. high with broad, flat falls, yellow-tinged at the base, in summer. Almost all, seedlings will be white. (15+) **B**

Lilium : the exquisite Asiatic species

- 4.516.000 : LILIUM AURATUM** (var. *auratum*) * Japan, Honshu, Shizuoka Pref. Ex a D. Elick coll. (The "Queen of Lilies", a spectacular Honshu endemic, with enormous, heavily scented, horizontally held flowers in waxy white, banded with gold & spotted with crimson, on stems of 1m. or more in late summer. A species of hill-slopes at quite low altitudes & likely to thrive best in good, loose, sandy loam in a warm, sunny site in the UK : definitely not in a cool, wet, peaty place.) (20+) **D**
- 4.516.825 : LILIUM CONCOLOR var. PULCHELLUM** (*L. buschianum*) * Russia, Ussuri. (A slender, lime-tolerant, sun-loving species from NE Asia. This is the most northern race from the Russian Far East & Korea, about 60cm. high with many linear leaves carry up to 10 erect flowers in glossy orange-scarlet speckled with purple.) (20+) **D**
- 4.517.010 : LILIUM DAURICUM** * No data. A handsome, hardy, hairy, Siberian species, widely distributed from the Altai eastwards to North Korea & Hokkaido. Stoloniferous stems rise to about 50cm. with large, open, upward-facing scarlet flowers, spotted with brown, in summer. It needs good well-drained soil in a sunny site in the UK. (10+) **D**
- 4.517.209 : LILIUM DAVIDII** * China, Yunnan. 1500m. (A beautiful, graceful, *Martagon*-type species about 1.5m. high with up to 20, nodding flowers in orange-red with raised black spots, opening in late summer from woolly buds & held out on stiff, horizontal pedicels. A very hardy species said to enjoy full sun and to be comparatively lime-tolerant.) (15+) **D**
- 4.517.610 : LILIUM DUCHARTREI** * A glorious, stoloniferous, W Chinese species, allied to *L. taliense* & *L. lankongense*. Brownish, 1.5m. stems with up to 12, pendant, scented, white flowers, with recurving segments spotted with deep purple & reddening with age. Most cultivated stock appears to derive from the 1915 Farrer coll. in S Gansu, where he wrote that 'its cold bone-white turkscaps have a glacial beauty.' Moist but well-drained, humus-rich soil in light shade. (20+) **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 on "Mount Morrison". It flowers quickly from seed sown in gentle warmth in winter.) (20+) **B**
- 4.518.109 : LILIUM HANSONII** * South Korea. Ex R. Bryer & C. Cowler 110. (A magnificent turkscap lily with sturdy, 1.5m. stems, whorled with broad, deep green leaves & carrying about 12, fragrant, nodding flowers with thick-textured, recurving segments in orange-yellow, spotted with brown. Long-lived, lime-tolerant & reliable in part-shade in the UK.) . . . (10+) **D**
- 4.518.269 : LILIUM HENRYI** * No data. Native to montane slopes between 700m. and 1000m. in Guizhou, Hubei and Jiangxi in S China. Stems about 2m. high with 10 to 20 flowers, large, nodding and soft-orange in colour, with a few sparse black spots and distinctive, fimbriate projections along the nectaries. A limestone plant & an adaptable species. (15+) **D**
- 4.519.509 : LILIUM LANKONGENSE** * China, Yunnan. 2700m. (Endemic to N Yunnan & close to white *L. duchartrei*, under which it has been included. Stems 1m. to 1.5m. high with scattered, dark leaves bear a raceme of about 12, scented, pendulous, *L. martagon*-type flowers in rose-pink, speckled with purple. For moist, humus-rich soil in semi-shade.) (20+) **D**
- 4.519.620 : LILIUM LEICHTLINII var. MAXIMOWICZII** * No data. Very 'classy', pendant, orange-red, turkscap flowers, profusely and evenly spotted with brown-purple, on 2m. stems in late summer. A handsome, stoloniferous plant from montane N Japan & Korea, more accommodating, in rich soil in light shade, than the yellow type-race. (20+) **D**

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- 4.519.919 : LILIUM LOPHOPHORUM** * China, Yunnan. 3300m. (The most distinct of lilies. Possibly closest to *L. oxypetalum* and of similar height & habit but the drooping, pale-yellow flowers have greatly drawn-out, attenuate tips to the segments. These cling together and the globular flowers look like pendant, Chinese paper-lanterns. Native to the area where Tibet meets Gansu, Sichuan & Yunnan between about 2500m. and 4500m. altitude, this needs cool, moist growing conditions in summer but prefers to be rather dry and cold from late summer through winter. Our own UK-grown seeds.) (10+) **F**
- 4.520.010 : LILIUM MACKLINIAE** * India, Manipur, Sirhoi near Ukhrul. 2300-2450m. Steep, grassy slopes. (All the cultivated stock stems from the collections made by Frank Kingdon-Ward on this one mountain in 1946 & 1948. An exquisite species in the group approaching *Nomocharis* with nodding, white, bowl-shaped flowers, flushed with rose-pink.) (15+) **C**
- 4.520.410 : LILIUM NANUM** * No data. From an established form, probably originating in N India, of this charming dwarf species, about 30cm. high. First described as a *Fritillaria*, it has oscillated between *Nomocharis* & *Lilium*. Distributed from the Garhwal Himalaya to NW Yunnan between 2700m. & 5000 m. Lilac to purplish, drooping, bells. (20+) **C**
- 4.520.460 : LILIUM NANUM var. FLAVIDUM** * No data. The pale yellow phase of this little Himalayan species. It was first described as *Fritillaria flavida*. Rather like *L. oxypetalum* but with much narrower leaves. (15+) **E**
- 4.520.810 : LILIUM OXYPETALUM var. INSIGNE** * No data. The dusky pink form of this dwarf, usually yellow, species from the NW Himalaya, between 3000m. & 4000m. About 20 cm. high with one nodding, campanulate flower. (15+) **D**
- 4.520.910 : LILIUM PHILIPPINENSE** * No data. Elegant, 1m., grassy-leaved stems & very long-tubed, horizontal, pure-white, scented trumpets, sometimes tinged green or brown outside. From the mountains of Luzon in the N Philippines.. . . (20+) **C**
- 4.521.608 : LILIUM PUMILUM (L. tenuifolium)** * Russia, Magadan. (A brilliant, little, early-flowering species from NE Asia. This Russian form is about 1m. tall with linear, alternate leaves and about 12 bright scarlet, pendant, turkschap flowers, mostly without any spots at all. It needs a well-drained site in sun in the UK and is usually easily grown from seed.) (20+) **D**
- 4.522.009 : LILIUM SEMPERVIVOIDEUM** * China, Yunnan. 2700m. (A little-known, *Nomocharis*-like species endemic to Yunnan & Sichuan on grassy slopes at about 2500m. altitude. One or two nodding, cup-shaped, white flowers, sparsely speckled inside with red-purple on 20-30cm. stems clad in narrow, linear leaves. Cool, moist growing conditions.) (10+) **F**
- 4.522.220 : LILIUM SPECIOSUM var. CLIVORUM** * Japan, S Shikoku, Agawa river gorge. Damp shady cliffs. Ex a D. Elick coll. (From Don's 1988 type-locality coll. of this very local race, described in 1956. Hanging out of the cliffs "like a giant *Tricyrtis*...stems 6ft. or longer with up to 20, light-pink flowers on very long pedicels." A sumptuous plant, growing successfully in the UK, both under glass & outside, with gloriously scented, crimson-speckled flowers in late summer. In 2004, a stock-plant here, grown under glass, had about 50 flowers on an arching stem almost 3m. long.) (20+) **E**
- 4.522.409 : LILIUM TALIENSE** * China, Yunnan. (A distinct and beautiful early-flowering turkschap lily, about 1.5m tall, with racemes of up to 12 nodding flowers. These are quite small but exquisitely coloured. Yellow buds open to ivory flowers, rapidly fading to white, discretely peppered with maroon. The long green nectary along each tepal becomes purple as the flower ages. A plant of openings in woodland and grassy slopes between 2600m and 3600m. in Sichuan and Yunnan.) (15+) **E**
- 4.524.000 : LINDELOFIA LONGIFLORA** * A rhizomatous, W Himalayan member of the *Boraginaceae* spread from Pakistan to Nepal in open meadows up to 3600m. Clumps of narrow leaves & erect, 60cm. stems with deepest blue flowers from blue-purple buds in summer. "Crozier of large deep-sapphire anchusa-flowers uncurling all the summer" wrote Farrer. . . (5) **C**
- 4.545.710 : MAGNOLIA SIEBOLDII** * Stored in a refrigerator so sow immediately.. (10+) **C**

Meconopsis : poppies in azure and gold

- 4.550.310 : MECONOPSIS BETONICIFOLIA** * No data. Seeds from a fairly reliably perennial strain of this incomparable herbaceous plant for cool, moist conditions in very rich soil. Huge blue poppies on 1m. tall stems. (50+) **A**
- 4.551.210 : MECONOPSIS GRANDIS** * No data. "One of the classic garden plants worth any effort, a perennial with breathtakingly blue flowers" writes James Cobb in his monograph. He adds "nearly all seeds offered as *M. grandis*...are in fact *M. betonicifolia*." These are from authentic parents grown by Mike and Polly Stone in Inverness-shire, Scotland . . (30+) **D**
- 4.551.549 : MECONOPSIS aff. HORRIDULA** * China, Yunnan. Ex A.C.E. 2442. From one of several recent collections made in SW China. Current thinking is that most of these belong under *M. prattii* and *M. rudis*, under which we have listed two others. This especially fine blue one is more difficult to place. It is unlikely, however, that, without a considerable amount of effort, these local races can be kept 'pure' in cultivation. Expect bristle-leaved rosettes and racemes of blue poppies on stems of around 30cm. high. All this group may be happier with better drainage & more sun than many in this genus. . . (50+) **C**
- 4.551.810 : MECONOPSIS INTEGRIFOLIA (subsp. integrifolia)** * No data. The famous, sumptuous, yellow poppy from W China & E Tibet, growing between 2700m. & 5200m. altitude. It can have 10 or more huge, silken flowers, up to 20cm. across, and reach 1m. in height but is usually half of that in gardens. A fast-grower and gross-feeder. (30+) **C**
- 4.552.447 : MECONOPSIS aff. NAPAULENSIS** * Nepal. Ex E.Needham 148. (Magnificent. About 1.5m. tall with pale lemon-yellow flowers. Like all the yellow-flowered variants near *M. napaulensis*, it may owe its colour to *M. paniculata*. *M. regia* may also be involved in the origins of some of these confusing wild forms with beautiful winter rosettes.) (50+) **D**

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- 4.552.790 : MECONOPSIS PRATTII** * No data. See our comments under 4.551.549 regarding these Chinese relatives of the Himalayan *M. horridula*. Seeds from some excellent collections made in Yunnan, grown by Mike & Polly Stone in Inverness-shire, UK. Greyish, bristle-leaved rosettes send up erect stems with axillary blue poppies with charcoal-grey anthers. Possibly best grown in scree-conditions but with plenty summer-moisture and in a sunny site (in cool climates). (50+) C
- 4.553.460 : MECONOPSIS RUDIS** * No data. The blue poppies, related to *M. horridula*, from Sichuan are possibly best placed under this species. Seed from a richly coloured, vigorous form grown by Mike & Polly Stone. (50+) C
- 4.562.600 : MERTENSIA PTEROCARPA var. YEZOENSIS** (*M. rivularis* var. *japonica*, *M. sibirica* complex) * No data. A beautiful plant from alpine-levels in Hokkaido, the northernmost island of Japan. Clumps of pointed, cordate leaves in bluish, greyish green offset the soft turquoise-blue flowers, which open on 20cm. stems over a long period in summer. . . (10+) C
- 4.574.100 : NEPETA CLARKEI** * No data. A W Himalayan species from wet habitats in high, dry areas of N Pakistan into Kashmir. Accommodating in cultivation here with many, erect, 1m. stems whorled with blue flowers. (20+) B
- 4.574.450 : NEPETA STEWARTIANA** * China, Yunnan, S of Zhongdian. 3215m. Ex ACE 1611. (This has settled down well with us. An excellent garden-plant with whorls of long-tubed, violet-blue flowers on leafy, 60cm. stems.) (20+) B
- 4.576.007 : NOMOCHARIS APERTA** * China, Yunnan. Ex CLD 229 (This can reach about 1m. in height but is usually half of that. Wideopen, saucer-shaped flowers in pink, speckled with crimson & with deep purple nectary-blotches. One of the easiest in this small genus barely separable from *Lilium*, all best suited to climates with cool, wet summers.) (15+) D
- 4.576.009 : NOMOCHARIS APERTA** * China, Yunnan, near Tianchi Lake. 3315m. Scrub. Ex ACE 2271. (15+) D
- 4.576.100 : NOMOCHARIS MAIREI** * China, Yunnan. Ex CLD 1490. (A glorious endemic of SW Sichuan & N Yunnan at 3000m- 4000m. Up to 7, almost flat, drooping flowers with white segments, the inner 3 of which have fringed margins, are evenly spotted with crimson & have crested, purple-red nectary glands. Humus-rich soil in a cool, moist site.) . . . (15+) D
- 4.576.220 : NOMOCHARIS PARDANTHINA f. PUNCTULATA** * Type species of this exquisite genus. Close to *N. mairei*, which some have sunk into it. About 10 flowers opening widely on stems, reaching to almost 1m. Unlike *N. mairei*, only the rounded, finely toothed inner segments are sparsely speckled with brown-purple in the lower third (15+) E
- 4.576.510 : NOTHOLIRION BULBULIFERUM** (*N. hyacinthinum*) * No data. A beautiful lily-relative, up to 1m. high with racemes of about 30 horizontal, lilac-purple trumpets, tipped with green. Distributed in alpine meadows from Nepal into W China, it is most likely to succeed in a cool, part-shaded site in moist but well-drained, humus-rich soil. (20+) C
- 4.576.560 : NOTHOLIRION CAMPANULATUM** * No data. Native to the area where the borders of Burma, Yunnan & Tibet meet, this remains a rare plant, though introduced to cultivation from Burma by Farrer in 1919. He likened it to a leafy-stemmed *Galtonia candicans* "with bells of bright cerise-crimson tipped...with vivid green...". About 1m. tall with up to 20 flowers, this has always grown best in cool, wet climates : "good drainage with plenty of moisture." (20+) E
- 4.579.808 : PAEONIA DELAVAYI from SELECTED YELLOW** * China, Yunnan, Dali, Cangshan. Ex SBEC 794. (From a fine clone selected from seedlings raised from a wild coll. of this shrubby species, currently considered to include Chinese *P. lutea* & *P. potaninii*, as a variable intergrading entity. All are about 1-1.5m. high with stiff, upright woody stems, clad in beautifully cut foliage, and have not suckered widely from the base. Seed is from a plant with very fine, large, full-petalled, soft-yellow flowers, tinted with copper in the bud, but they will be likely to vary.) (5) D
- 4.580.503 : PAEONIA LACTIFLORA** (*P. albiflora*) * Russia, Primorskiy Kray, Sakhalin. (Parent stock-from this island lying to N from Japan. This beautiful species is virtually unknown in gardens, where its influence is manifest only in the multitude of herbaceous hybrid clones. Dark-green leaves, usually crimson-tinted, divided into lanceolate lobes & 70cm. tall stems carrying two or more huge white flowers with golden stamens.) (6) D
- 4.581.020 : PAEONIA OBOVATA var. ALBA** * No data. New Zealand grown seed of this white-flowered variant, the most generally grown one and one of the loveliest. This is essentially similar to *P.o.* subsp. *willmottiae* but should lack the downy undersides to the leaves and usually flowers a few weeks later than it in cultivation. (6) E
- 4.581.050 : PAEONIA OBOVATA var. WILLMOTTIAE** * No data. Outstandingly beautiful even in such an aristocratic genus. Rounded, lobed foliage, greyish with coppery tints, forms a perfect background for the translucent, ivory-white cups holding the golden stamens around the crimson carpels. A native of W Hubei & E Sichuan, growable in the UK (6) E
- 4.581.600 : PAEONIA VEITCHII var. WOODWARDII** * No data. Wide, dense clumps of shiny green, deeply cut foliage & slightly drooping, rosy-red, bowl-shaped flowers. From around 3000m. in W China, in Gansu & NW Sichuan & an excellent, reliable grower in UK gardens. An ill-defined variety distinguished by the longer hairs on the leaf-veins. (8) C
- 4.581.610 : PAEONIA VEITCHII from WHITE FORM** * Rarely seen with pure-white flowers against cut, bright-green foliage. In our experience, 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. Pink or white, cup-shaped flowers top the mottled parasols of the expanding leaves in spring to be followed by big, squashy, scarlet fruits, dangling below in autumn. (8) **B**
- 4.596.010 : POLYGONATUM CIRRHIFOLIUM** * No data. A more eastern version of *P. verticillatum*, differing most notably in the coiling tendrils on the tips of the very narrow leaves which whorl the 1m. tall stems. The short-stemmed flowers, white flushed with purple or green, appear in the leaf-axils & are followed by red-purple fruits. A plant of scrubby slopes & forests between 1500m. & 3500m. in the mountains from N India to SW China. (15+) **C**
- 4.599.210 : POTENTILLA ATROSANGUINEA var. ARGYROPHYLLA** * No data. The eastern, orange to orange-yellow form of this Himalayan perennial from montane meadows at altitudes up to about 4500m. The species, red-flowered in the West, is distributed from Afghanistan to Sikkim. Spreading 60cm. stems and silver-backed, trifoliate leaves. (50+) **B**
- 4.599.710 : POTENTILLA NEPALENSIS** * India, Himachal Pradesh, Kulu, Parasher. 2100m. Open meadows. Ex R. McBeath 1698 (Rich, deep cherry-pink flowers with darker centres. Much daintier than 'Miss Willmott'.) (20+) **B**
- 4.604.009 : PRIMULA BULLEYANA (Sect. *Proliferae*)** * No data. A beautiful, wet-growing, summer-flowering, candelabra primula from marshy meadows in NW Yunnan & S Sichuan. Distinct in the beetroot red midribs to its leaves. White-mealy stems up to 1m. high with superimposed whorls of yellow to pale orange flowers opening from scarlet buds. . . . (50+) **A**
- 4.616.009 : PRIMULA FLORINDAE (Sect. *Sikkimensis*)** * Tibet. Ex K. Rushforth 3579. (Possibly the first coll since the 1924 Kingdon Ward introduction. Endemic to the Tsangpo basin of SE Tibet. Largest in its genus with huge umbels of up to 80 fragrant, sulphur-yellow bells hanging on mealy stalks atop a 1.5m stem. in summer. Rich, wet soil.) (50+) **A**
- 4.616.500 : PRIMULA FORRESTII (Sect. *Bullatae*)** * A famous, woody-based plant of the Lichiang limestones, dry habitats except when deluged by the monsoons of late summer. Umbels of yellow, orange-eyed flowers on 15cm. stems from rosettes of long-stalked, wrinkled, light-green leaves. Needs alpine-house cultivation with careful watering in the UK.) . . (20+) **D**
- 4.617.410 : PRIMULA HELODOXA (Sect. *Proliferae*) (*P. prolifera* complex)** * No data. Introduced by Forrest from Yunnan but now probably crossed with its allies, like Bhutanese *P. smithiana*, in gardens. It remains the finest yellow candelabra primula with bright, clear-yellow whorls on 50cm. stems from evergreen rosettes of rich-green leaves. (50+) **A**
- 4.619.710 : PRIMULA JAPONICA 'MILLER'S CRIMSON'** (Sect. *Proliferae*) * Rich-red strain of this species from mountain stream-sides in Japan. Robust clumps of red-ribbed, light-green leaves & 60cm. candelabra of large, deep red flowers. The species is a self-fertile, tetraploid homostyle and seedlings from the colour forms will come evenly and 'true' . . . (50+) **A**
- 4.619.720 : PRIMULA JAPONICA from WHITE FORMS** (Sect. *Proliferae*) * From pure-white 'Fuji' and the older form 'Postford White'. We can see little difference between these. Both outstanding in damp shade. (50+) **A**
- 4.628.610 : PRIMULA POISSONII (Sect. *Proliferae*)** * No data. A long-lived, neat candelabra primula, close to *P. wilsonii*, from NW Yunnan and SW Sichuan, where it grows in the black, acid earth of wet meadows. Tidy rosettes of smooth, evergreen leaves with 40cm. stems carrying whorls of golden-eyed flowers, described by John Richards as "velvety plum-purple". We should describe it as luminous carmine-purple. "An attractive plant which should be more frequently grown." . . . (50+) **B**
- 4.629.810 : PRIMULA PULVERULENTA (Sect. *Proliferae*)** * From wet sites above 2000m. in W Sichuan. The earliest candelabra primula with whorls of flat, crimson flowers with darker eyes on white, mealy stems up to 1m. tall. . . (50+) **A**
- 4.642.310 : PRIMULA VIALII (Sect. *Muscarioides*)** * No data. An extraordinary species of unique appearance : clumps of erect downy leaves send up 50cm. stems with cylindrical spikes of about 100, close-packed violet-blue flowers opening from brilliant red buds. It has a scattered distribution in meadows & scrub, around 3000m. in SW Sichuan & NW Yunnan, whence it was introduced by George Forrest in 1906 & has been maintained in gardens since. Cool site in a humus-rich soil. . . (50+) **C**
- 4.643.210 : PRIMULA WALTONII (Sect. *Sikkimensis*)** * No data. A plant of damp river-meadows in Tibet, Sikkim & Bhutan. The genuine species is rare and has proved difficult to maintain in cultivation in the UK. It was last introduced from Sikkim in 1983. Umbels of up to 30, pendant bells in deep pink to wine-red shades on mealy stems, up to 50cm. tall. Seeds from authentically named parents grown by Mike & Polly Stone in Inverness-shire, Scotland. (50+) **E**
- 4.644.110 : PRIMULA WILSONII var. ANISODORA (Sect. *Proliferae*)** * No data. From among deciduous scrub in moist sites around 3,500m. in Sichuan and N Yunnan. Evergreen rosettes of smooth, aromatic leaves. Willowy, stems rise to 50cm. or more, whorled with deep velvety-crimson bell-shaped flowers ringed centrally with neat pale-yellow 'eyes' (50+) **B**
- 4.698.910 : RHEUM ACUMINATUM** * Ex a Ron McBeath coll. A splendid species from the alpine meadows of the eastern Himalaya, above 3000m.. "Superbly worthy of cultivation for both foliage and flower" comments Dan Hinkley. Deeply veined, heart-shaped leaves, soft crimson beneath, on bright red stems with 1m. high, panicles of rosy flowers followed by glistening scarlet fruits. With us, an excellent garden-plant, whose foliage remains in fine condition all summer. (15+) **C**
- 4.699.600 : RHEUM PALMATUM from RED-LEAVED FORM** * One of the most imposing herbaceous perennials. Very large, deeply cut leaves, which in the parent are crimson, flushed with scarlet, as they emerge in spring, remaining crimson-tinted below well into summer, when a panicle of brilliant cerise flowers soars to about 3m. high. This is from 'Red Herald', selected, when we were at Buckshaw Gardens, as the best out of hundreds of seedlings from the plants circulated as 'Atrosanguineum', 'Bowles' Variety', etc. Sow the seed promptly, select the best but please don't call them 'Red Herald' (20+) **B**

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- 4.798.410 : RODGERSIA SAMBUCIFOLIA** (var. *sambucifolia*) * No data. A noble foliage plant of quite limited distribution in SW China, between 1800m. and 3700m. altitude in W Guizhou, SW Sichuan and N Yunnan. Huge, deeply veined, pinnate leaves & arching panicles, over 1m. tall with a myriad white flowers. For rich, moist soil in semi-shade. (50+) **B**
- 4.824.007 : ROSA SERICEA** * Sikkim, above Choka. 3100m. Ex AGSES 373. (The finest, most vigorous of the three collections of this very variable species, which we grow. Almost 3m tall with profuse ferny foliage and masses of small, white flowers, usually with only 4 petals, followed by elongated crimson fruits. Young stems are covered with huge, flattened, translucent, scarlet prickles, just as impressive as Chinese *R. s.f. pteracantha*, which is a poor grower with us.) (15+) **B**
- 4.825.010 : ROSA WEBBIANA** * No data but originally from material collected in the western Himalaya, where it is native to the drier, inner valleys. A splendid species, armed with yellowish prickles & seldom more than 2m. tall with rather glaucous leaves & white, sometimes pink-flushed, flowers, followed by globular, bright-red fruits. (15+) **B**
- 4.830.009 : ROSCOEA ALPINA** * India, Himachal Pradesh, Kailas Himalaya. c.3000m. Among shrubs. Ex C. Chadwell 3667. (A variable Himalayan species, distributed from Kashmir to Bhutan up to 4300m. Quite distinct in its very long-tubed flowers with rounded dorsal petals, mauve-pink to deeper purple in this coll., which is 10-15cm. in height.) (20+) **D**
- 4.830.110 : ROSCOEA AURICULATA** * No data. A robust E Himalayan species with broad, bright-green, auriculate leaves sheathing the 50cm. high stems which carry the rich purple flowers, with large, deflexed lips, emerging from among pale-green bracts, over a long period in late summer. Thrives here in rich, moist soil in semi-shade. (20+) **C**
- 4.830.551 : ROSCOEA CAUTLEOIDES from YELLOW FORM** * China, Yunnan. Ex CLD 772. (A variable Chinese endemic from Yunnan & adjacent Sichuan, between 2000m. and 3400m. This is an early-flowering, rather elegant, upright form, growing up to 50cm. in height, with a long succession of soft-yellow flowers, starting with us in May.) (20+) **C**
- 4.830.810 : ROSCOEA HUMEANA** * No data. From a variety of habitats in Yunnan & Sichuan between 2900m. and 3800m., this flowers in early summer as the broad leaves develop with big, hooded flowers. In this form these are purplish pink but like others, it can vary to yellow and white. A good, robust garden-plant which is best with a little shade. (20+) **C**
- 4.831.120 : ROSCOEA PURPUREA** * No data. A Himalayan species, distributed in N India from Himachal Pradesh to Assam, as well as in Nepal & Bhutan, usually growing in grassland or along forest margins between 1500m. & 3000m. It lacks the strongly auriculate leaves of *R. auriculata*, as well as having longer, narrower segments to the flowers, without a deflexed lip. Flowers in late summer are usually paler lilac, though white, purple-marked variants frequently occur. (20+) **C**
- 4.831.312 : ROSCOEA SCILLIFOLIA from PINK FORM** * No data. A variable little species, narrowly endemic to Yunnan, mainly in the Lijiang area, in moist mountain-pastures between 2700m. & 3400m. About 20cm. in height with small strawberry-pink flowers appearing among wide, bright-green bracts. Worth growing in a pan in the alpine-house. (20+) **D**
- 4.831.313 : ROSCOEA SCILLIFOLIA from PURPLE FORM** * No data. Usually a little taller & earlier flowering with longer, narrower leaves and deep violet-purple flowers with yellow anther appendages (white ones in the pink form). (20+) **D**
- 4.831.209 : ROSCOEA SCHNEIDERIANA** * China, Yunnan, Lijiang. Ex CLD 0773. (Endemic to the Lijiang range of Yunnan and to adjacent Sichuan, growing between 2600m. and 3350m., on limestone, often in rocky habitats or on cliff-ledges. Closest to the lower altitude, more southern *R. praecox* & *R. debilis* but most distinct in its rosette of long, linear, falcate leaves. Stems about 30cm. tall carry concolorous, rich purple flowers with deeply notched lips in late summer.) (20+) **E**
- 4.831.410 : ROSCOEA TIBETICA** * No data. This starts to flower as a compact rosette with the flowers, purple-red in this form, appearing on long tubes from the axils of the broad leaves, completely encircling the stem, which gradually elongates. Quite widely distributed in S Tibet, Bhutan, N Burma, W Yunnan & Sichuan up to 4270m. (20+) **E**
- 4.838.150 : SALVIA CAMPANULATA from YELLOW FORM** * No data. A handsome, 50cm. tall, robust, dry-meadow plant with a tuberous rootstock. Distributed from N India to SW China at altitudes up to 4000m. and 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**
- 4.844.010 : SARUMA HENRYI** * No data. Native to moist, shaded habitats in SW China, in Hubei, Guizhou & Yunnan, this monotypic genus in *Aristolochiaceae*, closely related to *Asarum*, is comparatively recently introduced to cultivation. Slow-growing clumps of stems, about 30cm. tall, clad in large, cordate, grey-green, velvet leaves, tinged with purple, carry small, 3-petalled, soft-yellow flowers over a long period in summer. Hardy, tolerant & an unassuming touch of class . . . (10+) **D**
- 4.878.210 : THALICTRUM DELAVAYI** (*T. diptercarpum* of gardens) * No data. An elegant, airy perennial from SW China. Maidenhair fern foliage & wiry, 2m. stems divided 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**
- 4.878.805 : THALICTRUM ROCHEBRUNIANUM** * South Korea, Kansong, N of Hangye. 370m. Ex M. Holmberg & U. Strindberg 92-167. (A handsome, tall, erect species, reaching over 2m., and producing its lilac-purple flowers with petaloid sepals over a long period. Earlier flowering than *T. delavayi* and with less finely cut, maidenhair foliage.) (20+) **B**

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Species from Australasia : Seeds from Jim & Jenny Archibald

We list a few 2004 British-grown seeds as soon as we can after harvest. These should be sown as soon as possible.

- 5.012.710 : ACIPHYLLA PINNATIFIDA** * No data. A most distinct species. The rosettes of deeply divided leaves with striking yellow midribs are pressed on to the ground. Erect, 15cm. tall stems are sheathed with large, colourful, orange bracts from which the umbels of pale yellow flowers appear. A plant of wet, alpine sites between 1100m. & 1700m in the mountains of Southland and Fiordland in the SW part of South Island, New Zealand. Growable outside in the UK. (15+) **D**
- 5.035.000 : ANISOTOME ANTIPODA** * New Zealand, Campbell Island. (While the New Zealand flora is predominantly white flowered, the allied species of the Subantarctic Islands are often brightly coloured. This member of the *Umbelliferae* (*Apiaceae*) is no exception. About 60cm. tall with cut, green foliage and umbels of rosy purple flowers. The first time we have been able to list any species from this remote island, lying over 600km. south from the South Island coast.) (20+) **D**
- 5.185.110 : CELMISIA SINCLAIRI** * No data. Quite a local species from damp peaty sites in the montane tussock-grasslands of Nelson & Marlborough in the North of South Island, New Zealand. A low-growing, shrubby plant with rosettes of quite broad, bright-green leaves, carrying white daisies on short stems. Some excellent UK-grown seed. (15+) **C**
- 5.406.610 : GENTIANA SAXOSA** * No data. From a compact, vigorous form of this New Zealand endemic (Tasmanian plants are split into *Gentianella diemensis*), forming prostrate pads of fleshy leaves covered with upturned, white flowers. A plant of coastal habitats & one of the most accommodating New Zealand species in cultivation in the UK. (50+) **B**
- 5.786.700 : RANUNCULUS LYALLII** * NZ, Southland, Hunter Mts., 1400m. Among grasses in wet depression. (The most sumptuous of New Zealand mountain-plants, this giant buttercup is distributed locally through most of the high rainfall ranges of South Island, growing in moist sites. The large, rounded leaves are overtopped by the branching stem, which can reach 1m. in height, carrying many huge, white flowers with up to 25 overlapping petals surrounding the yellow stamens.) . (20+) **C**
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Garden hybrids & selections : Seeds from Jim & Jenny Archibald

- 6.223.000 : BERGENIA from RED HYBRIDS** From some of the best modern crimson flowered hybrids : German ones like 'Abendglocken' & 'Admiral' as well as some of our own, like 'Bartok'. Good, tough foliage colours well in winter. (50+) **B**
- 6.223.100 : BERGENIA from WHITE HYBRIDS** From our compact white-flowered hybrids, such as 'Britten' & 'Bach', bred from *B. stracheyi* 'Alba'. Most seedlings will be apple-blossom pinks. Bronze, weather-resistant winter-leaves. (50+) **B**
- 6.720.001 : MECONOPSIS X SHELDONII** The beautiful hybrid, *Meconopsis grandis* x *M. betonicifolia*, is usually sterile. This is from the fertile 'Lingholm' strain. Outstanding, perennials about 1m. tall with intense-blue poppies. (50+) **B**
- 6.730.000 : NOMOCHARIS X FINLAYORUM** The hybrid between N Burmese *N. farreri* & W Chinese *N. pardanthina*. Stems up to 1m. tall with whorled leaves can carry up to 20 flowers, which can be nodding, horizontal or erect, in white or pink with deep purple centres & very variably spotted with crimson. Superb plants for areas with cool, moist summers. (15+) **E**
- 6.747.811 : PAEONIA from TBLISI HYBRIDS** Seed from a bed of mixed hybrids in the Tblisi Botanic Garden, where cultivated Caucasian species, yellow *P. mlkosewitschii* & *P. wittmanniana*, have crossed with pink *P. caucasica*. Will McLewin, who has seen these in flower in Georgia, describes some of them as "superb" (underlined three times). These are often extremely beautiful plants in soft, apricot-tinted creams & pinks. Such hybrids have occurred in cultivation : ivory, crimson-veined 'Fedora' & the old French *P. wittmanniana* hybrids 'Claire de Lune', 'Mai Fleuri' & 'Avant Garde'. (6) **D**
- 6.750.110 : PENSTEMON from 'ROSE ELF'** Seeds from one of the 'Prairie Hybrids' derived from the breeding programme initiated by Glenn Viehmeyer at the University of Nebraska in the 1950's. These were based on the mysterious *Penstemon* 'Flathead Lake', a naturalized hybrid resembling a dwarfed, pink-flowered *P. barbatus*. Seedlings may vary. (30+) **B**
- 6.625.000 : PRIMULA PULVERULENTA 'BARTLEY STRAIN'** One of the loveliest candelabra primulas (Sect. *Proliferae*). Developed from the crimson type-form by Huw Dalrymple in the 1920's, it may have some *P. bulleyana* in its ancestry. Originally, it varied in shades of pink and rose with both pale and dark eyes but now its whorls of flowers on white, mealy stems have settled into a fairly even, crimson-eyed, soft shell-pink. Very beautiful in rich, wet soil in semi-shade. (50+) **B**
- 6.860.000 : RODGERSIA from 'BUCKLAND'** Seeds from Keith Wiley's outstanding clone, one of the finest in this aristocratic genus for rich, moist soils in sun or part-shade. A form of *R. pinnata* or perhaps a hybrid of *R. pinnata* 'Superba' with deeply veined, pinnate, bronze-green leaves with toothed margins and wide panicles raspberry-pink flowers. (50+) **C**
- 6.900.005 : SCHIZOSTYLIS COCCINEA from SELECTED RED & PINK FORMS** Seed from almost all the named clones of this late-flowering member of the *Iridaceae* (now moved into *Hesperantha* by Peter Goldblatt). (30+) **C**
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