

The Hardy Plant Society/Mid-Atlantic Group

2018–2019 Seed Exchange Catalog

he 25th annual edition of the Seed Exchange Catalog includes 974 seed donations contributed by 58 gardeners, from beginners to professionals. Over 98 new plants were donated

for the first time. As you can see, this seed program includes new plants not previously offered as well as old favorites.

We're sure you'll enjoy perusing this year's selections and you will find plants your garden can't do without! Since some listed seed is in short supply, you are encouraged to place your order early.

Our Seed Donors

Catalog listed seed was generously contributed by our members. Where the initial source name is followed by "/" and other member names, the latter identifies those who actually selected, collected, cleaned, and then provided descriptions to the members who prepared the catalog. If a donor reported their zone, you will find it in parenthesis. Our sincere thanks to our donors—they make this Seed Exchange possible.

Aquascapes Unlimited / Heffner, Randy 1114 Bartlett, John 45 Bennett, Teri 1865 (7) Berger, Clara 65 Bittmann, Frank 2937 (6a) Bowditch, Margaret 84 Boylan, Rebecca 2137 (6b) Bricker, Matthew D. & Jamie H. 2429 (6) Carey, Jenny Rose 1918 Cresson, Charles 199 (7) Creveling, Beth 200 (7) Dahlke, Miriam 208 Davenport, Fiona 5095 (6) DeMarco, Loretta 215 (7b) Doblmaier, Susan 2515 (6) Doering, Alice 239 (6) Ellis, Barbara 269 (7) Gannon, Griffon 3651 (5b) Garnett, Polly 318

Gibson, M.M. 3177 (7) Gregg, John 3001 (7) Haas, Joan 1277 (6a) Iroki Garden 5024 (6b) Jellinek, Susan 1607 (7a) Jenkins Arboretum 9985 (7a) Kolo, Fred 507 (7) Kaplan, Paula West 475 (4/5) Krape, Deborah 2289 (7) Kushner, Annetta 522 Leasure, Charles 543 (7a) Lewis, Mary Liz 558 (5) Mackey, Janet 2497 (7b) Maher, Carole 3176 (7a) Mahony, Peter 590 (7a) Malocsay, Jan-Paul 592 (6) Mayer, Tiiu 3006 (7) McShane, Nadeen 627 Mills, Linda 644 Nolan, Patricia 2463 (6b) Norfolk Botanical staff 1999 (8a) Perron, William 3321 (6) Plant Delights, 32 Rifici, Stephen 3540 (7) Robinson, Barbara Paul 797 Roper, Lisa 9968 (7a) Roskoph, Zane 3645 (7a) Scofield, Connie 1585 Silberstein, Steve 3436 (7a) Smith, Carol 5082 (6b) Stonecrop Gardens, 118 (5a) Streeter, Mary Ann 926 Umphrey, Catherine 965 (7a) Urffer, Betsy 1939 Wave Hill Gardeners 9976 (6b) Weaver, George M. & Anne W. 2517 (7) Whitesell, Steve 1017 (5) Wiedorn, Paul & Gillian 1020 (7) Zatsick, Judy 9969 (7b)

Our Catalog Staff

The HPS members who have worked to produce this catalog, over the last three months, form a talented and dedicated group to whom we are all grateful. Contact the team via email at SeedExchange@hardyplant.org.

Carole MaherSeed Exchange Chair
Susan DoblmaierSeed Exchange Vice Chair
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Loretta DeMarco......Donation Receiver

Mary Ann ThomasNomenclature, Code Master, Order Tallier, and Proofreader

How to Use this Catalog

Each list entry is identified by a combination of a six-character Plant Code and a Donor Code. The list is organized alphanumerically by plant code. We have listed each plant and the basic facts about it only once in the following format:

Plant Code Botanical name. COM-MON NAME. Plant type. Light requirements. Plant height × spread. Bloom season.

After the plant name and basic plant facts, you'll find any further information from each individual who donated that particular plant as follows:

Donor Code - Flower color. Donor's description of or comments about the plant. Germ: Donor's germination information, if provided. Donor name.

'Cultivar name' of plant from which seed was collected is identified, if available, within the Botanical name. Please keep in mind that seedlings from cultivars may not come "true" from seed. They are not genetically identical to the parent. The seedlings they produce may look identical to the seed parent, may resemble the seed parent closely, or they may look very different from the seed parent.

Botanical name abbreviations

form subsp. subspecies

syn. synonym, alternate name

variety var.

Plant types abbreviations

Annual An Bien Biennial Per **Perennial** TenBulb Tender Bulb Tender Perennial TenPer TenShrub Tender Shrub

Germination Codes, Methods

Pretreatment

CMS Cold moist stratify. Sow in pot and place outside in January or February, or stratify by placing in the refrigerator for the required time in a sealed plastic bag containing a seeded pot, a mix of seed and some sowing mix, or a layer of seed within damp paper towels. (Seal bag well, since ethylene gas from fruit can affect seed germination.)

Frz Freeze the seed for the period noted. **NST** No special treatment.

Scfy Scarify seed before sowing. Scarify means to penetrate the seed coat to allow water absorption, which thus speeds germination. This can be accomplished by abrasion, nicking, chipping, filing, threshing, soaking, dousing with boiling water, or other such means.

WMS Warm moist stratify. Same as for CMS, but at room temperature.

Light Requirements

BC Barely cover seeds.

D Requires darkness for germination. Cover with lid or aluminum foil to exclude light.

L Do not cover seeds; light is needed for germination.

SS Surface sow.

Temperature

BH Bottom heat, used for any seed requiring soil temperature more than 70°F.

C Cool, approximately 50° to 60°F.

R Refrigerate after sowing.

OW Overwinter outdoors.

W Room temperature, approximately 65° to 70°F.

Germination Time

Maximum time is listed in days (d), weeks (wk), months (mo), or years (yr).

Special Notes

Cycle Seeds require alternating periods of cold and warm to germinate.

Rtp Resists or resents transplanting. **SIS** Sow *in situ* (directly in the garden). **SR** Store seed (dry) in refrigerator before sowing. Note: this differs from CMS, which requires moisture.

Reference Materials

Nomenclature

The primary resources used to verify and update nomenclature for this list are the Plant List (http://www.theplantlist. org/) and Royal Horticultural Society Horticultural Database (http://apps.rhs. org.uk/horticulturaldatabase/).

Additional resources are the List of Names of Perennials—International Standard 2005-2010; the Encyclopedia of Perennials from the AHS, edited by Graham Rice; and the Manual of Annuals, Biennials and Half-Hardy Perennials, by A. Armitage. A portion of the plants were further referenced in the American Horticultural Society A-Z Encyclopedia of Garden Plants (1997, Brickell) and the Index of Garden Plants (1994, Griffiths).

Germination

Bubel; The New Seed Starters Handbook (1988).

DeBaggio; Growing Herbs from Seed, *Cutting & Root.* (2000)

Deno; Seed Germination Theory and Practice. (1993)

Park Seed Company; Success With Seed. Phillips; Growing and Propagating Wild Flowers. (1985)

Powell; From Seed to Bloom. (1995)

Illustrated Books

We have been asked to recommend some books with good color photos. Many of the plants in this year's Seed Exchange Catalog are illustrated in one or more of the following:

Brickell and Zuk; The American Horticultural Society A-Z Encyclopedia of Garden Plants. (1997)

Ferguson; Right Plant, Right Place. (2005) Harper & McGourty; Perennials: How To Select, Grow & Enjoy. (1985)

Hay and Synge; The Color Dictionary of Flowers and Plants. (1991)

Kohlein and Menzel; Color Encyclopedia of Garden Plants and Habitats. (1994)

Phillips and Rix; The Random House Book of Perennials, 2 volumes. (1991)

Tenenbaum, ed.; Taylor's Guides, a series of volumes, including Annuals, Perennials, Bulbs, Groundcovers, and Trees.

Abe0050 Abelmoschus manihot. ORNAMENTAL OKRA, SUNSET HIBISCUS. An. Sun. 6+ x 3'. Summer–Fall.

> 199-Pale yellow with maroon centers. Evenly moist soil, likes heat. Self-sows. Blooms with asters. Cresson.

> **522-**Yellow. A back-of-the-border plant. Pale lemony yellow flowers (like tissue paper) with red inside. Best photo and description found in Wayne Winterrowd's Annuals for Connoisseurs. Germ: Soak, 1 hr in lukewarm water before sowing; BC; BH, 5-30 d; soaking is essential. Kushner.

> **627-**Yellow blooms. The cool yellow flower has a scarlet blot at the bottom. The flowers are truly lovely, and they stand tall without staking. Germ: SIS, 30 d. McShane.

> 9976-Creamy yellow blooms with a dark red center. BH, BC. 14d. Wave Hill Gardeners.

Ace0030 Acer buergerianum. TRIDENT MAPLE, THREE-TOOTHED MAPLE. Tree. Sun. 30 x 25'. Zone 5–9.

> 3001-Native to Eastern China, named for its wide, trilobed leaves. To 20-30', with attractive red/orange fall color. Popular for Bonsai. Germ: CMS: 60 d. Seed has been moist packed warm, so will need 2 mo cold on receipt. Gregg.

Ace0500 Acer griseum. PAPERBARK MAPLE. Tree. Sun/ PtShade. 30 x 30'. Spring. Zone 4–8.

> 3001-Asian native with distinctive/decorative cinnamon color, peeling bark. Fall leaf color red/orange. To 20-30'. Germ: CMS: 90 d. Seed has a notoriously low germination rate (10–15%). Seed is moist packed warm, so will need 90–120 d cold on receipt. Gregg.

Ach0700 Achillea siberica 'Japanese Lace'. JAPANESE LACE SIBERIAN YARROW. Per. Sun. 3'. Summer. Zone 5a-8b.

> 32-Pink blooms. Seed strain from a collection from Hokkaido, Japan. Germ: BC, SS, NST. Plant Delights.

Aco1050 Aconitum carmichaelii. Per. PtShade. 18 x 18"; from 5–6' in bloom. Fall.

1277-Blue flowers. Late blooming. Haas.

Aco5000 Aconitum species. MONKSHOOD. Per. PtShade. 6-7'. 208-Blue flowers. Produces its striking blooms in fall, when most flowers are all finished blooming. Dahlke.

Act0867 Actaea japonica 'Cheju Island Form'. JAPANESE BUGBANE 'CHEJU-DO'. Per. Shade. 24-36 x 24-36". Late Spring-Summer. Zone 4a-8b.

> 5024-White blooms. A compact form of the species, with foliage to 16" and flowers 3-4' high. Germ: Cycle: WMS 2 wk, CMS 4 wk, WMS again. Iroki Garden.

Act0900 Actaea racemosa (syn. Cimicifuga racemosa). BLACK COHOSH, BUGBANE, FAIRY CANDLE, BLACK SNAKEROOT. Per. PtShade. 7 x 2'. Summer.

> **522-**White blooms in long spires on an upright perennial great for the woodland's edge. Blooms at 4-6' in late summer through early autumn. Fragrant. Kushner.

> 926-White flowers born in wands in July above handsome foliage. Germ: Cycle: WMS 3mo, CMS 3mo. Streeter.

Act2000 Actaea simplex Atropurpurea Group (syn. Cimicifuga ramosa var. atropurpurea). BUGBANE. Per. PtShade. 4 x 4'; from 6-7' in bloom. Fall.

> 318-Fragrant, white flowers in September. Foliage dark purple. Turns dark green in fall. From plant acquired as 'Hillside Black Beauty'. Garnett.

Act3100 Actaea simplex Atropurpurea Group 'Brunette' (syn. Cimicifuga simplex (Atropurpurea Group) 'Brunette'). BUGBANE. Per. PtShade. 4 x 2'. Fall.

> 3321-White blooms. Autumn flowering, very dark foliage. Germ: Cycle: warm (70°) for 3 mo, then 3 mo cold (40°). Perron.

797-White flowers. Robinson.

Act4500 Actaea simplex (Atropurpurea Group) 'James Compton'. SNAKEROOT, BUGBANE. Per. PtShade. 5-7 x 2'. Fall.

> **522-**White flowers, purple/black foliage color. Similar to A. simplex (Atropurpurea Group) 'Hillside Black Beauty' but a bit shorter. Notable for its fragrant, white bottlebrush flowers standing above very dark foliage. Germ: CMS; C. Kushner.

Adl0050 Adlumia fungosa. **CLIMBING** FUMITORY, CLIMBING BLEEDING HEART. Bien. PtShade. 6-8'. Summer-

> **3436-**Light pink blooms. Rosette the first year and 6' vine with flowers & seed the second summer. Germ: OW, SS, SIS. Flowers early summer the second year from seed. Silberstein.

Aes0300 Aesculus parviflora. BOTTLEBRUSH BUCKEYE. Shrub. Sun/PtShade. 10 x 15'. Summer.

1277-White flowers. Large spreading shrub to 10'. *Haas*. Aet0050 Aethionema grandiflorum. PERSIAN CANDYTUFT. Per. Sun. 1 x 1'. Spring–Summer.

199-Somewhat blue-green foliage. Related to *Iberis*, but pink. Great between rocks in dry sunny places with good drainage. Self-sows, but in a friendly manner. Cresson.

Aga1750 Agapanthus species/cultivar. TenPer. Sun. 1½ x 1½'; to 3' in bloom. Summer.

926-Blue flowers. *Streeter*.

Aga2650 Agastache foeniculum 'Golden Jubilee'. ANISE HYSSOP. Per. Sun. 3–5 x 1–2'. Summer–Fall.

> 9969-Purple blooms. Germ: WMS: 14 d, W, L, 28 d. NST. Zatsick.

Aga2830 Agastache nepetoides. YELLOW GIANT HYSSOP. Per. Sun/PtShade. 4-6 x 1-3'. Late Summer. Zone 2-8.

> 9976-Greenish yellow blooms. Great, late-seasonblooming native. Germ: NST. Wave Hill Gardeners.

Aga5130 Agave bracteosa. CANDELABRUM AGAVE, SQUID AGAVE, CENTURY PLANT. Per. Sun/PtShade. 12-18 x 15-18". Zone 8-10.

32-HBG 14833–4 Germ: BC, SS, NST. Plant Delights.

Aga5450 Agave x loferox 'Stairway to Heaven'. Per. Sun. 3 x 4–5'. Zone 7–10.

> **32-**Parentage: Agave lophantha x (Agave x pseudoferox 'Logan Cahoun') Germ: BC, SS, NST. Plant Delights.

Aga5500 Agave lophantha. Per. Sun.

32-'Band Aid'. Yellow blooms. Wild collected in Mexico near San Jose at 6,800' elevation. AIM-25. Plant Delights.

Alc0050 Alcea rosea (all colors). HOLLYHOCK. Bien./Per. Sun. 2 x 2'; from 6–8' in bloom. Summer.

797-Rose-colored flowers. Robinson.

Alc0090 *Alcea rosea* (red). HOLLYHOCK. Bien. Sun. 6 x 2'. Summer.

797-Deep dark red to wine colored flowers. Long bloom period. Plants from seeds originally collected in France. Vigorous strain. Germ: NST; L/SS; SIS; blooms second year. *Robinson*.

Alc2250 *Alcea rosea* (pale yellow). HOLLYHOCK. Per. Sun. 2 x 1½'; from 6–7' in bloom. Summer.

797-Pale yellow flowers. Germ: BC; SIS. Robinson.

Alc4800 *Alchemilla glaucescens*. LADY'S MANTLE. Per. PtShade/Shade. 8 x 8". Spring.

208-Yellow. Leaves, 3½", have a bluish tint and a fine edging of white. Germ: CMS. *Dahlke*.

All0050 *Allium aflatunense.* PERSIAN ONION. Bulb. Sun. 1 x 1'; from 2–3' in bloom. Spring.

590-Purple, 4" diameter globes. Foliage declines prior to or with flowering, so needs overplanting. *Mahony*.

All4000 *Allium cepa var. aggregatum.* YELLOW POTATO ONION, PREGNANT ONION. Bulb. Sun. 12–18". Summer.

269-White blooms. This perennial onion forms clumps of bulbs that are tasty but not too strongly favored. These bulbs are planted in late summer or early fall for harvest the following summer. The first year, plant these in spring in full sun around the last frost date. Plants bloom in summer. Dig the clumps after the flowers fade and the foliage begins to yellow in late summer. Clumps yield a mix of small and large bulbs that range from 3–4". Use the large bulbs and save some of the smaller ones for replanting. Germ: NST. Store bulbs in a cool, dry place until planting. *Ellis*.

All4010 *Allium cepa var. proliferum*. EGYPTIAN WALKING ONION. Bulb. Sun/PtShade. 2'. Spring–Summer.

269-These hardy perennial onions produce clumps of small shallot-like bulbs in the ground, which can be dug in fall. Their most interesting characteristic is the clusters of bulbils produced on top of the flowering stems instead of flowers. Purplish bulbils range from ? to about ½". Eventually, the clusters topple over and the bulbils root, allowing the plant to walk to a new spot in the garden. Consider staking plants to preserve their unusual sculptural appearance and manage their spread. Bulbils have a nutty, oniony flavor. Germ: NST. These are bulbils, not seeds. Plant in full sun with other perennial crops or in the garden as living sculpture! *Ellis*.

All4900 *Allium fistulosum* (Nebuka, Japanese Bunching Onion). PerBulb. Sun/PtShade. 24 x 18"; to 12" in bloom. Early Summer.

199-White flowers. An edible Japanese perennial. Use stalks like small leeks, young leaves like chives, bulbs like small onions. Pretty, too. *Cresson*.

All5300 *Allium flavum.* YELLOW ONION, ORNAMENTAL ONION. PerBulb. Sun/PtShade. 4–6 x 8"; to 8" in bloom. Spring–Summer.

199-Bright yellow flowers. Silvery blue-green foliage. *Cresson.*

All6650 *Allium sativum*. HARDNECK GARLIC. Per. Sun. 2–2½'. Summer.

269-Good, culinary garlic. Typically, plant in summer and harvest bulbs the following summer just as foliage dies down. Plant these in spring the first year, then work toward a normal schedule. The foliage is tasty and edible, too. Chop and use like chives—great garlic bread! I keep a patch just for harvesting leaves. These are bulbils. *Ellis*.

All6900 Allium schubertii. PerBulb. Sun. Zone 5-8.

2937-Pale purple blooms. Loose, open flower heads approach 12" across on short stalks. Makes an interesting, long-lasting, dried flower. *Bittmann*.

All7510 *Allium senescens subsp. montanum var. glaucum.* PerBulb. Sun. 4 x 8". Summer.

199-Pink flowers. August bloom above gray-green glaucous foliage. An easy rock garden plant and strong enough for other uses among low-growing plants. *Cresson.*

All8300 *Allium tuberosum*. GARLIC CHIVES, CHINESE CHIVES. Per. Sun. 10–20 x 6"; to 2' in bloom. Summer–Fall.

1020-White flowers. Late bloomer with pleasing seed heads. Culinary and ornamental. Germ: NST; SIS. *Wiedorn*.

All8400 *Allium victorialis.* ALPINE LEEK. Bulb. PtShade. 6 x 12"; to 12" in bloom. Spring.

199-Greenish white flowers. Wide leaves make this onion especially interesting. European native. Summer dormant. *Cresson*.

Alo1500 Alophia drummondii (syn. Cypsella drummondii, Eustylis purpurea, Herbertia drummondii, Tigridia purpurea). PROPELLER FLOWER; PINEWOODS LILY; PURPLE PLEAT-LEAF; PINE LILY; PRAIRIE IRIS; PLEATLEAF IRIS. Per. PtShade. 15". Summer–Fall. Zone 7–9.

3645-Purple blooms. Will germinate after one stratification period, but reportedly has higher germination in the second year. Germ: CMS, Cycle, NST. *Roskoph*.

Ama1080 *Amaranthus cruentus.* TASSEL FLOWER. An. Sun. 7–8'. Summer.

797-Dark purple flowers and foliage. Prefers hot, sandy, or gravelly soil. Best SIS early. Germ: BC; SIS. *Robinson*.

Ama1090 *Amaranthus cruentus* '*Hot Biscuits*'. PRINCE'S FEATHER. An. Sun. 4–5'. Summer–Fall.

2937-Cinnamon orange blooms. 4–6' tall, long blooming. The warm buff orange seed heads look good in the autumn garden. *Bittmann*.

Ama1500 *Amaranthus* 'Hopi Red Dye'. An. Sun. 3–4 x 2'. Summer–Fall.

1918-A tall, 4–6' and up to 8' annual with plume-like deep magenta-red inflorescences. The stems and leaves are similarly colored. Young leaves are good in salads and the seeds are edible too. Full sun. Germ: NST, SIS. Sow directly in spring or fall. *Carey*.

2937-Red blooms. Bittmann.

543-Deep red flowers, stems, and leaves. Self-sows throughout the garden, but is welcome. Germ: NST; L; SIS. *Leasure*.

Amm1050 Ammi visnaga. An. Sun. 3–4 x 2'. Summer.

200-White flowers. Plant looks like Queen Anne's Lace, but foliage is ferny. Great for arrangements. Germ: SIS. Self-sows. Creveling.

Ams0050Amsonia hubrichtii. BLUE STAR, ARKANSAS AMSONIA. Per. Sun/PtShade. 3 x 3-4'. Spring.

> **3006**-Native perennial, 3 x 2'. Lovely spring through early winter. Pale blue flowers. Several years to reach its full potential. Mayer.

> **522-**Pale blue flowers. Flowers are insignificant. Foliage is the eye-catcher. It turns golden yellow in the fall. Wonderful filler in the perennial border. Plants bulk up in a couple of years. Kushner.

> 644-Light blue blooms. Flowers in late spring to midsummer; bright yellow foliage in fall. 2 ½-3 x 2-3'. Germ: OW, BC, SIS, NST. Mills, L.

Ams0250Amsonia illustris. OZARK BLUE STAR. Per. Sun/ PtShade. 4' x 18". Late Spring–Early Summer.

> 2515-Blue flowers with willow-like foliage. Similar in appearance to A. tabernaemontana except the leaves are shinier. Doblmaier.

> **5024-**Light blue blooms. Germ: Cycle: CMS at 40°F for 6 wk, then move to 70°F for germination *Iroki Garden*.

Ams0300Amsonia jonesii. JONES BLUESTAR. Per. Sun. 6–12". Spring. Zone 4.

> 2515-Shorter amsonia that enjoys the same conditions as A. hubrichtii. Paler blue flowers. Doblmaier.

Ams1050Amsonia ludoviciana. BLUE STAR. Per. Sun/PtShade. $2\frac{1}{2}$ x $2\frac{1}{2}$. Spring.

> **1865-**Light blue flowers. White pubescence on underside of leaves. Yellow fall color. Germ: CMS: 90 d; W. Bennett.

Ams2050Amsonia tabernaemontana. BLUE STAR. Sun/ PtShade. 2 x 1½'. Spring/Summer.

> 2515-Blue flowers. Very similar to A. hubrichtii, but the leaves are wider. Great fall color. Blooms in May. Native. Doblmaier.

> 965-Light blue blooms. Tough native with pretty blue flowers in spring and long-lasting, 3' foliage that turns butter yellow in fall. Shrub-like effect in borders. Seems more resistant to fungal problems in wet weather. Umphrey.

And2000 Andropogon gerardii. BIG BLUESTEM. PerGrass. Sun. 6'.

> **2937-**These are seeds from 'Red October', a big bluestem with foliage and stems which turn purple in late summer and then change to scarlet once temperatures drop. Even if the seedlings turn out to be plain green, it's still a nice tall grass. Bittmann.

Ane1350 Anemone x hybrida 'September Charm'. Per. Sun/ PtShade. 2–4 x 2–3'. Late Summer/Fall. Zone 4–8.

> 1939-Light rose pink flowers that are darker on the back side. 2–3'. Germ: BH. Scfy. Urffer.

Ane9800 Anethum graveolens. DILL.

215-Yellow blooms. Germ: SIS, NST. Sow in spring as soon as the soil can be worked. Plant seeds ?-1/4" deep, 2 seeds per inch. Thinning is not necessary, but a 4" final spacing produces healthy, full plants. DeMarco.

3645-Yellow blooms. Germ: NST. Roskoph.

Ang1050 Angelica gigas. KOREAN ANGELICA. Bien./Per. PtShade/Shade. 6-8 x 2-3'. Summer.

> 118-Maroon blooms. Biennial to 5'. This terrific Barry Yinger introduction from Korea and Japan is a stunner. Dramatic, deep maroon, spherical flowerheads emerge from red-flushed, bulbous, leafy sheaths above glossy green, dissected foliage. The afternoon sun intensifies the color and lends this plant another dimension. Please note that insects, especially hornets, also find it irresistible. Sun/partial shade. Germ: CMS: 50 d, Cycle: keep pan at 25–39° for 6–8 wk, the 60° until germination, C, OW, BC. Stonecrop Gardens.

> 558-Purple blooms. Bees love this tall biennial for part shade. Easy germination. Germ: SIS, NST. Lewis.

797-Purple flowers. Robinson.

Ang3010 Angelica polymorpha. Per. Sun/PtShade. 3-4 x 1-3'. Summer. Zone 5.

> 118-White blooms. Exquisite, airy umbels of white flowers and attractive lobed leaves. The flowering umbels look like a perfect firework display. A choice plant. Perennial to 6'. Germ: WMS: 21 d; Cycle: Follow with cold period for 35 d. Once seed has germinated, keep pans cool (41–54°). BC. Stonecrop Gardens.

Ang3049 Angelica sylvestris 'Vicar's Mead'. PURPLE HOLY GHOST. Bien. PtShade. 6'. Late Summer/Early Fall. Zone 4-8.

> 522-Pink blooms. This biennial provides a dramatic presence in the garden. Back of the border at 6'. Dark, dusty purple foliage and stems. Kushner.

Ani4010 Anisacanthus wrightii. Shrub. Sun. 4 x 4'. Summer/ Fall.

> 1999-Orange-red. Xeric, attracts hummingbirds, bees and butterflies. Although it is a deciduous shrub in its native Texas, it behaves like a herbaceous perennial in colder zones. Deer don't bother this plant. Germ: Plant seeds? -1/2" deep in a well-drained soil mix. Keep soil moist but not saturated. NST. Norfolk Botanical staff.

Ant0050 Anthemis tinctoria. Per. Sun. 11/2-2 x 1-11/2'. Spring-Fall.

> **592-**Yellow blooms. Adding these bright daisies to my ersatz meadow. Bloom first yr from seed. Malocsay.

***** Anthericum species. See: Chlorophytum species.

Ant2000 Anthericum ramosum. Per. Sun. 2–3'. Summer.

199-Numerous miniature, white lily flowers along wiry branched stems in early summer above narrow strappy foliage. Develops into a nice clump. Native E. Europe to Turkey in rocky grassy semi-arid slopes. Easy and not fussy in average soil. Cresson.

Ant3050 Anthriscus sylvestris 'Ravenswing'. BLACK COW PARSLEY. Bien. Sun. 2½ x 2'. Spring-Summer.

65-White blooms. *Berger*.

965-Tall, white flowers on perennial chervil. While the early summer umbels are just the icing on the cake, the plant is primarily grown for its purple-black ferny foliage, complements spring pastels. Excellent in spring. Suffers in summer heat. Germ: SR. Umphrey.

Aquilegia AKALY, canadensis. CANADIAN COLUMBINE, CLUCKIES, JACK-IN-TROUSERS, MEETING HOUSES, ROCK BELLS, TURK'S CAP. Per. Sun/PtShade. 3 x 1'. Spring–Summer.

> 2497-Red and yellow bell-like flowers. A light airy plant that flowers well in shady woodland settings. Attracts hummingbirds. Mackey.

Aqu1440 Aquilegia canadensis 'Little Lanterns'. COLUMBINE. Per. Sun/PtShade. 10". Spring-Summer.

> 269-Red and yellow blooms. This dwarf form of our native columbine ranges from 8-12", self-sows, and comes true from seed. My plants may have crossed with the species and A. canadensis 'Nana'. Rouge out taller plants. 'Little Lanterns' has brighter red flowers than 'Nana'. Germ: OW, SS, SIS, NST. Transplant containergrown seedlings with care. Ellis.

Aqu1445 Aquilegia canadensis 'Nana'. COLUMBINE. Per. Sun/ PtShade. Spring-Summer.

> 269-Red and yellow blooms. This dwarf form of Eastern red columbine ranges from 8-10" or 12" tall. Plants self sow and come true from seed. My plants may have crossed with the species and 'Little Lanterns'. Rogue out any full-size plants that appear. Full sun to light shade. Germ: OW, SS, SIS, NST. Ellis.

Aqu4000 Aquilegia species (individual colors). COLUMBINE. Per. Sun/PtShade. 2 x 1'. Spring.

> 318-Blue and white flowers to 2' tall. Will self-sow. Garnett.

Aqu5000 Aquilegia vulgaris. PURPLE COLUMBINE. Per. Sun/ PtShade. 2 x 1½'. Spring–Summer.

> 2289-All blue single blossoms. Germ: BC, L, NST. I don't pre-treat. Columbines are short-lived perennials, but gently seed around. Seeds can be planted in the spring. They do need light to germinate so cover lightly, or do as nature does and spread the seeds now. They are woodland plants and do best in light shade. Krape.

> 522-Deep purple blooms in late spring through early summer with gray-green foliage. Source: Niche Gardens. Germ: CMS or SIS. Kushner.

Aqu5300 Aquilegia vulgaris 'Hedgleigh Bicolor'. COLUMBINE. Bien. PtShade. 25 x 12". Spring.

> 199-Blue with white center flowers on a self-supporting plant. Shorter than the species. A selection of Charles Cresson that breeds true. Cresson.

Aqu5929 Aquilegia vulgaris (pink). COLUMBINE. Per. Sun/ PtShade. 12 x 12"; to 2' in bloom. Late Spring–Early Summer.

> 522-Pink flowers. Gray-green foliage with short-spurred pink flowers. Lovely old-fashioned plant that gently selfsows to form colonies. If isolated, keeps true to color. Germ: CMS; W; or SIS. Kushner.

Aqu5940 Aquilegia vulgaris var. stellata 'Black Barlow'. COLUMBINE. Per. Sun/PtShade. 15 x 12; to 30" in bloom. Late Spring-Early Summer.

> 2515-The black flowers combine well with any light colored spring ephemeral. Germ: NST. Doblmaier.

Ara2500 Aralia racemosa. AMERICAN SPIKENARD. Per. Sun/ PtShade. 3 to 6+ x 4'. Summer.

> 199-White blooms on herbaceous perennial to 6' tall. Panicles of white flowers followed by purple fruit in autumn. Cresson.

Ari0550 Arisaema consanguineum variegated. JACK IN THE PULPIT. Bulb. Sun/PtShade. 2-3 x 1-2'. Late Spring/Early Summer. Zone 5b–9b.

> **3001-**Silver-variegated form of consanguineum. Attractive structure. Can be invasive if seed is allowed to spread. Germ: CMS: 30 d, then cool to germinate irregularly. Gregg.

DRAGON, Ari0600 Arisaema dracontium. GREEN AMERICAN WAKE-ROBIN, DEVIL'S PULPIT. Per. Sun/ PtShade. 1–3 x 1–1½'. Summer. Zone 4–9.

> 9985-7-15 leaflets, otherwise similar to Jack in the Pulpit. Additionally, fruiting structure is more colorful and longer lasting. Visitors frequently ask about this plant. Germ: CMS, 90 d. Keep moist and refrigerated till sowing. Jenkins Arboretum.

Ari2500 Arisaema heterophyllum. COBRA LILY. Per. PtShade. $2-3\frac{1}{2}$ x 1'. Spring.

> 199-One of the easiest species to grow. Leaves divided into more than a dozen narrow segments. Typical jack-inthe-pulpit flower. Red fruit along with yellow fall foliage. Cresson.

> 3321-Green/pale yellow blooms. Grows to 3' tall with large horseshoe leaf and spadix with 1' long tongue. Germ: Soak: 7 d; W. Perron.

> 45-Green-purple-brown blooms. Easy Asian jack-in-thepulpit, to 2'. Germ: NST. Remove pulp before sowing. Bartlett.

Ari3050 Arisaema ringens. Per. PtShade/Shade. 2 x 4'.

199-A remarkable Japanese cobra-lily with closed hooded flowers, in early spring. Cresson.

Ari4010 Arisaema sikokianum. Per. PtShade/Shade. 1½-2½'. Spring.

> 1607-Dark maroon with white spadix. Germ: W, D, Some sources recommend 4-6 wk CMS before moving to darkness at room temperature (68–70°F). Jellinek.

Ari4040 Arisaema triphyllum. Per. Shade. Spring.

45-Green and purple blooms. Common natve. Easy to grow; often colonizes. Germ: BC, NST. Bartlett.

fimbriata. Ari7250 Aristolochia WHITE-VEINED DUTCHMAN'S PIPE. TenPer. Vine. Sun/PtShade. 2' in a pot, 6' in ground. Summer. Zone 7–10.

> 200-Brown-green flowers on vine. Interesting seedpod. Creveling.

> **592-**Tiny fringed pipes yield intricate baskets of seed. White-veined leaves have an interesting odor. Tuber makes for quick response to cutback. Easily managed small vine. Germ: Quick and easy from seed. Self sows in Pittsburgh. Malocsay.

Aro1000 Aronia arbutifolia. RED CHOKEBERRY.

1999-White flowers followed by bright red fruit. Fine shrub native to the eastern seaboard of North America, its intense red fall foliage makes it a perfect substitute for the invasive, exotic Euonymus alata (burning bush). Hardy in Zones 4-9. Good for erosion control. Germ: CMS: 90 d. Soak: 24 hr. Soak in hot water for 24 hr then give 90 d cold/moist stratification. 110 d. Norfolk Botanical staff.

Aro1050 Aronia arbutifolia 'Brilliantissima'. Shrub. 6-8'. Late Spring.

> 199-White blooms. Deciduous native shrub to 10+' with abundant bright red fruit and fall foliage color in October. Graceful and impressive! Cresson.

Art2650 Artemesia lactiflora. WHITE MUGWORT. Per. Sun. 4–5'. Late Summer/Early Fall. Zone 3–8.

> 199-In August, the white, plumy flowers are most welcome. Finely cut foliage is green. Cresson.

Aru2000 Arum italicum. LORDS AND LADIES. PerBulb. PtShade/Shade. 12-16½ x 6". Spring. Zone 5-9.

> 3321-Yellow-green/white blooms with variegated leaves fall to spring, dormant in summer, and stalk of red berries late-summer. Germ: Soak: 48 d, Cycle: 3 mo at 70°, followed for 3 mo at 40°, then repeat. W, D, SR, 90 d.

Aru3010 Aruncus aethusifolius. DWARF GOAT'S BEARD, KOREAN GOAT'S BEARD. Per. Sun/PtShade. 6 x 10". Summer. 318-Garnett.

***** Asarina erubescens. See: Lophospermum erubescens.

Asa0450 Asarina procumbens. CREEPING SNAPDRAGON. Per. Sun/PtShade. 2 x 24". Summer.

> 199-White and yellow blooms. Per. Sun/PtShade. 2" x 2'. Spring-Fall. Drought tolerant hardy perennial that creeps in and around dry stone walls. Rounded fuzzy greyish green foliage and perfect white snapdragon flowers with yellow lips. Seeds itself politely and conveniently.

Asc2500 Asclepias incarnata. SWAMP MILKWEED. Per. Sun. 4 x 2'. Summer.

> 2497-Pink blooms. This milkweed is a beautiful native plant for a garden. It has a nice vase shape, hosts Monarch caterpillars, and has beautiful seed heads. Germ: CMS: 30 d. OW. Plants may not bulk up and flower until the second year from seed. Mackey.

507-White form. Monarch food. Kolo.

Monarch butterflies. Doblmaier.

Asc2750 Asclepias incarnata 'Ice Ballet'. SWAMPMILKWEED. Per. Sun. 4 x 4'. Summer-Fall.

> 1999-White blooms. Distinguished from the species by a more compact form and by clusters of white, fragrant flowers. Long live the Monarchy! Nectar and larval host plant for the Monarch butterfly, Danaus plexippus. Perennial for Zones 3 to 9, this hard-working plant attracts pollinators and, despite its common moniker, grows happily in average soil in full sun. Distasteful to deer, tolerates clay soil. Comes true from seed, makes an excellent cut flower. Is tap-rooted, so resents disturbance. Germ: CMS: 60 d, BC. 80 d. Norfolk Botanical staff. 2515-White flowers. Great native perennial milkweed that loves wet sites. Food source for the larval stage of

Asc3200 Asclepias rubra. RED MILKWEED. Per. Sun. 2-3'. Summer. Zone 6–9.

3645-Pink-red blooms. Germ: NST. Roskoph.

Asc3700 Asclepias syriaca. COMMON MILKWEED. Per. 2-4'. 5082-White blooms. Germ: SR. Smith, C.

> **543-**Pink, mauve, and white blooms. Coarse native, 3–4'. Dried pods good for floral arrangements. Leaves host Monarch butterfly larvae. Germ: W; Rtp; NST. Leasure.

Asc4010 Asclepias tuberosa. MILKWEED, BUTTERFLY WEED. Per. Sun. 2–3 x 1–2'. Summer–Fall.

3540-*Rifici*.

3645-Yellow-orange blooms. Germ: CMS: 30 d, NST. Roskoph.

507-Flowers are a wonderful true orange. *Kolo*.

Asi1050 Asimina triloba. PAWPAW TREE. Shrub/Tree. Sun/ PtShade. 20 x 20'. Spring.

> 2463-Purple-brown blooms. Collected from trees on mountain in Zone 6. Harvested early October and cold treated since. Germ: CMS, RTp. May need several cold treatments. Nolan.

> 3436-Reddish-brown blooms. About 7 yr from seed to flowering. Seeds from large-fruited trees. Need 2 trees for good fruit set. Thrives in part shade and moist soil. Small tree that will sucker with maturity. Mature trees/ suckers difficult to move. Animal resistant, except for the fruit. Shake nearly ripe fruits from tree and they will usually ripen on counter. Germ: CMS: 60 d, 40 d. Leaves have strong scent when bruised. Fruit ripe when soft. Black means over-ripe. Silberstein.

> **45-**Purple blooms—but grown more for the tasty fruit. Native. Large shrub, beautiful foliage. Germ: CMS: 60 d. SIS. Gremination can be erratic. Sow in situ and be patient. Worth the wait. Bartlett.

Ast0300 Aster ageratoides. JAPANESE ASTER. Per. Sun/ PtShade. 18 x 24". Fall.

> 199-White blooms. This Japanese aster has been going around American nurseries under wrong name of Gymnaster savatieri (an early summer bloomer) for some years, but this is its true ID! Masses of moderate size white daisies Sept-Nov over clean, disease-free, dark green foliage. Long-lasting cut flower!! Spreading by rhizomes, so you could have lots to cut. Cresson.

***** Aster divaricatus. See: Eurybia divaricata.

Ast1450 Aster drummondii. Per. Sun/PtShade. 5'. Fall.

199-Pale lavender flowers. Branched, dense racemes of numerous, small pale lavender to near white daisies in October. Quite showy and rare. Native. Cresson.

Ast2500 Aster laevis. Per. Sun/PtShade. 3½ x 1½'. Summer/Fall. 3540-Light blue blooms. Germ: SR. Rifici.

Ast2650 Aster lateriflorus (syn. A. vimineus). Per. Sun/PtSun/ PtShade. 2-4 x 4'. Fall.

2429-*Bricker*.

Ast3000 Aster linariifolius. Per. Sun/PtShade. 2 x 1'. Late Fall. 199-Blue. Good drainage, even sandy. Drought tolerant. Excellent for planting in wall to cascade out. Pinch midsummer for branching. Many narrow leaves along stem. Cresson.

Ast4320 Aster novae-angliae 'Harrington's Pink'. NEW ENGLAND ASTER. Per. Sun. Fall.

239-Soft pink blooms. Germ: W, BC, NST, SR. Doering. Ast4470 Aster oblongifolius 'Fanny'. Per. Sun/PtShade. 3–6 x 3'; depends on fertility. Fall.

> 199-Purple-blue flowers. Unbelievably hardy freezeproof flowers and foliage. In full bloom with green foliage at Thanksgiving. Looks like New England aster. You won't believe it! Native. Cresson.

Ast5000 Aster tataricus. TATARIAN ASTER. Per. Sun. To 6' or more in bloom. Fall. Zone 4–8.

> 1865-Blue with yellow stamens. Seeds from cultivar 'Jin-dai'. Germ: W. Bennett.

Ast5600 Astilbe biternata. FALSE GOAT'S BEARD. Per. PtShade/Shade. 2 x 2'; to 3' in bloom.

> **507-**Creamy white flowers. Beautiful big astilbe. Thrives in shade. I received it as a Rodgersia, which it isn't. This was submitted before as A. grandis but I now believe this is correct. Kolo.

Ast5700 Astilbe chinensis var. pumila. CHINESE ASTILBE. Per. PtShade/Shade. 9-30 x 9-12". Summer.

> 208-Rosy white blooms in summer. Great border plant. Dahlke.

> 318-Lavender flowers in July-August. Prefer moist shade. Garnett.

Ast6100 Astilbe thunbergii var. okuyamae (syn. Astilbe okuvamae). Per. PtShade/Shade. 12-18 x 18; to 2' in bloom. Summer.

> 199-White flowers. Rare Japanese native with unique light green, quilted foliage on darker petioles. Unique and a personal favorite! Virtually nonexistent in western gardens. My source imported it in the 1980s but lost it years ago. Cresson.

Ast8300 Astrantia major 'Alba'. Per. Sun/PtShade. 2'. Zone 4–9.

84-White flowers. *Bowditch*.

Ath1000 Athyrium nipponicum var. pictum. JAPANESE PAINTED FERN. Fern. PtShade/Shade. 12-18 x 15-18'. Zone 4–9.

1277-Haas.

Auc0400 Aucuba japonica var. borealis 'Honshu'. Shrub. PtSun/ PtShade. 4 x 4'. Zone 7-9.

> 522-A splendid, compact (4 x 4') all green aucuba with long, glossy, scented evergreen leaves. Good fruiting on this female. Source: Camellia Forest, who introduced it. Kushner.

Auc1300 Aucuba japonica 'Wisley Nana'. WISLEY DWARF AUCUBA. Shrub. PtShade/Shade. 3 x 3'. Zone 7b.

> 522-Red berries on a lovely dwarf aucuba with dark green foliage. Shade evergreen. Source: Camellia Forest Nursery. Kushner.

Bac1050 Baccharis halimifolia. GROUNDSEL BUSH. HIGHTIDE BUSH. Shrub. Sun. 5-12 x 5-12'. Fall.

> 200-Native shrub to 12 x 12'. White fluffy 'blooms' in November. Often grown at the shore, but ripped out for new houses. Worthy of preservation! Germ: NST. Creveling.

Bap0050 Baptisia alba. WHITE FALSE INDIGO. Per. Sun. 3–4 x 2–3'. Late Spring–Summer.

> 118-White blooms. Grows in dry woods from North Carolina to Florida. A sparsely branched, bush-like, herbaceous perennial with trifoliate, bluish-green, glaucous leaves. Dark flower stems give rise to erect racemes of small, white, pea-like flowers, up to 2' in length. Blooms in spring. The large, oblong, inflated seed pods are initially green but turn black, extending the show. Sun/partial shade. Germ: Soak: 4 d, W, L. Stonecrop Gardens.

Bap1050 Baptisia australis. BLUE FALSE INDIGO, PLAINS FALSE INDIGO. Per. Sun. 3–5 x 2–4'. Early Summer. Zone 3–9. **1277-**Blue flowers. *Haas*.

> 1585-Early summer, bright blue blooms, like blue sweet peas, are followed by light green, 1 ½" seed pods. Germ: C. Germinates easily, but first winter is difficult. Scofield. 1999-Purple lupine-like flowers. Fabulous native perennial has blue-green, pea-like foliage followed by spikes of lavender-purple flowers in spring. Flowers attract butterflies, hummingbirds, and bees. Long-lived plant is tap-rooted so resents disturbance. Tolerant of drought and salt-spray. Host plant for many butterflies including the Wild Indigo Duskywing, Eastern Tailed-Blue, Orange Sulphur, Clouded Sulphur, Frosted Elfin, and Hoary Edge. Takes time to establish but worth the wait. Hardy in Zones 4-9. The inflated, charcoalblack seed pods are an interesting addition to flower arrangements. Germ: CMS: 15 d. Scfy, Soak: 24 hr. Soak in hot water 24 hr before sowing. Repeat process for any seeds that do not imbibe water. W, 21 d. RTp Scarify seed before stratification. Norfolk Botanical staff.

2463-Purple blooms. *Nolan*.

3645-Purple blooms. Germ: CMS: 10 d, Scfy. *Roskoph*. 9985-Blue blooms. Germ: CMS: 90 d, Scfy; OW; BC; NST; 30 d. Jenkins Arboretum.

Bas1500 Basella rubra. MALABAR SPINACH, RED VINE SPINACH. An./TenVine. PtShade. 10'.

208-Germ: SIS. Dahlke.

Beg0700 Begonia 'Erythrophylla' (syn. erythrophylla). BEEFSTEAK BEGONIA. TenPer. PtShade/ Shade. 12".

200-Creveling.

Beg1050 Begonia grandis subsp. evansiana. HARDY BEGONIA. Per. PtShade/Shade. 2 x 1½'. Late Summer-Fall.

> 239-Soft pink flowers. Lovely late, long-flowering, shade-loving begonia that spreads around a little. A very welcome addition to any shade garden. Germ: W; BC; SIS; NST; 12 d. Store dry and sow seeds at 70°F. Seeds germinate in 10–12 d. Can be sown in situ. *Doering*.

> 318-Pink flowers in September with interesting hanging, winged seed capsule. Wonderful filler, which seeds around prolifically, but provides color in early fall, when most everything else is fading. Deer do like it. Garnett.

> **522-**Pink flowers on shade-loving perennial. Blooms July-October. 18–24" tall. Good companion to hostas and ferns. Kushner.

Beg1060 Begonia grandis subsp. evansiana var. alba. HARDY BEGONIA. Per. PtShade/Shade. 2 x 1½'. Late Summer-Fall. Zone 6–9.

> 522-White flowers on shade-loving perennial. Blooms July-October. 18-24" tall. Appreciates damp soil. Good companion to hostas, ferns, and other shade plants.

Beg1100 Begonia grandis subsp. evansiana 'Heron's Pirouette'. HERON'S PIROUETTE HARDY BEGONIA. Per. PtShade/ Shade. 15". Late Summer-Fall. Zone 5-9.

> 1607-Pink flowers. Masses of deep pink, nearly 12"long flower clusters, followed by warm pink seed heads. Prefers well-drained soil and bright shade. Jellinek.

Beg2500 Begonia sutherlandii. TUBEROUS BEGONIA. TenPer. PtShade. 1 x 1½'. Summer.

> **522-**Clear orange. Splendid pot plant. Good light orange flowers. Overwinter in pot. Slow starter but worth the wait. Germ: L: BH. Kushner.

***** Belamcanda chinensis. See: Iris domestica.

Ber1960 Berlandiera lyrata. CHOCOLATE FLOWER. Per. Sun. 12–15 x 18–24". Summer to frost. Zone 4–8.

> 592-Yellow flowers. Chocolate scent is real, mornings only. Cheerful yellow daisies. SW native likes it hot and bright. New start this spring. Continuous bloom June to frost. Malocsay.

Ble2400 Bletilla ochracea 'Rickey'. CHINESE GROUND ORCHID. Per. PtSun/PtShade. 12-18". Spring.

> 199-Yellow flowers with petal reverse brushed with red. Smaller flowers and stature than B. striata. This has been hardy for several years for me. From Xichang Mountains, China. Bletilla are the easiest orchid to grow from seed. Germ: Cycle. Cresson.

Ble2500 Bletilla striata. HARDY ORCHID. Per. PtShade. 8–12". Spring.

> 199-Pinkish-purple blooms. The easiest garden orchid and the easiest orchid from seed. I find it drought tolerant even with morning sun. Germ: W, L. Sow seed on chopped sphagnum, sterilized in boiling water. Set pot in saucer of water. Cresson.

> **3176-**Pink blooms. Clump-forming sword-shaped leaves. Bright pink/purple orchid-shaped flowers in spring. Best in part shade. Foliage dies to the ground in winter. Germ: W, SS. Maher.

Boe0100 Boehmeria platanifolia. SYCAMORE LEAVED FALSE NETTLE. Per. Sun/PtShade. 5'. Zone 5-9.

> 3001-Non-stinging herbaceous nettle relative. Sun to part shade, though leaves can yellow in full sun. To 5 x 4', zones 5–9. One of the boldest of the boehmerias—leaves can be 6-8" across at maturity. Bright red petioles set off from medium green leaf. A nice addition to the woodland garden. Germ: NST. Gregg.

Boe0200 Boehmeria spicata. PtShade/Sun. 3'. Zone 5-9.

3001-Grows to 3'. Best in part shade, though can be grown in full shade if watered. Zones 5-9. Petioles and catkins pink to red. Leaves are edible; used in salads in Asian countries. Plant is dioecious, so grow more than one if seed is desired. Great for woodland garden or edge planting. Germ: NST. Gregg.

Boe0300 Boehmeria tricuspis. Sun/PtShade. Per. 2½'. Summer. **3001-**Best used as a woodland or part shade plant, to $2\frac{1}{2}$. Edible leaves, the stem fibers are used to make cloth, paper, and rope. Petioles and catkins are pink to red. Dioecious. Hardy to zone 7. Germ: NST. Gregg.

***** Brodiaea laxa. See: Triteleia laxa.

Bro1050 Browallia americana. JAMAICAN FORGET-ME-NOT, BUSH VIOLET. An. Sun/PtShade. 2 x 2'. Late Summer-Fall.

> 1277-Sky blue flowers. Wonderful filler plant. Blooms until frost. Self-seeds. Haas.

> **239-**Blue flowers. Lovely color. A weaver type of annual for garden. Germ: NST; W; SIS. Doering.

> 2515-Dainty blue flowers. Blooms all summer long. Germ: NST. Doblmaier.

> 318-Blue flowers. Self-sows. Germ: NST; W; SIS.

797-Blue flowers. Germ: NST; BC; W. Robinson.

Bup1400 Bupleurum rotundifolium. THROW-WAX. An. Sun. 2 x 1'. Summer.

> 2937-Green blooms. An annual which also grows well sown in autumn or late autumn. 2–3' tall branching stems of rounded leaves and tiny yellowish flowers. Bittmann.

> 592-Yellow/green bloom, interesting structure and posture good in bouquets. Self-sower that is easy to spot. Germ: NST. Malocsay.

> 9968-Lime green blooms. Self-sowing annual with chartreuse green flowers. Bupleurum blooms in June-July, lovely filler plant and cut flower. Full sun to part shade, average to well-drained soils. Leaves are bluegreen, round, and clasp the stem. Germ: L. Roper.

Cac0035 Cacalia hastata tanakae. Per. PtShade. 6'. Late Summer/Fall.

> 2137-White blooms. Strong, erect stems reach 4–6' tall in bloom. Small, soft white, bottlebrush flowers bloom mid-season. Gorgeous variegated foliage! Germ: W, BC, NST. Boylan.

Cal2200 Callicarpa americana. MEXICAN BEAUTYBERRY. Shrub. Sun/PtShade. 6 x 5'. Spring-Summer.

> 1865-Lavender blooms. Purple fruits in fall, more fruits if grown in sun. Germ: W; NST. Bennett.

Cal2400 Callicarpa bodinieri 'Profusion'. BEAUTYBERRY. Shrub. 6-10'. Summer-Fall.

> 522-Violet fruits. The abundant, clustered fruits make this a superior beautyberry. Germ: L; W, 7–10d. *Kushner*.

Cal2450 Callicarpa dichotoma. BEAUTYBERRY. Shrub. Sun/ PtShade. 4–5 x 4–5'. Summer.

> 45-Purple, insignificant blooms. Grown for large crop of purple berries in August-October that persist along the stems until birds or cold drop them. Small purple axillary flowers. The easiest and hardiest of the beautyberries. Best in background of garden. Germ: NST. Bartlett.

Cal2500 Callicarpa dichotoma f. albifructa. WHITE BEAUTYBERRY. Shrub. Sun/PtShade. 5 x 5'. Summer.

> 45-White blooms. Attraction is crop of white berries, down to the ground, in August-October. Fast growing. Put in the background for seasona effect. Germ: NST. Bartlett.

Cal2500 Callicarpa dichotoma f. albifructa. (Continued)

507-Bears off-white berries. Very open habit—flops a bit. Cut to ground in winter, pinch back until July. Kolo.

Cal2550 Callicarpa dichotoma 'Issai'. BEAUTYBERRY. Shrub. Sun/PtShade. 4–5 x 4–5'. Summer.

1277-Pale pink flowers. Haas.

Cal3250 Callirhoe involucrata. WINE CUPS. Per. Sun. 1 x 1–3'. Spring-Summer.

> 199-Deep maroon with white center blooms. Prairie plant adapted to heat and drought and blooming through the summer on sprawling stems. Cresson.

Cal4100 Caltha palustris. YELLOW MARSH MARIGOLD, KINGCUP. Per. PtSun/PtShade.10-12 x 12-18". Early Spring. Zone 3–7.

> 199-Yellow blooms. This seems to be a rather large and vigorous form of our native species, suggesting it is a hybrid with the Caucasian C. palustris var. major. Cresson.

Cal4110 Caltha palustris var. major. GIANT MARSH MARIGOLD, KING CUP. Per. PtSun/PtShade. 21/2 x 4'.

> 199-Yellow blooms. Formerly C. polypetala. Truly remarkable Caucasian species for its lush bold appearance with larger leaves and flowers, blooming before our native species, continuing 2 mo. Spreads moderately by rooting stems and can reach out into a pond. According to legend, it entered British gardens when a gardener with itchy fingers pinched it from the Vatican Gardens many years ago, so I call it "The Pope's King Cup"! Mine came from Beth Chatto in the 1990s. Cresson.

Cal4200 Calycanthus chinensis (syn. Sinocalycanthus chinensis). SWEETSHRUB. Shrub. 10'.

> 5024-White/pink blossoms with yellow centers. Deciduous shrub, up to 10', waxy, camelia-like flowers and large, glossy leaves. Very interesting seedpods. Germ: Scfy; BH; BC; 40d. Iroki Garden.

Cal4300 Calycanthus floridus 'Athens'. **CAROLINA** ALLSPICE, COMMON SWEETSHRUB, STRAWBERRY BUSH. Shrub. PtShade. 5-8 x 6-10'. Summer.

> 2137-Greenish-yellow blooms. An attractive form offering medium green foliage and unique, greenishyellow flowers that emit a fruity fragrance. Distinct among sweetshrub cultivars. 5-8'. Germ: W, 90 d. Boylan.

Cam0050 Camassia cusickii. CAMASS LILY. Bulb. Sun/ PtShade. 2½'. Spring.

199-Light blue flowers in May. Beautiful grayish-green foliage. Native to the west. Interplant with daffodils. Evenly moist soil, tolerates very wet clay, but grows anywhere soil is moist until June. Cresson.

Cam0335 Camellia japonica (from Korea). Shrub. PtShade. 15 x 10'. Spring.

> 199-Deep red, single flowers with yellow stamens. Spring blooming but often opens some flowers in November. Parent plants grown from seed collected wild on Sochong Island off the north coast of Korea, coldest habitat of the species. The hardiest C. japonica, at least a half zone hardier (probably zone 6a, at least). After 40 years, these are becoming small trees here. Cresson.

Cam1000 Camellia 'Survivor'. FALL-BLOOMING CAMEL-LIA. Shrub. 8 x 5'. Fall.

> 199-White flowers with faint tint of pink on edges. One of the hardiest of fall blooming C. oleifera hybrids with compact midsize habit. Seedlings will vary. Cresson.

Cam1500 Campanula americana. TALL BELLFLOWER. Bien. 1–3 x 1'; from 3–5' in bloom. Summer.

> **9985-**Lavender blue blooms. Self-sowing native biennial that provides color from June to August. Flowers are produced in succession higher up on each spike. Natural habitat is open woodlands. Attracts bees and butterflies. Not deer resistant. Germ: CMS: 30 d. NST. Jenkins Arboretum.

Cam4650 Campanula poscharskyana. SERBIAN BELL-FLOWER. Per. Sun/PtShade. 6 x 18". Late Spring.

> 199-A good campanula for the rock garden since it is a nonspreading clumper. Deep blue flowers. Cresson.

Cam4700 Campanula poscharskyana. TRAILING BELL-FLOWER. Per. Sun/PtShade. 6 x 24". Summer-Fall.

> 199-Blue blooms. Similar to C. portenschlagiana but spreads by rhizomes making it especially suitable for colonizing a dry stone wall for stunning effect. Deep blue flowers. Cresson.

Cam5800 Campanula trachelium. BATS-IN-THE-BELFRY, THROATWORT. Per. Sun/PtShade. 3 x 1'. Summer.

> 1585-Blue flowers. Upright plant. Blooms for several weeks starting in midsummer. Scofield.

797-Long-lasting, deep blue flowers. Low foliage and tall flower stalks. Germ: NST. Robinson.

Cam7010 Campylotropis macrocarpa. Shrub. Sun/PtShade. 4 x 3'. Summer.

> **45-**Soft blue/pink flowers in Sept-Oct on a 5 x 4' shrub. I've grown it in shade for the past 30 years. Not well known. Not difficult. Seems very hardy. Germ: L, NST. Germination time: a couple of months. 60 d. Bartlett.

Can5050 Canna Cannova® Rose (Cannova Series). TenPer. Sun. 30–48 x 14–20". Late Spring–Summer.

2937-*Bittmann*.

Can5800 Canna species. TenPer. Sun/PtSun. 4 x 2'. Summer. **590-**Yellow blooms. Compact grower with green foliage. Mahony.

Cap1120 Capsicum annuum 'Black Pearl'. ORNAMENTAL PEPPER. An. Sun. 12–20 x 12–18". Summer–Fall.

> 2517-Grown for foliage and fruit/small pepper not flowers particularly. Black leaves with small, round, hot, black fruit maturing to red. Annual. Germ: NST. Weaver. 269-A tender perennial grown as an annual for its nearly black leaves and bright red, round fruit. Great in containers. Germ: BH. Sow as you would any other pepper, 6–8 wk before the last frost date, and transplant after danger of frost once the soil has warmed up. Ellis.

'Calico'. ORNAMENTAL Cap1300 Capsicum annuum PEPPER. An. Sun. 12-18 x 12-16".

> 269-Tender perennial grown as an annual. Handsome foliage splashed with purple and white. Dark coneshaped peppers mature to red. Handsome in containers. Germ: BH. Sow as you would any other pepper, 6-8 wk before the last frost date, and transplant after danger of frost once the soil has warmed up. Ellis.

Cap1500 Capiscum annuum 'Fish'. ORNAMENTAL AND EDIBLE PEPPER. An. Sun. 15–18". Summer–Fall.

> 3006-An heirloom pepper as useful in the vegetable garden as it is ornamental in the flower bed due to stunning variegated green and white foliage and early on, variegated peppers that eventually turn solid red. Used in the mid-Atlantic region in days gone by to flavor fish dishes. The green and white pepper did not muddy the white sauce based dishes as a red pepper would. Medium hot. Germ: BH, BC, NST, SR, 21 d. I have successfully overwintered in a very sunny window small plants that were not planted out in spring. When placed in the garden in year 2 they thrive. Mayer.

Cap2250 Capsicum annuum 'Sedona Sun'. ORNAMENTAL PEPPER. An. Sun. 9–12 x 14–16". Summer–Fall.

> 2517-Masses of distinctive lemon yellow and carrot orange fruit put on a brilliant, multicolor display. 12" annual. Germ: NST. Weaver.

Cap2300 Capsicum annuum 'Tolli's Sweet'. TOLLI'S SWEET ITALIAN PEPPER. An. Sun. 2'. Summer-Fall.

> 475-I've grown others. Toll's Sweet is the earliest, sweetest, and most prolific. She's a tidy 18-24" tall with 5-6" long fruits. Eat fresh in the garden, roast for wonderful sweet deep flavor to soups, salads, sandwiches, you name it. Both red and green freeze nicely. A star in my beds! Loves heat and water. Germ: BH, W. I use bottom heat in my cold greenhouse starting mid-March. I could never get peppers before these: the real thing! Kaplan.

Cap2800 Capsicum annuum var. glabriusculum. TEXAS BIRD PEPPER.

> 2515-White flowers. Ornamental hot pepper plant with tiny orange peppers in the autumn. Seed came from Monticello. Germ: BH, BC. Doblmaier.

Cap2990 Capsicum annuum cultivar. ORNAMENTAL PEPPER—HOT. An./TenPer. 18–24 x 18". Summer–Fall.

> **5082-**Annual pepper. Germ: NST. Days to maturity: 69– 80. Smith, C.

Car0100 Cardiocrinum cathayanum.

5024-About 5' tall for us, with reddish-brown and green markings in the throat of the downturning flower. Germ: BC, Cycle: Sow at 70°F for 30 d, move to 40° for 30 d, return to 70°. Repeat the cold cycle if no germination in 30 d. Iroki Garden.

Car2500 Carex muskingumensis. PALM SEDGE. Sedge/Grass. Sun/PtShade. 2½ x 1½'. Summer.

2429-Germ: NST *Bricker*.

Car2650 Carex scaposa. CHINESE PINK FAIRY SEDGE. Per. PtShade.12 x12". Summer/Fall.

> 199-A truly "flowering" sedge. Plumes of pink flowers stand above clumps of wide green leaves in midsummer and again in September. Even attracts honey bees. Woodland with moderately moist soil. From China and northern Vietnam. Cresson.

Car3500 Caryopteris divaricata. BLUE MIST SHRUB. Per. Sun/ PtShade. 3–6 x 5'. Fall.

> 118-Violet-blue flowers with light green, aromatic foliage. Spikes of open, hooded flowers in late August. Germ: W; BC. Stonecrop Gardens.

***** Cassia marilandica. See: Senna marilandica.

Cea1040 Ceanothus americanus. Shrub. Sun/PtShade. 3 x 3-4'. Summer.

> 199-White blooms. Shrub. Sun/PtSun. 3 x 3. Early Summer. An easy compact deciduous shrub widely native in the Eastern US that tolerates our summers and drought. Give it decent drainage. More people need to try this. Good rock garden background plant too. Was used as a tea substitute. Cresson.

MOUNTAIN Cen2200 Centaurea montana. BLUET, PERENNIAL CORNFLOWER. Per. Sun/PtShade. 11/2 x 2'. Summer.

199-Blue flowers. *Cresson*.

Cen2245 Centaurea montana 'Amethyst Dream'. MOUNTAIN BLUET, PERENNIAL CORNFLOWER. Per. Sun/PtShade. 12-24 x 18–24". Early Summer. Zone 3–9.

> 199-Purple blooms. Per. Sun/PtShade. 12-24 x 18-24". Early Summer. A purple form of this blue species. Prune bloomed out stems to ground for new shorter blooming stems into mid-summer. Cresson.

Cen2250 Centaurea montana 'Amethyst in Snow'. MOUNTAIN BLUET, PERENNIAL CORNFLOWER. Per. Sun/PtShade. 12-24 x 9–24". Early Summer. Zone 3–7.

> 199-White/purple blooms. Deadhead for repeat bloom into midsummer. Cresson.

Cen5700 Centratherum punctatum. **BRAZILIAN** BACHELOR'S BUTTON, BRAZILIAN BUTTON FLOWER, LARKDAISY. TenPer. Sun. 3 x 3'. Summer–frost. Zone 9–11.

> **592-**One seedling from midsummer on does the work of a shrub with lovely foliage/bloom balance. Blue purple. Germ: NST. Self sows freely in Pittsburgh. Malocsay.

Cep0550 Cephalanthus occidentalis. BUTTONBUSH. Shrub. Sun/Pt. Shade. 8'. Summer.

> 1277-White blooms on shrub. Loves sunny wet areas but takes some shade. Germ: CMS: 90 d. *Haas*.

> 1999-Fragrant white spherical flowers resembling pincushions are followed by attractive, long-lasting round seed pods. Native deciduous shrub attracts bees, butterflies, and other beneficial insects. Thrives in wet soils, including flood conditions and shallow standing water. Prefers full to part sun. The fruits persist in winter and are gobbled up by ducks and other water birds. The willow-like foliage is deer-resistant. Thrives in USDA Zones 5–10. Germ: Soak: 24 hr. Soak in hot water for 24 hr before sowing. Light enhances germination so surface sow. W, L, SS, 21 d. Keep soil consistently moist for germination. Norfolk Botanical staff.

> 239-White blooms. Native plant with interesting flowers, seed head, and bark. Prefers moist areas, but is happy with average water and soil. Flowers are an excellent source of nectar for butterflies in the summer. Considered an important plant for butterfly nectar. Germ: W, NST, SR, 14d. Doering.

Cer1300 Ceratotheca triloba. SOUTH AFRICAN FOXGLOVE. An. Sun. 4–6 x 2½'. Summer–Fall.

> 592-Pink trumpets, handsome foliage, very quick to bloom from seed. Malocsay.

Cer1310 Ceratotheca triloba 'Alba'. AFRICAN FOXGLOVE. SOUTH AFRICAN FOXGLOVE. An. Sun. 15–18". Summer.

> 1020-Lovely white foxglove-like flowers. Germ: BH; NST. Wiedorn.

Cer2050 Cercis canadensis. EASTERN REDBUD, JUDAS TREE. Tree. Sun/PtShade. 30 x 30'. Spring.

3540-Pink blooms. Germ: CMS: 60 d, Scfy, SR. Rifici.

Cer2300 Cercis chinensis. CHINESE REDBUD. Shrubby Tree. Sun/PtShade. 12–15 x 6–8'. Spring.

3177-Pink blooms. Gibson.

Cer2720 Cercis siliquastrum. LESSER JUDAS TREE. Tree. PtShade. 40 x 30'. Spring. Zone 6-9.

3177-*Gibson*.

Ces2000 Cestrum species. ORANGE PEEL CESTRUM.

3436-Orange blooms. 5-6' high. Germ: SR. Shrub which dies back in mid 20s and flowers on new wood. Easily hardy in zone 7 with a little mulch. Silberstein.

Cha0150 Chaenomeles japonica 'Sargentii'. **DWARF** JAPANESE QUINCE. Shrub. Sun/PtShade. 2 x 4'. Spring.

> 199-Orange blooms. Rare heirloom dwarf variety. Can also make a moderate size espalier reaching 4'. Yellow fruit in fall. Cresson.

Cha0640 Chamaecrista fasciculata (syn. Cassia fasciculata). PARTRIDGE PEA. An. Sun. 1–3 x 1–3'. Summer

> 9976-Germ: Scfy: nick, chip, or file seed coat. Wave Hill Gardeners.

Cha1050 Chasmanthium latifolium. NORTHERN SEA OATS. PerGrass. Sun/PtShade. 3 x 2'. Summer/Fall.

> 5095-Green blooms. US native plant with pretty seed heads born on graceful stems which may be cut for flower arrangements. Birds eat seeds. Grows in sun to part shade. Enjoys moist, well-drained soils, but tolerant of clay and dry soils. Davenport.

Che2000 Chelone glabra. TURTLEHEAD. Per. PtShade. 2–3 x 2'. Summer–Fall.

> 199-White flowers. This mildly rhizomatous eastern native is ideal for moist meadows and woodland gardens.

> 318-Pink flowers. Likes moisture. Will self-sow if happy.

Che2200 Chelone lyonii. PINK TURTLEHEAD. Per. Sun/ PtShade. 3-4 x 2'. Summer.

> 199-Clusters of pink tubular turtle-head shaped flowers in August are a nice companion to asters. About 3' tall. Germ: NST. Cresson.

***** Cheiranthus x allionii. See: Erysimum allionii.

Chi0800 Chimonanthus praecox 'Luteus'. WINTERSWEET.

522-Purer yellow (no purple heart) than other chimonanthus. Stronger fragrance. High germination rate from seed. Source: Roslyn Nursery, 1996. Germ: CMS: 6 wk: C. Kushner.

Chr0800 Chrysanthemum indicum. Per. Sun. 2'. Summer-Fall. Zone 5–9.

> 2937B-These should produce wide, bushy plants without pinching, and colors should range from yellow to orange, pinks, and reds. The seeds were collected from 'Mammoth' strain mums which were originally bred in Minnesota for cold hardiness. Bittmann.

***** Chrysopsis falcata. See: Pityopsis falcata.

***** Cimicifuga species. See: Actaea.

Cit1050 Citrus trifoliata (syn. Poncirus trifoliata). TRIFOLIATE ORANGE, HARDY ORANGE. Shrub/Tree. Sun. 8-20 x 8-15'. Spring. Zone 5–9.

> 45-White blooms in spring, followed by small, oranges in fall. A large, fairly coarse shrub with wicked spines. Pretty foliage. Fast growing. Flowers in 4-5 yr from seed. Germ: Citrus seed loses viability quickly. Sow immediately. Bartlett.

Cle2220 Clematis crispa 'New Hope'. MARSH CLEMATIS. Vine. PtShade. 10'. Summer. Zone 7-10.

> 32-Small, dangling bell-shaped, lavender flowers, 10'. Seed strain from plants from Holmes Co, FL. Germ: W, BC, NST. Plant Delights.

Cle3200 Clematis glaucophylla. Vine. Sun/PtShade. 12+'. Summer.

2429-*Bricker*.

Cle3450 Clematis 'Helios' (syn. Clematis Aztek). Vine. Sun/ PtShade. 6'. Summer.

> 199-Climbing vine with golden yellow nodding flowers beginning early summer and repeating later. Fluffy seed heads. A good form of C. tangutica. Sun. Cresson.

Cle3900 Clematis integrifolia. SOLITARY CLEMATIS. Per. Sun/PtShade. 2-3 x 2'. Summer.

> 2515-Blue to violet blooms. Lovely, small, nonvining clematis with blue/violet, bell-shaped flowers. *Doblmaier*.

Cle4000 Clematis 'Jackmanii'. Vine. Sun/PtShade. 10 x 3'. Summer.

3645-Purple blooms. Germ: W, NST. *Roskoph*.

Cle4100 Clematis x jouiniana 'Praecox'. Per. Vine. Sun/ PtShade. 10-13'. Summer/Fall.

> 507-White blooms flushed with pale blue overtones. Nonclinging, woody vine. Vigorous. Astonishingly beautiful in bloom. Kolo.

Cle4450 Clematis 'Lemon Beauty'. Vine. Sun/PtShade. Spring. 199-Yellow blooms. Hybrid related to C. alpina with large early light lemon yellow flowers in April/May. Cresson.

Cle4500 *Clematis ladakhiana*. Vine. Sun. 15–20'. Summer.

199-Yellow flowers with maroon dots. Flowers are small, nodding, and prolific. Glaucous gray foliage. Likes hot sunny dry location. Cresson.

Cle5620 Clematis 'Rooguchi'. Per. Vine. Sun/PtShade. 6 x 4'. Early Summer-Early Fall.

> **522-**Plum purple flowers. A nonstop bloomer for months. Dainty, ribbed, bell-shaped flowers. Kushner.

Cle5700 Clematis serratifolia. PerVine. Sun/PtShade. 8-15 x 2-4'. Summer-Fall. Zone 5-8.

> 199-Soft yellow flowers. A climber to 10' with nodding scented yellow flowers. Needs more consistent moisture than some yellow clematis. Said to be the only yellow clematis with a lemon scent. Late summer bloom followed by fluffy seed heads. Germ: NST. Cresson.

Cle5800 Clematis species. Vine. Sun/PtShade. 10'. Spring.

2137-'Rebecca'. Red blooms. Large red blooms on this 5–7' climber. Repeat bloomer. Pruning group 2. Germ: CMS: 3 mo, BC. Boylan.

Cle5800 *Clematis* species. (Continued)

507-This is a stunning mid-season pale lavender large bloom climber, fairly typical hybrid form but the name has been lost for years. It's one of the best. Prune late just to new growth or to shape. Kolo.

Cle6150 Clematis texensis. SCARLET CLEMATIS, TEXAS CLEMATIS. Vine. Sun/PtShade. Summer-Fall. 15 x 1½'. Summer.

> 1607-Rosy red, bell-shaped flowers of thick substance on a 6-10' vine. Blooms June-September. My plant from the 2003–04 Seed Exchange. One of my favorites. *Jellinek*. 199-Carmine-red flowers. Spherical lantern-shaped flowers, from early summer through September, look like strawberries. Can be allowed to sprawl over shrubs, roses, or on a fence, where it is perhaps the most admired plant in the garden. It likes hot, sunny, dry conditions. Difficult species to obtain. Cresson.

> 2137-Red blooms. A small-flowered climber that typically grows to 10-15' long. It is native to Texas. Tulip to bell-shaped, reddish orange to scarlet flowers (to 1" across) bloom from early summer to frost. Blooms on new wood. Germ: Cycle: 6 wk room temperature, then 6 wk in the refrigerator, BC. Boylan.

> 269-Red blooms with creamy yellow inside. A showy summer-blooming species, C. texensis dies to the ground in winter, but has been reliably perennial in Zone 7. I grew my plants from HPS/MAG Seed Exchange seed from Charles Cresson's garden. The flowers are jugshaped with four petal-like sepals and about 1" long. Leaves are pinnate with oval leaflets. Vines climb to about 9' and cling by twining leafstalks. Germ: OW, SIS. 365 d. Patience is required for germination. Sow seed in pots and mulch with fine gravel. Then leave the pots in a protected spot outdoors. Water as necessary, and be prepared to wait 1-2 yr for germination. This plant is worth the wait! Ellis.

Cle6500 Clematis viorna. VASEVINE. Vine. Sun/PtShade. Summer.

> 1607-Purplish pink bells on this Southeastern native vine. Summer bloomer. My plants were grown from seeds I received from the HPS Seed Exchange. Jellinek.

Cle7300 Cleome hassleriana, SPIDER FLOWER, An. Sun. 5-6 x 3'. Summer-Fall.

> 239-Pink blooms. Great mid to late summer bloomer for the back of the garden. East to grow and, best of all, deer resistant. Germ: SIS, SS, NST. Doering.

Cle7320 Cleome hassleriana 'Cherry Queen'. SPIDER FLOWER. An. Sun. 5-7 x 2'. Summer.

> 5082-Light pink blooms. Annual but will reseed. Germ: BH, L, 10 d. SR. Keep soil moist until seeds sprout. Smith. C.

Cle8500 Clerodendron trichotomum. HARLEQUIN GLORY BOWER. Shrub. Sun/PtShade. 10 x 10'. Summer.

> 118-Cymes of fragrant white flowers with prominent stamens in late summer, followed by magenta seedpods opening to expose metallic blue berries. Germ: CMS, 4wk; BC; C, 3mo. Stonecrop Gardens.

Cle9000 Clethra acuminata, CINNAMON CLETHRA. Shrub/ Tree. PtShade. 12 x 12'. Summer.

9985-Jenkins Arboretum.

Cle9200 Clethra alnifolia. SUMMERSWEET, **SWEET** PEPPERBUSH. Shrub. PtShade. 8 x 8'. Summer-Fall. Zone 3-9.

5024-Pink, white blooms. Seed comes from 'Ruby Spice', but we are uncertain whether it will come true. Germ: WMS, BH, W. Iroki Garden.

Cle9250 Clethra alnifolia 'Ruby Spice'. SUMMERSWEET, SWEET PEPPERBUSH. Shrub. PtShade. 8 x 8'. Summer-Fall. 1277-Pink flowers. Haas.

Cli4000 Clivia miniata. NATAL LILY. TenPer. PtShade. 30 x 30". Spring-Summer.

> 199-Lemon-yellow flowers. Self-pollinated from 'Sir John Thouron'. Will come true. Germ: Sow immediately. Cresson.

Cod2010 Codonopsis lanceolata. POOR MAN'S GINSENG, BONNET BELLFLOWER. PerVine. Sun/PtShade. 3-8'. Late Summer-Fall.

> 118-Greenish white, nodding bells with prominent, bluish purple venation inside the cup. This Bonnet Bellflower has a twining habit and is best supported by a trellis or tripod where one can see to full effect the fat, greenish white, nodding bells with prominent, bluish purple venation inside the cup. Blooms midsummer. Well-drained soil. Sun/partial shade. Germ: W, L, SS. Stonecrop Gardens.

Cod3000 Codonopsis pilosula. PerVine. Sun/PtShade. 5'.

118-Purple flushed, greenish yellow, nodding bells. Northern China. A vigorous, vining plant with purple flushed, greenish yellow, nodding bells. Thick, tuberous roots are used in traditional Chinese medicine as a tonic, similar to ginseng. Midsummer. Well-drained soil. Sun/ partial shade. Germ: W, L, SS. Stonecrop Gardens.

Cod5050 Codonopsis tubulosa. PerVine. Sun/PtShade. 8'.

239-White flowers with muted blue-purple inner markings. Good vine for late summer-fall bloom. Nodding bell-shaped flower has beautiful interior. Wonderful vine to grow over a deck railing or over an evergreen shrub near a terrace. Place so that viewers can look up into the lovely, nodding flowers. Germ: BH; BC; NST. Self-sows somewhat but not invasively. Doering.

Col1400 Collinsonia canadensis. Per. PtShade. 2-4 x 1-3'. Late Summer. Zone 4–8.

> 32-SE15-106a Germ: CMS, Cycle. BC, NST. Plant Delights.

Col1550 Collinsonia japonica 'Snow White' (syn. Keiskea japonica). SNOW WHITE JAPANESE COLLINSONIA. Per. PtSun. 3 x 5'. Late Summer. Zone 5a-8b.

> 32-White blooms. AKA Keiskea japonica. Germ: BC, SS, NST, RTp. Plant Delights.

Con0700 Conoclinium coelestinum. BLUE MISTFLOWER. Per. Sun/PtShade. 24–36 x 6". Midsummer-Fall. Zone 5–8.

> **507-**Pale lavender blooms. This doesn't appear until late summer and is a welcome loose ground cover to a max of about 15". It is said to be invasive but in a contained space has not invaded more vigorous plants to one side of it. It used to be called a eupatorium. Germ: NST. Kolo.

Con1050 Consolida ajacis (syn. C. ambigua). LARKSPUR. An. Sun. 4 x 1'. Late Spring–Summer.

> 9976-Mostly purple, blue, gray blooms. Germ: NST. SIS. Wave Hill Gardeners.

Con1100 Consolida ajacis (blue) (syn. C. LARKSPUR. An. Sun. 4 x 1'. Late Spring-Summer.

> 199-Blue blooms. This classic annual self-sows and blooms in June on tall 5-6' plants. I think the blue strain is the most useful color, complementing everything else. Sow late winter in situ. Cresson.

Con1800 Consolida regalis. ROYAL KNIGHT'S-SPUR, FIELD LARKSPUR, FORKING LARKSPUR. An. Sun. 18-24". Late Spring/Early Summer.

> 9976-Blue/purple blossoms on a self-sowing 2' annual. Nice filler and very long bloom season. More airy and loose than other larkspurs. Wave Hill Gardeners.

Con2700 Convolvulus laciniata. PerVine. 6–8'. Late Summer.

507-Mottled purple, white, and green. A must. Will climb modestly to 6-8'. Its strange pendulous bells appearing in mid to late summer. Kolo.

Cor1400 Coreopsis grandiflora 'Rising Sun'. TICKSEED. Per. Sun. 10 x 14". Midsummer.

> 9969-Yellow blooms. Small, great in front of the border. Drought tolerant. Germ: WMS: 14 d, W, L, 30 d. NST. Zatsick.

Cor1700 Coreopsis leavenworthii.

592-Gold blooms. Dainty airy see-through habit, 2' high. 2013-14 Seed Exchange discovery I plan to keep going. Germ: NST. Malocsay.

Cor1750 Coreopsis rosea. TICKSEED. Per. Sun. 1–2 x 1½–2½'. Summer. Zone 3–8.

3645-Pink blooms. Germ: W, BC, SR. Roskoph.

Cor1850 Coreopsis tripteris. TALL COREOPSIS. Per. 4-6'. Sun. Mid-Late Summer.

> 199-Masses of small yellow daisies on stiffly upright stems in August. Native and popular with goldfinches. Good at back of border or naturalized in a meadow. Cresson.

Cor1950 Coreopsis verticillata 'Zagreb'. ZAGREB TICKSEED. Per. Sun. $1-1\frac{1}{2} \times 1\frac{1}{2}$. Summer. Zone 3–9.

> 208-Bright yellow blooms in summer on a compact, upright, bushy plant. Dahlke.

Cor2000 Coriandrum sativum. CILANTRO, **CHINESE** PARSLEY. An. Sun. 3 x 2'. Spring-Fall.

> 475-Sweet and so strong. It takes the cold better than kale and parsley. Every home should have some. Coriander is the seed: the leaves are cilantro. Cilantro is only sweet for 1-3 wk in my experience, however I let mine go to seed firstly to have my crop continue to plant itself but also to harvest the coriander seeds for pickles, tea, soups, and you. I toss a few seeds in ideally every two weeks: whenever I find a bare spot. You gotta love it and for all those who hate it: it's been past its prime and tastes like soap. I don't like it then either. Germ: SIS, RTp, NST. 14 d. Get a patch started and your kitchen will sing with yummy dishes, as well as having cleansing health benefits. Cilantro stands up to first frosts and winters in situ starting up again in March. Enjoy. Kaplan.

Cor2700 Cornus elliptica (syn. Cornus angustata, Cornus kousa var. angustata). EVERGREEN DOGWOOD. Shrub. Sun/ PtShade.15-20 x 12-15'. Summer. Zone 7-9.

> 1999-Cornus elliptica is an evergreen to semi-evergreen dogwood that is native to China. It was introduced to the U.S. in 1980 by Ted R. Dudley of the U.S. National Arboretum. It is hardy in USDA Zones 6-8. Small tree blooms in early summer. The edible fruit, collected in late September or early November, is used in making jellies and jam. Germ: CMS: 90 d, Soak: 1 d, Cycle: Soak seeds overnight in warm water then cold, moist stratify for 90 d. Plants germinate when returned to 70°F in 21 d. Norfolk Botanical staff.

Cor2780 Cornus florida 'Cherokee Chief'. FLOWERING DOGWOOD. Tree/Shrub. Sun/PtShade. Spring.

> 1277-Reddish pink flowers. Germ: CMS 3mo. Pot up seeds and OW. Haas.

Cor3030 Cornus mas 'Variegata'. VARIEGATED CORNELIAN CHERRY. Tree. PtSun/PtShade. 15-25'. Early Spring. Zone 4-8.

1017-Yellow blooms on a very showy, variegated tree. Whitesell.

CORNELIAN Cor3050 Cornus **JAPANESE** officinalis. CHERRY. Tree.

3177-*Gibson*.

Cos2500 Cosmos sulphureus. YELLOW COSMOS. An. Sun. 4 x 1½'. Summer–Fall.

> 797-Orange flowers. Very free flowering. More delicate than the usual white and pink *C. bipinnatus*. Germ: NST; L: W. Robinson.

Cot0500 Cotinus coggygria 'Velvet Cloak'. **PURPLE** SMOKETREE. Shrub. Sun. 10–15 x 10–15'. Summer.

> 1277-Smokey pink flowers. Seedlings usually have purplish foliage, and fall foliage is gorgeous. Haas.

Cot1050 Cotoneaster salicifolius 'Henryi'. WILLOWLEAF COTONEASTER. Sun. 15 x 15'. Late Spring/Summer.

> 199-White blooms. Rare and impressive evergreen fountain-shaped shrub to 10+' tall and wide. Abundant bright red fruit in fall. Dry shade or sun. Introduced from England by Styer Nursery decades ago, but no longer available. Cresson.

Cra1270 Crambe maritima. SEA KALE. Per. Sun. 2-3'. Late Spring/Midsummer. Zone 5–9.

> 592-White blooms. Leaves very large, expansive—I remove those that that lose their luster. Large, long-lasting cloud of fragrant bloom in spring. Gently crack husk before sowing. Malocsay.

Cro1550 Crocus speciosus 'Cassiope'. FALL CROCUS. Bulb. Sun/Shade. 6". Fall. Zone 3a-10b.

> 199-Lavender-blue blooms. Bulb. Sun/DecShade. 6". Oct. The easiest fall-blooming crocus you could grow because it can be fairly prolific and seems less attractive to critters. Flowers deep lavender-blue with striking orange stigma. Grow among low perennial groundcovers or under deciduous shrubs, or even in a lawn! Cresson.

Cun1000 Cunninghamia lanceolata 'Glauca'. CHINA FIR. Tree Conifer. Sun. 60-80'. Zone 6-8.

> 199-A strikingly beautiful, statuesque, glaucous bluefoliaged evergreen tree. Better suited to our climate than blue spruce. Cresson.

Cup1350 Cuphea ilavea SrirachaTM Rose. An. Sun. 14–18 x 12– 14". Summer. Zone 9–11.

> 1277-Red blooms with purple center. This is a wonderful annual which will re-seed. Attracts bees, butterflies and hummers. I grow some in a pot into which I allow the seed to drop by bending the seedheads down. I let it grow in the pot and transfer it to wherever I want it later in the spring. Germ: OW. Haas.

Cup8000 Cupressus arizonica 'Silver Smoke'. ARIZONA CYPRESS.

> 208-Conifer with reddish brown peeling bark when young. Silver blue foliage. Drought tolerant. To 50'. Dahlke.

Cyc0700 Cyclamen coum (mixed forms).

45-Pink to white blooms. A wonderful plant for late winter, flowering February-April. Plant where you can see them. They may naturalize. Super foliage. Probably at least 5A hardy. Germ: Soak overnight; C; D; 2 yr. Grow with grit/gravel. Transplant after dormancy. Germination my be slow. Bartlett.

Cyc0800 Cyclamen coum (mixed leaves).

199-White blooms. Attractive mottled or patterned foliage and white flowers. Cresson.

Cyc1700 Cyclamen hederifolium. Per. Shade. 5 x 5". Fall.

45-Pink or white blooms. A truly wonderful fall-blooming geophyte for light to moderate shade. They need dry feet. May naturalize. Germ: Soak overnight; C; D; 18 mo. Sow with grower grit. Hold seedlings in pot until after first dormancy. For germination, see Genus Cyclamen: In Science, Cultivation, Art and Culture, by Brian Mather.

Cyc1800 Cyclamen hederifolium (silver leaves with pink blooms).

> 3321-'Silver Cloud'. Fall, pink blooms with silver leaves. Zone 5 hardy. Germ: Soak: 1 d, WMS, W, D. 90 d. Perron.

Cyc1900 Cyclamen hederifolium (well-marked leaves with pink flowers). Per. Shade. 5 x 5". Fall.

> **3321-**Pink blooms. Arrow-shaped silver leaves. Germ: Soak: 1 d, W, D, SR. Surface sow, cover with grit. Zone 5 hardy. Perron.

Cyc2150 Cyclamen hederifolium var. hederifolium f. albiflorum 'Tilebarn Helena'. Per. Shade. 5 x 5". Fall.

> 3321-White blooms. Arrow-shaped silver leaves. Germ: Soak: 1 d, W, D, SR. 90 d. Zone 5 hardy. Perron.

Cyc3020 Cyclamen persicum hybrid. FLORIST'S CYCLAMEN. TenPer. Bulb/Houseplant. Sun/PtShade. 6 x 12". Winter.

> 45-Pink/white scented blooms. Elegant wild form. Very tender, otherwise easy. Germ: Soak: overnight. R, D. Bartlett.

Cyn2010 Cynoglossum amabile. CHINESE FORGET-ME-NOT. An. Sun/PtShade. 2 x 1'. Summer.

> 208-True blue flowers. Long blooming. Good pot plant. Germ: NST; 5d. Dahlke.

Cyp1000 Cypella coelestis (syn. C. plumbea). GOBLET FLOWER. TenBulb, Sun/PtShade. 3-4' x 3-6". Summer-Fall. Zone 7b.

32-Blue flowers. Germ: BC, SS, NST. *Plant Delights*.

Dan1050 Danae racemosa. Shrub. PtShade/Shade. 3 x 3'. Summer.

> 199-Insignificant blooms on a graceful evergreen perennial/shrub in the asparagus family. Bright red fruit in fall. Thrives in dry shade. Hardier than the books sav. Cresson.

> **522-**Greenish yellow bloom. Notable for its waxy green leaves. Evergreen with orange berries in the autumn. Favored by floral arrangers. Kushner.

Dar1000 Darmera peltata. UMBRELLA PLANT, INDIAN RHUBARD. Per. PtSun/Shade. 3 x 3'. Late Spring. Zone 5-7.

> 199-Pinkish white blooms. Per. PtSun/Pt/Shade. 3 x 3'. Late spring. Tall decorative flower stalks emerge before the umbrella-like leaves from thick ground-hugging rhizomes. For damp soils. Leaf stalks of this Pacific Coast native are edible. Cresson.

Das1550 Dasylirion wheeleri 'Apache Junction' KJS 334. DESERT SPOON, SOTOL. Per. Sun. 3–5 x 4–6'. Zone 6–10.

> 32-From wild collected seed from Kenton J Seth, from plants in Apache Junction, AZ. Germ: NST. Plant Delights.

Dat0050 Datisca cannabina. FALSE HEMP. Per. Sun. 5-6 x 3-4'. Summer-Fall.

> 118-Yellow blooms. An imposing herbaceous plant from India with graceful arching stems and finely divided foliage. A midsummer bloomer with ornamental tassellike yellow flowers in racemes. This herb yields a yellow dye often used for silks. We have enjoyed it in a pot and now love it in the garden. Sun. Germ: W, BC. Stonecrop Gardens.

Dat3150 Datura metel 'Black Currant Swirl'. ANGEL'S TRUMPET.

2515-Very dramatic purple and white flowers. *Doblmaier*. Dat3160 Datura metel 'Cornucopea'. ANGEL'S TRUMPET. An. Sun. 4 x 2'. Summer–Fall.

> 3006-Purple and white double (hose-in-hose) flowers. Will grow larger when planted out. Stems are a dark eggplant color. Grew 4' wide. Poor germination. Germ: NST; BC; BH, 2 wk. Mayer.

Dat3170 Datura metel 'Double Golden Oueen'. YELLOW ANGEL'S TRUMPET. An. Sun. 4 x 2-4'. Summer-Fall.

> 2515-Yellow, double flowers are attractive from midsummer to frost. Doblmaier.

> **590-**Pale yellow/creamy yellow (not gold). Hose-in-hose trumpet flowers are 6-8" long and 3-4" wide. Fragrant. Medium green, up to 12"-wide leaves. Takes 10-12 wk for seed to flower. Grown without any other daturas, so will likely be yellow. Germ: NST. Start early inside. Mahony.

Dat4000 Datura 'Evening Fragrance'. DOWNY THORN APPLE. Per. Sun/PtShade. 4–6'. Late Spring/Early Summer.

> 2515-Blue-green leaves and fragrant white flowers. Doblmaier.

Dau3000 Daucus carota. QUEEN ANNE'S LACE. Bien. Sun/ PtShade. 24–36 x 9–12". Summer. Zone 3–9.

> 5082-White blooms. Germ: SR, NST. Store seeds for up to a year in a baggie if not immediately planted after harvesting. Smith, C.

Dau3070 Daucus carota 'Purple Kisses'. PURPLE KISSES CARROT. An. PtShade/Sun. 40". Summer.

> 522-Mix of crimson and white, chocolate-colored blooms. Elegant umbellifer cowparsley-like flowers. Source: Derry Watkins' Special Plants Nursery. Kushner.

TWO-LOBED Dei0500 Deinanthe bifida. HYDRANGEA. Per. PtShade. 12–24 x 12–24'. Spring–Summer. 5024-White blooms. Germ: W, SS. Iroki Garden.

Del1750 Delphinium grandiflorum. BLUE BUTTERFLY. Per. Sun/PtShade. 15". Summer-Fall.

590-Pale layender blooms. *Mahony*.

Dia1550 Dianthus carthusianorum. CARTHUSIAN PINK, CLUSTERHEAD PINK. Per. Sun. 6 x 12"; to 30" in bloom. Summer-Fall.

> 199-Clusters of magenta pink flowers on upright foot high stems. Tolerates poor dry soils and likes lime. European mountain native. Cresson.

Dia2500 Dianthus deltoides. MAIDEN PINK. Per. Sun. 2½ x 2'. Summer.

> 199-Pink blooms. A low mat-forming perennial with deep pink flowers in spring. Easier to grow than many dwarf pinks. Cresson.

Dia 3000 Dianthus 'Feuerhexe' (syn. Dianthus gratian opolitanus 'Firewitch'). CHEDDAR PINK, MOUNTAIN PINK. Per. Sun. 6". Spring. Repeat Bloomer.

> 2937-Chedar pink blooms. Seed from 'Firewitch', produces dwarf to very dwarf plants with bloom colors ranging from pink to magenta to salmon. Bittmann.

Dia4650 Dianthus japonicus. Bien. Sun. 8–10". Spring–Summer. 9968-Pink blooms. A biennial with a glossy green evergreen rosette, winter color is burgundy. Flower spike to 18" in July. Sun to part shade, well drained soils. May spread by seed. Germ: W, BC, 21 d. Has self-sowed more in part shade or where seedlings get heat relief, i.e. in bed to thyme. Roper.

Dia4690 Dianthus knappii. WILD PINK, YELLOW CARNATION. Per. Sun/PtShade. 12–18". Midsummer/Early Fall. Zone 3–9.

> **592-**Sporadic small single blooms, quietly pretty, with minute detail best seen picked. As with many non-mat dianthus, its laggard fragility is provoking. I scatter seed in support of perennial uncertainty. Malocsay.

Dia4700 Dianthus knappii 'Yellow Harmony'. Per. Sun/ PtShade. 12–18". Midsummer/Early Fall. Zone 3–9.

> 2515-Yellow flowers in early to midsummer. Can take a drought tolerant location. Started from seed obtained from HPS/MAG seed exchange in 2016 and started to bloom the first yr. Germ: NST. Doblmaier.

Dia6700 Dianthus superbus var. longicalycinus. SUPERB PINK. Per. Sun/PtShade. 6-12 x 9-12". Summer. Zone 3-9.

> 2515-Purplish pink flowers. Germinated easily from seed obtained in the 2014-15 HPS Seed Exchange. The fringed flowers bloom from late July until frost. Germ: W, NST. Doblmaier.

Dic3010 Dicentra formosa f. alba. FRINGED BLEEDING HEART. Per. PtShade. 1–2 x 1–2'. Spring–Summer.

199-White blooms. Cresson.

Dig2500 Digitalis grandiflora. PERENNIAL FOXGLOVE, YELLOW FOXGLOVE. Per. Sun/PtShade. 1-1½ x 1'; from 2-3' tall in bloom. Late Spring-Summer.

> 215-Yellow blooms. Biennial. 30". Germ: SS; SIS, SR. DeMarco.

590-Pale yellow blooms. *Mahony*.

Dig3020 Digitalis lamarkckii. Per. PtShade. 3'.

592-No shy foxglove this—the full candelabra, sideshootwilling too. Some wild bee is nuts for it. Bloom akin to D. lanata but showier. Self-sowing welcome since it is most often biennial. Germ: NST. Malocsay.

Dig3050 Digitalis lanata. GRECIAN FOXGLOVE. Bien./Per. Sun/PtShade. 2-3 x 1'. Late Spring-Summer.

> 199-Small, waxy, ivory blooms born along one side of stem in June. Good dark green foliage. Cresson.

Dig3500 Digitalis lutea. STRAW FOXGLOVE. Per. PtShade. 6–12 x 12"; from 1–2' in bloom. Late Spring–Summer.

> **592-**Light yellow blooms, quiet, tall spikes of tiny bells. Does well in shade—even dry shade. Germ: NST. Steady self-sower. Malocsay.

797-Yellow flowers. Germ: BC; SIS. Robinson.

Dig4150 Digitalis purpurea 'Alba'. WHITE FOXGLOVE. Bien./Per. Sun/PtShade. 2 x 2'; from 3-6' in bloom. Summer.

797-Germ: BC; SIS. Robinson.

Dip1050 Dipsacus fullonum. TEASEL. Bien. Sun/PtShade. 7'. Summer-Fall.

797-Buff-colored flowers. Robinson.

Dis6650 Disporum uniflorum (syn. Disporum flavens). FAIRY BELLS. Per. PtShade. 18 x 12". Spring. Zone 4-9.

> 199-Chinese/Korean woodlander bearing yellow bells in May. 2' stems stand all summer, ending in yellow fall color. Self sterile so grow several seedlings together to get blue fruit. These were hand-pollinated between 2 clones. Cresson.

5024-Yellow blooms. Germ: OW. *Iroki Garden*.

***** Dolichos lablab. See: Lablab purpureus.

Dra0750 Draba arabisans. Per. Sun/PtShade. 4 x 8; to 10" in bloom. Spring.

> 199-White flowers. An eastern native, ideal for rock gardens, and tolerates our summers well. Self-sows moderately, so it stays around. Cresson.

Dra1000 Draba ramosissima. BRANCHED DRABA. Per. PtShade. 4 x 8". Spring. Zone 4a–7b.

> 199-White blooms. Mat-forming rock garden plant for part shade and well-drained alkaline soil. Southeastern native. Cresson.

Dro0500 Drosera capensis. CAPE SUNDEW. Per. Sun/PtShade. 1". Zone 3-8.

> 1114-Pink flowers standing 4–6" tall. Water with rainwater only, constant moisture. Native of South Africa. Germ: CMS, BH, SS, SR, 20-30 d. Aquascapes Unlimited.

Dro1000 Drosera filiformis var. filiformis. THREADLEAF SUNDEW. Per. Sun/PtShade. 6-8". Zone 3-8.

> 1114-Pink flowers with beautiful thread-like foliage. Upon maturity, this native Mid-Atlantic sundew is a must for every bog garden. Water with rainwater only, full sun, constant moisture. Germ: CMS: 30-40 d; BH; SS; 20-30 d. Aquascapes Unlimited.

Dro2000 Drosera intermedia. SPATULATE-LEAVED SUNDEW. Per. Sun/PtShade. 1-3". Summer. Zone 4-9.

> 3645-White blooms. Germ: CMS: 30 d, L, SS, NST. "The best medium for seedlings is finely milled peat moss mixed with an equal amount of clean, washed horticultural sand. You can use finely chopped, live green sphagnum also mixed with washed horticultural sand. Mix and water thoro Roskoph.

Dur1110 Duranta erecta 'Geisha Girl'. TenShrub. Sun/PtShade. 6'. Summer.

> 199-Purple/blue blooms. Nonhardy shrub with pendant racemes of white-edged, purple-blue flowers all summer followed by orange fruit. Good for standards, too. You can overwinter frost-free, semi-dormant. Cresson.

Ech0030 Echeandia texensis 'Loma del Potrero Cercado'.

32-Yellow orange blooms. Seed strain from plants collected originally from Loma del Potrero Cercado in Cameron Co, Texas in the Lower Rio Grande Valley. Remarkably hardy despite being from a zone 9b/10a. Germ: W, BC, NST. Plant Delights.

Ech0250 Echinacea purpurea. PURPLE CONEFLOWER. Per. Sun. 4 x 1'. Summer–Fall.

1020-Mauve-pink flowers. *Wiedorn*.

1277-Mauve pink. Attracts droves of butterflies. Haas. 507-A very attractive pink, fuller but slightly smaller than the species. Kolo.

Ech0500 Echinacea purpurea 'Alba'. WHITE CONEFLOWER. Per. Sun/PtShade. 3–5 x 3–4'. Summer–Fall.

1020-White flowers. *Wiedorn*.

208-White flowers. Germ: NST. Dahlke.

Ech1400 Echinacea CHEYENNE SPIRIT. CONEFLOWER. Per. Sun/PtSun. 1–2½ x 1–2'. Summer. Zone 4–9.

> 5082-Red and yellow blooms. Germ: CMS: 90 d. Cycle: cold then heat mat. W, D, 15 d. Store in a cool dry dark place. Moisten paper towel, place seeds on it, place in a baggie and refrigerate for 12 wk. Then sow 2 per pot. Keep moist—avoid overwatering. Smith, C.

Ech1450 Echinacea Sombrero Salsa Red = 'Balsomsed' (PBR) (Sombrero Series). RED CONEFLOWER. Sun. 18–24 x 22–24". Midsummer–Late Summer. Zone 4–9.

> 5082-Red blooms. Deer resistant. Germ: CMS: 90 d, W, D. Store in a cool dry dark place. Moisten paper towel and put seeds on it. Seal in a baggie in the refridgerator for 12 wk. Sow 2 seeds in each pot with a thin sprinkler of soil. Cover with a baggie and keep warm. Smith, C.

Ech3250 Echinops ritro. GLOBE THISTLE. Per. Sun. 2–4 x 1–3'. Summer, reblooms. Zone 3–9.

> 507-Steel blue flowers. A long-lived and beautiful perennial. Kolo.

> 926-Steel blue flowers. Taller 3-4'. Good back-of-theborder plant. Not as ferocious as most thistles. Flowers dry well. Self-sows. Germ: NST. Streeter.

Ele0750 Elephantopus species. ELEPHANT'S FOOT. TenPer. 9985-Jenkins Arboretum.

Els1050 Elsholtzia stauntonii. MINT BUSH. Per. Subshrub. Sun. 3–5'. Summer–Fall.

> 1277-Lavender flowers. Nice, little known shrub similar to caryopteris. Deadhead to prevent reseeding. Haas.

Emi2000 Emilia coccinea (syn. E. javanica). TASSEL FLOWER. An. Sun. 2 x 1'; to 3' in bloom. Summer–Fall.

> 9969-Red blooms. Germ: WMS: 7 d, W, BC, 14 d. NST. Zatsick.

Eng0500 Engelmannia peristenia (syn. Engelmannia pinnatifida). ENGLEMANN'S DAISY. Per. Sun. 2'. Spring-Summer. Zone 5–10.

> **592-**Bloomed first year from seed under lights in March. Self-reliant foliage, pleasantly informal yellow daisy and low stature make it easy to work with. Malocsay.

Enk1100 Enkianthus campanulatus. REDVEINENKIANTHUS, FURIN-TSUTSUJI. Shrub. Sun/PtShade. 6-10 x 4-6'. Late Spring. Zone 4–7.

> 1939-Blooms bell-shaped cream with a red vein, red wine-colored seed covers in the fall. An ericaceous shrub. Nice red fall color. Germ: BH; NST. Urffer.

Enk1700 Enkianthus perulatus. Shrub. 6'. Spring. Zone 6–9.

3001-The white-flowered form of enkianthus. Compact, deciduous, slow growing—eventually to 6'. Beautiful fall color of reds and oranges. It takes 6-8 yr to reach 4'+, but worth the wait. Germ: L, SS. Gregg.

Enn1000 Ennealophus euryandrus (syn. Herbertia euryandra, Alophia euryandra). ARGENTINE BLUE EURYANDRUS IRIS. TenBulb. PtShade. 12 x 15". Spring-Summer.

> 522-Blue flowers. No words can fully describe this charming iris that blooms for months in the rock garden. See Plant Delights' catalog for more details. Kushner.

Era4000 Eranthis hyemalis. WINTER ACONITE. Per. Sun/ PtShade. 3 x 2". Winter-Spring.

> 1939-Cheery bright yellow flowers, arrive soon after the snowdrops in February. Germ: BC, CMS, SIS, NST. They can grow into tubers or plant in undisturbed soils outside and leaves will open, but flowers take three years. Urffer. 2463-Yellow blooms. Germ: CMS. Nolan.

Eri1500 Erigeron pulchellus. Per. Sun. 4 x 6"; to 12" in bloom. Summer. Zone 2–8.

> 199-Lavender-blue blooms. This form originally from Lycoming County, PA has darker-colored flowers than 'Lynnhaven Carpet'. Cresson.

Eri1550 Erigeron pulchellus 'Lynnhaven Carpet'. ROBIN'S PLANTAIN, FLEABANE. Per. Sun/PtShade. 3 x 6; to 10" in bloom. Spring.

> 199-White-tinted, pale lilac flowers. New cultivar named in 2007 by Cresson from plants originating along Lynnhaven River behind Virginia Beach. Dry shade to sun, weed-suppressing, ground cover. Dark green, hairy rosettes spread by runners. Pale lavender daisies in May. Very hardy Eastern woodland native. Cresson.

Eri1600 Erigeron pulchellus 'Meadow Muffin'. Per. Sun/ PtShade. 3 x 6; to 10" in bloom. Spring.

> 199-White, tinted pink, daisies with yellow centers in May. Rare and adaptable dense stoloniferous ground cover for dry shade or sun with dark green rosettes of hairy foliage. Differs from 'Lynnhaven Carpet' by rounder leaves in tighter rosettes. Cresson.

Ery0360 Eryngium aquaticum. SWAMP ERYNGO. Per. Sun. 5 x 1'. Summer.

> 1114-Silver-blue flowers. Great in combination with Lobelia siphilitica. Germ: CMS: 30-40 d; W; SS; SR; 20–30 d. Aquascapes Unlimited.

> 1999-Silvery-blue, thistle-like flowers. Very architectural presence. The Xerces Society for Invertebrate Conservation rates this plant as having special value for pollinators, especially for native bees. In the wild this plant grows in bogs, marshes, and ditches. It tolerates saturated soils and periodic flooding. Prized by flower arrangers. Native to Eastern North America, it can be easily grown in average soil in Zones 6 to 8. Germ: CMS: 90 d. W, BC, RTp. Norfolk Botanical staff.

Ery1150 Eryngium eburneum (syn. E. paniculatum). SEA HOLLY. TenPer. Sun. 5-2'. Late Summer.

> **507-**Pale green, almost white blooms. This appeared on its own, don't ask me how. It has been growing in my garden for 4 yr now. Only last year could I identify it. It is precisely as photographed and described in Vol. 2 of Phillips & Rix. However it is described as tender there and this is thriving in my zone 7 garden, though I suspect my ground has not frozen during the last 4 yr. It is not unlike E. avavifolium, but clearly is not that. If the photo is correct, it is unmistakeably *E.eburneum*. Germ: I have no experience with germination except that a wayward seed did germinate in my garden. When I saw the straplike leaves with small spines on the edge I knew it was special. Over the years I have thrown various seeds here and there, but never knowingly of this. I would say it is more exotic and interesting than beautiful. Kolo.

Ery3600 Eryngium pandanifolium. PANDANUS ERYNGIUM, GIANT SEA HOLLY. Per. Sun/PtShade. 5 x 5'. Midsummer- Mid Fall. Zone 7a-9b.

> 32-Gray-green blooms on 5' plant. Germ: BC, SS, NST. Plant Delights.

Ery3750 Eryngium planum. SEA HOLLY. Per. Sun. 6 x 6"; to 30" in bloom. Summer-Fall.

> 1020-Steel blue blooms with blue spikey foliage. Germ: C. Wiedorn.

> 797-Small, silvery, steely blue, spikey flower heads add texture all summer. Germ: BC; W, 2-3wk; C, 3-5wk. Robinson.

Ery5250 Eryngium yuccifolium. RATTLESNAKE MASTER. Per. Sun. 4 x 2'. Summer/Fall.

> 1999-White, spherical, bristle-like blooms. Very architectural plant, attracts many pollinators, especially native bees and wasps. Foliage is decidedly yucca-like. Flowers dry well and add winter interest to the garden. Excellent cut flower. Hardy in Zones 4 to 9. Grows to 4' tall in full sun. Consorts well with echinacea. Germ: CMS: 60 d, Soak: 1 d, Cycle: Soak seeds overnight in warm water then cold, moist stratify for 60 d. Plants will sprout in 14-21 d when returned to 70°F. Light enhances germination. Norfolk Botanical staff.

> 2515-White blooms. Architechtural plant for the wetter areas of the garden. Doblmaier.

Ery5300 Eryngium vuccifolium 'Kershaw Blue'. BUTTON ERYNGO, RATTLESNAKE MASTER. Sun/PtShade. 30". Late Summer.

> 32-A1SC-002. Green blooms. Seeds from a plant from Kershaw, SC. This is a seed strain which comes true to type. Germ: BC, SS, NST. Plant Delights.

Ery5400 Eryngium x zabellii 'Big Blue'. SEA HOLLY. Per. Sun. 18-24". Summer.

> 199-Blue blooms. Most impressive 4"-wide, steely blue flowers. Good drainage and drought tolerant. Cresson.

Euo1050 Euonymus americanus. HEARTS A BUSTIN', AMERICAN STRAWBERRY BUSH. Shrub. PtShade. 6 x 5'. Spring.

> 199-Small, inconspicuous, greenish yellow flowers followed by strawberry-like fruit that splits open to show 4 or 5 red-orange seeds framed by the scarlet husk. Native understory plant. Cresson.

Euo1280 Euonymus atropurpureus. WAHOO, BURNING BUSH. Shrub. Sun/PtShade. 4-6'. Summer.

9985-Jenkins Arboretum.

Euo1550 Euonymus latifolius. Shrub. PtShade/Shade. 10 x 10'. Spring.

> **199-**Pale green flowers. Main feature of this plant are the clusters of large fruit that ripen to red in midsummer to early fall, then split to release seeds in orange flesh. Good for dry shade, but not wet, heavy clay. Very similar to E. planipes and E. sachalinensis. Cresson.

Eup0800 Eupatorium coelestinum. BLUE MIST FLOWER, HARDY AGERATUM. Per. Sun/PtShade. 2-3'. Late Summer-Fall.

> **543-**Pale blue flowers on 2–3' perennial. Benefits from support of neighboring plants if grown in partial shade. Germ: BC, SIS, NST. Leasure.

9985-Jenkins Arboretum.

Eup2100 Eupatorium fortunei variegated. VARIEGATED JAPANESE JOE PYE WEED. Per. Sun/PtSun. 3–5 x 3'. Summer. Zone 5–8.

> 199-Pink blooms. Japanese species with narrow, serrated leaves, irregularly edged white. Masses of pink flowers in late summer. Similar to 'Pink Frost'. Variegation may not come from seed but flowers are attractive and plant is less heavy and massive than our native Joe Pye weed. Cresson.

Eup2350 Eupatorium maculatum. JOE-PYE WEED. Per. 5-7 x 3'. Summer.

> **543-**Purple-pink flowers. Nice plant for the back of the border. Tolerates wet soil. Germ: W; BC; NST; 3 wks. Leasure.

Eup2420 Eupatorium purpureum. JOE-PYE WEED. Per. Sun/ PtShade. 6–7 x 3'. Summer–Fall.

507-Kolo.

Eup2490 Eupatorium rugosum. WHITE SNAKEROOT. Per. PtShade. 3 x 2-3'. Summer-Fall.

> **543**-White blooms. Native perennial 3' tall with clear white flowers. Blooms late summer through fall. Germ: W, BC, NST. Leasure.

Eup5570 Euphorbia corollata.: EUPHORBIA MARILANDICA, TITHYMALOPSIS OLIVACEA. Per. Sun. 1/2-3'. Early Summer-Early Fall. Zone 4–7.

> 965-White blooms. Very slow to get started and looks pathetic in pots (which is probably why it is hard to find in the trade), but once in the ground for a while, it is wonderful. Bloomed for 4 weeks in August this year, with grey-green foliage on 24" plants. A meadow plant, it likes lots of sun. Umphrey.

Eup6400 Euphorbia heterophylla. TenPer. Sun/PtSun. 24-36 x 24–36". Summer. Zone 9a–11.

> 199-Yellowish green flowers. The main attraction of this Central American annual is the red flower bracts, a muted version of its relative, the poinsettia. Vigorous bushy plants reach 2-3' in Sun/PtShade. Seed overwinters in the garden. Cresson.

Eup6900 Euphorbia marginata. SNOW-ON-THE-MOUNTAIN. An. Sun/PtShade. 3'. Summer-Fall.

> 592-White flowers with foliage edged white. Adds later summer freshness, good background. Self-sows in Pittsburgh. Transplants readily. Germ: NST. Malocsay.

Eup7100 Euphorbia myrsinites. SPURGE. Per. Sun 6–12 x 6–12'. Spring.

> 199-Yellow flowers. Low spreading short lived perennial with glaucous silver foliage. Tolerates very dry sites, requires good drainage, sun. Cresson.

***** Eurybia mirabilis. See: Aster mirabilis.

Eus0050 Euscaphis japonica. KOREAN SWEETHEART TREE. Tree. Sun/PtShade. 20 x 10-15'. Spring.

> 1999-White flowers followed by showy seed pods which open to reveal shiny black seeds. Choice, small-statured tree from Asia is hardy in Zones 6B to 8b. Mulch the seedbed to prevent weed growth. Remove mulch in second spring. Germ: Cycle: Scarification: Soak in water, let stand in water for 24 hr. Stratification: cold stratify for 60 d, warm stratify for 60 d, cold stratify for 60 d. Other: They can be fall sown for germination in 2 springs. Norfolk Botanical staff.

> 522-A multiple interest specimen tree. Slender growth habit, flowers turn to red fruits bearing black seeds. Seeds resemble those found on Euonymous carnosus. Germ: CMS, Scfy. Kushner.

Eus1000 Eustoma exaltatum.

32-Hays Co, TX Germ: SS, NST. Plant Delights.

***** Evodia daniellii. See: Tetradium daniellii.

Fra1000 Frangula caroliniana (syn. Rhamnus caroliniana). CAROLINA BUCKTHORN. Shrub. Sun/PtShade. 10-15 x 10-15'. Spring. Zone 5-9.

> 45-Greenish white blooms. Pink to red to black berries as they mature in autumn. Light textured with crops of red berries in fall. A pleasant native not as well known as it should be. Grown for foliage and berries. Germ: NST. 2 yr. Like many shrubs, slow to germinate. Bartlett.

Fre3000 Freesia laxa (syn. Anomatheca laxa). FALSE FREESIA. Per. Sun/PtShade. 8-15"; to 2' in bloom. Summer. Zone 8-10.

> 926-Tender South African bulb with small, pretty, red flowers and grassy foliage. Germ: NST. Streeter.

Fri2050 Fritillaria meleagris. GUINEA-HEN, FLOWERED SNAKE'S HEAD FRITILLARY. PerBulb. Spring.

> 199-Reddish purple blooms. One of the easiest fritillaries to grow in our climate. Has been long lived for me in rich soils that tend to stay moist longer into summer and root competition is not too severe. Cresson.

Fuc1800 Fuchsia regia. LADY'S EARDROPS. Woody. Sun/ PtShade. 2-3 x 2-3'. Summer-Fall.

> 199-Red and purple flowers. Another hardy species similar to *F. magellanica* but with narrow 4" glossy leaves and a graceful vase-shaped habit. Grow outdoors as a hardy perennial and mulch in winter for extra protection. Lots of tasty purple-black fruit. Cresson.

Gal2010 Galtonia candicans. Bulb. Sun. 2-3'; to 4-5' in bloom. 1017-Lovely summer-flowering white blooms. A wonderful summer-blooming bulb with a tropical appearance and a nice fragrance. Long-lived and desirable. Reliably hardy for me. Whitesell.

Gel1050 Gelasine elongata. GELASINE. Per. Sun/PtShade. 2'. Early Summer.

> 1999-Bright intense blue, iris-like blossoms. South American irid has pleated, gray-green foliage and striking blue or violet flowers from late April thru June. Easy to grow and pest free, it is hardy from Zone 7 thru 10. Inflated seed pods add interest to the plant. Germ: Soak: 24 hr. Soak in warm water for 24 hr then sow at 70°F for germination in 4-6 wk. W. Norfolk Botanical staff.

> 32-Purple/bright blue flowers. Germ: BC, NST. Plant Delights.

Gen0500 Gentiana andrewsii. BOTTLE GENTIAN, CLOSED GENTIAN. Per. Sun/Pt.Shade. 2' Summer-Fall.

> 1607-Dark blue flowers. I haven't started this one from seed, but CMS 60 d is recommended. Germ: CMS 60 d. Jellinek.

> 199-Blue flowers. A treasured wildflower for partial shade in moist well drained soil. Cresson.

Gen1250 Gentiana asclepiadea. WILLOW GENTIAN. Per. 20-30". Late Summer.

> **208-**Blue-purple flowers in late summer. Arching stems with 2-3" long willowlike leaves and clusters of 2-3 flowers at nodes, 20-30" tall. Dahlke.

Gen2190 Gentiana makinoi. ROYAL BLUE GENTIAN. Per. Sun/PtShade. 18-24". Late Summer/Early Fall.

208-Dahlke.

Gen2470 Gentiana saponaria 'Rockford'.

32-Germ: SS, NST. Plant Delights.

Ger2500 Geranium maculatum 'Espresso'. PtShade. 18".

199-Reddish purple foliage, especially in spring, and deeper pink flowers distinguish this form of our native wildflower. Cresson.

Ger3800 Geranium pratense. Per. Sun. 18 x 18"; to 30" in bloom. Summer.

> 199-Blue blooms. 2' Eurasian perennial with blue flowers in June. This species is the great grand-daddy of most blue hybrids. Let it naturalize. Cresson.

Ger3980 Geranium pratense var. striatum 'Splish Splash'.

2515-Violet-speckled pure white flowers. Definitely a different perennial geranium. Doblmaier.

Gil1000 Gillenia stipulata. AMERICAN IPECAC. Per. PtShade. 2 x 1'. Spring–Summer.

118-White blooms. A Southeastern United States native, producing loose sprays of starry white flowers atop wirey, red stems in midsummer. Finely serrated, large, trifoliate leaves have distinctive prominent stipules. Will tolerate a drier site than G. trifoliata. A good fall leaf colour of rich red and bronze with persistent red calyces. Well-drained soil. Sun/partial shade. Germ: WMS, Cycle: Warm, moist (64-72°) for 2-4 weeks followed by a cold period (25-39°) for 4-6 weeks. Once seeds germinate, keep pans cool (41–54°). BC. Stonecrop Gardens.

Gla0090 Gladiolus 'Boone'. PerBulb. Sun. 3'. Summer.

592-Yellow, shading into peach, quite variable blooms. Called 'Boone' by HPS some years back. Hardy in Pittsburgh, though I take some in to be sure. Picking prompts smaller scapes lower down. Cormlets should bloom in two years. Malocsay.

Gla0550 Gladiolus cross. PerBulb. Sun. 3'. Summer.

45-Various dark reds with white blooms in winter. An easy strain of winter-flowering gladiolus, hybrid of Gladiolus huttonii x tristis. They seem a bit more robust than better known hybrids. Germ: W, L. Bartlett.

Gla0845 Gladiolus murielae (syn. Acidanthera bicolor, Gladiolus bicolor, Gladiolus callianthus). SWORD LILY, PEACOCK ORCHID. TenCorm. Sun. 3-4'. Late Summer-Fall.

> **592-**Lightly fragrant white blooms with purple patches inside. Foliage upstages flowers dramatically. Scapes continue developing bloom in a vase. Cormlets provided should bloom in two years. Malocsay.

Gla0980 Glaucidium palmatum. JAPANESE WOOD POPPY. Per. PtShade/Shade. 18-24 x 15-18'. Spring.

558-Light purple flowers. Copious purple flowers light up woodland in May/June. No pests and very hardy (Zone 4). Germ: W; NST. Lewis.

Gla1050 Glaucium flavum. HORNED POPPY. Per. Sun. $\frac{1}{2}$ x 1–2'; to 1" in bloom. Summer.

199-*Cresson*.

9968-Yellow blooms. Deeply cut silver-gray foliage with undulate margins makes 18" mounds. Yellow poppy-like flowers late May through June. Full sun, poor and dry soils. Germ: CMS, 14 d. Roper.

Gom0400 Gomphocarpus physocarpus (syn. Asclepias physocarpa). PUFFER FISH MILKWEED, SWANPLANT. An. Sun/PtShade. 4–6 x 2'. Summer.

> 592-White flowers a footnote to pod appeal—light green poufs ornamented here by attentive harlequin bugs. Also good crop of monarch caterpillars. Awkward height needs mixing in a tall border. A weed for dedicated ecofreaks. Germ: NST. Malocsay.

> 627-White blooms. This tall slender plant with small ovoid leaves produces asclepius-like, white flowers which mature into intriguing light green balloons, covered with little dark fibers. They are host to both Monarch caterpillars and butterflies. Germ: Soak: 1 d. 7 d. Soak and sow seeds 2 mo before last frost, so that the plants will have time to flower and produce these interesting lime-green balls. McShane.

Gom1080 Gomphrena species. GLOBE AMARANTH.

590-Purple flowers. Up to 18–24" tall in flower. *Mahony*. Gos0080 Gossypium herbaceum 'Nigra'. LEVANT COTTON, BLACK-LEAVED COTTON. An./TenPer. Sun. 2-21/2 x 11/2-21/2'. Summer-Fall.

> 522-Deep burgundy hibiscus-like blooms on plant with black foliage and stems. When balls appear at summer's end, white cotton appears. Kushner.

Gos0550 Gossypium thurberi 'Mt. Lemmon'. Per. Sun/PtShade. 4'. Zone 8-10.

32-Germ: D, NST. *Plant Delights*.

Hab2550 Habranthus robustus 'Russell Manning'. Bulb. Summer.

> 522-Large lavender pink blooms are horizontal and trumpet-shaped on this rainlily. I grow in pots. Kushner.

Hab2750 Habranthus tubispathus (syn. H. andersonii). RAIN LILY. TenBulb. Sun. 6 x 3"; to 8" in bloom. Summer.

> **1999-**Yellow flowers with burnt orange streaks. Native to Texas and Florida, bulbs bloom after drenching summer and fall rains. Very showy when planted in groups. Hardy in Zones 7a to 10b. Germ: Sow immediately upon receipt. W, BC. Norfolk Botanical staff.

Hel0750 Helenium 'Red Jewel'. SNEEZE WEED. Per. Sun. 3 x 1'. Summer.

> **592-**Rusty red with dusting of yellow effect of anthers I find attractive even as blooms fade. Very prompt increase from divisions. I'm shifting most to "meadow" searched incessantly by various seed-loving sparrows.

Hel1400 Helianthus giganteus. GIANT SUNFLOWER. Per. Sun. 10 x 1'. Summer/Fall.

> 1277-Yellow flowers. Plant this perennial sunflower in a wild garden as it spreads rapidly. I cut it off in summer to keep shorter; it then blooms later. *Haas*.

> 199-Light lemon yellow flowers. Clusters of daisy-like flowers on tall stems in September. Perfect for moist meadow or back of border to follow summer composites. Loved by goldfinches. Better behaved than 'Lemon Queen', not expanding by rhizomes. Cresson.

Hel1600 Helianthus grosseserratus. Per. Sun/PtShade. 15 x 4'. Fall.

> 199-Bright yellow, October bloom. Reputedly can reach an amazing 15-20'. Branched clusters of daisies 2-3" diameter. Perfect in a moist meadow among tall perennials or as a garden statement. This form originated in a ditch in Mississippi. A goldfinch favorite, making this seed difficult to collect for you! Cresson.

Hel1900 Helianthus salicifolius. WILLOW-LEAVED SUNFLOWER. Per. Sun. 3–5 x 3'. Late Summer.

1865-Pale yellow blooms. Germ: W, D. Bennett.

Hel3770 Helleborus 'Rachel' (Spring Promise Series). LENTEN ROSE. Per. PtShade. Winter/Early Spring.

> 3321-Violet blooms. Germ: CMS: 90 d. Soak: 1 d. Cycle. R, W. Most stored in perlite. 1 yr. Zone 5 hardy. Store moist at room temp until ready to germinate. Then refrigerate or leave outside in winter. Recycle cold to warm and back for up to a yr. Perron.

Hel5450 Helleborus foetidus (Hungarian form). BEARPAW STINKING HELLEBORE. Per. Sun/PtShade. 2½ x 1½'...

> 199-Greenish flowers with a red edge. Characterized by glaucous foliage and longer, narrower leaf segments. Native near Sopron, Hungary. Cresson.

Hel5470 Helleborus foetidus 'Pontarlier'.

199-Green flowers. This seed strain from England is distinguished by having large serrated leaves. Cresson.

Hel7550 Helleborus x hybridus 'Sea Green'. LENTEN ROSE. Per. PtSun/PtShade. 12 x 18". Early Spring. Zone 4-9.

> 199-Green blooms. Per. PtSun/PtShade. 12 x 18". Early Spring. I will only say that this plant is a seedling in my garden, noteworthy for the intriquing sea-green color of the flowers and how they combine with the foliage, in a way I can't explain. Subtle and enchanting, drawing my eyes each year. Who knows what you will get? Cresson.

Hel7790 Helleborus multifidus subsp. bocconei. Per. PtSun/ PtShade. 12 x 18". Spring.

> 199-Green blooms. This subspecies has more leaf segments than many types. From southern Italy, but perfectly hardy. Cresson.

Hel7800 Helleborus multifidus subsp. istriacus.

199-Light green blooms. Second generation from wild collected seed in Slovenia. 10-25 leaf segments. Cresson.

Hel7850 Helleborus niger. Per. PtShade. 1 x 1½'. Winter-Spring. 199-White flowers. Remarkable for early bloom in January-February, weather permitting. Surprisingly tough. In mild winters, this plant is a spectacle in mid January. In colder years, it will bloom later. Germ: May be a year from seed. Cresson.

Hel8150 Helleborus niger 'Potter's Wheel'. CHRISTMAS ROSE. Per. PtShade. 1 x 1½'. Winter-Spring.

> 522-Lovely, white flowers that fade to pink. Germ: Last January, before she died, I wrote to Judith Tyler of Pine Knot Farms regarding storing hellebore seed in the fridge. She responded that she stores hers in perlite because vermiculite is tricky—too much and it turns into a slimy mess, too little and it is just dust. Kushner.

Hel8200 Helleborus niger (semidouble form). CHRISTMAS ROSE. Per. PtShade. 1 x 1½'. Winter-Spring.

> 199-White flowers. Well formed semidouble flowers with the nectaries transformed into a neat central ring of white petaloides. Cresson.

Hel8600 Helleborus orientalis subsp. guttatus. LENTEN ROSE. Per. PtShade. 1½ x 1½'. Winter/Spring.

199-White, cream, pink, or maroon flowers, generously spotted. Green nectaries. Seedlings of this group are always of good quality. Cresson.

Hem1020 Hemerocallis 'Corky'. DAYLILY. Per. Sun/PtShade. 2'. Summer. Zone 4a–9b.

> 84-Yellow flowers. From hybrid parent, which is my favorite small daylily, with mahogany-striped, yellow flowers. Bowditch.

Hem2450 Hemerocallis hybrid. HYBRID DAYLILIES. Per. Sun. 2–3 x 2'. Summer.

> 507-Diploid hybrid. Mix of small, mostly gold and yellow, diploid hybrids. A vigorous plant, long blooming with nice-looking, 2", well-formed trumpets, various heights. Kolo.

Hem2850 Hemerocallis middendorffii. DAYLILY. Per. Sun. 15 x 18; to 30" in bloom. Summer.

> 507-Gold flowers. Nice species daylily with small, beautifully formed trumpets. Deadhead daily in the morning for best display. I sometimes confuse it with *H*. longituba but I'm almost certain this is the correct name. They are in close proximity and labels long gone. Of the two plants, this is the more vigorous. *Kolo*.

Hem3000 Hemerocallis mix. HYBRID DAYLILIES. Per. Sun. 2–3 x 2'. Summer.

> **507-**DIPLOID HYBRIDS. Golds, yellows, and bicolors. The classic old-time garden hybrids in typical flower size and height. Kolo.

Hem3650 Hemerocallis 'September Sun'. DAYLILY. Per.

200-Yellow daylily flowers. Parent is a 6', very lateblooming daylily (August-October). Germ: D; SR. Creveling.

Hem3800 Hemerocallis 'Stella de Oro'. DAYLILY. Per. Sun. 12 x 18'. Summer.

> 5082-Yellow blooms. I believe the daylilies are 'Stella D'Oro'. Germ: 35 d. Store in paper envelope in a cool dry place. Late winter put seeds between damp paper towels in a plastic baggie and refrigerate for 4 wk. Then plant seeds in pots and until tall enough to plant in garden. Smith. C.

Hem4000 Hemerocallis thunbergii. THUNBERG'S DAYLILY. Per. Sun. 3½ x 3'. Summer.

> 199-Golden yellow flowers. Blooms in August, later than most hybrids. Foliage holds up all summer. A good landscape plant. From Korean Collection. Cresson.

Hep1000 Heptacodium miconioides. SEVEN-SON FLOWER TREE.

> 1277-White flowers. Large shrub to 15'; mottled bark; fragrant blooms; red calyxes in October look like flowers; sow seed when fresh. Germ: OW. Haas.

Hes1050 Hesperis matronalis. DAME'S ROCKET, SWEET ROCKET. Bien./Short-lived Per. Sun/PtShade. 8 x 10"; 30-36" in bloom. Late Spring-Summer.

> 1918-Purple (occasionally white) blooms. Dame's rocket. Many small purple fragrant flowers in racemes on 2-4' stems in May. Biennial. Eurasian and considered invasive in some parts of the country. Full sun to part shade. Carey.

> **522A-**Purple blooms on a hardy biennial. 1–3' x 1–2'. Blooms April-May. Good cottage plant. *Kushner*.

> **522B-**White blooms on a hardy biennial. 1–3' x 1–2'. Blooms April-May. Good cottage plant. Kushner.

Heu1050 Heuchera americana 'Dale's Strain'. Per. PtShade. 10 x 12"; to 1½' in bloom. Early Summer.

> 1277-Off-white flowers. Lovely variable leaf, veined in silver. Not a favorite of deer. *Haas*.

Heu2800 Heuchera villosa. HAIRY ALUMROOT. Per. Sun/ PtShade. 1½ x 1'; to 2' in bloom. Late Summer–Fall.

> **543-**Dark Form. White flowers. Velvety leaves that are rusty/gray, low to ground, still blooming in November. Germ: L; NST; 10-21 d. Leasure.

Heu2900 Heuchera villosa 'Purpurea'. NATIVE CORAL BELLS. Per. PtShade. 1 x 1'. Summer–Fall.

318-Creamy, off-white flower. Takes drought well.

Hib0300 Hibiscus coccineus. SWAMP HIBISCUS, SCARLET MALLOW. Per. Sun. 5–10 x 3–4'. Summer–Fall. Zone 6a–9b.

> 2515-Red blooms. Great perennial for a wet, sunny spot. The red flowers are a showstopper in August and September. Doblmaier.

3645-Red blooms. Germ: Scfy, BH, W, NST. Roskoph. 9985-Jenkins Arboretum.

Hib0350 Hibiscus coccineus 'Albus'. WHITE TEXAS STAR HIBISCUS, Shrub, Sun/PtShade, 4–10 x 3–4', Summer,

> 1999-Pure white, star-shaped flowers with a central staminal column. Rare white-flowered form of our native H. coccineus, comes true from seed. Attracts butterflies and wasps. Performs best in moist soil. Grows 4-6' tall in sun, is deer and humidity tolerant. Germ: Soak: 1 d. Cycle: Soak seeds overnight in warm water then sow at 75-80°F, expect germination in 14-25 d, BH, 25 d. Norfolk Botanical staff.

> 2515-Lovely, white-flowered form of the straight species. Germ: NST. Doblmaier.

Hib1850 Hibiscus militaris. ROSE MALLOW. Per. Sun/PtShade. 199-Light pink flowers. A native that is ideal for naturalistic plantings, especially in wet soils. Distinctive three-lobed leaves. Long bloom in midsummer. Cresson. 2515-The tall 5-6' pink flowers remain upright through the summer and early fall. Germ: NST. Doblmaier.

Hib2000 Hibiscus moscheutos (syn. Hibiscus palustris). PINK ROSE-MALLOW. Per. Sun. 5+'. Late Summer.

> 9985-Pink or white blooms. Attracts hummingbirds. Germ: Scfy. We winter sow ours, but cold period not required. Jenkins Arboretum.

Hib2150 Hibiscus moscheutos subsp. palustris. MARSH MALLOW. Per. 5 x 5'. Summer.

> 199-Pink flowers. Plant in your garden or naturalize in wet areas. Minimally damaged by caterpillars compared to many other species and hybrids. Cresson.

> **2515-**Pink flowers that provide a backdrop to my garden. Germ: NST. Doblmaier.

HIB2795 Hibiscus syriacus WHITE CHIFFON. ROSE-OF-SHARON. Shrub. Sun/PtShade. 8 x 4-6'. Summer. Zone 5-8.

> 208-White, double blooms in late summer and fall. Flowers on new wood; cut back in spring. Cuttings root easily. Better than H. 'Diane'. Dahlke.

Hie0500 Hieracium maculatum. HAWKWEED. Per. Sun. 8–12 x 8–12"; 1–3' in bloom. Summer.

> 199-Small yellow, dandelion-like flowers on branched wiry stems above brown-mottled leaves. Naturalizes in rocky areas. Cresson.

Hie0600 Hieracium pannosum. HAWKWEED. Per. Sun/ PtShade. Summer.

> 199-Yellow flowers. A unique and attractive hawkweed with wide felty gray foliage, almost like stachys, and yellow daisies in summer. Not a typical hawkweed since it lacks a basal rosette and runners, so is better behaved. Provide a dryish part shade to sunny location. Cresson.

Hip1100 Hippeastrum hybrid. AMARYLLIS. TenBulb. 2 x 1½'; from 2–6' in bloom. Spring.

> 507-A new red one, excellent shape blossom and a fine true red, grown in isolation and selfed, if that makes a difference. My foolproof method: after bloom when the weather warms put outside in a sunny spot, water well. Indoor foliage will yellow but new leaves will appear. In autumn, take it in and hold back water. Let it die down completely and hold in a darkened (this may be just superstition) place. When new shoot(s) appear, water and place in good light (direct sun not necessary.) Bloom will generally follow the leaves. I've kept them blooming for 10 yr sometimes. Kolo.

Hos0630 Hosta 'Empress Wu'. HOSTA. Per. PtSun/Shade. 4 x 4'. Summer. Zone 3–9.

> **3006-**White blooms. The Empress is one of the world's largest hosta plants. But she is a complex hybrid so the seeds are for those of you who want to have a little hosta fun and know not to expect juvenile royals. Mayer.

Hos1300 Hosta kikutii var. yakusimensis. Per. PtShade/Shade. $1-1\frac{1}{2} \times 2$ '. Summer.

> 199-Lavender flowers. One of the most drought tolerant and latest blooming (late September) hostas. Long, narrow, pointed, glossy leaves even look good planted in a dry wall. Cresson.

Hos2400 Hosta tardiflora. Per. PtShade. 6 x 10; to 8" in bloom. Fall.

> 199-Rich lavender flowers perfectly complement foliage color in October. An elegant species with glossy, dark green, pointed, firm textured foliage. Cresson.

Hyd1450 Hydrangea arborescens subsp. radiata. SMOOTH HYDRANGEA. Shrub. PtShade. 5-6 x 6-8'. Summer.

> 199-White flowers. A desirable but scarce subspecies distinguished by felted, gray, stellate hairs beneath the leaves that give a silvery appearance. Lacecap flower heads. Toughness of the species. Cresson.

Hyd1650 Hydrangea aspera 'Mauvette'. Shrub. Sun/PtShade. 10 x 10'. Summer.

> 199-More deeply lavender than 'Macrophylla'. In the Villosa Group of *H. aspera* with smaller leaves, but still dramatic. Cresson.

Hyd2300 Hydrangea heteromalla. WOOLLY-LEAVED HYDRANGEA. Shrub. Sun/PtShade. 10 x 10'. Spring.

> 199-Large spreading shrub from the Himalayas with large lacecap flowers in late May-June. Seldom seen in local gardens. 10' tall and wide. Germ: SIS. Cresson.

Hyd2400 Hydrangea heteromalla Bretschneideri Group. Shrub. Sun/PtShade. 15 x10'. Summer.

> 199-Large shrub with large white lacecap flowers in early summer. Similar to H. heteromalla but has more pronounced exfoliating bark. From Rick Lewandowski's collection for Morris Arboretum near Beijing, China. So is quite hardy and grows well here. Cresson.

Hyd2500 Hydrangea hirta. Shrub. PtShade/Shade. 4'. Late Spring/Early Summer.

> 3001-All fertile, white blossoms. Dark green leaves, deeply incised. Mixes well with H. arborescens in the woodland garden. Germ: W; L, SS, 21 d. Germinate "under glass". Gregg.

Hyd3650 Hydrangea quercifolia 'Little Honey'. LITTLE HONEY OAKLEAF HYDRANGEA. Shrub. PtShade. 3-4'. Summer. Zone 5–9.

> 3001-White blossoms. Seed is from 'Little Honey', a small, compact yellow-leafed form of Oak Leaf Hydrangea. Not all seedlings will be yellow-leafed, but still make a nice smaller hydrangea. Gregg.

Hyd3670 Hydrangea quercifolia 'Ruby Slippers'. OAKLEAF HYDRANGEA. Shrub. Sun/PtShade. 3-4' x 3-5'. Summer. Zone 5–9.

> 1277-White blossoms. The Dept. of Agriculture, which hybridized this short cultivar, encourages gardeners to grow the seed and report the results back to them. Sow the seed on peat moss in a flat on a heat mat in mid-March, do not cover. They sprout like grass and grow on well. This cultivar has outstanding fall color and grows to just 3-4'. Germ: L. Haas.

Hyd4000 Hydrangea serrata 'O-amacha Nishiki'. Shrub. PtSun/ Shade. 3½ x 3½'. Summer. Zone 6–9.

> 199-Blue blooms. Leaves strikingly variegated with creamy yellow speckles, reddish venation and midrib, and red petioles. Blue lacecap flower heads. Variegation may come true from seed. If not you can make tea from the dried leaves of the variety oamacha as the Japanese do. Cresson.

Hyd4030 Hydrangea serrata (early light blue). Shrub. Sun/ PtShade. 4 x 4'. Summer/Fall.

> 199-Light blue flowers. Earlier blooming, lighter blue. A much admired color on a well formed, compact plant. Evenly moist soil. This is called H. macrophylla var. megacarpa by Ohwi in Flora of Japan. It is the predominant wild form on Hokkaido. (H. serrata is considered a variety of H. macrophylla by some botanists.) Cresson.

Hyd5000 Hydrangea sikokiana. Shrub. PtShade/Shade. 4-6'. Late Spring-Early Summer.

> 3001-Large white lacecap inflorescence. Japanese woodland hydrangea, limited distribution. Requires supplemental water during dry periods. Germ: W; L, SS. Germinate "under glass". Gregg.

Hyp1250 Hypericum frondosum 'Sunburst'. GOLDEN ST. JOHN'S WORT. Shrub. Sun/PtShade. 2-4 x 2-4'+. Summer.

> 199-Yellow blooms. Deciduous native rounded shrub with blue-green foliage and reddish brown exfoliating bark. Large, bright yellow flowers May-June, 3–4 x 3–4'. Sun/PtShade, drought tolerant. Tetraploid cultivar that should come true from seed. Cresson.

> 2515-Started this from HPS seed three years ago and it finally bloomed! Well worth the wait with stunning yellow flowers. I grow my plant in wetter soil than most plant descriptions state it should be in. Doblmaier.

Hyp1350 Hypericum henryi subsp. henryi. ST. JOHN'S WORT. Sun/PtShade. 4 x 5'. Summer/Fall.

> 199-Bright yellow flowers. Large flowers similar to 'Hidcote', but with a taller, graceful, upright, arching habit. Repeats. Admired in England, should be more popular here. Cresson.

Hyp1600 Hypericum kalmianum 'Blue Velvet'. JOHNSWORT. Shrub. Sun/PtSun. 2-3 x 3-4'. Summer . Zone 4-10.

> 199-Yellow blooms. Compact dome of blue foliage and small yellow flowers through much of summer. Tough native shrub for heat and drought. Cresson.

Hyp1850 Hypericum latisepalum. Shrub. Sun. 5–6 x 5–6'. Summer. Zone 4–8.

> 199-Bright yellow flowers. Rare and spectacular arching shrub with large 2" flowers for over a month. Suffers in hard winters. My plant from seed collected by National Arboretum in Yunnan Province, China as SABE 24A. Cresson.

Hyp2450 Hypericum tomentosum. ST. JOHN'S WORT. Per. Sun. 1 x 2'. Summer.

> 199-Yellow flowers. Many small flowers over long time in summer. Gray foliage. Flops in rich soil, but great in poor soil or wall crevice. Plant originally from Tony Avent. Cresson.

Hyp5000 Hypoxis hirsuta. YELLOW STAR GRASS. Bulb. Sun/ PtShade. 6-8". Summer.

> 199-Branched stems with small bright yellow starry flowers sporadically through summer, narrow foliage. Easy to grow in sunny or shaded rock garden with minimal competition where it will self-sow. Native throughout eastern N. Am in dry woods. Cresson.

Hyp6010 Hypoxis rooperi. STAR FLOWER, APE'S ARMPIT. TenPer/Per. Sun/PtShade. 1 x 2'. Fall.

> **592-**Bright yellow flowers, a few at a time, summer-fall. RHS dictionary says difficult, resenting disturbance. Pot plant for me, dry overwinter in cool cellar. Odd foliage triangulation has grown on me. Malocsay.

Ibe1050 Iberis sempervirens. EVERGREEN CANDYTUFT. Per. Sun/PtShade. 1 x 2'; Spring.

> **199-**White blooms. A variable perennial, I prefer to grow the more compact forms and sheer them after bloom to keep them neat for years. Cresson.

Ide2010 Idesia polycarpa. Tree. Sun/PtShade. 40 x 40'. Summer. 1999-Small yellowish-green fragrant flowers blooms. Dioecious, fast-growing Asian tree noted for its large, 10" cordate leaves, fragrant yellow-green flowers in panicles in June, followed by clusters of small red berries in autumn and winter. The Igiri Tree is hardy zones 5 to 9. Good choice for the south because it actually prefers heat and humidity. Germ: CMS: 30 d, Soak: 1 d, Cycle: Soak seeds overnight in warm water then cold, moist stratify for 30 d; germination commences when seeds are returned to 70°F in 21 d. Norfolk Botanical staff.

Ile0450 Ilex decidua 'Warren's Red'. WARREN'S RED POSSUMHAW HOLLY. Shrub. Sun/PtShade. 4-12'. Spring. Zone 5–9.

> **522-**Scarlet/red berries on an upright, deciduous holly. Source: Woodlanders Nursery. Kushner.

Ile0950 Ilex pedunculosa. LONGSTALK HOLLY. Shrub. Sun/ PtShade. 15'x10'. Zone 5.

> 199-Spineless evergreen holly from China/Japan. Prominent red fruit hangs on long stalks among the leaves. Zone 5 hardiness. Cresson.

Ile1500 Ilex verticillata 'Winter Red'. WINTERBERRY. Shrub. Sun/PtShade. 6–10 x 6–10'. Spring.

> 1277-Red berries. Shrub to 10'. Excellent for the winter color of the berries. Haas.

Ill1500 Illicium floridanum. FLORIDA ANISE-TREE. Shrub. 6-10'. Zone 6-9.

> 199-Red blooms. Good substitute for rhododendrons. Heavy flowering in May, continuing intermittently into fall. Cresson.

Imp1060 Impatiens balfourii 'Frosty'. TOUCH ME NOT. An. PtShade. 3 x 2'. Summer-Fall.

> 3436-Pinky lavender blooms. Frosted foliage form that popped up in the garden several years ago. Foliage looks its best in spring & early summer. Self sows. Scatter seed outdoors on mineral soil in fall to germinate in spring. Moderately deer resistant. 2'. Germ: OW, SS, SIS, SR. Silberstein.

Imp1150 Impatiens balsamina. GARDEN BALSAM. An. PtShade/Shade. 24 x 8". Summer-Fall.

> 239-Pink flowers appear all summer and are absolute magnets for hummingbirds. Very easy to grow in sun to part shade. Germ: SS; SIS. Can be started indoors with no special treatment except room temperature. Can also be started sowing in situ. Doering.

Imp1170 Impatiens bicolor. An. PtShade/Shade. 1-4'.

3436-Pink & yellow blooms. 3'. Shade/part shade with moist soil. Self sows. Scatter seed outdoors on mineral soil in fall to germinate in spring. Moderately deer resistant. Germ: CMS, R, OW, SS, SIS, SR, 14 d. Silberstein.

Imp3000 Impatiens namchabarwensis. BLUE DIAMOND IMPATIENS, SAPPHIRE JEWELWEED. TenPer. 18 x 18". Fall.

> 3436-Blue/purple blooms. Scatter seed outdoors on mineral soil in fall to germinate in spring. Moderately deer resistant. 2-3'. Self sows. Germ: R, OW, SS, SIS. Silberstein.

> 965-Helmet shaped flowers appear on self-sowing plants in late summer and fall. May bloom in early summer if established by spring. A lovely filler with nearly true blue flowers. Germ: NST; BC; BH. Umphrey.

Ind1400 Indigofera amblyantha. Shrub. Sun/PtSun. 4-6 x 6-8'. Spring-Summer-Fall.

> 239-Good, delicate pink flowers for most of summer and into fall. Graceful unusual shrub. Germ: Soak 1 d; W; BC; 21 d. 190°F water produced best results. SIS. *Doering*.

Ind2100 Indigofera pseudotinctoria 'Rose Carpet'. DWARF FALSE INDIGO. Shrub. Sun/PtShade. 1 x 1½'. Summer.

1277-Pink flowers. Haas.

199-Pink flowers. Unique dwarf form descended from wild collection in Korea and selected by Polly Hill. Rarely seen. Good ground cover. Prune hard early spring. Drought tolerant and long blooming. Cresson.

Ind2200 Indigofera species. 5'

1277-Rose flowers. Grows 5' tall. Rosy pink blooms sporadically from early summer until frost. A nomenclature puzzlement. I think it is I. potaninii, but could be. I. heterantha (aka I. gerardiana). Not I. amblyantha. Whatever the name, it is a most lovely plant. At my house (zone 6a), it is almost half-hardy. Haas.

Inu2370 Inula helenium. ELECAMPANE. Per. Sun. 1 x 1–2'; from 5–8' in bloom. Spring–Summer.

> 2517-Yellow 2" flowers with many rays; thrives in moist soil but will tolerate dry also. Perennial herb blooming Spring-Summer. Germ: NST. Weaver.

> 3321-Yellow flowers. A sun lover. Germ: W, SS, NST,

Iph1000 Ipheion 'Alberto Castillo'. SPRING STAR FLOWER. Bulb. Sun/PtShade. 8". March/April. Zone 5-9.

> 199-White blooms. Bulb. Sun/DecShade. 8". March/ April. This South American native is unusually long blooming (5–6 wk) for a hardy spring bulb. This cultivar has proven one of the hardiest and most vigorous. White flowers have an attractive dark stripe on the back of the tepals and buds. Cresson.

Iph2050 Ipheion uniflorum 'Wisley Blue'. SPRING STAR FLOWER. Bulb. Sun/DecShade. 4-6". Spring.

> 199-Lavender-blue blooms. Strong garlicky scent to foliage makes this especially deer resistant. Flowers produced for over a month. Easy showy garden plant. Cresson.

Ipo2350 Ipomoea lobata (syn. Mina lobata). SPANISH FLAG. An. Vine. Sun. 15-20'. Summer/Fall.

> 592-Peculiar tubular blooms, not trumpets. Red shading through orange to yellow—on show day and night. Designed for moths, though hymenoptera do their best. Hummingbirds fiercely possessive. Supplemental water makes for huge coverage needing steady support. Ratty by September, even as bloomshow makes it impossible to take down. Seems to tolerate light frost. Picks very well. Malocsay.

Ipo2550 Ipomoea x multifida. CARDINAL VINE. An. Vine. Sun. 8–10 x 3'. Summer–Fall.

> **3006-**Red blooms. Climbing, twining vine to 15'! Keep well-watered. A cloud of little red trumpets once it gets going. Seems to take a long time to develop momentum but rewards patience. Interesting leaves. Germ: NST. Blooms late into the fall. Mayer.

Ipo2950 Ipomoea quamoclit. CYPRESS VINE, STAR GLORY. An. Vine. Sun. 6–20'. Summer.

> **3651-**Scarlet blooms. Tender annual climbing vine to 12', tropical Americas, bearing tubular flowers from June to Oct that flare open at the mouth to five pointed lobes. Delicate foliage is pinnately divided, with the linear segments resembling evergreen needles. Convolvulaceae. Germ: Scfy, Soak, BH, BC. Requires structural support for climbing. Gannon.

Ipo3300 Ipomoea purpurea Purple-Black'. 'Kniola's MORNING GLORY. An. Vine. Sun. 10'. Summer.

> 1020-Dark blue purple blooms with ivory center. From 2015-16 HPS Seed Exchange. Germ: Scfy, Soak, D, SIS, NST. Wiedorn.

Ipo5010 Ipomopsis rubra. STANDING CYPRESS, SCARLET GILIA, SKYROCKET. An./Bien. Sun/PtShade. 6" spread; 2-3' in bloom. Spring-Summer.

> 199-Scarlet-salmon flowers. Tall spike with feathery foliage. After mild winter, fall germinating seed blooms in spring. More often, spring germination blooms late summer. Allow to self-sow. Cresson.

Ipo5010 *Ipomopsis rubra*. (Continued)

592-Scarlet with faint salmon spots—pick to appreciate fully. Fine foliage rosette takes its time spiking up, but adds a lovely touch close to pathway. Blooms late enough to create anxiety about ripening seed. Malocsay.

Iri1000 Iris dichotoma (syn. Pardanthopsis dichotoma, *Evansia vespertina*). Per. Sun. 3–4'. Late Summer. Zone 6–10.

> 45-Blue/purple blooms. Easy, light-textured iris with fleeting flowers in the afternoon. Bartlett.

Iri1050 Iris domestica (syn. Belamcanda chinensis). BLACKBERRY LILY LEOPARD LILY. Per. Sun/PtShade. 1½-3 x 1-4'; from 2-4' in bloom. Summer. Zone 4-10.

> 2289-Speckled orange blooms. In 2005 with DNA evidence, Blackberry lily was moved from its own genus to the Iris genus. Generally, it's still more widely known as Belamcanda chinensis. Foliage looks like iris foliage. The clusters of seeds look like blackberries. Germ: CMS: 14 d. W, D, 40 d. Seeds can be planted outside about 2" deep before the ground is frozen. One Internet site lists these perennials as hardy in zones 8-10, but they have survived and spread nicely in my zone 7 garden. Takes several years to form a nice clump, but worth the wait. Krape.

522-Kushner.

Iri1060 Iris domestica 'Hello Yellow' (syn. Belamcanda chinensis 'Hello Yellow'). YELLOW BLACKBERRY LILY. Per. Sun/PtShade. 1 x 1'. Summer.

> 215-Yellow blooms. Dwarf blackberry lily. Blooms Julyfrost. Germ: CMS; BC. DeMarco.

522-Lovely, clear yellow flowers. *Kushner*.

Iri1070 Iris domestica hybrid.

45-Combinations of yellow, purple, red, and orange blooms from May-June in full sun, to 24". Easy to grow. Iris domestica x Pardancanda norrisii. Germ: NST. 90 d. Bartlett

Iri1450 *Iris ensata* (purple). Per. Sun. 3½ x 3½'. Summer. 199-Single blue-purple flowers. Much admired flowers with falls veined in purple. Moist soil. Cresson.

Iri2200 Iris foetidissima var. citrina. STINKING GLADWYN. Per. Sun/PtShade. 3'. Spring.

> 199-Yellow flowers in May. Primary feature is the pods, which open in October and November to display bright orange seeds. Evergreen foliage. Likes dry shade! Rare, yellow form much more attractive than the normal form with lavender-brown flowers. Perfectly hardy here since 1990. Cresson.

Iri6300 Iris tectorum. JAPANESE ROOF IRIS. Per. Sun/ PtShade. 12 x 36"; to 18" in bloom. Spring.

> **522-**Purple blooms in spring. Even when not in bloom, a worthy plant. Strong foliar presence. Kushner.

> **590-**Lavender and white blooms. Bloomed 2nd year from seed. Great foliage texture and somewhat weeping habit. Mahonv.

Iri6450 Iris tectorum 'Sun Moon Lake'.

32-Source: ICG/PDN Collected on: 8/8/14 Plant Delights.

Iri6500 Iris tridentata. Per. Sun/PtShade. 15". Summer.

199-Lavender flowers. July blooming. Thrives in wet soil or shallow water. Native species and one of latest to bloom. Rhizomatous. Young foliage purple in spring is much admired. Cresson.

Ite1000 Itea virginica. VIRGINIA SWEETSPIRE. Shrub. Sun. 3–5 x 10'. Early Summer.

5024-White blooms. Germ: BH, W. Iroki Garden.

Kal1050 Kalimeris incisa. BLUE STAR ASTER. Per. Sun/ PtShade. 2 x 1'. Late Summer-Fall.

> **208-**Lavender flowers. This is an underused plant similar to boltonia, but more dependable in bloom and with much more presence. The flowers are larger, it blooms earlier and weaves better than boltonia. Long blooming. Germ: NST, 10 d. Dahlke.

> **239-**Lavender blooms through most of summer into early fall. Very dependable and ornamental for a long time! Germ: CMS; BH; BC. Doering.

Kal1250 Kalimeris pinnatifida. Per. Sun. 2½-3 x 2'.

208-Daisy-like white blooms on 1' plant. Flowers sequentially along stems all summer. Remove spent flowers to encourage repeat blooms. Germ: BC, NST. Dahlke.

Kal1325 Kalmia buxifolia (syn. Leiophyllum buxifolium). SANDMYRTLE. Sun/PtShade. Shrub. 6-8'. Spring. Zone 6-8.

> 3645-White blooms. Likes moist, acidic, well-drained soil. Plants were blooming in early October (normal time is late April to late June). Growing instructions following Dirr (2006). Germ: W, L. One inflorescence collected from a large stand growing along a roadside and in accordance with NANPS guidelines (http://nanps. org/seed-collecting/). Very fine seeds that were near impossible to completely separate from chaff. Roskoph.

Kal1350 Kalmia latifolia. MOUNTAIN LAUREL. Shrub. PtShade. 5–15 x 5–15'. Spring. Zone 4–9.

> 1277-Pinkish white blooms. Germ: Grow on peat in March on a heat mat under light, covered with plastic. BH, L, SS. Haas.

Kei1000 Keiskeia japonica var. hondoensis. Per. PtShade. 24-36 x 18–24". Summer/Fall.

> 199-White flowers. Rare Japanese native for lightly shady woodland location. 2-3' tall with clean, green foliage, numerous flower spikes Sept-Oct. Mint family with scented foliage. Zone 5 hardiness. Cresson.

Kos1250 Kosteletzkya virginica. VIRGINIA MALLOW, SEASHORE MALLOW. Per. Sun. 4–5 x 3'. Late Summer–Fall.

> **2497-**Pink blooms. Grows well and flowers in deciduous shade. Nice to find a showy pink flower that tolerates shade. Germ: OW. Mackey.

2515-Pink flowers. *Doblmaier*.

522-Pink flowers. Best planted in groupings, as these are not meant to be specimen plants. Have mine planted in bogs alongside Joe-Pye weeds and pink Asclepias incarnata. Germ: NST; BH 7-10d. Kushner.

965-Pink blooms. Tall, elegant mallow for moist soils and sun. Blooms in late summer when we all need something fresh and lovely to lift the spirits. Late to emerge in the spring. *Umphrey*.

Kos1300 Kosteletzkya virginica 'ACE basin'. SEA SHORE MALLOW. Per. Sun/PtSun. 4-5 x 2'. Summer. Zone 5a-10b.

> 199-Pink blooms. Small hibiscus-like flowers adorn this southeastern native July-September. Wet to average soils. This form from Ace Basin, SC. A better alternative to the highly touted lavatera of English gardens. Cresson.

> 32-Pink blooms. Seed from a garden plant whose origins are from the ACE Basin Reserve (named for the converging Ashepoo, Combahee, and Edisto rivers) in SC. Germ: W, BC, NST. Plant Delights.

Kos2000 Kosteletzkya virginica 'Immaculate'. VIRGINIA MALLOW, SEASHORE MALLOW. Per. Sun. 4-5 x 3'. Late Summer-Fall.

32-Garden Location: Musa 'Panay Island' Plant Delights. Lab1050 Lablab purpureus (syn. Dolichos lablab). HYACINTH BEAN. An. Vine. Sun. 9'+. Summer-Fall.

> 590-Pink blooms. Green foliage with burgundy veins. Abundant flowers till October. Spectacular purple, beanlike pods. Easy germination, easy vigorous-grower to 15'+. *Mahony*.

Lac1300 Lachenalia reflexa. YELLOW SOLDIER, CAPE COWSLIP. TenPer. 8". Summer. Zone 9-11.

> 45-Yellow blooms in fall on a small tender South African bulb. Pretty as a group in a pot. There are 100 or more species of Lachenalia. L. reflexa is an easy one to try first. Germ: Sow or grow in grit to keep seed well drained.

Lag0100 Lagenaria siceraria. BIRD HOUSE GOURD. An. Vine. Sun.

> **3651-**White blooms. Tender annual climbing vine. Germ: Scfy, Soak, WMS. Start seed late March; requires a long growing season. Seed selected for birdhouse-type gourd shape with broad, round bottom and narrower, tapering neck. Gannon.

Lag0300 Lagerstroemia indica. CRAPE MYRTLE. Shrub. Sun. 1939-Dark red, fuchsia blooms from August to September. Smooth, exfoliating bark. 21'. Pruning when necessary to force compact growth. Germ: R; SIS. According to Dirr, south "seeds supposedly germinate if given 30-45 days". Collected seeds in January and germination in 2–3 wk. Urffer.

Lam2000 Lamium **BALM-LEAVED** orvala. **RED** DEADNETTLE. Per. PtSun/PtShade. 18 x 18". Spring.

> 199-Rosy-pink flowers in April-May. A nice rarely seen spring perennial that goes dormant mid-summer. Central European native. Cresson.

Lan1100 Lantana horrida. TEXAS LANTANA. TenPer. Sun. 12 x 12'. Summer. Zone 8a-11.

> 3436-Pink/lavender blooms. Plant seedlings outdoors in sun or mostly sunny well-drained soil by early summer. Reliable perennial in 7a if heavily mulched to keep soil from freezing, but doesn't sprout until early to mid May. 4-5 x 4-5' at maturity. Germ: BH. Lantana is animal resistant. Flowers non-stop early July to frost. Easily roots from cuttings in early fall. Silberstein.

Lan1150 Lantana camara 'Miss Huff'. LANTANA. Per. Sun. 3'. Summer. Zone 7–11.

> 3436-Orange blooms. Plant seedlings outdoors in sun or mostly sunny well-drained soil by early summer. Reliable perennial in 7a if heavily mulched to keep soil from freezing, but doesn't sprout until early to mid May. 4–5 x 4–5' at maturity. Germ: BH. Flowers non-stop early July to frost. Easily roots from cuttings in early fall. Silberstein.

Lan1160 Lantana camera Miss TaraTM 'Mhsh'.

3645-Pink and yellow blooms. Shorter, bushy hybrid variety derived from Miss Huff line. Hardy to zone 7. Germ: Soak, BH, W, NST. Roskoph.

Lat0050 Lathyrus latifolius. **EVERLASTING** PEA, PERENNIAL PEA. PerVine. Sun/PtShade. 6-9'. Summer-Fall.

> 507-Beautiful mix of white, white with pink overtones, soft pink, and a richer pink. Germ: Probably soak in warm water overnight. Kolo.

> **522-**Pink. I love annual *Lathyrus odoratus*, but it peters out in the heat. This sweetpea never disappoints as it rambles along fences or through spent perennials. Germ: Scfy or soak in tepid water overnight; D; W/C, 14 d; Sow ASAP. Armitage says seeds sown in spring may not bloom until next year. Transplant when seedlings reach 3–5 leaf stage. *Kushner*.

590-Mahony.

Lat1400 Lathyrus palustris. PerVine. Sun/PtShade. 8'. Summer. 507-Clear warm pink flowers. A perennial climbing pea—goes from strength to strength, year after year. This is the lathyrus for magenta haters, of which I am not one! Germ: Soak, probably. Kolo.

Lat2650 Lathyrus vernus. SPRING VETCH. Per. PtShade. 12-15 x 15". Spring.

> 1607-Pink and white blooms. Germ: Scfy, Soak: 1 d, W. Jellinek.

Lav0500 Lavandula angustifolia. Per. Sun. 2 x 2'.

199-Purple blooms. Shrub, Sun. 18 x 18". June and reblooms. 'Hidcote' has self-sown in my rock garden and this seed is from those compact seedlings. Gray foliage, purple flowers, and somewhat variable. Cresson.

Lav1450 Lavatera trimestris (syn. Malva trimestris). An. Sun. 18–24 x 15–18". Midsummer–Early Fall.

> **592-**Pure white trumpets, silky sheen same as the pink. Blooms short-lived but profuse. Picks well. A fussy gardener will out it by September. Malocsay.

Lei0050 Leibnitzia anandria. Per. Shade. Spring and Fall.

2515-Unusual perennial. Has two blooming stages. In early spring, white daisy-like flowers appear, then in late summer, early fall the "cottony", "dandelion type" seed producing flower heads appear. Doblmaier.

Leo4000 Leonurus sibiricus. SIBERIAN MOTHERWORT, HONEYWEED. Per. Sun. 4-6'. Midsummer.

> 118-Pale pink blooms. Biennial to 6'. Branching stems heavy with small, tubular blooms in dense, axillary whorls. Pinnately divided, deep veined, dark green leaves. Small black nutlets follow. Germ: SS, NST. Stonecrop Gardens.

Lia1850 Liatris pycnostachya. PRAIRIE BLAZINGSTAR, KANSAS GAYFEATHER, **DENSE-SPIKED BUTTON** SNAKEROOT. Per. Sun. 5-6'. Summer-Fall.

> 32-Purple blooms. Collected from: GH12 NE Collected on: 8/31/18 Plant Delights.

Lia2250 Liatris scariosa subsp. nieuwlandii. NIEUWLAND'S BLAZING STAR. Per. Sun. 36 x 18". Late Summer–Fall.

> 1999-Lavender-purple flowers on tall spikes, which bloom from the top downward. Makes an excellent cut flower and provides nectar for bees, hummingbirds, and butterflies. Songbirds relish the seeds. Hardy in Zones 3 thru 8. Germ: CMS: 60 d. W, 80 d. Norfolk Botanical staff.

Lia2500 Liatris spicata. BLAZING STAR, GAYFEATHER. Per. Sun/PtSun. 2-5 x 1½'. Summer-Fall.

> 2517-Per. Sun/PtSun. 2-5 x 1½'. summer-fall. Prefers moist soil but tolerant of harsh growing conditions, such as poor soil, drought, and heat. Good vertical accent for perennial gardens. Germ: NST. Weaver.

> 3645-Purple blooms. Germ: CMS: 60 d, NST. Roskoph. 5082-Purple bloom. Germ: CMS: 50 d. 45 d. Start seeds indoors or direct sow. Smith, C.

Lia2700 Liatris spicata 'Kobold'. GAYFEATHER. Per. Sun. 8–10 x 12"; to 2' in bloom. Summer.

590-Deep purple blooms. *Mahony*.

Lig0010 Ligularia 'Britt Marie Crawford'. Per. Sun/PtShade. 31/4'. Midsummer-Early Fall. Zone 4-8.

> 1277-Gold blooms. Must be grown in moist conditions; can take shade. *Haas*.

> 208-Yellow-orange flowers. 3–5 x 3'. Maroon stems and leaves. Dahlke.

> 3321-Yellow-orange blossoms. Very purple leaves.

Lig1340 Ligularia japonica 'Chinese Dragon'. Per. PtShade. 3 x 4'. Summer. Zone 4–8.

> 522-Yellow-orange blooms on nice-clumping, cutleaf variety. Perfect bog plant. Mine bloomed in mid-June on 4' spikes. Source: Plant Delights. Kushner.

Lil1570 Lilium concolor yellow flower form.

32-Shikoku Yellow Flower, Germ: Garden Location: 13: Miscanthus 'Golden Towers' Collected: 10/10/16 Plant Delights.

Lil1700 Lilium formosanum. FORMOSA LILY, TAIWAN LILY. PerBulb. Sun/PtShade. 6-8 x 1½'. Late Summer-Fall. Zone 6+.

> 1999-Fragrant, white trumpet-shaped flowers suffused with purple on the outside petals. Introduced from Taiwan in the 1880s, Formosa Lily is a spectacular self-seeding, perennial lily that bears large, extremely fragrant, funnelshaped white flowers, suffused with wine-purple on the outside petals. It flowers in August when few things are in bloom. Great cut flower and the dried seed pods are useful in arrangements. Germ: BC, NST. 21 d. Norfolk Botanical staff.

32-Giant form. Germ: BC. Plant Delights.

Lil1750 Lilium formosanum var. pricei. PerBulb. Sun. 2 x 1'. Summer.

> 199-White/reddish purple blooms. Large white trumpet flowers, stained reddish purple on the exterior, born on short stems. This Taiwanese alpine is great for the rock garden. Cresson.

Lil1950 Lilium henryi. HENRY'S LILY. PerBulb. Sun/PtShade. 2–10' x 8". Summer–Fall.

> 199-Yellow-orange. A great long-lived, virus-resistant garden lily. An easier woods lily than L. martagon. Cresson.

Lil2750 Lilium martagon. MARTAGON LILY. PerBulb. Sun/ PtShade. 4-6'. Early Summer.

84-Pink flowers. Bowditch.

Lil2800 Lilium martagon hybrids. TURK'S CAP LILY, MARTAGON LILY, MOUNTAIN LILY, EUROPEAN WOOD LILY. PerBulb. Sun/PtShade. 3-5'. Summer.

> 199-Orange blooms. Seed from various orange hybrids, some spotted. Long-lived, drought tolerant, and very virus resistant. Cresson.

Lil3300 *Lilium regale*. PerBulb. Sun/PtShade. 3–4 x 1'. Summer. **45-**Blooms with white/yellow interior, dark exterior. Easy trumpet lily species. Epigeal immediate germination, which means easy. Lots of seed, grow a clump, flowers in 3rd or 4th year. Regal lily is easy from seed and spectacular in the garden. Probably the easiest lily to grow. Germ: NST. Bartlett.

Lin1510 Linaria purpurea 'Canon J. Went'. TOADFLAX. Per. Sun/PtShade. 2-3 x 1'. Summer-Fall.

1277-Purple or pink flowers. Haas.

Lin3500 Lindera benzoin. SPICEBUSH. Shrub. Sun/PtShade/ Shade. 6–12 x 6–12'. Spring. Zone 4–9.

> 3001-Yellow blooms. Eastern North American native to 10'. Forest edge/part shade. Bright yellow leaves in fall and red berries on the female plants (dioecious). The entire plant is aromatic. Nice structure. Germ: Seed has been moist packed warm, so needs 3 mo cold on receipt. Gregg.

Lit1000 Lithospermum erythrorhizon. Per. Sun/PtShade. $2\frac{1}{2}$ x 1–2'. Summer. Zone 5–9.

> 3651-White blooms. Hardy upright herbaceous perennial (zones 5-9), $2\frac{1}{2}$ x 1-2', terminal clusters of diminutive white blooms appear starting in June, followed by shiny white nutlets that stand out against the grey-green leaves. Sun to part shade. Boraginaceae. Germ: W, BC. If no germination after 1 mo, keep at about 40° for 3 wk and then return to room temperature. Gannon.

Lob1250 Lobelia cardinalis. CARDINAL FLOWER. Per. Sun/ PtShade. 1-3 x 1+'. Summer-Fall.

> 1277-Red flowers. Likes sunny, moist conditions but will take shade also. Hummingbird's favorite plant. *Haas*.

> 1607-Bright red flowers attract hummingbirds. Prefers sunny, moist conditions, but also does well in my drier garden in part sun. Jellinek.

> 239-Red flower spike. Plant does best in moist sunny areas. Germ: BH; BC; NST. Do not allow germinating seed to dry out. Open pollinated. Doering.

318-Red flowers. Germ: SIS. Garnett.

Lob1250 Lobelia cardinalis. (Continued)

3436-Red blooms. Germ: SS, SR. Silberstein.

3645-Red blooms. Germ: CMS: 60 d, L, SS. Roskoph.

507-The reddest red in the garden. Easy from seed. *Kolo*.

590-Bright red blooms. Easy. Reseeds. *Mahony*.

965-Umphrey.

Lob1750 Lobelia siphilitica. GREAT BLUE LOBELIA. Per. Sun/ PtShade. 2–4 x 1'. Late Summer–Fall.

> 1585-Mostly blue, some white flowers. Biennial in my garden. Scofield.

> 3436-Blue, occasionally white blooms. Germ: SS, SR. Silberstein.

> 797-Adds welcome blue flowers late in season. Selfsows. Robinson.

> 9985-Blue blooms. Native to wet meadows and similar in habit to cardinal flower. Readily seeds in but it's the perfect plant in the right spot. Beautiful late summer/ fall color for woodland edge. Deer may explore, but it recovers well. Germ: CMS: 30 d. L, SS. Very easy. You can winter sow or toss about the garden in February. Jenkins Arboretum.

Lun0050 Lunaria annua. MONEY PLANT, HONESTY. Bien. Sun/PtShade. 3 x 1'. Spring.

> 1277-Purple flowers. Could have some variegated foliage mixed in. Haas.

> 215-Yellow blooms. Germ: BC; 21 d; SIS, NST. Sow in spring as soon as the soil can be worked. Plant seeds ?-1/4" deep, 2 seeds per inch. Thinning is not necessary, but a 4" final spacing produces healthy, full plants. *DeMarco*.

Lun2050 Lunaria annua var. albiflora 'Alba Variegata'. VARIEGATED MONEY PLANT, HONESTY. Bien. Sun/ PtShade. 3 x 1'. Spring.

> 199-White flowers. White-edged leaves. Variegation fades in summer heat. May germinate green, but will become variegated in spring. Cresson.

rediviva. **PERENNIAL** Lun4010 Lunaria HONESTY. PERENNIAL MONEY PLANT. Per. Sun/PtShade. 11/2-2 x 2'; from 3–4' in bloom. Late Spring–Summer.

> 522-Pale lilac blooms on a late-blooming lunaria with leaves that are finely toothed. As copared to the common Lunaria annua, this plant is larger, but the flowers are smaller and more highly scented. Source: Odyssey Bulbs. Kushner.

Lyc2750 *Lychnis cognata*. Per. Sun. $2\frac{1}{2}$ x $1-\frac{1}{2}$. Summer.

199-Cantaloupe-orange flowers. Goes well with other fruit-colored flowers such as 'Stella d' Oro'. Reblooms some if deadheaded. Sprawling habit, but can be pinched. Native to Korea. A reliable perennial, prefers drier site. Cresson.

Lyc3050 Lychnis coronaria. ROSE CAMPION, CATCHFLY. An./Bien./Short-lived Per. Sun/PtShade. 2-3 x 1-1½'. Summer. Zone 4–8.

> 1277-Magenta flowers. Nice silvery foliage and bright flowers. Self-sows but not a problem. Haas.

> 1918-Fuzzy silver stems and foliage. Flowers range from a deep but bright pink to white (the pink occurs most often). Does well in gravel or near stones. Needs drainage especially in winter. Full sun or some shade. Carey.

Lyc3150 Lychnis coronaria 'Angel Blush'. CAMPION, CATCHFLY. Bien./Short-lived Per. Sun/PtShade. 2½ x 1½'. Summer.

> 269-White with pink blush or all white blooms. This is a 1½-2'-foot tall biennial or short-lived perennial. Plants self-sow and come true from seed. This seed was collected from plants that were either typical 'Angel's Blush', white flowers with pink centers, or all white. Produces clumps of silver-gray, feltlike leaves. Germ: L, SS, SIS, NST. 30 d. Easy to start in pots as well. Plants self-sow with abandon, so cut back as flowers fade to reduce self-sowing. Also pull up older plants to make room for younger ones. Ellis.

Lyc3300 Lychnis flos-cuculi (syn. Silene flos-cuculi). RAGGED ROBIN, CUCKOO FLOWER. Per. Sun/PtShade. 1-2 x 1-2'. Summer.

> **522-**Wide, star-shaped, rose pink flowers with deeply cut petals on a herbaceous perennial that blooms May-June. Wild flower garden plant. Source: Chiltern Seeds. Germ: BC, L. Kushner.

Lyc3330 Lychnis flos-jovis. FLOWER OF JOVE. Per. Sun. 10 x 6". Spring–Summer.

> **9968-**Fringed pink flowers in June-July on stems 1–2' tall. Full sun, average to moist garden soil. Native to moist open meadows in Europe and Russia. Considered noxious weed in several states, banned in Connecticut. Germ: W, BC, 14 d. Roper.

Lyc9000 Lycoris chinensis. YELLOW SPIDER LILY. Per. Sun. Summer.

199-Golden yellow flowers. Cresson.

Lyc9500 Lycoris sanguinea. Bulb. Sun. 20". Summer.

199-Light tangerine. Blooms without leaves. Summer dormant. Lovely blooming through yellow seashell impatiens. Cresson.

Lyc9760 Lycoris sprengeri.

199-Pink/blue blooms. The most striking and unique thing about this sprinly clearspecies is the prominent blue petal ends. Unique and exciting! Spring foliage, summer dormant. Cresson.

Lys1750 Lysimachia minoricensis. Bien. Sun. 1 x 3; to 12–15" in bloom. Summer.

> **592-**White blooms. A personal favorite for many years foliage interest especially, flowers nondescript. Usually self-sows, but I save seed just in case. Description from Charles Cresson...This endemic of the South island of Menorca is now extinct in the wild but has shown remarkable adaptability to gardens. A biennial forming rosettes of attractive white-veined leaves, then a single stem with small white flowers. Persists by self-sowing, especially among rocks. Easy and nice, always attracting attention. Help save this rare species. *Malocsay*.

Mag1030Magnolia × brooklynensis. Tree. Sun/PtShade. 12–20'. Spring.

> **45-**Various shades of yellow. A cross between M. acuminata and M. lilliflora. Bartlett.

Mag1080Magnolia figo (syn. Michelia figo, Magnolia fuscata). BANANA SHRUB, PORT WINE MAGNOLIA. Shrub. Sun/ PtShade. 6–10 x 6–8'. Spring/Summer. Zone 7–9.

> 3436-Yellow blooms. Germ: CMS. Hardy to high single digits. Best grown as large container plant and protected from severe freezes. Flowers banana-scented. Silberstein.

Mag1200 Magnolia grandiflora. SOUTHERN MAGNOLIA. Tree. Sun/PtShade. 60-80 x 30-50'. Spring/Early Summer, reblooms through Fall.

> 2463-White blooms. Harvested from (I think) Edith Bogue planted over 25 yr ago, hardy zone 6. Harvested late Oct, cleaned and cold moist stored. Germ: CMS Nolan.

Mag1610Magnolia kobus var. borealis. Tree. Sun. 15–24'. Early Spring.

> 45-White flowers in spring. Large tree magnolia from East Asia. More vigorous tree than Magnolia kobus, with more and larger flowers even at a young age, and big bullate leaves. Germ: BC. I cover with grower grit for stability. Bartlett.

Mag1650Magnolia macrophylla. BIG LEAF MAGNOLIA, UMBRELLA TREE. Tree. Sun/PtShade. 30 x 30'. Summer. Zone 5-8.

> **3001-**White blooms. An East Coast native, makes a great addition to the woodland garden background. Protect from strong winds. Fast growing to 30-40', so pot up regularly. Leaves can be 3' long. Germ: CMS: 120 d. Needs CMS 3–4 mo, then room temperature, to germinate in 30-45 d. Seed is moist packed, so germination rate should be high. Gregg.

Mag1700 Magnolia salicifolia. ANISE MAGNOLIA, WILLOW-LEAVED MAGNOLIA. Tree. Sun. 25-30 x 20'. Spring.

> **45**-White flowers in spring. Fast-growing flowering tree. Superb choice for a smaller yard. Bark on our tree is silver-gray. Germ: NST; Straightforward germination; Easy. Cover with growers grit for stability. Bartlett.

Mag1750 Magnolia sieboldii. Shrub. Sun/PtShade. 25 x 40'. Spring-Summer.

> 45-White blooms with pink centers. Vigorous, shrubby, Asian magnolia species. Very hardy. Long flowering period. Small enough for any garden. Fast growing. Germ: NST. 90 d. Bartlett.

Mag1800 Magnolia soulangiana. SAUCER MAGNOLIA. Tree. Sun/PtShade. 20-30 x 15-20'. Spring.

> 45-Pink/purple blooms. Seed source from several cultivars. The standard saucer magnolia of gardens. Great lawn tree. Germ: NST. 60 d. Cover seed with growers grit. Bartlett.

Mag2010 *Magnolia stellata*. Tree. 15–20 x 10–15'.

45-White flowers. Expect variation, but good plants, from this. Good tree for a small garden or in a lawn. One of the fastest-growing magnolias, often flowering in four years from seed. Germ: CMS; A light covering of gravel is good form most seeds; seeds take 2 years. Bartlett.

Mag5050Magnolia virginiana. SWEETBAY MAGNOLIA, VIRGINIA MAGNOLIA. Shrub/Tree. Sun/PtShade. 28 x 20'. Summer-Fall.

> **45**-White, 4–5", lemon-scented flowers for several weeks in late spring. One of our best native flowering trees—much underused. Suitable for any but the smallest garden, and will grow in a wide range of habitats. Very fast and easy to grow. Germ: NST. I cover with growers grit. Bartlett.

522-Kushner.

926-Ivory flowers. Very fragrant. Leaves have silver undersides. Germ: CMS 3 mo. Streeter.

Mah1000 Mahonia japonica. Shrub. PtSun/Shade. 8'x8'. Winter. Zone 6–8.

> 199-Yellow blooms. Similar to M. bealei, but in my opinion, the best hardy mahonia and the most fragrant. Flower racemes are longer, strongly scented, and plant habit is fuller and less stalky. Late winter bloom. Does well in dry shade. Deer resistant. Cresson.

Man2100 Manfreda virginica. Per. Sun. 2 x 2–4'; to 6' in bloom. Summer.

> 9985-White, light green blooms. Unique, clove-scented flowers appear along a tall stalk. Foliage is evergreen. Native agave relative. Germ: CMS: 90 d; OW; BC; NST; 30 d. Jenkins Arboretum.

Man2500 Manihot grahamii. GRAHAM'S MANIHOT. Per. Sun.

> 3436-Survives winter with a heavy mulch and seeds around a bit. Grows 6-10' each year. Germ: Dieback shrub. Silberstein.

Mar1150 Marrubium incanum, SILVER HOREHOUND, Per. Sun. 1½ x 2'. Summer.

> 199-White blooms. Hairy gray-green foliage. Spikes of small white flowers in June-July. Plants are 16" tall, sprawling to a bit wider. Requires good drainage and sun. From Italy and the Balkans. Cresson.

Mar1400 Marshallia grandiflora. MONONGAHELA BARBARA'S BUTTONS. Per. PtShade. 12 x 12". Summer.

> **558-**Light catching, pale pink flowers. Very pest resistant. Easy from seed. Charming, early summer native woodlander, tolerating more dryness than Cullina says. Germ: NST. Lewis.

> 9985-Rose pink to lavender blooms. A neat and tidy plant whose glossy leaves serve as a ground cover when plant not in bloom. Endangered in PA. Germ: CMS: 90 d. NST. Easy germinator. Jenkins Arboretum.

Mec0050 Meconopsis cambrica. WELSH POPPY. Per. PtShade. 1½ x 1'. Spring–Fall.

> 199-Orange flowers. Prolific bloom May-June, then repeats through fall if deadheaded. Likes to seed into walls that face north and west. Cool conditions preferred. Lovely with candelabra primroses in June. Germ: SIS or sow into pots placed outside. May not germinate first year. Cresson.

797-Robinson.

Mel3050 Melanthium virginicum. BUNCH FLOWER. Per. Sun. 3 x 2'; to 5' in bloom. Summer.

3177-*Gibson*.

Mer3000 Mertensia virginica. VIRGINIA BLUEBELLS.

1939-Light blue, charming bell-shaped flowers in early spring. Native. Germ: CMS: 3 wk. SIS. Urffer.

Mim3550 Mimulus ringens. Per. Sun/PtShade. 2-4 x 1'. Summer.

> 2515-Lovely lilac-purple flower color. Great plant for the wet areas of the garden. Doblmaier.

Mir1010 Mirabilis jalapa. FOUR O'CLOCK. An./TenPer. Sun. 3–5 x 2–4'. Summer–Fall.

> 269-White blooms. Seed is collected from a plant that bears fragrant white flowers on 4' tall plants. Germ: NST. Produces a tuber that can be dug in fall and overwintered. My plant is hardy in Zone 7 in a site right next to the eastfacing side of the house. Ellis.

Mir1400 Mirabilis jalapa 'Limelight'. FOUR O'CLOCK. An./ TenPer. Sun. 2'. Summer.

> 200-Hot pink flowers, blooms all summer. Chartreuse foliage. Creveling.

Mol0500 Molinia caerulea subsp. arundinacea 'Skyracer'. PURPLE MOOR GRASS. Grass. Sun. 6-8 x 2-4'. Zone 5-8.

> 2937-2-3' clumps of foliage with 6' airy bloom stalks. Nice yellow fall color. Bittmann.

Mon1100Monarda bradburyana. BRADBURY'S MONARDA. 1999-Pale lavender cymes. Native perennial plant with fragrant foliage and cymes of pale lavender flowers. Great plant for attracting pollinators, butterflies, and hummingbirds. Eastern beebalm is resistant to powdery mildew and is drought tolerant. Grows readily in full sun to part shade. This species spreads less aggressively than other Monarda ssp. Hardy in Zones 5 to 8. Germ: CMS: 60 d. W, BC, 80 d. Keep seedlings in cooler conditions after germination occurs. Norfolk Botanical staff.

Mon1400 Monarda fistulosa. WILD BERGAMOT, ROSE-SCENTED MONARDA. Per. Sun. 3-4 x 1-1'. Summer.

3645-Purple blooms. Germ: NST. Roskoph.

Mon2250 Monarda punctata. ROSE-SCENTED MONARDA. An./Bien./Per. Sun. 1½-2 x 1½-2'. Summer.

> 1999-Native beauty has pale yellow blooms with purple spots. Spotted beebalm is a pollinator magnet and its aromatic foliage is drought, deer, and rabbit resistant. Monarda punctata thrives in full sun and dry sandy soil and is hardy in Zones 4-9. Germ: CMS: 60 d. cold stratify for 30 d prior to sowing at 70F L, SS, 40 d. Norfolk Botanical staff.

> 475-Silvery lavender blooms. This native nectar plant also has medicinal qualities. I put a bunch in about 10 yr ago just because it was a 'prairie plant'. I was pleasantly surprised by its ability to hold its own as well as its unusual iridescent coloring. Gone from my place for several years, it showed up this year again. I love it, therefore it may be Hardy Planter worthy? The flowers are arranged like a candelabra. Germ: I know nothing about germination as I originally bought plants. It has great symmetry with each of it 20-30 stems originating from the base and they are all about 36" tall. Nothing small growing out here where the cows and pigs used to roam! Kaplan.

Mor2000 Morella pensylvanica (syn. Myrica pensylvanica). NORTHERN BAYBERRY, SWAMP CANDLEBERRY. Shrub. Sun/PtShade. 5-12 x 5-12'. Spring.

> 1939-Yellow watery-colored flowers—not showy bloom. For aromatic gray berry. Germ: CMS: 90 d. R. Urffer.

Mus0600 Muscari armeniacum 'Argaei Album'. GRAPE HYACINTH. Bulb. Sun/PtSun. 4-8". April-May.

> 199-White blooms. A dwarf form, later blooming than most. Originally thought a separate species, the wild origin of this introduction from the famous bulb nursery, Van Tubergen, has been lost in time. In my rock garden for many years. Cresson.

Mus0900 Musa velutina. PINK VELVET BANANA. Per./TenPer. Sun/PtShade. 6 x 8'. Summer.

> 1999-Hailing from India, this hardy (when established in Zones 7b-10) banana produces abundant crops of velvety, pink-skinned fruit which peel themselves when ripe. Fun plant to add a tropical flair to the temperate garden. In colder regions it is wise to protect plants in winter with a leaf mulch around the stem. Musa velutina does well in containers. Germ: Scfy, Soak: 1 d, BH. Abrade seeds with sandpaper, then soak overnight in warm water. Sow at high temperatures and humidity, expect germination in 14-25 d. Norfolk Botanical staff.

Mus1000 Muscari azureum. GRAPE HYACINTH. Bulb. Sun/ PtShade. 6". Spring. Zone 5-8.

> 199-Flowers striped with clear sky blue and white. Cresson.

Myo2000 Myosotis sylvatica.

3176-Bright blue flowers in spring on low-growing biennials. Germ: SIS, NST. Possibly start indoors for same season bloom. Self sows once established. Maher.

Nan1050 Nandina domestica var. leucocarpa. Shrub. Sun. 6 x 5'. 199-Just like the species, but with large bunches of light yellow fruit against bright green foliage. Lovely next to the red form or alone. Difficult to find, but when you see it, you'll love it! Cresson.

> **522-**Lovely yellow-berried shrub. Nice companion in the autumn to corylosis, stachyurus, and other woodland plants. Germinates easily. Kushner.

Nas1000 Nassella leucotricha (syn. Stipa leucotricha). TEXAS WINTERGRASS. Per. Sun. 2'. Spring.

32-*Plant Delights.*

Nel1000 Nelumbo species. LOTUS. AquaticPer. Sun. 5–8 x 4–8'. Summer. Zone 5–10.

> 1114-Flower color is a surprise! Worshiped by people around the world, the sacred lotus is a true show stopper. Grower must have patience. Germ: Scfy; CMS: 30-40 d; BH; SS; NST. Scarify just before sowing. Aquascapes Unlimited.

Nic0200 Nicandra physaloides **'Splash** Cream'. VARIEGATED SHOO FLY PLANT. An. Sun. 39" x 12". Summer. **3436-**Blue-purple blooms. Germ: BC, NST. *Silberstein*.

Nic0600 Nicotiana langsdorffii. FLOWERING TOBACCO. An. Sun. 2 x 3'. Summer.

> **200-**Limegreen flowers on 2', summer-blooming annual. Creveling.

797-Lime green/chartreuse flowers born in tall, graceful wands. Self-sows. Germ: BC; SIS. Robinson.

Nic1110 Nicotiana Nancy Ondra's 'Green Mix'. An. Sun/ PtShade. 4 x 1'. Summer–Fall.

> 1607-Green blooms. Great self sower. Attracts hummingbirds. From seed obtained from HPS Seed Exchange several years ago. Germ: BC; SIS, NST. Jellinek.

Nic2750 Nicotiana sylvestris. FLOWERING TOBACCO, GREAT WHITE TOBACCO. An. Sun/PtShade. 12 x 18"; to 5' in bloom. Summer-Fall.

> 1918-Large, slightly sticky leaves on a 3-5' tall plant. White tubular flowers are fragrant at night. Sun or part shade. Not hardy but comes back easily from seed. Germ: SIS. Carey.

Nic2800 Nicotiana sylvestris 'Only the Lonely'. FLOWERING TOBACCO. An. Sun/PtShade. 12 x 18"; to 5' in bloom. Summer-Fall.

> 84-Tall annual with fragrant, white flowers for partial shade. Bowditch.

Nig1050 Nigella damascena. LOVE-IN-A-MIST. An. Sun. 8–12 x 8–12"; 12–18" in bloom. Summer.

1277-Blue and white flowers. Self-sows nicely. *Haas*.

5082-Purple blooms. Germ: Best if direct planted. Optimum soil temp for germination is 65-70°. Keep moist—press into soil. Self seeds. Smith, C.

592-Blue or (less often) white blooms. Classic self-sower (won't transplant). I wouldn't be without. Germ: SIS. Rtp. Malocsay.

Nol1190 Nolina microcarpa. BEARGRASS, SACAHUISTA. Per. Sun. 6–7 x 4–6'. Early–Midsummer. Zone 5–10.

> 32-Plant Sources from Corduroy Creek, AZ Collection Number: KJS 333. Plant Delights.

Oci0050 Ocimum basilicum. BASIL.

3645-Pale purple to white blooms. Germ: W, NST. Roskoph.

Oci0600 Ocimum basilicum var. thyrsiflorum. THAI BASIL. TenPer. Sun. 1–4 x 1'. Summer.

3645-Purple blooms. Germ: W, NST. Roskoph.

Oen2650 Oenothera stricta. EVENING PRIMROSE. Per./Bien. Sun. 3 x 1'. Summer.

> 199-Soft yellow flowers flushed with pink. Biennial forming narrow leaved rosettes, then lax sprawling branched stems 2–3' long. 4" soft yellow blooms, evening to following morning for 3 months. Spent flowers become peachy red enhancing the effect. This is a Cresson.

Oen2800 Oenothera versicolor 'Sunset Boulevard'. SUNDROP. EVENING PRIMROSE. Per. Sun. 12–18".

> 199-Orange blooms. Bien. Summer. Day-blooming tangerine orange flowers about 1" in diameter along tall maroon stems over a long period from a basal rosette of narrow foliage. This is sold as a perennial when you can find it, but biennial is more realistic, so let it self-sow. Seeds attract finches, like most of this genus. Cresson.

Oph1200 Ophiopogon umbraticola. MONDO GRASS. Per. PtSun/Shade. 10". Summer. Zone 5-8.

> **199-**White blooms. New miniature Chinese species with tufts of very narrow foliage. Stalks of white flowers in June are followed by round cobalt blue fruit in autumn. Has been making the rounds under the erroneous name O. Chingii. Zone 5. Cresson.

Orb1000 Orbexilum pedunculatum var. psoralioides (syn. Psoralea psoralioides). SAMPSON'S SNAKEROOT. Per. Sun/ PtShade. 1–2½'. Early Summer–Midsummer.

> 32-Collected from plant collected from Nash Co., NC Collected: 9/17/15. Plant Delights.

Orl1000 Orlava grandiflora. WHITE LACEFLOWER, MINOAN LACE. An.

> **1017-**Wonderful long-blooming white flowers. *Whitesell*. **592-**White blooms. Basal rosette nicely fine, flowers shed less than Queen Anne's Lace in bouquets. A second sowing adds fall freshness. Deer do like it. Does transplant young. Germ: NST, SIS. Malocsay.

Orn0500 Ornithogalum longibracteatum (syn. Ornithogalum candatum). FALSE SEA ONION. TenBulb. Sun. 2–3'. Summer.

> 926-Bulbils. Racemes of green and white flowers from bowiea-like bulb with floppy foliage. Small bulblets pop out of the sides of the bulb. Weird, but fascinating. Not hardv. Streeter.

Orn1030 Ornithogalum pyramidale. STARS OF HUNGARY. Bulb. Sun. 18"; to 2–3' in bloom. Summer.

> 199-White flowers with green stripes. Not weedy, but proving a good grower with tall, many flowered spikes in mid-late June. Cresson.

Orn1500 Ornithogalum sintenisii. Bulb. Sun/PtShade. 4 x 8"; 4" in bloom. Spring.

> 199-White flowers. An easy, early blooming species with low, flat clusters of white flowers in early spring. Similar to, but easier than, O. balansae. Leaves emerge in autumn, protect from rabbits. Very rare. Cresson.

Ory0100 Oryza sativa 'Red Dragon'. BURGUNDY-LEAVED RICE. An. Sun. 2–2½'.

> 9976-Nice dark foliage with arching seed heads to extend interest into the fall. Needs moist soil. We grow in our aquatic garden. Wave Hill Gardeners.

Pae2000 Paeonia lutea (syn. Paeonia lutea var. ludlowii). TREE PEONY. Shrub. 4-6 x 3-4'. Late Spring-Early Summer. Zone 6a-9b.

> 3001-Open, upright, medium sized woody Paeonia, grown as much for its deeply cut foliage as for its 3" solid yellow blossoms. Slow growth. Warm moist stratification for root development (2-4"), then cool/cold for top growth. Seeds can be sown 3–4" deep in the garden in fall or early winter for germination. Seed a gift from Roger Dinsdale, UK. Gregg.

Pae3600 Paeonia obovata. Per. Sun/PtShade. 2-3 x 2-3'. Late Spring.

> 200-Pink, single flowers. Gorgeous seedpods, can be slow to germinate. Germ: CMS. Creveling.

3321-White blooms. Great woodland peony. Germ: Cycle: 70° for 3 mo, 40° for 3 mo followed by another 3 mo of 70°, SR. Keep in baggie until root radicle develops, then plant in pot. *Perron*.

5024-White to pale pink blooms. Germ: Cycle: 70°F until germination occurs, then 40° for 90 d. Seeds require scarification. Nick or abrade with sandpaper or file. Iroki Garden.

Pae3600 Paeonia obovata (Continued)

558-Deep pink, single flowers. Vigorous woodland peony. Taller and later than P. japonica. Beautiful seed heads in August through October and sometimes great fall foliage. Germ: Cycle; May take two warm/cold cycles to germinate or sow outdoors. NST, SR. Lewis. **65**-Berger.

Pae4980 Paeonia species. Per. Sun. 2-3 x 2; to 3' in bloom. Spring-Summer.

1020-*Wiedorn*.

Pae4990 Paeonia suffruticosa. TREE PEONY. Shrub. Sun/ PtShade. 4–5 x 4–5'. Late Spring.

> 45-Pink, rarely white blooms. Not easy, but think of the bragging rights, "I grew that from seed." Worth the effort. This seed is from a pink-flowered single seedling from a Rock's Variety peony. Germ: WMS: 70 d, then CMS, then WMS. Maximum germination: don't give up for at least 3 yr. Protect seeds and seedlings from mice. Tree peonies are quite doable from seed. Bartlett.

Pae6500 Paeonia tenuifolia. FERN LEAF PEONY.

215-Red blooms. Germ: Cycle: WMS and CMS. OW, D. 3 yr. DeMarco.

Pap0350 Papaver atlanticum. MOROCCAN POPPY. Per. Sun. 8–12 x 12"; to 2' in bloom. Summer.

> 1277-Peach flowers. Deadhead and they will come. Nice rosette of foliage. One of the best poppies. Germ: SIS.

> **592-**Light orange blooms. Nice persistent rosette. Keeps blooming in spurts. Germ: SIS. Self-sows occasionally, despite competition. Malocsay.

Pap1010 Papaver orientale. ORIENTAL POPPY. Per. Sun. 3 x 3'. Late Spring/Early Summer.

> 215-Orange bloom. Germ: L, SS, SIS. Sew seed in situ spring to early fall. Mix seed with sand if desired. Will germinate the following spring. DeMarco.

Pap2270 Papaver rhoeas (orange). CORN POPPY, FLANDERS POPPY. An. Sun. 12–18 x 12–15". Spring–Summer.

> 199-Terracotta orange-red flowers. Self-sowing annual for June bloom in the cottage garden. Cresson.

Pap2320 Papaver rhoeas (red, burgundy). CORN POPPY, FLANDERS POPPY. An. Sun. 12–18 x12–15". Summer.

592-Very rich red, scarlet blooms. Germ: SIS. Selfsowing annual, happy anywhere. Malocsay.

Pap2350 Papaver rupifragum. Per. Sun. 3 x 8"; to 18" in bloom. Summer.

> 9968-Orange blooms. Perennial poppy. Papery orange flowers on wirey stems to 18–24" with gray-green foliage. Blooms spring through summer. Full sun, well-drained soil. Will self- sow. Germ: W, BC, SS, SIS. Surface sow seed and cover with fine grit to seeds depth. Roper.

Pap3250 Papaver somniferum (coral, double). CARNATION POPPY. An. Sun. 4 x 1'. Summer.

318-Deep-coral, double flowers. Germ: L; SS; SIS; Rtp.

Pap3270 Papaver somniferum (coral, single). OPIUM POPPY. An. Sun. 4 x 1'. Summer.

318-Germ: SS; SIS. Garnett.

Pap3450 Papaver somniferum 'Lauren's Grape'. CARNATION POPPY, OPIUM POPPY. An. Sun. 2–4 x 1'. Summer.

> 797-Various, pale purple flowers. Germ: BC; SIS early spring. Robinson.

> 84-Grape-purple flowers. Attractive foliage with dynamite purple flower and glaucous foliage. Comes true from seed. Germ: SIS. Sow outdoors spring or fall.

Pap3650 Papaver somniferum (pink, double). OPIUM POPPY. An. Sun. 4 x 1'. Summer.

> **592-**Fully double pink blooms. Striking. Germ: SIS. Rtp. SIS ASAP for bloom in June, self-sowing thereafter. Malocsav.

Par1650 Paradisia lusitanicum. PerBulb. Sun.

199-White blooms. Small lily-like flowers along a tall spike. Strappy leaves at the base. Forms a clump in a sunny location with good drainage. A rare plant in cultivation and often confused with its close relative, Anthericum. Southern Europe. 5' tall. Cresson.

Par1850 Parsenecio delphiniifolius 'Sanshoku'. Per. Shade/ PtShade. 2'-4'. August. Zone 4-9.

> 2137-White blooms. This variegated Japanese selection used to be in the genus Cacalia and has been recently placed in Parasenecio by the botanical powers that be. Broad foliage irregularly and finely streaked and spattered in cream like a monochromatic misting by Jackson Pollock on a green canvas. This will get to up to 30" with upright stems clad in this conversational foliage. Shade. Germ: W, SS, 90 d. Boylan.

Par2010 Pardanthopsis dichotoma (syn. Iris dichotoma). VESPER IRIS. Per. Sun. 3–4 x 1½–2'.Summer–Early Fall.

32-Collected on: 8/14/18. Plant Delights.

Par4010 Parthenium integrifolium. WILD QUININE. Per. Sun/ PtShade. 2–4 x 1–2'. Summer–Fall.

2429-*Bricker*.

Pas1050 Passiflora incarnata. MAYPOPS. **HARDY** PASSIONFLOWER. Per. Vine. Sun. 20'. Summer.

> 199-Purple-blue flowers. Native herbaceous vine with a very tropical appeal. Blooms July-September. Edible fruit in fall, tasty citrus-flavored juice. Cresson.

> 3176-Purple blooms. Fast-growing, native, perennial vine with beautifully intricate, tropical-looking flowers. Produces an edible fruit. Germ: NST. Soaking seeds in 5% alcohol/water solution for 24 hr may speed germination. Maher.

Pat2050 Patrinia scabiosifolia. GOLDEN LACE. Per. PtShade/ Shade. $3-6 \times 1\frac{1}{2}-2$; from 3-5 in bloom. Summer. Zone 5-8.

> 5024-Yellow blooms. Germ: Cycle: CMS at 40°F for 4 wk, then 70°F for germination. Iroki Garden.

Pel2000 Peltoboykinia tellimoides. YAWATA-SO. Per. PtShade/ Shade. 2–3'. Late Spring. Zone 6b–9a.

> 2137-Creamy white blooms. Unusual foliage plant with very ornate deeply toothed leaves, especially in early spring. An excellent plant for shade. Small sprays of green/yellow flowers in summer. 1½' tall. Germ: Cycle: refrigerate for 3 mo, then 68°F for 3 mo, L. Boylan.

Pel2050 Peltoboykinia watanabei. Per. PtShade/Shade. 18 x 18". Late Spring.

> 199-Yellow blooms. Japanese woodland plant with greenish-yellow flowers in summer. Cresson.

> 208-Ivory flowers. Lobed, deeply cut, toothed leaves on 12" stalks. From 2001-02 HPS/MAG Seed Exchange. Delightful ground cover, a favorite. Germ: CMS. Dahlke. **2137-***Boylan*.

> 239-Yellow blooms. Great plant for the woodland. The light yellow-green leaves light up the woodland. The bloom appears in late spring and is a pale yellow, bellshaped flower in a terminal cyme. Unusual and interesting perennial for light shade/shade. Germ: W, NST. Doering. **2429-***Bricker*.

> 3321-White and green blooms. Large-leaved Asian woodland plant. Germ: Cycle: 90 d 35-40°F, then 90 d 65–70°F. R, SS, SR. *Perron*.

Pen0250 Pennisetum glaucum 'Purple Majesty'. CATTAIL, BULRUSH MILLET. An. Grass. Sun. 3-4'. Summer-Fall.

> 1999-Insignificant flowers, but seed heads are a very showy purplish-brown and attract birds. Fast-growing annual ornamental grass comes true from seed. Has striking purple foliage and flowers; a favorite food of songbirds. Grow in groups for best effect. Seed heads make wonderful fall decorations. Germ: Soak: 24 hr. Soak in warm water for 24 hr prior to sowing. C, 21 d. Young plants are green. Stem and mid-rib of the foliage first turn purple after 6-8 leaves have developed. Norfolk Botanical staff.

Pen2500 Penstemon 'Dark Towers'. BEARD TONGUE. Per. Sun. $1\frac{1}{2}$ –3 x 1–2'. Summer. Zone 3–8.

> 2515-Wine-red stems and wine-red leaves. Flowers are pale pink. Keeps its leaf color all season. Doblmaier.

Pen3000 Penstemon digitalis. FOXGLOVE, BEARD TONGUE. Per. Sun/PtShade. 4 x 1½'. Summer.

> 2515-This is the straight species of penstemon. White flowers. Doblmaier.

> **543-**White blooms. Clump-forming long-lived perennial. Nice red foliage throughout the season, especially in a sunny location. Hummingbirds visit the trumpet-shaped flowers during the summer. Germ: W, BC, 45 d. NST. Leasure.

> 965-Lilac blooms. From one of the new dark leaf forms, P. 'Dark Towers', which exhibited good vigor and attractive flowers, more purple than pink. *Umphrey*.

Pen3050 Penstemon digitalis 'Husker Red'. FOXGLOVE, BEARD TONGUE. Per. Sun/PtShade. 4 x 1'. Summer.

2515-White bloom. Nice burgundy foliage. Doblmaier. Pen3100 Penstemon digitalis 'Pocahontas'. BEARD TONGUE. Per. Sun. 3-4 x 2-3'. Spring. Zone 3-8.

> 2515-Burgundy-red stems with dark burgundy leaves and the flowers are lavender-pink. Keeps its leaf color all season. Doblmaier.

Pen5300 Penstemon smallii. SMALL'S BEARDTONGUE. Per. Sun/PtShade. 6 x 6"; to 1' in bloom. Spring-Summer. Zone 6-8. **2429-***Bricker*.

Per1500 Persea borbonia (syn. Persea littoralis, Tamala borbonia, Tamala littoralis). REDBAY, SWEET BAY, SILK BAY, RED BAY PERSEA, LAUREL TREE. Shrub/Tree. PtShade. 36-72'. May-June.

> 3436-Inconspicuous blooms. Native from lower Delmarva to the Gulf coast. Fast-growing broadleaved evergreen for sun or light shade and moist to occasionally flooded. Avocado genus. Leaves are bayleaf-scented and taste. No damage at zero. Wind resistant, but can break in heavy snow/ice. Germ: CMS: 30 d, BH, 40 d. May not need cold stratification. Silberstein.

Per2000 Persea podadenia. MEXICAN REDBAY, AMOLILLO, CHIHUANA CARA. Shrub/Tree. 25'.

> **3436-**Inconspicuous blooms. Similar to *Persea palustris*, except no bay leaf scent. Native to Mexico. 7a at least. Germ: CMS, BH, 40 d. May not need cold stratification. Silberstein.

Per2650 Persicaria orientalis 'Shiro-gane Nishiki'. PRINCE'S FEATHER. An. Sun. 6-7 x 2-3'. Summer-Fall.

> 199-Pink flowers. Large, heart-shaped leaves splashed with cream. Pink tassel flowers last months. Lushest growth in rich soil with plenty of water. Self-sows year to year. Cresson.

> 3436-Pink blooms. Scatter seed outdoors on mineral soil in fall to germinate in spring. Deer resistant. 7–8'. Showy variegated leaves and hanging clusters of flowers late summer-frost. Germ: R, OW, SS, SIS. Silberstein.

Per3250 Persicaria virginiana 'Painter's Palette' (syn. Polygonum virginiana 'Painter's Palette'). JUMPSEED. Per. Sun. 2–3+ x 2–4'. Late Summer–Fall.

> 3436-Red-pink blooms. Heavily variegated leaves and thin spikes of flowers in late summer. Thrives in moist shade. Germ: SIS, 30 d. Seeds around. Silberstein.

Per3400 Persicaria virginiana (Variegata Group) 'Painter's Palette' (syn. Polygonum virginiana 'Painter's Palette'). JUMPSEED, VIRGINIA KNOTWEED. Per. Sun/PtShade. 18-24 x 15–18". Summer–Fall.

> 543-White blossoms, with white and pink variegated leaves. Small red fruit in fall, 2'. Good for moist, shaded location. Well-behaved; however, occasionally abandons planting beds for growth at edges of walkways. Germ: SS; SIS, NST. Leasure.

Pet2200 Petunia exserta. Per. Sun/PtSun. 2 x 2'. Summer. Zone 9b-11.

2515-Red flowers. *Doblmaier*.

Peu1400 Peucedanum verticillare. HOG'S FENNEL, MILK PARSLEY. Per. Sun/PtSun. 6-10 x 2-3'. Summer.

> 32-Greenish white and yellow flowers on glaucous, purple stems, to 70–80". Plant Delights.

Pha0200 Phacelia bipinnatifida. FERNLEAF PHACELIA. Bien. PtShade/Shade.

> **3176-**Purple blooms. Spring blooming biennial native to Southeastern U.S. Will self-seed in shade or part shade. Makes a stunning display in the woodlands at Mt. Cuba Center. Germ: NST. Maher.

Phl0100 Phlomis russeliana. JERUSALEM SAGE. Per. Sun/ PtShade. 3–4 x 2'. Summer.

> 199-Yellow blooms. Gray, felty, heart-shaped basal leaves. Spikes of tubular yellow flowers in early summer.

Phl0200 Phlomis tuberosa. Per. Sun/PtSun. 1 x 1½; 3-5' in bloom. Summer.

> 199-Purplish pink flowers. Summer bloom on tall spikes to 6' above large basal leaves. Drought tolerant. Cresson.

Phl2040 Phlox paniculata. Per.

2937-Seeds collected from a range of purple and red (dark-colored) hybrids, will probably give a nice range of white, pink, and purple, mildew resistant plants. Bittmann.

Pho2050 Photinia villosa. ORIENTAL PHOTINIA. Tree. Sun/ PtShade. 15 x 15'. Spring.

3177-Red berries. Gibson.

Phy1300 Phytolacca americana 'Silberstein'. VARIEGATED POKEWEED. Per. Sun/PtShade. 3-4'. Late Spring-Midsummer.

> 3006-A diminutive form of pokeweed, heavily variegated, almost white at times. Plant only grows to about 4 x 4' in first year or two. Germ: OW; SIS. Fits nicely into both polite or wild borders. Seed from N. Ondra, 2013. Mayer. 3436-Small pink/white flowers and purple berries. Scatter seed outdoors on mineral soil in fall to germinate in spring. Deer resistant. Germ: CMS, R, OW, SS, SIS, RTp, 21 d. Silberstein.

Pil1000 Pilosella officinarum. MOUSE-EAR HAWKWEED. Per. Sun/PtSun. 8-12' tall. Early Summer. Zone 6-9.

> 199-Forms a grey foliaged mat of stoloniferous rosettes with lemon-yellow dandelion-like flowers in early summer. Good groundcover for a dry sunny site. Needs space. Cresson.

Pin3160 Pinellia tripartita 'Atropurpurea'. Bulb. PtShade/ Shade. 9 x 6". Summer.

> 1607-Burgundy interior blooms. Narrow spathe with dark burgundy interior from which a long yellow-green spadix emerges (to 10"). Not one of the invasive Pinellia spp. Jellinek.

Pla2000 Platycodon grandiflorus (syn. Campanula glauca). BALLOON FLOWER. Per. Sun/PtShade. 2-3'x 12-15". Summer.

1277-Blue flowers, 2'. Haas.

318-Blue flowers. Garnett.

5082-Purple blooms. Deer resistant. Germ: W, L, SR, 30 d. Smith. C.

Pla4000 Platycrater arguta. Shrub. PtShade/Shade. 3 x 3'. Early Summer-Early Fall.

> 3001-White flowers on hydrangea relative. Blooms early summer to September. Nice in the woodland garden. Germ: W; L. Gregg.

Pol0250 Polanisia dodecandra. DWARF CLEOME. An. Sun. 2 x 1½'. Summer–Fall.

> 592-White flowers with orange anthers overcame my dislike of the sticky, skunky downside of Cleome hassleriana. Long-lasting in bouquets—not for nosing. Malocsay.

797-White flowers. Germ: BC; SIS. Robinson.

Pol2700 Polygonatum biflorum. SOLOMON'S SEAL. Per. PtShade/Shade. 1-5 x 3'. Spring/Summer.

> 926-White flowers with green tips. Graceful arching woodlander with pendant flowers followed by blue fruit. Propagation slow, but worth the wait. Do not let the seed dry out before sowing?keep moist. Germ: CMS; Cycle 40°—70°—40°—70°; Sow ASAP. Streeter.

Pol2800 Polygonatum falcatum. ASIAN SOLOMON'S SEAL. Per. PtShade/Shade. 1½-3 x 2-2½'. Late Spring-Early Summer. Zone 2–9.

5024-White blooms. Germ: OW. *Iroki Garden*.

Pot2010 Potentilla rupestris. CINQUEFOIL. Per. Sun. 15 x 15". 199-White flowers. Floriferous. Seeds generously, so deadhead plants some. Easy, reliable, and attractive in perennial border or rock garden. The perfect cottage garden plant, as it mingles with its companions. Cresson.

Pot2450 Potentilla thurberi. CINQUEFOIL. Per. Sun/PtShade. 1½ x 1'. Spring/Summer.

> 199-From the Southern US and Mexico comes this easy, long-blooming perennial with sprays of deep red small flowers. Best in an open sunny location with good drainage. About 18" tall. Cresson.

> **239-**Perennial native to south. 15–18" tall with similar spread. Small red flowers float on long stems all summer. For full sun and good drainage. Germ: W, NST. Doering. 2515-Red flowers. Each flower bud may be small on this plant, but having a few open makes quite a statement. Long bloom time for a drier location. Germ: W, NST.

> 592-Rich red blooms. Adaptable, quiet, small blooms, but people notice. Germ: NST Malocsay.

Pri2100 Primula japonica 'Miller's Crimson'. JAPANESE PRIMROSE. Per. Sun/PtShade. 2 x 1'. Spring.

199-Red flowers. Cresson.

Pri2270 Primula japonica (peppermint striped). JAPANESE PRIMROSE. Per. Sun/PtShade. 2 x 1'. Spring.

> 199-This is the easiest candelabra primrose species to grow in the mid-Atlantic. Pink and white peppermint striped flowers, blooming the whole month of May. Came from Dick Lighty's garden & I've never seen it or reference to it elsewhere. Cresson.

Pri2680 Primula japonica (white). JAPANESE PRIMROSE. Per. PtShade. 11/2 x 11/2'. Spring.

199-White flowers. Cresson.

Pru2500 Prunus americana. AMERICAN PLUM. Tree. Sun/ PtShade. 15–25 x 15–25'. Early Spring. Zone 3–8.

3177-White blooms. Gibson.

Pse1000 Pseudogynoxys chenopodioides (syn. Senecio confusus). MEXICAN FLAME VINE. TenVine. Sun. 6–12 x 3–6'. Summer–Fall. Zone 9–10.

> **200-**Bright orange blooms on gorgeous, tender perennial, from cuttings, 10-15'. Cultivar 'Rio'. Germ: BH; L. Creveling.

Pse2000 Pseudolarix amabilis. GOLDEN LARCH. Tree. Sun. 20-60'. Zone 4-8.

> **522-**Foliage color is chartreuse/yellow. A tree deserving of good placement to enjoy its elegant structure. Deciduous. Golden needles in the autumn. Mature trees at 60'. Amazing cones. Kushner.

Pte0300 Ptelea trifoliata 'Variegata'. VARIEGATED HOP TREE. Shrub. PtShade. 15-20 x 12-15'. Summer. Zone 5-9.

> 1277-White flowers. Unusual small tree from seed of the gold ptelea which mutated to a variegated form. Have not found this form listed in any book, so it is rare. They usually come gold. Haas.

Pte0510 Pterostyrax hispida. FRAGRANT EPAULETTE TREE. Tree/Shrub. Sun/PtShade. 50 x 40'. Spring-Summer.

> 1277-White, small tree (20–30') with unusual flowers. Germ: CMS: 90 d. Haas.

> 5024-White blooms. Germ: Cycle: CMS 3 mo at 40°F, move to 70°F for germination. Iroki Garden.

Rab1000 Rabdosia longituba. Per. Sun/PtSun. 5 x 2'; to 6' in bloom. Fall.

> 199-Blue flowers. Japanese native with tubular blue flowers in branched clusters at the nodes all along the stem in late September to October. White seedlings occur. Lovely supported by adjacent shrubs. Height 4–5'. Cresson.

Ran1050 Ranunculus gramineus. **GRASSY-LEAVED** BUTTERCUP. Per. Sun/Pt.Sun. 12". Spring. Zone 5-9.

> 199-Yellow blooms. Per. Sun/Pt.Sun. 12". Spring. Named for its narrow leaves on a plant that goes summer dormant, so drought is no problem. Perfect for a rock garden with good drainage. Adaptable and easy to grow. Mediterranean native. Cresson.

Rap0050 Raphanus sativus 'Caudatus'. DRAGON'S TAIL RADISH.

> **269-**Pinkish white. Grow like regular radishes, prefer full sun and cool conditions. I am not sure of the correct botanical name, but this is a radish grown for its edible purple seedpods, not its root. (Rat-tail radish, R. caudatus, has green pods.) The pods have a spicy radish tang and are great in salads or stir fries. Pretty, too! Harvest when pods are relatively small, 3-5", as they get hotter and tougher as they age. Allow some to mature to harvest seeds. The flowers are attractive to butterflies, too. Germ: BC, SIS, NST. Plants are large, so space seeds a foot apart in single rows for easy harvesting. Ellis.

Res1500 Reseda luteola. Bien. Sun/PtSun. 2-5 x 1'. Late Spring-Summer.

> 118-Yellow blooms. Long, meandering, slender spikes of small, yellowish flowers top narrow, lance-shaped leaves. Annual/biennial to 5'. Sun. Germ: W, SS. Stonecrop Gardens.

Rhe2000 Rhexia species. MEADOW BEAUTY. Per. Sun. 11/2 x½'. Summer–Fall.

> 1865-Pink flower with yellow anthers, 2' tall, will spread by seeds. Germ: W; BC; 0-14 d. Bennett.

Rhy1500 Rhynchospora colorata (syn. Dichromena colorata, Rhynchospora drummondiana, Rhynchospora STARRUSH WHITETOP, STAR SEDGE, WHITE-TOPPED SEDGE, WHITETOP SEDGE, STAR RUSH. Per. Sun/PtShade. 2–3'. Late Spring/Summer. Zone 7–10.

> 1999-Insignificant white flowers are set off by showy white bracts. Makes a showy addition to a bog or water garden. It will also grow in regular garden soil with plenty of water. Hardy in Zones 7 to 10, it is native to the eastern coastal plain of the United States. Germ: Sow @ 20°C. Seed germinates within 3 mo. Special Care: grow in pot with no drainage to keep quite moist W, 90 d. Norfolk Botanical staff.

Ric1160 Ricinus communis 'Carmencita'. CASTOR BEAN. An. Sun. 5–6+ x 5'. Summer.

> 200-Maroon and white blooms, bold bronzy leaves on tropical, poisonous plant. Will self-sow. Germ: SIS. Creveling.

Ric1230 Ricinus communis 'Carmencita Red'. CASTOR BEAN. TenPer. Sun. 6-9'. Summer.

> 2515-Red flowers. All parts of this plant are poisonous. Leaves are large and maroon colored. Another great castor bean for a container. Germ: BH. Doblmaier.

Ric1500 Ricinus communis 'New Zealand Purple'. PURPLE CASTOR BEAN. Shrub. Sun. 6-10'. Late Summer/Early Fall. Zone 8a-11.

> **2515-**Red blooms. Have propagated the seed of this plant for a long time. Bought the original seed online about 10 yr ago. Love this plant for a taller accent in containers. All parts of the plant are poisonous. Doblmaier.

Rod1040 Rodgersia pinnata 'Superba'. Per. PtShade. 1 x 1½; to 2'. Summer.

> 199-Pink flowers. Reddish foliage, especially when young. Darker than many I've seen. Cresson.

Roh1050 Rohdea japonica. NIPPON LILY, SACRED LILY. Per. PtShade/Shade. 12-18". Spring. Zone 6-10.

> 3001-Slow-growing Asian broadleaf shade perennial to about 14". Forms clumps over time. Mature plants produce red berries in late fall. Germ: CMS 2 mo. Gregg.

Ros3250 Rosa 'Geranium' (moyesii hybrid) (syn. Rosa moyesii 'Geranium'). Woody. Sun. 12 x 10'. Summer.

> 199-Red flowers. Highly valued for large, bottle-shaped, waxy, red hips in fall. Masses of single red flowers early June. Large fountain-shaped shrub. Grow with a native clematis for summer. Cresson.

Ros5300 Rosa roxburghii. CHESTNUT ROSE. Shrub, 6-8 x 6-8'. Zone 6-9.

> 926-Pink double flowers becoming very ornamental, bright yellow, prickly hips. Germ: CMS: 3–5 mo. Do not let seed dry out. Streeter.

Ros5400 Rosa rugosa. RUGOSA ROSE. Shrub. Sun. 4-6'. Summer-Fall.

> 926-Fragrant dark pink flowers in summer, followed by large prickly hips on a hardy, tough shrub rose with very prickly stems. Worth the prickles! From Isle au Haut, Maine. Streeter.

Ros6010 Rosa virginiana. Shrub. 3–6 x 2–3'. Spring–Summer. 3006-Possibly R. carolina. Native, part shade, pale pink blooms and pretty small hips in fall that persist into winter. Mayer.

Rud1560 Rudbeckia fulgida var. deamii. BLACK-EYED SUSAN. Per. Sun/PtShade. 3 x 2'. Summer.

> 199-Yellow flowers with black centers. Very heat and drought tolerant. Flowers July through September, later than 'Goldsturm' on longer flower stems, so it's better for cutting. Cresson.

Rud1740 Rudbeckia fulgida var. sullivantii. Per. Sun. 15 x 24". Summer-Fall.

> **507-**This is not 'Goldsturm', it's an altogether finer plant. Smaller blossoms. Doesn't run or reseed. Excellent. Kolo.

Rud1850 Rudbeckia fulgida var. sullivantii 'Goldstrum'. Per. Sun. 12 x 12"; to 2' in bloom. Summer–Fall.

> 1277-A workhorse of a plant. Blooms almost all summer and into fall. Haas.

Rud2800 Rudbeckia hirta 'Chim-Chiminee'. An./Bien. Sun. 2–3'. Summer–Fall.

208-Yellow blooms in summer. Petals narrow, quill-like.

Rud3500 Rudbeckia laciniata. CONEFLOWER. Per. Sun. 2 x 2'; from 4–6' in bloom. Summer–Fall.

> 9985-Light yellow petals, green disk. Tall plant that may need support when heavy with blooms. Does not seed in as readily as other rudbeckias. Green disk rather than brown. Adapts to a variety of light conditions. Germ: CMS: 30 d, NST. I winter sow this species. Jenkins Arboretum.

Rud3850 Rudbeckia laciniata 'Herbstsonne'. CONEFLOWER. Per. Sun/PtShade. 6 x 2-3'. Summer.

> 507-Yellow flowers. Wonderful late summer daisy. Spectacular. Kolo.

Rud4050 Rudbeckia maxima. GIANT CONEFLOWER. Per. Sun/PtShade. 6 x 2'. Summer.

2463-*Nolan*.

9985-Yellow and brown blooms. Large glaucous basal leaves, tall sturdy stems, and extra long conical brown disks in the center of yellow petals. No need to stake or cut back in early summer to avoid flopping plants. Germ: W. NST. We winter sow this species and it does well. Jenkins Arboretum.

Rud4900 Rudbeckia subtomentosa. SWEET CONEFLOWER. Per. Sun. 4'. Late Summer/Early Fall.

9985-Yellow and brown blooms. Larger blooms than R. triloba and the deer leave it alone. Large clumps of basal leaves make a presence even after the blooms are finished in the fall. Can tip in late spring to keep shorter. Germ: CMS: 30 d. I winter sow mine, good germination. Jenkins Arboretum.

Rud4935 Rudbeckia subtormentosa 'Little Henry'. SWEET CONEFLOWER. Per. Sun/PtShade. 3 x 2'. Summer/Early Fall. Zone 4–9.

> **507-**Pale yellow blooms. A rather stiffer-looking blossom than other rudbeckias, like it was designed geometrically. Blossoms also a bit smaller. A 30" or so narrow clump. Late blooming, long lasting. Kolo.

Rud5100 Rudbeckia triloba. BLACK-EYED SUSAN. BROWN-EYED SUSAN. Bien./Per. Sun/PtShade. 5 x 3'. Summer-Fall.

> 1020-Yellow with black centers. Blooms mid-August to frost. Self-sows. Wiedorn.

> 1277-Gold flowers with black centers. Many small flowers in late summer. Self-sows a little here. Germ:

> 1585-Flowers orange with brown centers. Clouds of small orange daisies cover branches in late summer, attracting both bees and butterflies. Germ: NST. Selfsows. Scofield.

Rue1040 Ruellia humilis. WILD PETUNIA. Per. Sun/PtShade. 1 x 1'. Summer.

> 1277-Blue-violet flowers. Perennial. Mine only got to 1'. Nice plant. Haas.

Rut1050 Ruta graveolens 'Blue Mound'. COMMON RUE. Per. Sun. 2 x 2'. Summer.

> 1017-Yellow-green blooms with wonderful, glaucous foliage. Whitesell.

Sab0500 Sabal minor. DWARF PALMETTO. Palm. Sun/ PtShade/Shade. 6 x 6'; to 7' in bloom. Summer. Zone 6–7.

3177- 4–5' foot tall sprays of black berries. *Gibson*.

Sab0550 Sabal minor Sabal minor Louisiana form. LOUISIANA PALMETTO. Shrub. Sun/PtShade. 6-12'. Spring/ Summer. Zone 7a (protected)–11.

> 3436-White-inconspicuous blooms. Grow in container for a few yr. Slow-growing; about 4 leaves per yr. Easily damaged by wet snow or ice and will freeze to the ground in the open in 7a. About 5 yr from seed to flowering. More vigorous than S. minor. Hardy to 7a if grown on warm side of building. Freezes back below zero and can windburn, but regrows from base. Don't let container freeze or dry out. Germ: Soak: 1 d, BH, 90 d. Easier to transplant than S. minor. Shrubby fan palm. Silberstein.

Sab0580 Sabal minor 'McCurtain'. DWARF PALMETTO, BLUESTEM PALMETTO, BLUE PALM. Palm. Sun/PtShade. 4–6 x 4–6'. Spring–Summer. Zone 6–7.

> 199-Greenish white blooms. Trunkless, evergreen, native fan palm makes a surprising foliage plant year around. Bluish green foliage. Seed from my plant hardy since 2000, originated from a natural stand in McCurtain County, Oklahoma. 4-6' tall. Sun-part shade. Cresson.

Sab0600 Sabal minor NE Texas Form. DWARF PALMETTO, BLUESTEM PALMETTO, BLUE PALM. Palm. Sun/PtShade. 4–5 x 4–8'. Spring–Summer. Zone 6–7.

> 3436-White-inconspicuous blooms. Grow in container for a few yr. Slow-growing; about 3 leaves per yr. A bit more wind-resistant than East coast S. minor. Six or seven yr from seed to flowering. Hardy to 6b if grown on warm side of building. Freezes back below zero and can windburn, but regrows from base. Don't let container freeze or dry out. Germ: Soak: 1 d, BH, 90 d. Second hardiest member of the palm family. Shrubby fan palm; no trunk. Silberstein.

Sab1100 Sabatia kennedyana. PLYMOUTH ROSE GENTIAN. Per. Sun/PtSun. 30". Zone 7b.

> 1114-Bright pink w/white center. Very attractive, fragrant composite flower, blooming in late May to July. Excellent companion for carniverous plant gardens. Germ: CMS: 30–40 d; BH; SS; SR; 20–30 d. Aquascapes Unlimited. 32-Source: Niche Gardens. Source Plant Description: light pink center, 'Juniper Creek' Collected on: 10/2016 Garden Location: 13:Long Bog. Plant Delights.

Sal0100 Salix gracilistyla 'Melanostachys'. BLACK PUSSY WILLOW.

> 208-Black catkins on 15 x 15' shrub, if not cut back in spring after bloom. Sun. Caution: Do not plant near water lines or septic systems. Dahlke.

Sal0600 Salvia azurea. BLUE SAGE, PRAIRIE SAGE. Per. Sun. 3 x 2'. Summer.

> 2515-Lovely light blue salvia. Drought tolerant. Native to central US. Bee magnet for me this year. *Doblmaier*. 475-Clear sky blue blooms. A five footer from the prairie. She stands up straight in the sun but supposedly can handle part shade. This native perennial pleasantly amazes me every fall waving her blueness in the wind. She escapes my staking but never ends up on the ground. Beautiful and happy. Germ: NST.I start most native seeds as soon as I can get them into flats in February or March. I cover them with crushed stone called #1 turkey grit. In PA I used granite and here it's rose quartz. The stone wards off the fungus that causes damping off as well as holding the seeds in place while watering or in this case I put the flats right outside, pile snow on them, and let the snow and rain do the rest. Kaplan.

Sal1100 Salvia coccinea 'Brenthurst'. An. Sun. 20–30 x 12". Summer-Fall.

318-*Garnett*.

522-Peachy pink flowers. Betsy Clebsch observes this will come true from seed if no other S. coccinea cross pollinates the plants. Wonderful filler plant. Deadheading promotes bloom. Germ: L; W, 10d. Kushner.

Sal1150 Salvia coccinea 'Coral Nymph'. CORAL NYMPH TROPICAL SAGE. An. Sun. 3-4 x 1-2'. Summer-Fall.

> 1277-Pretty coral flowers. A great color. Fantastic plant. Haas.

> 199-Coral-pink/white bicolor blooms. Self-sowing annual will reappear in your garden each year and is easy to transplant where you want it for abundant midsummer to fall bloom. Great filler among perennials. Cresson.

Sal1200 Salvia coccinea 'Lady in Pink'. An. Sun. 2' x 2'. Summer-Fall.

> 239-Red blooms. Annual plant. Good in full sun. 15–18". Great plant for good color in the summer and late into the fall. Hummingbirds love it! Germ: W, NST. Doering.

Sal1250 Salvia coccinea 'Lady in Red'. SALVIA. An. Sun/ PtSun. 3-4 x 2'. Summer-Fall.

1277-Red flowers. Airier than S. splendens. Germ: NST,

1939-Red blooms. Great filler in the summer and fall. Deadhead flowers. Germ: BH, W. NST. Deadheading prolongs bloom, but self sows easily if seedpods are allowed to form. Urffer.

Sal1370 Salvia 'Summer JewelTM Lavender'. SALVIA. Per. Sun. 20 x 15". Late Spring-Early Fall. Zone 7–10.

> 2515-Dusty lavender purple flowers on this 11/2 ' tall Salvia. Blooms all summer. Attractive for front of the border. Doblmaier.

Sal1390 Salvia deserta. Per. Sun/PtSun. 28". Summer.

199-A new species from China, closely related to S. nemorosa and has purple-red bracts. Cresson.

Sal1750 Salvia forskaohlei. Per. Sun/PtShade. 1½ x 1½'. Summer.

> 2515-The violet-blue and white flowers are stunning on this long-blooming salvia. Bloomed the first year from seed. Doblmaier.

Sal2350 Salvia guaranitica. ANISE-SCENTED SAGE. An./ TenPer. Sun/PtShade. 5 x 2'. Summer-Fall.

> 199-Indigo blue flowers. One of the hardiest forms of this species which has been hardy outdoors, protected by a mulch for 30 years. 5-6' tall when established. July-October bloom. Cresson.

318-Deep, strong, true blue flowers. *Garnett*.

522-Brilliant, true-blue flowers. Blooms for months.

Sal3100 Salvia lyrata. LYRE LEAF SAGE.

2497-Light lavender blooms. A wonderful plant native to the Eastern U.S. Lyre leaf sage spreads vigorously, but this is great for difficult locations like dry shady woodland areas. It is easy to weed out if it grows more than you want. The rosettes are evergreen and create a great groundcover for erosion control. Terrific on the bottom of my shady rain garden. Germ: BC, NST. Mackey.

Sal3290 Salvia 'Madeline'. MEADOW SAGE. Per. Sun/PtSun. 24". Summer. Zone 5a-8b.

> 2515-Bicolor purple/white flowers are delightful in late spring for about a mo. Loves dry conditions in my garden. Germ: NST. Doblmaier.

Sal3350 Salvia nemorosa. BALKAN CLARY, WOODLAND SAGE. Per. Sun. 18–36 x 24". Summer.

> 208-Long-blooming purple flowers in summer. A bushy palnt. *Dahlke*.

Sal3850 Salvia patens 'Blue Angel'. BLUE ANGEL GENTIAN SAGE. Per. Sun. 24-28". Mid-Summer to frost.

> 1277-Ultramarine blue flowers. Park's, where I purchased this seed, lists it as Zone 8. I have grown it now for several years in a protected spot by my polyhouse, and I am zone 6A! Try it. Germ: BH. Haas.

Sal3870 Salvia patens 'Patio Sky Blue'. Sun.

84-Pale true blue blooms on a low (12") tender perennial. Excellent in containers. Bowditch.

Sal4050 Salvia penstemonoides. GIANT RED TEXAS SAGE. Per. Sun/PtShade. 3-5' x 12". Summer-Fall. Zone 6a-9b.

> 2515-Light purple blooms. Native wildflower. Germ: NST. Doblmaier.

Sal4885 Salvia splendens 'Lighthouse Purple'. TenPer. Sun/ PtShade. 36-48 x 24-36". Summer-Fall.

> 522-Intense purple blooms on long-blooming, longlasting, mid-border plant. Blooms June-October. 24–30". Source: Summer Hill Seeds. Germ: D. Kushner.

Sal4910 Salvia splendens 'Peach'. An. PtShade. 3-4 x 3'.

965-Peach form. Late bloomer in luscious shade of soft shrimp pink. Not your typical red salvia. Three foot plants bloom in fall with loose spires of peach flowers. Shade. Gorgeous. Wouldn't be without it. *Umphrey*.

San0100 Sanguisorba armena. Per. Sun/PtShade. 3-4'. Late Spring/Early Summer.

> 199-White blooms. Large glaucous 3' foliage resembles Melianthus major. Nodding, white, bottle-brush flower spikes in early summer. Probably best with part sun and moist soil. Turkish native. Cresson.

San1200 Sanguisorba officinalis. GREAT BURNET. Per. Sun. 2½ x 2-3'. Late Spring-Early Summer. Zone 4-8.

> 590-Deep red, bottlebrush or catkin-like blooms. 3–4 x 2–2½'. *Mahony*.

San1300 Sanguisorba officinalis 'Tanna'. Per. Sun. 1½ x 1. Summer.

> 9969-Purple blooms. Germ: CMS: 60 d, C, L, 60 d. Zatsick.

San1400 Sanguisorba obtusa. JAPANESE BURNET. Per. Sun/ PtShade. 2½ x 2'. Summer–Fall.

> 199-Spikes of pink bottlebrush blooms July to Sept. Enjoys rich organic soil. Similar to S. hakusanensis, but later bloom. Japan. Cresson.

San1850 Sanguisorba tenuifolia 'Purpurea'. Per. Sun/PtShade. 4-6 x 1½'. Fall.

> 1999-Elongated spikes of burgundy-red, bottlebrush-like flowers are set off by dramatic, shiny green pinnately compound foliage. Excellent cut flowers. To be reliably perennial, Japanese burnet should be grown in full sun and have sharp winter drainage. Hardy in Zones 4 to 8. Plants often turn yellow in the autumn. Germ: CMS: 90 d. Soak: 24 hr. Soak seeds in warm water for 24 hr then cold/moist stratify for 90 d. Germination will commence in 7-14 d when seeds are returned to 70°F. W. Norfolk Botanical staff.

Sar1450 Sarracenia flava. YELLOW PITCHER PLANT.. Per. Sun. 1½-3'.

> 1114-Red flowers. Cold hardy to zone 5. Produces tall wide-mouthed tubes from April to June and Sept to Oct, with large, fragrant flowers in April/May. Water with rainwater only. Full sun. Constant moisture. Germ: CMS: 30-40 d; BH SS; SR; 20-30 d. Aquascapes Unlimited.

Sar1470 Sarracenia leucophylla. CRIMSON PITCHERPLANT, PURPLE TRUMPET-LEAF, WHITE PITCHER PLANT. Per. Sun. 1½-3 x 1½-3'. Spring/Late Summer.

> 3645-Red blooms. Purchased as S. leucophylla, which the flowers indicate, but the shape and coloration of the pitchers of the parent plant resembles S. alata, suggesting it may be a hybrid. "The best medium for seedlings is finely milled peat moss mixed wi Germ: CMS: 50 d, L, SS. Roskoph.

Sar2010 Saruma henryi. UPRIGHT WILD GINGER. Per. PtShade/Shade. 12-18 x 15-18". May-June. Zone 4-8.

> 199-Yellow flowers. Charming shade plant with heartshaped leaves. Flowers at least 2 months in spring, or longer in cool weather. Sows itself into interesting places without becoming weedy. Cresson.

Sar2010 Saruma henryi (Continued)

522-Yellow flowers. Related to Asarum, and Saruma is a play on that name. Splendid addition to the shade garden edge. Felty leaves. When well sited will bloom off and on for months. Kushner.

84-Clear light yellow blooms. Asian perennial for partial shade blooms in May and June. Attractive heartshaped leaves add interest. Seeds around a bit, but not excessively. Germ: C, NST. Bowditch.

Sca1650 Scabiosa lucida. SCABIOUS. Per. Sun. 10 x 10"; to 12" in bloom. Summer.

> 118-In late spring, light blue, dense heads are surrounded by bristly, involucral bracts. Deep green, pinnatifid foliage forms a basal rosette. Perennial to 15". Self-sows. Well-drained soil. Sun. Germ: CMS: 42 d, BC. Stonecrop Gardens.

Sca2400 Scadoxus 'Konig Albert' ('King Albert'). Bulb.

199-Red blooms. German hybrid S. puniceus x S. multiflorus ssp. katherinae. Bright red flowers. Spherical flower heads, 2' high in summer. Wide, nearly evergreen foliage. Red berries, fall/winter. Easy tropical pot plant. Warm or cool and nearly dry in winter, like clivia. Likes my shaded patio in summer. Cresson.

Sch0500 Schefflera delavayi. HARDY CHINESE SCHEF-FLERA. Shrub. PtShade. 6-8'. Zone 7-10.

> 1999-Sprays of tiny, insignificant white flowers followed by blue berries. Hardy in Zones 7b to 10a, where it will remain evergreen. Germ: Soak: 24 hr. Soak seeds overnight in warm water before sowing at 70°F. Expect germination in 2-3 wk. W, BC. Norfolk Botanical staff. **32-***Plant Delights.*

Sch3500 Schizophragma aff. megalocarpum. EVERGREEN HYDRANGEA VINE. Vine. Sun/PtShade. 20-30'. Zone 7-10. **32-***Plant Delights.*

Sci1010 Scilla autumnalis. AUTUMN SCILLA. Bulb. Sun/ PtShade. 2"; to 12" in bloom. Summer-Fall.

> 118-Pink blooms. Hardy bulb to 8?. Autumn Squill. Europe. What a treat to have this pink squill blooming in September. Open racemes display the bractless flowers. Not fussy about soil. Adorable. Sun/partial shade. Germ: CMS: 50 d, C, BC, SIS. Stonecrop Gardens.

3321-Pink-purple blooms. Great late season color.

45-Purple blooms in falll. A pleasant novelty for the late summer. A delicate, hardy squill to 1'. Grow in the front of your garden for late season interest. Germ: NST. 90 d. Do not overwater seed. Bartlett.

Sci2010 Scilla scilloides (early form). CHINESE SCILLA. Bulb. Sun/PtShade. 2'. Summer.

> 199-Summer dormant until bloom in August. Very hardy. Best in at least part sun. May seed very freely. *Cresson*.

Sci2020 Scilla scilloides (late form). CHINESE SCILLA. Bulb. Sun/PtShade. 2'. Summer-Fall.

> **199-**Often grown under the misnomer *S. numidica*, this late blooming form is a bit huskier and deeper in color. Self-sows vigorously in the rock garden, so deadhead. Try near early colchicums. Blooms August-September. Cresson.

Scu2010 Scutellaria diffusa. SKULLCAP. An. Sun/PtShade. 6 x 10'. Summer.

> 199-Lavender-blue flowers. Attractive compact rock garden plant. Self-sows freely. Grayish foliage. Evenly moist to dry soil. Cresson.

Scu4010 Scutellaria incana, DOWNY SKULLCAP, Per. Sun/ PtShade. 2–3 x 2'. Summer–Fall.

> 1017-Blue flowers in midsummer. An upright perennial that blooms when the border is slowing down a little. I'm told it can be a vigorous seeder, but I've never had a problem and you want more of these anyway. Nice bushy habit. Whitesell.

> 1999-Spires of small, lavender-blue, snapdragon-like flowers. Long-blooming perennial attracts hummingbirds and bumblebees. Makes an excellent cut flower. This native wildflower is hardy in Zones 5 to 8. Germ: CMS: 60 d. W, 60 d. Norfolk Botanical staff.

> 2515-Blue flowers and gray foliage is attractive together. Germ: NST. Doblmaier.

Scu4150 Scutellaria integrifolia. SKULLCAP. Per. Sun. 1 x 2'. Summer-Fall.

> 199-Purple-blue blooms. Eastern native, prolific flowers all summer. Cresson.

Scu4400 Scutellaria ovata. HEART-LEAF SKULLCAP. Per. 12 -28". Late Spring-Early Summer.

> 199-Blue-purple blooms. A pretty plant with blue-green leaves, spreading by rhizomes. Tolerates poor dry soils. Southeastern US. Cresson.

Scu4900 Scutellaria species.

199-Rose-pink blooms. I'm not sure where this scullcap came from, but it might be S. suffruticosa from Mexico. A compact bushy plant with deep pink flowers. Let it self-sow for next year. Cresson.

Sed1550 Sedum sieboldii. OCTOBER DAPHNE. Per. Sun. 6–12 x 12". Summer–Fall. Zone 3–9.

> 1939-Small, light pink flowers with silver-blue foliage. Urffer.

> 199-Deep pink blooms. A favorite little clumping sedum of arching stems with silvery blue foliage all summer and deep pink flowers in October. Looks wonderful hanging out of a wall or among rocks. Cresson.

Sed1600 Sedum spectabile. Per. Sun/PtSun. 1 x 1'. Fall. Zone 4–9.

> 199-Bright pink blooms. Old fashioned bushy clumping perennial with large, light green leaves and flat flower heads of hot pink flowers. Sun or moderate shade in almost any soil, even poor and dry. Perfect with colchicum and Lespedeza thunbergii. About 1' tall and wide. Cresson.

Sen1750 Senna didymobotrya (syn. Cassia didymobotrya). CANDLESTICK SENNA, POPCORN CASSIA. TenPer. Shrub. Sun. 8 x 6'. Summer–Fall.

200-Creveling.

Sen1800 Senna hebecarpa. WILD SENNA. Per. Shade. $4-6 \times 2\frac{1}{2}$ '. Summer.

> 199-Yellow flowers. Branched heads of yellow peashaped flowers. Self-sows in my meadow. Tropical appearance. Native. Cresson.

Sen1800 Senna hebecarpa (Continued)

2515-Yellow flowers and interesting foliage attracted many neighbors to ask what was that plant. Native. Germ: NST. Doblmaier.

Sen2010 Senna marilandica (syn. Cassia marilandica). WILD SENNA. Per. Sun/PtShade. 3-6 x 2-3'. Summer-Fall.

1277-Yellow flowers. Blooms spring to fall. *Haas*.

1918-A shrubby herbaceous 3–6' perennial native to the East Coast and Midwest, it blooms in midsummer with yellow pea-like flowers. These are followed by seedpods which ripen to black and remain on the plant through winter. Carev.

797-Yellow flowers. Self-sows gently for me. May need CMS. Robinson.

Set2000 Setaria palmifolia (syn. Panicum palmifolium). PALMGRASS, BROAD-LEAVED BRISTLEGRASS, HAILANS PITPIT. Grass. Sun/PtShade. 3-6'. Summer.

> 3436-Greenish white blooms. Needs to be dug and brought indoors in fall. Seeds around. Germ: Thrives with heat and water. Silberstein.

Sil0050 Silene armeria. SWEET WILLIAM CATCHFLY, NONE-SO-PRETTY. An./Bien. Sun/PtShade. 12-24" in bloom. Summer.

> 1918-Little pink flowers which bloom beginning in late spring and continuing sporadically through summer. Glaucous foliage on thin, slightly sticky stems to 1-2' tall. Will self sow. Full sun and dry-medium soil with good drainage. Germ: BC, SIS. Seed should be sown outdoors 3 wk before last frost in the spring, or may be started indoors 8-10 wk before the last frost and then transplanted. It may be helpful to sow the seed mixed with coarse sand. Carey.

> **522-**Dark pink/rose pink blooms on a herbaceous perennial that thrives in a rock garden. Eye-catching. Full sun to part shade. Germ: Self seeds. Kushner.

> 797-Hot pink blooms. Germ: SIS; NST. Self-sows. Robinson.

Sil0080 Silene armeria 'Electra'. SWEET WILLIAM, CATCHFLY. An. Sun. 12"; from 12-15" in bloom.

> **522-**Hot pink blooms on plant with blue-gray leaves. Good rock garden plant, since it likes dry sun. 1½" annual that self-sows. Blooms in July and August. Source: Derry Watkins. Kushner.

Sil0550 Silene dioica. RED CAMPION, COCK ROBIN. Per. Sun/PtShade. 12–18 x 15–18". Spring–Fall. Zone 5–11.

> 1277-Deep rose-pink flowers. Adds color to the garden when not much else is blooming. Self-sows. One of my favorite plants. Germ: OW. Haas.

Sil1700 Silene regia. ROYAL CATCHFLY. Per. Sun/PtShade. $2\frac{1}{2}$ x 1'. Summer.

> 1277-Red flowers. Grow on the dry side. Very similar to Silene virginica, Fire Pink. Haas.

> 199-Reddish orange blooms. Tall 4' spikes July-August resemble cardinal flower, but thrives on dryish clay in sun to part shade. Easy mid-Western and Southern native in prairies and open woods. Cresson.

Sil2010 Silene species. CAMPION, CATCHFLY. Per. Sun. 8–15 x 12"; to 24" in bloom. Late Spring–Summer.

> 592-Pink/magenta blooms. Plants were here when I came. Good mixer in low-height contexts. Germ: SIS, NST. Pleasant self sower. Easy to pull when finished. Malocsav.

Sil2500 Silene subcilliata. Per. Sun/PtSun. 2 x 1½'. Fall. 32-Plant Delights.

Sil4260 Silphium perfoliatum. CUP PLANT. Per. Sun/PtShade. 8 x 4'. Summer–Fall.

> 644-Yellow blooms. Blooms July to September in full sun. 4–8 x 1–3'. Germ: OW, BC, SIS. Mills, L. 9985-Jenkins Arboretum.

Sil4370 Silphium terebinthinaceum. ROSIN WEED, PRAIRIE DOCK. Per. Sun. 1-2'; from 6-8' in bloom.

32-Plant Delights.

Sil5040 Silybum marianum. MILK THISTLE, BLESSED THISTLE, HOLY THISTLE. Bien. Sun. 3–5 x 3'. Summer–Fall.

> 592-Dramatic rosette, fiercely armed, handsomely silvered, stout thistle bloom. Ripening spoils the show so by late summer I out all but seed-savers. Meaty seeds seem not a flying threat. Germ: SIS early makes it an annual for me. Malocsay.

Sis1350 Sisyrinchium palmifolium. 32-Plant Delights.

Ski2500 Skimmia japonica (Giant Form). JAPANESE SKIMMIA. Shrub. PtShade/Shade. 4 x 5'. Spring. Zone 7–9.

> 199-White blooms. Large leaves and plant habit distinguish this remarkable form from the normally low growing types. White flowers in spring and bright red fruit in fall if a male plant is present. Skimmias thrive in dark, dry, shady locations. Cresson.

Sol0200 Solanum atropurpureum. CRUELLA DE VIL, PURPLE DEVIL. TenPer. Sun. 3-6 x 3-4'. Summer. Zone 10a-11.

> 543-Yellow blooms. Purple-mahogany stems and spines. Tropical-looking plant with serious 1" spines covering the stems. Yellow flowers similar to tomatoes leading to green-striped rounded fruits that ripen to orange. All parts are poisonous if ingested. Germ: W, BC, 21 d. NST. Sow as you would tomato or pepper seeds. Leasure.

Sol0590 Solanum lycopersicum 'Black Krim'. BLACK KRIM TOMATO. An. Sun.

> 215-Yellow blooms. Dark deep red fruit with heavy green shoulders. Fruit interior is a deep, reddish-green color. Sweet and tasty. Matures extremely early. An indeterminate tomato. Germ: BH, BC, NST. DeMarco.

Sol1250 Solanum quitoense. NARANJILLA, LULO, SPINY TOMATO. TenPer. Sun. 6–8 x 4'. Summer–Fall. Zone 9b–11.

> **269-**White insignificant blooms. This is an 8' shrub from South America that is grown as a tender perennial. White flowers are followed by round green fruit that turn orange when mature. The common name means "little orange." (The fruit is crushed and mixed with sugar to make naranjilla juice in Ecuador.). For gardeners, the showy, 2'-long, 11/2'-wide leaves make the plants handsome additions to sunny beds, borders, and large containers. The leaves are very spiny, and the spines are showy. Germination is similar to tomatoes, but plants take up to 12 mo to begin fruiting, so for fruiting plants, grow them in containers and overwinter in a greenhouse or indoors. Germ: BH, BC; Germination time is unknown, but start seedlings in mid winter: Plants are ready for transplanting in about 2-3 mo from sowing. Give plants full sun and rich, well-drained soil. Ellis.

Sol1450 Solidago bicolor. SILVERROD. Per. Sun/PtShade. 1-3'. Summer-Fall.

> 199-White flowers. The only white-flowered goldenrod species. White flowers born in terminal spikes. Easy native. Originally from Eastern Shore of Maryland in dry shade, clay soil on a wood's edge. Cresson.

Sol1500 Solidago caesia. WREATH GOLDENROD. Per. PtShade/Shade. 2'. Fall.

> 199-Yellow flowers. Tolerant of dry shade. A good nonspreading goldenrod for dry shade that looks great in fall with woodland asters Cresson.

Sol1600 Solidago elliottii. Per. Sun/PtSun. 3'. Late Summer.

199-Yellow flowers. This coastal salt tolerant species holds promise as a garden plant. Clump forming. September bloom. From Polly Hill Arboretum. Cresson.

Sol4010 Solidago sempervirens. SEASIDE GOLDENROD. Per. Sun. 4–6 x 2'.

> 199-Mustard yellow flowers. October bloom. This attractive clump-former with deep green foliage is perfectly happy in the garden. Cresson.

Sol4280 Solidago sphacelata 'Golden Fleece'. DWARF GOLDENROD. Per. Sun. 1'. Fall.

> 9985-Seeds from 'Golden Fleece' cultivar. Great basal growth makes this a preferred garden goldenrod. Germ: CMS: 60 d, NST. I winter sow mine. Jenkins Arboretum.

Sol4300 Solidago tenuifolia. Per. Sun/PtShade. 6 x 2'. Summer-Fall.

> **199-**Yellow flowers. Widely branched, open flower heads atop slender stems with narrow leaves. One of the few fragrant goldenrods. Rhizomatous but worth it. I cut back midsummer and pull extra stems. Cresson.

Sop1050 Sophora davidii. Shrub. Sun. 8 x 10'. Spring-Early Summer.

> 199-Lavender-blue flowers. This central Chinese shrub tolerates heat, drought and humidity, perfect for the "new climate". Clusters of pea-like flowers in May. Finely textured compound foliage all summer. Prune occasionally to keep dense. Cresson.

Sop1050 Sophora davidii (Continued)

45-Light indigo blue/white, pealike blooms in spring. Dark green pinnate foliage, shrub is 8 x 10' after 25 yr. Not well known. A bit of good blue in the spring. Germ: Scfy. A hard seed coat: pour water over seed and let that sit overnight (water will cool). Sow immediately. Sow under grit, maybe 1/4-1/2". May be slow to germinate. 2 yr. Germination is sporatic. Bartlett.

***** Spilanthes species. See: Acmella species.

Sta3330 Stachys officinalis (dwarf form). WOOD BETONY. Per. Sun/PtShade. 2½ x 12–15"; to 6" in bloom. Summer.

> 199-White or magenta flowers. A tight grower, ideal for the front of the border or a rock garden. Cresson.

Sta8750 Staphylea trifolia. AMERICAN BLADDERNUT. Shrub. Sun/PtShade. 10-15 x 6-8'. Spring.

> 965-Cream blooms. A rarely seen, native large shrub or small tree. Clusters of small, blueberry-like flowers appear mid-late spring followed by the bladder-like seedpods. Umphrey.

Ste0850 Stewartia monadelpha. TALL STEWARTIA. Tree/ Shrub. Sun/PtShade. 80 x 25'. Summer.

> 199-White blooms. Tree. Sun/PtShade. 25'. Early Summer. White flowers over several wk in June-July on a small pyramidal tree. A special feature is the smooth cinnamon bark on the older branches and trunk. This Japanese species is said to be more heat tolerant than other stewartias. Cresson.

Sto2000 Stokesia laevis. STOKES ASTER. Per. Sun/PtShade. 6 x 8"; to 12–18" in bloom. Summer.

> 208A-1" purple blooms atop erect 2' leafy stems, basal 6" narrow leaves, summer sun. Germ: NST. Dahlke.

> 208B-1" white blooms atop erect 2' leafy stems, basal 6" narrow leaves, summer sun. Germ: NST. Dahlke.

> 3321-Some blue, some yellow blooms. Late summer bloomer, easy to raise from seed. Germ: W, SR. Perron.

Sto2200 Stokesia laevis 'Honeysong Purple'. STOKES ASTER. Per. Sun/PtShade. 6 x 8"; to 12–18" in bloom. Spring.

> 9969-Purple blooms. Germ: WMS: 14 d, W, BC 35 d. NST. Zatsick.

Sto2300 Stokesia laevis 'Klaus Jelitto'. STOKES ASTER. Per. Sun/PtShade. 6 x 8"; 18–20" in bloom. Summer.

> 200-Lavender-blue flowers; to 18", likes dry soil. Wonderful filler plant in the perennial garden. Germ: W. Creveling.

Sty4800 Styrax americanus. AMERICAN SNOWBELL. Shrub. Sun/PtShade. 10 x 10'. Spring.

3177-*Gibson*.

45-White flowers in spring. This Souteast Coast native is a pleasant small tree or large shrub. Light texture. Try growing it! Germ: Cycle; OW; 2 yr. Be patient. Bartlett.

Sty5020 Styrax japonicus. JAPANESE SNOWBELL. Tree. Sun. 25 x 20'. Spring. Zone 5–9.

> 1865-White flowers in May on small tree. Germ: WMS: 5 mo; R: 3 mo. Bennett.

3177-*Gibson*.

45-Small, white blooms on a small tree. Germ: NST. Slow germination. Bartlett.

522-White. Good specimen tree with fragrant, pendulous blossoms. Interesting structure. Germ: SR. Kushner.

Sty5150 Styrax japonicus 'Emerald Pagoda'. Tree. Sun/ PtShade. 20–30 x 20–30'. Spring–Early Summer. Zone 5–9.

> 522-White flowers. A J. C. Ralston introduction form South Korea. Has larger leaves and flowers than the species. Good article on styraxes in June 2014 issue of the RHS The Plantsman. Kushner.

Sty5550 Styrax obassia. FRAGRANT SNOWBALL. Tree. Sun/ PtShade. 20–30 x 15–25'. Spring. Zone 5–8.

> 1999-Fragrant white star-shaped flowers with yellow stamens in 8" clusters in spring. Fragrant snowbell tree prefers moist acid soil and part shade, especially in hot regions. The flowers are attractive to bees. Germ: CMS: 120 d. Soak: 24 hr. WMS: 90 d. Soak seeds in hot water for 24 hr then warm/moist stratify for 3 mo, then cold/ moist statify for 120 d. Expect germination when seeds are returned to 70°F. W, 180 d. Norfolk Botanical staff. 2137-White blooms. A small, slender, upright tree with

> ascending branches and rounded crown or a large shrub. Typically grows 20–30' tall. Bell-shaped, fragrant, white flowers with showy yellow stamens appear in pendulous, terminal racemes (to 8" long) in May-June. Germ: Cycle. Use repeated cycles of room temperature and refrigerator for 3 mo each. May take a long time. Sowing seeds outdoors may be more successful as I'm constantly pulling up styrax seedlings! Boylan.

> **45-**White spring flowers in 6–8" hanging chains on a medium-sized (up to 30') tree. Quite decorative. Attractive bunches of hanging seed in fall. Good tree for a small space. Germ: NST. Slow to germinate. Bartlett.

Sty7000 Styrax wilsonii. Tree. Sun/PtShade. 8–10'. Late Aprilearly May. Zone 7.

3177-White blooms. Similar to *S. americana. Gibson.* Suc0500 Succisa pratensis (syn. Scabiosa succisa). DEVIL'S BIT SCABIOUS. Per. Sun/PtShade. 2'. Late Summer/Fall. Zone 5-9.

65-Berger.

Sym0900 Symphyotrichum shortii (syn. Aster shortii). SHORT'S ASTER. Per. Sun/PtShade. 2-4'. Midsummer-Fall. Zone 3-8.

> 2429-A woodland aster with bright purple flowers. Bricker.

> 9985-Lavender blue blooms. Cheerful fall bloomer for part shade. Grows well even under trees at woodland edge. Deadhead if you don't want it to spread. Germ: CMS: 30 d, NST. I winter sow mine. Jenkins Arboretum.

Syn1250 Syneilesis aconitifolia. SHREDDED UMBRELLA PLANT. Per. PtShade/Shade. 15"; to 21/2' in bloom.

> 1017-Pinkish white blooms on a wonderful, shadetolerant foliage plant. Flowers are rather insignificant. Whitesell.

> **5024-**Pink/white blooms. Large, dissected leaves are very interesting when first emerging. Spreads by rhizomes in the woodland. Germ: CMS: 30d; BH; BC; 30d. Iroki Garden.

558-Great foliage at 3–4' for shade/part shade. *Lewis*.

Syn1500 Syneilesis palmata. Per. PtShade/Shade. 15". Summer. 1277-White small flowers. Emerging leaves look like ghosts, shrouded in shaggy silver hairs. Fully emerged, they look like umbrellas. An intriguing plant. Haas.

> 3321-White blooms. rown more for foliage than flower. Woodland plant. Germ: Cycle: fluctuating temps outside for 3 mo, then raise temps and increase light, OW, SR.

Syn1550 Syneilesis palmata 'Kikko'. KIKKO SHREDDED UMBRELLA PLANT. Per. PtSun/PtShade. 12–18". Zone 4–8.

> 522-Tiny insignificant gray flowers. Attention-getting, shredded, umbrella-shaped leaves that emerge creamy yellow. I grow it in my woodland but tolerates sun. Kushner.

Tag2180 Tagetes patula 'Nana' (syn. Tagetes tenuifolia). FRENCH MARIGOLD. An. Sun. 6-12 x 6-9". Summer-Fall. Zone 2–11.

> 5082-Orange/yellow blooms. Grows very tall. Germ: BH: 14 d. NST. Smith, C.

Tal1150 Talinum calycinum. FAMEFLOWER. Per. Sun. 4 x 10-12". Summer–Fall.

> 522-Rose pink flowers only open for short time in the afternoon. Lovely rock garden plant. Blooms from May-August. Zones 5-9. Germ: R, then 70°. Kushner.

Tal1260 Talinum paniculatum 'Kingwood Gold'. GOLDEN JEWELS OF OPAR. An. Sun. 8-10"; to 12" in bloom. Summer-Fall.

> 1277-Pink flowers. Fantastic plant. Succulent golden foliage. Withstands drought. Self-sows nicely. Haas. 1607-Jellinek.

239-Germ: NST. Doering.

318-Pink flowers. Chartreuse foliage is fleshy. Airy spikes of flower stems topped by pink flowers followed by red seed heads. Germ: NST; BC; W, 14d; or SIS. Selfsows. Garnett

3436-Pink blooms with little reddish brown fruits. Annual that self sows. Germ: W, SS, NST. Silberstein.

522-Pink/orange. Lovely, bright, fleshy, chartreuse foliage topped by graceful panicles of tiny pink and orange flowers, turning to carmine berries as they mature. Self-sows. Kushner.

543-Red blooms. Tender perennial. Low-growing bright foliage topped by red, small, flowers with bead-like seeds. Will self-seed around, but is generally welcomed. Germ: W, BC, NST, 30 d. Leasure.

GOLDEN Tan2250 Tanacetum parthenium 'Aureum'. FEVERFEW. Per. Sun. 2 x 1'. Summer.

65-White blooms. Cheerful reseeder. *Berger*.

Tan2500 Tanacetum parthenium 'Hedgleigh Pincushion'. FEVERFEW. Bien/Ann. Sun/PtSun. 18-24 x 18". Summer.

> 199-White blooms. Masses of daisy flowers, but I've never seen this unique form with the center raised into a dome in any other garden or reference. Grow it as a biennial to bloom in June or as an annual to bloom in late summer. You can pinch for compactnes Cresson.

Tel1250 Telekia speciosa. HEART-LEAVED OX EYE. Per. Sun/ PtShade. 1½ x 3'; to 3' in bloom. Summer.

> 199-Yellow daisies on sturdy branched stems in early summer. Large light green basal leaves. Best with afternoon shade. Cresson.

Tep1000 Tephrosia virginiana.

32-Prairie Moon form. Collected on: 7/11/17 Garden Location: 13:Chamaecyparis 'Yadkin Valley Gold' Plant Delights.

Tha1600 Thalictrum chelidonii. Per. PtShade. 1–2 x 2'; from 3–7' in bloom. Summer. Zone 5–9.

> 592-Lavender blooms. Lovely. I do support in bloom which, like T. rochebruniaum, keeps coming to summer's end. Needs support. Malocsay.

Tha3450 Thalictrum polygamum. MEADOW RUE. Per. Sun/ PtShade/Shade. 5-6 x 2'. Summer.

> 199-White flowers. Our native meadow rue ideal for naturalizing in a moist meadow. Will also take the dry woodland garden. Cresson.

Tha3650 Thalictrum rochebruneanum. LAVENDER MIST, MEADOW RUE. Per. Sun/PtShade. 1–2 x 2'; from 3–7' in bloom. Summer.

> 1277-Lavender flowers. Tall, airy, and delicate looking see-through plant with pretty, blue-green foliage. Haas.

> 2497-Light lavender blooms with soft yellow centers. A tall, beautiful, airy perennial with interesting flowers. Mackey.

> 592-Lilac flowers. Towering yet dainty in foliage and flower. Give shade in really hot places. Self-sows where happy. Germ: NST. Malocsay.

> 926-Lavender. Doesn't need staking if grown in full sun. Streeter.

Tha3800 Thalictrum rochebrunianum var. grandisepalum PDN#01A-C.

> **32-**PDN#01A-C. Garden Location: *Xylosoma japonicum* Seed Source for Plant: GBG131 Seed Collected: 9/11/17; 10/24/17 Plant Delights.

Tha4250 Thalictrum uchiyamae. MEADOW RUE. Per. Sun/ PtShade. Summer.

> 199-Greenish white flowers. Very rare Korean species. Successfully weaves up through shrubs. A texture plant. Cresson.

The 2050 Thermopsis villosa (syn. T. caroliniana). SOUTHERN LUPINE, CAROLINA LUPINE. Per. Sun/PtShade. 4-7 x 2-4'. Late Spring-Summer.

1277-Yellow flowers. Does not tend to flop. Haas.

1607-Clump-forming perennial with dense spikes of yellow flowers in June look like Baptisia or lupines. Compound foliage is attractive late into the season. A tough plant that is long lived once established. Germ: RTp. Jellinek.

1918-Lupine-like racemes of yellow flowers held on top of the 3–5' stems with trifoliate leaves. This herbaceous perennial blooms in late spring. Native. Medium to dry soil and sull sun. Carey.

Thu2010 Thunbergia alata. BLACK-EYED SUSAN VINE. An. Vine. Sun. 5–10'. Summer.

> 199-Soft yellow blooms. This soft yellow strain is easy to combine with most summer colors. Grow on a tripod or tuteur. Cresson.

Tia2500 Tiarella wherryi. FOAMFLOWER. Per. PtShade. 8 x 15"; to 12" in bloom. Spring.

1607-White, tinged with pink blooms. Jellinek.

Tit0050 Tithonia rotundifolia. MEXICAN SUNFLOWER. An. Sun. 4–6 x 1'. Summer–Fall.

> **592-**Rich orange blooms. RHS "coarse", not a good mixer. SIS after frost gives later, fresher, lesser giants whose leaning towers are very attractive to migrating monarchs. Transplants. Picks beautifully, but do condition. Germ: SIS, NST. Malocsay.

Tit2260 Tithonia rotundifolia 'Torch'. **MEXICAN** SUNFLOWER. An. Sun. 4-6 x 1'. Summer-Fall.

> 965-Brilliant orange-red flowers. A butterfly magnet and a great color contrast with true blues. Germ: W. Umphrey.

Tra2500 Trachelospermum jasminoides. CONFEDERATE JASMINE. Vine. Sun/PtSun. Early Summer. Zone 7-8.

> 199-White blooms. I've grown this in a pot for 30 years for its sweetly fragrant flowers. Prune after bloom. Not quite hardy, but survives winter in my cold porch. A landscape necessity in the South. Cresson.

Tra6000 Tradescantia virginiana. VIRGINIA SPIDERWORT. Per. PtShade/Shade. $1\frac{1}{2}$ –3 x 1–1 $\frac{1}{2}$ '. Spring. Zone 4–9.

3645-Purple blooms. Roskoph.

Tra9000 Tragopogon dubius. YELLOW SALSIFY. An./Bien. Sun. 2–3'. Summer.

> 199-Yellow blooms. Tall-branched upright stalks with narrow blue-green leaves topped by lemon yellow dandelion flowers followed by large dandelion-like seedheads. A European native. Germ: I sowed it direction in the garden. Cresson.

Tri1300 Tricyrtis dilatata. TOAD LILY. Per. PtShade. 3 x 2'. Summer-Fall.

> 199-White, spotted purple flower. Although botanists no longer consider this as separate from T. macropoda, it is horticulturally distinct in leaf shape and blooms a month earlier in August. Cresson.

Tri2000 Tricyrtis formosana 'Sinonome'. TOAD LILY. Per. PtShade/Shade. 40". Fall.

> 318-Flowers white with maroon spots. Branched, arched stems. October blooms that are more at terminals and more spreading, upright than T. hirta. Garnett.

Tri3000 Tricyrtis hirta. TOAD LILY. Per. PtShade/Shade. 1½ x 1½'. Fall. Zone 4–8.

> 1277-White with purple-spotted flowers. Perennial. Shade. Late blooming, 2'. Haas.

Tri3020 Tricyrtis hirta 'Alba'. TOAD LILY. Per. PtShade. 2-3'. Fall.

> 199-White flowers. Vigorous plant with anthracnoseresistant foliage. Makes a good show. Cresson.

Tri3100 Tricyrtis hirta 'Miyazaki'. TOAD LILY. Per. PtShade/ Shade. 4 x 2'. Late Summer–Fall.

> 318-Pale lilac flowers with purple spots. Such a lovely sight?small orchid-like blooms along the arching stems in September. Forms nice clumps and self-sows. Germ: CMS; Sow in cold frame in fall or early spring. Takes 6 mo to reach transplanting size. Garnett.

> **590-**White blooms with burgundy spotting. Great foliage texture. Mahony.

Tri3200 Tricyrtis hirta 'White Towers'. TOAD LILY. Per. 24–30". 1277-White flowers. Perennial. Late-blooming shade plant, 2'. Haas.

Tri3300 Tricyrtis hirta 'Variegata'. TOAD LILY. Per. PtShade/ Shade. 21/2 x 2'. Fall.

> 208-White and purple flowers. Leaves of seedlings are not variegated. Orchidlike flowers bloom sequentially on arching branches. Lovely! Germ: NST; 15d. Dahlke.

Tri3950 Tricyrtis latifolia. TOAD LILY. Per. PtShade. 3 x 1'. Early Summer.

> 318-Green-yellow flowers with brown spots. More upright than arching. Blooms in July. Self-sows. Germ:

Tri4010 Tricyrtis macropoda. TOAD LILY. Per. PtShade/Shade. 3 x 3'. Summer–Fall.

> 199-White flowers with reddish spots. Masses of flowers in Sept. Parent plant of wild origin in Hubei, China. Very easy and adaptable. Cresson.

> 239-Basically white flowers with red-purple spots. Flowers upright at end of stems. Germ: NST; BC; W; 2–3 wk. Self-sows in my garden. Doering.

Tri8010 Triteleia laxa 'Queen Fabiola' (syn. Brodiaea laxa). TRIPLET LILY, UTHURIELS'S SPEAR. Per. Sun. 1-21/2'. Spring.

> **522**-Gentian blue. These bulbs grow best on a sunny, dry bank. Long-lasting funnel-shaped flowers. Leafless stems. Kushner.

Tro1050 Trollius x cultorum 'Pritchard's Giant'. GLOBE FLOWER. Per. Sun/PtShade. 3 x 2'. Spring.

> 199-Orange blooms. Per. Sun/PtShade. 3 x 2'. Spring. Early perennial is great companion to bulbs. Summer dormant, but prefers a cool moist location. Cresson.

Tro1400 Trollius laxus. AMERICAN GLOBEFLOWER. Per. Sun/PtShade. 18-24". Late Spring/Early Summer.

2515-Dainty yellow flowers floating above the foliage. Likes a moister soil. Germ: NST. Doblmaier.

Tsu2000 Tsuga chinensis. CHINESE HEMLOCK. Tree. Sun/ PtShade. 100+'.

> 199-Chinese hemlock is resistant or immune to the woolly adelgid which is killing our native Canadian hemlock. It is very similar with slightly longer needles and thrives in our climate. A magnificent tree still scarce in nurseries. My tree came from wild s Cresson.

Tsu5000 Tsuga sieboldii. JAPANESE SOUTHERN HEMLOCK. Tree. Sun/PtShade. 40'.

> 199-Rarely seen small tree, more resistant to woolly adelgid than most other hemlocks. Rarely seen smaller species with shorter needles and compact habit makes attractive garden specimen. Cresson.

Twe1050 Tweedia caerulea. TenPer./An. Sun. Summer.

592-Unusual light blue blooms. Herbaceous clambering milkweed relation. Pinch early to discipline. Handsome sprawling foliage, nice mixer or in pots (though vigorous in ground). Use in the front of border or in containers. Quietly gorgeous. Germ: NST. Malocsay.

Vel4250 Veltheimia bracteata. TenBulb. Sun. 1½'. Spring.

45-Pink or yellow blooms on a tender South African bulb. The yellow forms are particularly fine. Can be spectacular flowers in March. Easy to grow and dramatic in flower. To 18". Probably zone 8 hardy. Plant will become large and fill a pot. Germ: BH, BC, NST. Easy to grow. Can live many years. Sow on grit. Bartlett.

926-Pale-pink and green flowers. A tender South African bulb with glossy, wavy-edged foliage and flowers that resemble a pale pink kniphofia. Germ: NST. Streeter.

Ver0100 Veratrum nigrum. BLACK FALSE HELLEBORE. Per. PtShade/Shade. 5 x 1'. Summer–Fall.

> **558-**Purple-black flowers. Tall, striking flowers at 2½' above lovely pleated foliage. Original plant from old Heronswood. Deer resistant. Moist shade. Zone 4 hardy.

Ver2220 Verbascum species. Bien. Sun/PtShade. Basal rosette; to 4' in bloom. Summer.

65-White bloom. *Berger*.

Ver3100 Verbena bonariensis. **PURPLE** VERBENA. BRAZILIAN VERBENA. TenPer. Sun/PtShade. 4 x 1/2'. Summer-Fall.

2937-*Bittmann*.

318-*Garnett*.

590-Purple-magenta flowers. Easy, floriferous. Seeds a bit but wouldn't be without it. Germ: NST. Mahony.

Ver3200 Verbena hastata. Per. Sun. 3 x 2'; to 4' in bloom. Summer.

> **2515-**Attractive clump-forming verbena for the moister areas of the garden. Doblmaier.

Ver3360 Verbena hastata f. rosea. ROSE VERVAIN. Per. Sun. $3-4 \times 1\frac{1}{2} - 2$ '. Summer. Zone 3-8.

> 1999-Candelabras of tiny pink flowers are produced on erect stems. Wonderful long-blooming native wildflower adds architectural interest to the border. Attracts a myriad of beneficial insects, including butterflies and hummingbird clearwing moths. Germ: C, D, NST. 30 d. No pre-treatment needed. Sow seeds just below soil surface in darkness at 50°F and water. Expect germination in 7-28 d. Norfolk Botanical staff.

Ver3500 Verbena stricta. Per. Sun. 3 x 2'. Summer–Fall.

1999-Luminescent, elongated spikes of lavender flowers. Hoary Vervain is a larval host plant for the common buckeye butterfly, Junonia coenia. Many other insects, including native bees, seek out the nectar. The seeds are a favorite of many small birds. Plants are drought tolerant, and non-aggressive. Verbena stricta thrives on dry soils and is deer and rabbit resistant. The long-blooming flowers are prized by floral designers. Germ: CMS: 60 d, BC, L, SS, 100 d. Norfolk Botanical staff.

Ver5400 Vernonia lettermanii 'Iron Butterfly'. NARROW-LEAF IRONWEED. Per. Sun. 2-4 x 2-3'. Fall. Zone 4-9.

> 199-Purple blooms. At last, a very garden-sized ironweed. Very narrow leaves provide unique effect and September flowers are most welcome. 'Iron Butterfly' has shorter even stronger stems. Cresson.

Ver5480 Vernonia fasciculata. IRONWEED. Per. Sun/PtShade. 3–6 x 2–3'. Mid–Summer.

> 199-Reddish purple flowers. Shorter, more compact, and earlier blooming (July) than other ironweeds. Cresson.

Ver5650 Vernonia gigantea (syn. V. altissima). UPLAND IRONWEED. Per. Sun. 3–5 x 2–4'; to 8' in bloom. Summer–Fall. Zone 6-8.

> **269-**Rosy purple blooms. A large, erect native perennial typically 5-8' tall, but can grow to 10'. Cut back stems once or twice in early summer before the end of June to reduce height and encourage branching and more blooms. Showy rounded clusters of rosy purple flowers from late summer to fall. Very attractive to butterflies and pollinators. Partial to full sun; average to moist soil. Good for meadows and informal gardens. Seed collected in Ohio. Germ: SIS, NST. Plants form clumps and spread where happy. Cut off spend flower clusters to prevent self sowing if necessary. Ellis.

Ver5850 Vernonia glauca. UPLAND NEW YORK IRONWEED. Per. 5 x 3'. Fall.

> **199-**Purple flowers. At 4–5' this is more garden sized and also blooms a little earlier, in late summer, than many other species. Cresson.

> 2517-Purple flower blooms midsummer-fall. Native plant. A good pollinator attracting fauna: bees, birds, butterflies, and hummingbirds. Germ: CMS. Weaver.

Ver6050 Vernonia noveboracensis. IRONWEED. Per. Sun/ PtShade. 4-7 x 2-3'. Summer-Fall. Zone 5-8.

> 199-Violet flowers. Locally native species for large border and naturalizing in meadow. Cresson.

> 507-Rich purple flowers. Cool, dark green foliage. A slowly widening clump. Very dependable. Kolo.

> 543-Purple/pink blossoms, native, 6'. Late summer, fallblooming. Will tolerate wet feet. Germ: NST. Leasure. 9985-Jenkins Arboretum.

Ver7600 Veronica 'Nestor'. **PROSTRATE** prostrata SPEEDWELL. Per. Sun. 6 x 16". Summer.

> 1277-Blue blooms. Mat-forming perennial with short decumbent stems. In early summer, spike-like racemes of deep blue flowers. Germ: CMS 90 d. Haas.

Ver7750 Veronica spicata.

1585-Scofield.

Ver7880 Veronica wormskjoldii 'Mann's Variety' (syn. Veronica stelleri 'Mann's Variety'). AMERICAN ALPINE SPEEDWELL. Per. Early Summer.

> 199-Blue blooms. Low creeping perennial suited to a rock garden among other small plants. Blue flower spikes in early summer. Cresson.

Ver8500 Veronicastrum virginicum. CULVER'S ROOT. Per. Sun/PtShade. 6 x 1½'. Summer/Fall.

> 1277-Bluish white flowers. Nice tall meadow plant. Native. Germ: CMD 3 mo. *Haas*.

Ver8570 Veronicastrum virginicum 'Fascination'. CULVER'S ROOT. Per. Sun/PtShade. 2 x 1½; to 5' in bloom. Summer.

> **1017-**Blue-lavender summer flowers. Hybrid between *V*. virginianum and V. sibirium? Great foliage, tall border plant. Statuesque and rarely needs staking. Whitesell.

> 199-White/pink blooms. Vertical stems with whorls of horizontal foliage create a unique effect beneath the pink flower spikes in midsummer. Stronger, more dramatic and earlier blooming than 'Album'. Cresson.

Vib0100 Viburnum acerifolium. MAPLELEAF VIBURNUM. Shrub. PtShade/Shade. 3-4 x 3-4'. Spring-Summer.

> **3651-**White blooms. Hardy deciduous shrub (zones 3–8), 3-5 x 2-4', with small flowers in flat-topped cymes up to 3" across in mid-spring. Will naturalize by suckering to form colonies over time. Grows in sun or shade, being fairly shade tolerant. Excellent fall color. Germ: CMS, WMS 6 mo, then CMS 2 mo; germinate at room temperature. Gannon.

Vib1650 Viburnum dilatatum 'Michael Dodge'. LINDEN VIBURNUM. Shrub. Sun/PtShade. 8-10 x 8-10'. Late Spring/ Early Summer.

> 522-Lovely linden viburnum clusters of showy golden yellow berries. Kushner.

Vib2460 Viburnum nudum 'Bulk' Brandywine. POSSUMHAW VIBURNUM. Shrub. Sun/PtShade. 5–12'. Spring. Zone 5–9.

1277-White blooms on 5' shrub. Haas.

Vib2560 Viburnum rhytidophyoides. **HYBRID** LEATHERLEAF VIBURNUM, Shrub, Sun/PtSun, 6 x 6'.

> **199-**Cream blooms. I collected a batch of seed of this hybrid at the Kalmthout Arboretum, Belgium in fall 1978. This was the only unique seedling which is smaller growing with more oval evergreen leaves that turn a plum color in winter when grown in sun. Clust Cresson.

Vib2750 Viburnum setigerum. TEA VIBURNUM. Shrub. Sun/ PtShade. 8–12 x 4–8'. Spring.

1277-White flowers. Red berries. Put seeds in pot, cover with screening, and wait until they germinate. May take two years. Germ: CMS; OW. Haas.

Vig0080 Vigna unguiculata. RED NOODLE BEAN.

200-Lavender flowers. Same as red *Vigna ungucilata* but seedpods are very pale green. Albino? Don't know what the kids will look like. Germ: SIS, SR. Creveling.

Vio0500 Viola corsica. Sun/PtShade. ½ x 1'. Spring-Fall.

199-Purple-blue blooms. Per. Sun/PtShade. 6 x 12". Spring/summer. This scarce little native of Corsica and Sardinia is surprisingly tough and long blooming. Give it space to reseed and this short-lived perennial will become a permanent resident and rarely be out of bloom. A natural for rock gardens and among low perennials and bulbs. Cresson.

Vio2300 Viola labradorica, LABRADOR VIOLET. Sun/ PtShade. 2–4 x 8–12". Spring.

3645-Purple blooms. Germ: NST. Roskoph.

Vio2500 Viola lanceolata. LANCE-LEAVED VIOLET, BOG VIOLET. Per. Sun. 2–6". Spring.

> 3645-White blooms. Germ: CMS: 60 d, BC, SIS. Reportedly best sown in fall. Roskoph.

Vio2950 Viola odorata 'Irish Elegance'. SWEET VIOLET. Per. PtShade. 4–6 x 12". Spring.

> 199-Apricot blooms. I bought this lovely violet from a little now defunct mail-order nursery 30 years ago. Prized for its apricot/yellow flowers, it spreads by runners and seed, but not aggressively. It likes a moist woodland setting and has even moved into Cresson.

Vit1640 Vitex agnus-castus. CHASTE TREE. Shrub. Sun/ PtSun. 12 x 12'. Summer.

> **45-**Purple blooms in midsummer on a large shrub. More common in South. Pointed heads of flowers in July-August. Full sun. To 12' tall. Dieback in colder areas, fully hardy in PA. Germ: BC, NST. Do not overwater seedlings. Seeds and seedlings prefer a bit dry. *Bartlett*.

Vit1850 Vitex negundo var. heterophylla. Shrub. Sun. 10 x 10'. Summer/Fall.

> 45-Purple-blue blooms in July-August. Smaller, hardier, easier to use, and more delicate than V. agnus-castus, so better in a small, full sun garden. Interesting leaves. Takes heat and drought well. Not used enough. Germ: NST. Do not overwater seedlings, they like to be a bit on the dry side. *Bartlett*.

> **592-**No great shakes for bloom (blue cut with white), but cut-leaf foliage and generally graceful demeanor keep it in place—as does fanatic devotion of bees, a smaller species of bumble especially. Pruned for openness, it subs for a (very) small tree. Malocsay.

Zan2000 Zantedeschia albomaculata.

199-White flowers. White spotted arrowhead foliage. The hardiest species, happy with moist average soil in part shade and a winter mulch. Cresson.

Zan2900 Zanthoxylum piperitum. JAPANESE PRICKLY ASH, JAPANESE PEPPER. Tree. Sun/PtShade. 6 x 6'. Summer. Zone 5-9.

> 3001-Small tree to 15'. Full sun to part shade. Nice structure, and a standout, covered with red berries in the fall. Berries used as a spice in Asian countries. Germ: CMS. Give cleaned seed 3 mo cold. 90 d. Gregg.

Zea1200 Zea mays 'Glass Gem'. GLASS GEM CORN. An. Sun. Summer.

> 2937-Tall stalks produce medium-sized ears of multicolored kernels. Easy to grow and a fun surprise when each ear is un-husked. Bittmann.

Zep0200 Zephyranthes 'Ajax'. AJAX RAIN LILY. PerBulb. Sun. 8". Summer. Zone 7b-10b.

> **522-**Upfacing, straw-yellow/buttery yellow blooms turning cream. Lovely late bloomer. Cross between Zephyranthes candida and Zephyranthes citrina round leaves. Source: Plant Delights Nursery. Kushner.

Zep0500 Zephyranthes 'Apricot Queen'. RAIN LILY. Bulb. Sun/PtShade. 6–12 x 3–6". Late Summer–Fall. Zone 8a–11.

> **522-**Lovely warm apricot blooms. See listing in Pacific Bulb Society's zephyranthes page and Plant Delights' offerings. Kushner.

Zep0600 Zephranthes 'Bali Beauty'. RAIN LILY. TenBulb. Sun. 6". Zone 7b-10b.

> 522-Bi-color yellow/pink blooms. Lovely rain lily. Hybrid from Indonesia. Source: hybrid of Fadjar Marta, named and introduced in 2006 by Plant Delights. Kushner.

Zep0750 Zephyranthes candida. RAIN LILY. TenBulb. Zone

522-Pure white with golden stamens. Floriferous if well sited. Kushner.

Zep1200 Zephyranthes citrina. RAIN LILY. TenBulb. Sun. 3–4 x 8; to 6" in bloom. Spring through Fall.

> **522-**Bright golden yellow rain lily. 6–12". Full sun. Late season bloomer. Good container plant. Kushner.

Zep2100 Zephryanthes drummondi. RAIN LILY. TenBulb. Sun. 6 x 4"; to 10" in bloom. Summer.

> **522-**San Carlos form. Fragrant, large, pure white flowers. Early bloomer. Source: Yucca Do Nursery. I grow mine in containers. Kushner.

Zep2200 Zephyranthes 'Eastern Pearl'. EASTERN PEARL RAIN LILY. TenBulb. Sun. 10". Summer. Zone 7b–11.

522-Peachy-pink blooms on a lovely bulb bred by Fadjar Marta and introduced by Plant Delights Nursery. Notable for the yellow stripes down the center of each petal. Pot plant. *Kushner*.

Zep2550 Zephranthes fosteri. RAIN LILY. TenBulb. Sun/ PtShade. 6-12". Late Summer-Fall. Zone 7b-10b.

> 522-Good pink bloomer. I grow in pots. Not hardy. Source: Woodlanders. Kushner.

Zep2600 Zephyranthes grandiflora. RAIN LILY. TenBulb. Sun. 6–12". Summer–Fall. Zone 8–11.

> 522-Pink flowers. Most floriferous of the Zephranthes species I grow. Fragrant. Source: Old House Gardens. Germ: SR. 6 wk. Kushner.

Zep2870 Zephyranthes 'Krakatau'. KRAKATAU RAIN LILY. Bulb. Sun/PtShade. 6-12 x 6-9". Zone 7b-10b.

> 522-Floriferous, bright reddish-orange blooms fade on second day to peachy color. 10" tall spikes with 2" up flowers. Another superb Fadjar Marta introduction. Source: Plant Delights. Kushner.

Zep2900 Zephyranthes La Bufa Rose Group 'Apertif' (syn. Z. 'Labuffarosea'). GIANT PRAIRIE RAIN LILY. TenBulb. Sun/ PtShade. 6–10 x 4–6". Summer–Fall. Zone 7–10.

> 522A-Light pink, nearly white blooms. A Yucca Do discovery in Mexico. Lovely pot plant. Short green glossy leaves. Prolific bloomer. Kushner.

Zep3250 Zephyranthes macrosiphon. RAIN LILY. TenBulb. Sun/PtShade. 6 x 6"; from 7–12" in bloom. Summer.

> 199-Nonhardy Mexican species easily grown in a pot. Strap-like green foliage in clumps produces 10" tall stems topped with wide open rich rosy flowers, followed by repeat bloom. A mass of the easy-to-grow Z. macrosiphon is an absolute stunner in full bloom. Be sure to keep it moist. Even boggy conditions work great! For winter dry off in pot and put the pot away for winter. Water in spring and enjoy the plant again. Cresson.

> **522-**Deep pink blooms, similar to Zephyranthes grandiflora, but a bit smaller. Native to Mexico. 2-3", but 14" in flower. Source: HPS Kushner.

Zep3900 Zephyranthes primulina. RAIN LILY. TenBulb. Sun/ PtShade. 6–12 x 3–6". Late Spring–Early Summer. Zone 8a–11.

> 522-Yellow blooms fading to pink/peach. Very pretty, large flowered rain lily, upward facing blooms. Source: Wild Ginger Farm. Kushner.

Zep4500 Zephyranthes species. RAIN LILY. TenBulb. Sun. 6 x 6". Late Summer–Fall.

> 522-Pale apricot blooms. May be 'Sunset Strain' or a stray seedling. Kushner.

Zep4550 Zephyranthes 'Star Spangled'. STAR SPANGLED RAIN LILY. TenBulb. Sun. 8". Summer. Zone 7b-10b.

> 522-Bicolored flowers with white in the center and pink on tips. Blooms on and off through the summer. A Labuffarosea YuccaDo hybrid. Kushner.

Zep4600 Zephyranthes Sunset Strain. RAIN LILY. TenBulb. 10". Summer-Fall. Repeat Bloomer.

> **522-**Prolific, pale apricot blooms. Blooms more often than other varieties. Source: Yucca Do. Kushner.

Zep4900 Zephyranthes 'Zodiac Surprise'. RAIN TenBulb. Sun. 8".

> 522-Medium pink blooms. A tall, 8" rain lily. Notable for its large white center that radiates into each petal. Kushner.

Zin1400 Zinnia elegans 'California Giant'. MAMMOTH ZINNIA. An. Sun. 3-4'. Summer-Fall.

> 5082-Multiple colors—yellow, white, orange, red, purple, and pink. Petal shapes vary. Germ: SR. Smith, C.

Zin1700 Zinnia haageana 'Persian Carpet'. An. Sun. 12-16". 475-Gold and maroon blooms. I purposely put my 18" plant 18" up off the ground, but every time I walked by, more had broken off. It's extremely brittle albeit pretty: a fragile challenge. This plant is an annual. Germ: NST. Kaplan.

Ziz2150 Zizia aurea. GOLDEN ALEXANDERS. Per. Sun. 2–2½'. Spring–Early Summer.

> 965-Yellow blooms late spring through early summer. A sturdy native umbel for shade. Umphrey.

> 9985-Yellow blooms. Native to moist meadows/open woodlands and best for a naturalistic garden. Will spread. Germ: CMS: 60 d. OW. NST. Best sown into a container outside in late fall. Jenkins Arboretum.

HPS/MAG Seed Exchange Order Form

Online: www.hardyplant.org By mail: Mary Ann Thomas 8600 Elliston Drive Wyndmoor, PA 19038

ma.weeder@gmail.com 215-233-3071

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Only HPS/MAG members may order. If you are not a member, please join. When ordering, you must list the Plant Code and Botanical Name of each plant in alphanumeric order. List the Donor Code only if you want seed provided by a specific donor. If the supply of that donor's seed is gone, we will send seed of the same plant but from an alternate donor, if available. If all that particular seed is gone, we will provide an alternate from your Alternate Choices List. Seed packets will indicate the Plant Code, Donor Code and Name. Retain the Catalog for additional information about your seed.

Each member may order 25 packets of seed, limited to one packet of any particular seed/donor combination. Members who

donated five or more types of seed to this year's Exchange, as well as this year's Seed Exchange volunteers, may order 10 bonus packets.

Please submit your order online at www.hardyplant.org. If you prefer, you can still fill in this form manually and mail it with your payment. All checks should be made payable to HPS/MAG, and sent to Mary Ann Thomas, 8600 Elliston Drive, Wyndmoor, PA, 19038. Payment required is \$20.00.

Orders by mail must be received by January 26; the online deadline is January 31. No orders will be accepted after January 31.

Submit your order as early as possible to enhance the likelihood of receiving all your

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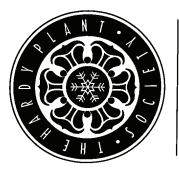
Dual members of a single household may each place an order; each order requires the \$20.00 fee and only one is entitled to the donor/volunteer bonus, if applicable.

Seed orders will be filled in the order received; requests from donors and volunteers will be honored first. Supplies of some seed are very limited, so read through the list, make your choices, and complete your order today.

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	Plant Code	Botanical Name	Donor Code		Plant Code	Botanical Name	Donor Code
	Xxx0000	Genus & specific epithet 'Cultivar If Available'	0000	26			
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10				Alternate Choices List: Identify in order of preference.			
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MID-ATLANTIC GROUP

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