

American Horticulturist

This special issue of *American Horticulturist* News Edition contains your 1985 Seed Program Catalogue, which appears just after page 10. Use the order blank on page 11 to send in your order. Don't miss the opportunity to participate in this exciting program!

Also, plan to join AHS members at our Spring Symposium in Los Angeles, March 20 to 23. For information on the program, turn to page 17.



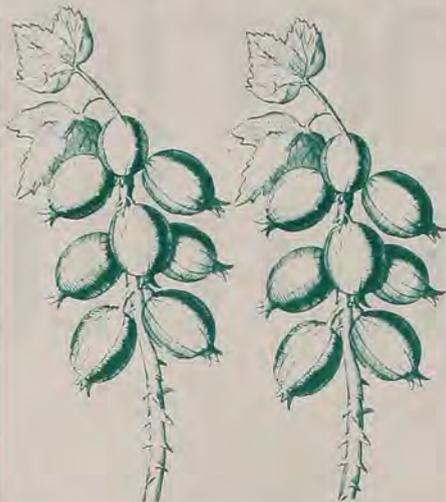
1985 Seed Program Catalogue Enclosed!

Endangered Plant Update

The U.S. Fish and Wildlife Service has added four new plants to the list of Endangered and Threatened Species, and has proposed two more species for listing.

Sidalcea pedata, pedate checkermallow, and *Thelypodium stenopetalum*, slender-petaled mustard, were both listed as Endangered Species. Both species grow only in moist, alkaline meadows found in Big Bear Basin in San Bernardino County, California. *S. pedata* is a multi-stemmed, perennial member of the mallow family that bears pinkish-rose flowers. *T. stenopetalum*, a member of the mustard family, is a short-lived herbaceous perennial that bears lavender or white flowers. Both species were once abundant, but their populations have been greatly reduced because of urbanization as well as the impoundment of Big Bear Lake in the 1800's, which destroyed nearly all of the natural meadowlands. In addition to eliminating much of the habitat, these activities also destroyed most of the existing populations. *S. pedata* exists in significant numbers at only three locations, all on private land. Scattered individuals have been found in a few other areas, but these plants apparently do not reproduce, and these populations are expected to die out. *T. stenopetalum* is known from only four locations, three of which are on private land.

Frankenia johnstonii, known from



only a few sites in southwestern Texas and a single site in Mexico, has been listed as Endangered. This species is a small perennial shrub that grows to about one foot in height. It is blue-green in color, has a wiry appearance and bears small, white flowers. Five small populations of the species have been found in Texas, and there is a population consisting of several hundred individuals near Monterrey in Nuevo Leon, Mexico. All of the populations are on privately owned rangeland that is in poor condition, and cattle grazing may be one reason for the plant's low reproductive success.

Styrax texana, Texas snowbell, had been listed as Endangered. This small shrub, which grows to just above three feet in height, bears showy clusters of white flowers in April and May. Although the plant's reproduction has not been studied, the fact that there are no known seedlings or saplings indicates that the species has not reproduced recently. *S. texana* grows in crevices in the limestone cliffs that occur along stream channels on the Edwards Plateau and in the creosote bush scrub on the eastern Trans-Pecos basins. Only 25 individuals of the species are known to exist.

Ribes echinellum, Miccosukee gooseberry, has been proposed for listing as Threatened. This species is known from only two locations: one in Florida and one in South Carolina. According to the *Endangered Species Technical Bulletin*, "The plant was first discovered in 1924, growing along the shore of Lake Miccosukee

in Jefferson County, Florida. It was more than 30 years later that the only other known population was found about 200 miles to the northeast in McCormick County, South Carolina." The species, which is a small shrub with spiny stems and greenish-white flowers, is threatened by habitat degradation.

Gardenia brighamii, na'u or Hawaiian gardenia, was proposed for listing as Endangered. Only about a dozen individuals of this species are known to exist; about 10 plants have been found on the island of Lanai, two plants on Molokai and one plant on Oahu. The species once grew on the islands of Hawaii and Maui. *G. brighamii*, a 20- to 30-foot tree with very fragrant white flowers, is threatened by habitat degradation due to browsing cattle and goats, and by the invasion of exotic plants.

1985 Awards Nominations

Members are invited to recommend candidates for the Society's 1985 awards, to be presented at the Society's Annual Meeting in Chicago, September 11-15, 1985. The Awards and Citations Committee will meet soon to nominate individuals, and welcomes suggestions from the general membership. The Committee will be determining a roster of candidates for the Liberty Hyde Bailey Medal, the G. B. Gunlogson Award and the Citation awards.

The Liberty Hyde Bailey Medal is the highest award the Society can bestow on an individual. To qualify for this award, an individual must reside on the North American continent and must have made significant contributions in at least three of the following areas of horticultural activity: teaching, research, writing, plant exploration, administration, art, business and leadership.

The G. B. Gunlogson Award is given for the creative use of new technology to make home gardening more productive and enjoyable.

Citations are awarded to individu-

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EDITOR, PUBLICATIONS DIRECTOR: Barbara W. Ellis.
ART DIRECTOR: Rebecca K. McClimans. ASSOCIATE
EDITOR: Lynn M. Lynch. ASSISTANTS TO THE EDITOR:
Louise Baughn, Cindy Weakland

Address all editorial correspondence to: The Editor,
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als, firms or institutions that have accomplished something unusual and of national importance in one of the following nine areas of horticulture: scientific, commercial, professional, amateur, teaching, landscape, architecture, horticultural writing, local horticulture (in the Annual Meeting host city) and meritorious service.

If you would like to suggest nominations for any of these categories, please forward the name(s) of your nominee(s), as well as pertinent biographical information, to the Awards Committee Chairman, in care of the Society, no later than May 1.

Board Nominations

It is time to begin thinking about nominations for the Society's Board of Directors election scheduled for the Annual Meeting in Chicago, September 11-15, 1985.

Members are encouraged to submit names to the Nominating Committee, appointed by AHS President Edward N. Dane. Suggestions should be accompanied by résumés detailing the candidate's horticultural and/or professional interests, and should be addressed to the Nominating Committee in care of the Society.

Henry Skinner Dies

Henry T. Skinner, former director of the National Arboretum and for many years associated with the activities of the American Horticultural Society, died on November 26, 1984 at Hendersonville, North Carolina.

During his years at the Arboretum, Skinner initiated significant programs on research and education, and was responsible for construction of the present administration building, greenhouses and roads. He was an outstanding gardener and an authority on native American azaleas.

Skinner was the eighteenth president of AHS, serving in 1962 and 1963, and was the second director of the National Arboretum.

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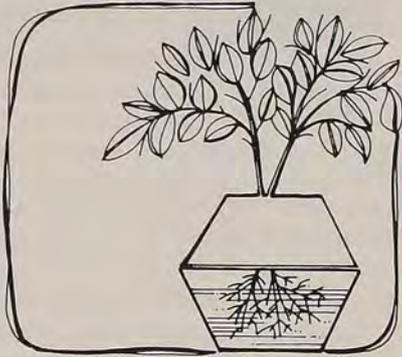


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Naming Oriental Vegetables



Chinese vegetables have been cultivated in the United States for more than 100 years. Most are grown in California, Hawaii, Florida and New Jersey. California leads in total production, but Hawaii grows more kinds of Oriental vegetables than any other state.

At first, these vegetables were sold to Chinese families and Chinese restaurants throughout the country. Only a few Oriental vegetables—such as Chinese cabbage, snow peas and bean sprouts—were popular outside the Chinese culture. However, as the number of Chinese restaurants grew outside the Chinatown areas of big cities, Chinese food became more popular, gourmet cooks began trying to copy the recipes, and the demand for fresh Oriental vegetables increased. Today, many American-style supermarkets offer these vegetables in their produce sections.

In the past several years, many enthusiastic gardeners have become in-

terested in growing their own Chinese vegetables. Some seed companies have started to carry a selection of Oriental vegetable seeds, and the number of varieties is increasing steadily to meet various environmental conditions.

When American gardeners order Oriental vegetable seeds from seed catalogues, they encounter a confusing problem: the name given to an Oriental vegetable in one catalogue may be different from the name given in another catalogue for what appears to be the same vegetable. For example, *Allium tuberosum* is called Chinese chives or Chinese leeks in one catalogue, and garlic chives or Oriental garlic chives in another catalogue.

Why does one vegetable have several names in English? The choice of a name often varies according to the writer. Some Oriental vegetables have American counterparts, so the writer simply places “Chinese” be-

fore the vegetable, as in Chinese parsley or Chinese kale, for example. Some names are also given by Chinese seed producers or growers. However, the choice of a name usually depends on where the "name giver" is from. For example, Chinese loose-leaf (nonheading) cabbage (*Brassica chinensis*) is called *pak choy* or *bok choy* in Cantonese; in the northern part of China, where Mandarin is spoken, the same vegetable is called *pe-tsai*. In Hawaii and California, many farmers are Japanese immigrants who use Japanese names, including *daikon* for Oriental radish; *shungiku* for chopsuey green (also called garland chrysanthemum); and *napa* for Chinese heading cabbage. Some vegetable names also originate from other countries in South Asia, such as the Philippines and Vietnam.

For a list of 22 Oriental vegetables commonly found in the United States, send a self-addressed, stamped, business-size envelope to Assistants to the Editor, American Horticultural Society, P.O. Box 0105, Mt. Vernon, VA 22121. The list includes the scientific and common names for each vegetable, as well as a description of edible parts and how to cook them. Also included is information on growing these vegetables and a list of sources.

—Wei-ning Fu,
Central Connecticut State University,
Department of Biological Sciences

Plant Culture Tied to Disease

Cultural conditions that are detrimental to plant growth can lead to more severe problems. Experiments have shown that chrysanthemums given high salt concentrations are more likely to be infected with root-rotting fungus than those plants that are not exposed to such high levels. Similarly, Easter lilies infected with a virus appear to be more susceptible to root-rotting fungi than healthy lilies. Finally, rhododendrons given either too much or too little water have been found to be more susceptible to water molds and root-rotting fungus than plants given the correct amount of water.

—Pacific Horticulture, Winter 1983

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Gardener's Dateline

JANUARY 17-20

American Camellia Society Spring Meeting

Mobile, Alabama. Information: American Camellia Society, Box 1217, Fort Valley, GA 31030, (912) 967-2358.

FEBRUARY 1-3

UCLA Botanical Garden Symposium on Camellias

Botanical Garden, University of California, Berkeley, California. Information: Camellia Symposium, c/o The Education Coordinator, University of California Botanical Garden, Centennial Dr., Berkeley, CA 94720, (415) 642-3343.

FEBRUARY 1-6

Minnesota Home and Garden Show

Minneapolis Auditorium, Minneapolis, Minnesota. Information: Trade Shows, Inc., 15235 Minnetonka Blvd., Minnetonka, MN 55345, (612) 933-3850.

FEBRUARY 1-10

Vancouver Home and Garden Show

Pacific National Exhibition Grounds, Vancouver, British Columbia, Canada. Information: Southex Exhibitions, 202-2695 Granville St., Vancouver, B. C., Canada V6H 3H4.

FEBRUARY 1-10

Colorado Garden and Home Show

Downtown Currigan Hall, Denver, Colorado. Hours: Friday, Feb. 1, 6 to 10 p.m.; Monday through Saturday (excluding Fri., Feb. 1) noon to 6 p.m.; Sunday noon to 6 p.m. Admission: Adults \$3.50; Children \$1.50. Information: Jacquie Haughton, Show Manager, Industrial Expositions, Inc., PO Box 12289, Denver, CO 80212, (303) 458-5615.

FEBRUARY 13-17

Midwest Flower, Garden and Outdoor Living Show

Omaha Civic Auditorium, Omaha, Nebraska. Information: Jane Booth, Lutheran Medical Center, PO Box 3434, Omaha, NE 68103, (402) 536-6994.

FEBRUARY 14-MAY 23

Longwood Graduate Program Spring Seminar Series

Longwood Gardens, Kennett Square, Pennsylvania. Hours: Thursdays 3 p.m. Information: Longwood Graduate Program, 153 Townsend Hall, University of Delaware, Newark, DE 19717, (302) 451-2517.

FEBRUARY 19-24

Kansas City Flower, Lawn and Garden Show

Bartle Hall, Kansas City Convention Center, Kansas City, Missouri. Hours: 11 a.m. to 9 p.m. Admission: Adults \$3.50; Children \$2.50. Information: Kansas City Parks and Recreation, 5605 East 63rd St., Kansas City, MO 64130, (816) 444-3113.

FEBRUARY 20-24

Central Iowa Home and Garden Show

Veterans Memorial Auditorium, Des Moines, Iowa. Information: Trade Shows, Inc., 15235 Minnetonka Blvd., Minnetonka, MN 55345, (612) 933-3850.

FEBRUARY 21-24

Ark-La-Tex Home and Garden Show

Exposition Hall, Shreveport, Louisiana. Information: Ark-La-Tex Home and Garden Show, c/o Page Enterprises, Inc., Route 3, Box 12, Gravois Mills, MO 65037, (314) 372-2277.

FEBRUARY 22-MARCH 3

Central Ohio Home and Garden Show

Ohio State Fairgrounds, Columbus, Ohio. Hours: Weekdays 4 to 10 p.m.; Saturdays 1 to 10 p.m.; Sundays 1 to 6 p.m. Admission: Adults \$4.00; Children \$1.00. Information: Harriett S. Wyatt, Show Manager, Hart Productions, Inc., 1172 W. Galbraith Rd., Cincinnati, OH 45231, (513) 522-7330.

FEBRUARY 22-MARCH 3

Cleveland Home and Flower Show

Public Hall and Convention Center Complex, Cleveland, Ohio. Hours: Opening Friday 4 to 11 p.m.; Fridays and Saturdays 11 a.m. to 11 p.m.; Monday through Thursday 11 a.m. to 10 p.m.; Sundays 11 a.m. to 8 p.m. Admission: General \$4.50; Advance \$3.50. Information: Cleveland Home and Flower Show, 118 St. Clair Ave., NE, Suite 100, Cleveland, OH 44114, (216) 621-3145.

FEBRUARY 23-MARCH 3

Southern Spring Show

Charlotte Merchandise Mart, Charlotte, North Carolina. Hours: Weekdays and Saturdays 10 a.m. to 9:30 p.m.; Sundays 10 a.m. to 6 p.m. General \$4.00; Advance general \$3.50; Group \$3.00. Information: Southern Shows, Inc., PO Box 36859, Charlotte, NC 28236, (704) 376-6594.

FEBRUARY 27-MARCH 3

Calgary Home and Garden Show

Round-Up Centre, Stampede Park, Calgary, Alberta, Canada. Information: Southex Exhibitions, 202-2695 Granville St., Vancouver, B.C., Canada V6H 3H4.

MARCH 2-10

Cincinnati Home and Garden Show

Cincinnati Convention Center, Cincinnati, Ohio. Hours: Weekdays 5 to 10 p.m.; Saturdays noon to 10 p.m.; Sundays noon to 6 p.m. Admission: Adults \$4.00; Children \$1.00. Information: Harriett S. Wyatt, Show Manager, Hart Productions, Inc., 1172 W. Galbraith Rd., Cincinnati, OH 45231, (513) 522-7330.

MARCH 2-10

Long Island Flower Show

State University of New York, Farmingdale, New York. Information: Frank Bon Giorno, Show Director, 692 Elmont Rd., Elmont, NY 11003, (516) 285-6702.

MARCH 3-10

Philadelphia Flower Show

Philadelphia Civic Center, Philadelphia, Pennsylvania. Hours: Sundays 10 a.m. to 6

New Public Garden Opens

Gardeners traveling to Hawaii should plan to visit Hawaii Tropical Botanical Garden, a brand-new public garden located on the Island of Hawaii, on the Hamakua Coast outside the city of Hilo. The Garden, which is being developed as a native preserve to protect the natural beauty of a tropical rain forest, houses a growing collection of exotic and tropical species of plants from many parts of the world.

In order to preserve the natural beauty of the Garden, only 50 visitors per day will be admitted. The 17-acre preserve stretches from the rugged ocean coast to cascading streams and waterfalls inland. Hawaii Tropical is open seven days a week, 8:00 a.m. to 5:00 p.m., and admission is \$6.00 per person. For more information, write or call Hawaii Tropical Botanical Garden, PO Box 1415, Hilo, HI 96721, (808) 964-5233.

p.m.; Saturday, Monday through Thursday 10 a.m. to 9:30 p.m. Admission: Adults \$6.50; Children under 12 \$3.25; Adult Advance \$5.75. Information: Pennsylvania Horticultural Society, 325 Walnut St., Philadelphia, PA 19106, (215) 625-8250.

MARCH 6-10

Nashville Lawn and Garden Fair

Tennessee State Fairgrounds, Nashville, Tennessee. Information: Frank Crowell, Nashville Lawn and Garden Fair, P.O. Box 50063, Nashville, TN 37205, (615) 331-1212.

MARCH 7-10

Metropolitan Louisville Home, Garden and Flower Show

Kentucky Fair & Exposition Center, Louisville, Kentucky. Information: Tony Short, Home Builders Association, 1800 Arthur St., Louisville, KY 40217, (502) 637-9737.

MARCH 8-10

40th International South Florida Orchid Society Show

Coconut Grove Exhibition Center, Miami, Florida. Information: South Florida Orchid Society, 13300 S.W. 111 Ave., Miami, FL 33176, (305) 251-1934.

MARCH 9

5th Annual Vegetable Garden Symposium

Callaway Gardens, Pine Mountain, Geor-

gia. Information: Education Department, Callaway Gardens, Pine Mountain, GA 31822, (404) 663-2281, ext. 153.

MARCH 9-17

New England Spring Flower Show

Bayside Exposition Center, Boston, Massachusetts. Hours: Sundays 10 a.m. to 8 p.m.; Monday through Saturday 10 a.m. to 10 p.m. Admission: General \$6.00; Senior Citizens \$5.00; Children under 12 free; Advance \$5.00. Information: Massachusetts Horticultural Society, Horticultural Hall, 300 Massachusetts Ave., Boston, MA 02115, (617) 536-9280.

MARCH 13-17

Washington Flower and Garden Show

Washington Convention Center, Washington, D.C. Hours: Wednesday through Saturday 10 a.m. to 10 p.m.; Sunday 10 a.m. to 8 p.m. Information: TJS Productions, 7668-B Fullerton Rd., Springfield, VA 22153, (703) 569-7141.

MARCH 16-24

Indiana Flower and Patio Show

Indiana State Fairgrounds, Indianapolis, Indiana. Hours: Monday through Thursday 11 a.m. to 9 p.m.; Friday and Saturday 11 a.m. to 10 p.m.; Sunday 10 a.m. to 6 p.m. Information: Indiana Flower & Patio Show, PO Box 20189, Indianapolis, IN 46220, (317) 255-4151.

39th Annual Williamsburg Garden Symposium

March 31-
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Wildflower Legislation

Legislation setting aside funds for the use of native wildflower seeds and seedlings in highway landscaping passed both the House and Senate in the 98th Congress. Both the House and Senate versions of this legislation became part of other bills, which were sent to a conference committee of House and Senate members. Although there was no opposition to the wildflower legislation itself, the committee could not agree on a final form for the bills. Thus, the wildflower legislation died and was never returned to the House and Senate for a final vote.

Senator Lloyd Bentsen of Texas introduced the Senate bill, which was known as the National Wildflower Landscaping Act of 1984, S. 2585. In introducing the bill, Senator Bentsen mentioned the cost-cutting, water-saving, and labor-saving benefits of blending wildflowers into highway landscaping, and referred to "Mrs. Lady Bird Johnson's efforts to beau-

tify America with the planting and cultivation of colorful and hardy native wildflowers." The Senator also cited examples from the Texas Highway Department proving that less mowing and watering are required along highways where wildflowers grow, and that even travelers seem more reluctant to litter in these areas. He summed it up by saying, "I hope we may join together in following the lead of Lady Bird Johnson in beautifying our nation's highways and conserving a national resource, while contributing to significant financial savings."

Senator Bentsen is planning to introduce similar legislation again in the next Congress. To ensure the introduction of this legislation and to help get support for its passage, interested AHS members may write Senator Bentsen, as well as the senators and congressmen from their home states.

—Sharon Barnes

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Plants Wanted

Members who are growing or who have access to any of the plants in this month's column are invited to help their fellow members locate seed, plants or cuttings of their "Plants Wanted" by writing directly to the addresses listed below.

Please send your "Plants Wanted" lists, including genus, species, common name and a brief description, to "Plants Wanted" in care of the Society. Please type or print neatly. We will publish them on a space-available basis after checking for sources in the Society's mail-order catalogue file.

- *Aralia elata* 'Variegata', variegated Japanese angelica tree, a multiple-stemmed, woody plant with large pinnate leaves bordered with white. Bears upright white flower clusters in late summer. Rich Hassett, 2911 West 2900 Street, Ogden, UT 84401.
- *Boswellia* sp., the Biblical frankincense. Mrs. Hazel Whittenburg, 6430 Heintz Road, Oakville, MO 63129.
- *Senecio cruentus*, a species from the Canary Islands thought to

be one of the parents of florist's cineraria, *C. × hybridus*. A tender perennial with purple flowers. Ellen K. Penick, Route 1, Box 166A, Ruther Glen, VA 22546.

- *Solanum wendlandii*, potato vine or giant potato creeper, a tall, climbing vine with large, usually pinnate leaves, and lilac-blue flowers borne in large cymes. A tender perennial from Costa Rica. Joy Benton, Horticulturist, Longue Vue House and Gardens, 7 Bamboo Road, New Orleans, LA 70124.
- *Tetrapanax papyriferus*, rice-paper plant, a small, spineless, evergreen tree native to southern China, with fan-shaped, 12-inch leaves. E. R. Watt, 1820 E. Grauwlyer Road, Irving, TX 75061.
- *Vitis rotundifolia*, muscadine grape or scuppernong, a large, vigorous, climbing grape with small clusters of dull purple, thick-skinned berries. Native to the Eastern United States and west to Kansas and Mexico. Prof. Charles-James N. Bailey, Technische Universitat Berlin, Ernst-Reuter-Pl. 7, (Zl. 815), D-1000 Berlin 10, West Germany.

Clinton Community Garden Saved



Just one month before the Clinton Community Garden in New York City was to be sold for development, the city-owned site was transferred to the Department of Parks and Recreation. The garden, located on West 48th Street between 9th and 10th Avenues, was an eyesore for many years. In 1978, neighborhood residents leased the site from the city and transformed it into a garden. To save the garden from development, residents, with the help of the Trust for Public Land, sold square-inch plots for \$5 each. The funds raised through the Inch-by-Inch campaign will now be used to start a general Community Garden Site Protection Fund.

Plant Scientists Discover New Essential Element

According to new findings at the Plant, Soil and Nutrition Laboratory in Ithaca, New York, green plants may need minute amounts of the mineral nickel for their health and well-being. Research indicates that nickel is essential for normal nitrogen metabolism in soybeans, cowpeas and possibly all higher plants. Experiments involving plants growing in water-nutrient culture, or hydroponics, show that nickel may also play a role in helping plants resist diseases.

"No immediate impact on fertilizer industries can be expected because we don't know if nickel-deficient soils exist," says plant physiologist Ross M. Welch. "But we have discovered that a nitrogen cycle in plants, previously thought to be unimportant, may help us better understand how plants make use of nitrogen."

Research associate David L. Eskew of Cornell University, Welch, and ARS research chemist Earle E. Cary conducted the study. They built their experiments upon the recent discovery that nickel is a part of urease, the plant enzyme that breaks down the nitrogen compound urea into simpler compounds that, in turn, aid growth and development. Eskew, Welch and Cary showed that without nickel, plants do not properly metabolize urea, which they obtain from fertilizers, nitrogen-fixing bacteria, or other natural phenomena. Plants deprived of nickel accumulated toxic levels of urea in leaves, causing die-back or leaf tip necrosis. The researchers plan to repeat their experiments on water-cultured barley, wheat and other plants.

Nickel is the first chemical element shown to be essential to plants since 1954, when scientists discovered that chlorine plays an essential role in photosynthesis, the process by which plants use energy from light.

Sixteen elements are currently recognized as being essential to all plants. Major nutrient elements are carbon, hydrogen and oxygen, which are readily available to plants from water and air; and calcium, magnesium, potassium, nitrogen, phosphorus and sulfur, which are common constituents of fertilizers. If further

research confirms the new findings, nickel will join a group of seven minor nutrient elements: iron, manganese, boron, copper, zinc, molybdenum and chlorine.

The minor elements, which are widely distributed in soil, usually serve as catalysts for chemical reactions. Minute amounts of these elements are required for such reactions to occur. However, agriculturists must often deal with soils in some areas of the world where certain minor nutrients are lacking or in short supply.

—Stephen Berberich, *Agricultural Research*, June 1984

New Publications

Gardeners with an interest in members of the Amaryllidaceae, or amaryllis family, will want to purchase a copy of the newest publication of The American Plant Life Society, *A Review of the Southern African Species of Cyrtanthus*. This 68-page booklet includes a key, as well as botanical descriptions of the 55 species of *Cyrtanthus* that are found in South Africa.

A Review of the Southern African Species of Cyrtanthus is available for \$12 per copy in the United States and Canada, and \$14 per copy elsewhere. To order, write The American Plant Life Society, 1843 East 16th Street, National City, CA 92050.

Fuchsia fanciers will want to order the American Fuchsia Society's new publication, *Fuchsia Culture*. This attractive, authoritative book on growing fuchsias is designed for both the amateur gardener and the professional horticulturist. The 160-page book includes chapters on potting soils, fertilization, miniatures and bonsai, pests and diseases, containers, and propagation and hybridizing.

Fuchsia Culture is available for \$10.81 per copy, including postage and handling. To order a copy, write AFS Book Sales, 867 S. Knickerbocker, Sunnyvale, CA 94087.

AHS Travel Program

Barbados Exploration (March 1-8) Spend a week exploring this small Caribbean island with spacious beaches and exotic tropical plants. Everitt Miller, former Director of Longwood Gardens, will lead tours to botanical areas of interest, including Welchman Hall Gully and the famous Andromeda Gardens, owned by the same family for over 200 years. Visits to several Barbados National Trust mansions and botanical gardens are also scheduled.

Hawaii (March 4-16) Tour Hawaii's experimental gardens and arboreta, many of which are generally closed to the public, as well as unique nurseries, private gardens and estates. Visits to the Pacific Tropical Botanical Garden, Lyon's Arboretum and Grove Farm Plantation are also on the itinerary. Tour leader is former San Diego Zoo horticulturist Ernie Chew.

Spring Gardens of the Southern United States (March 30-April 21) Visit the most beautiful gardens in New Orleans, Natchez, Savannah, Charleston and Atlanta during the height of the spring blooming season. Tour leader is Liberty Hyde Bailey Medal winner and Emeritus Professor of Botany at UCLA, Dr. Mildred Mathias.

Spring in the Mediterranean (April 8-24) Cruise the Mediterranean and stop at ports in Greece, Turkey and Yugoslavia during the height of the spring wildflower season. Alfred Evans, Assistant Curator of the Royal Botanical Gardens in Edinburgh, will lead the tour. Botanical shore excursions and lectures on board are scheduled.

YES! Please send me more information on the tours I have checked below:

- Barbados Exploration
- Hawaii
- Spring Gardens of the Southern U.S.
- Spring in the Mediterranean

Name _____

Address _____

City _____ State _____ Zip _____

Mail to: Robin Williams, American Horticultural Society, PO Box 0105, Mount Vernon, VA 22121.

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Horticultural Exploration of BARBADOS March 1 - 8, 1985

Come to Barbados with A.H.S. this winter. Get away from the cold and experience the tropical beauty of this Caribbean island. Departing from either New York City or Miami, we will begin our stay in Barbados with an exploration of the city of Bridgetown with its 18th-century English atmosphere. As guests of the Barbados Horticultural Society, we visit local gardens such as Andromeda Gardens, owned by the famous Iris Bannochie. Special lectures by local horticulturists have also been arranged. As a special treat, several Barbados National Trust Homes will be open during our visit.

Everitt Miller, Esquire, will be our escort. Formerly the director of Longwood Gardens, he is an eminent horticulturist as well as amenable companion.

For a free brochure, please write to the Education Department, American Horticultural Society, Box 0105, Mt. Vernon, VA 22121. Or call collect: (513) 281-7000.

Other Horticultural Explorations include Mediterranean Cruise (April 8 - 24), China (June 5 - 22), Spring England (May 9 - 23), Romantic France (June), Fall England (September 11 - 26), Fall Orient (November 1 - 24).

Seed Storage Life

Contrary to popular belief, all seed from a single plant species or cultivar cannot be stored the same length of time. Plant physiologist Louis N. Bass at the National Seed Storage Laboratory in Fort Collins, Colorado tested reed canary grass seed that had been stored for up to 18 years in the lab's temperature- and humidity-controlled rooms. The seed from different lots did not germinate equally well.

In this experiment, Bass stored seed at either 50°, 41°, 30° or 10° F. Seed germinated best when stored at the lower temperatures.

In addition to the temperature and relative humidity in the storage area, the length of time that seed can be stored is determined by how gently seed is handled during harvest and cleaning. The environment in which a plant grows also affects how long seed can be stored. Seed harvested from the same plant in two different years did not germinate equally well.

—Dennis Senft, *Agricultural Research*, June 1984

New Plant Society

Water garden enthusiasts will want to join the Water-Lily Society, a new plant society devoted to sharing information and aquatic plants among members. The Society also plans to serve as a community resource for water gardeners, and is planning an international water gardening symposium for 1985.

The president of the new organization, Walter Pagels of San Diego, California, has been growing and collecting water lilies and other aquatic plants for over 25 years. Charles Thomas, President of Lilypons Water Gardens, is the founder and executive secretary of the new Society. Steve Davis, Director of Grounds and Buildings at the American Horticultural Society, will edit the Society's newsletter.

Individuals interested in joining this new organization should write to the Water-Lily Society, PO Box 104, Lilypons, MD 21717.

American Horticultural Society's 1985

SEED



PROGRAM CATALOGUE

ILLUSTRATION BY MARJORIE STODGELL

HOW TO USE THIS CATALOGUE

For gardeners, January brings an itch for spring and thoughts of planting, pruning and spring flowers. Luckily for American Horticultural Society members, it also brings thoughts of the Society's Annual Seed Program and the many plants that can be grown from the seeds we distribute each year.

Take a few minutes to look through our 1985 Seed Program Catalogue. This year's program has even more to offer than last year's. In addition to an excellent selection of unusual vegetables, we have a large number of tropical species to offer house plant enthusiasts, greenhouse owners and members in the southern portions of the country. Gardeners with small gardens should read through our list of shrubs and small trees; many of the shrubs can be limbed-up into small trees that are perfect for small spaces. Finally, we have a wide range of perennials for all kinds of gardens. In short, there is something for everyone; perhaps you will find a few old favorites, a plant you have always wanted to try or a species you've never heard of before.

Many of you will notice a major change in our Seed Program; this year we are mailing your catalogue to you with your *American Horticulturist* News Edition. This change allows us to cut the costs of administering this popular program. Printing, production and mailing costs rise every year, and including the Seed Program Catalogue with the January News Edition is a way for us to contain these ever-increasing expenses. Cost-saving measures such as these, combined with the continued generosity of members who participate in the Seed Program, will help us continue to improve this membership service.

Selecting Plants

Use the table of contents on this page or the common name index on page 16 to help you select plants.

All of the seed distributed in the Society's Seed Program is donated to us by your fellow members and by seed companies, public gardens and plant societies from across the country. Although we have large quantities of many of the species listed here, in some cases, donors were only able to provide small quantities of seed.

Whenever possible, we will send you your first-choice selections. We request that you list alternate selections, however, so if the supply of any of your first choices is depleted we can send your alternate choices. Our volunteers who fill your order can make substitutions for you, but only you know what is best for your own garden.

Selections of which we have unusually small quantities are marked "limited supply."

How To Order

Once you have selected the seeds that you would like to grow, complete the order form on page 11 of this newsletter (January 1985).

We hope you will help us defray the costs of our Seed Program by enclosing a voluntary donation with your seed order. The cost of this program increases each year, and only the generosity of those who donate seed or help us with contributions allows us to continue the program. We ask for a minimum contribution of \$1.00 if you request seven packets of seed, and \$2.00 if you request 14. We are sure you'll agree that the value of the seed you receive is much greater than a dollar. You can help us continue to expand and improve our Seed Program if you contribute more.

Please send your completed order form and contribution (cash or check made out to the American Horticultural Society) to Seeds 1985, American Horticultural Society, P.O. Box 261, Mount Vernon, VA 22121. (Because of the complexities of foreign exchange, foreign members need not include a contribution with their order.)

After sending us your order, it is **important that you keep this catalogue**; you will need it to identify the seeds you receive. All of the seed packets distributed in the Society's Seed Program are marked with only the master list numbers that appear in the catalogue.

Please note that we cannot fill orders received after June 1.

Beginners' Seeds

If you are new at germinating plants from seed, you may want to consider some of the selections listed below. They germinate quickly and are all easy to grow.

Annuals. Use the general germination instructions for annuals for the following easy-to-germinate plants: 2, 4, 18, 19, 20 and 22.

Perennials. Use the general germination instructions for perennials for the following easy-to-germinate plants: 32, 36, 40, 51, 52, 58, 59, 69, 73, 99, 100 and 101.

Observations

Once again, we ask for your help in compiling information on the seed listed in this year's program. This information is valuable both to the Society and to those who have donated the seed we are offering.

Just keep a brief record or log of your experiences with the seed you try. You might include such information as the date you sowed your seed, the date the seed germinated, the number of successful germinations, and the date you transplanted or set out your seedlings. It would also help to include an evaluation of the seedlings' performance in the

garden, including information on the planting site selected and the susceptibility of the plants to disease and pests.

If you know any special handling tips or have extensive information on any of the very rare species in this year's list, pass them along to us. Your information may help improve a fellow member's results with one of your favorite plants. The information need not be detailed; just tell it like it is.

When you have completed your report, send it to Steve Davis in care of the Society, P.O. Box 0105, Mount Vernon, VA 22121.

Also, please help us better serve you by giving us your ideas and recommendations concerning the Seed Program. Your suggestions and comments will help us as we develop next year's program.

Seed Program '86

Plan now to donate seed to the Society's 1986 Seed Program! Although seed companies and botanical gardens donate seed to this exciting program every year, the majority of the items we list are donated by you, our members. Those of you who can only harvest and donate small quantities of seed need not despair; this year several of the selections we are offering were donated in small quantities by several individuals. These small donations, added together, provided us with enough seed to offer to program participants. For more information on the 1986 Seed Program, write to Steve Davis in care of the Society, P.O. Box 0105, Mount Vernon, VA 22121.

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GENERAL GERMINATION INSTRUCTIONS

To germinate any of the seeds in this catalogue, use the following general planting instructions, and combine them with the specific sowing instructions given for annuals, perennials, and trees and shrubs on this page. Any exceptions or special requirements (for example, stratification or scarification requirements) are mentioned in the individual plant descriptions.

Outdoors, sow seed into a prepared seed bed, and keep the bed moist until the seeds have germinated and plants are growing vigorously. Seeds that are sown in the fall for germination the following spring should be watered in and protected for the winter.

Indoors, sow seed in flats or other containers that have an ample number of drainage holes. Plants identified as difficult to transplant can be seeded directly into peat pots or pellets that will, in turn, be planted directly into the ground, thus minimizing transplant shock.

Fill containers to within ¼ inch of the top with a commercial potting mix, or develop your own medium. A soil-less medium consisting of equal parts of vermiculite, milled sphagnum and perlite is ideal.

Thoroughly moisten the medium and let it drain for two hours before sowing. To control damping-off, many gardeners and professional horticulturists soak seed flats in fungicide before sowing. Use Dexon, Terrachlor, Truban, Benlate or another fungicide recommended for this purpose. It is probably a good idea to wait 24 hours after treatment before sowing seed.

Sow the seed by pressing it into the moistened medium until it can be covered with soil to a depth equal to the diameter of the seed. Place very small seeds on the medium, and cover them lightly with milled sphagnum. Mist the surface after sowing, and label the flats or pots so you will be able to identify the seedlings when they appear.

Keep the medium moist. Water from the bottom by placing the flats or pots in a container of water until the moisture can be seen coming to the top of the medium. To provide uniform moisture and humidity, cover the containers with clear plastic bags. Do not let the plastic rest on the medium or touch the seedlings when they appear.

Place the container in strong, indirect light. Maintain an approximate temperature of 60° to 75° F.

Poke small holes in the plastic coverings as soon as the seedlings emerge. This will improve ventilation and prevent overheating. Transplant seedlings to individual containers if there is a danger of overcrowding.

Transplanting is the second most crucial period in a plant's life after germination, so it is important to make this transition as gradually as possible. Harden off seedlings by slowly exposing them to brighter light and lower humidity after they have produced their second set of true leaves. Finally, a few days

before you plan to transplant, move the plants outdoors for a few hours per day to accustom them to their new environment.

Germination For Annuals

Indoors, sow seed six to eight weeks before the plants are to be set outdoors, which should be done after all danger of frost is past. Transplanting two weeks after the frost date in your area is generally safe. Many annuals will not start growing until the ground warms up in the spring, so early transplanting will not necessarily give them a head start.

Recommended temperatures for the growing medium are 65° to 70° F. Seed should germinate within 20 days unless otherwise indicated.

Outdoors, annuals can be sown into a prepared seed bed after all danger of frost is past.

All of the annuals listed can be sown according to these directions, combined with the general planting instructions, unless otherwise indicated. Exceptions to these rules, as well as specific sowing instructions that will improve results, are included in the individual plant descriptions.

Germination For Perennials & Biennials

Indoors, sow perennials four to six weeks before transplanting to the garden, which should be done after danger of frost is past. Although well-hardened perennial seedlings can withstand cool temperatures, transplanting about two weeks after the last frost date in your area is probably best.

Recommended temperatures for the growing medium are 65° to 70° F. Unless otherwise indicated, seed should germinate within 20 days. However, perennial seed may germinate slowly over a long period of time, even if a few individuals pop up almost immediately. Keep seeded flats moist for two to three months to avoid throwing away seed that is still viable.

Outdoors, sow seed in the spring two weeks after the last frost date, and in the summer or fall, up to two months before the first frost of autumn is expected.

All of the perennials listed can be sown according to these directions, combined with the general planting instructions, unless otherwise indicated. Treatments necessary to satisfy seed-dormancy factors, exceptions to these rules and more specific sowing instruc-

tions that will improve results are included in the individual plant descriptions.

Germination For Trees & Shrubs

Indoors, sow seed of trees and shrubs anytime. However, be sure adequate light, moisture and proper temperatures are provided. If sown in the spring, grow the plants through the summer in containers and set them out in the early fall; or sow them in containers and grow them under controlled conditions for a year or more before planting them out in the garden.

Outdoors, sow them in a prepared seed bed in the fall. Be sure to protect the seed from alternating periods of freezing and thawing with a layer of mulch. Keep rodents away with a layer of wire mesh.

All of the trees and shrubs listed can be sown according to these directions, combined with the general planting instructions, unless otherwise indicated. Exceptions to these rules are included in the individual plant descriptions.

Stratification & Scarification

Cold stratification. Place seeds that require a period of cold stratification in order to germinate in a plastic bag with a small amount of moistened sand, peat moss or sphagnum moss, or a mixture of half sand and half peat. Close the bag with a rubber band or a twist-tie, and place it in the refrigerator (about 40° F) for the length of time specified in the individual plant descriptions. The mixture should be just damp, not soggy; otherwise, the seeds will rot. Sow the seeds according to instructions after the required period of time, or if they begin to germinate.

Warm stratification. Seeds that exhibit double dormancy must often be stratified at warm temperatures before they can be given a period of cold stratification. Place these seeds in a plastic bag, as prescribed for seeds to be cold-stratified, but keep them in a spot where they will be exposed to temperatures of 65° to 85° F.

Scarification. The seeds of many species are dormant because of hard seed coats that water cannot penetrate. Scarify these seeds by nicking the seed coat with a knife or filing it down with sandpaper or an emery board. Or, pour boiling water over the seeds and leave them to soak for 24 hours. Some seed requires both treatments.

ANNUALS

1. *Amaranthus hybridus* var. *erythros-tachys*. Prince's-feather. Six-foot plant grown for its colorful, reddish foliage and red spikes. Full sun; will tolerate poor soil.

2. *Bidens polylepis*. Tickseed sunflower. Erect annual or biennial, excellent for naturalizing in locations with full sun and poor soil. Daisy-type flowers composed of pale yellow disc florets surrounded by showy, golden-yellow, 1-inch ray florets. Height 3 feet. Blooms August through October. Will reseed. Surface-broadcast seed where plants are to grow. Zone 10.

3. *Capsicum annuum* 'Candlelight'. 1984 All-America Selections winner. Each plant bears 100 or more 1½-inch-long, thin peppers above the dark green foliage. Peppers turn from light green to bright red in late summer. Fruit edible, but very hot. Full sun and average, well-drained soil.

4. *Cleome hasslerana*. Spider flower. Three- to 6-foot plant with large, 6- to 7-inch heads of airy, orchid-like blooms in shades of rose, pink, white or lavender borne from midsummer to fall. Full sun. Will reseed at

great rate. Remove seed pods prior to maturity to reduce next year's weeding. Sow outdoors in spring or fall.

5. *Cleome hasslerana* 'White Queen'. White spider flower. White-flowered cultivar. For cultural and germination information, see #4.

6. *Crepis incana*. Hawksbeard. Daisy family member from Greece. Flower heads are magenta-pink in color. Height to 6 feet. Full sun and light, loamy soil. Zone 5.

7. *Emilia javanica*. Tassel flower, Flora's-paintbrush. Daisy family member with gray-green foliage and loose, summer-borne corymbs of half-inch, orange-red or yellow-gold flowers. Full sun, and dry, sandy, well-drained soil.

Gourds. This year we are pleased to offer three excellent ornamental gourds that are perfect for drying. These easy-to-grow vines require full sun, average garden soil, and a long, hot growing season for fruit production. They can be trained on a trellis or grown on a mound, much like melons or cucumbers.

Pick the fruit when the stems begin to dry up, wash with a weak solution of bleach, and wax or dry. To germinate, soak seed in warm water for 24 hours, then sow outdoors after all danger of frost is past. Or sow indoors 2 to 4 weeks before last frost in individual pots, keeping medium temperature at 70° F. Germination takes 8 to 14 days.

8. Crown of Thorns Gourd

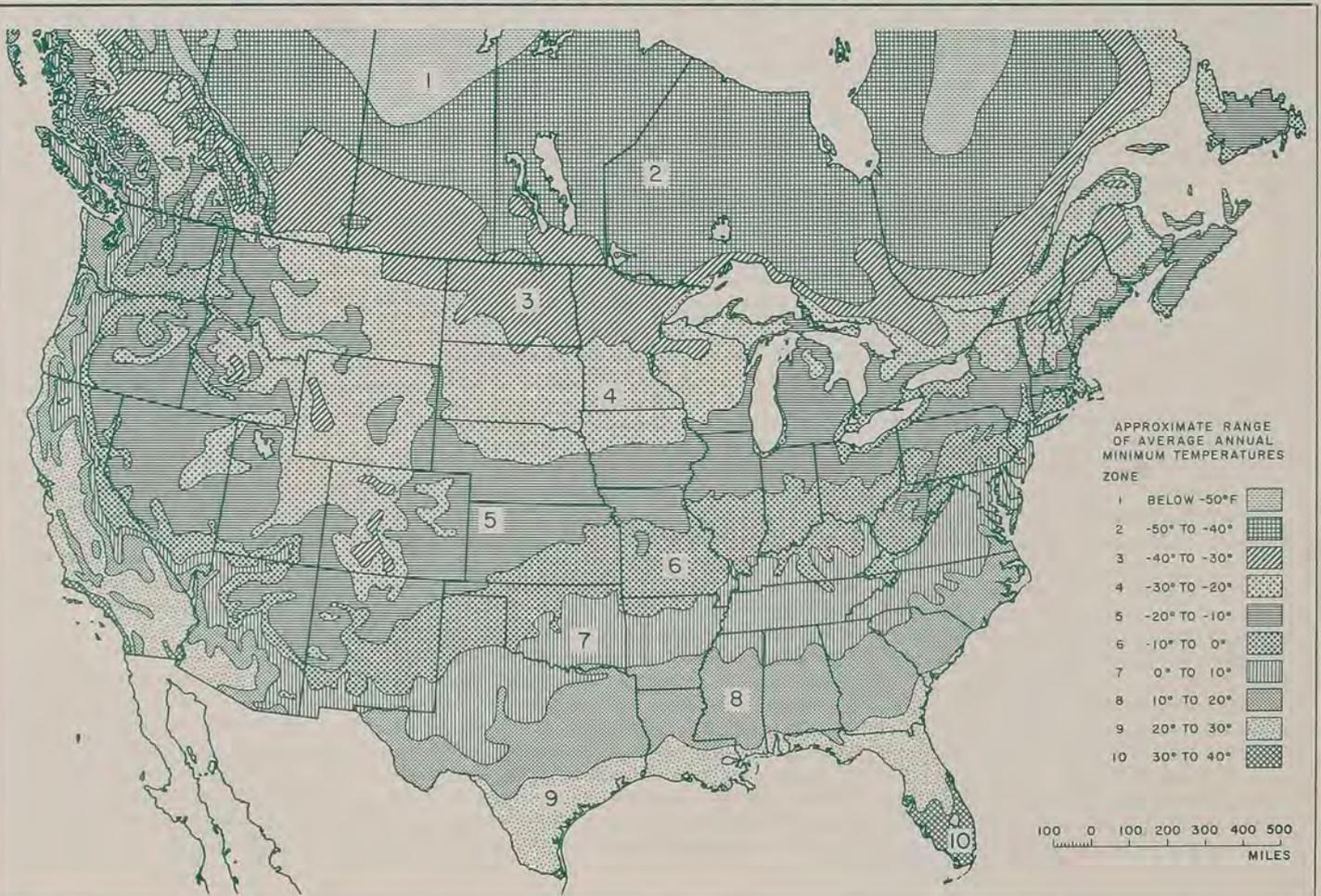
9. Pear Bi-Colored Gourd

10. Giant Bottle Gourd

11. *Impatiens capensis*. Orange jewelweed. Five-foot plant with orange flowers that have inch-long spurs borne on drooping pedicels. Flowers dotted with reddish-brown. Will reseed. Moist conditions and partial shade. Limited supply.

12. *Kochia scoparia* forma *trichophylla* 'Childsii'. Summer cypress, burning bush. Dense globe-shaped plant with narrow, fine foliage. Grown for its light green foliage that turns purplish-red in fall. Very showy. Full sun and dry, very well-drained

U.S.D.A. HARDINESS ZONE MAP



soil. Prefers hot weather. Follow general germination instructions for annuals, but do not cover seed; light is necessary for germination.

13. *Lathyrus odoratus* 'Mammoth' mix. Sweet pea. Mixture of large-flowered, long-stemmed sweet peas in an assortment of bright colors, including pink, white and salmon. Full sun and deep, rich, fertile, slightly acid soil. Mulch to keep roots cool. Soak seed for 24 hours or nick seed coat before sowing, and sow indoors 4 to 6 weeks before last frost date. Plant seed at depth of 1½ to 2 inches; darkness required for germination. Keep medium at a temperature of 55° to 65° F.

14. *Linaria maroccana*. Spurred snapdragon or toadflax. Twelve-inch, summer-blooming plant bearing half-inch, snapdragon-like flowers in shades of pink, salmon, red, blue, yellow, bronze and white. Full sun, partial shade and rich, well-drained soil. Prefers cool climates; night temperatures of 50° F are ideal. Follow general germination instructions for annuals, but indoors, keep medium temperature between 55° and 60° F.

15. *Mimulus lewisii*. Monkey flower. Annual or greenhouse plant bearing yellow, scarlet or orange flowers that resemble monkeys' faces. Prefers shade and cool, moist conditions. Follow general germination instructions for annuals, but do not cover seed; or cover with no more than ¼ inch of soil.

16. *Mirabilis jalapa* Cultivar Mix. Four-o'clock. One- to 2-foot, tuberous-rooted plant with funnel-shaped, yellow, red, pink, white or violet flowers that open in the late afternoon, summer to frost. Full sun. Roots can be lifted and stored over winter.

17. *Pelargonium* species. Geranium. We have a small selection of 10 rare species of geraniums. Should you request this selection, and seed remains, we will send the seed of one species, our choice. We will try to honor preferences, if indicated. 17a) *P. alchemilloides*. 17b) *P. aridum*. 17c) *P. canariense*. 17d) *P. carnosum*. 17e) *P. cucullatum*. 17f) *P. fulgidum*. 17g) *P. hispidum*. 17h) *P. pap-*

ilionaceum. 17i) *P. ribifolium*. 17j) *P. scandens*. Sow seed indoors 12 to 16 weeks before planting outdoors. Limited supply.

18. *Tagetes* 'Joyful'. Marigold. Attractive, 10- to 12-inch plant that bears red and yellow bicolor flowers. Full sun, well-drained soil. Remove spent flowers to prolong blooming. Sow indoors 4 to 6 weeks before last frost.

19. *Tagetes* 'Tiger Eyes'. Marigold. Twelve-inch, double French marigold with yellow flowers that have brown centers. For cultural information and germination instructions, see #18.



20. *Tithonia rotundifolia* 'Sundance'. Mexican sunflower. Perfect, 3- to 4-foot annual for the back of the border. Bears spectacular, 3-inch, daisy-like, scarlet-orange flowers from summer through fall. Drought-resistant. Full sun, well-drained soil. Light may benefit germination, so do not cover seed.

21. *Vinca* 'Morning Mist'. Tender perennial bearing many double white flowers with pink eyes. Light shade, full sun with average soil. Sow seed indoors 12 weeks before last frost and maintain a medium temperature of 70° to 75° F. Cover seed; darkness required for germination. Hardy to Zone 9.

22. *Zinnia angustifolia*. Zinnia species with 1½-inch flower heads that are black-purple in the center and have bright orange ray florets with a central yellow stripe. Height 15 inches. Full sun and rich, well-drained soil. Likes heat and dry conditions. Sow outdoors using general germination instructions for annuals.

Annual Vines

23. *Ipomoea purpurea*. Morning glory. Robust annual vine with showy, funnel-shaped, blue, purple or pink flowers, borne from July until frost. Flowers open in the morning and fade towards end of day. Full sun, well-drained soil. Requires a trellis and will not flower in very rich soil. Follow general germination instructions for annuals, but soak seeds in warm water for 24 hours, or nick seed coat before sowing.

24. *Ipomoea quamoclit*. Cypress vine, cardinal climber. Vining annual with foliage that is cut into delicate, thread-like segments. Flowers are scarlet and 1½ inches in length. Height to 20 feet. Full sun, partial shade and average, well-drained soil. Requires trellis. Sow indoors following scarification treatment for hard seed coat. For best results, nick the seed coat and soak seeds in warm water for 24 hours.

PLANTS FOR DRIED BOUQUETS

In addition to the following annuals and biennials, a number of other selections make excellent additions to dried bouquets. Selections 35 and 36 have very ornamental seed pods. Numbers 41, 45, 58, 71, 72, 79, 87 and 90 are among the easiest to dry for bouquets.

25. *Briza minor*. Little quaking grass. Graceful, nodding, ornamental grass with stems to 16 inches. Seed heads quiver and quake in breezes. Use general germination instructions for annuals, but maintain a medium temperature of 55° F.

26. *Coix lacryma-jobi*. Job's tears. Ornamental grass with bluish-gray to white fruit that is sometimes mottled or striped. Height to 3 feet. Full sun, average soil. Requires staking. Cut stems can be hung in a cool, airy place for drying. Use general germination instructions for annuals, but soak seed in warm water for 24 hours before sowing.

27. *Gypsophila elegans*. Baby's-breath. Eighteen-inch annual bearing dense clouds of elegant, white flowers from June until frost. Excellent dried flower. Full sun and well-drained, alkaline soil.

28. *Lunaria annua* (formerly *L. biennis*). Money plant, honesty. Biennial grown for its interesting, round, flat fruit, which is silvery and translucent once the seeds and valves (or coverings) have dropped. Flowers are purple or white, fragrant, and borne in clusters in spring and early summer. Plants to 3 feet. Sow outdoors in midsummer for flowering the following year, or sow indoors.

29. *Setaria italica*. Foxtail millet. Three-foot ornamental grass with graceful, upright stalks and 5-inch seed heads. Full sun and average, well-drained soil.

PERENNIALS & BIENNIALS

Perennials For The Border

30. *Anemone patens*. Pasque flower. Eight-inch plant with blue-violet flowers. Blooms in early spring; silky, plummy seed heads that follow blooms are also ornamental. Full sun, light shade. Germination takes 21 to 28 days. Zone 5.

31. *Anemone pulsatilla*. Pasque flower. Six- to 12-inch plants bearing 2-inch, bell-shaped flowers in shades of blue, reddish-purple or purple. Seed pods and foliage are feathery and attractive. Full sun, light shade. Sow indoors or outdoors in early spring or late fall. Germination takes 21 to 28 days. Zone 6. Limited supply.

32. *Anthemis tinctoria* 'Kelwayi'. Hardy marguerite. Short-lived, 3-foot perennial with very dissected foliage and summer-borne flowers. Flowers, which are daisy-like, are 1½ inches across and have bright yellow ray florets. Will reseed. Full sun and average soil. Tolerates poor soils and dry conditions. Zone 3.

33. *Arnica frigida*. Arnica. Daisy family member bearing yellow flowers in early summer. Excellent rock garden plant. Full sun and rich, very well-drained soil. Probably prefers areas with cool summers. Sow outdoors in fall or indoors following 1-month period of cold stratification. Germination takes 30 days. Zone 3.

34. *Baptisia alba*. White false indigo. White-flowered native of southern states from Virginia to Florida. Racemes of half-inch flowers are lateral. For germination information see #35. Probably hardy to Zone 7. Limited supply.

35. *Baptisia australis*. Blue false indigo. Clover-like, blue-green leaves and indigo-blue flowers borne in late spring. Pea family member; seed can be inoculated with nitrogen-fixing bacteria as are legumes grown for vegetables. Full sun. Outdoors, sow in very early spring or in late fall. Indoors, nick hard seed coats before sowing in early spring. Zone 3.

36. *Belamcanda chinensis*. Blackberry lily. Spectacular plant bearing late-summer clusters of 2-inch, lily-like flowers that are orange with red spots. Flowers are followed by seed pods that open to reveal ornamental, blackberry-like fruit. Iris-like foliage is 1 to 2 feet long. Full sun, light shade, and well-drained soil. Zone 6.

37. *Campanula rotundifolia*. Bluebell, harebell. Rosette- or mat-forming plant with erect stems of 1-inch, bell-shaped, bright blue flowers. Low growing, to 18 inches. Full sun

to partial shade. Moist, well-drained soil. Zone 2. Limited supply.

38. *Chelidonium majus*. Celandine. Poppy family member that is either a perennial or a biennial. Has compound leaves that are deeply lobed and toothed, and small, yellow flowers borne from early spring to late summer. Will reseed. Moist, fertile soil and sun to light shade. Germination takes 30 to 40 days. Zone 4.

39. *Dasyliirion wheeleri*. Desert spoon, spoon flower. Three-foot, yucca-like plant with narrow, three-foot leaves that radiate from the trunk in all directions. Plume-like, straw-colored flowers, which appear occasionally, are borne on 5-foot stalks. Full sun, partial shade. Tolerant of poor soils (especially alkaline) and dry conditions. Native to Texas, Arizona and Mexico. Zone 6. Limited supply.

40. *Dianthus barbatus*. Sweet William. Biennial, annual or short-lived perennial bearing flat, rounded clusters of red, white, pink, violet and bi-colored flowers. Full sun and light, well-drained soil that is slightly alkaline. Prefers cool, damp climate. Sow outdoors in spring for bloom the following year, or sow indoors and treat as an annual.

41. *Echinops ritro*. Small globe thistle. Excellent 1- to 2-foot accent plant. Leaves are glossy-green above and woolly-white beneath. Spiny, blue, 2- to 3-inch flower heads borne in midsummer. Full sun. Can be dried. Zone 4.

42. *Gaillardia* × *grandiflora* 'Goblin'. Blanket flower. Beautiful, daisy-like flowers in shades of orange, yellow and red. These low-growing plants will tolerate heat, drought and poor soil. Full sun. Use general germination instructions for annuals, but do not cover seed; light aids germination. Zone 3.

43. *Gentiana andrewsii*. Closed or bottle gentian. Deep-blue-flowered plant that is excellent for bog gardens or other damp spots. Flowers are 1½ inches long and bottle-shaped. Full sun, partial shade. Requires moist but well-drained soil. Prefers cool climates. Sow outdoors in fall or sow indoors following 10-day period of cold stratification. Seedlings will germinate and grow very slowly during their first year. Zone 4.

44. *Gladiolus tristis*. Corn flag. Two-foot plant with grass-like foliage and fragrant yellow flowers that open at night. Full sun. Sow indoors in late winter. Germination takes 20 to 40 days. Cormels will form first year; plant will flower in 2 or 3 years. Hardy to Zone 7b (to 5° F). In northern regions corms probably can be lifted and stored in winter.

45. *Gypsophila paniculata*. Baby's-

breath. Three-foot perennial bearing clouds of tiny white flowers in June and July. Will continue to bloom into the fall if faded flowers are sheared. Full sun and well-drained, alkaline soil. Zone 3.

46. *Hibiscus lasiocarpus*. Woolly rose mallow. White- or pink-flowered plant whose blossoms are 4 to 5 inches across and have a red eye. Blooms from May to September. Full sun and very moist conditions. Sow seed outdoors in spring or early summer, or sow indoors and maintain a medium temperature of 70° to 75° F. Germination is variable and may take up to 60 days. Zone 5.

47. *Hibiscus trionum*. Flower-of-an-hour. Tender, 4-foot perennial bearing cup-shaped, 3-inch flowers that are white, cream or yellow with a red base. Full sun or light shade with well-drained moist soil. Use general germination instructions for annuals, but indoors, maintain a medium temperature of from 70° to 75° F. Germination takes 15 to 30 days. Zone 8.

48. *Iris setosa*. Alaskan and northeast Asian native with 2-foot, sword-shaped leaves. Flowers have dark blue-purple falls with white basal blotches and blue-purple standards. Full sun and average, well-drained soil. Follow general germination instructions for perennials, but indoors, provide a 2-week period of cold stratification before sowing. Germination is slow and irregular. Zone 2.

49. *Iris sibirica*. Siberian iris. A blue-purple-flowered cultivar with grass-like, 3½-foot leaves. Full sun, light shade. Prefers slightly acid, moist soil. Follow general germination instructions for perennials, but indoors, sow following 40- to 50-day period of cold stratification. Germination takes 20 to 35 days. Zone 3.

50. *Leontopodium alpinum*. Edelweiss. Silvery-white-foliaged plant from 6 to 12 inches in height. Tiny yellow flowers are surrounded by large, white bracts that make the flowers appear much larger. Flowers borne in midsummer. Full sun and sandy, well-drained, alkaline soil. Native to the mountains of Europe and Asia. Sow outdoors in early spring, or sow indoors and maintain a medium temperature of 55° F. Or, sow following a 3-week period of cold stratification and maintain a medium temperature of 70° F. Do not cover seed; light is required for germination. Zone 5.

51. *Liatris scariosa* Cultivar. Gay-feather. Three-foot plant bearing spikes of white, 1-inch flower heads. For cultural information and germination instructions, see #52. Zone 3.

52. *Liatris spicata* 'Kobold'. Gay-feather. Daisy family member bearing many small purple flower heads on 30-inch spikes. Plant height to 3 feet. Flower heads open first at

top of stem. Summer-blooming. Blooms best in full sun and rich, moist, well-drained soil. Germination takes 20 to 25 days. Zone 4.

53. *Lychnis flos-cuculi*. Cuckoo flower, ragged-robin. Three-foot-tall plants that bear panicles of deep rose-red or white flowers in June. Full sun. Plants that are cut back immediately after flowering may bloom again in the fall. Zone 4.

54. *Malva alcea*. Hollyhock mallow. White to deep rose-flowered mallow with 1- to 2-inch flowers. Summer-blooming plant to 3 feet in height. Full sun, light shade. Easily grown in well-drained, average soil. Zone 5. Limited supply.

55. *Malva alcea* var. *fastigiata*. Mallow. Attractive, 3-foot perennial bearing many stems filled with soft pink, five-petaled blooms. Blooms in July and August. Full sun, light shade. Average, well-drained soil. Zone 3.

56. *Melissa officinalis*. Lemon balm, bee balm. Mint family member with lemon-scented foliage. Develops thick clumps and bears white flowers on 2½-foot stalks in late summer. Partial shade or full sun, and average, well-drained soil. Indoor sowing recommended. Germination takes 15 to 30 days. Zone 5.

57. *Papaver orientale* cultivar. Oriental poppy. Showy, white-, yellow- or pink-flowered plant blooming in late May or June. Blossoms are up to 6 inches across, and plants reach a height of 2 to 4 feet. Foliage dies down after blooming and reappears in fall. Full sun and well-drained, fertile soil. Sow indoors or out using general germination instructions for perennials, but maintain a medium temperature of 55° F during germination, and be sure seed is completely covered; darkness is necessary for germination. Zone 2.

58. *Pennisetum alopecuroides*. Chinese pennisetum. Beautiful ornamental grass reaching 3½ feet in height. Bristly, spike-like inflorescence borne in late summer and fall. The dark, reddish-purple panicles are very airy looking. Full sun, well-drained soil. Zone 7.

59. *Rudbeckia hirta* 'Pinwheel'. Black-eyed Susan. Vigorous, 3-foot perennial with striking 5-inch flower heads that are mahogany and gold. Summer-borne flowers are excellent for cutting. Well-drained soil. Tolerates heat and drought well. Zone 4.

60. *Sarracenia purpurea*. Pitcher plant. Carnivorous plant that requires a moist, acid soil in a swampy location. Tubular, 12-inch leaves are green marked with purple, and are topped with a lid. Requires high humidity and fine, sandy, acid soil or live sphagnum moss. Sow seed on the surface of wet sphagnum following 30-day period of cold stratification. Zone 3. Limited supply.

61. *Sisyrinchium* species. Blue-eyed

grass. Low-growing, 6- to 10-inch plant with grass-like foliage and blue flowers. Flowers borne abundantly, but each only opens for a few hours. Full sun, light shade and moist, well-drained soil. Sow indoors in spring using general germination instructions for perennials. Germination takes 20 to 40 days. Zone 5. Limited supply.

62. *Stanleya pinnata*. Prince's-plume. A sub-shrubby perennial with showy, foot-long, feather-like heads of golden-yellow flowers. Height to 5 feet. Blooms from May through August. Western American native that prefers full sun and average soil. Soil must contain some sulfur for best growth. Work gypsum, Epsom salts or elemental sulfur into soil annually. Sow outdoors in spring or fall. Germination takes 20 to 30 days. Zone 3.

63. *Stokesia laevis*. Stokes aster. Twelve- to 18-inch perennial with long, slender, basal leaves and 4-inch, blue, white, pink or purple aster-like flowers. Flowers borne on erect stems from July through September. Full sun, well-drained soil. Germination takes 25 to 70 days. Zone 5.

64. *Tricyrtis hirta*. Toad lily. Three-foot lily family member with 1-inch, white flowers that are spotted purple. Flowers are either solitary or borne in clusters. Light shade and rich, well-drained soil. Sow outdoors in peaty soil at a depth of 2 inches from October through March. Germination takes 35 to 48 days after onset of warm weather. Marginally hardy to Zone 7.

65. *Veronica latifolia* cultivar. Speedwell. Summer-flowering plant bearing masses of blue flowers on erect stems. Full sun. Height to 2 feet. Zone 3.

Perennials For The Back Of The Border

66. *Alcea rosea* Double-Flowered Mixture. Hollyhock. Ten-foot biennial bearing spire-like spikes of double white, red or pink flowers. Flowers range from 2 to 4 inches across. Full sun, rich soil. Requires staking. Barely cover seed with soil; light is required for germination. Zone 3.

67. *Alcea rosea* Single-Flowered Mixture. Hollyhock. A mixture of single, pink-flowered plants. For cultural information see #66. Zone 3.

68. *Aster novae-angliae*. New England aster. Magnificent, 6½-foot plant for back of border. Deep violet to rose flowers appear August to October. Full sun, light shade. A period of cold stratification improves germination. Zone 3.

69. *Coreopsis tripteris*. Tall coreopsis.

Tall, 3- to 9-foot plant, with 2-inch, daisy-like flowers. Ray florets are yellow; yellow disc florets turn purplish with age. Full sun, average or poor soil. Dry conditions. Germination takes 30 days. Zone 6.

70. *Delphinium* sp. Monkshood delphinium. Seven-foot plant with 3-inch flowers borne in early summer. Flowers are primarily blue in color. Light shade and moist, well-drained soil. Prefers cool climates. Probably hardy to Zone 4.

71. *Echinacea purpurea*. Purple cone-flower. Large, 4-inch flower heads consisting of dark reddish-purple "cones" of disc florets surrounded by drooping, light purple ray florets. Excellent border plant and cut flower. Full sun, light shade. Will tolerate dry soil and wind. Sow indoors; 30-day period of cold stratification improves germination. Zone 4.

72. *Echinops sphaerocephalus*. Great globe thistle. Bushy, 7-foot plant with pale blue to whitish flowers that are 2 inches across. Upper surfaces of leaves are green, lower sides are silvery-white. Stems are gray-woolly. Full sun and average soil. Germination takes 20 to 30 days. Zone 4. Limited supply.

73. *Helianthus* × *multiflorus* 'Lodden Gold'. Sunflower. Tall, 6-foot daisy family member. A bushy plant that produces masses of 5-inch, golden-yellow flowers. Full sun and average, well-drained soil. Does not tolerate wet soil. Zone 5.

74. *Heliopsis helianthoides* 'Incomparabilis'. Oxeye. Five-foot, summer-flowering perennial with 3-inch flower heads that are double and golden-yellow in color. Full sun and average, well-drained soil. Zone 3.

75. *Hibiscus coccineus*. Large, 6-foot perennial with palmately, 3-, 5- or 7-parted compound leaves. Flowers are deep red and have four 3-inch-long petals that open into a flat whorl. Full sun, light shade and well-drained soil. Germination takes 15 to 30 days. Zone 7. Limited supply.

76. *Hibiscus coccineus* 'Texas Star'. Annual or tender perennial. Bears large, red, 4-petaled flowers in mid- to late summer. Will reseed. Foliage is dissected into 3 to 5 toothed fingers. Full sun, light shade and well-drained, moist soil. Germination takes 15 to 30 days. Zone 9.

77. *Inula helenium*. Elecampane. Robust, 6-foot perennial whose foot-long leaves are smooth above and velvety-tomentose beneath. Flower heads are 3 inches across and yellow in color. Blooms from July to September. Full sun and average well-drained soil. Germination takes 20 to 40 days. Zone 4.

**Save this catalogue to identify
the seeds you have selected.**

Sun-Loving Wildflowers

All of the following plants make excellent additions to the sunny meadow or wildflower garden. Many are also perfect for a sunny border or a corner of your yard that receives lots of sun. In addition to the plants listed below, you may also want to consider selection 2 (a reseeding annual) and selections 34, 35, 43, 52, 53, 68, 69 and 71.

78. *Asclepias tuberosa*. Butterfly weed. Beautiful milkweed relative bearing clusters of orange flowers atop 2- to 3-foot plants. Will thrive in sandy, gravelly soil and in dry conditions because of deep root system. Difficult to transplant; sow indoors in individual pots following 2-week period of cold stratification, which will speed germination. Germination takes from 21 to 28 days. Zone 3.

79. *Dipsacus sylvestris*. Common teasel. Six-foot biennial with thistle-like flower heads used in dried arrangements. Flowers are pale lavender. Full sun. Tolerates poor soil and dry conditions. Zone 3.

80. *Hesperis matronalis*. Dame's or sweet rocket. Three-foot European native that is naturalized in North America. Bears dense clusters of white or lilac flowers in spring. Individual flowers are one-half inch across and very fragrant. Full sun, partial shade. Prefers well-drained soil, but will also tolerate poor soil. Sow outdoors in spring or summer or sow indoors. Do not cover seed; light aids germination, which takes from 20 to 25 days. Zone 3.

81. *Lobelia cardinalis*. Cardinal flower. Striking scarlet flowers borne in 1½-foot racemes. Height to 3 feet. Full sun, partial shade. Native to moist meadows, stream banks. Sow outdoors in fall or sow indoors following 3-month period of cold stratification. Zone 3.

82. *Lobelia siphilitica*. Great lobelia, blue cardinal flower. Beautiful, blue-flowered plant that bears dense, 3-foot racemes of flowers late in the summer. Full sun, average but moist soil. Sow outdoors in late fall, or indoors, sow following 3-month period of cold stratification. Keep medium temperature at 70° F. Germination takes 15 to 20 days. Zone 5.

83. *Monarda fistulosa*. Wild bergamot. Four-foot mint family member with bright lavender flowers borne in summer. Full sun and average soil. Will tolerate drought. Indoor sowing recommended. Transplant to pots when there are 4 true leaves. Zone 4. Limited supply.

84. *Oenothera hookeri*. Giant evening primrose. Bright yellow-flowered biennial bearing dense spikes of blooms in summer and fall. Height 2 to 8 feet. Pinch back early in season to increase bushiness. Light shade to full sun. Will not tolerate overly dry conditions. Mulch for winter protection. Zone 8.

85. *Oenothera tetragona* (formerly *O. fruticosa* var. *youngii*). Sundrop. A day-blooming, 1- to 2-foot plant with 4-petaled, yellow flowers. Full sun and rich, moist soil. Zone 4.

86. *Penstemon smallii*. Beard-tongue. Pink-purple-flowered plant whose inch-long flowers are striped with white inside. Height 2½ feet. A species native to North Carolina and Tennessee. Sow indoors 8 to 12 weeks before planting out, and maintain a medium temperature of 65° F. Zone 7.

87. *Rudbeckia hirta*. Black-eyed Susan. Biennial or short-lived perennial that can also be grown as an annual. Three-foot plant with 3-inch flower heads consisting of golden-yellow ray florets surrounding a brownish-purple "cone." Flowers from late July to October. Zone 4.

88. *Solidago pauciflosculosa*. Goldenrod. Shrubby, 4-foot species with long-lasting, bright yellow flowers. Full sun and sandy, well-drained soil. Southeastern United States. Zone 8.

89. *Thermopsis caroliniana*. Carolina or false lupine. Pea family member to 5 feet in height. Bears erect racemes of yellow pea-like flowers in mid-summer. Likes sun and deep, well-drained soil. Very deep-rooted. Sow seed outdoors in fall for bloom the following year. Zone 7. Limited supply.

Bulbous Perennials

90. *Allium giganteum*. Ornamental onion. Bulbous perennial bearing globe-like, densely-flowered umbels that are 6 inches across. Lavender or lilac flowers are borne on 4-foot scapes. Full sun, well-drained soil. Sow outdoors in fall or sow indoors following 1-month period of cold stratification. Takes several years to bloom from seed. Zone 4.

91. *Fritillaria imperialis*. Crown-imperial. Bulbous perennial with brilliant red or yellow bell-shaped flowers that appear in spring. Rich, well-drained soil and full sun. Use general germination instructions for perennials. Seedlings will not flower for 6 years. Germination takes 20 to 40 days. Zone 6.

92. *Lilium canadense*. Canada lily, meadow lily. Five-foot, summer-blooming perennial bearing 1 to 20 flowers in 1 to 4 umbels. Nodding flowers are 3 inches long, 3 inches across, and orange-yellow to red with purple-brown spots. Full sun; will tolerate dry conditions. Sow indoors following 45-day period of cold stratification. Germination takes 20 to 40 days; plants will take several years to bloom from seed. Zone 4.

93. *Lilium formosanum*. Lily species native to Taiwan. Purplish-brown stems are 5 to 7 feet in height. Flowers, which are fragrant, are 5 to 8 inches long and white on the inside and wine-purple outside. Pollen is bright yellow. Flowers appear in late summer and are borne solitary, paired or 3 to 10 in

an umbel. Full sun and fertile, slightly acid, evenly moist but well-drained soil. Outdoors, sow in early spring. Indoors, use general germination instructions for perennials. Germination takes 20 to 40 days. Although most lilies take from 3 to 4 years to bloom from seed, this species will bloom the first or second year after sowing. Zone 5.

94. *Lilium formosanum* var. *wilsonii*. Formosa lily. Easter-lily-like plant with 5- to 8-inch, white, trumpet-shaped flowers. For germination instructions and cultural information, see #93. Zone 5.

95. *Lilium lancifolium*. Tiger lily. Narrow-leaved, 8-foot perennial with orange to salmon-red flowers that are spotted with purple-black. Plants bear up to 25 nodding, 5-inch flowers. Native to China, Korea and Japan. Partial shade and rich, well-drained soil. For germination instructions see #93. Will probably take at least 3 years to bloom from seed. Zone 4.

96. *Lilium longiflorum* Cultivar Mix. Trumpet lily. Three-foot lily with fragrant, funnel-like flowers that are up to 7 inches long. Mix of colors. For cultural information and germination instructions, see #93. Will take from 3 to 4 years to bloom from seed. Zone 8.

97. *Lilium regale*. Regal lily. Six-foot lily with fragrant, funnel-like, 6-inch flowers that are lilac or purple on the outside and white inside with a yellow base. July bloomer. For cultural information and germination instructions, see #93. Will take from 3 to 4 years to bloom from seed. Zone 3.

98. *Lilium washingtonium*. Washington lily. Four-foot lily with funnel-shaped flowers that are white, fading to lilac. Bears as many as 20 flowers per stalk. Full sun and fertile, light, slightly acid soil with perfect drainage. Difficult to cultivate. From Sierra-Nevada mountains. Sow indoors following 40-day period of cold stratification. Germination takes 20 to 40 days. Zone 6. Limited supply.

Perennials For Shade

99. *Amsonia tabernaemontana*. Willow amsonia, blue dogbane. Clump-forming, 3½-foot plant with willow-like, 9-inch leaves that turn yellow in autumn. Dense terminal clusters of light blue, star-like flowers borne in late spring. Partial shade, moist, well-drained soil. Easy to grow, few pests. Zone 4. Limited supply.

100. *Aquilegia canadensis*. Wild columbine. Nodding, 1½- to 4-inch flowers with red sepals, yellow petals and red spurs. Blue-green foliage. Outdoors, sow in early spring, about 2 weeks before last frost date. Indoors, provide period of cold stratification for 3 weeks, then germinate at temperatures of 70° to 75° F. Do not cover seed; light improves

germination, which usually takes from 20 to 25 days. Zone 2-3.

101. *Aquilegia* × *hybrida* Unnamed Cultivar. Columbine. A 2½-foot plant with deep purple, long-spurred flowers. Full sun, light shade. For cultural information, see #100. Zone 5.

102. *Aquilegia* × *hybrida* Mix. Columbine. A mixture of garden columbines for sun or light shade. For cultural information, see #100. Zone 5.

103. *Aquilegia vulgaris*. European crow-foot, garden columbine. Violet-flowered plant with large, long-spurred flowers. Height 2 feet. See #100 for cultural information. Seed can also be soaked for 24 hours, sown indoors and kept at a temperature between 60° and 70° F. Zone 4.

104. *Arisaema triphyllum*. Jack-in-the-pulpit. Attractive, 2-foot plant for woodland or shade garden. Produces two three-parted leaves with a "pulpit" at the fork. Red fruit in fall. Sow outdoors in fall. Zone 5. Limited supply.

105. *Arum italicum* 'Marmoratum'. Italian arum. Tuberous plant with upright, arrow-shaped leaves that are dark green and marbled with yellow- to whitish-green. Small white flowers in spring followed by scarlet berries in fall. Rich, moist soil. Zone 7b.

106. *Asarum hartwegii*. Wild ginger. Rhizomatous, evergreen plant native to Oregon and California. Five-inch leaves are mottled with white. Inconspicuous half-inch flowers are brownish-purple. Shade and moist, rich soil. Sow seed indoors or outdoors as soon as possible; does not store well. Zone 6.

107. *Dicentra eximia*. Wild bleeding-heart. Attractive plant with dissected, bluish-green foliage and panicles of nodding, pinkish flowers produced from spring to fall. Sow outdoors in late fall or early winter for germination the following spring, or sow indoors in a moistened medium and freeze for 45 days. Germinate at temperatures from 55° to 60° F. Germination takes 30 days or more. Zone 3.

108. *Liriope muscari* var. *exiliflora*. Lilyturf. Evergreen plant with grass-like leaves and purple, grape-hyacinth-like flowers, which are borne on 6- to 12-inch spikes. Light or full shade with well-drained soil. Excellent edging plant or ground cover. Sow indoors or out after soaking seed for 24 hours in warm water. Germination takes 30 days. Zone 6.

109. *Polemonium reptans*. Jacob's-ladder. Attractive, 2-foot-tall plant with narrow, bell-like, ¾-inch flowers that are borne in spring and early summer. Full sun or partial shade. Prefers rich, loamy soil. Sow outdoors in fall or sow indoors following 2-week period of cold stratification. Zone 4.

110. *Tiarella wherryi*. Foamflower, false miterwort. Low-growing plant for the woodland or shade garden. Bears racemes of small, delicate, white flowers in summer. Sow seed outdoors after last frost. Zone 7.

Hostas

Hosta. Plantain lily, funkia. This year we have an excellent selection of hostas to offer. These shade-loving plants prefer rich, moist, well-drained soil, and light to full shade. Follow the general germination instructions for perennials. Germination takes 15 to 20 days.

111. *Hosta* Cultivar Mix. Mixture of hostas that are medium in size, and have green, blue or blue-green foliage. Flowers are lavender or purple. Zone 3.

112. *Hosta* Gold and Yellow Foliaged Mixture. A mixture of hostas that have medium or large leaves that are gold or yellow in color. Flowers are lavender. Zone 3. Limited supply.

113. *Hosta* Miniature Cultivar Mix. A mixture of very small plants that have white or lavender flowers. Zone 3. Limited supply.

114. *Hosta sieboldiana*. Very large-leaved species; leaves from 10 to 15 inches in length. Funnel-shaped flowers, which are pale lilac, are borne in 6- to 10-flowered racemes. Zone 3. Limited supply.

115. *Hosta sieboldii* Hybrid. Large, blue-foliaged hosta with lavender flowers. Zone 3.

116. *Hosta* Variegated Cultivar Mix. A mixture of large hostas whose green leaves are variegated with yellow, cream or white markings. Flowers are lavender. Zone 3. Limited supply.

117. *Hosta ventricosa*. Blue plantain lily. Showy, dark green leaves and loose racemes of flowers borne well above the foliage. Flowers are 2 inches long, bell-shaped and dark violet in color. Height to 3 feet. Zone 3.

118. *Hosta venusta*. Pale purple-flowered plant with 2-inch leaves. Height to 1 foot. Funnel-like flowers are 1½ inches long and borne in few-flowered racemes. Probably hardy to Zone 4.

PLANTS FOR THE HERB GARDEN

119. *Agastache foeniculum*. Anise hyssop, fennel giant hyssop. Three-foot perennial with fragrant blue flowers. Dried leaves used in seasoning and tea. Full sun and average, well-drained soil. Sow indoors using general germination instructions for perennials. Zone 4. Limited supply.

120. *Allium schoenoprasum*. Chives. Perennial herb with 12-inch, grass-like leaves and pale purple flower heads, which are borne in early summer. Aromatic foliage used as seasoning. Full sun, well-drained soil. Use general germination instructions for perennials. Zone 5.

121. *Anethum graveolens*. Dill. Annual herb reaching 3 feet in height and used in flavoring. Pick finely divided, light green foliage any time for fresh use or drying, or harvest seeds when they turn brown. Prefers full sun, slightly acid soil and good drainage.

Water often. Sow outdoors or indoors using general germination instructions for annuals. Plant is difficult to transplant, so do so with care.

122. *Anthriscus cerefolium*. Chervil. Annual herb with foliage that is used much like parsley. Used in soups and salads; has slight anise flavor. Shade, cool climates and rich soil. Grown as spring or autumn crop. Usable leaves produced 6 to 8 weeks after seeds are sown. Hardy annual; mulch or grow in frames for over-winter crop. Limited supply.

123. *Isatis tinctoria*. Dyer's woad. Three-foot biennial bearing terminal panicles of yellow flowers in spring and early summer. Once grown for the blue dye obtained from foliage. Full sun. Use general germination instructions for biennials; germination is irregular. Limited supply.

124. *Matricaria recutita*. Sweet false

chamomile. Old World annual herb often used as a digestive aid. Reaches 2 to 2½ feet in height and bears daisy-like flowers with yellow centers and white petals. Follow general germination instructions for annuals, but indoors, maintain a soil temperature of 55° F. Do not cover seed; light is required for germination.

125. *Petroselinum crispum*. Parsley. Biennial cultivated as a garnish and for salads. Full sun and rich, well-drained soil. For best results soak seed in warm water for 24 hours before sowing. Sow outdoors 2 to 4 weeks before last frost at a depth of ¼ inch in rows 12 inches apart. Cover seeds completely; darkness aids germination. Can be sown indoors 8 weeks before last frost, but does not transplant well, so sow in individual pots. In warm climates can be sown outdoors in early fall. Fertilize when 4 inches tall, and again one month later.

126. *Rosmarinus officinalis*. Rosemary. Four-foot herb whose dried leaves are used in seasoning. Bears small, pale blue flowers in spring. Fresh flowers are used to distill an aromatic oil. Full sun, well-drained soil. Sow indoors using general germination instructions for perennials. Germination takes 15 to 20 days. Zone 8.

127. *Ruta graveolens*. Common rue, herb-of-grace. Three-foot perennial herb with del-

icate, blue-green foliage and yellow flowers. Foliage can cause dermatitis. Used medicinally and as a condiment. Full sun, well-drained soil. Seed heads can be used in dried arrangements. Sow seed indoors in a sandy medium. Zone 5.

128. *Salvia officinalis*. Sage. Perennial herb whose leaves are used to season meat, fish, poultry and everything from butter to vinegar. Shrubby plants with woolly-white leaves bearing spikes of violet-blue flowers.

Also used as edging plant. Use general germination instructions for perennials. Zone 4.

129. *Stachys officinalis*. Betony, woundwort. Attractive, rosette-forming plant with 2½-foot spikes of pink or reddish-purple flowers borne in mid-summer. Full sun and average soil. Cut off spent blooms to extend flowering period. Sow indoors using general germination instructions for annuals, but only cover seed lightly with soil. Zone 4.

HOUSE, GREENHOUSE & TROPICAL GARDEN PLANTS

All of the *House, Greenhouse and Tropical Garden Plants* are suitable for tropical gardens. Gardeners in the North can grow the selections listed under *Plants for Small Containers* indoors or in greenhouses; the species listed under *Shrubs For Large Containers* are probably better suited for greenhouse culture in areas where they are not hardy. Selections 21, 44, 47, 64 and 76 are also tender perennials that can be grown out of doors in the South.

Plants For Small Containers

130. *Asparagus asparagoides*. Smilax. Twining vine grown by florists. Excellent in hanging baskets. Glossy, 2-inch, apple-green leaves, thread-like stems. Bright, indirect light. Sow indoors anytime; maintain a medium temperature of 70° to 80° F.

131. *Asparagus setaceus* 'Nanus'. Dwarf asparagus fern. Low-growing cultivar with lacy, ferny foliage that is rich green in color. Light shade and light, fertile, slightly acid soil. Water and feed heavily in summer. Sow seed indoors after soaking in warm water for 24 hours. Germination takes 30 days. Zone 8.

132. *Cyperus alternifolius*. Umbrella plant. Tender, semi-aquatic perennial with grass-like leaves that radiate umbrella-like from 3-foot-tall stalks. Light shade. Rich, moist soil and high humidity. Sow indoors in a moist medium kept between 70° and 75° F. Germination takes 25 to 30 days. Zone 10.

133. *Dietes vegeta*. African iris. Tender perennial with fan-like leaves and attractive flowers borne on 2-foot stems. Flowers are 2½ inches across. White outer perianth segments with yellow or brown spots. Crests of the styles are marked with blue. Humus-rich soil; allow to dry between waterings. Germination takes 20 to 40 days. Zone 10. Limited supply.

134. *Hippeastrum calypttratum*. Green amaryllis. Bulbous perennial with strap-like leaves and 2- to 4-inch, trumpet-shaped flowers that are green in color with a reddish base. Flowers are borne on 12- to 24-inch stems. Full sun and rich, well-drained soil that is kept evenly moist. After blooming, when foliage turns brown, store bulb in a cool, dry place. Blooms best when pot-bound. Sow seeds indoors anytime. Keep medium temperature between 70° and 75° F. Germination takes 30 to 40 days. Seedlings will not flower for several years. Zone 10.

135. *Hypoestes phyllostachya*. Polka-dot plant. Excellent 6- to 14-inch pot plant with dark green leaves covered with pink and white spots. Produces lilac flowers late in summer if grown outdoors. Tender perennial. Bring indoors before frost. Full sun or light shade. Rich soil, high humidity. Sow seed indoors and maintain a medium temperature of 70° to 75° F. Pinch to induce bushiness.

136. *Mimosa pudica*. Sensitive plant. Greenhouse or pot plant with fern-like leaves and mimosa-like, pink flowers in late summer. Leaves are sensitive, and close when touched. Height 3 feet. Full sun and rich, well-drained soil. Keep moist; likes high humidity. Sow indoors anytime, but cover seeds, as darkness is required for germination. Maintain medium temperature of 70° to 80° F. Zone 9.

137. *Solanum integrifolium*. Tomato-fruited eggplant. Spiny, large-leaved plant grown for its showy, round, red or yellow fruits that are 2 inches across. Full sun and rich, well-drained soil. Pot or greenhouse plant. Sow seed indoors; keep medium near 70° F and moist. Do not cover seed; light aids germination. Limited supply.

138. *Solanum melongena*. Egg tree. Tender perennial that is grown as an annual or a pot plant. Bears violet-purple flowers and inedible white fruit that resembles eggs. Likes heat and humidity. Allow soil to dry slightly between waterings. Requires a long growing season for fruiting. Sow indoors us-

ing general germination instructions for annuals. Germination takes 15 to 20 days. Zone 10.

139. *Spilanthes acmella*. Burmese toothache plant. Creeping, heavily branched house plant that is perfect for hanging baskets. Bears button-like, yellow flowers. Full sun or partial shade. Grown as an annual. Sow indoors using general germination instructions for annuals. Zone 10.

Shrubs For Large Containers

140. *Bouvardia ternifolia*. Tender, 6-foot shrub bearing red, waxy-textured flowers that are 1¼ inches in length. Good subject for cool greenhouses; prefers temperatures of 55° F. Full sun, rich soil and lots of water. Sow using general germination instructions for annuals. Germination period unknown. Zone 9.

141. *Caesalpinia pulcherrima*. Pride-of-Barbados, dwarf poinciana. Shrub with red flowers edged in yellow. Petals turn deep red as they age. Full sun, high humidity. Good greenhouse shrub. Reaches 10 feet in height. Soak seed in warm water for several hours before sowing indoors, and transplant seedlings to pots as soon as first true leaves appear. Zone 10. Limited supply.

142. *Erythrina herbacea*. Cardinal-spear, Cherokee bean. Six-foot perennial herb or shrub. Dark red flowers borne in 2-foot racemes. Eight-inch seed pods contain scarlet seeds. Native in southern United States. Also grown as house or greenhouse plant. Full sun and rich, well-drained soil. Soak seed in warm water for 24 hours before sowing. Zone 8. Limited supply.

143. *Jacaranda acutifolia*. Mimosa-leaved ebony. Feathery-textured, 10-foot tree with compound leaves. Bears blue to violet, funnel-shaped flowers. Full sun, light shade in sandy, moist but well-drained soil. Needs

high humidity. Requires bright light if grown indoors. Prune in early spring. Tender perennial, hardy in Zone 10. Limited supply.

144. *Stiffia chrysantha*. Stiffia. Brazilian shrub grown for its showy seed heads. Flowers are 2 inches across and bright orange in color. Seed heads have many orange bristles and are ornamental in dried arrangements. Height 3 to 13 feet. Slow-growing. Full sun or light shade and warm, humid conditions. Rich, well-drained soil. Zone 10.

145. *Tecoma stans*. Yellowbells. Large shrub or small tree to 20 feet in height. Bears bright yellow, 2-inch flowers that are funnel-shaped. Full sun and average soil. Germination takes 30 to 60 days. Zone 10.

146. *Veitchia merrillii*. Manila palm, Christmas palm. Attractive, 15-foot palm with leaves composed of 48 to 63 leaflets. Bears bright red fruit during winter and spring. Full sun and average, well-drained soil. Sow immediately in warm, moist medium. Germination takes 15 to 30 days. Zone 10.

147. *Wilkesia gymnoxiphium*. 'Iliau. Hawaiian species that is found only on the island of Kauai. Daisy family member that reaches 8 or 9 feet in height and bears terminal inflorescences. Flower heads are yellow-green and 2 inches across. Full sun, well-drained soil. Sow seed in a mixture of 2 parts perlite and one part peat after soaking in warm water for 48 hours. Keep moist. Germination varies. Zone 10.

148. *Zauschneria cana*. California fuchsia. Tender, 2- to 3-foot perennial with tubular, reddish flowers borne in late summer. Gray foliage. Drought-tolerant. Attracts hummingbirds. Germination period unknown. Zone 9.

Tropical Trees

149. *Albizia lebeck*. Woman's-tongue tree. Greenish-yellow-flowered, 50-foot tree from tropical Asia. Clustered flowers are followed by flat, 6- to 12-inch seed pods. Full sun, plenty of moisture, but well-drained soil. Sow indoors after dropping seed in hot water and allowing to soak for 24 to 48 hours. Germination takes 14 to 21 days. Zone 10.

150. *Bauhinia variegata*. Orchid tree. Deciduous, 20- to 40-foot tree bearing 4- to 5-inch flowers. Orchid-like flowers are lavender to magenta, purple or white. Blooms appear in late winter just before foliage. Full sun and rich, well-drained soil. Zone 9. Limited supply.

151. *Cassia didymobotrya*. Shower tree. Ten-foot shrub with foot-long leaves divided into 8 to 16 pairs of leaflets. A pea family member that bears erect racemes of ¾-inch flowers. Full sun and warm, humid conditions. A native of tropical Africa, it is naturalized in tropical America. Sow indoors in warm moist medium. Do not allow to dry

out. Germination is variable; 20 to 60 days. Zone 10b. Limited supply.

152. *Cassia grandis*. Coral shower tree. A pea family member whose flowers turn from yellow to peach or salmon as they age. Height to 50 feet. Native to tropical America. For cultural information, see #151. Zone 10. Limited supply.

153. *Chorisia speciosa*. Floss-silk tree. South American species with 3- to 5-inch flowers that appear before the leaves. Petals are white to yellowish or reddish or violet above, and usually spotted at base. Seeds are covered with very silky floss, which is used for stuffing pillows. Full sun and warm, humid conditions with rich, well-drained soil. Sow seed indoors for greenhouse culture, or sow outdoors. Under ideal conditions, germination is rapid. High humidity and ample moisture are important. Zone 9b.

154. *Chrysalidocarpus lutescens*. Yellow palm. Attractive, 30-foot palm with pinnate leaves. Leaflets are narrow and borne feather-fashion in a single plane. Petioles and sheaths are yellowish or orange-tinged. Each leaf has from 40 to 60 leaflets. Native of Madagascar. Sow indoors in moist, warm (80° F) sandy-peat medium. Germination takes 30 days. Zone 10.

155. *Erythrina variegata* var. *orientalis*. Tiger's claw, coral bean tree. Deciduous, 25-foot tree with showy, red butterfly-like flowers borne in dense, 6-inch racemes. Seeds are red. Full sun or light shade and well-drained, average soil. Allow to dry out between waterings. Sow seed indoors after soaking in warm water for 24 hours. Maintain

a medium temperature of 70° to 75° F. Zone 10. Limited supply.

156. *Metrosideros rubra* (Also listed as *Xanthostemum rubrum*.) Bottlebrush, iron tree. A showy flowered evergreen tree in the myrtle family. Flowers have very conspicuous stamens. Germination requirements unknown. Zone 10. Limited supply.

157. *Parkinsonia aculeata*. Jerusalem thorn. Tropical evergreen tree with pinnate leaves composed of many wiry, thin, foot-long pinnae. Very thorny. Height 30 feet. Bears fragrant yellow flowers in spring. Full sun and well-drained soil. Sow as soon as possible in warm, moist medium. Germination takes 20 to 30 days. Zone 9. Limited supply.

158. *Spathodea campanulata*. African tulip tree, flame-of-the forest. Showy, 70-foot evergreen tree bearing scarlet, 5-inch flowers. Full sun and fertile, well-drained soil. Germination period unknown. Zone 10b. Limited supply.

159. *Washingtonia* sp. Washington palm. Large palm to 80 feet in height. Sturdy, straight, cylindrical trunk topped with a crown of fan-shaped, pleated fronds. Sow in sand or peat-sand mix following 12-week period of cold stratification. Cover seed to a depth of ¼ or ½ inch. Use bottom heat if possible. When an elongated second leaf appears, transplant to individual containers filled with a soil mix enriched with leaf mold. Grow in partial shade to prevent drying out. Gradually move to sunnier location as seedlings mature. Germination is irregular and will take from 4 to 15 weeks. Zone 9.



TREES & SHRUBS

Large Shrubs & Small Trees

160. *Acer diabolicum*. Devil maple. Rare, 30-foot tree with broad, 5-lobed leaves 4 to 7 inches in length. Full sun, light shade, and well-drained, average soil. Sow outdoors in fall or indoors following scarification treatment for hard seed coat and 3-month period of cold stratification. Zone 6.

161. *Acer ginnala*. Amur maple. Beautiful large shrub or small tree to 20 feet. Small panicles of yellowish-white flowers in spring, small leaves. Samaras turn red in autumn before foliage turns brilliant scarlet. Sow outdoors in fall and mulch for protection. Or sow indoors in spring following scarification treatment for hard seed coat, 1- to 2-month period of warm, moist stratification, and 3- to 6-month period of cold stratification. Zone 5.

162. *Acer palmatum*. Japanese maple. Small, deciduous tree with deeply lobed, palmate leaves that are red in color. Excellent specimen plant. Full sun or partial shade. Average soil with good drainage. Sow outdoors in fall or indoors following 1- to 2-month period of warm stratification and 3- to 6-month period of cold stratification. Germination takes 3 months. Zone 5.

163. *Acer palmatum* 'Green Lace Leaf'. Japanese maple with extremely dissected green leaves. See #162 for cultural and germination information.

164. *Asimina triloba*. Pawpaw. Deciduous, 30-foot tree with foot-long, drooping leaves. Bears inconspicuous purple flowers and 3- to 5-inch, edible, greenish-brown fruit. Shade and rich, moist soil. Sow outdoors in fall or indoors following 2-month period of cold stratification. Cover seed with $\frac{3}{4}$ inch of soil, place in part shade, keep moist and alternate day temperatures of 86° F with night temperatures of 68° F. Germination slow and irregular. Zone 5.

165. *Callicarpa americana*. Beautyberry. Deciduous, 6-foot shrub bearing tiny, bluish flowers from late spring to early summer. Grown for its ornamental, $\frac{1}{4}$ -inch fruit that is bright violet in color and persists after leaf drop. Full sun to partial shade. Prefers areas with good air circulation. Rich, moist soil. Sow outdoors in fall, or sow indoors following 70-day period of cold stratification. Zone 7. Limited supply.

166. *Callicarpa dichotoma*. Beautyberry. Four-foot shrub bearing pink flowers in summer and striking, dense clusters of lilac-violet fruit in late summer and fall. Full sun, partial shade. Average, well-drained soil. Sow outdoors in fall or indoors following 70-day period of cold stratification. Germination takes 1 to 2 months. Zone 5.

167. *Calycanthus occidentalis*. Western spicebush. Deciduous, 12-foot shrub with 8-inch leaves and light, reddish-brown, 3-inch flowers. Germination, see #173. Zone 5.

168. *Cephalanthus occidentalis*. Buttonbush. Twenty-foot, small tree or large shrub with glossy, 6-inch leaves and creamy, 1-inch flowers borne in showy heads. Blooms in summer and early fall. Found along streams; likes moist conditions. Sow in spring or summer, indoors or out. Zone 4. Limited supply.

169. *Cercis canadensis*. Redbud. Deciduous tree to 40 feet. Heart-shaped, light green leaves and abundant, showy, pea-like, pinkish-purple flowers borne in spring before the leaves appear. Sow outdoors in fall or indoors after 2- to 3-month period of cold stratification. Use medium with high content of coarse sand. Germination takes 1 to 3 months. Zone 4.

170. *Cercis occidentalis*. California redbud. Deciduous shrub to 15 feet in height. Showy spring clusters of half-inch, reddish-colored flowers. Full sun or light shade. Sow indoors or out. Zone 4.

171. *Chionanthus retusus* var. *serrulatus*. Asian fringe tree. Deciduous, 20-foot tree bearing small, white flowers in dense, showy, 4-inch long panicles. Blooms in early summer. Full sun and moist, sandy loam. Very difficult to germinate. Requires 30-day warm stratification period followed by 30-day period of cold stratification before sowing. Germination takes up to one year. Zone 6.

172. *Clerodendrum trichotomum*. Harlequin glory-bower. Showy-flowered, 10- to 20-foot shrub. Flowers are white, fragrant and borne in cymes. Also bears bright blue berries in fall. Sun and average soil. Dies to ground in the northern portion of its range. Sow indoors following 3-month period of cold stratification. Germination takes 20 to 30 days. May be hardy to Zone 6.

173. *Cornus florida*. Flowering dogwood. Beautiful small tree, to 30 feet, bearing showy white flowers in spring, red fruit and red autumn color in fall. Sow indoors following 4-month period of cold stratification. Can be sown outdoors in fall, and in this case seed may benefit from summer-long period of cold stratification. Germination may take several months or the seed may lie dormant for a year. Zone 5.

174. *Cornus kousa*. Japanese dogwood. Beautiful June or July flowering dogwood with creamy-white, pointed bracts. Fall-borne fruit is pinkish-red and raspberry-like. Very showy. Sow indoors following 4-month period of cold stratification. Or sow outdoors in fall. Germination may take several months or seed may lie dormant for a year. Zone 5.

175. *Cornus mas*. Cornelian cherry. Small

tree or large shrub bearing $\frac{3}{4}$ -inch umbels of yellow flowers very early in the spring before the leaves appear. Dark red, $\frac{3}{4}$ -inch edible fruit. Sow indoors in spring following scarification treatment for hard seed coat and a 4-month period of warm stratification followed by a 1- to 4-month period of cold stratification. Zone 5.

176. *Corylus cornuta* var. *californica*. California beaked filbert. Shrub or small tree to 10 feet in height. Deciduous. Bears small, inconspicuous flowers in January or February. Edible nuts are excellent food for wildlife. Full sun and average, well-drained soil. Sow outdoors in fall. Or, sow indoors following 2- to 6-month period of cold stratification. Germination takes 3 months. Zone 4.

177. *Crataegus phaenopyrum*. Washington hawthorn. Twenty-five-foot tree with $\frac{1}{2}$ -inch white flowers and bright red, $\frac{1}{4}$ -inch fruit. Sow in fall for germination the following spring or in the spring following a 5-month period of cold stratification. Zone 5.

178. *Euonymus alata*. Winged spindle tree, burning bush. Deciduous, 8-foot shrub or small tree. Branches have corky wings. Yellowish flowers, reddish to purplish fruit and spectacular red fall color. Indoors, sow in spring following 3- to 4-month period of cold stratification. Or sow outdoors in early fall for germination the following spring. Zone 4. Limited supply.

179. *Euonymus americana*. Strawberry bush. Eight-foot deciduous shrub with beautiful fruit consisting of a pinkish-red capsule surrounding bright orange fruit. Sow indoors in perlite-peat mixture following 140-day period of cold stratification. Zone 6.

180. *Evodia elleryana*. Evodia. Australian native with small, white star-shaped flowers and brown fruit. Will tolerate most soils. Germination period unknown. Zone 6.

181. *Franklinia alatamaha*. Franklin tree. Native American, 20- to 30-foot tree that is extinct in the wild, now known only in cultivation. Shiny, 6-inch leathery leaves, bright orange fall color. Two- to 3-inch, cup-shaped, white flowers appear in August and September. Full sun, light shade. Rich, moist, acid soil. Store seed in refrigerator until planting. Outdoors, sow in late fall, early winter. Indoors, sow following a 1-month period of cold stratification. Germination takes 25 to 30 days at temperatures of 70° to 75° F. Zone 6.

182. *Fraxinus bungeana*. Chinese dwarf ash. Deciduous 15-foot tree that is rare in the United States. Leaves are compound with 5 leaflets per leaf. Full sun to partial shade. Fairly moist soil. Sow outdoors in the fall. Or sow indoors following 2-month period of warm stratification, followed by a 3- to 5-month period of cold stratification. Germination

nation is slow; seed may remain dormant until second year. Zone 4.

183. *Hamamelis virginiana*. Witch hazel. Shrub or small tree to 15 feet in height. Bears small golden-yellow flowers in autumn just as foliage turns to bright yellow. Light shade, full sun and moist conditions. Sow outdoors in fall, or sow indoors following 2-month period of warm stratification followed by 3-month period of cold stratification. Germination takes 2 months. Zone 4.

184. *Hibiscus syriacus*. Rose-of-Sharon. Shrub to 10 feet, bearing 3-inch, hibiscus-shaped flowers in white, reddish-purple or bluish-lavender. Blooms in summer. Will re-seed at a great rate. Full sun, light shade. Sow outdoors in spring or summer, or indoors in spring. Zone 3.

185. *Hydrangea quercifolia*. Oak-leaved hydrangea. Six-foot shrub with oak-like leaves. Bears showy, 10-inch clusters of white flowers in spring. Light to deep shade, and rich, loamy, well-drained soil. Sow indoors following a two-week period of cold stratification, and maintain a medium temperature near 70° F. Zone 5.

186. *Koelreuteria paniculata*. Golden-rain tree. Small, deciduous, 16- to 35-foot tree. Loose, terminal panicles of attractive yellow flowers borne from July to September that are followed by fascinating, triangular, balloon-like, 1½- to 2-inch capsules held on tree through fall. See #211 for germination information. Zone 5.

187. *Lonicera maackii*. Amur honeysuckle. Large, 15-foot shrub bearing dainty white flowers in late spring and colorful red fruit in late summer through fall. Easier to control than vining honeysuckles. Will re-seed. Will attract birds. Outdoors, sow seed in fall. Indoors, sow following 2- to 3-month period of cold stratification. Zone 3.

188. *Philadelphus lewisii* subsp. *californicus*. Lewis mock orange. Deciduous shrub to 10 feet. Bears fragrant, 2-inch flowers May through July. Sow indoors following 3-month period of cold stratification. When sowing, cover seed lightly with soil; full light or total darkness seems to prevent germination. Zone 7.

189. *Prunus laurocerasus*. Cherry laurel. Evergreen shrub or small tree with shiny, leathery leaves that are 2 to 7 inches long. Bears white flowers in ascending racemes. Full sun to light shade. Sow seed indoors following scarification treatment for hard seed coat and 2- to 3-month period of cold stratification. Sow in a sand-peat mix and bury seed to a depth of 1 inch. Zone 7.

190. *Ptelea trifoliata*. Common hop tree, water ash. Small tree to 25 feet in height. Has chestnut-brown bark and aromatic foliage. Bears greenish-white flowers in spring or early summer. Likes shady locations and porous soil. Sow outdoors in fall or indoors in spring following 3- to 4-month period of

cold stratification. Zone 5.

191. *Rhus trilobata*. Skunkbush sumac. Six-foot shrub with greenish flowers, ill-smelling foliage, but showy red fruit and fall color. Requires scarification treatment for hard seed coat and 1- to 3-month cold stratification treatment before sowing indoors. Or sow outdoors in fall. Sowing depth ½ inch. Germination takes 20 to 30 days. Zone 3.

192. *Syringa peginensis*. Peking tree lilac. Beautiful native of China reaching a height of 40 feet. Large sprays of white flowers and attractive, purplish, peeling bark. Freely branching. Sow seed outdoors in fall. Cover with ¼ inch of soil and mulch for winter. Indoors provide 1-month period of cold stratification before sowing. Zone 5.

193. *Syringa reticulata* var. *mandschurica*. Japanese tree lilac. Beautiful, 30-foot tree with cherry-like bark and showy, 12-inch panicles of yellowish-white flowers. Fragrance is privet-like. Very late-blooming lilac, mid-June. Sow seed outdoors in fall. Cover with ¼ inch of soil and mulch for winter. Or sow indoors following 1-month period of cold stratification. Zone 5.

194. *Viburnum setigerum*. Deciduous ornamental shrub to 12 feet in height. Dark green foliage and beautiful 2-inch cymes of white flowers in spring. Colorful red fruit in fall. Full sun, well-drained soil. Sow indoors following 2-month period of cold stratification. Zone 6.

195. *Vitex agnus-castus*. Chaste tree. Large, aromatic shrub or small tree from 6- to 25-foot tall. Bears showy, dense spikes of lavender-blue flowers in late summer. Sow outdoors in fall or indoors following 3-month period of cold stratification in moist sand. Germination takes 15 to 35 days. Zone 6.

Large Trees

196. *Acer negundo*. Box elder. Deciduous maple with compound leaves. Height to 70 feet. Good for damp soils, but also grown in plains states, where summer drought and winter cold make it impossible to grow other species. Indoors sow following scarification treatment for hard seed coat and 2- to 3-month period of cold stratification. Zones 3-9.

197. *Acer saccharum*. Sugar maple. Deciduous tree to 130 feet in height. Leaves are 4 to 6 inches across and 3- to 5-lobed. Autumn color is gold, orange, scarlet or crimson. The sap is made into maple sugar. Average, well-drained soil. Sow outdoors in fall or sow indoors following 40- to 90-day period of cold stratification. Germination takes 3 months. Zone 3.

198. *Alnus glutinosa*. Black alder. Eighty-foot tree recommended for its ability to grow in wet soils. Prefers cool climates. Sow seed ½ inch deep after a 4-month period of cold

stratification, followed by 3 days in freezer. Zone 4.

199. *Betula lenta*. Sweet birch. Deciduous tree to 75 feet in height. Bark is dark red to almost black, turning to gray on old trees. Young twigs and bark are the main source of oil of wintergreen. Moist, sandy soil and full sun to partial shade. Sow in sand following 40- to 70-day period of cold stratification. Cover seed lightly. Germination takes 30 days. Zone 3.

200. *Calocedrus decurrens*. California incense cedar. Attractive, 100-foot evergreen found from western Oregon to Baja California. Broad at base; has conical shape. Full or light shade and moist, well-drained, fertile soil. Not tolerant of smog or wind. Sow indoors following 2-month period of cold stratification. Germination takes 30 to 60 days. Zone 6.

201. *Carya cordiformis*. Bitternut. Deciduous, 90-foot tree with edible nuts. Full sun to partial shade, average soil. Hickories are slow-growing. Sow outdoors in fall. Or sow indoors following 3-month period of cold stratification, in a medium consisting of sand, peat and soil. Germination takes 8 months. Zone 5.

202. *Carya tomentosa*. Mockernut hickory. Large deciduous tree to 90 feet in height. Full sun, partial shade. Average soil. See #201 for germination information, but cold-stratify for 3 to 5 months. Germination takes 3 months. Zone 5.

203. *Cladrastis lutea*. Yellowwood. Deciduous, 50-foot tree bearing 10- to 12-inch panicles of fragrant flowers in early summer. Bark is beech-like. Full sun to partial shade. Average soil with good drainage. Sow outdoors in fall. Or sow indoors following scarification treatment for hard seed coat and 3-month period of cold stratification. (A scarification treatment of both nicking the seed coat and soaking in nearly boiling water may help break dormancy.) Day temperatures of 86° F and night temperatures of 68° F are recommended. Germination takes 1 to 2 months. Zone 7.

204. *Cornus nuttallii*. Mountain or Pacific dogwood. Deciduous tree to 75 feet. Prefers regions with cool, moist summers. White flower heads with 4 to 7 showy, petal-like bracts in spring, attractive red to orange fruit in fall. Sow outdoors in fall for spring germination or sow indoors following 3-month period of cold stratification. Germination may take several months, and seed may lie dormant for up to a year. Zone 9.

205. *Eucommia ulmoides*. Hardy rubber tree. Deciduous, 60-foot tree native to China. Elm-like foliage is 3 inches in length. Tree yields rubber, and bark is used medicinally. Unusual ornamental. Full sun and average soil. Almost pest-free. Drought-resistant. Sow indoors following 2-month period of cold stratification. Germination takes 45 to 90 days. Zone 5.

206. *Evodia hupehensis*. Evodia. Large tree to 60 feet in height. Bears 6-inch corymbs of white flowers and has interesting red-brown fruit that is ornamental. Rare in this country. Probably hardy to Zone 6.

207. *Firmiana simplex*. Chinese parasol tree. Deciduous, 60-foot tree native to Southeast Asia. Palmately lobed leaves are up to 12 inches across. Bears showy, ½-inch, lemon-yellow flowers in 5-inch panicles. Sun or partial shade and rich, moist, well-drained soil. Sow indoors following 25- to 40-day period of cold stratification. Germination takes 40 to 60 days. Zone 8.

208. *Gymnocladus dioica*. Kentucky coffee tree. Deciduous, 100-foot tree bearing foot-long racemes of greenish-white flowers in May and June. Seeds, which are borne in 10-inch, red-brown pods, were once used as a coffee substitute. Full sun, average soil. Sow indoors following scarification treatment for hard seed coat. Alternate medium temperature between 85° F days and 70° F nights. Germination takes 20 to 30 days. Zone 6.

209. *Idesia polycarpa*. Iigiri tree. Deciduous, 50-foot tree native to China and Japan. Bears large panicles of flowers and orange-red berries. Full sun and well-drained soil. Excellent shade tree for lawn, park or street plantings. Germination takes 1 to 3 months. Zone 7.

210. *Juniperus virginiana*. Eastern red cedar. Large evergreen to 75 feet in height. Full sun, average soil. Soak fruit in water for several hours, then macerate to extract seed. Sow outdoors for germination the following spring. To sow indoors, soak seed in 1% solution of citric acid for 4 days followed by 1- to 4-month period of cold stratification. Germination takes 20 to 60 days. Zone 3.

211. *Koeleruteria bipinnata*. Golden-rain tree. Beautiful, 60-foot deciduous tree that produces fragrant yellow flowers in summer. Flowers arranged in large, terminal panicles that are 18 inches long. They are followed by paper-like, rose-colored, 2½-inch fruit that persists until winter. Sow outdoors in fall or sow indoors after scarification treatment for hard seed coat followed by a 1-month period of cold stratification. Germination takes 20 to 45 days. Zone 7.

212. *Liriodendron tulipifera*. Tulip tree. Tall (to 200 feet) deciduous tree. Excellent shade tree. Colorful, tulip-like flowers appear from April to June. Petals are greenish-yellow with broad orange band at base. Full sun and rich, moist soil. Sow outdoors in fall or sow indoors following 2- to 3-month period of cold stratification. Cover seed with ¼ inch of soil when sowing. Germination takes 35 to 50 days. Zone 5.

213. *Magnolia grandiflora*. Southern magnolia. Evergreen tree with large, 5- to 8-inch, glossy-green leaves. Huge, 8-inch white flowers borne in summer. Interesting cone-like fruit in fall. Sow outdoors in fall or in-

doors following 3- to 4-month period of cold stratification. Germination takes 1 to 2 months. Zone 7.

214. *Magnolia macrophylla*. Great-leaved magnolia. Deciduous tree to 50 feet in height. Leaves to 3 feet in length. Creamy-white, fragrant flowers to 1 foot across. Borne in late spring. See #213 for germination information. Zone 7. Limited supply.

215. *Magnolia tripetala*. Umbrella tree. Coarse-textured, fast-growing tree with 10- to 24-inch leaves. Bears white, 7- to 10-inch flowers. Full sun, light shade and very rich, moist soil. Sow seed as soon as possible, following 4-month period of cold stratification. Germination takes 30 to 60 days. Zone 6.

216. *Oxydendrum arboreum*. Sourwood. Beautiful deciduous tree to 80 feet in height. Bears long, 10-inch panicles of white flowers that remain on the tree throughout the season. The 8-inch leaves exhibit excellent red fall color. Sow in spring or summer in a sandy-peat medium. Zone 5.

217. *Pinus ponderosa*. Western yellow pine. Large (to 200 feet) evergreen tree with dark green, 5- to 11-inch needles. Full sun and average, well-drained soil. Sow indoors following 1- to 2-month period of cold stratification. Germination takes 21 days. Zone 6. Limited supply.

218. *Platanus × acerifolia*. London plane tree. Large deciduous tree to 120 feet in height. Bears 5-inch, 3- to 5-lobed leaves and ball-like fruits. Very attractive exfoliating bark. Very tolerant of wet soil, pollution and heavy pruning. Sun to partial shade. Sow indoors or out without treatment, or sow following 2-month period of cold stratification. Germination takes 1 month. Zone 5. Limited supply.

219. *Quercus macrocarpa*. Bur oak, mossy-cup oak. Very large, 80-foot tree with 10-inch, pinnatifid leaves with a large terminal lobe. Grayish beneath. Very drought-resistant; will tolerate poor and alkaline soils, but grows best in moist bottomlands. Sow outdoors in fall or sow in spring following 1- to 2-month period of cold stratification. Zone 4.

220. *Quercus prinus*. Chestnut oak. Deciduous, 100-foot tree with 7-inch leaves that are bright green above and grayish beneath. Excellent yellow fall color. Full sun, partial shade, and average soil. Sow outdoors in spring or fall, or sow indoors in sand. Germination takes 2 months. Zone 6.

221. *Quercus rubra*. Red oak. Deciduous, 80-foot oak with 9-inch, deeply lobed leaves. Full sun, partial shade, and average soil. Sow outdoors in fall. Or, sow indoors following 30- to 45-day period of cold stratification, and germinate in sand. Germination takes 40 to 60 days. Zone 5. Limited supply.

222. *Quercus velutina*. Black oak. De-

ciduous tree that reaches 100 feet or more in height. Ten-inch leaves are lobed and a shiny dark green. Full sun, partial shade, with average soil. For germination information see #221, but cold-stratify for up to 2 months. Zone 4.

223. *Sequoiadendron giganteum*. Giant sequoia. Giant evergreen with pyramidal shape (especially when young). Trunk can reach many feet in diameter and 250 feet in height. Full sun, very rich, well-drained soil. Sow indoors following 1-month period of cold stratification. Germination takes 1 month. Zone 7.

224. *Ulmus parvifolia*. Chinese elm. Resistant to Dutch elm disease. Reaches a height of 75 feet. Attractive, shiny leaves. Partially evergreen in mild climates. Easy to grow. Sow seed outdoors in spring. Zone 6.

Vines

225. *Campsis radicans*. Trumpet vine. Showy, bright orange-flowered vine. Trumpet-shaped blooms are 2 inches across and 3 inches long, and appear in late summer. Rich, fertile soil and full sun. Sow indoors using general germination instructions for trees and shrubs, following a 2-month period of cold stratification. Germination takes 1 month. Zone 5.

226. *Celastrus scandens*. American bittersweet. Deciduous, climbing or twining shrub that will grow to 25 feet with support. Beautiful, bright orange fruit useful in indoor arrangements and attractive to birds. Ordinary soil, full sun to partial shade. Male and female plants necessary for fruit production. Sow cleaned seed outdoors in fall, or sow indoors following 2- to 6-month period of cold stratification. Cover seed to a depth of ½ inch with a mixture of ½ sand and ½ sawdust. Germination takes 20 to 36 days. Zone 4. Limited supply.

227. *Eccremocarpus scaber*. Chilean gloryflower. Woody, climbing shrub that is tender and grown as an annual. Bears clusters of orange-scarlet flowers all summer long if seed is started early enough. Height 8 to 12 feet. Sow indoors 8 to 10 weeks before last frost and plant outdoors after danger of frost is past. Germination takes 1 to 2 months. Hardy in the Deep South, probably to Zone 8.

228. *Passiflora incarnata* and *P. lutea* Mix. Wild passionflower, maypop and yellow passionflower. *P. incarnata* bears 2- to 3-inch white or pale lavender flowers, each with a ring of petals and a ring of filaments. Yellow, egg-shaped fruit is edible. *P. lutea* bears ½- to ¾-inch flowers with greenish-yellow sepals, minute white petals and a white corona that is pink at the base. Sun, light shade. Rich, well-drained soil. Prune heavily in fall or early spring. Sow seed indoors 8 weeks before last frost. Maintain a medium temperature of 70° to 75° F. Germination takes 30 to 35 days. Zone 8. Limited supply.

229. *Wisteria sinensis*. Chinese wisteria. Beautiful deciduous vine bearing 12-inch racemes of lavender flowers that hang from the vines. Flowers appear in May before foliage. Full sun to light shade. Rich, moist, well-drained soil. Prune each year after flowering.

Scarification treatment for hard seed coat required; nick or file seed coat and soak seed in warm water for 24 hours before sowing. Sow indoors, maintaining a medium temperature of 55° or 65° F. Zone 5.

230. *Wisteria sinensis* 'Alba'. White Chinese wisteria. White-flowered cultivar of wisteria. Fragrant racemes of flowers are up to 18 inches in length. For cultural information and germination instructions, see #229. Zone 5. Limited supply.

VEGETABLES

231. Cardoon (*Cynara cardunculus*). Perennial vegetable grown for its edible roots and thickened leaf stalks. Leaf stalks are blanched as are those of celery or endive. Also has attractive purplish-blue flowers. Height to 6 or 8 feet. Full sun, rich soil and abundant moisture. Sow indoors using general germination instructions for perennials. Zone 8. Limited supply.

232. Celериac 'Alabaster' (*Apium graveolens* var. *rapaceum*). Close relative of celery grown for its edible roots, which can be eaten raw or boiled. Also called turnip-rooted celery. Roots have celery flavor and can reach 4 inches in width and 3- to 6-inches in length. Full sun, very well-drained soil. Sow seed outdoors in early spring at a depth of ½ inch. Harvest 120 days after sowing.

233. Celtuce. A *Lactuca sativa* or lettuce hybrid. Parentage unknown. Young foliage is excellent in salads, and heart of central stems tastes like celery. Central stem can be eaten raw or cooked. Full sun, and average, well-drained soil. Sow outdoors in early spring for spring crop, or sow in late summer for fall crop. Good winter crop for Zones 9 and 10. 75 days from sowing to foliage harvest; 90 days to stalk harvest.

234. Celtuce. A *Lactuca sativa* or lettuce hybrid of Oriental origin. For cultural and germination information see #233.

235. Chicory 'Parolus'. Perennial vegetable forming tight heads that are cabbage-like in appearance. Foliage has sweet, tangy taste and is excellent in salads. Slow to bolt in warm weather. Full sun and average, well-drained, evenly moist soil. Sow outdoors in June or July for fall harvest. Zone 5.

236. Cucumber 'Longfellow'. Dark green, 12- to 15-inch fruit. This cultivar takes 72 days from sowing to first harvest. Sow outdoors 2 weeks after last frost at a depth of ½ inch. Or sow indoors 3 to 4 weeks before last frost. Dislikes transplanting; sow in individual pots. Prefers medium temperature of 75° F; use black plastic mulch to warm soil to speed growth.

237. Endive 'President'. Lettuce-like plant forming a large head of deep green, rather wide, finely curled leaves. Excellent lettuce substitute; slow to bolt. Full sun and average, well-drained but evenly moist soil. Sow in early spring for spring crop and again in late summer for fall crop.

238. Lovage (*Levisticum officinale*). Ornamental, 6-foot plant with celery-like leaves that are used in salads, soups, stews and sauces. The leaves have a stronger taste than celery, with a hint of curry. Seeds are also crushed and used in cooking. Full sun and deep, rich soil with ample moisture. Sow indoors using general germination instructions for perennials. Zone 3.

239. Red orach (*Atriplex hortensis* 'Rubra'). Also called red mountain spinach. Six-foot annual whose triangular foliage is used medicinally and for greens. Salt-tolerant. The cultivar 'Rubra' has blood-red foliage. Sow seeds in rows 12 inches apart in early spring. Germination takes 30 to 60 days.

240. Salad burnet (*Poterium sanguisorba*). Perennial herb producing a basal rosette of 12-inch leaves. Leaves have a cucumber-like flavor and are used in salads. Best harvested in spring or fall. Full sun. Does well in poor, dry soil. Sow outdoors in spring or late autumn. Cover seed *lightly* with soil. Indoors, sow using general germination instructions for perennials. Zone 4. Limited supply.

241. Squash 'Sundance'. Bright yellow, smooth-skinned squash with a crook-neck shape. For germination and cultural information, see #242.

242. Squash 'Vegetable Marrow White Bush'. Extra-early squash producing an abundance of oblong, 6- to 7-inch fruits. Sweet-tasting. Cream-white on the outside, pale green on the inside. Full sun, well-drained soil. Use general germination instructions for annuals, but transplant with care; roots are easily disturbed. Takes 45 days from sowing to first harvest.

243. Tampala (*Amaranthus tricolor*). Four-foot vegetable grown for its edible foliage. Makes good spinach substitute when cooked. Eaten raw in salads, and stems can be cooked like asparagus. Has artichoke-like flavor. Full sun and average, well-drained soil. Sow seed outdoors in early spring at a depth of ½ inch. Harvest 70 days after sowing.

244. Tomato "Name That Tomato". A compact tomato that grows to only 3 or 4 feet in height. Although it is compact, this cultivar is indeterminate, so it produces fruit all season. Over 14,000 gardeners trialed this plant in 1984 as part of a contest to find the

best cultivar name for the plant. For germination information, see #245.

245. Tomato 'Pink Girl'. New hybrid tomato with juicy, excellent-tasting fruits that average 8 ounces each. Fruits are pink in color when ripe. Heavy producer from summer until frost. Fruit is resistant to cracking, verticillium and fusarium. Full sun, well-drained soil. Sow indoors using general germination instructions for annuals.

246. Zucchini 'Gold Rush'. Excellent cultivar for small garden. Bright, golden-yellow fruit that can be eaten raw or cooked. Best picked when 4 to 8 inches long. For cultural and germination instructions, see #242.

Indian & Sweet Corn

247. Indian corn. An ancient, nearly extinct cultivar of Indian corn with kernels varying in color from pale blue to dark purple. Ears are 9 to 10 inches in length. Edible; historically, made into corn meal. Full sun and well-drained soil. Sow outdoors after all danger of frost is past and soil has warmed up. Plant at a depth of 1½ inches in several rows 24 to 30 inches apart. Within the rows, space plants 10 to 14 inches apart. Wind-pollinated; *must* be planted in several rows if ears are to be filled with kernels.

248. Indian corn, dwarf. A dwarf cultivar of *Zea mays* with variously colored kernels. Ears are 2½ to 4 inches in length. Plants are 2 to 8 feet tall. For cultural information and germination instructions, see #246.

249. Red Dent Corn. Edible, large-eared corn that turns dark red if allowed to remain on plant to maturity. Very colorful and ornamental. See #246 for cultural and germination information.

250. Sweet Corn 'Silver Queen'. White-kernelled corn that is very sweet-tasting when ripe. For cultural information and germination instructions, see #247.

Save this catalogue to identify the seeds you have selected.

COMMON NAME INDEX

The following index to some of the many common names of plants offered in this year's Seed Program is designed to help gardeners who are overwhelmed by scientific plant names. Use it as an introduction to the listings, or to locate a favorite plant, but remember it is by no means a complete index.

Plants in the Vegetable section are listed by their common names.

Also, to help you locate a plant, we have also included the common name(s) at the beginning of each description, just after the scientific name.

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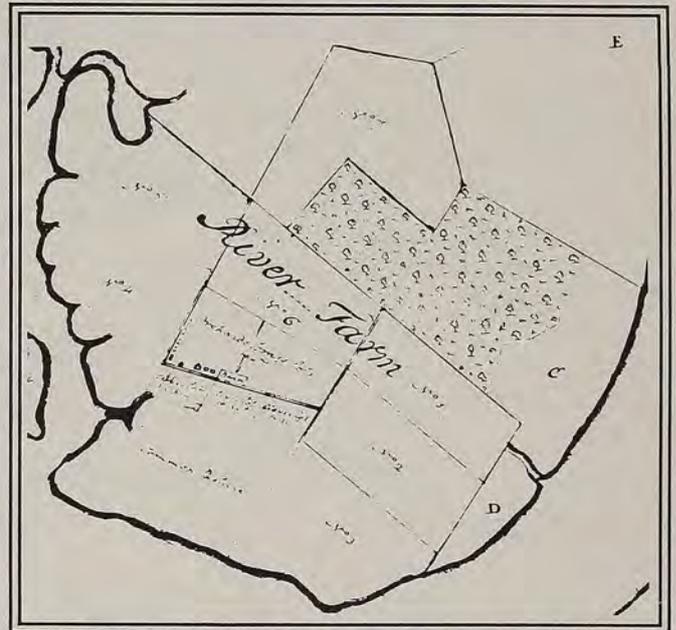
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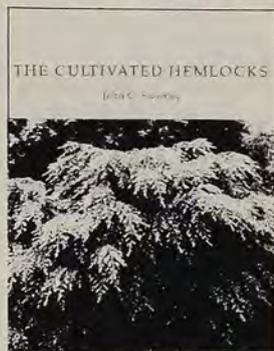
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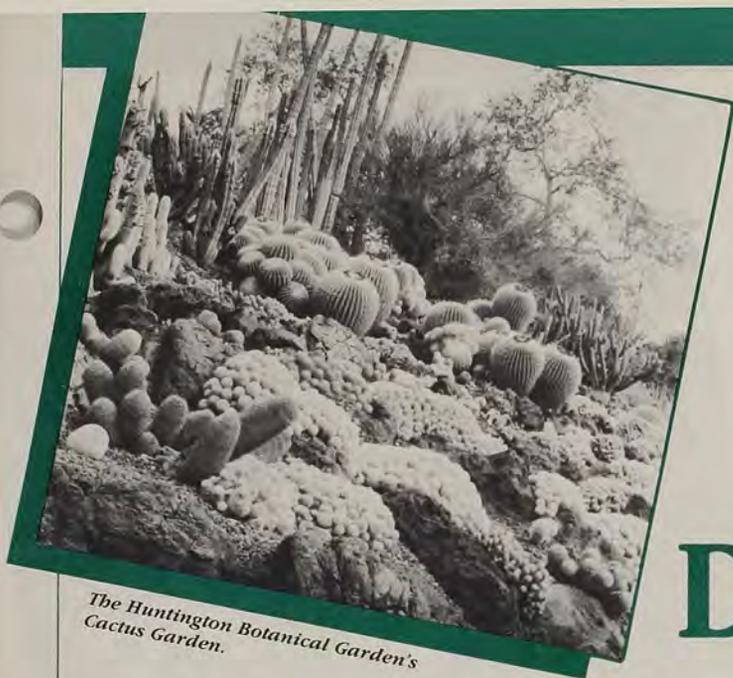
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**American
Horticultural Society's
Spring Symposium**
March 20-23, 1985
Los Angeles, California

Making The Desert Bloom:



*The Huntington Botanical Garden's
Cactus Garden.*

Richly diverse, the Los Angeles area dazzles the garden enthusiast with its wealth of contrasts. From the breathtaking 100,000-plant camellia forest of Descanso Gardens to a comprehensive display of the world's drought-tolerant plants at the Los Angeles County Arboretum, horticulturists have made this desert bloom in remarkable ways. Join your fellow Society members and Los Angeles-area horticultural experts for behind-the-scenes tours of public gardens and exclusive looks at private gardens open only to Spring Symposium participants. Learn and enjoy in the brilliant desert spring of the City of Angels!

Spring Symposium Schedule

Wednesday, March 20, 1985

10:00 a.m. - 5:00 p.m.—*Registration* at the Los Angeles Biltmore Hotel.

Choose one of the following two optional activities for this afternoon:

1:00 - 5:00 p.m.—*Optional Tour of West Side Gardens*, \$22.50 per person. Visit the Hannah Carter Garden, a mature Japanese garden designed by Nagao Sakurai, which specializes in azaleas, magnolias and ferns. Then enjoy the lush palm grove, fruit trees, flowers and shrubs of the Virginia Robinson Garden, the product of 74 years of loving attention by Mr. and Mrs. Harry Winchester Robinson.

1:00 - 5:00 p.m.—*Optional Tour of Monrovia Nursery Company*, \$17.50 per person. Since 1926, this 600-acre nursery has specialized in trees, shrubs and ground covers. One of the largest nurseries in the country, Monrovia does extensive testing of new selections for the marketplace.

6:00 - 7:00 p.m.—*No-Host Cocktail Reception for Spring Symposium Participants* at the Los Angeles Biltmore Ho-

tel. Join fellow horticulturists for a relaxing welcome to the Spring Symposium.

7:00 - 10:00 p.m.—*Optional Dinner at Fung Lum*, \$35.00 per person. This unique gourmet Chinese restaurant features an integrated architecture, decor and cuisine—meticulously planned to create a memorable dining experience. Fung Lum offers an unsurpassed view of Los Angeles at night.

Space for 42 participants only is available on a specially designed Post-Symposium Tour of Southern California, March 24-28, 1985.

For more information, see page 19.



*J. Paul Getty Museum's Main
Peristyle Garden.*

Thursday, March 21, 1985

8:45 a.m. - 2:00 p.m.—*Descanso Gardens*, La Canada, California. This garden offers one of the world's largest camellia displays, as well as a four-acre All-America Rose Selections garden, a History of Roses garden, and a Japanese garden and teahouse. James Yoch will join us to talk about the gardens of his cousin, Florence Yoch, which we will visit later in the day. An education session featuring the following lectures will introduce us to Southern California's horticulture:

- "Bonsai: Creative Horticulture," Warren Hill, Past President and Director of the Descanso Garden Bonsai Society. Mr. Hill will give a bonsai demonstration during his talk.
- "Remodeling Existing Gardens," Bob Fletcher, an outstanding Los Angeles landscape architect. Mr. Fletcher, who specializes in residential landscape architecture, received his BA from the University of California at Berkeley and now teaches at UCLA.
- "Photography in the Garden," George Waters, Editor of *Pacific Horticulture*.
- "New Directions in Southern California Gardens," Robert Smaus, Editor of the Garden Section of the *Los Angeles Times* and 1982 recipient of the American Horticultural Society's Writing Citation.

Lunch will be served at Descanso Gardens at 1:00 p.m.

2:00- 5:30 p.m.—*The Gardens of Florence Yoch*, Pasadena, California. One of Southern California's outstanding landscape architects in the 1920's and 1930's, Florence Yoch collaborated with Myron Hunt on some of the most outstanding houses and gardens of that period in the Los Angeles-Pasadena area. The four gardens we will visit demonstrate Florence Yoch's exceptional abilities.

Evening—On your own to explore Los Angeles.

7:00 p.m.—*President's Council Dinner*. Open only to members of the Society's President's Council. For information about membership in this special group, please call or write to President Edward N. Dane, AHS, P.O. Box 0105, Mount Vernon, VA 22121, (703) 768-5700.

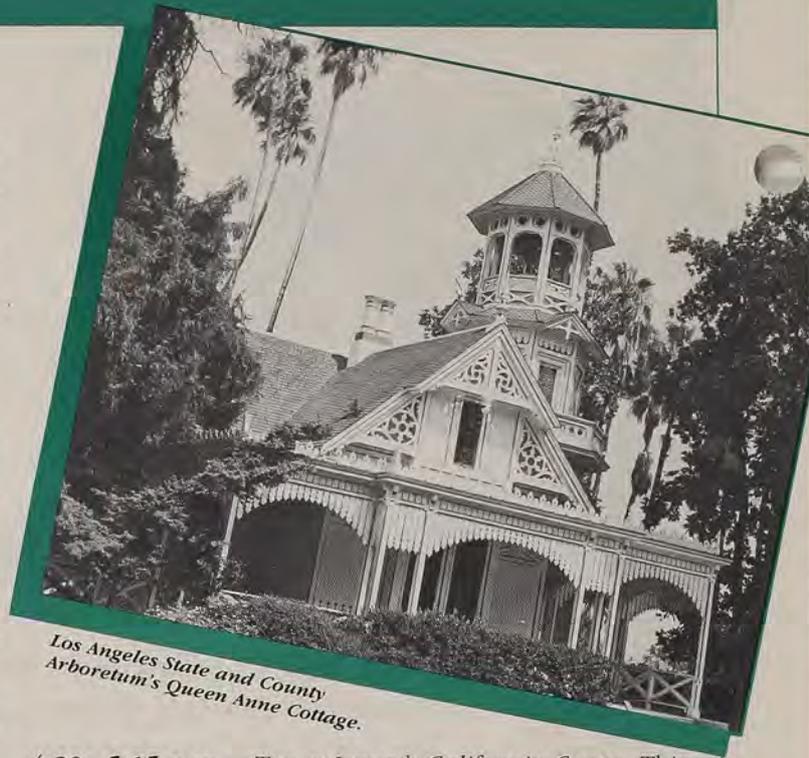
Friday, March 22, 1985

Today's program will focus on the cultivation and uses of drought-tolerant plants.

8:30 - 11:30 a.m.—*Rancho Santa Ana*. This 83-acre garden is devoted to California native plants, and its purposes and programs are anchored in conservation and education. In addition to a large collection of drought-tolerant native plants, a 30,000-volume library and a 500,000-specimen herbarium enhance Rancho Santa Ana's programs. Dr. Tom Elias, Director of Rancho Santa Ana, will introduce us to this unusual garden.

11:30 a.m. - 2:30 p.m.—*Los Angeles State and County Arboretum*. We will arrive for lunch and a special introductory talk by Arboretum Director Francis Ching. The 127-acre Arboretum has collections that represent plants from all over the world, and contains sections displaying plants from Africa, Australia, South America, the Mediterranean region, Asia and North America, including the Southwestern United States. We will visit the South African and Australian collections.

2:30 - 4:30 p.m.—*The Huntington Botanical Gardens*, San Marino, California. The Gardens' Myron Kimnach will introduce us to the 12-acre Desert Garden, which contains approximately 2,500 species.



Los Angeles State and County
Arboretum's Queen Anne Cottage.

4:30 - 5:15 p.m.—*Tea at Lawry's California Center*. This installation, the international headquarters of Lawry's Foods, Inc., received the American Horticultural Society's 1984 Corporate Commercial Citation, in recognition of the exotic plantings and colorful flowers found throughout the complex.

Evening—On your own to explore Los Angeles.

Saturday, March 23, 1985

7:30 - 8:45 a.m.—*Optional Education Breakfast*, \$12.50 per person, Los Angeles Biltmore Hotel. Join Society board and staff members to discuss the Society's educational programs.

8:45 - 11:15 a.m.—*J. Paul Getty Museum*. Built to house the art collection of J. Paul Getty, this museum recreates the splendor of a first-century Roman villa. Its formal gardens include plants thought to have grown in the original villa. Museum docents will guide us as we view the Museum's symmetrical landscaping, which contains over one mile of boxwood hedge, as well as courtyard pools and fountains.

11:15 a.m. - 2:45 p.m.—*Lunch at the UCLA Sculpture Garden*. This remarkable garden, created by Dr. Franklin Murphy (Chancellor of UCLA, 1960-1968) and Ralph Cornell, contains more than 60 twentieth-century sculptures.

Mr. Phillip E. Chandler, well-known landscape architect and teacher, will join us after lunch to introduce us to the next stop on our itinerary, Hancock Park.

2:45 - 6:15 p.m.—*Hancock Park Private Gardens*. We will visit three privately owned gardens. Hancock Park is one of the oldest residential areas of Los Angeles and has experienced a home and garden renaissance over the last 10 years.

7:00 - 7:45 p.m.—*No-Host Cocktail Reception* at the Los Angeles Biltmore Hotel.

8:00 - 10:30 p.m.—*President's Banquet*. Banquet Speaker: Dr. Mildred Mathias, 1980 Recipient of the American Horticultural Society's Liberty Hyde Bailey Medal and Professor Emeritus of Botany at the University of California at Los Angeles, will speak on "The Old and the New in Botanical Gardens."

Join Us For A Post-Symposium Tour!

March 24-28, 1985

Southern California's horticultural diversity beckons to the avid gardener, especially when winter lingers on in other parts of the country. To follow our Los Angeles Spring Symposium, we have prepared a special five-day tour of the mountain, desert and coastal areas south of Los Angeles. Led by AHS board member Dr. Julia Rappaport, the tour will expand the Symposium's themes of the uses of drought-tolerant plants and the horticultural diversity of this region.

We'll visit the beautiful Living Desert, a remarkable center for the preservation and interpretation of the world's deserts. At Moorten's Botanical Gardens, we'll have lunch with desert plant specialist Patricia Moorten. And we'll visit a number of breathtaking public and private gardens in Redlands and in the San Bernardino Mountains—picnicking amidst the splendor of 100,000 flowering bulbs that cascade down a mountain hillside in one of several special private gardens. We will also see the University of California's South Coast Field Station Research Facilities (where a specially guided tour will allow participants to sample freshly picked strawberries), the tropical Sherman

Foundation Gardens and the stunning native flora of the Anza-Borrego Desert State Park.

We've also included the glorious "tropical paradise in the desert"—Palm Springs—with its resort atmosphere, the exquisite Palm Springs Desert Museum, and an opportunity to ride the breathtaking Palm Springs Aerial Tramway 8,500 feet to the top of Mount San Jacinto.

Enjoy the red-carpet treatment AHS tours bring: admission to private gardens, special tours of public facilities. . . . Enjoy this beautiful and remarkable region in the company of fellow gardeners. The tour is limited to 42 participants; please write or call for more information today: Robin Williams, AHS, PO Box 0105, Mount Vernon, VA 22121, (703) 768-5700.

The tour price includes five nights' lodging at first-class hotels, all meals except breakfasts and all admission fees, as well as a \$50 tax-deductible contribution to the American Horticultural Society. Price: \$675 per person double occupancy; \$120 single supplement. You may register by sending a check, made payable to AHS, to Mrs. Williams at the address above.

Los Angeles Spring Symposium Registration Form

Important: Registrations must be postmarked by March 4, 1985. Please register early if you can.

Hotel Information: When we receive your registration form and check, we will send you a hotel reservation card. Please return the card to the Biltmore Hotel (515 South Olive Street, Los Angeles, CA 90013). Hotel staff will confirm your reservation.

Room rates for AHS Spring Symposium participants are \$60 single and \$68 double. Please be sure to reserve your hotel room early, as space is limited. The hotel will not hold extra rooms for late registrations after February 27.

Cancellations: A full refund, less \$40 per person for booking expenses, will be made if written cancellation is postmarked by March 4. We cannot honor refund requests postmarked after March 4.

Please send payment in full to: Mrs. Robin Williams, American Horticultural Society, P.O. Box 0105, Mount Vernon, VA 22121.

If you would like information on the Post-Symposium Tour of Southern California, please check here.

Name _____

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Please list your name(s) as you wish it/them to appear on your name badge(s), if different from above:

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Please enter the number of people registering and the total fee for each item in the spaces below.

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March 20-23	\$295	_____	\$_____	\$325	_____	\$_____
Daily Registration Fees:						
March 21 only	\$100	_____	_____	\$110	_____	_____
March 22 only	\$105	_____	_____	\$115	_____	_____
March 23 only	\$100	_____	_____	\$110	_____	_____
Optional Activities:						
March 20: West Side Gardens Tour or	\$ 22.50	_____	_____	\$ 22.50	_____	_____
Monrovia Nursery Tour	\$ 17.50	_____	_____	\$ 17.50	_____	_____
Dinner At Fung Lum	\$ 35.00	_____	_____	\$ 35.00	_____	_____
March 23: Education Breakfast	\$ 12.50	_____	_____	\$ 12.50	_____	_____
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