

ity. Cultivar registration is simply the acceptance of a cultivar name by a Registration Authority and the inclusion of this name in a register. This process helps to avoid violating one or more of the rules and recommendations for cultivated plant nomenclature. It also helps to distinguish cultivar names from common and botanical names and ranks.

Registration is for the *name only*. Acceptance of a name for cultivar registration does not imply judgement on the distinctiveness or merit of the cultivar.

Examples of organizations which may act as Registration Authorities are plant societies, such as the Holly Society of America, Inc., or botanic gardens, arboreta, or research institutions, such as the Arnold Arboretum and the U.S. National Arboretum. The U.S. National Arboretum acts as Registration Authority for those genera of woody plants for which separate registration authorities do not exist. Information on Registration Authorities for various genera, and their addresses, may be obtained from Mr. F. Vrugtman, Vice-Chairman, ISHA Commission for Horticultural Nomenclature and Registration (address: Royal Botanical Gardens, Box 399, Hamilton, Ontario, Canada L8N 3H8), or from the American Association of Nurserymen.

In conclusion, the Codes of Nomenclature and Cultivar Name Registration have been designed to stabilize plant names and bring order out of a chaotic situation. We are presently in a transitional phase, sorting out what is right and wrong. By using correct names to the best of our ability, we who deal with aesthetically and economically important plants will speed up the process and arrive sooner at a point of stability.

NEW PLANT FORUM

JACK ALEXANDER AND GARY KOLLER, Moderators

MODERATOR ALEXANDER: Darrel Apps from Longwood Gardens will begin the new plants session with a presentation on the J. Franklin Styer Award of Garden Merit and then discuss a promising plant.

DARREL APPS: The Pennsylvania Horticultural Society established the J. Franklin Styer Award in 1980. Its purpose is to promote the recognition and dissemination of woody ornamental plants of outstanding garden merit. Any person or organization may submit a plant or plants. However, award is made to the plant and not the introducer. Entries must be

received by December 1 for examination in February of the next year. Application forms are available from:

J. Franklin Styer Award
Pennsylvania Horticultural Society
325 Walnut Street
Philadelphia, PA 19106
For further information call 215-625-8250

The award is given in two stages:

The first stage is the Certificate of Preliminary Commendation. A group of horticulturists and landscape architects reviews entries each February. The committee makes its selections on the basis of slides and written descriptions.

The second stage is the J. Franklin Styer Award itself. After receiving the Certificate of Preliminary Commendation, plants become eligible. The applicant is required to distribute a number of plants for testing among evaluators in the mid-Atlantic States. The length of the test depends on the nature of the plant. Before final consideration for the J. Franklin Styer Award the plant must have a registered cultivar name and must be propagated for distribution. Plants eligible for awards from associations and plant societies (such as hybrid tea roses) are not eligible for either phase of the J. Franklin Styer Award.

The J. Franklin Styer Award has not been granted to date. Plants that have received the Certificate of Preliminary Commendation and are currently being tested are:

1981

Magnolia 'Elizabeth'
Kalmia latifolia forma *myrtifolia* (seedling)
Prunus 'Okame'
Cornus kousa 'Elizabeth Lustgarten'
Pyracantha coccinea 'Rutgers'

1982

Ilex serrata × *I. verticillata* 'Sparkleberry'
Malus 'Jewelberry'
Viburnum, nudum 'Winterthur'

1983

Ilex serrata × *I. verticillata* 'Autumn Gold'
Ilex serrata × *I. verticillata* 'Harvest Red'
Pieris japonica 'Crystal'
Rhus chinensis 'September Beauty'
Viburnum 'Eskimo'
Cornus kousa 'Square Dance'

Sedum hybridum cv. Weihenstephaner Gold. Longwood Gardens originally acquired *Sedum hybridum* cv. Weihenstephaner Gold in 1976 from England under the name *S. floriferum* cv. Weihenstephaner Gold. Dr. Donald G. Huttleston, Longwood taxonomist, later identified it as a *S. hybridum* cultivar.

Dr. Huttleston described it as follows: "Dense ground cover about 4 in. deep; leaves glabrous, grayish green, flattened, concave above, oblanceolate, to about 1 in long by 1/3 in wide with 2 or 3 pairs of prominent teeth on upper third, forming rosettes toward ends of sterile shoots; flowers 1/2 in in diameter, bright yellow, in flat-topped clusters to 2 in in diameter; ovaries turning orange-red after flowering."

The normally gray-green leaves turn purplish late in the fall and during the winter. In full sun yellow star-shaped flowers appear 2 in above the foliage in mid-May and continue until around the beginning of July. About the first of June small orange-red fruit capsules appear and remain attractive until the end of July. Plants are extremely hardy and have overwintered in containers above the ground in southeastern Pennsylvania (USDA Zone 7a).

Cuttings for propagation can be obtained from Dr. Robert Armstrong, Longwood Gardens, Kennett Square, PA 19348.

MODERATOR ALEXANDER: Bill Thomas from Longwood Gardens has an herbaceous perennial to present.

BILL THOMAS: *Hemerocallis* 'Stella de Oro', bred by Walter Jablonski of Merrillville, Indiana, and registered in 1976, is a unique daylily because of its long season of bloom. First blossoms appear about June 10 at Longwood Gardens in southeastern Pennsylvania and subsequent scapes continue to produce flowers until heavy frosts cut them down in late October. Although the individual gold flowers are less than 3 in. across, multiple scapes provide a mound of color. Heaviest bloom is from about June 10 to 25 followed by a slight pause of 3 to 4 weeks. From that point on 'Stella de Oro' blooms continuously until fall. It produces many new fans and needs to be divided every 3 years.

Well-grown plants are about 18 in tall when in flower. The foliage is narrower and more grass-like than that of large cultivars. Unlike many daylilies the flowers open at night (by 10 pm and stay open for about 24 hrs giving two sets of flowers for an evening display. The plant is completely dormant in winter and dies to the ground by the end of November. 'Stella de Oro' is also unique in that its blossoms open well during cool nights.

Propagation material can be purchased from nurseries specializing in daylilies.

MODERATOR ALEXANDER: Paul Meyer has one plant to show us.

PAUL MEYER: In the mid-1930's Dr. Henry Skinner brought to the United States a rooted cutting of a hybrid cherry which had attracted his attention in England. It was collected in the garden of Captain Collingwood Ingram, the famed cherry collector and hybridizer. Over the years, this cherry, 'Okame', has become one of the most popular flowering trees at the Morris Arboretum.

'Okame', a hybrid of *Prunus incisa* and *P. campanulata*, is covered with clusters of clear carmine-pink flowers each spring. In Philadelphia, it has come into full bloom as early as March 28 and as late as April 13. Its bloom usually precedes *P. subhirtella* by 5 to 7 days. Full bloom usually lasts 7 days. The flower buds are deep maroon and after petal drop the red calyx

and stamens persist for another week. Thus, spring color lasts up to 3 weeks.

'Okame' forms a small upright tree maturing at about 25 feet. Its small stature and fine twig and leaf texture make it adaptable to the small garden. In the autumn its foliage colors to bright shades of orange and yellow.

'Okame' cherry is still rare in the nursery trade but seems readily adaptable to field or container production. It roots readily from softwood cuttings. At the Morris Arboretum 6-in cuttings are taken in mid to late June. These are treated with Hormo-root A (1000 ppm IBA and Thiram); 95% of the cuttings are well rooted within 4 weeks. Terminal cuttings result in plants with the best upright form; lateral cuttings require pruning to form a strong leader.

As a young plant, it grows rapidly and usually begins flowering immediately. It is fully hardy in Philadelphia and the flower buds withstand late spring frosts. The Arnold Arboretum reports that it thrives in Boston and a specimen observed in Cincinnati for the past 5 years has been unaffected by the cold winters.

A limited number of rooted cuttings are available from the Morris Arboretum for introduction to commercial nurseries.

MODERATOR ALEXANDER: Peter Vermeulen will next present two plants.

PETER VERMEULEN: *Juniperus virginiana* 'Sparkling Skyrocket' is a sport of 'Skyrocket'. 'Sparkling Skyrocket' is distinctly and liberally highlighted by dabs and dabs of amber among a slim and slender but dense column of silvery blue-gray foliage. The striking impression of this rapid growing plant makes it easy to imagine a skyward bound sentinal rocket. *Juniperus virginiana* 'Sparkling Skyrocket' is easily propagated by softwood or hardwood cuttings in a sand, or sand and peat medium. It can also be grafted on *J. chinensis* 'Hetzii'. It originated in our nursery.

Picea pungens 'Royal Knight' develops into uniform compact pyramids of nice colonial blue. 'Royal Knight' grafts well on *Picea abies* in January and February. The J.C. Bakker and Sons Nursery selected this plant about 25 years ago from a batch of predominantly blue seedlings.

MODERATOR ALEXANDER: Dave Bakker is next with one plant.

DAVE BAKKER: *Spiraea* 'Gold Mound' is a natural cross of *Spiraea* 'Gold Flame' × *S. nipponica*. It was selected by Mr. Huber of W.H. Perron, Boulevard LaBelle, Chomedey, Montreal, Quebec. The gold leaves remain a fresh yellow in sunny or shady locations. 'Gold Mound' forms a medium-sized shrub maturing to between 12 and 24 in. and is hardy to -30°F. Flowers are light pink but the yellow foliage dominates.

MODERATOR ALEXANDER: Peter Del Tredici has one plant to present.

PETER DEL TREDICI: This evergreen clone of the sweet bay magnolia is growing on an exposed site in the front yard of a private home in Milton, Massachusetts. Nothing is known of its history except that it was planted around 1955 by the Blue View Nursery of Canton, Massachusetts. The tree has been under observation by Arnold Arboretum staff members since 1977. During this time, it has been exposed to a low temperature of -10°F and retained its leaves in a fresh green condition. According to the tree's owner, the plant has never shown any winter damage.

While *M. virginiana* is typically evergreen in the deep south, it is deciduous in the north. Seedlings of evergreen trees, when grown in the north, are usually either winter-killed or deciduous. *M. virginiana* 'Milton', therefore, is unusual in that it holds its leaves until well after the appearance of the new leaves in spring.

The plant produces fragrant, eight petaled flowers over a two-month period in July and August. Nearly every blossom on the tree sets a fruit that contains viable seed. It sets seed in the absence of any other specimen of *M. virginiana* in the vicinity.

'Milton' is about 30 ft tall with a strongly upright habit that is atypical of sweet bay magnolias grown in the north. The leaves are also distinctive, being long and narrow. They range in size from 4 to 6 in long and 1 to 1½ in wide. 'Milton' is different from another evergreen selection of *M. virginiana*, 'Henry Hicks', by virtue of its leaf shape and the fact that it is highly self fertile.

I have had seedlings of 'Milton' under observation at the Arnold Arboretum for 3 years. They are straight stemmed, between 1 and 2 ft tall, and fully evergreen. They also have narrow leaves like the parent. It is normal for all sweet bay magnolias to be evergreen when young. However, I feel that the self fertility of the tree, coupled with its isolation, makes it likely that seedlings will be similar to the parent. Scion wood for grafting is available from the Arnold Arboretum. Illustrations of 'Milton' magnolia have been published in *Arnoldia* 41(2):36-49. 1981.

MODERATOR ALEXANDER: Kris Bachtell has one plant to show us.

KRIS BACHTELL: *Sibiraea laevigata* (Altai spirea) is a hardy, slow growing, dwarf shrub with several ornamental attributes. Its attractive foliage, spring flower display, and showy fruits, along with its freedom from diseases and insect pests suggest that it has a use in today's landscape and nursery trade.

Despite its common name, Altai spirea, this plant does not belong to the genus *Spiraea* as was once thought, but is placed in the genus *Sibiraea*. As its generic name implies, it is native to Siberia. Our plant at the Morton Arboretum showed no winter damage after -27°F during the winter of 1981-82.

Our 21 year old cutting-produced specimen is now only 24 in tall with a spread of 4 ft. It has been growing in full sun and a rather heavy clay soil. This summer the foliage remained in excellent condition despite the excessive heat and uneven distribution of rain.

The plant's texture is rather coarse with stout stems suckering from its interior. Adding to this coarseness are the oblong, glaucous leaves. Their color is a beautiful blue-green throughout the spring and summer. Fall coloration is not significant.

Sibiraea laevigata begins to flower in early May. Its small, ⅓ in white flowers are borne on 4 to 5 in panicles and are evenly distributed throughout the plant. The flowering period lasts approximately 3 weeks. After flowering, clusters of small fruits start to develop and turn a bright yellow color. From a distance it actually appears as if the plant is flowering. In late July, the fruits assume a golden color. Finally, in late August-early September, the clusters turn brown and persist on the plant through most of the winter.

Sibiraea laevigata can be propagated by either seeds or cuttings. Seed germination is easy, requiring no stratification. We stored the seed cool and

dry until sown in mid-March. With cuttings taken in early July, we've had 50% success when treated with 2000 ppm IBA in a quick-dip solution.

If you are interested in obtaining a plant for trial purposes, please contact me at the Morton Arboretum. We plan to distribute approximately 300 seedlings in October, 1984.

MODERATOR ALEXANDER: Our next speaker is Barry Yinger.

BARRY YINGER: Correspondence relating to my two plants should be sent to Carl R. Hahn, Maryland-National Capital Park and Planning Commission, 8787 Georgia Ave., Silver Springs, MD 20907.

Cornus kousa 'Gold Star' was introduced in 1977 by the Sakata Nursery Company, Yokohama, Japan.

On this plant the leaves are dark green, with an irregular central blotch of deep butter-yellow covering one-third of the leaf area. On new growth the blotch is chartreuse. The form of the plant and flower characters are typical of the species. This vigorous cultivar is at its best in full sun and beautiful in all seasons.

Cornus kousa 'Snowboy' was introduced in 1977 by the Sakata Nursery Company.

The leaves of this selection are pale gray-green with a regular white margin, 2 to 5 mm wide, which occasionally invades the center of the leaf. Splashes of yellow-green, or small areas of paler gray-green along the edge of areas of darker gray-green, occur infrequently. Axillary tufts of hair are absent on the leaf undersurfaces. The leaf apices are often reddish, as well as the leaf bases on new shoots and young twigs. Flowers and habit are typical of the species. This plant sunburns in late summer in our climate unless grown under high shade or on the north side of a building.

MODERATOR ALEXANDER: David Beattie has two plants to show us.

DAVID BEATTIE: *Prinsepia sinensis*, or cherry prinsepia, is a member of the Rosaceae family. It is a spiny deciduous shrub that grows to about 8 ft and is native to northern China and Manchuria. *Prinsepia* tolerates very low temperatures and survives as far north as Morden, Manitoba, Canada.

Prinsepia flowers just before Forsythia 'Lynwood Gold.' Flowers are born in clusters at each node and are cream colored about ½ in across. Fruit is somewhat smaller than, but similar in color and shape to a sour cherry. Fruit set is not always reliable either because of self incompatibility, or because flowering occurs so early that insect pollinators are unavailable. The drupe fruit has a heavily fissured stone that has been used in bead art.

Propagation of prinsepia is by seed or softwood cuttings. When propagated by seed the shoot must be chilled after germination to bring about normal shoot elongation. Softwood shoots root easily if taken before growth hardens and terminates in early July. Thereafter, cutting propagation is extremely difficult.

Because of its dense growth habit prinsepia has been used as an ornamental hedge plant or for wildlife cover. One of its greatest assets is that it is one of the first shrubs to "green up" in the spring — even before bush honeysuckle.

Although prinsepia has many uses, it is unavailable in the nursery trade and must be obtained from arboreta or botanical gardens.

Eustoma grandiflorum, or prairie gentian, is sometimes referred to as *Lisianthus russellianum*. It is a member of the gentian family and is native to the western part of the U.S. Great Plains, from Texas to Nebraska. This little known herbaceous perennial grows to about 3 ft high. Flower colors include blue, white, and pink. When grown out-of-doors in the 1983 Pennsylvania State University Trial Gardens, plants began blooming in July and continued until frost. Flowers are 2 in across, showy, and the continuous formation of new buds on upright stems ensures a continual floral display. Annual flowering selections have been introduced for bedding plant use and as flowering pot plants. Although winter hardy as far north as Nebraska, overwintering depends on the formation of small rosettes at the base of the stem in the fall. Annual flowering forms were selected from plants in the southern part of its native range and may not form rosettes reliably. If this plant is to be grown as a hardy herbaceous perennial in the eastern U.S., selections from the northern portion of its range should be grown.

Color clones of *Lisianthus* can be propagated by dividing basal rosettes in the spring. However, seed propagation would be more economical. Seeds germinate in about 20 days at 70°F. but grow very slowly at first. Therefore, care should be taken not to overwater young seedlings.

MODERATOR ALEXANDER: Harrison Flint has five plants to tell us about.

HARRISON FLINT: *Firmiana simplex* (Chinese parasol tree, Japanese varnish tree, Phoenix tree) is a temperate-zone member of the mostly tropical *Sterculia* family (Sterculiaceae) is useful at least from USDA Plant Hardiness Zone 7b (Washington, DC, Nashville, and Memphis, Tennessee) southward. Its most striking landscape features are its strongly whorled branching and smooth, pale-green bark. The palmately-lobed leaves are covered with a rusty tomentum as they unfold, then glabrous at full expansion. Small, white flowers, in upright clusters to 20 in long add interest in midsummer. Maintenance needs are minimal.

Kalopanax pictus (castor aralia), a member of the aralia family (Araliaceae) is a useful and interesting shade tree from USDA Zone 5a (southern Vermont to southern Wisconsin) southward at least to Zone 8a (Atlanta, Georgia). Like other members of the family, this tree is covered with large, sharp prickles, which must be removed from the trunk and lower branches for safety of children. The large, palmately-lobed leaves, reminiscent of those of castor-bean (hence the common name) lend a "tropical" appearance, and usually turn dull reddish before falling in mid-autumn. Large compound umbels of small white flowers in mid-summer are followed, in early autumn, by quantities of small, shiny black fruits, which are usually taken quickly by birds. This trouble-free tree appears sparse, even stark, in winter, but is unusually interesting during the leafy season.

Styrax americanus (American snowbell) is a large, graceful shrub, or very small tree, native to the southeastern U.S. It is seldom encountered in landscape use, but is a handsome flowering plant useful in a wild garden, mixed shrub border, or even trained as a tiny patio tree. Its useful limits range northward at least through USDA Zone 7b, and probably to Zone 6b as well.

Styrax obassia (fragrant snowbell) is a small Japanese tree less common than its relative, *S. japonicus*, yet worthy of a place in landscapes in Zones 6b to 8b, at least. Unlike *S. japonicus*, its fragrant flowers are borne in pendulous racemes, 4 to 8 in long. These are partly hidden by the large,

rounded leaves, but this is a minor objection. A major functional advantage of *S. obassia* is that it is upright and fairly narrow in form, while *S. japonicus* is so wide-spreading that it cannot be used where lateral space is at a premium.

Pterostyrax corymbosus (shrubby epaulette tree) is a handsome member of the styrax family (Styracaceae), usually not exceeding 15 to 20 ft in height. It has been de-emphasized in favor of its larger relative, *P. hispidus*, because of its smaller flower clusters, 4 to 5 in. long, and presumed lesser cold-hardiness. However, fine specimens can be seen in Louisville, Kentucky, in USDA Zone 6b (perhaps more like 7a in the microclimate afforded by the city and adjacent Ohio River), so any difference in cold-hardiness between these species must be small. On balance, *P. corymbosus* is a useful, smaller version of *P. hispidus*, with its own landscape function. Both species are Asian in origin, and both have been trouble-free in limited usage.

MODERATOR ALEXANDER: I have a small tree to present.

JOHN ALEXANDER: *Symplocos paniculata* is a large shrub or small tree native to the Himalayas, China, Korea and Japan. It was introduced to cultivation in 1875. Several specimens in the Arnold Arboretum date to 1897 and the largest of these is perhaps 6 m tall with a spread of about 10 m.

In late May or early June, just after peak lilac bloom, it produces an abundance of fragrant white flowers in both terminal and axillary panicles. It is reported by Michael Dirr to be flower-bud hardy to -25°F . Plants are relatively self-sterile and may not produce an abundance of fruit unless several different individuals are planted in one area.

Although it is principally grown for its bright blue fruit, both black and white fruited forms have been reported. The fruit, a single seeded drupe, is very attractive to birds. The blue color gives this species one of its common names "sapphireberry."

Propagation by softwood cuttings under mist can be very successful. One experiment at the Arnold Arboretum yielded 100% in all variables; even the control lots rooted. These were evaluated and potted after rooting, but the following spring not a single cutting grew out. However, we have been successful by rooting them in flats from which they are not transplanted until growth commences in spring.

When a very attractive plant is rare to horticulture, there is usually a good reason. Often the reason is that somewhere along its path of production it is difficult for the nurseryman to handle. *Symplocos paniculata* has such a reputation. Propagation by seed can be very difficult. The seed, when ripe, contains a fully formed embryo, which requires two years for it to germinate. A relatively long period of warm stratification is required to induce radicle emergence, and that must be followed by approximately 3 months cold stratification. Testing combinations of stratification, scarification, and gibberellic acid, Peter Del Tredici at the Arnold Arboretum showed that none of these treatments gave good results.

MODERATOR KOLLER: James Will has five plants to show us.

JAMES WILL: *Fontanesia fortunei* 'Titan' is a member of the Oleaceae family. It has simple, obovate, entire leaves of 2 to 3 cm which are grey-green on the upper side and white on the underside. The flowers and fruits of this cultivar are inconspicuous, like the species.

'Titan' was named by the Cole Nursery Company because of its upright form. 'Titan' propagates very easily from both softwood and hardwood cuttings, and transplants well bareroot. This plant will grow well in many soil types and can withstand sun and semi-shade. Shearing during dormancy and mid-summer is necessary to keep 'Titan' in a desirable, densely-branched form. The species is hardy in southern Wisconsin (Zone 5a, USDA); 'Titan' should not differ in cold hardiness.

Fontaneisa fortunei 'Titan' can be seen at the Holden Arboretum of Mentor, Ohio. Presently, 'Titan' is propagated and grown by two nurseries: Herman Losely & Son of Perry, Ohio, and Ned's Nursery of Circleville, Ohio.

Hydrangea paniculata 'Tardiva' is the little-known, late-flowering form of the panicle hydrangea. In Lake County, Ohio, 'Tardiva' begins blooming in mid- to late August and remains showy through mid-September. The clone is finer textured than the popular 'Grandiflora'. The winter hardiness of this clone is similar to other *Hydrangea paniculata* clones (USDA 4a to 8a). 'Tardiva' roots easily both from hardwood and softwood cuttings. At Herman Losely & Son, hardwood cuttings are taken in December, treated with 20,000 ppm IBA and stuck in unheated sand benches. A 90% rooting success rate is common with this clone.

A large specimen of *H. paniculata* 'Tardiva' can be seen at Dawes Arboretum, Newark, Ohio. Many other arboreta exhibit this clone, including the Longenecker Horticultural Gardens of the University of Wisconsin Arboretum. This plant is presently propagated by a few nurseries, including Herman Losely & Son of Perry, Ohio, and Bobtown Nursery of Onacock, Virginia.

Mahonia aquifolium 'King's Ransom' is a vigorously growing, upright form. This clone was named by Mr. Harvey Templeton of Huntland, Tennessee over 20 years ago. 'King's Ransom' has red-bronze new foliage which remains colorful for 3 months after emergence. For the rest of the season, the foliage is dark bluish-green with the appearance of a matte finish. The flowers are larger than in the species and are borne in mid-May. The berries appear in late June and are a glaucous bright purple. Through informal reports, it appears that 'King's Ransom' suffers from winter foliage burn less frequently than seed-grown mahonias.

Mahonias can easily be asexually propagated by cuttings taken in late November and stuck in heated sand benches. Chloromone treatments are effective, as well as 20,000 ppm IBA in talc. 'King's Ransom' is especially useful as a container plant because of its uniform rate of growth and exceptional upright form. It is equally well suited for field growing.

'King's Ransom' is not widely distributed. The Longenecker Horticultural Gardens of the University of Wisconsin is testing this plant for winter hardiness in zone 5a (USDA). Few commercial sources exist for 'King's Ransom'.

Rhamnus frangula 'Asplenifolia' is a strap-leaved variant of the alder buckthorn. 'Asplenifolia' was first mentioned in an 1888 Morton Arboretum publication. The clone has leaves as long as in the species, but only ½ cm in width. 'Asplenifolia' is a slow growing upright shrub eventually reaching 2 m. Similar to the other selections of *R. frangula*, 'Asplenifolia' is hardy from Zones 4b to 8a (USDA). As with other *Rhamnus* selections, 'Asplenifolia' is easily rooted from softwood cuttings taken in mid-June. At Herman Losely & Son, 20,000 ppm IBA is used in talc and the cuttings are stuck in outdoor mist frames. The cuttings are left in the frames for 22 months.

Rhamnus frangula 'Asplenifolia' can be seen in many arboreta throughout the temperate region of the country. Propagation material is readily available from many commercial sources.

Rhododendron × 'Pink Plush' is an advanced generation natural hybrid of *R. bakeri* and *R. arborescens* selected and registered by Dr. David G. Leach. Dr. Leach selected this azalea while at Brookville Pennsylvania. During this time the plant was exposed to -28°F. without loss of buds or twig die-back. 'Pink Plush' has a vivid, clear pink flower and blooms in early June. The small flowers bloom in sequence and cover the plant until the 1st of July. The leaves are dark olive-green and are similar in size to *R. arborescens*, one of its parents.

'Pink Plush' can be propagated asexually like other deciduous azaleas. At Herman Losely & Son, best success has been with micropropagation. The azalea grows and multiplies well in culture, and will root and grow-on without difficulty.

'Pink Plush' is one of the eight North Madison azaleas selected by Dr. Leach. Propagules of this clone are available from Herman Losely & Son of Perry, Ohio, as well as Bovee Nursery of Oregon.

MODERATOR KOLLER: Dixon P. Hoogendoorn will present the next plant.

DIXON HOOGENDOORN: *Ilex verticillata* 'Compacta' has a dwarf growth habit and is more compact than most of the other *I. verticillata* cultivars. It may reach a height of 3 to 4 ft after many years. The cultivar was also named *I. verticillata* 'Red Sprite' a few years ago. *Ilex verticillata* 'Nana' is believed to be the same plant as well.

I presented this plant at the 1979 IPPS Eastern Region meeting in St. Louis, Missouri, and implied it was self-pollinating. *I stand corrected!* An occasional male is needed to facilitate pollination. This plant is a heavy fruiter and the large, bright, red fruit is magnificent and long lasting.

Ilex verticillata 'Compacta' can be used as an individual plant in foundation plantings, shrub borders, and is probably used most effectively in mass plantings. This cultivar would also seem to be a natural plant for garden centers to market during the fall or holiday season. It can be propagated with little difficulty by softwood cuttings taken in June.

MODERATOR KOLLER: Tom Tracz has three low-growing shrubs to present.

TOM TRACZ: *Rhus aromatica* 'Grow-Low' is a selection made for its low, spreading habit. Mature plants grow to a height of 30 in with a spread of 10 ft or more. 'Grow-Low', hardy to Zone 3, has a fast growth rate, is easily transplanted, and grows well in full sun or partial shade. The bright green foliage remains clean and insect-free during the summer, turning an orange-red in the fall. It is easily propagated in June or July when treated with 1000 ppm IBA.

Ribes alpinum 'Green Mound' was selected for its dwarf, compact form and resistance to leaf diseases. 'Green Mound', a male clone, does well in full sun or shade, growing twice as wide as high. It is excellent as a hedge plant or massed in groups. 'Green Mound' can be propagated from softwood cuttings in sand under mist when treated with 1000 ppm IBA.

Stephanandra incisa 'Crispa' is a graceful shrub selected for its dense low-mounding habit. The plant is wider than high, reaching a height of 2 to 3 ft, with finely textured foliage on thin, arching branches. It is hardy to Zone 4, easily transplanted, and has a fast growth rate. Although 'Crispa'

will do well in full sun, the plant does better with some protection from the hot summer sun. Both fruits and flowers are not significant. It is excellent when used as a ground cover, facer plant, or bank cover. Softwood cuttings root well when treated with 1000 ppm IBA.

MODERATOR KOLLER: Tom McCloud has a group of plants to present.

TOM McCLOUD: *Forsythia viridissima* 'Bronxensis' or bronx forsythia reaches a height of 2 ft and is flower and bud hardy to Zone 5 (Arnold Arboretum). Growth habit is low, dense, compact, true dwarf, and twiggy, bearing bright-green finely-toothed foliage and a profusion of bright yellow flowers in early spring. Excellent for banks, massing in beds, or foreground planting. Golden stems provide good winter interest. Rich medium moist, loam, with pH 6.5 to 8.0, and sun or light shade, are suitable conditions.

Itea japonica 'Beppu' or Beppu Japanese sweetspire is a vigorous, stoloniferous USDA introduction from the Beppu region of Japan. It produces a broad, spreading mass of dense branches and produces a smaller, more compact shape than *I. virginica*, but similar to *Leucothoe*. Dark green summer foliage turns red in fall; fragrant white flowers are borne in summer. It grows 2½ to 3 in in 6 years and is hardy to -6°F. 'Beppu' will grow in dry, acidic, poorly-drained soil, and in sun or shade.

Lonicera pileata, or royal carpet honeysuckle, grows to a height of 12 in and is hardy to Zone 5. Dark, shiny, semi-evergreen leaves and purple berries on stiffly horizontal branches give this twiggy, slow-spreading form considerable ornamental value in large beds, mass plantings, or as a ground cover, specimen or trimmed to a dwarf hedge. A real aristocrat in the ground cover group. A soil pH 6.0 to 7.5 is best.

Viburnum plicatum forma *tomentosum* 'Newport'® (P.P. 1891), or dwarf doublefile viburnum, grows to 2 ft high and 4 to 6 ft wide and is hardy to Zone 4 (Arnold Arboretum). The original plant was a chance seedling of *V. plicatum* forma *tomentosum*. It acts like its parent, except that the plant is quite dwarf. White blooms are smaller but double, like the Japanese snowball, and the leaves are less than half the size of *V. plicatum* forma *tomentosum*. Light loam to silty clay, moist, well-drained with pH 6.0 to 7.5, sun or partial shade are good growing conditions.

Malus 'Sugartime' P.A.F. Introduced by Lake County Nursery Exchange, Perry, Ohio, and found by Professor Emeritus Milton Baron, Campus Landscape Architect at Michigan State University. Upright oval habit reaching 18 ft, bearing white buds opening to pink flowers. Intense red fruit ½ in in diameter appears in October and persists until January, which hold until spring when new flowers appear. Full disease resistance of this plant has been documented over the past several years by Dr. Les Nichols of Penn State University.

MODERATOR KOLLER: Jim Cross has two plants to present.

JIM CROSS: *Arctostaphylos uva-ursi* 'Big Bear' appears to do well in the open cold winters of the East Coast, based on 5 to 6 years experience. It was found on a plant search high up in Montana near Big Bear Creek. The leaves are glossy, large, and not pointed. Being vigorous, 'Big Bear' develops a fast cover and is very ornamental. 'Big Bear' hardwood cuttings root readily with a minimum of help and care in a well drained medium. It is important to take short cuttings from the plant's center and stay away from terminal shoots.

Genista sagittalis, is a "broom" like *Cytisus* and is a member of the legume family. It is native to Europe and western Asia. This plant is deciduous but appears evergreen from the color of branches which are unusual in that the central woody core has broad wings on either side which are interrupted in an unusual manner at each joint. It is more like some of the cacti. The flowers are yellow and distinctly pea-like. Flowers also are produced on new wood so rabbit or winter damage will not affect its performance. *Genista sagittalis* grows in a prone position with branches developing in every direction from a central crown. It never takes on a brushed or wind-swept appearance. When it does come into flower it takes on a showy appearance. *Genista sagittalis* is easily rooted from hardwood cuttings in mid-winter with modest hormone treatment and with bottom heat.

MODERATOR KOLLER: Dale Herman has a hardy forsythia to tell us about.

DALE HERMAN: The Departments of Horticulture and Forestry, North Dakota State University (NDSU), Fargo, and South Dakota State University (SDSU), Brookings, in collaboration with the Arnold Arboretum, announce the introduction of *Forsythia* 'Meadowlark' (meadowlark forsythia).

In much of Canada and our more northern states, particularly the Northern Great Plains region, most commercially available *Forsythia* species and cultivars flower reliably only on branches protected beneath the snowline. The introduction of meadowlark forsythia will provide a shrub with vastly superior flower bud hardiness and showy spring flowers for planting in northern areas where forsythias were previously non-adapted.

The hybrid plant originated in 1935 via the breeding work of Sax and Dermen at the Arnold Arboretum. Meadowlark forsythia resulted from a cross of *Forsythia ovata* × *F. europaea*. Flint, while working at the Arnold Arboretum, observed a plant from this population in full bloom after the unusually cold 1966-67 winter, whereas a mass planting of *F. × intermedia* 'Spectabilis' which surrounded the new hybrid was nearly devoid of flowers. In the early 1970's the plant was distributed in cooperation with the USDA-ARS via the North Central Regional Plant Introduction Station, Ames, Iowa. For the past ten years 'Meadowlark' has blossomed consistently in North and South Dakota. The North Central Regional Plant Introduction subcommittee recognized its merits and approved the cultivar name 'Meadowlark'.

Meadowlark forsythia grows in a dense, regular spreading form to a height of 7 to 9 feet. It is a vigorous, fairly rapid growing shrub. Mature foliage is lush and dark ivy green, maintaining this color until late in the fall. A purple-bronze cast is the first indication of autumn color; however, under continued favorable fall conditions, the leaves usually change to golden-yellow. The foliage is of excellent quality and in Northern Plains trials has been virtually pest-free throughout the growing season. Bright yellow flowers are borne profusely in early spring. They are also deeper yellow in color than those of *F. ovata*. Plants begin to bloom when only 3 years old. Meadowlark is hardier than either parent and flower buds have not shown injury at temperatures of -35°F. Therefore, it is recommended throughout Zone 3 of either the USDA or Arnold Arboretum plant hardiness maps and it merits trial further north in Zone 2b. Plants also exhibit considerable drought tolerance.

Meadowlark forsythia is easily propagated from softwood cuttings in a 1:1 (v:v), peat-perlite medium with 90 to 96% rooting common. It can also

be propagated successfully using semi-hardwood cuttings, or hardwood cuttings (with bottom heat), and in limited numbers by layering.

Meadowlark forsythia will be officially registered in early 1984 and the first public commercial nursery distribution of this clone will be in the spring of 1985.

MODERATOR KOLLER: I will next present a plant for Sylvester March.

GARY KOLLER: *Deutzia crenata* var. *nakaiana* is native to Japan (Honshu, Shikoku, and Kyushu). The noteworthy characteristic of this plant is its low, compact growth habit of less than 18 in with gently arching branches, making it an excellent groundcover. The plant is covered with small white flowers in May. The leaves turn a deep burgundy in fall. The Arboretum's plant was acquired during a plant exploration to Japan in 1976, at the Watanabe Nursery, Gotemba City. Propagations have been distributed to arboreta and the nursery trade in the U.S.

The Nakai deutzia is easily rooted from softwood cuttings. The plant may also be layered. The lower branches root naturally as they touch the ground. Cuttings should be taken during the summer months. Treating the cuttings with a rooting hormone, such as IBA, will enhance rooting. *Deutzia crenata* var. *nakaiana* is of easy culture, doing best in a loamy soil with abundant moisture and full sun. Little or no pruning is required. It is free of any serious insect or disease problem. An occasional infestation of aphids may occur on the tips of soft new growth.

MODERATOR KOLLER: Kathy Freeland has six plants to show us from the Prairie Collection of the Chicago Botanic Garden.

KATHY FREELAND: *Anemone patens*, pasque flower, is an attractive herbaceous perennial with fern-like foliage. The principal attraction is the 2½ in solitary blue-to-purple flowers which appear in April and are followed by interesting feathery seed plumes.

Asclepias tuberosa, butterfly weed, is an excellent choice for the dry, sunny garden, or rockgarden. Flowers are borne during summer on 12 to 24 in stems and may vary from yellow through all the orange shades to red.

Gentianopsis crinita (*Gentiana crinita*), fringed gentian, is a biennial noted for its deep blue flowers; produced on 2 ft plants. The fringed gentian grows best in a neutral grassy meadow.

Lithospermum canescens, hoary puccoon, is a perennial with white, downy foliage. Golden-yellow, tubular flowers appear from mid-May to mid-June and are highly ornamental. The plant may have a mycorrhizal requirement.

Monarda punctata, horse mint, is a member of the mint family with erect square stems that can reach 3 ft in height. Terminal rosettes of pale yellow flowers with purple spots are borne from July through October. Showy white or lilac bracts add color.

Zizia aurea, golden alexanders, has terminal flat clusters of yellow flowers which are borne in May and June. The leaves are doubly compound.

MODERATOR ALEXANDER: Harold Bruce from Winterthur Gardens will present a little known witchhazel.

HAROLD BRUCE: *Hamamelis mollis* 'Pallida' is characterized by large, fragrant, sulfur-yellow flowers produced in great abundance. When in

bloom its ornamental qualities and fragrance exceeds all other witchhazels in the Winterthur collection.

MODERATOR ALEXANDER: Robert Nicholson from the Arnold Arboretum will share information about the genus *Enkianthus*.

ROBERT NICHOLSON: *Enkianthus perulatus* is a member of the family Ericaceae and native to Japan. I feel that this is probably one of the most underused hardy shrubs. Its best feature is its fall color, a brilliant scarlet, although it also has an excellent floral display in early May. Unlike the other *Enkianthus* species, their flowers appear before the leaves. They are white, bell-shaped, and appear in clusters of 3 to 10 blossoms. It is a very hardy, long-lived shrub as we have specimens at the Arnold Arboretum that are approaching 100 yrs. in age. These are about 5 ft high although I have seen specimens that measured 9 ft high by 12 ft wide. In the United States it is mainly used as a specimen plant; the Japanese use it in hedge-rows.

Another *Enkianthus* I would like to present is equally unusual. *Enkianthus campanulatus* var. *sikokianus* is also native to Japan and, like *E. perulatus*, has a fine fall color and floral display. Its flowers, when young and unopened, are a maroon with undertones of violet and when open are a dark brick-red with streaks of shrimp-pink. Our plant was out of University of Washington seed and a cutting from our plant, grown at Martha's Vineyard, Massachusetts, grew to 5 ft in just 6 yrs. This would be an excellent plant for walkways and patios but can be a bit tender in Zone 6.

A final *Enkianthus* is a cultivar I am naming *Enkianthus campanulatus* 'Renoir'. The type plant grew from seed received from the University of Edinburgh in 1923 and has been growing at the Arnold Arboretum since then.

It is distinctly different from the regular species with flowers that are pale yellow with pink lobes. The flowers which come in late May, are arranged in racemes about 1½ to 2 in. in length and number up to 11 blossoms. After 60 yrs the plant is 11 ft high by 10 ft wide.

Propagation of these three plants can be achieved by using a 5000 ppm IBA dip on softwood cuttings taken in mid-June and placed under mist. The cuttings should not be disturbed until they have over-wintered and broken bud.

MODERATOR KOLLER: I will conclude the New Plants session with one plant.

GARY KOLLER: In the Boston, Massachusetts area the American yellowwood (*Cladrastis lutea*) has proven itself as a landscape plant by being both dependable and robust. At the Arnold Arboretum we cultivate another ornamental *Cladrastis* species which, in North America, is probably unknown outside of botanical gardens. The plant is *C. platycarpa*, the Japanese yellowwood, which deserves attention by nurserymen due to its successful growth and flowering period.

The oldest plant at the Arnold Arboretum is about 64 years of age. This tree stands approximately 35 ft tall and spreads 40 ft. The branch structure is different than in *C. lutea* for there are more secondary and tertiary branches giving the tree a more dense and twiggy aspect. New season's growth ranges from 2 to 6 in in height.

This species produces terminal clusters of white to creamy white flowers in late June or early July, or several weeks after the American yellow-

wood. Flowering occurs in alternate years. Seedlings appear to take 12 to 14 years to begin the flowering cycle. Fruit resembles that on *C. lutea* but differs by having a marginal wing.

The foliage canopy of the tree is light enough to allow grass to grow up to the base of the tree. While root flare is visible directly at the base, rooting does seem to be deep. Arboretum trees are growing on a slight slope in a dry, gravelly loam of acid pH. We grow a number of specimens and the lowest winter temperatures our trees have endured is approximately -10°F , with no apparent tissue damage or dieback.

The seeds available today were collected from Arnold Arboretum, accession number 10928. Germination is inhibited by a hard seed coat. In order to obtain maximum sprouting scarify the seeds for one hour in a bath of concentrated sulfuric acid, or soak the seeds for 12 hours in hot water, just off boil and allowed to cool gradually while steeping the seeds.

Thursday Evening, December 8, 1983

The thirty-third annual banquet was held in the Constellation Ballrooms of the Hyatt-Regency Hotel, Inner-Harbor, Baltimore, Maryland.

On behalf of the Society, an award was presented to Mr. Craig R. Adkins, Department of Plant Pathology, North Carolina State University, Raleigh, North Carolina, for the best graduate student award paper and to Dr. Frank Blazich, who was the advisor for the work presented in the paper by Mr. Adkins.

John McGuire made the following presentation:

AWARD OF MERIT

I will concentrate on the personal history of the 1983 recipient in an attempt to show you how his determination and courage led to his success as a plantsman of the highest regard. I could simply catalog his accomplishments which were many since his professional career spans 60 years but as I looked into this personal history, I was fascinated with it.

He first entered the world of horticulture at the age of 13 as an apprentice in a market garden. He continued to work as an apprentice at estates and gardens for 5 years when he went to a large nursery. He was now near a large city (Copenhagen) where he had the opportunity to go to school at night while working during the day. This was the first time he was exposed to plant breeding which would eventually become his profession. It was also here where he met a young lady who would eventually be his wife.

He began to think about coming to America and in 1922 he got the opportunity. His lady friend was not as enthusiastic about moving as he was but he promised her if he did not like it, he would return in 2 years. Otherwise, he would send for her. He migrated to Jewitt City, Connecticut where he worked