

color at the time when people enjoy being outdoors will result in wide popularity of this type of plant. We will be continuing to hybridize and evaluate to extend color through the summer, for improved fragrance, and for optimum foliage and growth characteristics.

NEW PLANT FORUM

JACK ALEXANDER and GARY KOLLER, MODERATORS

ROB NICHOLSON:

Acer saccharum 'Globosum' is a globe-shaped sugar maple. What makes this tree of interest to the nursery trade is its small eventual size. This sugar maple has the same fine fall color as the species. We have two plants at the Arnold Arboretum. One, a 45 year old plant, is about 25 ft high by 18 ft wide and was grafted low to the ground. It could also be grafted as a standard. I don't know about the history of this cultivar but we received our material in 1942 from the Henry Hohman Nursery in Kingsville, MD. I see this cultivar as an excellent tree for lawn, patio or park use.

Betula grossa, the Japanese cherry birch, is a small tree that has shown no pest problems at our arboretum. It is native only to Japan and is found in the lower three islands but seems to be most common in the central provinces of the large island, Honshu. Its bark, while not being a "commercial white", is a fine silvery-maroon color which resembles the bark of some cherries. It is reported to reach over 50 ft in Japan but in Boston our trees have not topped 30 ft. One of our trees is 90 yr old and only 30 ft high. A 30 yr old plant grown from seed is 25 to 30 ft high and shows a nice pyramidal habit. The hardiness of this birch is probably Zone 5.

GARY KOLLER:

Heptacodium of the Caprifoliaceae is a new genus of shrubs, first arriving in North America as a result of the 1980 Sino-American plant collecting expedition of which the Arnold Arboretum was a cooperating institution. *Heptacodium jasminoides* grows 20 to 22 ft tall and forms a large shrub or small tree. The most distinctive ornamental feature is the small, white, fragrant flowers produced from mid-August to early October. Blossoms are followed by rose-purple fruits borne in large terminal clusters which are especially showy when backlit by late afternoon sun. Propagation is easy from softwood cuttings. Growth is 2 to 3 ft or more per year and flowering occurs the second growing season. A full account on the introduction, ornamental features and growth of *Heptacodium jasminoides* can be found in *Arnoldia*. 1986. 46 (4):2-14.

ALAN GORKIN:

The plant I will present here is not new. *Cercis chinensis* was introduced to this country from China in the late 1800's. While it may be grown in the southern portion of the U.S., especially the southeast, one rarely encounters it in the mid-Atlantic to northeast areas. The Chinese redbud is hardy to Zone 5 USDA, (Zone 6, Arnold). *Cercis canadensis* is hardier than *C. chinensis*. *Cercis chinensis* is a multistemmed small tree or large shrub to 12 ft. Redbuds do best on well drained soils and transplant best in spring. They grow well with a pH in the slightly acidic range (6.0 to 6.8). Flowers occur up and down stems in early spring before leaves develop. Leaves are attractive, thick, dark-green, leathery and heart-shaped appendages. The only possible drawback is its retention of seed pods into the winter. Some have germinated fresh

seed collected before the seed coat is fully developed and seed coat dormancy established. Timing is fairly critical since the seed must be mature. Seeds have impermeable coats and must be scarified before receiving moist stratification. It does well in the shrub border, foundation planting or possibly as a street tree or shrub if pruned.

CHRISTOPHER ROGERS:

Rhododendron 'April Snow' is a lepidote whose parentage goes back to the 1940's. Two of its parents are a semi-double 'PJM' and a white *R. dauricum* var. *sempervirens*. It blooms in mid-April and has fully double pure white flowers. It is a vigorous grower, with a wide upright growth habit. Foliage is light green and persists throughout the winter. Flower buds have tested hardy to -18°F .

Rhododendron 'Olga Mezitt' is a cross between a chance seedling of a pink semievergreen azalea (*R. mucronulatum*) crossed to a *R. minus* "compactum", which was received from Wayman's Framin ham Nursery in the late 1950's. It blooms around Mother's Day with clear pink flowers. The shiny and reflexed leaves change from bright green in the summer to dark mahogany in the winter. Flower buds have tested hardy to -24°F .

Rhododendron 'Aglo' is a sister of 'Olga Mezitt'. It blooms two days earlier than 'Olga Mezitt' with light pink flowers containing a darker center. The leaves are similar to 'Olga Mezitt' but change to a bronze-mahogany in the winter. Flower buds have tested hardy to -24°F . The original plant is more spreading than its sister 'Olga Mezitt'.

WILLET WANDELL:

Amelanchier \times *grandiflora* 'Autumn Brilliance' is a vigorous growing, small tree to 18 ft. 'Autumn Brilliance' is a heavy bloomer and has brilliant red fall color in October. It is resistant to summer leaf drop caused by *Entomosporium maculatum*.

MICHAEL KACZOROWSKI:

Rhodotypos scandens, jetbead, is not an unusual rare or glamorous plant; that's why I think it is a valuable plant in the landscape. It has 4 assets that endear it to me. 1) It is a good transition plant where the formal landscape ends and a naturalizing plant is needed. It has a mounding habit with branches that ascend and then arch. 2) It grows equally well in full sun or heavy shade. 3) Its functional size, 3 to 4 ft. high and 4 to 9 ft. wide, makes it very flexible. In deep shade both height and spread fall into the lower range. 4) It has no serious insect or disease problems. Jetbead roots easily from softwood cuttings taken in the spring. Seed requires both acid scarification and cold treatment. Jetbead grows best in Zones 4 through 8. It flowers in May and early June. The flower is 4-petaled which is unusual for the Rosaceae. The summer foliage is clean, medium to bright green in color and the 3 to 4 shiny black fruits persist into the spring.

SIDNEY WAXMAN:

Pinus strobus 'Paul Waxman' was selected from a population of seedlings obtained from a witches'-broom in 1963. This dwarf specimen is unusual because it is more than twice as broad as tall. This low-growing broad mound is densely branched and has a fine texture. It measured, after 22 years from seed, $4\frac{3}{4}$ ft across and only 2 ft high. Its annual growth rate in width is approximately 2 in. Its needles are slightly curved and very short; measuring only $\frac{7}{8}$ in. in length. The foliage exhibits two color tones, a mixture of green and blue-green. This two-tone effect has been observed on this selection as well as on several other plants of the same progeny and is the result of the partial opening of the needle bundles or fascicles. The green color is exhibited near the base of the fascicles where the fine needles have separated exposing the stomatal coloration.

Tsuga canadensis 'Howard Waxman' was a graft taken directly from a witches'-broom found in Storrs, Connecticut. It is a very compact hemlock with rigid branches that curve down. The foliage is extremely dark green and very dense. This selection does not exhibit the bleaching of the upper foliage that is common on many dwarf, dense hemlocks. 'Howard Waxman' is twice as wide as high. Its dimensions, 11 yr

after having been grafted, is 3¾ ft wide and 2 ft high. Its annual growth rate is approximately 4 in.

Sciadopitys verticillata 'Joe Kozey' was selected from among many seedlings grown at the University of Connecticut nursery. This seedling differed from the others because of its form. Unlike most umbrella pines which tend to produce many vigorous terminals that compete with one another, this selection has a strong leader that remains dominant. As a consequence it develops into a taller and more conical tree than the typical umbrella pine. It has grown to a height of 6 ft after 10 yrs. from a rooted cutting and has an annual growth rate of approximately 10 in. Its foliage is dark green and during the winter months turns slightly bronze on its western exposure. Our nursery is located on the crest of a hill with full exposure to sun and wind. Under a more protected environment this tree retains good winter color.

It can be rooted from cuttings quite readily. Cuttings taken from 10-year-old plants rooted 80%.

RICHARD MUNSON:

The Chinese neillia, *Neillia sinensis*, is a deciduous shrub in the rose family, 3 to 6 ft in height with an equal spread, noted primarily for its light pink flowers produced in pendulous terminal clusters. The flower racemes, which contain 10 to 20 bell-shaped flowers, are produced in late May in western Massachusetts. Leaves are alternate, simple, and toothed, with a bright crisp-green color. Because the branches are spreading and somewhat pendulous, the plant is less vulnerable to breakage from ice and snow. Chinese neillia is particularly well-suited to bank plantings and other sites where its graceful branching habit can be accentuated. A native of China, the plant is listed by some references as being hardy to USDA Hardiness Zone 4 while other sources list it as being hardy to Zones 5 to 7. It performs well in the Zone 5 to 6 borderline area and has suffered no appreciable damage during unseasonable cold periods. Although the fall color is a rather unspectacular dull yellow, the winter character is attractive because of the pendulous light to medium brown branches with exfoliating bark.

Chinese neillia is propagated by several means. Softwood cuttings may be rooted under mist or plastic. Hardwood cuttings can be callused during winter for spring rooting. One source lists propagation by seed, but does not provide details. Presumably the seeds should germinate after a moist-chilling period of approximately 90 days.

BOB CARLSON:

As a grower and propagator of more than 1200 cultivars and species of azaleas and rhododendrons, I'm here to suggest that, while we probably are growing too many at Carlson's Gardens, most nurseries are offering too few. Consider the white azaleas that are most commonly found in garden centers. 'Delaware Valley White' is a glaring, chalk white that can hardly be said to blend easily in an informal azalea garden. But at least it is lower growing and has a less upright growth habit than 'Polar Bear', which is the other chalk white too frequently offered.

Much more subtle in their coloring is a new group of *R. mucronatum* hybrids that we have started offering to our retail mailorder customers. We call them "Carlson's Face 'em Down Azaleas" because of the pleasing landscape effect they give when planted in front of taller, leggier shrubs. We find that a planting that includes several different clones is much more interesting in bloom than if only one clone has been used. Yet because their foliage and plant habits are so similar, they can give the massing effect that designers call for the other 56 weeks of the year. 'In The Pink' is white with tints of lavender pink. Like most of this group, close up it gives the effect of a water color wash, while from a distance it carries as a soft white. The second clone is called 'Foamy'. I should also point out that in addition to having a pleasing fragrance, these plants have been growing for the past 15 yr in USDA Zone 6a without any form of winter protection. The original plant is approximately 4 ft in diameter by 2 ft high in 15 yr.

CONNOR SHAW:

New Jersey tea, *Ceanothus americanus*, has many horticultural traits that should induce nurseries to grow it. It ranges as far north as southern Manitoba, south to Florida, and west to Texas. The plant is hardy to Zone 2. This *Ceanothus* grows to a height of about 2 meter (3 ft) and therefore makes an excellent plant for placing in front of taller shrubs. New Jersey tea has white flowers the first two weeks in July in the Chicago area. Few other shrubs bloom at this time. It is adaptable to very droughty sites and also does well on heavy clay soils. *Ceanothus* fixes its own nitrogen which is unusual for a non-legume.

New Jersey tea has folklore. The plant was used as a substitute for tea during the revolutionary war and the tea is very good being similar to the green tea of China. The root was used for a red dye.

Propagation of New Jersey tea is very easy once you have the seed. We collect the seedheads as soon as they turn brown and place them in a plastic bag in the greenhouse. Seed is forcibly ejected from the seedheads. One week later the seed is separated from the heads and put into a jar and stored in a cool room. The seed needs scarification. The seed is placed in boiling water, the heat is turned off, and the seed is allowed to sit in the water overnight. The next day the seed is placed in flats with bottom heat. Once the seedlings are big enough to transplant they are placed in bottomless containers. The plants next go to the field in August or the following spring depending on field conditions.

DENNIS BRUCKEL:

Daphne × *burkwoodii* 'Carol Mackie' originated in 1962 as a variegated sport of *D.* × *burkwoodii* 'Somerset'. The subtle variegated pattern on the leaf margins makes this plant attractive and salable at any season. Fragrant pink flowers open in early June in Vermont, and fade to nearly white. 'Carol Mackie' grows 3 to 4 ft tall with a similar width. The plant survives winter temperatures of -30°F without injury. While essentially evergreen in sheltered locations, excessive winter wind and sun will result in considerable leaf drop during winter.

Propagation procedures at Grand Isle Nursery are based on very softwood cuttings taken in June through August. For suitably soft late summer cuttings, it is essential that stock plants be heavily pruned 2 to 3 weeks prior to cutting collection. We treat with Hormodin #3, stick in 1:1 vermiculite and perlite and root under mist. Presently we pot rooted cuttings in 4 in. square pots for about 30 days prior to out-planting in Vapam-treated transplant beds. We get vigorous growth late that season, and cover with microfoam during winter to prevent frost heaving. The following season we use this bedded stock to supply cuttings, giving us a well-branched, 9 to 12 in. plant in late summer for canning or lining out for future B&B material.

JACK ALEXANDER:

Elsholtzia stauntonii, the mint bush, is native to northern China. Known to botanists for some time, it was not introduced into cultivation in the U.S. until 1905 when J. G. Jack of the Arnold Arboretum brought back cuttings on his return from China. As in many other members of the mint family, the Labiatae, its leaves, stems and floral parts emit a characteristic mint odor when bruised. The rosy or purplish pink flowers produced in mid-September in the Boston area when few other shrubs are in bloom, are its most important ornamental feature. There is also a form with white flowers. The flowers are produced in terminal and axillary panicles. Terminal panicles are usually 5 to 7 in. long while the axillary panicles are 3 to 4 in. I have, however, measured panicles that were 9 in. in length.

Mint bush is considered to be hardy to -20°F , but since it produces its flowers on new growth, winter injury from colder temperatures can be pruned out without seriously affecting the early fall floral display. Some authors even suggest that this shrub be routinely pruned back to 1 to 2 ft after flowering. Such severe pruning suggests that this plant be grown almost as if it were an herbaceous perennial and I believe that it might serve very well in just such a capacity. It will tolerate poor soils, but does best in a good garden loam and full sun. It can be propagated from soft-

wood, greenwood, and hardwood cuttings and from seed, which exhibits no dormancy.

RICHARD HESSELEIN:

Hydrangea quercifolia 'Snow Queen' (Plant Patent No. 4458) is a cultivar of the native oakleaf hydrangea. It is notable for the large size and pure white color of its flowers. The parent shrub, which was discovered on the Princeton Nurseries, has many more sterile flowers in the flower panicles than is the case with the species. This means that the panicles are much fuller looking and more decorative. They are a clear snow white color when they open in early July and gradually turn pink as they mature in August. Unlike the fully sterile forms of this species, the panicles are held erect on stiff stems even after heavy summer rains, when the flowers of sterile plants droop down and become hidden in the foliage. 'Snow Queen' grows to a height of 5 or 6 ft and is winter hardy in Zone 5. It is one of the few deciduous shrubs which grow well in the shade as well as full sun. The bold, handsome foliage which resembles oak leaves, is a dark green color in the summer and turns a beautiful red-purple color in the fall. The peeling bark of the stems and orange buds are attractive in the winter months. It is an ideal shrub for combination planting with conifers and broadleaf evergreens.

With the growth in popularity of sophoras for street planting, there has been a need for a more upright growing form to give ample clearance for pedestrian and vehicular traffic. The Princeton upright pagoda tree (*Sophora Japonica* 'Princeton Upright,' Plant Patent No. 5524) was selected from a block of seedling sophora trees growing on Princeton Nurseries. It is a vigorous grower with attractive shiny foliage and a distinctly upright branching pattern. The crown broadens with age, but maintains a high head of branches with the twigs held well above the horizontal level. It bears compact globular heads of pea shaped white flowers with a yellow flush in the center of each blossom. It flowers for a long period in mid-summer from late July to late August when very few other trees are in bloom. 'Princeton Upright' is highly resistant to the twig die back which many sophoras of seedling origin exhibit. It is also resistant to the bark canker which troubles the species in areas with a humid climate. Like all sophoras it is particularly resistant to high temperatures, polluted atmosphere, and heat reflected from pavement and building walls in city locations. It tolerates drought and high pH soils which will turn oaks and many maple species yellow.

ELWIN ORTON:

Rhus chinensis 'September Beauty' is the most recent introduction from the woody ornamentals breeding program at Cook College, Rutgers University—The State University of New Jersey. It is the first named cultivar of this species and is being introduced as our field tests indicate that it is an excellent clone.

A typical plant of 'September Beauty' is a multi-trunked, small to medium sized, spreading tree with a mature height of 20 to 30 ft. Plants of this cultivar rapidly develop as trees since 4 to 6 ft of growth per year is not uncommon when the plants are young. The trees are surprisingly strong-wooded for plants that exhibit such rapid growth.

The creamy-white flowers are borne on compound panicles which average 18 to 22 in. in length and 15 to 20 in. in width. These large inflorescences, as well as the tiny flowers, provide an attractive floral display from late August through mid-September in central New Jersey (USDA Plant Hardiness Map Zone 6a). The plants are staminate so there are no fruit to pose a litter problem as might be the case with a pistillate selection.

The leaves are pinnately compound and exhibit an excellent dark green, glossy appearance. Some years, the foliage provides a brilliant display of fall color, but this characteristic is variable from year to year.

Plants of 'September Beauty' are readily propagated from root cuttings. In late winter, direct-stick a 3-in. rootpiece vertically in a one- or two-gallon container with the proximal end of the cutting even with the surface of the growing medium. Callus will form at the cut surface and several adventitious shoots will emerge at that point. Rub off all shoots except the best one.