



BOB'S PICKS

Deer Tolerant Deciduous and Evergreen Shrubs for Putnam County, New York

South Educational and Demonstration Garden (SEDG) at Cornell Cooperative Extension, Brewster, NY

The following collection of deer tolerant deciduous and evergreen shrubs is a plant list resource for the design of the South Education and Demonstration Garden at Cornell Cooperative Extension of Putnam County located in Brewster, NY. Plants selected provide a broad cross section of available cultivars based on deer browsing tolerance; plant size; foliage color upon opening and maturity; fall foliage color; bloom opening time, duration and color; sun and shade tolerance, soil and water requirements. Specific habits are noted when appropriate.

“Plants that Deer Do Not Like To Eat” compiled in 2009 by Dr. Mark Bridgen of Cornell University was used as an initial starting point for this research, as well as “Deer Resistant Annuals and Perennials” compiled in 2002 by Brad Roeller of the Cary Institute of Ecosystem Studies. Local, observational data was incorporated. Further research made use of the following university horticulture and plant databases: Cornell University, North Carolina State University, University of Connecticut, University of Massachusetts, University of Rhode Island, Rutgers University and Virginia State University.

The following books were used extensively for cultivar reference and descriptions:

- Boxwood Handbook, A Practical Guide to Knowing and Growing Boxwood, 3rd Edition 2005, Lynn R. Batdorf, U.S. National Arboretum, Greater Valley Publications, Inc.
- Botanica's Pocket Trees & Shrubs, 1999, KONEMANN, by arrangement with Random House Australia, Pty Ltd
- Flowering Trees and Shrubs, First Revised Edition 1990, Isabel Zucker, Grove Weidenfeld
- Gardening with Trees and Shrubs in Ontario, Quebec and the Northeastern U.S., 1996. Trevor Cole, Whitecap Books
- Manual of Woody Landscape Plants, 6th Edition 2009, Michael A. Dirr, Stipes Publishing, LLC.
- Taylor's Guide to Shade Gardening, 1994, France Tenenbaum, Editor, Houghton Mifflin Company

Cornell staff

Abbreviations: D: Deciduous; E: Evergreen; H: Height; W: Width;

Measurements: Defined as height in feet followed by width in feet. inches as noted.

Zones: All plants Zone 5 appropriate except noted (Zone 5b.)

***Buddleia davidii* (Shows invasive qualities)**

Butterfly Bush

D. 10-15'H x 7-12'W. Full sun. Flowers bloom on new wood. Prune to ground each year before spring. Easily transplanted.

Michael Dirr's favorite cultivars by color:

White

'Nanho Alba': 6-8'H x 5-6'W. Compact, haystack like habit.

'Peace': 2/3 size of species.

'Silver Frost: Silver grey foliage.

Lavendar

'Blue Chip': 18'H x 2-3'W. Compact spreading mound.

'Ellen's Blue': Deeply blue saturated flower color.

'Griffin Blue': Blue green foliage.

'Moonshadow': Dark blue green foliage. Lilac purple flowers.

Pink/Mauve/Rose

'Summer Beauty': Compact 5-6'H. Deep rose color. True rose-flowered form.

'Summer Rose': 8-10'H x 7'W. Vigorous growth habit. Flowers are mauve rose colored.

'Pink Delight': Grey green foliage with true pink flowers.

Purple/Lavender/Magenta

- 'Adonis Blue': Richly saturated blue purple flowers.
- 'Attraction': Red flowers.
- 'Guinevere': Common cultivar with deep purple flowers.
- 'Miss Ruby': 5-6'H. Rose red flowers.

Yellow

- 'Honeycomb': Yellow flowers.

Buxus

Reader, please note: In Autumn, 2011, *Cylindroccladium buxicola* or box blight was identified in a number of eastern seaboard states as. Susceptibility to this disease by 24 commercially available cultivars was conducted and evaluated at North Carolina State University in 2012. In general, *B. mycophylla* may be less susceptible and *B. sempervirens* may be more susceptible to *C. buxicola*. Cultivars labeled **CbT** are tolerant to the disease. Those labeled **CbMT** are moderately tolerant. **Unlabeled** cultivars have not been evaluated. Please see endnote for additional evaluation information.

Buxus microphylla

Little Leaf Box, Boxwood

E. 3-4'H x 3-4'W though it can become much larger. Evergreen, compact, broad-rounded form. Sun to part shade. Medium green summer foliage changing to yellow-green-brown in winter. Do not mulch deeply, plant's roots are at surface. Prune late spring after first growth. Prefers neutral to slightly acidic soil.

- 'Compacta': 1'H. Extremely slow growing cultivar.
- 'Faulkner': 4'H x 5'W. Foliage is rounded. Extremely cold hardy.
- 'Green Beauty': Variety of *japonica* form. Tolerates negative 10° weather. **CbT**
- 'Golden Dream': 2'H x 2'W. Tight compact habit. Bright green foliage with golden border. **CbT**
- 'John Baldwin': 3-4'H x 2-4'W. Upright conical form. New foliage blue tinted slowly fades to blue green. Useful for hedging. **CbMT**
- 'Hamlin': Persistent green foliage throughout winter.
- North StarTM: 2-3'H x 2-3'W. Globe shaped form. Shiny dark green leaves, retain color throughout winter.
- 'Winter Gem': 3-4'H x 3-4'W. *B. sinica* var. *insularis* form. **CbMT**

***Buxus sinica* var. *insularis* x *B. sempervirens* (hybrids)**

Little Leaf Box, Boxwood

E. Hardy, compact shrub with good winter color.

- 'Green Gem': 3'H x 3'W (after 13 years.) Densely mounded, slow growing, requires little pruning. Green foliage through winter. **CbMT**
- Green Ice[®]: Extremely hardy with deep green winter color. Blue green flush of new growth.
- 'Green Velvet': 4'H x 4'W. Rounded, dense habit with small dark green leaves.
- 'Nana': 1½'H x 3'W after 15 years. Low mound form. Lime green new growth. **CbT**

Buxus sempervirens

Common Box, Boxwood

- E. Dense, multi-branched shrub. Lustrous dark green foliage. Can bronze in winter. Easily transplanted. Prune in late winter.
- 'Graham Blandy': 9'H x 1½'W (after 20 years.) Columnar, narrow upright form. Foliage somewhat loose and open.
- 'Dee Runk': 8'H x 2½'W after 15 years. Upright, tightly narrow columnar pyramidal form. Slight taper at base. Higher and wider at full maturity. **CbT**
- 'Fastigiata': 8'H x 3'W after 15 years. Similar to 'Dee Runk' with broader conical habit **CbT**
- 'Liberty': 6'H. Narrow columnar habit.
- 'Myrtifolia': 4-5'H. Low growing form.

‘Newport Blue’: 1½’-3’H x 3’W. Dense, slow growing foliage with bluish-green small, rounded leaves. Withstands shearing.

‘Northland’: 4’H x 5’W (after 14 years.) Hardy form from central New York State. Dark green foliage all winter.

‘Pyramidalis’: 10-12’H x 3’W. Tight conical, pyramidal form. Dark green leaves.

‘Pullman’: 3’H x 4’W. Rounded habit. New foliage not injured by late freezes.

‘Vadar Valley’: 2’-3’H x 4’W. Flattish on top, may grow twice as wide as high. Winter foliage gets ‘beaten up’ over time.

Calluna vulgaris

Heather, Scotch Heather

E. 4” x 2’H x 2’W. Evergreen with tiny, needle-like leaves. Needs good drainage; prefers poor fertility soil; full sun. Soil should be half sand/half peat plus the addition of sulphur. Shear in early spring if needed. Good as ground cover or edging. Forms thick mat. Early, mid and late blooming cultivars, July through November.

Cultivars include: ‘Alba’: White flowers; ‘Alba Erecta’: white flower but erect foliage; ‘Atrorubens’: Crimson flower, dense erect-growing grey foliage; ‘Aurea’: Pink flower against golden yellow foliage; ‘Cuprea’: Purple flower against golden yellow foliage.

Caryopteris x clandonensis (C. incana x C. mongholica)

Bluebeard, Blue Spirea, Chinese Beardwart, Verbana Shrub

D. 2-3’H. Blue to bluish flowers, delicate shrub with slender branches and dull blue-grey green foliage. Silver-grey beneath. Good drainage, full to part sun. Prune late winter to encourage new growth. Flowers borne on new foliage. Plant in groups for airy blue-grey swath. Blooms late summer.

Cultivars include: ‘Blue Mist’: Powder blue flowers; ‘First Choice’: deep blue flowers, erect but compact form; ‘Longwood Blue’: 4’H x 4’W, flowers bluish violet.

Note: This plant is on the cusp of Zone 6 – 5b. Plant should sprout from root stock if damaged during winter and subsequently cut back. Check with local nurseries for cultivars that perform well locally.

Cotinus coggygria

Smoke Bush, Common Smoke Tree

D. 10-15’H x 10’-15’ W. Fruiting panicle may look like fluffy smoke. Male and female plant required for flowering. Often cut to ground for vigorous shoot growth which is more colorful than older growth.

‘Purpurea’ (Red or purple leaved smoke bush): New growth purple changing to purplish-green all season.

‘Royal Purple’: Grows 6’-8’H. Dark maroon smoke in June and July.

Cotoneaster D/E

Glossy green foliage and beautiful fruits. Easy to plant and grow. Full sun but tolerates part shade. Prefers good drainage.

C. adpressus (Creeping c.) 6”H. Dwarf, prostrate and often roots where branches touch soil. Glossy green leaves with small pink flowers. Bright red berries. Will trail.

C. adpressus praecox 15”-2’. Low mounding form with a dome-like shape. Dark green foliage with pale pink flowers flushed with deep purplish red. Bright red fruit. Plant as specimen or in front of shrub border.

C. apiculatus (Cranberry c.) 2-3’H x 3-6’W. Horizontally spreading branches. First grows upright then outwards. Tiny pink flowers flushed with purplish red. Reddish-orange berries larger than other cotoneasters.

C. dammeri (Bearberry cotoneaster) 1½’ . Prostrate evergreen, good ground cover plant. Small, white flowers appearing in June. Bright red berries ripening in fall. Glossy dark green foliage.

C. horizontalis (Rockspray c., Rock c., Quinceberry, Plumed c.) 2½’. Can be used as ground over. Bright green foliage turns red and orange in fall. Small red fruits, rarely many.

Daphne

A temperamental plant that demands specific cultural conditions: plant high in well drained, loose sandy soil. Light to medium shade; cool root environment (mulch). Do not move after planting. Highly scented flowers.

D. cneorum

Rose Daphne, Garland Flower

E. 6-12"H (inches) x 2'W (spread.) Evergreen, grey green foliage. Low flat mounding. Good ground cover or for rock gardens. Transplant early spring or fall. Bright rosey pink flowers late April and May often reflowering in early fall.

Cultivars include: 'Alba': 6-8" (inches) x 3-6' (feet) with white to ivory flowers; 'Leila Haines': Dark rose buds opening to bright rose pink flowers. Bushy, compact habit; Pygmaea'; Rose-pink free flowering form with prostrate branches; 'Velky Kosir; Leaves with narrow purplish border turn purple in fall. Dark crimson buds open to red-pink flowers.

D. x burkwoodii (*B. cneorum* x *D. caucasica*)

Burkwood Daphne

E/D. 3-4' H. Semi-evergreen, holds foliage into early winter. Flowers pinkish tinged opening to white. May to early-June flowers. Two clones include 'Albert Burkwood' and 'Somerset'. 'Somerset', 4'H-6'W is larger with lighter flower color and smaller leaves.

Deutzia

D. Full sun. Tolerates light shade. Plant in spring. Blooms late May to early June on old growth. Prune after flowering. Avoid pruning short lateral shoots. Good for massing, facing, unclipped hedge or shrub border.

Deutzia gracilis (Slender Deutzia)

D. 2-4'H - 3-4'W. Low, broad mound. Slender ascending branches. Earliest flowerer. Pure white flowers in late May for one to two weeks. Pale flat bright to deep green summer foliage. Does not effectively color in fall. Slow growth rate.

Chardonay Pearls™: 1-3'H x 1 1/2'-2'W. White flowers with yellow to lemon yellow foliage. Best in partial shade.

'Nikko': 2'H x 4'W. Compact. Forms neat, dense low mound. Abundant pure white flowers. Rich blue green foliage turns dark burgandy in fall. Good for rock gardens, ground cover and borders.

Spring Sensation™: 4-5'H. White flowers from apex to branch base. Bred for cut flower trade.

'Variegata': Leaves broadly-margined with white.

Deutzia x kalmiflora (*D. parviflora* x *D. purpurascens*): D. 4-5'H. Light green foliage may turn plum purple in fall. Pink flowers.

'Mont Rose': Fuschia purple flowers.

'Contraste': Larger flowers similar to 'Mont Rose' with darker stripe on back of petal. Arching habit.

Deutzia purpurascens: D. 5'H.

'Alpine Magician': Erect corona formed by dark purple filaments within white petals.

'Pearl Rose': Pale pink flowers edged with white

'Rosea Plena' ('Pink Pompon'): 3-4'H x 3-4'W. Deep carmine buds striped purplish pink open to double pale pink flowers early to mid June. Full sun for best color. (Zone 5b.)

Deutzia X rosea (*D. gracilis* x *D. purpurascens*): D. Compact shrub with arching branches. Campanulate-shaped pink or white flowers.

'Carminea': 3'H. Pale rosy pink petals, darker pink outside.

Deutzia crenata: D. 6-7'H. White flowers on 4-6" racemes.

'Nakata': Small, single white flowers.

'Aureovariegata': Irregular lemon yellow patches throughout foliage.

'Summer Snow': Medium green leaves with white markings.

Deutzia x elegantissima (*D. purpurascens* x *D. scabra*) (Elegant Deutzia)

D. 4-6'H. Upright branching habit. Pinkish white flowers carried on many-flowered loose, erect cymes. Dull green foliage.

'Rosalind': 4-5'H. Good form with carmine-pink flowers.

'Acurata': Pink buds open to white flowers.

'Conspicua': Pink buds open to white flowers in rounded corymbs.

'Faciculata': Dark pink buds open to lighter pink flowers.

Deutzia x lemoinei (D. gracilis x D. parviflora) (Lemoinei Deutzia)

D. 5-7'H x 5-7'W. Dense, twiggy, round, erect-branched form. Showy white flowers cover plant. Medium green foliage turns yellow in fall, not showy. One of the hardiest.

'Avalanche': 4'H. Dense, compact habit. White flower cluster on arching branches.

'Compacta': Dwarf cultivar with compact form. Pure white flowers in dense clusters.

'Spring Sensation': 4-5'H x 4-5'W. Compact spreading. Garlands of white flowers from apex to base of each branch. Medium green summer foliage turning burgundy in fall.

Deutzia scabra (Fuzzy Deutzia)

D. 6-10'H x 4-8'W. Coarse, oval round topped shrub. Arching branches give loose open appearance. Dull olive green foliage. No fall color. Flowers pure white tinged pink outside. Flowers blooms early June on upright panicles. Consistent year to year flowering.

'Candissima': Double, pure white flowers.

'Godsall Pink': Double, clear pink flowers.

'Macrocephala': Large, bell shaped white flowers.

'Pink Minor': 2-3'H. Dwarf growth habit. Delicate pink flowers with rich green foliage.

'Plena': Double flowers with rose purple on outside.

'Pride of Rochester': Light rosy pink tinge flower paler than 'Godsall Pink.'

'Variegata': Leaves splashed with white variegation. Not overwhelming.

'Watereri': Flowers 1" across, single. Petals rosy outside.

Note: Variegated Deutzia species are inclined to revert to green.

Erica

Likes full sun to semi-shade. Easily transplanted. Requires moist, acidic, low fertility, well drained soils. Do not prune into leafless wood. Good as ground cover or in rock gardens.

E. carnea

Spring, Winter or Snow Heath

E. 6-10"H x 20"W (inches.) Evergreen with tiny, needle-like leaves. Leaves bright to rich green. Some cultivars with yellow, orange and bronze foliage. Shear in early spring if needed. Good as ground cover or edging. Flower color from white to red. Light green buds for next year's growth adds interest. Hundreds of cultivars available.

E. vagans

Cornish Heath

1'-1½'H. More upright than *Erica carnea*. Pink or pinkish flowers August through October. Needle like dark green foliage. Yellowish to grey stems. Spreading form. 'Alba' or White Cornish has white flowers.

Hibiscus syriacus

Shrub Althea, Rose-of-Sharon, Shrubby Althea

D. 8-12'H x 6-10'W. Narrow growing, mostly vertical shrub. Late summer, early September blooms. Transplants well. Move only in spring. Prefers soil with heavy organic matter. Mulch. Water during draught conditions. Full sun preferred. *Note: Tree forms available with single stem and branching top.*

Numerous cultivars available including: 'Diana': Large pure white flowers remain open at night; Blue Bird' ('Blue Bird', 'Oiseau'): Clear blue flower with small red center; 'Lavendar Chiffon': Deep lavender flowers with ruffled anemone center, red-maroon eye; 'Rose Satin': Single, rose pink flowers; 'Russian Violet'; Single purple flowers with dark centers.

Kolkwitzia amabilis

Beautybush

D. 6-10'H x 8' W. Large upright shrub with branches that arch around the perimeter creating a fountain effect. Foliage unremarkable – red in autumn. Pink, yellow-throated, flaring bell-shaped flowers in late May to early June (if weather is cold.) Full sun and well drained soil. Easily transplanted. Prune older stems yearly. Rejuvenate by cutting to ground.

Leucothoe

E. Broad leaved evergreen with small white wax-like flowers. Prefers soil with plenty of peat for moisture retention. Plant in spring only.

L. fontanesiana (Native)

Drooping Leucothoe, Fetterbush, Dog Laurel, Dog-Hobble

E. 3-6'H x 3-6'W. New foliage bright green, bronze to purple changing to shiny dark green. Green, bronze, reddish purple foliage in winter (continues through winter unless drops from cold.) Arching stems. Small white flowers. Small fruit, not showy. Transplants readily. Partial to full shade. Tolerates sun if not too dry. Spreads by underground stems to form clump. Difficult to know spread size.

Cultivars include: Carinella™: Compact, low growing with arching shoots, foliage with reddish margin; 'Lovita': Mounded, compact habit with deep red-bronze winter foliage.

L. axillaris

Coast Leucothoe, Dog-Hobble

E. 2-4'H x 3-6'W. Hard, dense, low form with arching branches. Glossy dark green leaves and tiny bell like flowers in April and May. Prefers part shade.

Cultivars include: 'Augusta Evans Wilson': Compact form; 'Beulah': Compact form; 'Marcaria': Compact form larger than 'Augusta Evans Wilson'; 'Sarah's Choice': 4'H x 4'W, low mounding with arching branches. New foliage red in springtime, shades to burgundy in fall. Abundant flowers in April.

Mahonia

Reddish bronze leaf when unfolding to glossy yellow green to lustrous dark green by summer. Evergreen shrub with holly like leaves and yellow flowers followed by blue or blue black berries. Foliage turning purplish bronze in fall through winter. May brown, spot or drop from winter sun and wind but will recoup in spring. Prefers shade but will tolerate sun. Plant where sheltered.

M. acquifolium

Oregongrapeholly, Oregon Grapeholly, Oregon Holly Grape, Oregon Grape, Holly Barberry

E. 3-6'H (will grow to 9'), spread 3-5'W. Will sucker and form colonies/clumps. Abundant cultivars. Can be pruned. Bright yellow flowers bloom in late April/early May followed by fruit that colors in July.

'Apollo': Low growing, ±2'H, with conspicuous golden orange flowers. Purple winter foliage.

'Compactum': Dwarf form, 2-3'H. Bronze winter foliage color.

'Donewell': Broad-arching to 3'H.

'Golden Abundance': Heavy yellow flowers borne against bright green foliage. Vigorous, erect, dense form with blue berries.

'King's Ransom': Upright form with dark green/blue foliage. Bronze-red-purple winter foliage.

'Moseri': 3'H, bronze-red or orange new leaves turn apricot, then apple green and finally dark green.

'Orange Flame': Blazing bronze –orange new foliage. Erect grower with wine red or deep green older foliage. Needs full sun.

'Smargard': Glossy emerald green leaves. Deep yellow flowers. Bronze to red-purple winter foliage.

M. repens

Creeping Mahonia

E. 10-18"H. Evergreen ground cover, plant of stiff habit. Dull bluish-green leaves. Rich purple foliage in winter. Flowers deep yellow in April. Fruit, black grape-like, August – September.

Microbiota decussata

Russian Arborvitae, Siberian Cypress

E. 1'H. Indefinite spread. Branches in flattened spray like *Thuja*. Soft textured scale like sprays. Bright green in summer changing to bronze purple to brown in winter. Spreading. Some shade acceptable. (Several cultivars: 'Gold Spot', 'Jacobsen', 'Trumpenburg')

Pieris

Andromeda, Lily-of-the-Valley Shrub, Japanese Pieris, Portuna

Broad leaved evergreen, glossy leaves, upright and arching stems with white flower clusters in April. Prefers light shade and shelter from winter wind. Slightly acid soil.

P. floribunda

Mountain Andromeda, Mountain Fetterbush

E. 2-6'H x 2-6'W. Thick dark green foliage, waxy bell shaped flowers in April for two to six weeks.

P. japonica

Japonica Andromeda, Japanese Andromeda

E. 9-12'H. x 6-8'W. More tender than floribundas to winter cold. New foliage yellow-green to bronze. Shelter near building.

Cultivars include:

'Blush': 5'H x 5'W. Rose pink flowers fade with maturity. Open elegant habit.

'Cavatine': 2-3'H x 2-3'W'. Cold hardy, long lasting flowers.

'Compacta': 6' Dense foliage, leaves on-half size of species norm. Heavy flowering.

'Cupido': 3'H x 4-6'W. Bronze new growth. White flowers borne in upright panicles.

'Dorothy Wyckoff': Compact form. Dark red flower buds opening to pale pink.

'Firecrest': New growth bright red.

'Grayswood': 4-5'H x 4-5'W. Bronzy green new growth. Matures to dark green. Forms dome-shaped outline.

'Mountain Fire': New growth fire-red. White flowers.

'Nocturne': Slow growing dwarf with white pendulous flowers. Good rock garden shrub.

'Red Mill': Extra hardy. New foliage red, changing to green.

'Shojo': Black-red flower buds open to red.

Sweetwater®: Long flowering, 7 ½ to 8 ½ weeks. Wine red buds open to white.

'Wada's Pink': 4'H x 4'W. Compact habit. Deep pink buds, clear pink flowers.

Picea abies

Norway Spruce

E. 40-60'H x 25-30'W. Dark green foliage. Shallow spreading roots. Likes acid to average soil. Full sun. Will tolerate extremely light shade.

"Dwarf" cultivars:

'Nudiformis': Bird's Nest Spruce, 3-6'H over many years.

'Procumbus': 2-3'H. Flat topped, branches .

'Pygmaea': 4-6'H x 8-10'W. Broad spreading mound.

'Repens': Wide spreading, gradually builds up in center.

Picea glauca

White Spruce

E. 40-60'H x 10-20'W. Pale or dull blue green foliage. Tolerant to heat, cold, wind and crowding. Best grown in moist loam.

"Dwarf" cultivars:

'Caerulea': 6'H x 3'W. Silvery, gray-blue needles.

'Conica' (Dwarf Alberta Spruce/Dwarf White Spruce): 10-12'H after 20 years.

'Ed Hirle': 4'H x 1½'W after 10 years.

'Elf': Softball sized dwarf.

'Little Globe': 2'H x 2'W after 20 years. Medium green needles, large buds.

'Sander's Fastigiata': Tight dwarf with gray-green needles.

***Potentilla fruticosa* (Native)**

Bush Cinquefoil, Cinquefoil, Buttercup Bush, Five Finger Blossom, Five Finger Grass

D. 1-4'H x 2-4'W (or larger in spread.) Bushy upright shrub. Silvery grey green foliage unfolding to bright green to dark green at maturity. Flowers vary in shades of yellow to single white blossom. Most flower profusely for extend periods of

time. Tolerates most soils except wet. Tolerates light shade (though less bloom.) Use as hedge or specimen or in front of a border. Fall color green to yellow brown (not ornamental.) Hundreds of cultivars.

Note: For ease of presentation the following list treats *P. fruticosa* as a polymorphic species including the following: *P. arbuscula*, *P. davurica*, *x friedrichsenii* and *P. parcifolia*.

- 'Abbotwood': 3'H x 3'W. Dark bluish green foliage. Large white flowers over extended period of time.
- 'Apricot Wisper': 2-3'H x 2'W. Light green foliage with apricot flowers. Oval rounded habit.
- 'Boskoop Red': Flame red flowers early in season. Becoming lighter later in heat of season. Bright green foliage. Semi-dwarf plant.
- 'Coronation Triumph': 3-4'H x 3-4'W. Dense, full, and mounded form of soft dark bluish green foliage. Numerous bright yellow flowers.
- 'Daydawn': Handsome form in cool climate: Peach pink flowers suffused with cream fade in heat to cream. Tall mounded form. Medium green foliage.
- 'Gold Drop': 2'H x 3'W. Very bright yellow flowers.
- 'Hopleys Orange': 2'H x 2'W. Rounded habit. Flowers warm deep orange on and off for several months.
- 'Klondike': 2'H. Dwarf, compact shrub with large deep yellow flowers.
- 'Lemon Drop': 2'H. Blooms sulphur yellow flowers continually from June until frost.
- 'Limelight': Free flowing, soft yellow flowers with bright yellow centers. Bright green foliage.
- Marion Red Robin®: Low spreading habit with deep red flowers.
- 'Moonlight': 3'H. Dark blue green leaves and pale yellow flowers. Blooms from intermittently from June until frost.
- 'Mt. Everest': 3'H. Upright, vigorous growth. Dark green leaves with 1" white flowers.
- 'Orangeade': Upright habit, bright green foliage, flowers orange-red.
- 'Pink Pearl': Large, mid-pink flowers on a neat, mounded, spreading shrub.
- 'Pretty Polly': 1'2"H x 1'6"W. Small, salmon-pink flowers on compact shrub.
- 'Red Sunset': Orange flowers fading to yellow.
- 'Ruth': Small, erect shrub with nodding, bell-shaped cream flowers.
- 'Tangerine': 2'H x 4'W. Mounding, spreading shrub. Medium yellow, pale copper-orange or flushed with copper red flowers. In full sun, yellow flowers.

Rhus aromatica (Native)

Fragrant Sumac, Sweet-Scented Sumac

D. 2-6'H. Upright form, wider than tall and needs plenty of room to spread. Small yellow leaf clusters before opening in May. Red berries, ¼", in early summer. Foliage turns orange and scarlet in Autumn.

Spirea species

D. Two distinct groups of spring blooming and summer blooming shrubs. Flowers growing close to stems or as flat topped clusters at end of branch. Cultivars vary greatly in height and bloom time. Few have decorative foliage. Easy to grow and move. Thrive in sun or light shade (can be pruned to ground in spring if needed.)

Hundreds of cultivars including:

x bumalda (*S. albiflora* x *S. japonica*; 'Anthony Waterer'): 2-3"H x 3-5'W. Leaf unfolds pinkish reddish. Matures dark bluish green. Bronzy red to purplish in fall, seldom spectacular. Perfect white to deep pink flat top flowers on borne on new wood. Blooms June into August. Deadheading will promote additional bloom. Can be used for massing or as filler plant.

S. japonica: 4-5'H x 4-5'W. Normal flower color is rosy pink to carmine. Rarely white. Excessively variable species with a multitude of cultivars.

- 'Abigal': 2'H x 3'W. Yellow foliage turning green in summer heat. Pink flowers in mid-May.
- 'Abiflora': 2-3'H x 2-3'W. Low rounded, dense habit. White corymbs appear in late June-July. Flowers on new wood.
- 'Anthony Waterer': 3-4'H x 4-5'W. Late May and June flat topped 4-6" carmine-pink flower. Leaves open brownish-red, changing to green, then wine-red to russet red in fall.
- 'Atrosanguinea': 3-4H x 3-4'W'. Spring foliage reddish. Strong purplish red large flat flower clusters in late June to early July. Deadhead for rebloom.
- 'Bullata': 12-15"H. Ground cover. Thickish blue-green foliage. Deep rosy pink 3" diameter corymbs in June and July.

‘Candlelight’: 2-3’H Compact mounded, flat-topped habit. Light pink flowers. Soft butter yellow foliage turning orange-red in fall.

Double Play™ Gold: 16”-24”H. Compact, low mounded habit. Vibrant pure golden foliage, pure pink flowers.

‘Firelight’: 2-3’H x 3-4’W. Deep orange new growth. Does not turn completely green. Fiery red fall foliage. Pink corymbs.

‘Flaming Mound’: 24”H x 24”W. Flaming red foliage, red buds turning yellow with small dark pink flowers. Mounded habit.

‘Genpei’ (‘Shirobana’, ‘Shibori’): 3-4’H x 3-4’W. Flowers early to mid-June. Flowers recurrent through summer without deadheading. Shrub has deep rose, pink and white flowers often on same stem!

‘Gold Mound’ (‘Goldmound’): 2½-3½’H x 3-4’W. Low mounded form with lavender-pink flowers in May and June. Golden colored leaves throughout the growing season. Some fading to yellow-green in summer heat. Orange-red fall color.

‘Golden Globe’: 10”H x 10”W. Salmon–pink new growth changes to golden yellow color. Holds color to fall then turns pink. Dense globulus shrub in sunny, dry locations.

‘Green Globe’: 7-8”H x 10”W. Vigorous compact habit. With small bright green leaves. Brilliant purple-red in fall. Light pink flowers June to September.

‘Little Princess’: 2’H x 3’W. Dense mounded habit. Deep pink flowers.

Pink Taffeta™: 2-3’H x 3’W. Slightly larger than ‘Little Princess’. Purple-gold fall color.

Royal Prince™: 3’H x 4’W. Shoots emerge burgundy. Dark green mature foliage. Burgandy-red fall foliage. Pinkish purple flowers.

‘Snowball’: Ball-shaped white flowers. Lighter yellow foliage.

‘Sparkling Carpet’: 4”H x 11”W (inches) in three years. Dense prostate habit. Reddish pink leaves turn yellow. Forms dense multicolored carpet. Flowers are rare or nonexistent.

Var. *alpina* (‘Alpina’, ‘Nana’): 13”-2’6”H. Dense, ground cover, plant in full sun. Soil tolerant. Little pink flower clusters in May, occasionally throughout summer. Blue-green foliage.

x *billiardii* (*Billiard Spirea*): 6’H. Great flower spikes bloom late June through August. Likes to clump. Good border shrub/excellent for massing. Plant in acid soil. Cultivars include: ‘Alba’: white flowered; ‘Macrothyrsa’: 6-8’ long bright pink panicles; ‘Triumphans’’: purplish rose flowers in dense conical panicles.

S. cinerea (‘Grefsheim’): 4-5’H x 4-5’W. Early-flowering, dense shrub with arching stems. Blooms late April.

S. nipponica (‘Snowmound’, Boxwood Spirea): 3-5’H x 3-5’W. Dark green upper leaves with bluish green undersides. Small white flower clusters. Blooms in June. Mounded form.

S. prunifolia (Bridal Wreath) 4-8’H x 4-8W’. Narrow straggly upright growth. Often leggy. Mid-May tiny white flowers along stems. Glossy green foliage turning bright orange in Autumn. Rarely cultivated

S. thunbergii: 3-5’H x 3-5’W. Upright arching, slender branched, loosely spreading with yellowish green foliage turning to yellow tinged with orange and bronze in the fall. One of the earliest to flower, March to April, white florets of 2-5 tiny flowers. Prune winter dieback. Prune to maintain

S. trilobata (Threelobe Spirea): 4-5’H. Dense compact habit. Slender spreading branches with three lobed leaves. Pure white flowers in clusters spaced along stem. Blooms late May to early June. (Cultivar: ‘Fairy Queen’: Dark green foliage and frothy masses of white flowers in May to June; ‘Swan Lake’: 3-4’. Very floriferous; compact.)

S. tomentosa (Hardhack, Steeplebush, *Native*): 2-5’H. Blooms late June through September on current season new growth. Flowers deep rose to white. Not showy. Prefers moist soil.

S. x vanhouttei (*S. cantoniensis* x *S. tribolata*) (Vanhoutte Spirea): 6-10”H x 8-10’W. Fountain or vase-like shape. Round-topped with arching branches re-curving to ground making a tall mound. Very showy flat flower clusters, 1 ½”, in late May. Foliage dull bluish green. During some Autumns, leaves turn purplish. Easy to grow.

Weigela (Old Fashioned Weigela)

D. 6-10’H x 9-12’W. Dense, coarse, spreading branches eventually touching ground. Rounded habit. Deep pink flowers, funnel to bell shaped. Two week primary bloom in May to June. Full sun, well drained soil. Fall foliage not spectacular except noted. Prune older branches after flowering to maintain vigor. Use for shrub border, grouping or massing. Numerous

cultivars. Easy to transplant.

Weigela florida

D. 6-9'H x 6-9'W. Rose pink, trumpet shaped flowers. Growth habit is upright and spreading sometimes with arching branches. Flowers open white tinged deep purplish-pink on outside. Older flowers moderate purplish-pink.

'Alexandra' (Wine and Roses^R): 4-5'H. Rose red blooms against glossy burgundy foliage.

'Apple Blossom': Flowers open white and age to pink. Variegated foliage.

'Aureovariegata': Bright pink flowers. Bright green, cream-edged leaves.

'Bristol Ruby': 6-8'H x 6-8'W. Profuse crimson flowers with slender arching branches.

'Bristol Snowflake': 5-8'H x 5-8'W. White flowered counterpart of 'Bristol Ruby' and more vigorous.

'Candida': 8'H x 8'W. White flowered

'Elvera' (Midnight WineTM): 3'H. Dwarf form of 'Alexandra.'

'Eva Rathle': 5'H x 5'W. Dense erect habit. Purplish red flowers open from purplish red buds.

'Purpurea' (Syn. *W. purpurea*, *W. foliis purpureis*, *W. 'Java Red'*) 4'H x 4'H.

Deep pink flower with paler throat. Bronze-leaved foliage.

'Rubidor': 5-7'H x 5-7'W. Red blooms contrast against gold leaves. Foliage color may fade in summer heat.

'Variegata': 4 1/2'H x 4 1/2'W. Open habit. Blooms white fading to purplish-pink. Foliage edged cream white. Foliage blends well with other shrubs.

'White Knight': 6'H x 6'W. White flowered may bloom sporadically throughout summer. Notable densely branched compact habit.

Weigela floribunda

'Dark Horse': 2'H x 3'W. Deep pink trumpet flowers. Compact, mounded. Deep purple black leaves with lime green venations.

'Fine Wine': 2-2 1/2'H x 3-3 1/2'W. Compact mounded. Pink flowers. Dark burgundy foliage.

'Minuet': 2 1/2'H. Dwarf. Flowers ruby red outside, lilac purple lobes, yellow throat. Reddish tinged foliage. Good cold hardiness.

Nain RougeTM: 2-3'H. Orange red flower. Rich green foliage turning red in fall.

'Red Trumpet': 4'H. Relatively compact.

'Tango': 2'H x 2 1/2'W. ruby flower with yellowish throat. Purple upper leaf, dark green lower

Weigela subsessilis

'Canary': 5-6'H x 5-6'W. Pale yellow flowers fading to pink. May be mixed with pink flowers on same plant. Very early flowering.

Small Trees

Cercidiphyllum japonica

Katsura Tree

D. 40'-60'. Leaves emerge reddish purple and gradually change too bluish green in summer. Fall color yellow to apricot and often apricot orange. pH adaptable. Many cultivars. Not draught tolerant.

'Pendulum': 18'H x 30'W. Mounded with grace blue green foliage.

Salix matsudana

Hankow Willow, Peking Willow

'Tortuosa' (Dragon's Claw Willow): 20-30'H or larger. Hardy and fast growing. Grey branches are gnarled and contorted. Spring foliage light green maturing to dark green to yellow in Autumn. More draught tolerant than other *Salix* species.

***Sassafras albidum* (Native)**

Common Sassafras

E. 30-60'H x 25-40'W. Foliage bright to medium green. Stems bright yellowish green, often red where exposed to direct sunlight. Bark is dark reddish brown forming corky ridges. Fall color progresses: yellow to deep orange to scarlet to purple. Difficult to transplant (balled and burlapped, early spring.)

Boxwood Blight Caused by the Fungus *Cylindrocladium pseudonaviculatum*

The fungus *Cylindrocladium pseudonaviculatum* causes severe defoliation and death of young and container grown boxwood plants, and dieback in older plantings. Most boxwood species are susceptible, including American and English boxwood (*Buxus sempervirens*), little leaf boxwood (*B. microphylla*) and hybrids such as *B. sinica*. Pachysandra is also a host, and can be a source of spores capable of causing new infections. There are a number of other diseases that affect boxwood, and environmental stress plays a role in susceptibility and predisposition to disease. Timely and accurate identification is important in order to control this aggressive new disease.

Boxwood blight was first identified in the United Kingdom in 1994 and then in the U.S. in October of 2011. The disease has been identified in nurseries and landscapes on boxwood and pachysandra. It has now been confirmed in ten states, including NC, CT, VA, RI, MD, MA, OR, NY, PA, OH, and Delaware. It was identified in the UD Plant Diagnostic Clinic in 2012, but came from plants in Maryland. In June of 2013, boxwood blight was identified in a retail nursery in Delaware. *Cylindrocladium* is favored by temperatures between 18 and 25 C and by rainfall or high humidity. Early symptoms include brown leaf spots or tip blight, which can be rather inconspicuous. Twigs and stems later develop black streaks and leaves drop. After moist weather conditions or incubation of samples in a moist chamber, signs of the fungal pathogen may be seen with a hand lens or a microscope. Signs include white clusters of spores of the fungus. It is very important to have this disease accurately identified due to similarity with other diseases, especially *Volutella* blight, which has been common in Delaware for many years. *Volutella* blight is most often associated with boxwood plants under environmental stress, whereas *Cylindrocladium* can affect healthy plants. Spore masses of *Volutella* are pink to orange in color. There is no good control for *Volutella* except to trim out and reduce stress on plants. Boxwood blight, however, can be severe and lead to death of infected plants, and requires remediation and control.

Management and Control of Boxwood Blight

Control is dependent on rapid and accurate diagnosis. Diseased plants should be removed and destroyed if in a retail or nursery situation. Boxwood within 10 feet of affected plants should also be removed. Make sure to clean up all debris and leaves, as sanitation is very important to reduce plant material producing spores. The pathogen can survive for several years in soil and debris, so infected material should not be composted. Following removal of affected material and trimming and sanitation of remaining area, fungicides can be used to protect new growth and unaffected plants nearby. Pruners and tools should be cleaned with bleach or alcohol. Avoid overhead irrigation. Do not bring new boxwood into established landscape plantings.

Adapted from: University of Delaware Cooperative Extension Fact Sheets and Publications-Boxwood Blight by Nancy F. Gregory 6/21/13

Note: Variegated *Deutzia* species are inclined to revert to green.