

Some Favored Shrubs for the Landscape and How to Prune Them

John Woodmansee

Extension Educator, Whitley Co. February 2025



An Equal Access/Equal Opportunity University

Favored Shrubs?

Shrubs are typically not the "WOW" plants in our landscape, but they serve important functions, such as transitional plants, adding color, and wildlife cover.

Likewise, "favorite" can be a misleading word. What I like may not be what you like. And, some of our old "favorite" shrubs are now invasive (e.g. burning bush).

Let's look at a few shrubs that may be on many people's "favored" list, with a heavier emphasis on native shrubs.

<u>Ultimately, Lencourage you to do your own</u> <u>research before choosing</u>!





Shrub or Tree?

There is more of a gradient between shrubs and small trees than there is a well-defined line. Keep in mind that some small trees may be appropriate for your landscape space (e.g. flowering dogwood, redbud, white fringetree).

There are hundreds of possible shrubs and small trees to choose from.

Consider size (height and width), tendency to spread, native habitat, and aesthetics before placement in your landscape. Not every shrub is appropriate in for the windows!

Topics

- Favored shrubs now un-favorites or invasive
- Favored shrubs to consider, their characteristics, and pros/cons
- Favored shrubs that may become problematic
- Shrub Pruning 101
- Resources



Old favorites now unfavorites

- Burning Bush/Winged Euonymous/Winged Wahoo (*Euonymus alatus*)
- Issue: highly invasive in natural areas, but not yet prohibited





Photos: John E. Woodmansee



Old favorites now unfavorites

- Japanese barberry *Berberis* thunbergia
- Woodlands Dense infestations of Japanese barberry provide an ideal habitat for blacklegged (deer) ticks. (Lyme disease)
- Prohibited invasive



Japanese barberry Photo by Richard Gardner, Bugwood.org



Photo by Leslie J. Mehrhoff, Univ. of Connecticut, Bugwood.org



Old favorites now unfavorites

- Border privet, a.k.a. Bluntleaved privet (*Ligustrum obtusifolium*), prohibited invasive
- Amur privet, California privet, Chinese privet, Common privet, (Ligustrum spp.) "Caution" invasive rating (potentially invasive per Indiana Invasive Species Council, IISC)



Border/Blunt-leaved privet Photo: Purdue Arboretum



Shrubs on Indiana Terrestrial Plant Rule (312 IAC 18-3-25) List (Illegal)

- Berberis thunbergii
- Ligustrum obtusifolium
- Lonicera maacki
- Lonicera morrowii
- Lonicera tatarica

Japanese barberry Blunt leaved privet (a.k.a. border privit) Amur honeysuckle **Morrow's honeysuckle** Tatarian honeysuckle









Photos: Purdue Arboretum

GENERAL TYPES OF SHRUBS TO CONSIDER FOR SIZE

Smaller shrubs

- Juniper
- Viburnum (some species)
- Hydrangea
- Holly (evergreen not native)
- Willows
- Native spireas
- Roses
- Magnolias (not native)
- Lilacs (not native)

Larger shrubs

- Buttonbush
- Dogwoods
- Wahoos
- Elderberry
- Hazels
- Deciduous hollies
- Willows
- Sumac
- Ninebark
- Spicebush



Common Juniper (Juniperus communis)

- Habitat Well-drained soils with a wide pH range in Northern North America.
- Landscaping Pros/Cons Evergreen, adaptable to many sites. Several horticultural varieties. Ground junipers for groundcovers. Native but rare in IN, more common north than south. Struggles with high humidity.
- Wildlife Benefit Thermal cover for wintering birds and nesting/escape cover for birds and small mammals. Fruit is used heavily by small mammals, game birds, songbirds, and woodpeckers. Also browsed by deer.

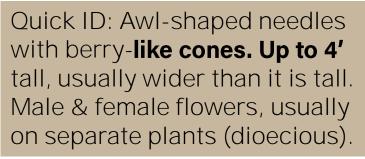




Photo: Oregon State University

Facts & Lore: Holds record for having the largest natural range of any tree or shrub in the world. Used for making gin and food flavorings (mildly toxic for some people). An Equal Access/Equal Opportunity University



Buttonbush Cephalanthus occidentalis

- Habitat wetlands, wet areas, full sun to slight shade. Best native shrub for a wet, poorly drained site.
- Landscaping Pros/Cons Showy, white spikey flowers, up to 9 ft. high. Shiny leaves, red ripening fruit. Planted in an upland site – must water!
- Wildlife Benefit In/near water cover for roosting ducks, nesting for wetland birds. Butterflies, hummingbirds, moths, and bees love the nectar-laden flowers.



Quick ID: Showy white globelike flowers are unique



Buttonbush flower Photo: Purdue Arboretum

Facts: Can grow in water yearround.

Common ninebark (*Physocarpus opulifolius*)

- Habitat Along stream banks, mostly intolerant of shade, but can tolerate a wide variety of soil types and moisture regimes.
- Landscaping Pros/Cons Up to 9 ft. high. Suckers at base and spreads via seed. Beautiful white flowers with purple anthers. Red-colored ripening fruits. Large seed clusters in papery bladders. Peeling bark. Some horticultural varieties available. Replace burning bush? 'Monlo' [sold as Diabolo® or Diablo®] has reddish-purple leaves.
- Wildlife Benefit wildlife cover, some foraging by deer and rabbit. Good nesting for shrub-nesting songbirds.



Quick ID: 2-inch usually 3-lobed leaves, 5-petaled perfect flowers ½ inch wide in 2-inch clusters



Ninebark flower cluster Photo: Ashley Adair

Dogwoods (Cornus spp.)

9 native shrub species (including flowering dogwood tree) + others

- Habitat Mostly shade tolerant, wet areas. Some species tolerate dry conditions and sun.
- Landscaping Pros/Cons white spring flowers, fall color (reds), fruit red, white or blue(ish). When planted, produce root suckers (stoloniferous), giving rise to patches/thickets of dogwoods. Size varies by species.
- Wildlife Benefit Fruit for songbrids and game birds, mammals, browsed by deer. Poor songbird nesting (except for gray dogwood).

Quick ID: Leaf veins all curve toward leaf tip (arcuate), mostly opposite leaf arrangement



Silky dogwood Photo: Purdue Arboretum Red-osier dogwood/ Red twig dogwood in winter Photo: Purdue Arboretum *Stems of older specimens turn green to grayish brown*



An E

Wahoos (Euonymus spp.)

3 native species, other exotics

- Habitat near streams, moist woods, shady spots, but can tolerate some sun. Also along woods edges.
- Landscaping Pros/Cons Fall
 "burning bush" color, susceptible to euonymus scale, size from mostly prostrate (running wahoo) to 6-15 ft tall. At least ½ day sun, gorgeous fall color. Green twigs apparent in winter.
- Wildlife Benefit Preferred deer browse, sparing use of fruits by songbirds and game birds.

Quick ID: Green branches w/ridged twigs, opposite branching @ 90° angles, warty or fleshy red seed capsule



American euonymus/Strawberry bush (I), Eastern wahoo (r) Photos: Purdue Arboretum



An Equal Access/Equal Opportunity University

Viburnums, clockwise from upper left: Arrowwood, Blackhaw, Nannyberry, Am. Cranberrybush



Extension









Photos: Purdue Arboretum

An Equal Access/Equal Opportunity University

"A garden without a viburnum is akin to life without music and art."

Michael Dirr, Manual of Woody Landscape Plants



Mapleleaf viburnum *Viburnum acerifolium*

- Habitat ridges and slopes, tolerates dry conditions, also does well in moist, mesic habitats, shady areas, up to ½ day of sun
- Landscaping Pros/Cons adaptable to almost any site, fuller in sunny areas. Reddish blush to leaves & buds in spring, pink to fading green in fall. Good replacement for Asian bush honeysuckles. Native.
- Wildlife Benefit cover for small mammals & birds, nesting. Fruit is not highly preferred, but used.

Quick ID: Opposite branching, leaves resemble red maple, shiny black fruit, up to 6 ft. tall



Mapleleaf viburnum Photos: Purdue Arboretum



Blackhaw Viburnum prunifolium

- Habitat Openings and forest edges, can form thickets. Adaptable, easy to grow, tough. Probably the most common viburnum in the Midwest.
- Landscaping Pros/Cons can grow up to 15 feet high and 12 feet wide (in the south as tall as 33 feet)! Aesthetic value year-round.
- Wildlife Benefit Edible fruit is also used by mammals, songbirds, turkey and grouse. In thickets, interlacing branches form nesting sites for songbirds.

Quick ID: Leaves opposite, simple, 1.5-3.5" long and 1-2" wide. Lead colored (gray-purple) buds. Flower buds sharp-pointed with bulbous base.



Blackhaw, Photos: Purdue Arboretum Facts/Lore: James Whitcomb Riley wrote, "What is sweeter, after all, than black haws, in early fall?"



Elderberries Sambucus spp.

- Habitat wet sites, moist soil, along streams/ditches. Full sun, tolerates some shade.
- Landscaping Pros/Cons Large white flowers and copious fruit. Rarely used in landscaping but could be used in full sun with lots of room to grow. Can scatter to clumps of plants. Suckers easily.
- Wildlife Benefit Fruit used by the smallest songbirds and many other birds, mammals, and humans. Low cover value, poor nesting for birds.



Quick ID: Copious tiny, juicy, deep purple berries. 5-12 feet height/spread.



Common Elderberry Photo: H. Zell <u>CC BY-SA 3.0</u>, NC State Extension

Facts/Lore: People use elderberries for dyeing, winemaking and baking. High in Vit. C

Hydrangeas Hydrangea spp.

- Habitat moist but not wet soils and partial shading, wooded slopes, pH variable, does not tolerate full sun
- Landscaping Pros/Cons Native (American/Smooth/Wild, *H. arborescens,* Ashy, *H. cinerea*) and other exotic species (Bigleaf, *H. macrophylla, others*) available. Oakleaf hydrangea (*H. quercifolia*) native to southeastern US. Pruning varies (flower on old vs. new wood) – do research. Flowers of native species are less showy.
- Wildlife Benefit Deer browsing, nest site for songbirds, esp. indigo bunting



Quick ID: Small shrub, 3-4 feet, opposite ovate to orbicular leaves, stems < ½ inch.



Wild hydrangea. Photo by David D. Taylor, U.S. Forest Service

Facts/Lore: Bigleaf hydrangea (*H. macrophylla*) – Aluminum determines blue flower color – more available in acidAsoils: Opportunity University

Spicebush Lindera benzoin, Benzoin aestivale

- Habitat Moist to wet woods, poorly drained areas, along streams. Shadeloving.
- Landscaping Pros/Cons Can reach 15 feet high, large basal stems. Yellow fall color. Winter twigs greenish. Plant has a spicy, lemon scent. No cultivars – may be available in native plant nurseries.
- Wildlife Benefit Fruits widely taken by ruffed grouse, wild turkey and songbirds.

Quick ID: Leaves (3-5" long by 1-2.5" wide), aromatic, alternate, simple, oblong-obovate. Yellow flowers early, fire engine-red fruit.



Spicebush, Photo: Purdue Arboretum

Facts/Lore: Fruit was used as a substitute for allspice during the Revolutionary War, when it was **known as "allspice bush."**



An Equal Access/Equal Opportunity University

Hazels *Corylus spp.*

- Habitat Beaked hazel, N. US, Hazelnut, Midwest. Roadside fencerows. Adapted to a wide variety of habitats, wet to dry. Full sun or partial shade.
- Landscaping Pros/Cons Spreading by suckers, can form thickets. Quick growing, can provide screening as a hedge. Adapted to naturalized settings. Fall color in oranges and yellows.
- Wildlife Benefit Cover for nesting songbirds like brown thrasher and cardinal. Nut is an important food source for mast feeders.



Quick ID: Spreading shrub, 10-12 feet, up to 15 feet tall. Alternate simple leaves, doubly toothed.



American hazelnut Photo: Purdue Arboretum

Facts/Lore: The only native shrub that produces a nut. Hazelnut coffee! Beaked hazel has one of the largest natural ranges of any shrub in the U.S. or Canada.

Deciduous Hollies

llex spp.

Possum-haw, Mountain-holly, winterberry/black alder (shown). Many other exotic species of trees and shrubs.

- Habitat Need slightly acid soil. Strongly associated with water, moist soils. Dioecious (male & female) needed close to pollinate.
- Landscaping Pros/Cons Abundant, bright red fruit adds striking color that lasts into winter. Can get tall in full sun, tolerates partial shade.
- Wildlife Benefit Dense and multi-branched for nesting and cover. Fruit is only preferred after other fruit is gone. Wood ducks, waterfowl, mammals, and birds eat fruit.



Quick ID: Bright red berries, lanceolate to obovate leaves. Smooth, gray bark with raised lenticels. Up to 10-15 feet.



Common winterberry Photo: Purdue Arboretum

Facts/Lore: In the Midwest, all native shrub hollies are deciduous. Evergreen – exotic. American holly (native tree) is evergreen.^{Equal Opportunity University}

Willows Salix spp.

- Habitat Associated with wetland sites. Pussy willow is most common willow prized as an ornamental, but prairie willow may also be available. It will thrive in wet areas but will also grow on upland sites. Full sun.
- Landscaping Pros/Cons Needs room to grow or regular pruning to maintain size. Male plants available.
- Wildlife Benefit Occasionally used for birds near wetland areas, browsed by deer.

Quick ID: lanceolate to oblong or elliptic leaves, finely toothed. Much variability; difficult to ID to species. Size variable by species.



Prairie willow buds/flowers Photo: Purdue Arboretum Facts: At least 14 native shrub willows in Midwest. Willows common in N. U.S. to Canada to Alaska.



Cherries

Prunus spp.

Sandcherry (NW IN), Chokecherry – more common throughout IN

- Habitat woods and forest edges, sun to partial shade. Sandcherry – sandy soils, full sun.
- Landscaping Pros/Cons White flowers, red to black fruit, lenticel-rich bark. Subject to diseases. Chokecherry med/lg shrub up to 18 ft.
- Wildlife Benefit Food and cover for wildlife. Fruit is relished by mammals and birds. Nest site for songbirds.

Extension

Quick ID: Alternate, lanceolate to obovate leaves, finely toothed. 5petaled white flowers in dangling dense clusters.



Common chokecherry. Photo: Paul Wray, Iowa State University, Bugwood.org

Facts: Several cherry species from shrubs to small and large trees. The Genus includes plums and other stone fruits.

Spireas Spiraea spp.

Meadow sweet/Meadow spirea, and Hardhack/Steeplebush are native

- Habitat Full sun, moist soils. Prune in late winter. Can rapidly colonize. Large, upright white (Meadow) to pink (Hardhack) flower clusters that can persist for a month or more. Hardhack on borders of dune marshes/wetlands.
- Landscaping Pros/Cons Meadow sweet up to 7 feet tall, normally 3-4 feet tall. Slender, upright.
- Wildlife Benefit Cover for rabbits and other small mammals, songbird nesting

Quick ID: Alternate lanceolate (or similar) leaves. Prominent terminal and axillary flowers



Meadowsweet Photo: Rob Routledge, Sault College, Bugwood.org

Facts: Asian (non-native) forms common in landscapes, esp. Japanese/Bridal-wreath spirea.



Sumacs *Rhus spp.* Fragrant, Dwarf, Smooth, Staghorn

- Habitat ravines, open woods, full sun, a wide range of tolerance to soils from sandy to moist, heavy soils.
- Landscaping Pros/Cons Vibrant fall color, stout upright limbs, prominent fruit clusters in shades of red with hairs. Tough, hardy, easy to maintain. Worthy of consideration.
- Wildlife Benefit Stout stems allow nesting for birds and cover for small mammals. Some deer browse and rabbits chew stems.



Quick ID: Alternate compound leaves, tri-foliate to multiple leaflets







Fragrant sumac (I), Smooth sumac (r) Photos: Purdue Arboretum

Facts: Poison sumac is normally in swampy/boggy areas with yellow-white or gray-white smooth mature fruit

Roses Rosa spp. 7 native species in Midwest, many horticultural varieties

- Habitat full sun, variable soils/sites depending on species
- Landscaping Pros/Cons A favorite of many people, but native varieties less showy. Loved by Japanese beetles and rose slugs (sawfly larvae). Most roses are shrubby, but climbing prairie rose and multiflora rose (invasive) will climb. Some native varieties in nurseries that specialize in natives.
- Wildlife Benefit Rose hips utilized by mammals. Some cover for rabbits & quail.

Quick ID: Native roses have 5petalled pink flowers, thorns. Variability within each species.



Swamp Rose Photo by Will Cook, courtesy of <u>carolinanature.com</u> at <u>https://www.fs.usda.gov/</u>

Facts: The exotic multiflora rose is invasive.



An Equal Access/Equal Opportunity University

Magnolias Magnolia spp. Most are not native, but they behave themselves

- Habitat full sun to partial shade, moist, well-drained soils with high organic matter
- Landscaping Pros/Cons Early flowering. A good, showy landscape shrub, probably not the best shrub next to the house (potential height, window visibility).
- Wildlife Benefit Unknown



Quick ID: Alternate, simple ovate leaves, showy flowers



Star Magnolia, 'Jane' Magnolia

Photos: left, Purdue Arboretum; right, John Woodmansee

Facts: Only two native magnolias - small trees (endangered)

Lilacs

Syringa spp. (Not native)

- Habitat full sun, well-drained alkaline soils
- Landscaping Pros/Cons Fragrant and showy flowers, susceptible to powdery mildew and other pests.
 Without pruning, can become leggy, needing renewal or rejuvenation pruning.
- Wildlife Benefit Unknown

Note: Common lilac (*Syringa vulgaris*) has the potential to become a species of concern.



Quick ID:

Multi-Colored flowers, extremely fragrant, white, pink, reddish, or purple, 8" long flower panicles in May. Leaves simple, ovate or broad-ovate.



Common Lilac Photo: Purdue Arboretum

Facts: Species from shrubs to trees. New England: blooming season called **the "lilac tide." Arnold Arboretum: 400** plants, 180 kinds.

FAVORED SHRUBS THAT MAY BECOME (OR ALREADY ARE) PROBLEMATIC

https://www.entm.purdue.edu/iisc/index.html





INDIANA INVASIVE SPECIES COUNCIL

High – These species are either regulated and prohibited from trade or will be evaluated for potential inclusion as a state regulated species in the future. Medium - According to the assessment the species did not accumulate enough points to warrant regulation in Indiana. Low – The cumulative points for these species indicate minimal risk. Caution – Indicates the assessment could not be completed due to lack of information, but there is potential for invasion and negative impacts in Indiana.

2023

Indiana Invasive Plant List

	Latin Name (click name for species		IISC Invasive	
Common Name	assessment)	Growth Form	Rank	Regulatory Status
Shrub				
Amur honeysuckle	Lonicera maacki	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Amur privet	Ligustrum amurense	shrub	Caution	None None
Autumn olive	Elaeagnus umbeliata	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Bell's honeysuckle	Lonicera x bella	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Bicolor lespedeza	Lespedeza bicolor	shrub	Medium	None
Blunt leaved privet	Ligustrum obtusifolium	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Burning bush	Euonymus alatus	shrub	High	None None
California privet	Ugustrum ovalifolium	shrub	Caution	None None
Chinese privet	Ligustrum sinense	shrub	Caution	None None
Common barberry	Berberis vulgaris	shrub	Caution	None
Common buckthorn	Rhamnus cathartica	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Common privet	Ligustrum vulgare	shrub	Caution	None None
Glossy buckthorn	Frangula alnus	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Highbush cranberry	Viburnum opulus v. opulus	shrub	High	None
Japanese barberry	Berberis thunbergii	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Japanese meadowsweet	Spiraea japonica	shrub	Medium	None
Jetbead	Rhodotypos scandens	shrub	Medium	None
Morrow's honeysuckle	Lonicera morrowii	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Multiflora rose	Rosa multiflora	shrub	High	Prohibited species per IC 14-24-12 and 312 IAC 18-3-13
Russian olive	Elaeagnus angustifolia	shrub	Medium	None
Sericea lespedeza	Lespedeza cuneata	shrub	High	Prohibited Invasive Terrestrial Plants [312 IAC 18-3-25]
Tatarian honeysuckle	Lonicera tatarica	shrub	High	Prohibited Invasive Terrestrial Plants (312 IAC 18-3-25
Wine raspberry	Rubus phoenicolasius	shrub	Caution	None



Rose of Sharon

IISC Rating: Not rated

Hibiscus spp.

- Comments: Full sun to partial shade. Flowers single or double, in wide range of colors (depending on cultivar), are born on new growth, so heavy pruning in the spring enhances blooming later that summer. Pruning to functional size of 4-5' produces excellent habit and flowering. Becomes leggy with age if not pruned. Late to leaf out in spring. Salt tolerant.
- Concern: It has escaped intended plantings to invade, crowd out, and displace more desirable native plants. (US Forest Service)



Photo: Purdue Arboretum



Japanese spirea, Japanese meadowsweet

Spiraea japonica

- Comments frequently used as a landscape shrub.
- Concerns- Capable of spreading rapidly and competing with native species (Feldhaus et al. 2013) USDA National Invasive Species Information Center



IISC Rating: Medium

Photo: Purdue Arboretum



Butterflybush Buddleja davidii

Comments – This plant seeds itself freely and can become quite weedy, so it is best to deadhead the old flowers, before they can go to seed. This also encourages further blooming.

The flowers of this large, tough shrub attract a considerable amount of butterflies, as its name would imply.

IISC Rating: Not rated



Photo: Purdue Arboretum



PRUNING Shrubs

Do you have the patience to do it right?





TYPICAL PRUNING TOOLS FOR SHRUBS









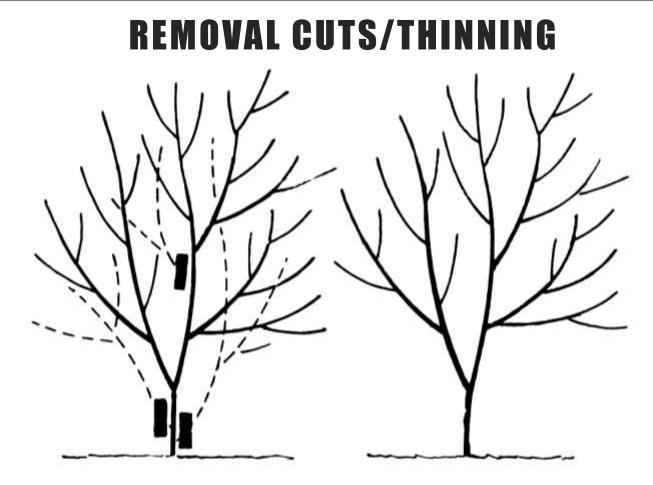


PRUNING MULTI-STEMMED SHRUBS

- Combination of removal (thinning) and reduction (heading back) cuts
- Prune out up to 1/3 of oldest stems (thinning)
- Vary heights of heading back cuts (control size)
- Avoid "sheared" look unless formal hedge







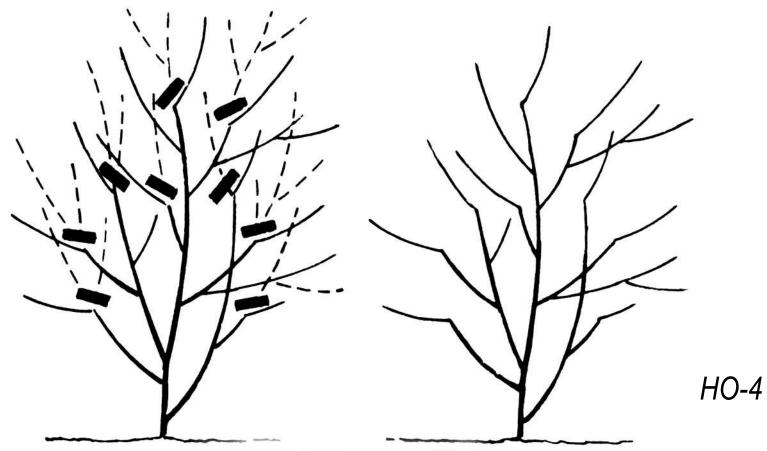
Completely removing a shoot: back to main branch or to ground



An Equal Access/Equal Opportunity University

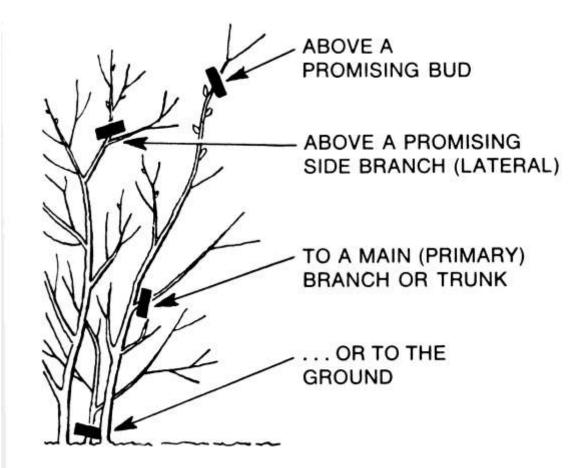
HO-4

REDUCTION CUTS/HEADING BACK





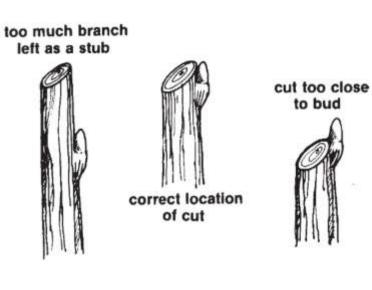
WHERE TO PRUNE?





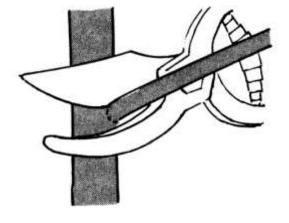
PRUNING CUTS

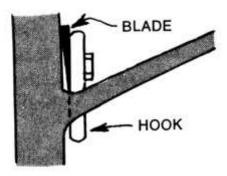
Prune about ¼ inch above a bud



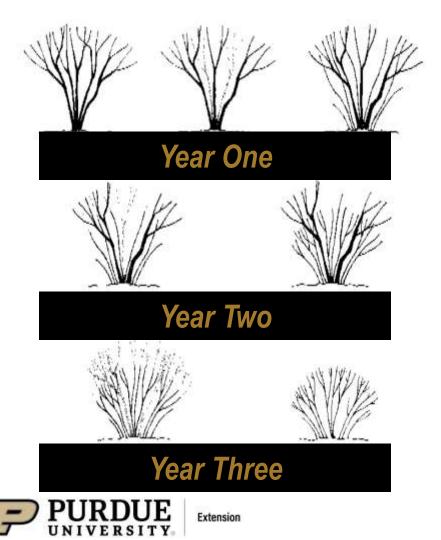
HO-4-W







RENEWAL PRUNING – 3-YR PLAN



Thin 1/3 of oldest growth each year

HO-4-W

REJUVENATION PRUNING – CUT TO GROUND



Landscape plants that may be rejuvenation pruned:

Butterflybush, forsythia, shrub-althea, rose of Sharon, smooth hydrangea, oakleaf hydrangea, privet*, spirea, lilac. *Some privet species invasive



Species list from HO-4-W

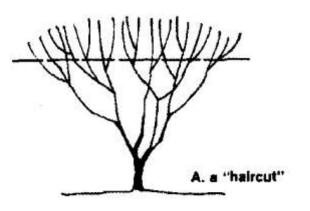
HOW WOULD YOU PRUNE THIS LILAC?

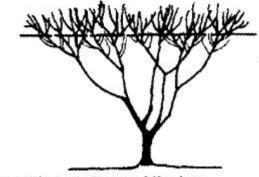
- Lilac wood is often 3 years old before it flowers
- Lilac is a plant that can withstand *rejuvenation* pruning (pruning completely to ground)
- Or, use renewal pruning: thin out 1/3 of oldest growth (repeat next year if necessary)





AVOID "HAIRCUT" PRUNING





B. new growth occurs only at the lop





HO-4-W

PRUNING EVERGREEN SHRUBS



- Prune to natural form (don't try to make a "box" of this shrub)
- Use combination of thinning and heading cuts
- On heading back cuts, don't prune back to bare wood (branch will remain barren)



PRUNING EVERGREEN SHRUBS

 Taxus spp. (Yews) are the exception to not pruning back to bare wood – new growth will occur on bare wood stems

Photos: John Woodmansee







2 years later An Equal Access/Equal Opportunity University

PRUNING PINES AND SPRUCES

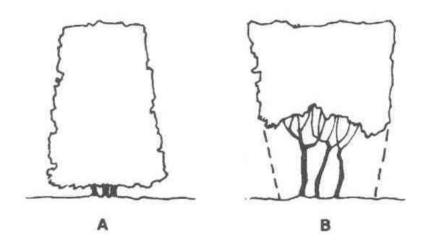




- To thicken new growth, pinch out ½ of the "candle" (new shoot) when it is about 2" long in spring
- Do not use pruning shears, since they damage needles
- Prune annually
- Effective on Mugo pine (shrub)



PRUNING HEDGES



- Prune row of plants as a single unit
- Which Hedge is Properly Pruned? Why?

Image from HO-4



Thank you!

John E. Woodmansee

Extension Educator, Agriculture and Natural Resources

Whitley County

jwoodman@purdue.edu

References:

Shrubs and Woody Vines of Indiana and the Midwest, by Sally Weeks and Harmon Weeks, Jr.

The Folklore of Trees and Shrubs, by Laura C. Martin

Purdue Arboretum Explorer, https://www.arboretum.purdue.edu/explorer/

Photos as referenced

For educational purposes only – not for sale.

