TREE AND SHRUB ID GUIDE
for LIVE STAKE HARVESTING

Live Stake Cooperative
Live Stake Cooperative Partners

Chesapeake Conservancy
Pennsylvania Department of Conservation and Natural Resources
Susquehanna University
Merrill Linn Land & Waterways Conservancy
How to harvest live stakes:

Collect live stakes in late fall through early spring while plants are still dormant. Use a pair of loppers or pruning shears to cut straight stems. Each stake should be between 10 – 36 inches long and between ½-inch and 1 ½-inch in diameter. Make a straight cut on the top end of the branch, removing the terminal bud and any side branches. Cut the bottom end at an angle to form a point. The angle cut at the bottom is important so that it gets installed with the proper growth orientation. Do not remove more than 30% of the source plant and allow it to regrow several years before harvesting again. Package and label each species collected appropriately.
**Dormant Cuttings**

1. **Examples of Dormant Cuttings**
   - 3 - 4 Ft. Long
   - 1/2” - 2”

2. **Preparing Live Stakes**
   - 10” - 24” Long
   - 1/2” - 2”

Multiple live stakes can be prepared from one dormant cutting.
TREES
Box elder – *Acer negundo*
Leaf: Opposite, pinnately compound, 3 to 5 leaflets (sometimes 7), 2 to 4 inches long, margin coarsely serrate or somewhat lobed, shape variable but leaflets often resemble a classic maple leaf, light green above and paler below.

Flower: Species is dioecious; yellow-green, in drooping racemes; appearing in spring.

Fruit: Paired V-shaped samaras, 1 to 1 1/2 inches long, in drooping clusters, light tan when ripe in fall, persist throughout winter.

Twig: Green to purplish green, moderately stout, leaf scars narrow, meeting in raised points, often covered with a glaucous bloom; buds white and hairy, lateral buds appressed
River Birch – *Betula nigra*
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**Leaf:** Alternate, simple, pinnately-veined, rhombic to ovate, 1 1/2 to 3 inches long, conspicuously doubly serrate, with a wedge-shaped base, green above, paler and fuzzy below.

**Flower:** Species is monoecious; preformed, reddish green, male catkins near the end of the twig, 2 to 3 inches long; female catkins upright, 1/4 to 1/2 inch long, light green, appear or elongate (males) in mid-spring.

**Fruit:** Cone-like, aggregate, 1 to 1 1/2 inches long, with many hairy scales, reddish brown, containing many tiny, 3-winged seeds, ripen and break apart in the fall.

**Twig:** Slender, orangish brown in color, smooth or slightly pubescent, with the terminal bud absent. Lateral buds may be slightly pubescent. No wintergreen odor when cut.
Tuliptree - *Liriodendron tulipifera*
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**Leaf:** Alternate, simple, palmately veined, orbicular, 4-lobed with an entire margin, 4 to 8 inches long, notched to flat top. Somewhat shaped like a tulip, light green to green.

**Flower:** 2 1/2 inches long, with yellow-green petals and an orange corolla, appearing in late spring to early summer.

**Fruit:** An oblong (cone-like) aggregate of samaras (2 inches long), deciduous at maturity; each samara is 1-winged, 1 1/2 inches long, and curved upwards at seed cavity; maturing August to October and disseminating through late fall and winter; base whorls of samaras persist on fruit into following spring and resemble wooden flowers high in the tree.

**Twig:** Red-brown in color, often with a shiny appearance or a waxy bloom. Stipules are large and encircle the twig; buds are elongated and valvate, resembling a "duck bill". Twigs have a sweet, spicy odor when broken.
Sycamore – *Platanus occidentalis*
**Sycamore – *Platanus occidentalis***

**Leaf:** Alternate, simple, palmately veined, 4 to 8 inches wide, ovate in shape, with three to five lobes, margins coarsely toothed, petiole bases encircle and enclose the buds, veins may be pubescent below.

**Flower:** Species is monoecious; imperfect, both male and females are very small and appear in dense round clusters, typically a single cluster to a stalk, appearing with the leaves.

**Fruit:** A spherical multiple of achenes borne on a 3 to 6 inch stalk. Each seed is tiny, winged, and 1/2 inch long; maturing in November, disseminating in late winter.

**Twig:** Obviously zigzag, quite stout and orange-brown in color; leaf scar surrounds the bud and the stipule scar surrounds the twig; terminal bud is absent; lateral buds are reddish, resinous, with a single, cap-like scale.
Quaking Aspen - *Populus tremuloides*
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**Leaf:** Alternate, simple, 1 to 3 inches long, green above and paler below, heart-shaped to nearly round with a fine toothed margin, petiole is flattened.

**Flower:** Species is dioecious; male and female hanging catkins 1 to 3 inches long.

**Fruit:** Catkin (2 to 4 inches long), with attached light green capsules which contain many small hairy seeds.

**Twig:** Slender, glabrous, reddish brown often with a gray, waxy film; buds conical, reddish brown, terminal bud 1/4 inch long, may be slightly resinous.
Pussy Willow – *Salix discolor*
**Pussy Willow – Salix discolor**

**Leaf:** Alternate, simple, elliptical to oblong, weakly serrated, 2 to 4 inches long, may be fuzzy, blue-green above, pale almost white below.

**Flower:** Species is dioecious; catkins, both males and females very fuzzy, silvery gray, 1 inch long, appearing in late winter or very early spring.

**Fruit:** Small, brown capsules in clusters 2 to 2 1/2 inches long, each containing many small fuzzy seeds, ripen in late spring.

**Twig:** Slender, green or red, may be fuzzy, buds purple-red with a single cap-like scale.
Black Willow – *Salix nigra*
Black Willow – *Salix nigra*

**Leaf:** Alternate, simple, pinnately veined, lanceolate in shape, 3 to 6 inches long, with a finely serrate margin. Leaves are dark and shiny above, light green below.

**Flower:** Species is dioecious; flowers are tiny, green, borne on catkins, 1 to 3 inches long, early summer.

**Fruit:** Cone-shaped capsules that contain many small, cottony seeds, borne on catkins; capsules split at maturity, mid summer.

**Twig:** Slender, orange-brown in color, with a bitter aspirin taste; buds are small and appressed, covered by one bud scale, the terminal bud absent; stipules/scars are obvious.
Silky Willow – *Salix sericea*
**Silky Willow – *Salix sericea***

**Leaf:** 6–10 cm long, 7–8 mm wide, glaucous (whitened) and sericeous (silky-hairy) beneath.

**Flower:** Catkins are sessile and usually bracteate. *S. sericea* blooms in May and fruits in June

**Twig:** thin and purplish
SHRUBS
Speckled Alder – *Alnus incana*
Speckled Alder – *Alnus incana*

**Leaf:** Alternate, simple, oval, doubly serrated, 2 to 4 inches long, dull dark green above, paler and may be velvety below

**Flower:** Species is monoecious; in small clusters, preformed male catkins are 1/2 to 1 inch long, slender and green; females are much smaller, reddish green, open in early spring.

**Fruit:** Cone-like, 1/2 inch long, brown when ripe, each scale enclosing a very small winged seed, mature in late summer, and persistent

**Twig:** Moderate, gray-brown to reddish brown, velvety, lighter lenticels, buds stalked, plump and reddish brown
Smooth Alder – *Alnus serrulata*
Smooth Alder – *Alnus serrulata*

**Leaf:** Alternate, simple, obovate to elliptical, 2 to 4 inches long, pinnately-veined, finely serrated wavy margin, dark green above, paler and finely hairy beneath.

**Flower:** Species is monoecious; both males and females preformed; males green brown catkins, 1 to 1 1/2 inches; female 1/2 inch long, reddish, opening in early spring.

**Fruit:** Woody, cone like catkin, 1/2 inch long, dark brown with each scale enclosing a tiny, winged seed. Fruit ripens in fall and is very persistent.

**Twig:** Reddish brown with gray fuzz, 3-angled pith; buds are stalked, plump, covered in 2 to 3 red-purple scales, resemble a match head.
Buttonbush – *Cephalanthus occidentalis*
**Leaf:** Opposite or whorled, elliptical, pointed tip, entire margins, 3 to 5 inches long, shiny dark green above.

**Flower:** Small, white tubular flowers occur in a dense round (1 inch across) cluster at the end of a slender 1 to 2 inch stalk, appear mid-summer.

**Fruit:** Round cluster of nuttlets (each 1/4" long), dark brown, mature late summer to fall.

**Twig:** Slender to moderately stout, dark reddish brown, speckled with lighter, elongated lenticels; tips of twigs typically die back; lateral buds small and embedded in bark, leaf scar "D"-shaped or nearly round with a single "U"-shaped bundle scar.
Silky Dogwood – *Cornus amomum*
Silky Dogwood – *Cornus amomum*

**Leaf:** Opposite, simple, oval, 2 to 4 inches long, arcuately veined, margin entire, green above and maybe silky grayish when young, paler below.

**Flower:** Species is monoecious; small, white, in flat-topped clusters, 2 inches in diameter that appear in late spring and early summer.

**Fruit:** Berry-like drupes developing in flat-topped clusters, 1/4 inch in diameter, bluish with white blotches, maturing in late summer.

**Twig:** Red-purple (may be green-tinged), bearing silky gray hairs with a salmon colored pith, buds are narrow, pointed, hairy, sessile, and close to the stem.
Gray Dogwood – *Cornus racemosa*
Leaf: Opposite, simple, ovate to elliptical, entire with arcuate veins, 2 1/2 to 5 inches long, dark green above, lighter below.

Flower: Species is monoecious; small, dull white in upright racemes, about 2 inches across appearing in late early summer.

Fruit: Dull white, 1/4 to 1/3 inch in diameter in rounded clusters, maturing in late summer to fall, fruit stalks remaining red well into winter.

Twig: Slender, gray to reddish brown, buds are dark brown and valvate, bud scales sharp-pointed and appear to have frosted tips, pith very light brown
Redosier Dogwood – *Cornus sericea*
Redosier Dogwood – *Cornus sericea*

**Leaf:** Opposite, simple, arcuately veined, 2 to 4 inches long, somewhat narrow, entire margin, green above, pale below.

**Flower:** Species is monoecious; small, dull white in flat top clusters about 2 inches across appearing in late spring to early summer.

**Fruit:** Dull white, 1/4 to 1/3 inch in diameter in rounded clusters. Maturing in late summer to fall.

**Twig:** Bright red, sometimes green splotched with red, white pith, buds narrow and tapering, flower buds more swollen
Winterberry – *Ilex verticillata*
**Winterberry – *Ilex verticillata***

**Leaf**: Alternate, simple, deciduous, margin sharply toothed, lance to egg-shaped (variable), glabrous and green above, paler and generally hairy below, 2 to 3 inches long.

**Flower**: Species is dioecious; both male and females are stalked and greenish-white with 5-7 petals, usually in clusters, spring.

**Fruit**: Round drupes, 1/4 inch in diameter, reddish-orange to red in clusters of 2 to 4, ripening in fall but persisting through the winter, seeds smooth and smaller (1/8 inch long) than *Ilex decidua* or *I. montana*.

**Twig**: Slender, gray, with scattered light lenticels, buds and leaf scars are small, one vascular bundle scar, tiny, black thorn-like stipules may be present on either side of the leaf scar.
Spicebush – *Lindera benzoin*
Spicebush – *Lindera benzoin*

**Leaf:** Alternate, simple, elliptical, 3 to 5 inches long, pinnately veined, entire margin that may be somewhat ciliate, strong, spicy odor when crushed, green above and slightly paler below. **Flower:** Species is dioecious; small, but due to large numbers they can be showy, yellow, appearing in axillary clusters before the leaves in early spring. **Fruit:** A bright red drupe when ripe (green before ripening), 3/8 inch long with a large seed and a peppery taste and scent, maturing in fall. **Twig:** Slender, olive-green to brown in color, numerous light lenticels, with distinctive, stalked globose buds covered with 2 to 3 yellow-green to brown scales; when broken, a spicy, peppery smell is obvious.
Leaf: Alternate, simple, deciduous, maple-like, palmately lobed (3 to 5 pointed lobes); almost circular in outline, 1 1/2 to 3 1/2 inches in diameter; dark green above and paler below, somewhat pubescent.

Flower: Perfect, small (1/2 inch) white flowers borne in dense, upright, hemispherical clusters, appearing in late spring to early summer.

Fruit: Small (1/4 inch long) brown follicles borne in dense, upright hemispherical clusters.

Twig: Slender and orange-brown; young twigs have tight bark but on older twigs the bark splits and exfoliates in long strips
Elderberry – *Sambucus canadensis*
**Leaf:** Opposite, pinnately compound, 6 to 11 inches long, with 5 to 11 elliptical, serrate leaflets, acuminate tips, bottom leaflets are often 3-lobed, dark green above and much paler below.

**Flower:** Species is monoecious; small, white, borne in dense, flat-topped clusters, up to 8 inches across, appearing in summer.

**Fruit:** Small, berrylike drupe, purple-black, and very juicy, up to 1/4 inch in diameter, borne in flat-topped clusters, maturing in late summer.

**Twig:** Stout, silvery- to yellow-gray with obvious, warty lenticles, large white pith; buds are very small, red-brown and pointed, terminal buds are generally lacking.
Highbush Blueberry – *Vaccinium corymbosum*
Highbush Blueberry – *Vaccinium corymbosum*

**Leaf:** Alternate, simple, deciduous, elliptical, 1 to 2 1/2 inches long, entire or serrated margins, green above, green or sometimes pubescent and paler below.

**Flower:** Small, white, bell-shaped, in clusters (corymbs), appearing in spring with the leaves.

**Fruit:** Small (1/3 inch), dark blue berry ripens in mid to late summer. Fruits are sweet and edible.

**Twig:** Slender, zigzag, green and red; vegetative buds are small, red and pointed; flower buds are considerably larger and round.