



# CAES

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## Woody Vines - Identification and Control

### Oriental Bittersweet

**Scientific Name:** *Celastrus orbiculatus*  
*Thunb.*

**GENERAL DESCRIPTION:** A non-native, deciduous, perennial woody vine that twines around and climbs up trees and shrubs. It grows very aggressively and can reach up to 60 feet tall. Leaves are simple, alternate, elliptic-to-round in shape with slightly toothed margins.



Figure 1: Oriental bittersweet vine smothering a tree.

Flowers are yellow in color, borne in axillary dangling clusters. Mature fruit capsules are yellow in color containing bright red berries inside. Oriental bittersweet colonizes by vegetative sprouting from roots and spreads to new locations through seed dispersal by birds, animals, and humans. Its native counterpart, the American bittersweet (*Celastrus scandens* L.), has terminal white flower clusters and orange

fruit capsules. The two species are cross compatible i.e. can easily hybridize.



Figure 2: Oriental bittersweet leaves, stem, flowers, and fruits.

### Porcelain Berry/Amur Peppervine

**Scientific Name:** *Ampelopsis brevipedunculata* (Maxim.) Trautv.

**GENERAL DESCRIPTION:** A non-native, deciduous, perennial woody vine that can grow up to 20 feet tall. It is highly invasive in the eastern United States. Leaves are heart-shaped and may have entire, toothed, or symmetrically lobed margins. Vines can climb over shrubs, trees, and rock faces with the help of clinging forked tendrils. Flowers are inconspicuous, yellowish in color, and borne in small clusters.



Figure 3: Porcelain berry growing atop trees. Fruits are spherical multicolored berries of white, green, and blue color. Porcelain berry colonizes by a prolific network of vines that root at nodes and spreads to new locations by water, birds, and possibly, animals.



Figure 4: Porcelain berry leaves, tendrils, flowers, and fruits. It can be distinguished from its native counterpart, the heartleaf peppervine (*Ampelopsis cordata* Michx.) which has non-lobed leaves and hairless stems.

### English Ivy

**Scientific Name:** *Hedera helix* L.

**GENERAL DESCRIPTION:** A non-native, evergreen vine commonly seen climbing up trees, buildings and other structures. Some of the older vines have measured over 90 feet in length and 1 foot in stem diameter.



Figure 5: A web of English ivy covering the ground. Leaves are alternate, simple, glossy and dark green with pale or whitish veins. Leaf shape varies with age of the vine; leaves of juvenile plants are three to five lobed and those of mature plants are lanceolate and without lobes. Flowers are greenish-yellow in color and are produced on mature vines, ten years or older.



Figure 6: English ivy leaves, aerial roots, flowers, and fruits. Mature berry-like fruits, called drupes, are dark blue to purple in color. Juvenile vines multiply vegetatively from stem and root fragments. Mature vines may also reproduce via seeds. English ivy colonizes by trailing and climbing vines that root at nodes. Seeds are consumed by birds that are a vector of dispersal into new areas. English ivy is toxic to humans if eaten and

even touching it can trigger dermatitis in sensitive individuals.

**Non-native Wisterias:**

**Chinese Wisteria [*Wisteria sinensis* (Sims) DC.] and Japanese Wisteria [*Wisteria floribunda* (Willd) DC.]**

**GENERAL DESCRIPTION:** Non-native, deciduous, climbing and twining, perennial, leguminous woody vines that can grow up to 70 feet tall. Leaves are alternate, pinnately compound. Leaflets are oppositely arranged and vary in numbers from 7 to 13 in Chinese wisteria or 13 to 19 in Japanese wisteria.



Figure 7: Non-native wisterias overgrowing native vegetation.

Flowers are fragrant and arranged in dangling, showy clusters called racemes. In Chinese wisteria, all flowers in a raceme bloom at about the same time whereas in Japanese wisteria blooming proceeds gradually from the base upwards. Another difference between the two is that the Chinese wisteria vines spiral clockwise while the Japanese wisteria vines spiral in a counterclockwise direction. Nevertheless, the two species are often difficult to distinguish due to possible hybridization. Fruit is a flattened, oblong to oblanceolate legume pod, velvety hairy, and greenish brown to golden in color. Both wisterias colonize by vines that root at nodes and spread to new locations by humans or as water-dispersed seeds along riparian areas.



Figure 8: Chinese wisteria leaves, stem, flowers, and fruit.

Non-native wisterias can be distinguished from their native counterpart, the American wisteria [*Wisteria frutescens* (L.) Poir.], which flowers in June–August, whereas the non-native wisteria flower in March–May.

**Poison Ivy**

**Scientific Name:** *Toxicodendron radicans* L.

**GENERAL DESCRIPTION:** A native, woody vine that may grow as a dwarf, shrubby plant or a prostrate trailer carpeting the ground but usually it is seen climbing trees or other objects.



Figure 9: Poison ivy with typical three leaflets. Leaves are alternately arranged on stems, compound with three leaflets, and have smooth, toothed or lobed edges. In contrast, Virginia creeper, a non-poisonous, poison ivy-look-like, has five leaflets. Newly produced leaves are an interesting reddish color which turn shiny green as they

mature. Leaf surfaces may be glossy or dull with sparse hair on the lower surface. Yellowish-green flowers (June-July) are produced in clusters originating from the leaf axil. The clusters of small, round, waxy, berry-like white fruit appear in late summer and often persist all winter. Poison ivy propagates by underground rhizomes and seeds.



Figure 10: A poison ivy young shoot, flowers, mature foliage with typical three leaflets, and white berries.

Seeds are eaten by birds and other animals which help in its further spread. Poison ivy is a well-known human health hazard. All parts of poison ivy contain a sticky, resin like allergen called “Urushiol” that causes severe dermatitis reaction (itching, rashes, and blisters) in sensitive individuals (~90% Americans). For more information on poison ivy triggered allergic reaction and its treatment visit:

<https://amtrustgroup.com/AmTrust/media/AmTrust/Documents/Loss%20Control%20Docs/PoisonIvyOakSumacFactSheet-1.pdf>

### Virginia Creeper

**Scientific Name:** *Parthenocissus quinquefolia* (L.) Planch.



Figure 11: Virginia creeper with typical five leaflets.

**GENERAL DESCRIPTION:** A native, fast growing, deciduous, woody vine that may grow as a low ground cover or climb up (>50 feet) trees, poles, and other structures by means of tendrils. Leaves are alternate, palmately compound with five leaflets. Leaves are bright green above and pale green below and turn into a regaling red color in fall. The leaflets have jagged margins.



Figure 12: A Virginia creeper shoot, flowers, tendrils, and mature bluish black berries. Inconspicuous, green flowers appear in clusters in spring. Fruits are bluish black berries (toxic if ingested), ¼-inch in diameter and borne in clusters. More information on Virginia creeper biology and ecology can be found at:

<http://edis.ifas.ufl.edu/fp454>

<https://plants.ces.ncsu.edu/plants/all/part/henocissus-quinquefolia/>

### IMPACT

Non-native invasive vines compete with native shrubs and trees for light, water, nutrients, and space. They may grow around and girdle shrubs and trees and constrict their stems and branches. Tangled mats of vines exclude light, smother herbaceous plants and young trees in the forest understory, and make tall shrubs and trees top-heavy, thereby, rendering them susceptible to breakage by wind or under the weight of snow. Monocultures of non-native invasive vines reduce wildlife habitat and biodiversity. Native vines such as poison ivy and Virginia creeper also choke trees, shrubs and desirable under story vegetation. Poison ivy is also a serious health hazard.

### MANAGEMENT

#### Mechanical Control

**Small seedling vines:** Hand pull small plants along with the root crown when the ground is moist. To uproot large woody stems, 2-3 inch in diameter, use a “Weed Wrench”, “Root Jack”, or “Root Talon”.

**Established vines:** Repeated mowing or cutting multiple times during a year, over several years may help control the woody vines.

**\*Poison Ivy:** Often, poison ivy grows among Virginia creeper and other vines and is not easily distinguishable. Always, wear protective clothing, long pants, and long sleeves to avoid accidental contact with the poison ivy plants. Bury the uprooted or cut poison ivy plants. Do not use fire to burn poison ivy because the toxic oil, “Urushiol” vaporizes when hot, and can damage lungs if inhaled or cause rashes if the smoke contacts the skin.

#### Chemical control

**Small seedling vines:** If no desirable plants are growing among or around the undesirable woody vines, make foliar applications of 3 to 5% solution (12 to 20 ounces per 3-gallon mix) of glyphosate (Roundup Pro, etc.) or triclopyr (Garlon 3A, or Garlon 4). Add a non-ionic surfactant (Read the herbicide label).

For controlling woody vines around homes, many products such as Enforcer Brush Killer, Ortho Brush-B-Gon, Ortho® Max® Poison Ivy and Tough Brush Killer Concentrate, and Roundup® Poison Ivy Plus Tough Brush Killer Concentrate are available at local home and garden centers. Apply herbicides for controlling small seedling vines when the plants are young, fully leafed-out, and actively growing. However, mid to late fall cut stump applications, before the first frost and when the leaves are still green, have been found more effective in controlling old established vines.

**Established vines:** For large vines with well-established root system, cut the vines close to the ground and quickly treat the exposed stem with the 20 to 25% solution (5 to 6 pints per 3-gallon mix) of Roundup or Garlon 3A or Garlon 4 plus a surfactant (see the product label) or apply full strength solution of pathfinder II or Enforcer Brush Killer or Ortho Brush-B-Gon, or Ortho® Max® Poison Ivy and Tough Brush Killer Concentrate or Roundup® Poison Ivy Plus Tough Brush Killer Concentrate. Make sure that herbicide does not contact the desirable surrounding broadleaf plants or grasses, or else serious plant injury or death may occur.

Chemical control of woody vines may vary with the vine species, herbicide and rate used, application timing, and environmental conditions etc. In general, triclopyr containing products are more

effective than glyphosate in controlling woody vines.

Often multiple applications over many years are required to achieve satisfactory control. Therefore, monitor the treated plants periodically and repeat the treatment if you observe any regrowth.

#### **CAUTION**

Triclopyr ester formulation (Garlon 4) has high potential for volatilization and off-site movement, therefore, triclopyr containing herbicides should not be used in locations where desirable sensitive species (Ornamentals, fruit trees, grapes, tobacco, tomatoes and many vegetables) grow near undesirable woody vines. Triclopyr will not harm most grasses growing in residential lawns.

Glyphosate is a non-selective herbicide but it is not volatile. It will seriously injure or kill any green vegetation it comes in contact with.

For woody vine control in or near aquatic sites, use appropriate herbicide formulations. Examples include: Rodeo® (glyphosate) and Renovate® (triclopyr). People and pets should avoid passing through treated areas until the vegetation has dried completely. Follow the restricted entry intervals of at least 4 hours for glyphosate, 12 hours (Garlon 4) to 48 hours (Garlon 3) for triclopyr containing products. Before using an herbicide, always read and follow the directions on the product label.

**The mentioning of trade names in this publication is solely for the purpose of providing specific information. The CAES does not guarantee or warranty the products named, and references to them in this publication do not signify our approval to the exclusion of other products of suitable composition.**

#### **INFORMATION SOURCES**

- 1) Oriental Bittersweet Factsheet- USDA Forest Service.  
<http://na.fs.fed.us/spfo/invasiveplants/factsheets/pdf/oriental-bittersweet.pdf>
- 2) Porcelain-berry Factsheet.  
[http://www.fws.gov/delawarebay/Pdfs/Porcelain-berry Fact Sheet%20.pdf](http://www.fws.gov/delawarebay/Pdfs/Porcelain-berry%20Fact%20Sheet.pdf)
- 3) Weed of the Week-English Ivy.  
<http://www.na.fs.fed.us/fhp/invasiveplants/weeds/english-ivy.pdf>
- 4) Fact Sheet on Ivy Removal in a Home Landscape.  
[http://www.woodlandtree.com/assets/1792/ivy\\_removal\\_fact\\_sheet.pdf](http://www.woodlandtree.com/assets/1792/ivy_removal_fact_sheet.pdf)
- 5) Poison Ivy Control:  
<http://archive.lib.msu.edu/DMC/Ag.%20Ext.%202007-Chelsie/PDF/e1517-1988-rev1.pdf>
- 6) Poison Ivy (*Toxicodendron radicans*):  
[http://www.ladybug.uconn.edu/factsheets/tp\\_05\\_poisonivy.html](http://www.ladybug.uconn.edu/factsheets/tp_05_poisonivy.html)
- 7) Poison Ivy Factsheet:  
<http://www.omafra.gov.on.ca/english/crops/facts/99-015.htm>
- 8) Virginia creeper Vitaceae *Parthenocissus quinquefolia* (L.) Planch. <http://dendro.cnre.vt.edu/dendrology/syllabus/factsheet.cfm?ID=126>

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