

WHITE BRYONY: Options for control

White bryony (*Bryonia alba*), a member of the Cucurbitaceae family, is a class-B noxious weed in Franklin County, Washington. White bryony is native to Europe and Northern Iran. Other common names include English mandrake, kudzu of the Northwest, and devil's turnip. All parts of White bryony are poisonous to humans and animals.

White bryony is an aggressive herbaceous perennial vine with climbing stems. Stems have long curling, not branched tendrils and the flowers are from leaf axils. Numerous stems grow from the root each spring, dying back in the fall. If removed manually or by herbicide application, stems can regrow from the roots in the same season. Both male and female flowers are found on the same plant. Flowers are a pale green to white color. Leaves are simple, triangular, alternate, broadly toothed and 3 to 5 lobed. The upper and lower surfaces have small white glands. It has thick, tuberous, fleshy, light yellow roots. Berries range in color from dark green to black at maturity. Berries each contain 3 to 6 ovoid to oblong shaped seeds. Berries are especially poisonous (though all parts of the plant are).



These immature berries are producing seed that may remain viable for many years.



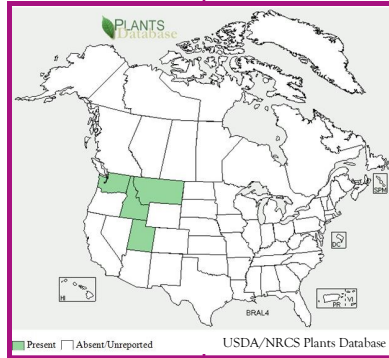
White bryony leaves can vary in size from small to large.



You can see the old vines still attached to this White bryony root.

can kill an adult. The sap of White bryony can cause a rash and irritation. Root, leaves and stems are also considered poisonous.

White Bryony is threatening orchards, urban communities, trees, riparian areas and native and natural habitats. It has been documented in Montana, Nez Perce and Latah counties in Idaho, as well as the SE counties of Washington State. Reports indicate that it is spreading rapidly in all areas.



An extremely aggressive vine, White bryony can grow 6 inches a day with vines growing to 60-150 feet in a season. Curling tendrils help vines climb swiftly covering anything in their path, forming dense mats of foliage. It has a climbing growth pattern similar to kudzu, and will grow into a dense mat when it cannot climb. Numerous pale greenish-white flowers produce dark poisonous berries, each containing 3-6 seeds, from which birds may feed on. Birds are the most common means of transportation. After ingestion they deposit seeds, so bryony is prevalent in trees and bushes and in windbreaks, riparian areas, fence lines, and

wildlife plantings. Vines can present a problem in yards, on buildings and irrigation equipment as well. The leaves can be a food source for Cabbage moth larvae.



Numerous small greenish white flowers develop from leaf axils.



Flowers develop continuously over the growing season.



Tendrils help White bryony climb trees, fences and buildings.

All parts of the plant are toxic to humans, livestock and other animals. The bryonin in the berries and leaves can result in illness and death. Forty berries

Key identifying traits

- **Leaves** are simple, triangular, alternate, broadly toothed and 3 to 5 lobed. The upper and lower surfaces have small white glands. Long curling tendrils, flowers, and fruit all stem from axils of palmately lobed leaves.
- **Stems** are vine-like and can grow over and blanket other plants.
- **Flowers** are monoecious with male and female flowers found on the same plant. Flowers are greenish-white and up to 0.5 inch across.
- **Fruit** are small black berries, each containing 3-6 ovoid to oblong shaped seeds. Berries are especially poisonous.

Biology and ecology

- A perennial vine with climbing stems that resembles kudzu in its growth. Stems have long curling, not branched tendrils and the flowers are from leaf axils.
- **Poisonous** to **humans, livestock, and other animals**, due to the **bryonin** found within all plant parts.
- **Reproduces** solely by **seed**. Thrives in shade, it may appear sunburnt in full sun.
- Deep large fleshy **root**, enables the plant to be a strong competitor for soil resources.

CONTROL MEASURES:

FRANKLIN COUNTY NOXIOUS WEED CONTROL BOARD 509-545-3847

Control is difficult and often takes several years. The most effective control to date is the physical removal of the top or crown of the root. Tillage may be effective in certain circumstances, however, it can harm desired plants as well.

White bryony produces a huge amount of seed which remain viable for several years. It is important that new growth is controlled before seed production, which may need multiple cuttings and/or herbicide applications in a season.

Removal of new growth with herbicides such as glyphosate will take several applications and may pose a risk to host plants. Multiple applications may be necessary to move the herbicide to the root. Fall application may be an option for successful control, however it is important to prevent the vines from producing seed during the growing season.

Prevention:

- Learn to identify plants, know your property. Beware of unusual vines appearing. Early detection is vital to prevent invasion.

Biological:

- No approved biological control agent is currently available.

Mechanical:

- **Digging** and cutting off the top crown of the root is the most effective control method to date.
- Mowing is *ineffective*.
- Tillage under certain circumstances may work, but could harm host plants.

Chemical:

- Herbicides may affect the vines and hold them back a time, however multiple applications during the season may be necessary. Be aware that herbicide applications may adversely affect the host plant.
- You want to apply herbicides during the early vine stage to prevent seed production. Multiple applications may be needed.
- Herbicides may have better result as a fall application in cooler weather when the plant is sending reserves into the roots.
- **Read the label before applying. Be sure the product is compatible with your goals. The label is the law!**



White bryony is prevalent in riparian areas and windbreaks. Additional locations include trees and bushes, fence lines, and wildlife plantings. Vines can present a problem in yards, on buildings and on irrigation equipment as well. All parts of the plant are poisonous to humans and animals.



Photos and references courtesy of: Robin Kusske, FCNWCB; Vic Reeve, FCNWCB; the Washington State Noxious Weed Control Board; and the USDA/NRCS Plants Database.

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