

Invasive Plants in Pennsylvania

Jimsonweed

Datura stramonium L.



Photo: Patrick J. Alexander, USDA-NRCS
[PLANTS Database](#)

Background:

Jimsonweed or “Jamestown weed” was documented in that Virginia colony in 1676 when local soldiers ate its leaves, resulting in hallucinogenic poisoning. Native Americans used this plant and a closely related Mexican species for medicinal and religious purposes leading to another common name: Indian-apple.

Range:

Jimsonweed is widespread in warm temperate regions around the earth, so its origins are uncertain. Some varieties are probably native North America while others are Asian. *Daturas* grow throughout the U.S. and across Pennsylvania.

Description:

An annual plant reaching one to five feet tall, branching in two equal forks. Stems are smooth, green to purplish with alternate, simple, coarsely toothed leaves three to eight inches long. The flowers form white or pinkish, flaring, five-pointed trumpets three to four inches long and two inches wide from August to October. The fruits are short prickly capsules about one inch in diameter.

The plant has a very pungent odor when crushed. All parts of the plant are poisonous if ingested. Poisonings have been reported from accidental overdose of the herbal medicine Stramonium U.S.P. or by intentional ingestion for illicit drug use.

Habitat:

Datura stramonium is a common weed in cultivated fields along roadsides and disturbed ground.

Biology and Spread:

D. stramonium overwinters only as seeds. Plants produce from three capsules (about 1,500 seeds) to 50 or more capsules with 30,000 or more seeds. Seeds are dispersed three to twelve feet from the dry capsules. Dispersal is also accomplished by water, on farm machinery or as an impurity in crop seeds, hay and feed grains. Seeds can remain viable in the soil for decades.



Photo: Howard F. Schwartz, Colorado State University, www.bugwood.org

Ecological Threat:

Datura stramonium is listed as a noxious weed in Pennsylvania due to its poisonous tropane alkaloids. Most animals avoid the plant due to its odor but livestock poisonings occur due to contaminated hay or feed. Jimsonweed is not typically found in undisturbed native plant communities.

How to Control this Species:

Preventing infestation is important. Buy clean seed and clean all equipment after working in an infested field. Remove *Datura* plants before they flower and produce seed.

Jimsonweed seedlings emerge intermittently during the growing season, so monitoring and repeated pulling may be required. Once an area is infested, new seedlings will spring up for several years. If individual plants are pulled, wear gloves to avoid plant contact with skin and eyes.

It is a violation of the Noxious Weed Control Law to sell, transport, plant or otherwise propagate *Datura stramonium* within the Commonwealth.

Jimsonweed is controlled in agricultural crops with pre-emergence and post-emergence herbicides.



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Look-A-Likes:

Datura innoxia Mill. (*D. meteloides* DC.), from Mexico and *D. metel*, a hairy Eurasian species with entire or singly toothed leaves, are sold as ornamentals called “angel’s trumpets” and occasionally escape to railroad tracks or waste ground. All are toxic.



Photo: K. R. Robinson

References:

Weed Circular No.12, Jimsonweed, *Datura stramonium* L. by Wilber L. Mountain. Pennsylvania Department of Agriculture Bureau of Plant Industry. Spring 1987

For More Information:

Center for Invasive Species and Ecosystem Services:
www.invasive.org

DCNR Invasive Species Site: www.dcnr.state.pa.us/conservationscience/invasivespecies/index.htm

Plant Invaders of Mid-Atlantic Natural Areas:
www.nps.gov/plants/alien/pubs/midatlantic/midatlantic.pdf