

Datura stramonium

Jimsonweed, thornapple

Datura stramonium L.

Family: Solanaceae

Description: Thick-stemmed, erect annual, malodorous, branched in upper part of plants. Sparsely hairy. Leaf size variable by age of plant, 6 inches by 4 inches on mature plants, angular, lobed. Flowers solitary in stem forks, tubular, white or lavender, 5-lobed, 5-pointed tips. Fruit an erect capsule, oval, covered with spines, splits into 4 parts at maturity. Seeds numerous, black or dark brownish gray, angular, D-shaped⁽⁷⁰⁾. Each plant capable of producing 25,000 long-lived seeds. Generic name derived from the Hindi name for the plant, *dhatūra*; *stramonium*, from the Greek *strychnos*, nightshade, and *manikos*, mad, for its hallucinogenic properties^(25, 42).

Distribution: A weed of many crops, pastures, and other non-cropland areas in temperate to tropical zones. Long thought to be native to Asia but Wagner et al.⁽⁷⁰⁾ suggests a North American origin. Occurs in dry disturbed sites on all inhabited islands except Ni‘ihau. Naturalized in Hawai‘i prior to 1871^(17, 70).

Environmental impact: Mentioned in ancient writings as a poisonous plant and, like most poisonous plants, also as a medicinal. It was reportedly introduced with the first settlers to Jamestown as a medicinal, hence the name jimsonweed, and has become a weed of rich soils in crops and pastures, as it is responsive to phosphorus⁽²⁵⁾. Normally unpalatable to livestock, but poisonings have occurred during feed shortages. Humans have



been poisoned upon consumption of the leaves as greens, or when seed-contaminated grain was subsequently ground into flour and consumed, or when consumed by children at play, or in deliberate attempts at suicide. Jimsonweed was also used to deliberately induce delirium in sacramental rituals. Contains several alkaloids common to the Solanaceae. Symptoms range from delirium to death⁽⁴²⁾. Readily established in disturbed areas and overgrazed pastures. Seeds long-lived with 91% germination after 39 years of burial⁽⁴²⁾. Also reported to be allelopathic (suppressive) to forage and grain crops⁽⁶¹⁾.

Management: Young plants susceptible to hormone-type herbicides and glyphosate and to soil-applied tebuthiuron⁽³³⁾. Also sensitive to metsulfuron⁽³⁶⁾. Isolated plants can be manually removed before fruiting. Larger infestation in arable lands can be cultivated prior to seed set⁽⁶¹⁾.