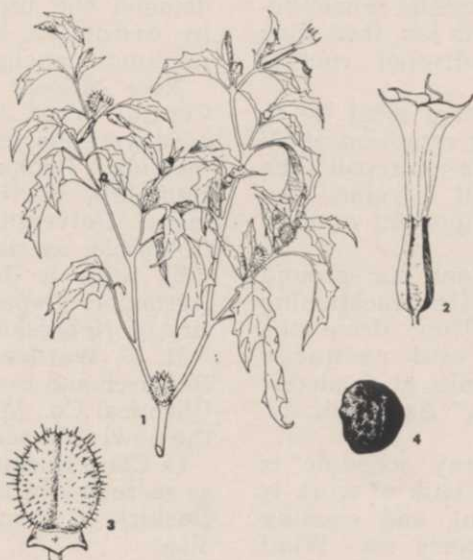


## JIMSON WEED (*Datura stramonium*)



Jimson weed is an annual, reproducing by seeds, which is variously known as Jamestown weed, stinkwort, thornapple, and trumpetplant. It is widespread across the United States and southern Canada, but is more troublesome in southern North America. It was introduced from South America as an ornamental.

Jimson weed is found on silty or gravelly soils in low areas, fields, and waste places such as dumping grounds.

Stems (1) grow 2 to 4 feet tall. They are smooth, stout, and widely branching. Leaves are oval, with shallow, irregularly toothed margins. Leaves occur alternately on thick stems. They have a distinct foul odor.

Flowers (2) are large, either white or purplish, funnel (trumpet)-shaped and 2 to 5 inches long. They are borne singly in the axils (junctures) of leaves.

After flowering, the unique seed pod (3) develops. It is ovoid with a crease extending from the base over the end and down the other side. The pod is covered with short, sharp spines. It measures about 1 inch in diameter. Many dark-brown seeds (4) contained in four sections of the pods, are circular, flat, and wrinkled. Seeds are permitted to fall when autumn dryness causes the pod to curl back along the crease and release the seeds.

Roots are thick and fleshy, very much branched, and shallow.

There are two related southwestern species: the desert thornapple, *Datura discolor*, and the sacred datura, *D. meteloides*, which are readily distinguished as *Datura* spp. by the funnel-shaped flowers or the spiny seed pod, but these species differ in size and coloration.

All *Datura* spp. are members of the Nightshade family, Solanaceae, renowned for members which possess poisonous properties.

All parts of the jimson weed plant are poisonous when eaten by man or animals. Some sensitive individuals contract dermatitis (skin rash) when they touch jimson weed.

Jimson weed is easily controlled with 2,4-D or 2,4,5-T. Many seeds of this weed which lie dormant in the soil necessitate continuous controls with these herbicides year after year for several seasons before complete control is achieved. Of course, jimson weed is vulnerable to soil sterilants.

Prepared in cooperation with Crops Research Division, Agricultural Research Service, United States Department of Agriculture, Beltsville, Maryland.

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## New Ways to Apply Aquatic Herbicides

(from page 19)

pleted in one continuous operation. A layoff of even a few hours may result in the shifting of water to such an extent that some areas may be undertreated, with a resulting decrease in effectiveness of treatment — or, may be overtreated with resulting hazards to fish life.

The blower-type machines are of various sizes and weights, but basically they are all of the same construction pattern: (1) a hopper with sloping sides holding 130 to 170 lbs. of material; (2) an agitator just above the bottom of the hopper having a speed of from 15 to 30 rpm; (3) an adjustable orifice to feed from 5 to 60 lbs. per minute; (4) gas engines, 2½ to 6 hp at 3,500 rpm; (5) 14" to 16" blowers directly connected or V-belt driven, with chemical fed directly into the suction port and 4" to 7" outlet spout for dispersion; (6) a light frame to support counter shafts and hopper speed reducer. The total weight of the unit will vary from 250 lbs. to 450 lbs., depending upon the size and type of material used.

The cost will naturally vary depending on the size, equipment, and personnel available for fabrication. The engineering department of Helix estimates approximately 50 hours of time and a total cost in the neighborhood of \$1,000.00.

### Screenhopper—Power Boat

To quickly and efficiently treat not only the 725 acres but also the seven-mile shoreline of their primary storage reservoir, the Seattle Water Department has designed and built two specialized pieces of distributing equipment. For the treatment of the reservoir itself a large, bronze, mesh-screened hopper was constructed.

The screen has a ¼" mesh and is supported on a framework of extruded steel angle stock. Two-point pivot mounting permits flexibility and prevents damage