HAIRY NIGHTSHADE

Solanum physalifolium Rusby

Family: *Solanaceae* (Nightshade).
Other Scientific Names: *Solanum sarrachoides.*
Other Common Names: Hoe nightshade.
Legal Status: Not categorized.

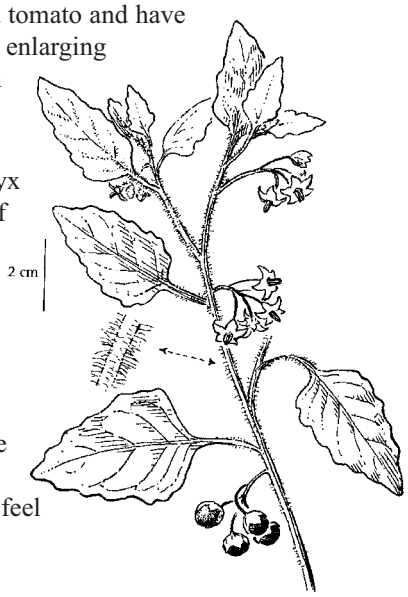
Identification

Growth form: Annual forb.

Flower: The flowers resemble those of the potato and tomato and have 5 white petals and an enlarging green calyx (Whitson et al. 1996).

Seeds/Fruit: As the fruit matures, the calyx cups the lower half of the greenish or yellowish berry-like fruit (Whitson et al. 1996).

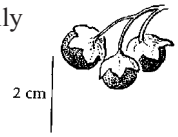
Leaves: Leaves are alternate, egg-shaped (ovate), tapered to the tip, and covered with glandular hairs. May feel sticky when handled.



Stems: Mature plants are 10–90 cm tall, spreading, and freely branching. The stems are light green and round or slightly angular with glandular hairs.

Roots: No information available.

Seedling: The first true leaves of hairy nightshade have wavy edges and prominent veins. The leaves have numerous fine, short hairs, especially along the underside of the main vein (Calweed 1997).



Similar Species

Exotics: Hairy nightshade is distinguishable from black nightshade (*Solanum americanum* var. *nodiflorum*) by the hairy appearance of its foliage and the covering calyx on top of the berry, which covers half of the fruit.

Natives: None known.

Impacts

Agricultural: A common weed of disturbed habitats and cultivated fields. Berries frequently become mixed with agricultural crops, which decreases their quality. The plants produce a sticky substance that can clog agricultural equipment such as combine screens and rotors (Basset and Munro 1985). The plant contains toxic alkaloids, especially in the berries, that can poison cattle, sheep, goats, pigs, ducks, and chickens (Basset and Munro 1985; Whitson et al. 1996).

Ecological: No information available.

Human: Berries are considered toxic.

Habitat and Ecology

General requirements: In BC, found at low- to mid-elevations on dry to moderately dry sites on a variety of soils and climates. Commonly found on disturbed soils such as roadsides, rights-of-way, and overgrazed rangeland, as well as cultivated fields, flowerbeds, and vegetable gardens. Hairy nightshade has been found on sandy/gravelly soils to fertile cultivated soils but seems to be adapted to soils that are high in nitrogen.

Distribution: Widely distributed in the US but infrequent in southern parts of BC (Douglas et al. 2000).

Historical: Introduced from South America.

Life cycle: Typically, hairy nightshade plants begin to

germinate in the spring and continue to germinate through the summer. Flowering begins by mid-June, and berries mature 4–5 weeks later. Full sunlight is needed for maximum flower initiation (Basset and Munro 1985).

Mode of reproduction: By seed.

Seed production: Capable of producing 2,500–5,000 seeds/plant (Basset and Munro 1985).

Seed bank: No information available.

Dispersal: Berries and seeds are dispersed by rodents, birds, livestock, and humans, and along watercourses.

Hybridization: Reported to be able to hybridize with other closely related nightshades (Basset and Munro 1985).

Management

Biocontrol: None.

Mechanical: No information available.

Fire: No information available.

Herbicides: Post-emergence application of dicamba has been effective. Atrazine, cyanazine, or linuron will also manage small seedlings (Basset and Munro 1985). Consult the most recent edition of BC Ministry of Agriculture, Food and Fisheries Crop Production Guides for specific recommendations. **Before applying herbicides, read the label for full use and precautionary instructions.**

Cultural/Preventive: Hand-pulling can be effective on small populations, especially before a seed bank develops, but it may take several years to accomplish eradication.

Integrated Management Summary

Integrated management should focus on eliminating seed production and depleting the seed bank. Use mechanical or chemical methods to prevent seed production, and revise land management practices to ensure the maintenance of a vigorous perennial plant community.

References

Basset, I. J., and D. B. Munro. 1985. The biology of Canadian weeds. 67. *Solanum ptycanthum* Dun., S. *nigrum* L. and *S. sarrachoides* Sendt. *Canadian Journal of Plant Science* 65: 401–414.

Calweed Database. 1997. *California Noxious Weed Control Projects Inventory.* Natural Resource Projects Inventory, Information Center for the Environment, University of California, Davis. http://endeavor.des.ucdavis.edu/weeds/ [6 Jan 99].

Douglas, G. W., D. Meidinger, and J. Pojar, eds. 2000. *Illustrated Flora of British Columbia*. Vol. 5: *Dicotyledons (Salicaceae through Zygophyllaceae) and Pteridophytes*. Province of British Columbia.

Whitson, T. D. (ed.), L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Lee, R. Parker. 1996. Hairy nightshade. *Weeds of the West.* Western Society of Weed Science, in cooperation with the Western United States Land Grant Universities Cooperative Extension Services, Newark, CA.