Coronopus didymus (L.) Sm. (Brassicaceae)
Wart Cress, Swine Cress

Description. Annual, sometimes biennial, aromatic. Stems 15-50 cm long, somewhat erect to decumbent, procumbent, or prostrate, often diffusely branched. Leaves 10-30 mm long, oblong to narrowly ovate in outline, deeply pinnatifid, the lobes narrow, margins entire to toothed. Inflorescence a raceme, 1-4 cm long; petals ca. 0.5 mm long, white, stamens generally 2, sometimes 4; pedicels in fruit 1-3 mm long; fruit a silicle, ca. 1.5 mm long, 1.5-2 mm wide, inflated to somewhat compressed, two-lobed (upper and lower sinuses between fruit valves deep), hard at maturity, surface wrinkled to reticulate. Seeds 1 per locule, less than 1 mm long and wide. Flowering in California from March to July. (Abrams 1944, Ball 1964, Fernald 1950, Gleason and Cronquist 1991, Barker 1986, Munz 1959, Rollins 1993, Wagner et al. 1990).

Geographic distribution. Wart cress is believed to be native to South America or possibly Eurasia (Ball 1964, Robbins et al. 1970, Rollins 1993). Introduced to Australia, New Zealand, southern Africa, North America (where widespread except in the Rocky Mountain states), including Mexico and Central America, Hawaii (Arnold and de Wet 1993, Hewson 1982, Popay et al. 1995, Rollins 1993, Wagner et al. 1990).

Wart cress was first reported from California as early as 1893 (Robbins 1940). Naturalized populations occur on all the Channel Islands except for Santa Barbara (Junak et al. 1995), coastal California from Del Norte County southward to San Diego County, and in most counties west of the Sierra Nevada (Anonymous 1998, Rollins 1993).

Ecological distribution. Wart cress is primarily associated with recently tilled land, fallow fields, abandoned pastures, gardens, roadsides, and vacant lots (Munz 1959, Gleason and Cronquist 1991, Robbins et al. 1970, Rollins 1993)

Reproductive and vegetative biology. Wart cress reproduces entirely by seeds. Like many small-flowered, annual mustards, it is presumably self-compatible and self-pollinating (Richards 1978, Rollins 1993). In New Zealand Popay et al. (1995) reported seed germination both in the fall and spring, depending on precipitation. Apparently, wart cress does not compete well, because Lorenzi and Jeffery (1987) recommend use of fertilizers, pH adjustment, and other methods that increase vegetative cover and apparently reduce infestations.

Weed status. Wart cress is not considered a noxious weed in agricultural or horticultural practice, at least at a global level (not listed by Holm et al. 1977), nor is it considered a noxious weed by the State Dept. of Food and Agriculture (Anonymous 1996). However, it is listed as an important weed in the United States by Lorenzi and Jeffery (1987).

Microbial and insect pathogens. No literature was found that reported wart cress as a host of detrimental fungal or insect pathogens.

Herbicide control. Lorenzi and Jeffery (1987) recommended 2,4-D in the early spring for waste places and presumably fallow fields. Wart cress apparently responds differentially to several

herbicides applied to control general weeds in Indian potato fields (Jaiswal 1994). No other literature was found that reported herbicide treatment of wart cress.

Literature Cited

Abrams, L. 1944. Illustrated flora of the Pacific states. Volume 2. Polygonaceae to Krameriaceae. Stanford University Press, Stanford, California. 635 pp.

Arnold, T. and B. de Wet. 1993. Memoir 62. Plants of southern Africa: names and distribution. National Botanical Institute, Pretoria. 825 pp.

Ball, P. 1964. *Coronopus*. p. 333. In Tutin et al. (eds.) Flora Europaea. Volume 1. Lycopodiaceae to Platanaceae. Cambridge University Press, Cambridge. 464 pp.

Barker, W. 1986. Brassicaceae. pp. 293-333. In Great Plains Flora Association. Flora of the Great Plains. University Press of Kansas, Lawrence. 1392 pp.

Fernald, M. 1950. Gray's Manual of Botany. Eighth Edition. American Book Company, New York. 1632 pp.

Gleason, H. and A. Cronquist. 1991. Manual of the vascular plants of northeastern United States and adjacent Canada. Second edition. New York Botanic Garden, Bronx. 910 pp.

Hewson, H. 1982. Brassicaceae. pp. 231-357. In George et al. (eds.). Flora of Australia. Volume 8. Lecythidales to Batales. Australian Government Printing Service, Canberra. 420 pp.

Holm, L., D. Plucknett, J. Pancho, and J. Herberger. 1977. The world's worst weeds: distribution and ecology. University Press of Hawaii, Honolulu. 609 pp.

Jaiswal, V. 1994. Differential response of weed species to herbicides in potato. Journal of the Indian Potato Association. 21: 157-159.

Junak, S., T. Ayers, R. Scott, D. Wilken, and D. Young. 1995. A flora of Santa Cruz Island. Santa Barbara Botanic Garden and California Native Plant Society, Santa Barbara and Sacramento. 397 pp.

Lorenzi, H. and L. Jeffery. 1987. Weeds of the United States and their control. Van Nostrand and Reinhold Company, New York. 355 pp.

Munz, P. 1959. A flora of California. University of California Press, Berkeley. 1681 pp.

Popay, A., T. Cox, A. Ingle, and P. Kerr. 1995. Seasonal emergence of weeds in cultivated soil in New Zealand. Weed Research. 35: 429-436.

Richards, A. 1978. The pollination of flowers by insects. Linnean Society Symposium Series 6: 1-213. Academic Press, London.

Robbins, W. 1940. Alien plants growing without cultivation in California. Agricultural Experiment Station Bulletin 637. University of California, Berkeley. 128 pp.

Robbins, W., M. Bellue, and W. Ball. 1970. Weeds of California. CA Department of Agriculture, Sacramento. 547 pp.

Rollins, R. 1993. The Cruciferae of North America. Stanford University Press, Stanford, California. 976 pp.

Wagner, W., D. Herbst, and S. Sohmer. 1990. Manual of the flowering plants of Hawaii. 1853 pp.