

# FACT SHEET: ANNUAL BASTARD-CABBAGE

# **Annual Bastard-Cabbage**

Rapistrum rugosum (L.) All. Mustard family (Brassicaceae)

#### **NATIVE RANGE**

Central Europe, the Mediterranean, northern Africa and western, temperate Asia

# **DESCRIPTION**

Annual bastard-cabbage is an annual, many-branched, herbaceous plant that grows from 1 to 5 feet or more in height and has a taproot that can become guite large. Leaves are deep green, lobed and wrinkled, and sometimes have a reddish cast. The terminal lobe is larger than the lateral lobes, especially on the basal leaves. Younger leaves growing higher up on the plant are less lobed and more



elongated. Annual bastard-cabbage typically flowers from early spring into summer, bearing clusters of small, showy yellow flowers at the tips of its branches, resembling those of broccoli and cabbage. Annual bastard-cabbage can be identified more easily and certainly by its unusually shaped fruit - a two-segmented seed capsule, called a silique. The seed capsule is stalked, with a long beak at the tip, and contains 1-2 seeds. The seeds are oval-shaped, dark brown, smooth, and tiny (about 1/16-inch).

Two subspecies of this plant are recognized: R. rugosum ssp. rugosum and R. rugosum ssp. orientale. Annual bastard cabbage is also known as turnip-weed, common giant mustard, ball mustard, wild turnip, wild rape and tall mustard-weed. It is designated a terrestrial noxious-weed seed in the state of Texas.



# **ECOLOGICAL THREAT**

Annual bastard-cabbage is an early successional plant that develops a broad, robust mass of basal leaves, which allows it to successfully outcompete native plant species. In some places, it forms a monoculture (a vegetative cover of mostly one species). Annual bastard-cabbage has long been established on agricultural fields, roadsides, and disturbed lands and is becoming invasive in natural areas such as open forests and along streams.

# **DISTRIBUTION IN THE UNITED STATES**

Annual bastard-cabbage is documented to occur in sixteen states, from California to New England.

# HABITAT IN THE UNITED STATES

Annual bastard-cabbage grows mostly in open sites on disturbed soils.

#### **BACKGROUND**

The history of introduction of annual bastard-cabbage into the U.S. is uncertain. It appears to be spreading through contaminated grass seed mixes or mulching materials. Because its seeds are similar in size to those of wheat and rve, weed seed screens may fail to remove it from grass seed mixes.

# **BIOLOGY & SPREAD**

Annual bastard-cabbage seeds germinate early in the growing season (late fall or early winter) and quickly cover the ground with a blanket of leafy rosettes (circles of leaves at ground level). These dense rosettes block sunlight from reaching seeds and seedlings of native plants.



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http://www.nps.gov/plants/alien/

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# MANAGEMENT OPTIONS

Manual removal of the plant and its taproot, and disposal of seeds, is effective, though labor-intensive. Research is now underway at the Lady Bird Johnson Wildflower Center to determine if oversowing with native grasses and herbaceous groundcovers is effective in controlling annual bastard-cabbage.

#### Chemical

Chemical control of annual bastard-cabbage may be difficult because of its ability to ability to attain resistance to several selective herbicides. Research into effective herbicide control is on-going.

USE PESTICIDES WISELY: Always read the entire pesticide label carefully, follow all mixing and application instructions and wear all recommended personal protective gear and clothing. Contact your state department of agriculture for any additional pesticide use requirements, restrictions or recommendations.

NOTICE: mention of pesticide products on this page does not constitute endorsement of any material.

#### CONTACT

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#### **REFERENCES**

- Diggs, Jr., G. M., Lipscomb, B.L., and O'Kennon, R. J. Shinners and Mahler's Illustrated Flora of North Central Texas. Fort Worth, TX: Botanical Research Institute; 1999; p. 476.
- Hashem, A., Bowran, D., Piper, T. and Dhammu, H. 2001. Resistance of wild radish (Raphanus raphanistrum) to acetolacetate synthase-inhibiting herbicides in the Western Australia wheat belt. Weed Technology 15:68-74.
- Kartesz, J.T. and C.A. Meacham. 1999. Synthesis of the North American Flora. North Carolina Botanical Garden, University of North Carolina at Chapel Hill. Chapel Hill, NC. [CD]
- Lemke, David E. and Worthington, Richard D. Brassica and Rapistrum (Brassicaceae) in Texas. The Southwestern Naturalist; June, 1991: pp. 194-196.
- Neiman, Bill\*. Personal conversation 4/9/2000. \*President, Native American Seed.
- Rollins, Reed C. The Cruciferae of Continental North America. Stanford, CA: Stanford University Press; 1993; p. 722.
- USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network (GRIN). [Online Database] National Germplasm Resources Laboratory, Beltsville, Maryland. (http://www.arsgrin.gov/var/apache/cgi-bin/npgs/html)

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USDA Plants On-line Database. (http://plants.usda.gov)					
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