black bindweed

Fallopia convolvulus (Linnaeus) Á. Löve or *Polygonum convolvulus* L.

Synonyms: *Bilderdykia convolvulus* (Linnaeus) Dumortier, *Fallopia convolvulus* var. *subalata* (Lejeune & Courtois) D. H. Kent, *Reynoutria convolvulus* (Linnaeus) Shinners, *Tiniaria convolvulus* (Linnaeus) Webb & Moquin-Tandon ex Webb & Berthelot
Other common names: climbing buckwheat, climbing knotweed, cornbind, dullseed cornbind, pink smartweed, wild buckwheat
Family: Polygonaceae

Invasiveness Rank: **50** The invasiveness rank is calculated based on a species' ecological impacts, biological attributes, distribution, and response to control measures. The ranks are scaled from 0 to 100, with 0 representing a plant that poses no threat to native ecosystems and 100 representing a plant that poses a major threat to native ecosystems.

Description
Black bindweed is an annual, climbing herb with thin, deep roots. Stems are slender and can grow up to 91 cm long with long internodes. They branch freely from the base and sometimes have a reddish tinge. Stems trail on the ground or twine around other plants. Leaves are alternate, 2 ½ to 4 cm long, and elongate-ovate or arrow-shaped with long petioles and backward-pointing basal lobes. Leaves emerge from papery sheathes that surround the stems. Flowers are small, inconspicuous, and up to 6 mm long. They are grouped in short axillary clusters of two to six. Fruits are triangular achenes with obtuse bases and pointed tops (FNA 1993+, Royer and Dickinson 1999).

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Similar species: Black bindweed may be confused with the non-native field bindweed (*Convolvulus arvensis*) if the plant is not flowering. Unlike black bindweed, field bindweed is a deep-rooted, perennial herb that has creeping rhizomes, rounded leaf tips, and large, funnel-shaped, pink or white flowers. Field bindweed lacks papery leaf sheaths (Royer and Dickinson 1999, Whitson et al. 2000).

Ecological Impact
Impact on community composition, structure, and interactions: Black bindweed has the ability to cover bare ground quickly and spread rapidly. Seeds and leaves are important food sources for birds (Wilson et al. 1999). Black bindweed is an alternate host for a number of fungi, viruses, and nematode species (Townshend and Davidson 1962, Cooper and Harrison 1973, Royer and Dickinson 1999).
Impact on ecosystem processes: Black bindweed quickly covers bare soil (Hume et al. 1983, Rutledge and McLendon 1996). It may prevent the establishment of native species.

Biology and Invasive Potential
Reproductive potential: Black bindweed reproduces by seeds only. Each plant is capable of producing over 30,000 seeds (Stevens 1932, Forsberg and Best 1964). The hard seed coat allows seeds to remain dormant for several years (Chippendale and Milton 1934, Roberts and Feast 1973, Conn and Deck 1995).
Role of disturbance in establishment: Black bindweed tends to colonize disturbed ground (Rutledge and McLendon 1996). Small-scale animal disturbances can be sufficient for the establishment of black bindweed (Milton et al. 1997).
Potential for long-distance dispersal: Seeds can be dispersed by water over short distances (Rutledge and McLendon 1996).
Potential to be spread by human activity: Seeds can be dispersed by farm machinery. This species is a common contaminant in cereal crops (Gooch 1963, Rutledge and McLendon 1996).
Germination requirements: Seedlings emerge throughout the growing season. They normally germinate at depths in the soil between 6 and 51 mm, although research has shown that seeds buried as deep as 19 cm can germinate (Forsberg and Best 1964). Light is not required for germination. Seeds of black bindweed germinate at temperatures between 2°C and 30°C, with maximum germination rates occurring

between 5°C and 15°C.

Growth requirements: Black bindweed grows in a wide range of soil types (Hume et al. 1983). Shade usually suppresses the growth of black bindweed (Haman and Peeper 1983).

Congeneric weeds: Prostrate knotweed (*Polygonum aviculare*), Asiatic tearthumb (*P. perfoliatum*), Himalayan knotweed (*P. polystachyum*), Japanese knotweed (*Fallopia japonica* / *Polygonum cuspidatum*), giant knotweed (*Fallopia sachalinensis* / *Polygonum sachalinense*), Bohemian knotweed (*Fallopia ×bohemica* / *Polygonum ×bohemicum*), spotted ladysthumb (*Persicaria maculosa* / *Polygonum persicaria*), and curlytop knotweed (*Persicaria lapathifolia* / *Polygonum lapathifolium*) are considered noxious weeds in one or more states of the U.S. or provinces of Canada (USDA, NRSC 2006, Invaders 2010). A number of *Polygonum* species native to North America have weedy habits and are listed as noxious weeds in some states of the U.S. The species listed above are closely related taxa and can be considered congeneric weeds, although the latest taxonomy considers them to be members of three different genera: *Polygonum*, *Fallopia*, and *Persicaria* (FNA 1993+).

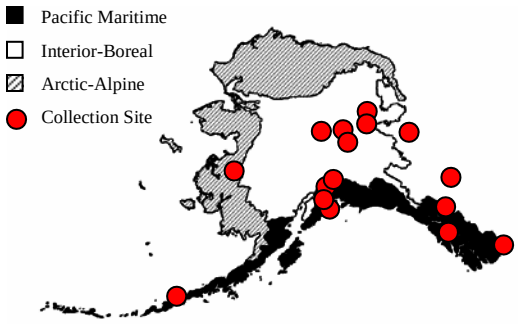
Legal Listings

- ☐ Has not been declared noxious
- ☒ Listed noxious in Alaska
- ☒ Listed noxious by other states (OK)
- ☐ Federal noxious weed
- ☒ Listed noxious in Canada or other countries (MB, QC, SK)

Distribution and abundance

Black bindweed is a common weed in cultivated fields, gardens, and orchards. It may also be found in waste areas, thickets, and roadsides. It occasionally grows in riverbanks and pastures (Hume 1983).

Native and current distribution: Black bindweed is native to Eurasia. It grows throughout Canada and the U.S. (Royer and Dickinson 1999). It has also been introduced to Africa, South America, Australia, New Zealand, and Oceania (Hultén 1968, USDA, ARS 2003). Black bindweed has been documented from all three ecogeographic regions of Alaska (Hultén 1968, AKEPIC 2010, UAM 2010).



Distribution of black bindweed in Alaska.

Management

Mechanical methods are only somewhat effective at controlling infestations of black bindweed. A number of chemicals are recommended for the control of this species. Several pathogenic fungi have been studied as potential biological control agents (Mortensen and Molloy 1993, Dal-Bello and Carranza 1995).

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