

bird vetch

Vicia cracca L.

Synonyms: *Ervum cracca* (Linnaeus) Trautvetter; *Vicia cracca* f. *canescens* Maximowicz; *V. cracca* var. *canescens* (Maximowicz) Franchet & Savatier; *V. cracca* ssp. *heteropus* Freyn; *V. cracca* var. *japonica* Miquel.

Other common names: cow vetch

Family: Fabaceae

Invasiveness Rank: 73 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

Bird vetch is a climbing or trailing, perennial plant that grows 40 to 150 cm tall. Stems are weak and hairy or glabrous, and they cling to structures. Leaves consist of eight to ten pairs of narrow leaflets and have coiling, branched tendrils at the ends. Leaflets are linear to oblong, 11 to 30 mm long, and 2 to 4 mm wide with round or acute tips. Flowers are blue-violet and are borne on one-sided, many-flowered racemes. Pods are narrow, lanceolate, and 20 to 25 mm long with beaked apices (Hultén 1968, eFloras 2008).



Racemes of *Vicia cracca* L.

Similar species: There are a number of other climbing, blue-flowered legumes in Alaska. Bird vetch can be distinguished from similar species by the presence of fully developed inflorescences that are longer than the subtending leaves, many-flowered, one-sided racemes, entire stipules, leaflets with sparse, unobvious lateral veins, gradually rounded calyxes, and lance-attenuate

teeth on the lower calyxes (Cody 1996).

Ecological Impact

Impact on community composition, structure, and interactions: Bird vetch overgrows herbaceous vegetation and can climb over shrubs, such as alder and willow. It forms symbiotic relationships with *Rhizobium* bacteria, allowing it to fix nitrogen. This species is highly palatable to grazing and browsing animals. Flowers are visited by native bees, and their presence may alter the pollination ecology of the surrounding area (Klebesadel 1980, Aarssen et al. 1986).

Impact on ecosystem processes: Bird vetch alters soil conditions by fixing atmospheric nitrogen (Aarssen et al. 1986).



Leaf of *Vicia cracca* L. with coiling, branched tendrils.

Biology and Invasive Potential

Reproductive potential: Bird vetch reproduces sexually by seeds and vegetatively from spreading, underground roots (Aarssen et al. 1986). Each plant produces a copious amount of seeds. Seeds remain viable for a number of years, and large seed banks are common.

Role of disturbance in establishment: Bird vetch establishes in disturbed, grassy areas and roadsides.

Potential for long-distance dispersal: Seeds are large

and not easily dispersed (Densmore et al. 2001).

Potential to be spread by human activity: Bird vetch is used as a cover and forage crop, and it frequently escapes cultivation. It can be introduced with topsoil. Seeds can be carried in tangled vegetation clinging to maintenance or construction equipment (Densmore et al. 2001).

Germination requirements: Seeds germinate underground. Cold stratification is not required for germination, but scarification significantly increases germination rates (Aarssen et al. 1986).

Growth requirements: Bird vetch is adapted to all soil textures with pH levels from 4.9 to 7. It is somewhat tolerant of shade and highly tolerant of drought, fire, and high calcium carbonate (CaCO₃) content. This species can withstand temperatures down to -36°C. It requires 110 frost-free days to grow and reproduce successfully (USDA 2002).

Congeneric weeds: *Vicia benghalensis*, *V. disperma*, *V. hirsuta*, *V. lathyroides*, *V. pannonica*, *V. sativa*, *V. tetrasperma*, and *V. villosa* are known to occur as non-native weeds in North America (Hultén 1968, Whitson et al. 2000, USDA 2002).

Legal Listings

- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states
- Federal noxious weed

References:

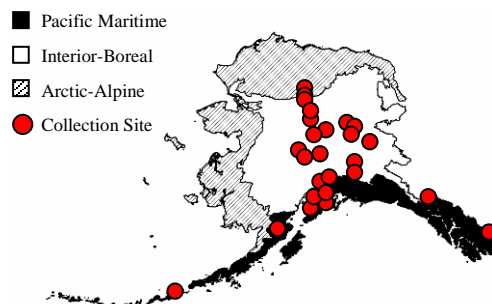
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- Listed noxious in Canada or other countries

Distribution and Abundance

Bird vetch grows in waste places, old fields, and roadsides.

Native and current distribution: Bird vetch is native to Europe. It can be found throughout Canada and through much of the U.S. This species was introduced to Alaska as a forage crop in Fairbanks and Palmer, and it has spread relatively slowly from these urban centers. Bird vetch has been documented from all three ecogeographic regions of Alaska (AKEPIC 2010).



Distribution of bird vetch in Alaska

Management

This species is very difficult to eradicate once established.

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