

Icelandic poppy

Papaver croceum Ledeb.

Synonyms: unknown

Other common names: Siberian poppy

Family: Papaveraceae

Invasiveness Rank: 39 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.

Note on Taxonomy: The taxonomy of cultivated Icelandic poppy is unclear. We adopt Elven's (2007) interpretation from the Checklist of the Panarctic Flora that cultivated Icelandic poppy should be classified as *P. croceum* Ledeb., a cultivar of Siberian origin that is not native to Alaska. An alternative view suggests that cultivated Icelandic poppy should fall under the name *Papaver nudicaule* ssp. *americanum* Rändel ex D.F. Murray, a delineation that also includes plants that are native to Alaska (Kiger and Murray 1997). Evidence indicates that the Icelandic poppy cultivar was introduced into cultivation in Europe from Siberia in 1730 (Fabergé 1942) and not from North America. Additionally, the cultivar and Siberian *P. croceum* populations are primarily diploids, while the *P. nudicaule* aggregate are generally tetraploids (Elven 2007). While the evolutionary history and appropriate nomenclature requires additional study, it is clear that the cultivated Icelandic poppy is a non-native plant in Alaska.

Description

Icelandic poppy is a perennial, loosely to densely tufted plant that grows 15 to 60 cm tall from a short, thick, and usually simple taproot. Stems and foliage are covered in simple, bristly hairs. Leaves are basal, pinnately-lobed, thin, ovate to lanceolate, slightly glaucous on both surfaces, and blue-green with 5 to 12 cm long petioles. Stems are leafless; each bears a single flower. Flower buds are nodding, ovoid to spherical, 1.5 to 2 cm long, and densely hairy. Flowers are cup-shaped and 2 to 6 cm in diameter with four petals and two sepals each. Flower color can be yellow, orange, red, or white. Sepals fall when the flower opens. Capsules are ovoid, 10 to 21 mm long, and glabrous or hairy with many seeds. Seeds are small, brown, and striate (eFloras 2008, Smekalova 2009, NatureGate 2010).



Hairy, nodding flower bud of *Papaver croceum* Ledeb.

Similar species: Cultivated Icelandic poppy (*Papaver croceum*) can be confused with the native poppy *P. nudicaule* ssp. *americanum*. The native taxon grows on dry, exposed, rocky openings in the boreal forest of interior Alaska and westward along the Yukon and Kuskokwim rivers, while the cultivated Icelandic poppy escapes to roadsides and disturbed areas. The petals of the native taxon can be yellow or white, but not orange or red (Kiger and Murray 1997). Seven other native *Papaver* species can be found in Alaska. Icelandic poppy can be distinguished from these native species by the presence of stems that are often taller than 25 cm, petioles that are often glabrous or have light-colored, long hairs, and large flowers. Unlike Icelandic poppy,

the non-native corn poppy (*P. rhoeas*) only has scarlet flowers and has leafy stems (Hultén 1968).



Flowers of *Papaver croceum* Ledeb.

Ecological Impact

Impact on community composition, structure, and interactions: Icelandic poppy is considered an important invasive plant in China (Fang and Wan 2009). It is an established non-native species in northern Iceland, northern Norway, Finland, and southwestern Greenland; it is naturalized in scree in arctic Norway and escapes cultivation in Finland (Elven 2007, NatureGate 2010). However, no ecological impacts have been documented from these locations. Icelandic poppy has been documented growing in wild habitats below treeline in the Rocky Mountains, but, similarly, no ecological impacts were documented (Löve 1969). Escaped populations of cultivated Icelandic poppy have the potential to increase the density of forbs in waste areas and roadsides due to their tufted or matted growth form (eFloras 2008, Smekalova 2009, NatureGate 2010). Populations of this plant may reduce the amount of resources available to native species, limiting their populations in naturally and anthropogenically disturbed sites. However, populations in Alaska appear to be sparse and ephemeral and are unlikely to cause measurable effects on native populations (Carlson pers. obs.). This species can serve as a host for the beet webworm (*Loxostege sticticalis*), Pepper 1938). Plants are pollinated by bees (Plants for a Future 2010), and their presence may alter native plant-pollinator interactions.

Impact on ecosystem processes: Populations of Icelandic poppy are likely to only have minor impacts to nutrients and moisture available to native species since they can achieve high densities in some contexts (eFloras 2008, Smekalova 2009, NatureGate 2010). Populations in Alaska appear to be sparse and ephemeral (Carlson pers. obs.).

Biology and Invasive Potential

Reproductive potential: *Papaver* species generally produce many seeds per capsule (Kiger and Murray 1997). The amount of time for which seeds remain viable is unknown.

Role of disturbance in establishment: Cultivated Icelandic poppy germinates in meadows, gardens, waste places, and roadsides in Finland (NatureGate 2010). It has been documented escaping cultivation into wild habitats below treeline in the Rocky Mountains (Löve 1969). Populations in Alaska appear to grow in disturbed areas; 86% of documented infestations are associated with fill importation and the remaining 14% are associated with other types of disturbances. Rarely, Icelandic poppy establishes in areas naturally disturbed by stream action (Duffy 2003, AKEPIC 2010).

Potential for long-distance dispersal: Seeds are small and have no specialized adaptations for dispersal (eFloras 2008). They are shaken out of the fruit by wind or by passing animals (Willson and Traveset 2000).

Potential to be spread by human activity: Icelandic poppy is frequently cultivated in the U.S. and Canada. It easily escapes cultivation (Löve 1969, NatureGate 2010). This species has mainly spread along roads in Alaska (AKEPIC 2010) and has been associated with roadside revegetation (Conn pers. obs., Riley pers. comm.). It has spread from roads into naturally disturbed areas as well, such as the infestation recorded on a gravel bar in Quartz Creek on the Kenai Peninsula (Duffy 2003, AKEPIC 2010).

Germination requirements: Information on the germination requirements of Icelandic poppy is not available.

Growth requirements: Cultivated Icelandic poppy grows best on mesic, nutrient-rich, sandy loam in full sunlight. It does not grow well in wet soils (Plants for a Future 2010).

Congeneric weeds: Opium poppy (*Papaver somniferum*) is considered a noxious weed in West Virginia (USDA 2010). Corn poppy (*P. rhoeas*) is known to occur as a non-native species in Alaska (AKEPIC 2010). It infests summer grain crops in Russia (Sokolova 2009).

Legal Listings

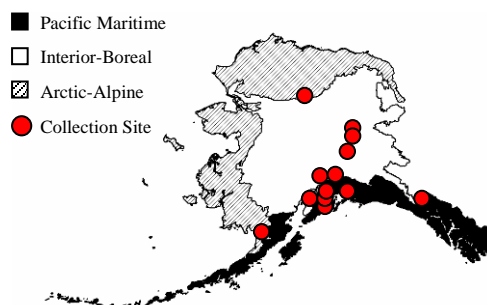
- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states
- Federal noxious weed
- Listed noxious in Canada or other countries

Distribution and Abundance

Icelandic poppy is a commonly cultivated garden ornamental (eFloras 2008, Smekalova 2009, NatureGate 2010) and is associated with roadside revegetation in Alaska (Conn pers. obs., Riley pers. comm.). In its native range, this species grows in forest margins, grasslands, grass steppes, slopes, meadows, valleys, river gravel, moraines, and roadsides (eFloras 2008).

Native and current distribution: Icelandic poppy is native to Pakistan, Central Asia, Siberia, and northeastern Asia (Smekalova and Ushakova 2007,

eFloras 2008). It has been introduced to Europe and North America (Elven 2007, NatureGate 2010, USDA 2010). This species has been documented from arctic regions in Russia, Finland, and Norway (Elven 2007, Smekalova and Ushakova 2007, NatureGate 2010, Vascular Plant Herbarium Trondheim 2010). In North America, it has been documented in Alaska, British Columbia, Colorado, Maryland, Utah, and Yukon Territory (USDA 2010). Icelandic poppy has been found in the Pacific Maritime and Interior-Boreal ecogeographic regions of Alaska as well as in one location (Coldfoot) in the Arctic-Alpine ecogeographic region (Hultén 1968, AKEPIC 2010).



Distribution of cultivated Icelandic poppy in Alaska

Management

Control options have not been explored for *Papaver croceum*.

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