# creeping bellflower

## Campanula rapunculoides L.

Synonyms: *Campanula rapunculoides* var. *ucranica* (Bess.) K. Koch Other common names: false rampion, rampion bellflower, rover bellflower

Family: Campanulaceae

**Invasiveness Rank:** 64 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**

Creeping bellflower is a perennial plant with thick, creeping rhizomes. Stems are erect, 61 to 122 cm tall, often purplish, and hairy or glabrous. Leaves are alternate and 2½ to 13 cm long. Lower leaves are long-stalked and heart-shaped with coarsely toothed margins. Upper leaves are sessile and lance-shaped. Flowers are blue to purple, bell-shaped, nodding, and approximately 2½ cm long. Inflorescences appear strongly one-sided. Capsules are round and contain numerous small seeds. Seeds are elliptical and light brown with small wings (Afnes 1975, Royer and Dickinson 1999, Whitson et al. 2000, Gubanov et al. 2004).



Inflorescence of Campanula rapunculoides L.

Similar species: Harebell (Campanula rotundifolia) and other native bluebell species can be distinguished from creeping bellflower by their much shorter stems, smaller flowers (13 to 19 mm long), and/or smaller, narrower leaves (Hitchcock and Cronquist 1973, Royer and

Dickinson 1999). Dane's blood (*Campanula glomerata*) and beachleaf bellflower (*C. persicifolia*) are cultivated in Alaska. No garden or native bellflowers in Alaska have strongly one-sided inflorescences.

## **Ecological Impact**

Impact on community composition, structure, and interactions: The flowers of creeping bellflower are pollinated by bees, flies, beetles, moths, and butterflies (Plants For A Future 2004).

*Impact on ecosystem processes:* Creeping bellflower likely reduces soil moisture and nutrients (Royer and Dickinson 1999).

## **Biology and Invasive Potential**

Reproductive potential: Creeping bellflower reproduces vegetatively from creeping rhizomes and sexually by seeds. Each plant can produce from 3,000 to 15,000 seeds annually (Royer and Dickinson 1999, Whitson et al. 2000, Gubanov et al. 2004).

Role of disturbance in establishment: Unknown.

Potential for long-distance dispersal: Seeds are spread by wind because of their light weight and small wings (Gubanov et al. 2004).

Potential to be spread by human activity: Creeping bellflower was introduced to North America as an ornamental plant (Royer and Dickinson 1999). It frequently escapes from gardens (Whitson et al. 2000). This plant also disperses aggressively from contaminated commercial seed and nursery stock (Alfnes 1975, USDA, ARS 2005).

Germination requirements: Germination occurs in the top 2.5 cm of the soil (Royer and Dickinson 1999). Seeds normally germinate in two to four weeks at 18°C (Plants For A Future 2004).

Growth requirements: Creeping bellflower grows best in sand or loam in well-drained areas with pH from 6.6 to 8.5. It can grow in full sun, semi-shade, or shade (Plants For A Future 2004).

Congeneric weeds: No other Campanula species are known to occur as noxious weeds (Invaders 2010, ITIS 2010).



# Legal Listings ⊠Has not been declared noxious (but is considered a nuisance weed in AB)

Listed noxious in Alaska

Listed noxious by other states

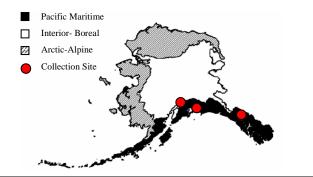
Federal noxious weed

Listed noxious in Canada or other countries

#### Distribution and abundance

Creeping bellflower is a weed of gardens, horticultural fields, and forest plantations. It is a serious weed in lawns. In its native range, creeping bellflower grows in open woodlands, forest edges, and meadows (Royer and Dickinson 1999, Gubanov et al. 2004).

Native and current distribution: Creeping bellflower was introduced to North America from Europe and Asia (Royer and Dickinson 1999, USDA 2006). Its range is expanding in Scandinavia (Afnes 1975, Lid and Lid 1994). This species has been documented from the Pacific Maritime and Interior-Boreal ecogeographic regions of Alaska (Hultén 1968, AKEPIC 2010, UAM 2010).



Distribution of creeping bellflower in Alaska

#### Management

Creeping bellflower infestations are extremely difficult to eradicate (Gubanov et al. 2004). It is practically impossible to control this species mechanically, and it is also problematic to control it by chemical methods. Some of the selective herbicides (glyphosate) can be effective (Alfnes 1975).

#### **References:**

AKEPIC database. Alaska Exotic Plant Information Clearinghouse Database. 2010. Available: http://akweeds.uaa.alaska.edu/

Alfnes, A.T. 1975. Dispersion of especially troublesome weeds (*Rorippa sylvestris*, *Aegopodium podagraria*, *Campanula rapunculoides*) in nursery stock. Gartneryrket; 65: 772-774. In Norwegian.

Gubanov, I.A., K.V. Kiseleva, V.S. Novikov and V.N. Tihomirov. 2004. An illustrated identification book of the plants of Middle Russia, Vol. 3: Angiosperms (dicots: archichlamydeans). Moscow: Institute of Technological Researches; 520 p. In Russian.

Hitchcock, C. L., A. Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press, Seattle and London. 730 p.

Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.

Invaders Database System. 2010. University of Montana. Missoula, MT. <a href="http://invader.dbs.umt.edu/">http://invader.dbs.umt.edu/</a>

ITIS. 2010. Integrated Taxonomic Information System. http://www.itis.gov/

Lid, J. and D. T. Lid. 1994. Flora of Norway. The Norske Samlaget, Oslo. Pp. 1014. Plants For A Future. 2004. *Campanula rapunculoides*. Available from: <a href="http://pfaf.org/user/default.aspx">http://pfaf.org/user/default.aspx</a>

Royer, F., and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.

UAM. 2010. University of Alaska Museum, University of Alaska Fairbanks. Available: http://arctos.database.museum/home.cfm

USDA, NRCS. 2006. The PLANTS Database, Version 3.5 (<a href="http://plants.usda.gov">http://plants.usda.gov</a>). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

USDA, ARS, National Genetic Resources Program.
Germplasm Resources Information Network - (GRIN) [Online Database]. National
Germplasm Resources Laboratory, Beltsville,
Maryland. URL: <a href="http://www.ars-grin.gov/var/apache/cgi-bin/npgs/html/taxon.pl?300618">http://www.ars-grin.gov/var/apache/cgi-bin/npgs/html/taxon.pl?300618</a>
[October 5, 2005].

Whitson, T. D., L. C. Burrill, S. A. Dewey, D. W. Cudney, B. E. Nelson, R. D. Lee, R. Parker. 2000. Weeds of the West. The Western Society of Weed Science in cooperation with the Western United States Land Grant Universities, Cooperative Extension Services. University of Wyoming. Laramie, Wyoming. 630 pp.

