

Mountain Bluet

Centaurea montana L.

About Mountain Bluet

This tap-rooted perennial herb from Europe prefers full sun and dry to medium wet conditions. It is self-seeding and colonizes quickly and considered very invasive. Often purchased as an ornamental, it easily escapes flower beds and infests landscapes. It is often spread by people giving or selling the plants, and improperly disposing of garden waste.

Legal Status

Unregulated, invasive plant of concern in BC.

Distribution

Known in southwest BC, Cariboo, Omineca and Skeena regions.



Mountain Bluet Distribution (2011)

Identification

Flowers: Showy compound disk flowers with blue (sometimes white) ray flower petals, solitary flower on stems that bloom May – August, black-fringed bracts on base of each flower.

Stems: Several too many, erect, upright, unbranched and slightly hairy, growing 30-80 cm tall.

Leaves: Are broad and lance shaped, un-lobed, and winged near the stem. Leaves become smaller towards the top of the stem. Leaves are nearly hairless on top and lightly woolly below.

Fruits: Seeds are light yellow to golden, glossy and about 5-6 mm long.

Similar Native Species: Blue thimble flower (*Gilia capitata*) has a similar form with blue flowers. Large-leaved lupine (*Lupinus polyphyllus*) is similar in flower colour but the flowers appear on a spike with many florets and the leaves are deeply lobed.

Similar Non-Native Species: Mountain bluet can easily be mistaken for bachelor's buttons, a similar but annual plant which is also invasive. Bachelor's buttons differ in having finer foliage than mountain bluet and no spreading rhizomes.

Ecological Characteristics

Habitat: Plants prefer full sun to part shade in dry to moist, but well-drained soil.

Reproduction: Mountain bluet is self-fertile, producing copious seeds, which can persist in the soil for several years.

Dispersal: Dispersal is primarily by seed that may be spread by livestock, farm equipment, vehicles, and humans. Often purchased as an ornamental, it easily escapes gardens. It also spreads by people giving or selling the plants, and improperly disposing of garden waste.

Impact

Economic: Mountain bluet can out-compete forage species which can lead to a decrease of food sources for livestock.

Ecological: Mountain bluet colonizes quickly and can grow into thick stands that displace native plants. It is able to grow earlier in spring and continue growing later in fall than many native plants, giving it a competitive edge over native plant communities. It can also alter native plant-pollinator interactions and reduce forage opportunities for wildlife and livestock.

Integrated Pest Management

IPM is a decision-making process that includes identification and inventory of invasive plant populations, assessment of the risks that they pose, development of well-informed control options that may include a number of methods, site treatment, and monitoring.

A. Prevention

- » Educate gardeners and horticulturists to prevent active distribution and trading.
- » Control mountain bluet before seed set, monitor results and re-treat as necessary to prevent seed dispersal.
- » Avoid unloading, parking or storing equipment and vehicles in infested areas.
- » Remove plant seeds and propagules from personal gear, equipment, vehicles and machinery at designated cleaning areas before leaving infested sites.



- » Monitor site annually until it is free of mountain bluet for several consecutive years.

B. Mechanical Control

- » Hand pulling, cutting or mowing is most effective when completed prior to seed set. If the plants have not yet flowered, the removed plants can be left on site, but stems should be twisted, bent or otherwise crimped.
- » If treatment is performed while flowers are present on stems, the plants must be bagged and removed from the site and disposed of by burial to prevent production of viable seeds.
- » Wherever possible, the root system should be removed to prevent re-sprouting.
- » Follow up treatments will be required as mountain bluet has an extensive, long lived seed bank.

C. Biological Control

There currently are no biocontrol agents available.

D. Chemical Control

Herbicide recommendations and use must first consider site characteristics and be prescribed based on site goals and objectives. Herbicide labels and other sources of information must be reviewed before selecting and applying herbicides.

- » Effective herbicides include: picloram, dicamba, 2,4-D, clopyralid, aminopyralid and glyphosate.
- » Picloram has been determined most effective; however it has residual effects.
- » On small infestations apply herbicides by using a wick or by selective spot spraying to minimize non-target damage.

Application of herbicides on Crown land must be carried out following a confirmed Pest Management Plan (*Integrated Pest Management Act*) and under the supervision of a certified applicator. www.env.gov.bc.ca/epd/epdpa/ipmp/index.html

Disposal

Note: Disposal of invasive plants varies by region. Contact your local government for specific information on how to dispose of your invasive plants.

- » Tarp and bag removed plants, plant parts and seeds before transporting to a designated disposal site (e.g. landfill or transfer station).
- » It is recommended that transfer stations provide disposal bins intended solely for invasive plants. This will ensure the plant matter within the container is transported in a sealed unit and properly disposed of at the landfill.
- » Burning and composting is not recommended as extreme temperatures are required. cut plant parts should undergo deep burial (at least 5m deep) at a landfill.

Common Names

Perennial Cornflower, Perennial Bachelor's Buttons, Montane Knapweed, Mountain Coneflower.

References/Links

E-Flora BC: Electronic Atlas of the flora of British Columbia. <http://linnet.geog.ubc.ca/Atlas/Atlas.aspx?sciname=Centaurea%20montana>

Invasive Alien Plant Program BC. <https://www.for.gov.bc.ca/hra/plants/application.htm>

Invasive Species Compendium. <http://www.cabi.org/isc/datasheet/12041>

Invasive Species Council BC. <http://bcinvasives.ca/invasive-species/identify/invasive-plants/mountain-bluet>

Ministry of Forest Lands and Natural Resource Operations, Biocontrol matrix. https://www.for.gov.bc.ca/hra/Plants/biocontrol/Agent-Plant_Matrix.htm#M

Northwest Invasive Plant Council. <http://nwipc.org/plants/mountain-bluet>; <http://nwipc.org/documents/private/known-whatyougrowmtnbluetsheet.pdf>

PlantWise, BC. <http://beplantwise.ca/invasives/detail/1734>