

BLUEWEED

Echium vulgare L.

Family: *Boraginaceae* (Borage).

Other Scientific Names: None.

Other Common Names: Viper's bugloss, blue devil.

Legal Status: Regional Noxious: Cariboo, Central Kootenay, Columbia-Shuswap, East Kootenay, Okanagan-Similkameen, Thompson-Nicola.



Identification

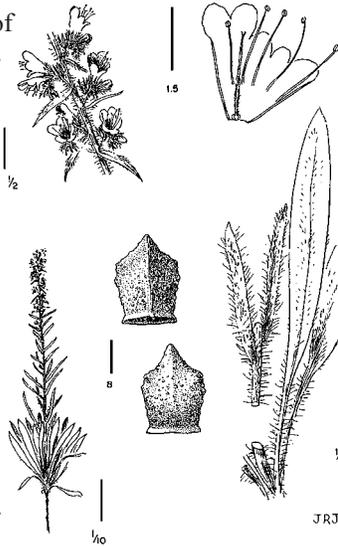
Growth form: Biennial forb.

Flower: Numerous flowers (10–20 mm long) are arranged on the upper side of short

stems that elongate after flowering (BC Ministry of Agriculture and Fisheries 1988). Buds are reddish purple, becoming bright blue upon flowering. The petals are fused at the base into a short tube that flares at the top into unequal lobes (Douglas et al. 1998).

Seeds/Fruit: Nutlets are clustered together in groups of 4. Each nutlet (seed) is 3 mm long, greyish brown, angular, roughened, and wrinkled.

Leaves: Basal leaves are narrow, 6–25 cm long, and have stalks. The alternate



stem leaves become progressively smaller and stalkless moving up the stem. All leaves are covered with stiff hairs. The hairs are sometimes swollen at the base.

Stems: Stems are erect and covered with short hairs and scattered long, stiff hairs, and grow 30–80 cm tall. The long hairs often have swollen dark bases that form conspicuous flecks on the stems (Frankton and Mulligan 1970).

Roots: Long, stout, and black taproots, with smaller fibrous lateral roots.

Seedling: The seed leaves (cotyledons) are 9–14 mm long and 4–7 mm wide and are covered with fine, needle-like hairs (Royce and Dickinson 1999). The plant produces a flat rosette with long, narrow leaves in the first year.

Similar Species

Exotics: With its bright blue flowers and rough, hairy foliage, this plant is not likely to be confused with other plants.

Natives: None known.

Impacts

Agricultural: Usually not found in cultivated crops but can invade rangelands and pastures. Seeds can contaminate clover and other crop seeds and can act as an alternate host for viral diseases.

Ecological: This plant is generally unpalatable and increases in overgrazed pastures. Competition with native species in BC is unknown.

Human: None known.

Habitat and Ecology

General requirements: Blueweed grows in dry roadsides, disturbed habitats, rocky pastures, and rangelands at low- to mid-elevations in BC. It is well adapted to dry, rocky, or shallow soils, especially over limestone.

Distribution: Frequent in the central and south-central areas of the province, it is also present on the Mainland, Vancouver Island, and in northern parts (Douglas et al. 1998) and is considered a major concern in the Kootenay, Okanagan, Thompson, and

Cariboo agricultural reporting regions. It is found in every Canadian province, and especially Ontario and Quebec (Frankton and Mulligan 1970).

Historical: Introduced from Europe.

Life cycle: Germinates in autumn and overwinters as a rosette. In spring, the stems elongate and flowering begins by late June to early July. Seeds ripen from August to November, depending on geographic location (NS Department of Agriculture and Fisheries 2001).

Mode of reproduction: By seed.

Seed production: A single plant may produce up to 2,800 seeds.

Seed bank: Seeds can remain viable in the soil for several years.

Dispersal: Most seeds fall to the ground near the parent plant. The rough seeds stick to clothing, animal fur, and feathers. Dead flower stalks may break off and be dispersed by the wind.

Hybridization: No information available.

Management

Biocontrol: None.

Mechanical: Cutting established blueweed can reduce seed production, but repeated treatments may be required to prevent shoots from re-sprouting and producing seed. Repeated defoliation will eventually deplete root reserves and reduce the plant's capacity to flower (NS Department of Agriculture and Fisheries 2001).

Fire: No information available.

Herbicides: Spring or early autumn application of 2,4-D will manage blueweed. Consult the most recent edition of BC Ministry of Agriculture, Food and Fisheries Crop Production Guides for specific recommendations. **Before applying herbicides, read the label for full use and precautionary instructions.**

Cultural/Preventive: Small infestations can be managed with hand-pulling.

Integrated Management Summary

Integrated management can combine cultural, mechanical, and chemical treatments. New infestations can often be managed with hand-pulling. Seed disturbed areas to perennial grasses and forbs, and manage grazing animals to maintain perennial plant communities. For larger infestations, chemical management may be required as well.

References

BC Ministry of Agriculture and Fisheries. 1988. Blueweed. Agdex 640 Fact Sheet.

Douglas, G. W., D. Meidinger, and J. Pojar. 1998. *Illustrated Flora of British Columbia*. Vol. 2: *Dicotyledons (Balsaminaceae through Cuscutaceae)*. Province of British Columbia.

Frankton, C., and G. A. Mulligan. 1970. *Weeds of Canada*. Publication 948. Ottawa: Canada Department of Agriculture.

NS Department of Agriculture and Fisheries. 2001. Nova Scotia Noxious Weeds—Blueweed. <http://www.gov.ns.ca/nsaf/rir/weeds/blueweed.htm> [June 2001].

Royer, F., and R. Dickinson. 1999. *Weeds of Canada and the Northern United States*. Edmonton: University of Alberta Press.

