



Bear's-foot Sanicle



Photo: © Matthew Fairbairns

Scientific name
Sanicula arctopoides

Taxon
Vascular Plants

COSEWIC Status
Threatened

Canadian range
British Columbia

Reason for Designation

This perennial wildflower occurs in Canada only along a 30 km stretch of coastline in extreme southeast Vancouver Island. While this wildflower can live more than 10 years, it flowers and fruits once and then dies. It occupies small areas of remaining meadow habitat, which is being modified by invasion of exotic plants. Several new sites, discovered since the species was last assessed, have reduced the risk to this plant. Most of the Canadian population occurs at one site, which is also threatened by grazing by an expanding non-migratory, newly resident Canada Goose population. Severe trampling by humans also affects a few sites. Many of the known subpopulations have relatively few individuals and may not persist.

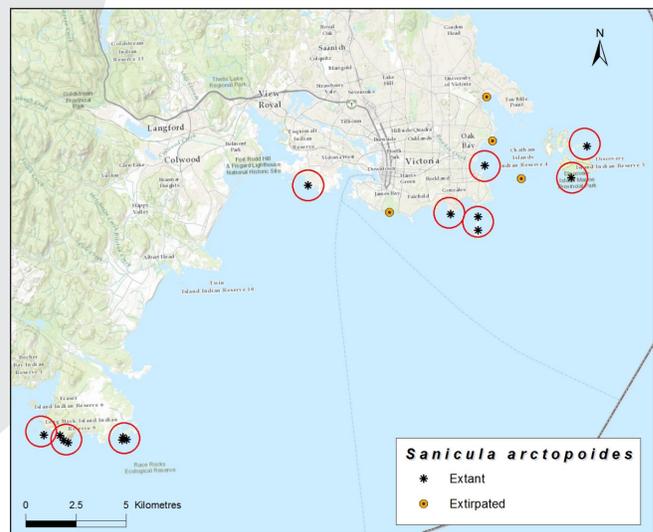
Wildlife Species Description and Significance

Bear's-foot Sanicle is a tap-rooted, low-growing, herbaceous perennial wildflower. Its basal leaves, which are deeply lobed and sharply toothed, form

a compact rosette. The inflorescences are compact with many bright yellow small flowers that produce fruit with hooked bristles. Bear's-foot Sanicle is one of over 50 nationally rare species that are restricted (in Canada) to Garry Oak and associated ecosystems in southern Vancouver Island and the adjacent Gulf Islands.

Distribution

In Canada, Bear's-foot Sanicle occurs only in a 30 km length of shoreline in the vicinity of Victoria, British Columbia. Bear's-foot Sanicle is known from nine extant subpopulations in Canada. In the United States it ranges from the San Juan Islands of Washington State, south along the coast of Washington and Oregon, to California. Subpopulations in Washington State are very small and are imperilled. The nearest US subpopulations (San Juan Islands) are approximately 25 km from the nearest Canadian subpopulation and separated by several kilometres of open ocean, making dispersal between these sites unlikely.



Distribution map of Bear's-foot Sanicle (*Sanicula arctopoides*) in Canada, each circle represents one location, less than 1% of species global range lies within Canada. Map provided by: Jenny Wu, COSEWIC Secretariat.

Habitat

In Canada, Bear's-foot Sanicle is restricted to drought-prone maritime meadows at low elevations along shorelines. The plants experience wide

seasonal fluctuations in water availability, with abundant rains typically beginning in mid-autumn, and continuing through autumn and winter, ceasing with the onset of the summer drought, when Bear's-foot Sanicle becomes dormant. The dry summer conditions discourage the growth of native trees and shrubs although the exotic invasive Scotch Broom is often present. Bear's-foot Sanicle usually occurs in vegetation dominated by low (< 20 cm tall) forbs and grasses. A few native species may be relatively common in the vegetation but exotic, invasive forbs and grasses tend to dominate.

Biology

Bear's-foot Sanicle is a perennial species with a monocarpic life cycle, meaning that after it flowers and fruits the whole plant dies. Germination occurs as early as December and may continue into March. Plants tend to reach maximum annual size by April or May and the small non-reproductive plants either die or become dormant in late May or early June as the summer drought deepens. Larger, older plants flower in March or April and produce ripe fruits by mid- to late June. The small dry fruits are covered with hooked bristles, which aid in dispersal, by catching on the fur and feathers of passing animals as well as on clothing. Dormant plants resprout in October or November and grow slowly through the winter months. Most seeds germinate in the first fall after dispersal, or else perish in the soil. Most seedlings live only a few months and the survivors grow slowly. Generation time is estimated at 14 years.

Population Sizes and Trends

The total Canadian population is currently estimated at approximately 2,900 mature individuals. There are nine extant subpopulations in Canada. Five of the nine subpopulations had fewer than 50 mature individuals. Approximately 85% of the Canadian population occurs in one subpopulation, on Trial Islands. The only other Canadian subpopulation that consistently produces > 100 mature individuals is at Harling Point, a headland on Vancouver Island close to Trial Islands. Habitat information suggests there has probably been a decline in the number and

size of the total Canadian population over the past 3 generations (42 years). Bear's-foot Sanicle is critically imperilled in Washington—there is little likelihood of dispersal from US populations to establish new populations in Canada.

Threats and Limiting Factors

The major limiting factor across the Canadian range of Bear's-foot Sanicle is its restriction to a rare habitat type within a tiny area in Canada. The primary threat to the species is a continuing decline in habitat quality because of the increasing abundance of invasive species. Other major threats include herbivory by the increasing size of the non-migratory and newly resident population of Canada Geese at several Canadian locations of Bear's-foot Sanicle, construction and operation activities, trampling in sites that experience high levels of human visitation and a projected decline in the suitability of occupied habitat as a result of climate change.

Protection, Status, and Ranks

Bear's-foot Sanicle is listed as Endangered on Schedule 1 of the federal *Species at Risk Act* (SARA) and afforded measures of protection under that legislation. It is not protected under BC provincial species at risk legislation. Bear's-foot Sanicle is ranked globally secure but critically imperilled in Canada. Bear's-foot Sanicle is also critically imperilled in Washington State and has not been ranked in Oregon or California, where it also occurs.

Source: COSEWIC. 2015. COSEWIC assessment and status report on the Bear's-foot Sanicle *Sanicula arctopoides* in Canada. Committee on the Status of Endangered Wildlife in Canada. Ottawa. xi + 35 pp.

For more information, please visit www.sararegistry.gc.ca.

Cat. No.: CW69-14/727-2016-1E-PDF
ISBN: 978-0-660-07300-2

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