

Cyclamen species

CYCLAMENS

ENGLISH NAMES Cyclamen, Hardy Cyclamen (*C. hederifolium*), Wild Cyclamen, Icy-leaf Cyclamen, Sowbread (*C. coum*), Small-flowered Cyclamen (*C. parviflorum*)

SCIENTIFIC NAMES *Cyclamen hederifolium*, *C. coum*, *C. parviflorum*

FAMILY Myrsinaceae (Myrsine family), Primulaceae (Primula family)



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Cyclamens are low-growing perennial herbs from tubers, with distinctive flowers having petals that sweep backwards (reflexed). Cyclamens are popular garden plants that readily naturalize and hybridize.

RANGE/KNOWN DISTRIBUTION

The genus *Cyclamen* consists of 20+ species native to the Mediterranean basin. Habitat ranges from beech (*Fagus*) woodland, to scrub and rocky areas, to alpine meadows. Some cyclamen species and likely some cultivars have naturalized in Greater Victoria and in oak woodlands around Seattle, Washington and Eugene, Oregon.

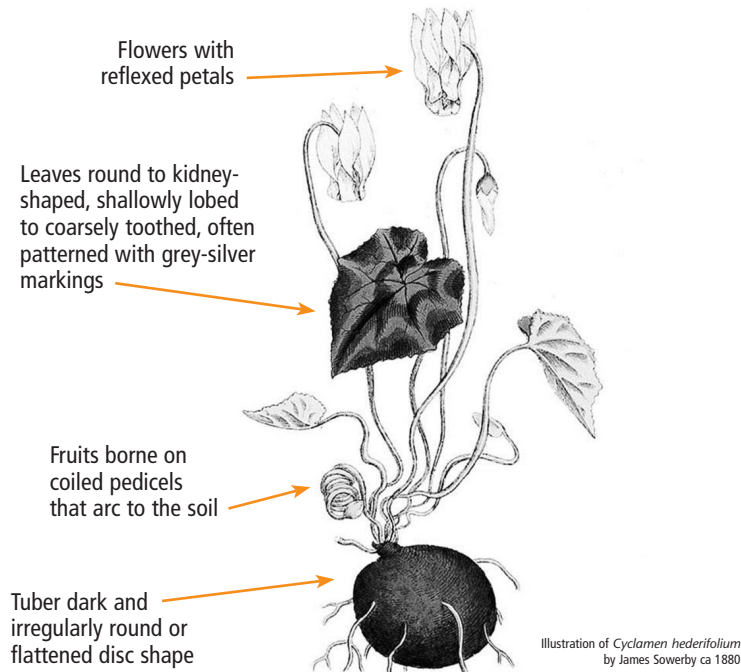
IMPACTS ON GARRY OAK AND ASSOCIATED ECOSYSTEMS

Impacts of cyclamens on Garry Oak ecosystems are not yet known. As a Mediterranean species, cyclamens, and *C. hederifolium* in particular, are well-adapted to Garry Oak woodland conditions. A prolific seed producer prized by gardeners as a naturalizing ground cover, cyclamens' disc-shaped tubers can exceed 25 cm in diameter, and have been observed in some locations to crowd out native plants. Patches of cyclamen in the Victoria area appear to be expanding more rapidly than in the past.

FIELD DESCRIPTION

Cyclamens are tuberous perennials, flowering either in fall or early spring, depending on species. Leaf appearance is variable both within and among species. They are generally round to kidney- to heart-shaped, shallowly lobed to coarsely toothed, dark green with silver-grey patterns above and often purplish-red below. Leaves may be present from late autumn and last through winter into spring. Flowers have reflexed petals, range in colour from pale to deep pink, on flower stems (pedicels) that bend down at the top so flowers face downwards. Fruits are numerous

CYCLAMEN SPECIES



round capsules held either loosely on the pedicel, or the pedicel becomes tightly coiled and arcs toward the ground. Capsules lie on top of the tuber and become inserted below the soil. When dry, the capsules release several seeds having a brown fatty projection (elaiosome). Seedlings produce plump, tear-drop shaped roots that mature to dark brown potato-like or disc-shaped tubers.

LIFE HISTORY

Cyclamens spend part of the year in growth, and the other part in a dormant state. During this phase there is no visible foliage, although in some species, pedicels bearing seed capsules remain on the plant as the seeds mature. During the dormant period, the plant remains in the form of a swollen root, or tuber. Vegetative growth begins at the onset of cooler, damper conditions. Leaves unfurl first, followed by flowers. *C. hederifolium* blooms in late fall, *C. coum* in late winter to early spring, and *C. parviflorum* in mid- to late spring, although time of bloom can vary within each species. In *C. hederifolium*, foliage dies back before flowers open, while in other species, flowering occurs when foliage is mature. Cyclamens freely self-sow. Reproducing exclusively from seed,

CYCLAMEN SPECIES

cyclamens are pollinated by insects but can also self-fertilize. Mature seeds germinate where they fall from the fruit capsules, but are also dispersed short distances by woodland ants, which are attracted to the elaiosome. Ants carry the seeds to their nest, consume the elaiosome, then discard the intact seed.

HABITAT

Cyclamens that naturalize in our region are adapted to mild, wet winters and dry summers in mesic to dry lowland woods and grassy meadows. Tolerant of root competition, cyclamens generally grow under coniferous or deciduous trees and shrubs, which provide shelter from winds and help remove excess soil moisture. Cyclamens can tolerate a range of soil types, but require good drainage or the tubers will rot.

MANAGEMENT

Develop a long-term, realistic program for invasive species removal before undertaking any work. Before taking action, obtain expert advice. Please refer to the introductory section of this manual.

At this time there is no empirical research on methods to control cyclamens. The following information has been provided by stewardship groups and specialists who are familiar with cyclamen species.

PHYSICAL CONTROL: Hand-dig when soils are moist and cyclamen vegetative growth is apparent; remove all tubers, large and small. Depending on time of year, either mulch or replant the site to avoid leaving soil exposed to other invasive plants. Monitor site for 3-4 years and remove cyclamen seedlings. To stop mature plants from dropping seed, remove all fruits before seeds ripen. This is generally after the flowers have faded but before the capsules split open. Expose the top of the tuber to locate all the fruits. Light inhibits cyclamen seed germination; if they are growing under a shrub overstorey, consider cutting it back to expose the cyclamen plants to full sun. If exposed to sun, seedlings will dry out shortly after germination and will usually die.

BIOLOGICAL CONTROL: There are no regulated bio-controls for cyclamens. Two species of mite that commonly attack cyclamens in greenhouses are treated as pests; their use as a bio-control is unlikely.

CHEMICAL CONTROL: *Herbicides should only be used under expert advice and with extreme caution in Garry Oak ecosystems.* Glyphosate has been applied to cyclamens growing in pavement cracks but tubers were observed to re-sprout within a year.

CYCLAMEN SPECIES

OTHER TECHNIQUES: Flaming has been used on the above-ground parts, but does not kill the tuber unless flamed repeatedly over more than a year. One study showed that *C. hederifolium* plants were negatively affected by high soil nitrogen content. However, increasing soil nitrogen creates conditions that favour non-Garry Oak ecosystem species and is therefore not recommended.

PREVENTATIVE MEASURES: Given their popularity as garden plants, re-introductions of cyclamens into Garry Oak sites are inevitable. Monitor sites near gardens or lawns where cyclamens occur, and monitor for yard waste dumping. Remove as soon as vegetative growth is apparent.

PERSISTENCE: Cyclamen seeds can remain viable in soil for 2-3 years. Plants can survive for 20 or more years.

GENERAL COMMENTS: In their native range, cyclamens are threatened by habitat loss, and are protected under Convention on International Trade in Endangered Species (CITES) legislation from overexploitation through trade. The common name Sowbread refers to the fact that the cyclamen tuber is a favourite food of wild boar.

SELECT REFERENCES

The Random House Book of Bulbs. Roger Phillips & Martyn Rix. 1989. Random House, Inc., New York, NY. 255 pp.

A bibliography of literature specific to Cyclamens is available at www.goert.ca/invasive.

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For more information contact the Garry Oak Ecosystems Recovery Team, or see the website at www.goert.ca