

# Cotoneaster species

COTONEASTERS

**ENGLISH NAMES** Cotoneaster; various species including Franchet cotoneaster, rock cotoneaster, Parney cotoneaster, Himalayan cotoneaster

**SCIENTIFIC NAME** *Cotoneaster* species, including *C. franchetii*, *C. horizontalis*, *C. parneyi*, *C. simonsii*

**FAMILY** Rosaceae (Rose)



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Cotoneasters are evergreen or semi-evergreen shrubs with densely interwoven branches and orange to red fruits. At least 30 species of these popular garden shrubs are in cultivation.

## RANGE/KNOWN DISTRIBUTION

Most cotoneasters have been introduced from China to North America as ornamental plants. In the last 30 to 40 years, cotoneasters have been increasingly reported as garden escapees. Rock cotoneaster has escaped from gardens on southern Vancouver Island, the Gulf Islands, the Sunshine Coast and the lower Fraser Valley, and has been present in Garry oak ecosystems in British Columbia since 2002. Franchet cotoneaster can be found scattered within Garry oak habitats in the Victoria area. Himalayan cotoneaster is found in the Vancouver area and on the Queen Charlotte Islands, southern Vancouver Island and the Gulf Islands, but has not yet been reported in Garry oak ecosystems. Franchet cotoneaster, rock cotoneaster and Parney cotoneaster are all found in the native woodlands and prairies of Oregon's Willamette Valley. Franchet cotoneaster is found in waste areas of Washington.

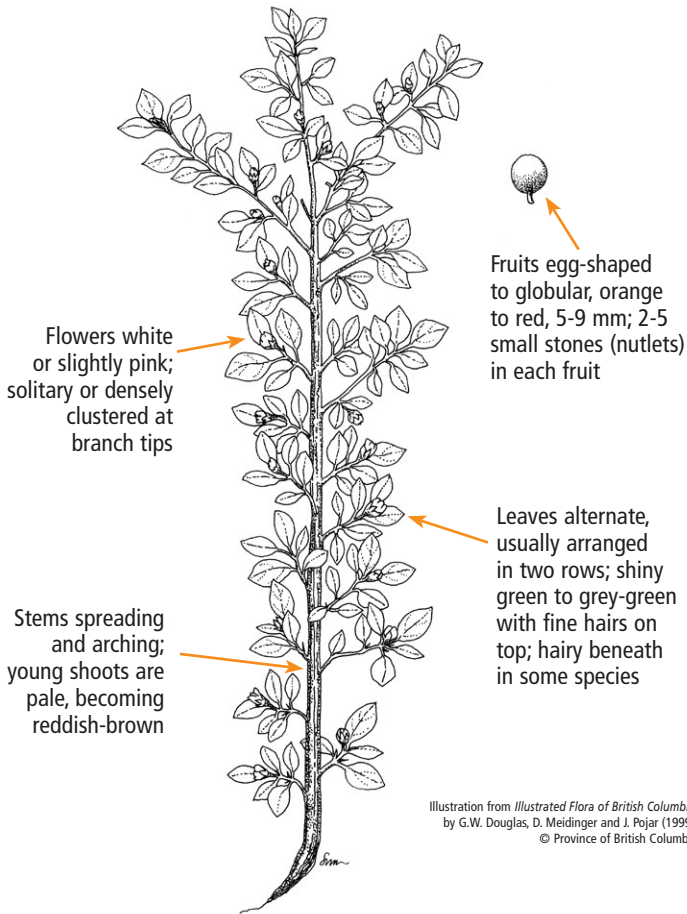
## IMPACTS ON GARRY OAK AND ASSOCIATED ECOSYSTEMS

Although cotoneasters are not yet considered a serious problem in Garry oak and associated ecosystems, their potential for invasiveness is not known. Cotoneasters can successfully compete for moisture and light, displacing native species. Because rock cotoneaster does well on dry, rocky sites, it may represent the greatest concern. Sites close to residential gardens may also be at greater risk of invasion.

## FIELD DESCRIPTION

These shrubs take different forms, from low and creeping (e.g., rock cotoneaster) to 2-7 m or more tall and wide (e.g., Franchet

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cotoneaster). Cotoneasters are hardy, fast growing plants that keep most of their leaves through winter. Branches often grow in a complex, interwoven pattern. Flowers emerge from late spring through summer and are attractive to bees. Bright red to orange berries adorn the shrub from autumn through winter.

### LIFE HISTORY

Cotoneasters reproduce mainly by seed but can also sprout from shallow roots. Fruits are often eaten by birds and the seeds dispersed in their droppings. Most seeds simply fall to the ground and germinate into numerous seedlings, which vigorously compete with each other. Seeds typically germinate in the first year. Plants flower from late spring through summer, and set fruit in autumn, with berries persisting through winter. Timing of ripening following fruit set

varies with species or cultivar, and with local climate (for example, in our area rock cotoneaster fruits ripen September through October). The seed bank is short-lived, but plants can survive 15 to 40 years in the wild and much longer under cultivation, depending on local conditions.

## HABITAT

Cotoneasters are found in forests, shrublands, grasslands and rocky areas. They tolerate partial shade and a wide range of environmental conditions, from moist woodlands to open areas having thin, rocky soils. In dry areas, they prefer coastal conditions where cool fogs reduce transpiration. Rock cotoneaster is found in dry to relatively moist (mesic) waste areas or open forests in lowland areas.

## 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.**

**PHYSICAL CONTROL:** To lessen site disturbance, remove cotoneaster plants when soil is moist, and immediately replant disturbed soil with desirable native species to prevent re-infestation. If cotoneaster plants are removed before the fruits ripen, any fruits that fall to the ground will be unlikely to spread viable seed. Large plants can be removed with equipment; cut off limbs first, then dig out the base with a shovel or backhoe. Roots can penetrate deep into rock crevices, requiring extensive excavation. Ensure stumps and shallow roots are completely removed, as both can re-sprout.

Because seeds from the seed bank can germinate and re-infest the site, management efforts should include seedling removal as required. Some authorities advise waiting one to two years to let competition among the new seedlings reduce their numbers, while others recommend pulling seedlings immediately as they are found.

**BIOLOGICAL CONTROL:** No known biological agents are available.

**CHEMICAL CONTROL:** To kill small cotoneaster shrubs and control regrowth, treat with glyphosate, using a wiping type of herbicide applicator (weed wiper) or hand-held spray. For large shrubs, cut branches to the stump and paint with glyphosate. It may be beneficial

to rough up exposed bark and paint it with glyphosate.

*Herbicides should be used in sensitive Garry oak ecosystems only with extreme caution and expert advice.*

**OTHER TECHNIQUES:** Seedlings can be smothered with mulch or black plastic. Burning is not effective for controlling cotoneaster regeneration.

**PREVENTIVE MEASURES:** Remove residential garden refuse and any invading cotoneasters as quickly as possible. Encourage planting of alternative, non-invasive species in gardens.

**PERSISTENCE:** Although cotoneasters are very long-lived, mature quickly and produce highly viable seeds, the seed bank does not persist.

## GENERAL COMMENTS

The fruits provide food for wintering birds, which then spread the seeds in their droppings. Cotoneasters can set seed without being pollinated and fertilized, and readily hybridize to form new varieties.

## SELECT REFERENCES

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A comprehensive annotated bibliography of literature specific to cotoneasters is available at <http://www.goert.ca/resources/biblio.htm>.

**For more information contact the Garry Oak Ecosystems Recovery Team, or see the website at [www.goert.ca](http://www.goert.ca)**