

Simon's cotoneaster

Cotoneaster simonsii Baker

Synonyms: n/a

Other common name: Himalayan cotoneaster

Family: Rosaceae

Invasiveness Rank: 42 The invasiveness rank is calculated based on a species' ecological impacts, biological attributes, distribution, and response to control measures. The ranks are scaled from 0 to 100, with 0 representing a plant that poses no threat to native ecosystems and 100 representing a plant that poses a major threat to native ecosystems.

Description

Simon's cotoneaster (*Cotoneaster simonsii*) is a medium height (2-3 m) thorny shrub occasionally used for landscaping in Alaska. This variety of cotoneaster and others are imported and sold through nurseries and garden centers as ornamental species. Simon's cotoneaster is deciduous with conspicuous orange-red fruits, orange/scarlet red leaves in the fall with small white to rose-colored flowers. The leaves are dark-green, pubescent and oval-shaped, forming an alternate pattern on the leaf twig. Flowers have 5 petals and are grouped in clusters of 2-5. Corollas (flower petals whorled within sepals) are white with red markings or pinkish, calyces are appressed and hairy; ovaries are inferior and stamens number about 20 (E-Flora BC 2016). Cotoneaster species produce strong, wide spreading, but superficial root systems. Identification to the species level in the *Cotoneaster* genera requires field visits during flowering and fruiting times.

Similar species: Cotoneaster is a common perennial shrub with over 65 species found in the U.S. and Canada. In Alaska, the most common cotoneaster shrubs are Peking cotoneaster (*Cotoneaster acutifolius*) and Hedge cotoneaster (*Cotoneaster lucidus*) both of which have black fruit.

Distribution and Abundance

General information about distribution/range: The natural habitats in China where *Cotoneaster* species are found are mountain regions, forests, slopes, thickets, river valleys, river banks, grassy sites, often on rocky or calcareous sites, at altitudes of 800-4100 m (Lingdi & Brach, 2003).

Native and current distribution: Simon's cotoneaster is native to the region of India and Bhutan but has naturalized in Europe (Fryer and Hylmö 2009, Hassler 2016). Simon's cotoneaster is an escaped ornamental in Washington, Oregon, California, Ohio and British Columbia, Canada (NNS 2016, USDA, NRCS 2018). It is considered invasive in the U.K., Denmark, South Africa, France Italy, and Ireland (GBIF 2018).

In Alaska Simon's Cotoneaster has only been

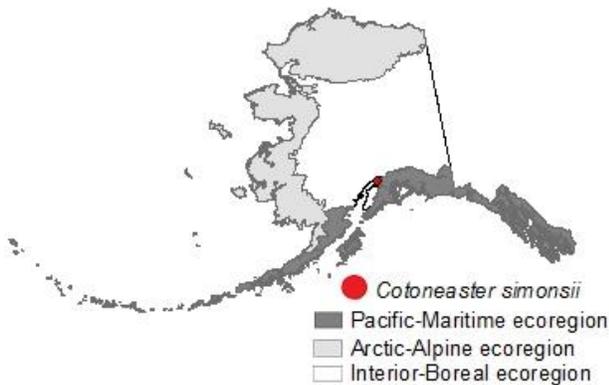
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Simon's Cotoneaster (*Cotoneaster simonsii* Baker) herbarium specimen from University of Alaska, Anchorage, Herbarium (CPNWH 2018).

documented in the Pacific-Maritime ecogeographic region (AKEPIC 2018).

AKEPIC database link and information regarding Alaska's non-native plant species is available online: <http://accs.uaa.alaska.edu/invasive-species/non-native-plants>



Distribution of Simon's cotoneaster (*Cotoneaster simonsii* Baker) in Alaska.

Legal Listings

- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states
- Federal noxious weed
- Listed noxious in Canada or other countries (New Zealand and some European countries).

Ecological Impact

Impact on community composition, structure, and interactions: Simon's cotoneaster is a newly recognized escaped ornamental and the impacts are unknown, but it appears to be competing with native understory and self-seeding (G. Graziano - pers. obs). Other species of cotoneaster are known establish in undisturbed natural areas and to shade out/smother indigenous species (Day et al. 2003, Boer 2014).

Impact on ecosystem processes: The impact of Simon's cotoneaster on ecosystem processes in Alaska is relatively unknown. Simon's cotoneaster has the ability to produce large amounts of seed in a single growing season, possibly affecting colonization of natural areas near where cultivars are growing. Simon's cotoneaster exhibited moderate resistance to fire blight when compared to other *Cotoneaster* species (Rothleitner et al. 2014).

Biology and Invasive Potential

Reproductive potential: Simon's cotoneaster self-seeds from fruits distributed by birds and from in-situ sowing. Cotoneaster seeds from rockspray cotoneaster (*C. horizontalis*) may remain viable for up to 5 years (Pilkington 2011). *Cotoneaster* species are also known to

reproduce vegetatively (Boer 2014).

Role of disturbance in establishment: Simon's cotoneaster likely needs some level of disturbance for germination. Cotoneaster species produce strong and wide growing but superficial root systems.

Potential for long-distance dispersal: *Cotoneaster* fruits are edible for small mammals and seeds are able to germinate when eaten by rats or larger animals. (Williams et al 2000). There is potential for long-distance dispersal from birds that eat *Cotoneaster* fruit and disperse seeds. In the Netherlands, bird species spread *Cotoneaster* short distances to nearby roosting sites (Verloove 2013).

Potential to be spread by human activity: As an ornamental shrub this plant could be spread by intentional and unintentional human perennial garden related activity. It has escaped cultivation on the Chester Creek trail in Anchorage.

Germination requirement:

Simon's cotoneaster prefers full sun but will germinate in partial shade. Soils can be poor and dry but not saturated for germination (NNSS 2016).

Growth requirements: Full sun to partial shade preferred. Cotoneaster can grow in poor soil conditions including rocky ledges, crags, scree and calcareous habitats (Day et al. 2003, Boer 2014).

Congeneric weeds: Milkflower cotoneaster (*Cotoneaster lacteus*) is listed as invasive for the state of California. Silverleaf cotoneaster (*Cotoneaster pannosus*) is listed as an alien species for Hawaii and as an invasive in the state of California (USDA, NRCS 2018). Numerous other species of *Cotoneaster* have been introduced in the contiguous U.S. States and Canada but are not listed as invasive (USDA, NRCS 2018).

Management

Cotoneaster species produce strong and broad reaching but superficial root systems. While young *Cotoneaster* plants can still be uprooted using a weed wrench. Both the stump and the shallow roots should be removed as both can re-sprout (GOERTS 2005). Effective control of Simon's cotoneaster was reported using picloram, as Vigilant® gel, and has been consistently more effective than two other herbicides (glyphosate or metsulfuron), producing complete control of Simon's cotoneaster (*Cotoneaster simonsii*) (Ward & Henzell 2003).

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