

## scentless chamomile

### *Tripleurospermum inodorum* (L.) Sch. Bip.

Synonyms: *Chamomilla inodora* (L.) Gilib., *Matricaria inodora* L., *M. maritima* var. *agrestis* (Knaf) Wilmott, *M. maritima* ssp. *inodora* (L.) Clapham, *M. maritima* var. *inodora* (Linnaeus) Soó, *M. perforata* Merat, *Tripleurospermum maritimum* (Linnaeus) W. D. J. Koch subsp. *inodorum* (Linnaeus) Applequist, *T. perforata* (Mérat) M. Lainz

Other common names: false chamomile, false mayweed, scentless false mayweed, scentless mayweed

Family: Asteraceae

**Invasiveness Rank:** 48 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

Scentless chamomile is an annual to perennial forb that grows over 91 cm tall from extensive, fibrous root systems. Stems are highly branched. Leaves are alternate, odorless when crushed, 2 ½ to 7 ½ cm long, and divided into numerous, narrow, thread-like, branched segments. Plants produce numerous flower heads. Flower heads are 2 ½ to 4 ½ cm in diameter. Disk florets are yellow. Ray florets are white and 9 ½ to 19 mm long. Both disk and ray florets are capable of producing viable seeds. Seeds have three distinctive ridges (Royer and Dickinson 1999, Parchoma 2004).



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**Similar species:** False mayweed (*Tripleurospermum maritimum* ssp. *phaeocephalum*) is native to the shores of the Bering and Beaufort Seas of Alaska and can be confused with scentless chamomile. False mayweed has

dark brown margins on its involucre bracts, whereas scentless chamomile has light brown margins on its involucre bracts. Scentless chamomile looks similar to the non-native species stinking mayweed (*Anthemis cotula*) and wild chamomile (*Matricaria recutita*), but can be distinguished from these species by its lack of a strong odor (Royer and Dickinson 1999, CWMA 2000, Juras et al. 2004).



Flower heads of *Tripleurospermum inodorum* (L.) Sch. Bip.

#### Ecological Impact

**Impact on community composition, structure, and interactions:** Spring-emergent seedlings can form dense stands, suppressing the growth of native plant seedlings (NAPPO 2003). Scentless chamomile is unpalatable to animals; thus, dense stands reduce the quality of forage sites (CWMA 2000, Parchoma 2004). This species is pollinated by bees and flies (Harris and McClay 2003).

**Impact on ecosystem processes:** Scentless chamomile is likely to alter the amounts of soil moisture and nutrients available to native species.

## Biology and Invasive Potential

**Reproductive potential:** Scentless chamomile reproduces entirely by seeds. Large plants are capable of producing up to one million seeds, and solid stands of scentless chamomile can produce 1,800,000 seeds per square meter. Seed banks can be extensive and persistent; buried seeds can remain viable for at least 15 years (Juras et al. 2004).

**Role of disturbance in establishment:** Scentless chamomile is often associated with disturbed habitats where there is little competition from established vegetation. Periodic disturbances, such as cultivation, trampling, or flooding, promote the establishment of scentless chamomile (Juras et al. 2004).

**Potential for long-distance dispersal:** Seeds do not have any specific adaptations for long-distance dispersal. Nevertheless, seeds can be spread by wind, water, and drifting snow (Juras et al. 2004, Parchoma 2004). Up to 26% of seeds remain viable after passing through digestive systems (Rutledge and McLendon 1996, NAPPO 2003).

**Potential to be spread by human activity:** Seeds can be transported on vehicles. They are contaminants in forage and commercial seed (Juras et al. 2004, Parchoma 2004).

**Germination requirements:** Seeds are able to germinate under a wide range of temperatures and moisture conditions. The optimal temperature range for germination is from 2°C to 40°C. Seeds floating in water germinate readily. Germination rates are higher under canopy layers than in exposed areas (Juras et al. 2004).

**Growth requirements:** Scentless chamomile grows in a range of soils including clay, loam, and sand with pH ranging from 5.5 to 7.9. It grows best in moist, organic soils and does not tolerate calcareous soils (Rutledge and McLendon 1996).

**Congeneric weeds:** No other *Tripleurospermum* species are listed as noxious species in the U.S. or Canada or are known to occur as non-native species in North America (USDA 2002).

## Legal Listings

- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states (CO, WA).
- Federal noxious weed
- Listed noxious in Canada or other countries (AB, BC, MB, QC, SK)

## References:

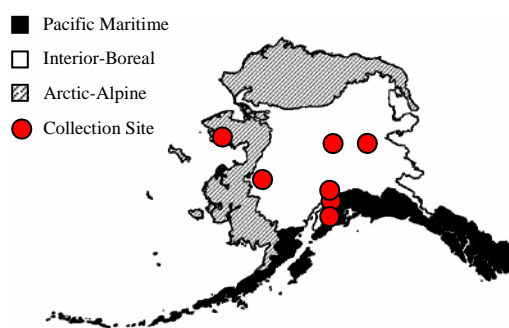
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## Distribution and Abundance

Scentless chamomile grows in roadsides, perennial forage crops, pastures, lawns, gardens, waste areas, irrigation ditches, shorelines, streams, and pond edges (Juras et al. 2004, Parchoma 2004). In Alaska, it appears to be restricted to areas with recent anthropogenic soil disturbance and little organic soil.

**Native and current distribution:** Scentless chamomile is native to northern and central Europe. It has been introduced to North America and Asia. It can be found in 27 states of the U.S. and in all Canadian provinces (USDA 2002, NAPPO 2003, Juras et al. 2004). Scentless chamomile has been documented from all three ecogeographic regions of Alaska (Hultén 1968, AKEPIC 2010, UAM 2010).



Distribution of scentless chamomile in Alaska

## Management

Scentless chamomile can be difficult to control. It is resistant to many herbicides. A combination of mowing, tillage, and hand-weeding has been effective in controlling infestations. Biological control agents have been released in British Columbia to control scentless chamomile infestations (Juras et al. 2004, Parchoma 2004); however, biological control agents may be detrimental to false mayweed (*Tripleurospermum maritimum* ssp. *phaecocephalum*) populations in Alaska. Scentless chamomile tends to occupy recently disturbed sites and does not persist without repeated disturbances; thus, control efforts may not be necessary in some cases (Harris and McClay 2003).

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