

## common tansy *Tanacetum vulgare* L.

Synonyms: *Chrysanthemum uliginosum* Pers., *C. vulgare* (L.) Bernh., *Tanacetum boreale* Fisch. ex DC., *T. vulgare* var. *crispum* DC.

Other common name: garden tansy

Family: Asteraceae

**Invasiveness Rank:** 60 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

Common tansy is a rhizomatous, perennial forb that grows 40 to 150 cm tall. Plants are glabrous or sparsely hairy and have a strong odor. Stems are erect, solitary, branched, and often purple-red at the base. Leaves are alternate, oblong to elliptic, short-petiolated or sessile, 4 to 20 cm long, 2 to 10 cm wide, and pinnately lobed with 8 to 20 lobes per leaf. Lobes are lanceolate to narrowly elliptic with coarsely toothed margins. Flower heads lack ray florets and are borne in compact clusters of 20 to 200 at the ends of stems. Involucres are 2 to 3 mm tall and 5 to 10 mm in diameter. Involucral bracts are arranged in 2 to 3 rows. Flower heads are button-like, yellow, and 7 to 12 mm in diameter. Seeds are yellowish-brown, 4- or 5-angled, and 1 to 2 mm long. Pappus bristles are inconspicuous and 0.2 to 0.4 mm long (Watson 2006, Luneva 2009, Klinkenberg 2010, NatureGate 2011).



Flower heads of *Tanacetum vulgare* L. Photo by C. Slemmons.



Foliage of *Tanacetum vulgare* L. Photo by M. Harte

**Similar species:** Common tansy can be confused with Lake Huron tansy (*Tanacetum bipinnatum*), which is native to Alaska. Unlike common tansy, Lake Huron tansy has leaves that are usually hairy, flower heads that are arranged in clusters of 5 to 12, and ray florets that are 1 to 7 mm long (Watson 2006, Klinkenberg 2010). Common tansy can also be confused with several introduced members of the Asteraceae family. Tansy ragwort (*Senecio jacobaea*) can be distinguished from common tansy by the presence of ray florets and conspicuous pappi (Royer and Dickinson 1999). Mayweed chamomile (*Anthemis cotula*) can be distinguished from common tansy by the presence of white ray florets and leaves that are divided two to three times into linear segments. Common brassbuttons (*Cotula coronopifolia*) has yellow, button-like flower heads that are similar to those of common tansy. However, common brassbuttons has linear to lanceolate leaves that are 2 to 7 cm long and not pinnately divided (DiTomaso and Healy 2007).

### Ecological Impact

**Impact on community composition, structure, and interactions:** In Alaska, 16% of recorded infestations have occurred at or above 50% ground cover (AKEPIC 2011). Common tansy establishes in the existing herbaceous layer, increasing the density of the layer (Lapina pers. obs.). Dense populations of common tansy

displace native plant species (Gucker 2009). This species is unpalatable and poisonous when consumed in large quantities; it therefore can reduce the quality of foraging sites. Birds eat the seeds (Gucker 2009). Flowers are pollinated by a variety of insects (LeCain and Sheley 2006); the presence of *Tanacetum vulgare* may therefore alter native plant-pollinator interactions. This species is associated with several viruses (Royer and Dickinson 1999).

**Impact on ecosystem processes:** Common tansy restricts the flow of water when growing along stream banks (Gucker 2009). It can form dense clumps (Gucker 2009) and likely reduces the availability of soil moisture and nutrients.

### Biology and Invasive Potential

**Reproductive potential:** Common tansy reproduces sexually by seeds and vegetatively from long rhizomes (Gucker 2009, Luneva 2009). Each plant is capable of producing over 50,000 seeds, but plants in Montana produced an average of 2,553 seeds each. Field studies in the Czech Republic suggest common tansy seeds are viable for just one season (Prach and Wade 1992).

**Role of disturbance in establishment:** Common tansy colonizes disturbed areas, including disturbed forest understories. Seeds germinate in open soil, especially after large disturbances. This species does not establish in vegetated areas or in soil covered with litter (Gucker 2009). Most recorded infestations in Alaska are associated with anthropogenically disturbed areas. However, some infestations have been documented from areas that are naturally disturbed by coastal processes or river action (AKEPIC 2011, UAM 2011).

**Potential for long-distance dispersal:** Seeds can float and are spread by the movement of water. They are also transported on the fur and feathers of animals (Gucker 2009).

**Potential to be spread by human activity:** Common tansy is cultivated as an ornamental plant. It commonly escapes cultivation along the Pacific Coast of the U.S. and Canada (Watson 2006). This species has been associated with the soil of container-grown ornamental plants (Conn et al. 2008). Seeds can likely be spread by maintenance and construction equipment and on shoes (Gucker 2009).

**Germination requirements:** Seeds germinate most readily within the top 2 cm of soil. Cold stratification followed by warm temperatures stimulate germination. Seeds do not germinate well in water-logged soils (Gucker 2009).

**Growth requirements:** Common tansy is adapted to a wide range of climate and soil conditions. It commonly grows on dry to moist sand or loam. It can grow in shaded forest understories but grows best in full sunlight (Gucker 2009).

**Congeneric weeds:** Feverfew (*Tanacetum parthenium*) is known to occur as a non-native weed in California

(DiTomaso and Healy 2007).

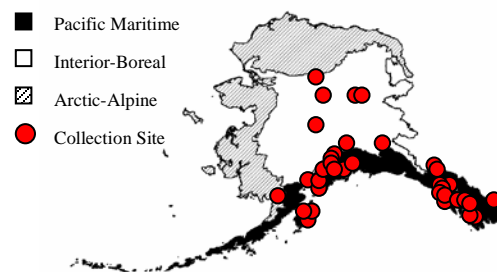
### Legal Listings

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

### Native and current distribution:

Common tansy was introduced to North America from Europe in the 17<sup>th</sup> century as an ornamental and medicinal plant (Whitson et al. 2000, Gucker 2009). This species is a frequent agricultural weed in Russia (Luneva 2009). It commonly grows in rangelands and pastures in North America (Gucker 2009). Common tansy can form dense populations along riverbanks and lake shores (Gucker 2009, AKEPIC 2011). It invades disturbed prairies in Wisconsin (Wisconsin DNR 2003) and forms dense, monotypic stands in Idaho (DiTomaso and Healy 2007). It reduces the quality of rangelands and pastures (Gucker 2009).

**Native and current distribution:** Common tansy is native to Siberia and parts of Europe (Gucker 2009, NatureGate 2011). It has been introduced throughout much of the world, including parts of Eurasia, North America, Australia, and New Zealand (Rebele 2000, Watson 2006, Gucker 2009, Landcare Research 2011). It grows in 45 states of the U.S. and most of Canada (USDA 2011). This species grows in arctic regions across Russia (Luneva and Budrevskaya 2006). Common tansy has been documented from all three ecogeographic regions of Alaska (Hultén 1968, AKEPIC 2011, UAM 2011).



Distribution of common tansy in Alaska

### Management

Small populations of common tansy can be removed by hand pulling or digging as long as rhizome fragments are removed. Gloves should be worn when pulling plants, as this species can cause dermatitis. Plants should be bagged and removed from the site. Mowing multiple times per year before seed set can contain populations (Gucker 2009, King County 2010).

Dicamba, picloram, and chlorsulfuron control this species (Parchoma 2002, King County 2010). Metsulfuron applied at a rate of at least 21 grams per hectare with a non-ionic surfactant effectively controls populations. Glyphosate and 2, 4-D can also be used

when wiped onto the foliage, but they do not provide complete control (LeCain and Sheley 2006). Herbicides are most effective when applied in spring. Controlled areas should be monitored for several years (King County 2010).

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