

common dandelion

Taraxacum officinale F.H. Wigg. ssp. *officinale*

Synonyms: *Leontodon latiloba* (DC.) Britton, nom. inq., *L. taraxacoides* (Vill.) Mérat, *L. taraxacoides* ssp. *longirostris* Finch and Sell, *L. taraxacum* L., *Taraxacum atroglaucum* M.P. Christ., *T. campylodes* G.E. Haglund, *T. croceum* auct. non Dahlst., *T. curvidens* M.P. Christ., *T. cyclocentrum* M.P. Christ., *T. dahlstedtii* Lindb. f., *T. davidssonii* M.P. Christ., *T. devians* Dahlst., *T. dilutisquameum* M.P. Christ., *T. firmum* Dahlst., *T. islandiciforme* Dahlst., *T. kok-saghyz* auct. non Rodin, *T. laevigatum* (Willd.) DC. in part, *T. latilobum* DC., nom. inq., *T. officinale* F.H. Wigg. ssp. *vulgare* (Lam.) Schinz & R. Keller, *T. officinale* F.H. Wigg. var. *palustre* (Lyons) Blytt p.p., *T. palustre* (Lyons) Symons var. *vulgare* (Lam.) Fernald, nom. inq., *T. pleniflorum* M.P. Christ., *T. retroflexum* Lindb. f., *T. rhodolepis* Dahlst., *T. undulatum* Lindb. f. & Marklund, *T. vagans* G.E. Haglund, *T. vulgare* Lam., nom. inq., *T. xanthostigma* Lindb. f.

Other common name: blowball, canker-wort, dandelion, faceclock, Irish daisy, lesser hawkbit, lion's tooth, pee-a-bed, wet-a-bed, wandering dandelion

Family: Asteraceae

Invasiveness Rank: 58 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.

Note on Taxonomy: The *Taraxacum* genus is taxonomically confusing because asexual reproduction causes local diversification. The genus has been subject to many divergent interpretations, and hundreds of specific names have been published. The current taxonomic treatments describe *Taraxacum officinale* as encompassing two subspecies, one of which is introduced in Alaska (ssp. *officinale*) and the other of which is native to Alaska (ssp. *ceratophorum*) (USDA 2002).

Description

Common dandelion is a perennial herb that grows 5 to 51 cm tall from a branched stem base with a thick, deep taproot. Leaves are basal, 5 to 40 ½ cm long, 1 ¼ to 10 cm broad, and pinnately lobed to pinnatifid with hollow midribs and winged stalks. Flower heads rise from the basal leaves on hollow stalks and are composed of yellow ray florets. They are 2 ½ to 5 cm in diameter and surrounded by 2 rows of involucre bracts. The whole plant contains a white, milky juice (Welsh 1974).



Flower head of *Taraxacum officinale* F.H. Wigg. Photo by C. Evans.

Similar species: The non-native *T. officinale* ssp.

officinale can be distinguished from native *Taraxacum* taxa in Alaska by the absence of horns on its involucre bracts and by its substantially larger flower heads. Native *Taraxacum* species are found primarily in undisturbed, herbaceous, alpine meadows.



Taraxacum officinale F.H. Wigg. Photo by M. Harte.

Ecological Impact

Impact on community composition, structure, and interactions: Common dandelion competes with native plants for moisture and nutrients. It is commonly eaten by moose, bears, sharp-tailed grouse, pocket gophers, deer, elk, and bighorn sheep. Sage grouse and deer populations benefit from the increased production of common dandelion (Esser 1993). Common dandelion is an important source of nectar and pollen for bees in Alaska (Esser 1993). Its presence may therefore alter the pollination ecologies of co-occurring plants. This species is a known host for a number of viruses (Royer and Dickinson 1999).

Impact on ecosystem processes: Common dandelion is one of the first colonizers to appear after disturbances and likely causes modest impacts to natural successional processes. It often achieves a peak in dominance within two to three years (Auchmoody and Walters 1988). In Alaska, this species often establishes in existing herbaceous layers, changing the density of the layer. It can form a new herbaceous layer on exposed mineral soil along river banks and roadsides.

Biology and Invasive Potential

Reproductive potential: Common dandelion reproduces sexually by seeds and vegetatively by shoots that grow from the root crowns (Whitson et al. 2000). Each plant can produce up to 5,000 seeds per year (Royer and Dickinson 1999). Seeds remained viable for up to 5 years in soil samples from Montana (Bard 1952) and up to 9 years in experiments in Nebraska (Burnside et al. 1996); seed banks are generally long-lived (Pratt 1984).

Role of disturbance in establishment: In Alaska, common dandelion is primarily found on disturbed substrates, but it also establishes in meadows (M. Carlson – pers. obs.).

Potential for long-distance dispersal: Each seed has a spreading pappus and weighs little; thus, wind can disperse seeds considerable distances. In tall grass prairie communities in Iowa, seeds were blown several hundred meters from the nearest source population (Platt 1975).

Potential to be spread by human activity: Seeds are likely transported on vehicles and in horticultural materials (Hodkinson and Thompson 1997). They are common contaminants in crop and forage seeds (Rutledge and McLendon 1996).

Germination requirements: Seeds must be in the top 2 ½ cm of soil to germinate (Royer and Dickinson 1999). Litter and mulch inhibit germination. Common dandelion germinates best in burned sites (Esser 1993). Seeds do not require cold stratification to germinate (USDA 2002).

Growth requirements: Common dandelion is adapted to all soil types with pH levels from 4.8 to 7.5. This species can withstand temperatures down to -39°C. It requires 100 frost-free days to grow and reproduce successfully (USDA 2002).

Congeneric weeds: Rock dandelion (*Taraxacum laevigatum*), marsh dandelion (*T. palustre*), and showy dandelion (*T. spectabile*) are non-native species known to occur in North America. None are considered noxious weeds in the U.S. or Canada (USDA 2002).

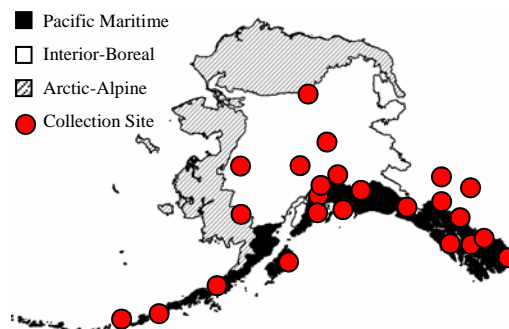
Legal Listings

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

Distribution and Abundance

Common dandelion grows in moist sites, lawns, meadows, pastures, and overgrazed areas. It also occurs in roadsides, waste places, and old fields. This species is considered a threat in montane forest and alpine zones in western Montana since it invades partially disturbed or undisturbed native communities and competes with conifer seedlings (Esser 1993).

Native and current distribution: Common dandelion (*Taraxacum officinale* ssp. *officinale*) is native to Eurasia but has become naturalized throughout North America. It has been found in all 50 states of the U.S. and most Canadian provinces. This species has also been introduced into southern Africa, South America, New Zealand, Australia, and India (Hultén 1968, Esser 1993). Common dandelion has been reported from all three ecogeographic regions of Alaska (Hultén 1968, ALA 2004). It invades meadows in Glacier Bay National Park and Preserve and river bars along the Nenana River and Stikine River (M. Shephard – pers. obs.). Common dandelion colonizes burned areas in the Kenai Peninsula (P. Spencer – pers. obs.). Common dandelion has been documented from all three ecogeographic region of Alaska (Hultén 1968, UAM 2003, AKEPIC 2010).



Distribution of common dandelion in Alaska

Management

Dandelion can be readily controlled with herbicides and spring burning. Hand pulling and cutting are generally ineffective because plants readily resprout from the caudex (Staniforth and Scott 1991).

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