

nipplewort

Lapsana communis L.

Synonyms: none

Other common names: common nipplewort

Family: Asteraceae

Invasiveness Rank: 33 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

Nipplewort is an annual plant that grows 20 to 150 cm tall from fibrous roots. All parts of the plant exude milky juice when broken. Stems are hollow, erect, simple or branched, and glabrous or hairy on the lower section. Leaves are alternate, hairy, thin, ovate to nearly circular, 1 to 15 cm long, and 1 to 7 cm wide with entire or coarsely toothed margins. Leaves are occasionally pinnately lobed near the base with the terminal lobes much larger than the lateral lobes. Lower leaves are petiolated. Petioles are narrowly winged, giving the leaf a lyrate shape. Upper leaves are sessile or nearly sessile. Flower heads are arranged in groups of 5 to 25 with 8 to 15 ray florets each. Involucres are 4 to 10 mm long, and 3 to 4 mm in diameter with 8 to 10 involucre bracts arranged in a single row. Involucre bracts are linear to oblong, glabrous, and 3 to 9 mm long with prominent longitudinal ridges. Florets are yellow and 7 to 10 mm long with five small teeth at the tips. Seeds are nerved, oblong, and 3 to 5 mm long. Seeds lack pappi (Bogler 2006, Kravchenko 2009, Klinkenberg 2010, NatureGate 2011).



Leaf of *Lapsana communis* L. Photo by T. Voekler.

Similar species: Wall lettuce (*Mycelis muralis*), a similar non-native species, can be distinguished from nipplewort by the presence of leaves that are pinnately divided with broad, triangular terminal segments, smaller involucres that are 1 to 2 mm in diameter, and flowers heads that are composed of five florets (eFloras 2008, NatureGate 2011). Western rattlesnake-root (*Prenanthes alata*), a native species, looks superficially similar to nipplewort when not flowering. Unlike nipplewort, western rattlesnake-root has arrow-shaped lower leaves and white flowers (eFloras 2008, Klinkenberg 2010).



Flower heads of *Lapsana communis* L. Photo by R. Old.

Ecological Impact

Impact on community composition, structure, and interactions: Nipplewort occurs at up to 30% ground cover in Alaska (AKEPIC 2011) and may increase the density of vegetation in disturbed areas. However, most infestations recorded in Alaska are associated with fill importation and occur at low densities (AKEPIC 2011). Because it is not highly aggressive in Alaska and is restricted to disturbed areas (AKEPIC 2011, UAM 2011), it likely causes only minor reductions in native plant populations. This species is edible to domestic cattle (Kravchenko 2009) and may be consumed by wild animals as well. Flowers are pollinated by flies, bees,

moths, and butterflies (Plants for a Future 2010), and the presence of this species may alter native plant-pollinator interactions.

Impact on ecosystem processes: Nipplewort likely has only minor impacts on ecosystem processes, as it is restricted to disturbed areas and has been noted for low aggressiveness in Alaska (AKEPIC 2011, UAM 2011).

Biology and Invasive Potential

Reproductive potential: Nipplewort reproduces by seeds. A single plant can produce 400 to 800 seeds (Cowbrough 2005, Faculty of Agricultural Sciences 2011). Seeds can remain viable for six years (Kravchenko 2009).

Role of disturbance in establishment: Nipplewort grows in agricultural fields, stream banks, roadsides, and shady disturbed areas in North America (Bogler 2006, Klinkenberg 2010). Most infestations recorded in Alaska are associated with fill importation (AKEPIC 2011); however, plants near Sitka were found growing on a rocky upper beach fringe (UAM 2011), suggesting that this species can establish in naturally disturbed areas as well.

Potential for long-distance dispersal: Seeds lack pappi (Hultén 1968) and have no specific adaptations for dispersal.

Potential to be spread by human activity: Nipplewort occurs mainly along roadsides in southeast Alaska (AKEPIC 2011), suggesting that seeds are spread by human activities.

Germination requirements: Light stimulates the germination of seeds (Milberg and Anderson 1997). Seeds often germinate in fall in Finland (NatureGate 2011).

Growth requirements: Nipplewort grows well in moist, shady areas (Kravchenko 2009). In Finland, it often grows as a winter annual and overwinters under snow as a rosette. Winter annuals are stouter and produce more seeds (NatureGate 2011).

Congeneric weeds: The *Lapsana* genus is monotypic (Pak and Bremer 1995).

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

References:

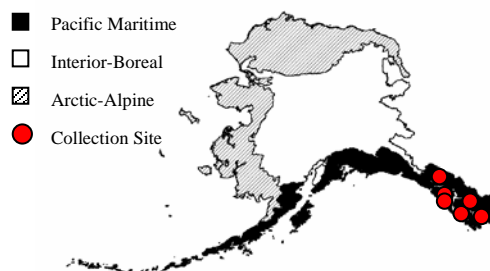
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Distribution and Abundance

Nipplewort is a frequent but not abundant agricultural weed in Russia and Europe and is becoming more common in Ontario (Cowbrough 2005, Kravchenko 2009, NatureGate 2011). It is known to grow along stream banks in North America (Bogler 2006). This species grows in natural areas on Mt. Haleakala, Maui (Kitayama and Mueller-Dombois 1995).

Native and current distribution: Nipplewort is native to Europe and southwest Asia (Bogler 2006). It has been introduced to North America, New Zealand, and East Asia (Bogler 2006, Kravchenko 2009, Landcare Research 2011). It grows in 37 states of the U.S. and much of Canada (USDA 2011). This species is known to grow in arctic regions in western Russia (Kravchenko and Budrevskaya 2005). Nipplewort has been documented from the Pacific Maritime ecogeographic region of Alaska (Hultén 1968, AKEPIC 2011, UAM 2011).



Distribution of nipplewort in Alaska

Management

Mowing before seed set can contain populations. Hand pulling effectively controls nipplewort (Kravchenko 2009). The following herbicides have proven effective in controlling this species in agricultural fields: dicamba, clopyralid, and atrazine and mixtures of dicamba and atrazine, bromoxynil and atrazine, diflufenzopyr and dicamba, and atrazine and 2, 4-D (Cowbrough 2005). Several years of monitoring may be necessary following treatment to control plants sprouting from the seed bank.

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