

white deadnettle

Lamium album L.

Synonyms: *Lamium petiolatum* Royle ex Benth.

Other common names: none

Family: Lamiaceae

Invasiveness Rank: 40 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

White deadnettle is a hairy, perennial plant that grows 20 to 80 cm tall from short, creeping rhizomes. Stems are simple, ascending to erect, four-angled, and sparsely hairy. Leaves are opposite, petiolated, ovate to ovate-lanceolate, hairy, net-veined, 2.5 to 9 cm long, and 1.5 to 5 cm wide with pointed tips and coarsely toothed margins. Petioles are up to 8 cm long on basal leaves and 1 to 6 cm long on upper leaves. Floral leaves are nearly sessile. Flowers appear whorled but arise in groups of three to nine from opposite leaf axils. Bracts are linear, sessile or nearly sessile, and 2 to 7 mm long with hairy margins. Calyxes are tubular to bell-shaped, 9 to 15 mm long, and 2 to 3 mm wide with teeth longer than the tube. Corollas are white to light rose, hairy, two-lipped, and 20 to 25 mm long. Lower lips are bisected. Nutlets are dark brown, narrowly ovoid, 3 to 3.5 mm long, 1.5 to 2 mm wide, and four-segmented with one seed per segment (Hultén 1968, eFloras 2008, NatureGate 2011).



Flowers of *Lamium album* L.

Similar species: White deadnettle can be confused with stinging nettle (*Urtica dioica*) and field mint (*Mentha*

arvensis), both of which are native to Alaska. Stinging nettle can be distinguished from white deadnettle by the presence of stinging glandular hairs and small, greenish flowers (Rudy 2004, NatureGate 2011). Field mint can be distinguished from white deadnettle by the presence of regular, four-lobed corollas (Hultén 1968). Several *Galeopsis* (hempnettle) species can be confused with white deadnettle. *Galeopsis* species can be distinguished from white deadnettle by the presence pinnately veined leaves (NatureGate 2011).



Leaf of *Lamium album* L.

Ecological Impact

Impact on community composition, structure, and interactions: White deadnettle is rhizomatous and forms clumps (Aniško 2008); it may therefore increase the density of forb/graminoid layers. It has been observed

growing in vegetated areas around Glacier Bay Lodge (Rapp 2009). This species does not form monocultures. The population near Glacier Bay Lodge was persistent but did not spread from its original location (Rapp pers. obs.). The leaves provide a food source for mollusks. Flowers are visited by mason bees (Bramley 2011) and bumblebees (Fussell and Corbet 1992, Bramley 2011); the presence of this species may therefore alter native plant-pollinator interactions.

Impact on ecosystem processes: White deadnettle is rhizomatous and forms clumps (Aniško 2008), likely reducing the availability of soil moisture and nutrients.

Biology and Invasive Potential

Reproductive potential: White deadnettle reproduces sexually by seeds and vegetatively from rhizomes (Aniško 2008). It spreads vigorously (Rudy 2004). The number of seeds produced per plant has not been quantified. Most seeds germinate within two years of maturation; however, approximately 1% of seeds remain viable in the soil for five years (Roberts and Boddrell 1984).

Role of disturbance in establishment: White deadnettle has spread into vegetated areas near Glacier Bay Lodge (Rapp 2009), and it is capable of spreading into areas occupied by other perennial plants in gardens (Aniško 2008).

Potential for long-distance dispersal: Seeds do not have any specialized adaptations for dispersal (eFloras 2008).

Potential to be spread by human activity: White deadnettle is grown as a low-maintenance ground cover in gardens (Rudy 2004, Aniško 2008). Plants found near Glacier Bay Lodge were likely escaped ornamentals (Rapp 2009).

Germination requirements: Seeds germinate in early spring. Temperature stratification, moisture, and light stimulate germination (Roberts and Boddrell 1984, eFloras 2008).

Growth requirements: White deadnettle grows best in partial shade; however, it tolerates a variety of light, moisture, and soil conditions (Rudy 2004, Bramley 2011).

Congeneric weeds: Henbit deadnettle (*Lamium amplexicaule*) is considered a noxious weed in Manitoba and a nuisance weed in Alberta (Invaders 2011). Henbit deadnettle and purple deadnettle (*L. purpureum*) are known to occur as non-native weeds in the U.S. (DiTomaso and Healy 2007).

Legal Listings

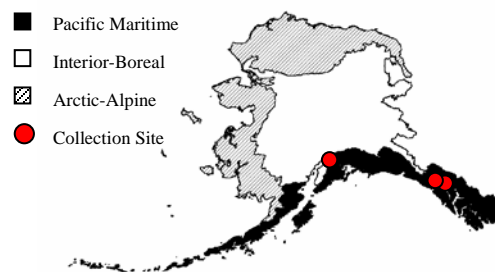
- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states

- Federal noxious weed
- Listed noxious in Canada or other countries

Distribution and Abundance

White deadnettle is grown as a low-maintenance ground cover in gardens (Rudy 2004, Aniško 2008), but it is not widely planted in Alaska. It grows along streams in Europe (Rudy 2004, Aniško 2008), suggesting that it could invade riparian communities in Alaska. It also grows in hedgerows and waste dumps in Europe (Rudy 2004).

Native and current distribution: White deadnettle is native to Europe and Asia, including eastern Turkey, Iran, Iraq, Russia, Mongolia, central Asia, India, China, and Japan (eFloras 2008, Bramley 2011). It has been introduced to Iceland, New Zealand, and North America (Bramley 2011). This species grows in Alaska, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, and Virginia, as well as central and eastern Canada (USDA 2011). It grows as far north as 69.7°N in Norway (Vascular Plant Herbarium Oslo 2011). White deadnettle has been documented from Juneau and Glacier Bay National Park in the Pacific Maritime ecogeographic region of Alaska and Anchorage in the Interior-Boreal ecogeographic region (Hultén 1968, AKEPIC 2011, UAM 2011).



Distribution of white deadnettle in Alaska

Management

White deadnettle is rhizomatous (Aniško 2008) and can resprout from rhizome fragments. Mechanical control methods will likely need to be repeated to remove resprouting plants. Field tests in Germany showed that glyphosate does not provide adequate control for *Lamium* species unless plants are sprayed when young. Glufosinate proved somewhat effective when applied while plants were young. Three applications of glufosinate at 400 grams per hectare or three or four early applications of metamitron, phenmedipham, desmedipham, and ethofumesat effectively controlled this species (Bückmann et al. 2000).

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