

baby's-breath

Gypsophila paniculata L.

Synonyms: *Gypsophila paniculata* L. var. *paniculata*

Other common names: babysbreath gypsophila, bachelor's button, perfoliate baby's breath

Family: Caryophyllaceae

Invasiveness Rank: 57 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

Baby's-breath is a perennial herb that grows up to 91 cm tall with widely branching stems. Stems are hairless, but noticeably glaucous. Rootstalks are woody and can grow as deep as 4 meters. Leaves are opposite, lanceolate, 2 to 10 cm long, and sharply pointed. Upper leaves are reduced in size. Plants lose most of their leaves by the time they begin to flower. Inflorescences are diffusely branched. Flowers are 1 ½ to 3 mm wide and have five-lobed calyxes. Calyx lobes are purple, and petals are white. Fruits are small capsules that contain two to five seeds (Douglas et al. 1998, Royer and Dickinson 1999, Whitson et al. 2000).



Gypsophila paniculata L. Photo by R. Old.

Similar species: Annual baby's-breath (*Gypsophila elegans*), another introduced garden plant, can be distinguished from baby's-breath by the presence of petals that are 8 to 10 mm long and stems that are 15 to 46 cm tall (Hartman 1993).

Ecological Impact

Impact on community composition, structure, and interactions: Baby's-breath can invade natural habitats and out-compete native perennial plants (Rutledge and McLendon 1996, Wisconsin DNR 2004, MAFF 2005). Baby's-breath is reported to be an alternate host for a number of viruses (Royer and Dickinson 1999). Its

presence reduces the protein content of desirable grasses (Wisconsin DNR 2004). Baby's-breath is attractive to numerous species of pollinating bees and flies (Darwent and Coupland 1966).

Impact on ecosystem processes: Baby's-breath reduces the nutrients available to co-occurring grass species (Robson 2004, Wisconsin DNR 2004).

Biology and Invasive Potential

Reproductive potential: Baby's-breath reproduces by seeds only. Each plant is capable of producing up to 14,000 seeds (Rutledge and McLendon 1996, Royer and Dickinson 1999).

Role of disturbance in establishment: The role of disturbance in the establishment of baby's-breath is unknown. Baby's-breath grows in partially disturbed pastures, rangelands, and stabilized sand dune communities (Darwent and Coupland 1966, Rutledge and McLendon 1996, Whitson et al. 2000).

Potential for long-distance dispersal: Wind is capable of transporting seeds distances of 1 km; however, most seeds land near the parent plant (Rutledge and McLendon 1996). At maturity, stems often break off from the base and tumble in the wind, spreading seeds widely (Royer and Dickinson 1999).

Potential to be spread by human activity: Baby's-breath is often cultivated in gardens and flower beds. It escapes cultivation and establishes in pastures and rangelands (Rutledge and McLendon 1996, Whitson et al. 2000, Robson 2004). The fairly wide distribution of baby's-breath in the northwestern U.S. may be a result of the spread of seeds along transportation corridors (Robson 2004). Baby's-breath may also be a contaminant in domestic crop seed (USDA, ARS 2004).

Germination requirements: Maximum germination occurs at temperatures ranging from 10°C to 28°C. Seeds do not need to be covered to germinate (Darwent and Coupland 1966, Nau 1996, Rutledge and McLendon 1996).

Growth requirements: Baby's-breath grows in both fine and coarse soils but does not tolerate acidic soils (Nau 1996). It is most problematic in sand and loam (Rutledge and McLendon 1996). In Canada, baby's-

breath is most aggressive in areas of low rainfall (MAFF 2005). Baby's-breath occurs in areas where the mean number of degree days above 5.5°C range between 832 and 2,220 and the mean annual precipitation ranges between ¼ and 1 meter (Darwent 1975, Wisconsin DNR 2004).

Congeneric weeds: Other introduced *Gypsophila* species are known to occur in the U.S. but none are listed as weeds (Royer and Dickinson 1999, USDA 2002).

Legal Listings

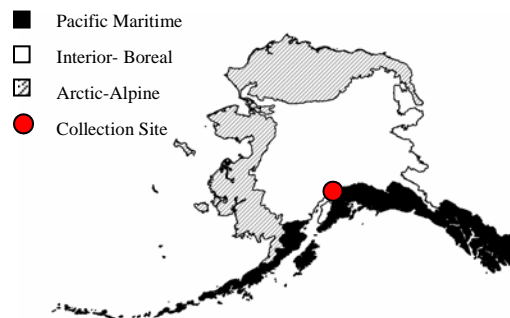
- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states (CA, WA)
- Federal noxious weed
- Listed noxious in Canada or other countries (MB)

Distribution and abundance

Baby's-breath grows in pastures, roadsides, hay fields, and waste places (Rutledge and McLendon 1996, Royer and Dickinson 1999, Wisconsin DNR 2004).

Native and current distribution: Baby's-breath is native to Europe and temperate Asia. It was introduced to North America as a garden ornamental in the late 19th century. It is now widespread across Canada and the northern U.S. (Royer and Dickinson 1999, USDA, ARS

2004, MAFF 2005). Baby's-breath has been documented from Anchorage and the Matanuska-Susitna Valley (I. Lapina – pers. obs., J. Snyder – pers. obs.).



Distribution of baby's-breath in Alaska.

Management

Annual tilling is a very effective control method for baby's-breath. This species is sensitive to herbicides. In Canada, heavy grazing has suppressed the growth of baby's-breath and prevented the establishment of new seedlings. Neither mowing nor clipping appear to be effective control strategies (Rutledge and McLendon 1996).

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