

dames rocket

Hesperis matronalis L.

Synonyms: None

Other common name: dame rocket, dame's rocket, dames violet, mother-of-the-evening

Family: Brassicaceae

Invasiveness Rank: 41 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

Dames rocket is a showy, biennial plant with weak root systems. Stems are branched and grow up to 91 cm tall. Leaves are lanceolate, alternate, and sharply toothed. Leaves and stems are covered in simple or forked hairs. Flowers are showy, fragrant, 16 to 25 ½ mm in diameter, and white, pink, or purple. They are arranged in elongated clusters. Each flower has four petals. Seeds are round, dark reddish-brown, and 3 to 4 mm long. Dames rocket generally produces a basal rosette of leaves during the first year and flowers during the second year (Welsh 1974, Royer and Dickinson 1999).



Flowers of *Hesperis matronalis* L. Photo by J. Reveal.

Similar species: Dames rocket is unlikely to be confused with any other mustard in Alaska. *Parrya* and *Braya* species are native mustards with violet flowers, but, unlike dames rocket, their leaves are primarily basal. Some *Arabis* species have violet flowers, but they are much smaller than the flowers of dames rocket. The introduced radish (*Raphanus sativus*) has large white to purple flowers and tall leafy stems that can be confused with dames rocket. Radish can be distinguished from dames rocket by the presence of lyrate lower leaves.

Ecological Impact

Impact on community composition, structure, and

interactions: Dames rocket likely competes with native species for soil moisture and nutrients (Wisconsin DNR 2003). It is a known host for several viruses (Royer and Dickinson 1999).

Impact on ecosystem processes: The effects of infestations of dames rocket on ecosystem processes are unknown. This species can dominate small areas in Ontario (Canadian Wildlife Service 2004).

Biology and Invasive Potential

Reproductive potential: Dames rocket reproduces by seeds only. A single plant can produce up to 20,000 seeds (Royer and Dickinson 1999).

Role of disturbance in establishment: Unknown.

Potential for long-distance dispersal: Unknown.

Potential to be spread by human activity: Dame's rocket is cultivated as an ornamental plant and quickly escapes cultivation. Seeds are commonly included in "wildflower" seed mixes (Wisconsin DNR 2003, CWMA 2004).

Germination requirements: Germination is slow and irregular. Seeds require constant moisture and temperatures between 19°C and 22°C in order to germinate successfully (HortiPlex 2004).

Growth requirements: Dames rocket is adapted to medium-textured soils with pH between 5 and 7. It requires 120 frost free days for successful growth and reproduction. This species can withstand winter temperatures as low as -30°C. It has intermediate shade tolerance (USDA 2010).

Congeneric weeds: No other introduced *Hesperis* species are known to occur in North America (USDA 2010)

Legal Listings

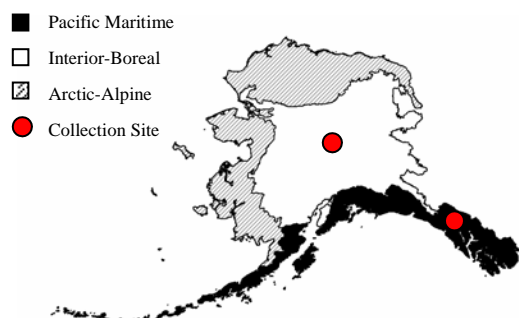
- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states (CO)
- Federal noxious weed
- Listed noxious in Canada or other countries

Distribution and abundance

Dames rocket usually grows in moist or mesic

woodlands, meadows, roadsides, fence lines, and open areas. It invades riparian and wetland habitats in the foothills around Boulder, Colorado (CWMA 2004). Dames rocket is cultivated in southeast Alaska, where it has escaped cultivation. It has been recorded invading mesic meadows in the Interior-Boreal ecogeographic region of Alaska (Welsh 1974, UAM 2010).

Native and current distribution: Dames rocket is native to Eurasia. It was introduced to North America in the 1600's. It can now be found throughout most of Canada and the U.S. (USDA 2010). This species has been documented from the Pacific Maritime and Interior-Boreal ecogeographic regions of Alaska (AKEPIC 2010, UAM 2010).



Distribution of dames rocket in Alaska.

References:

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Management

Hand-pulling may require several years to deplete seed banks. Seeds are likely to mature if plants are pulled after the seed pods have begun to develop. Bagging or burning plants will prevent further seed dispersal. Burning and herbicide treatments have proven to be effective control methods (Wisconsin DNR 2003).