

Azolla cristata Species Profile




(Tannery, 2023)

Scientific Name: *Azolla cristata*

Common name: Crested Mosquito Fern

Synonyms and Other Names: Fairy moss, Mexican mosquito fern

Taxonomy: available through  ITIS

Taxonomic Hierarchy

Kingdom	Plantae
Subkingdom	Viridiplantae
Infrakingdom	Streptophyta
Superdivision	Embryophyta
Division	Tracheophyta
Subdivision	Polypodiophytina
Class	Polypodiopsida

Subclass	Polypodiidae
Order	Salviniales
Family	Salviniaceae
Genus	Azolla
Species	Azolla cr

Retrieved [December, 7, 2023], from the Integrated Taxonomic Information System (ITIS) on-line database, www.itis.gov, [CC0 https://doi.org/10.5066/F7KH0KBK](https://doi.org/10.5066/F7KH0KBK)

Noxious: This species is not listed by the U.S. Department of Agriculture as a noxious weed

Identification: Example Characteristics

Stem/Rhizoids: *A. cristata* has small protuberances called trichomes that create water resistance and are two-celled (Evrard and Van Hove, 2004). It has brown rootlets that can get up to 6 cm long (Ahad et al., 2012).

Leaves: Small floating plant with greenish reddish fronds 1-5 cm long (Yañez et al., 2020).

Look-a-likes: Often confused with *Azolla caroliniana*, *Azolla filiculoides* differ by having one celled trichome instead of two like *A. cristata*.

Size: 1-5 cm long across the plant (Yañez et al., 2020).

Native Range:

Azolla cristata is widely distributed throughout North, Central, and South America (NEIS, 2021), including Canada, Eastern United States, Mexico, Uruguay and Argentina (Yañez et al., 2020).

Nonindigenous Occurrences:

Introductions outside of the United States include India, Japan, and Mozambique (Langa et al., 2020). Nonindigenous occurrences in the United States include Kentucky (Brunton and Bickerton, 2018) and Kansas (Aber et al., 2010).



Global Distribution of *Azolla cristata* (GBIF Secretariat., 2021)

Ecology:

Azolla fixes nitrogen from the air, and resides in still or slow moving lakes, ponds, and streams (Weldy et al., 2021). Found in lower, warm coastal regions (Madeira et al., 2016). It grows in elevations of 0-300 meters above sea level (Rizzo, 2021).

Means of Introduction:

Introduced purposefully for agricultural use in Japan, and thought to have been accidentally spread throughout Japan by hitchhiking on a bird (NIES, 2021). Introduction into Kansas and Kentucky is likely to have occurred from migrating waterfowl (Aber et al., 2010; Brunton and Bickerton, 2018).

Status:

Azolla cristata is spreading throughout the United States outside of its native range. All water bodies within the United States with slow moving water without prolonged freezing are susceptible to invasion, most likely a result from waterfowl migration.

Impact of Introduction:

Azolla can form large mats that can cause issues to human recreation like boating and fishing, as well as keeping sun from reaching other plants, preventing them from photosynthesis. It is limited by phosphorus, and will compete for this nutrient, keeping other species from using it (Keller et al., 2018). In Japan, they are hybridizing with native *Azolla* species (*A. imbricate*, *A. japonica*) and causing major competition with these native species (NIES, 2021).

Remarks:

This species was presumed to be unable to survive extremely cold habitats, but it does persist through Canadian and New York winters (Brunton and Bickerton, 2018).

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