

## Parrot feather watermilfoil (*Myriophyllum aquaticum*)

**History:** Parrot feather watermilfoil is an aquatic perennial herb native to South America. It was introduced to North America as an aquarium plant and pond ornamental and first reported in Washington, D.C., in 1890. Parrot feather is found primarily in the southern and eastern U.S. and is limited in its distribution in California, Idaho, Oregon, and Washington. The first and only record of parrot feather in Montana was in 1977 near Stevensville (Ravalli County).

**Identification:** Parrot feather is a member of the Haloragaceae family. It gets its name from the feather-like, pinnately compound leaves arranged around the stem in whorls of five to six. Parrot feather has both submersed and emergent leaves. Submersed leaves are 0.5 to 1.5 inches long with 20-30 leaflets per leaf; emergent leaves are 1 to 2 inches long with fewer (6 to 18) leaflets per leaf. Emergent leaves are brighter green and stiffer than submersed leaves, and they can grow up to a foot above the water's surface. Parrot feather has inconspicuous, white flowers about 1/16" long borne in the axils of emergent leaves. Male and female flowers occur on separate plants (dioecious), and plants in North America are typically female. The rooting structure of parrot feather is rhizomatous and branched. It can develop fine adventitious roots at the nodes along the stem.



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**Habitat:** Shallow (up to 5 feet deep) freshwater that is slowly moving or still is ideal habitat for parrot feather. It can be found in lakes, ponds, streams, and canals and appears to be adapted to high nutrient environments. Parrot feather grows best in warm water, but it can survive freezing conditions by going dormant. The relatively cold climate of Montana could impede its establishment; its current distribution suggests it is restricted to warmer areas.

**Spread:** Only vegetative reproduction through fragmentation has been reported in North America due to the lack of male flowers. Parrot feather fragmentation requires disturbance (i.e. no auto fragmenting). Fragments can be dispersed on boats or by clinging to waterfowl. Parrot feather is also spread by aquarium dumping.

**Impacts:** Parrot feather forms dense mats that cover the water surface. This can be problematic for water flow and pumping equipment in irrigation ditches, streams, ponds, and lakes. Monospecific stands can change physical and biological properties of a water body and may make areas less suitable for native or desired species. Areas with high parrot feather cover can decrease invertebrate abundance and shade the water column, decreasing algae and phytoplankton abundance.



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**Management:** Parrot feather is listed as a regulated plant (Priority 3) on the Montana noxious weed list. As with most aquatic invasive plants, preventing spread is important because once established, parrot feather can be very difficult to control. Education about the dangers of moving plant fragments by boats or other water recreational equipment and dumping aquariums is critical. Aquatic herbicides that contain 2,4-D, diquat, or endothall can be applied to emergent leaves; however, chemical control is rarely satisfactory due to parrot feather's waxy cuticle. Used alone, mechanical cutting of parrot feather is usually ineffective because this species readily resprouts, and disturbance can lead to fragmentation and further spread. However, mechanical cutting can be effective if it is repeated over time to relatively small infestations and care is taken to remove all plant parts.

## Test your knowledge of parrot feather watermilfoil— WORD SCRAMBLE!!!

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- TROIGMNTENAF A \_\_\_\_\_  
Method of spread in North America
- MRWA \_\_\_\_\_  
Ideal water temperature for parrot feather
- IREHROTITREYP \_\_\_\_\_  
Type of listing of parrot feather in Montana
- PEVIERNONT \_\_\_\_\_  
Strategy that is key to parrot feather management
- AEWCXCLTUYI \_\_\_\_\_  
This plant characteristic makes herbicide control challenging
- EELMFA \_\_\_\_\_  
Sex of most parrot feather plants found in North America
- AHAUISMTOERC \_\_\_\_\_  
Native continent for parrot feather

Solutions are posted to the MSU Extension Invasive Rangeland Weed website:

<http://www.msuextension.org/invasiveplantsMangold/extensionsub.html>

