



SLENDER MOONWORT (*Botrychium lineare*)

12-MONTH PETITION FINDING

The U.S. Fish and Wildlife Service (Service) has prepared a 12-month finding for a petition to list a small perennial fern, slender moonwort (*Botrychium lineare*), under the Endangered Species Act of 1973, as amended (Act).

The Service believes that sufficient information is currently available to support a finding that listing slender moonwort is warranted, but a proposed rule is precluded at this time by work on other higher priority listing actions. This species will be added to the Service's candidate species list upon publication of this finding.

Candidate species are those for which sufficient information on biological vulnerability and threats to support proposals to list them as endangered or threatened is on file. The Service anticipates developing and publishing proposed rules for candidate species in the future, and encourages state and Federal agencies as well as other parties to give consideration to these species in environmental planning.

DESCRIPTION OF PLANT, HISTORICAL DISTRIBUTION AND HABITAT

Slender moonwort is a small perennial fern with a pale green leaf about 2 to 7 inches long. Leaf segments are typically linear and divided or forked at the ends. It is considered to be one of the more distinctive moonworts.

The plant grows in meadows with tall grass and forbs, and in small openings within forests dominated by a variety of spruce, pine or fir species. It was described for the first time in 1994, and is considered to be one of the more distinctive moonworts.

The plant once was found in Idaho (Bonner or Boundary County), Oregon (Wallowa County), Montana (Glacier and Lake counties), California (Fresno County), and Colorado (Boulder and El Paso counties). *B. lineare* has also been documented in Quebec and New Brunswick, Canada. Populations in Idaho; Lake County, Montana; Fresno County, California; Boulder County, Colorado; and Canada are thought to be extirpated. Plants at some of these sites have not been seen since the early 1900s.

CURRENT STATUS

Today, nine sites are known to support *B. lineare*. Two populations are in the Pike-San Isabel National Forest, El Paso County, Colorado. Another population exists near Leadville in Lake County, Colorado. Two sites are found at Glacier National Park in Glacier County, Montana, and another south of St. Mary's, Montana, on the Blackfeet Indian Reservation. Eastern Oregon has two sites: one in the Eagle Cap Wilderness (Wallowa-Whitman National Forest) and another on private land in Wallowa County. One site exists in the Colville National Forest, Ferry County, Washington. Remaining populations of this plant are extremely small, ranging in size from 2 to 100 individuals.

REASONS FOR DECLINE

The decline of native plant species such as slender moonwort is an indicator of the overall health of the ecosystem in which it lives. Threats to this species include herbicide spraying; uncontrolled spread of non-native plants; ground-disturbing activities such as livestock grazing, urban development, timber harvest and road maintenance; various recreational activities; naturally occurring events and other human activities.

WHO TO CONTACT FOR FURTHER INFORMATION

For further information on slender moonwort (*Botrychium lineare*), contact *Robert Ruesink*, Supervisor, or *Steve Duke*, supervisory fish and wildlife biologist, at the U.S. Fish and Wildlife Service, Snake River Basin Office, 1387 S. Vinnell Way, Room 368, Boise, Idaho 83709, telephone (208) 378-5243.