

Limber Pine Dwarf Mistletoe

Infects five-needle pines

Pathogen—Aerial shoots of limber pine dwarf mistletoe (*Arceuthobium cyanocarpum*) are yellow-green, 1 1/4-2 3/4 inches (3-7 cm) long, and up to 1/13 inch (2 mm) diameter. Branching is fan-shaped and shoots are densely clustered (fig. 1). Limber pine dwarf mistletoe generally occurs in five-needle pine (predominantly limber pine) stands along the Continental Divide in the Rocky Mountains but also occurs in other mountain ranges (fig. 2).



Figure 1. Limber pine dwarf mistletoe parasitizing limber pine. Photo: Brian Howell, USDA Forest Service.

Hosts—Almost all of the five-needle pines in the Rocky Mountain Region, including limber, whitebark, and Rocky Mountain bristlecone pine, are primary hosts of limber pine dwarf mistletoe. The only endemic white pine that is not a host in nature is southwestern white pine, although it has been infected in greenhouse trials.

Signs and Symptoms—Signs of infection include aerial shoots and basal cups left after shoots have fallen off branches. Limber pine dwarf mistletoe causes small, tightly clustered witches' brooms (fig. 3). Other symptoms of infection include swelling of branches at infection sites, dieback, and eventual mortality of heavily infected trees.

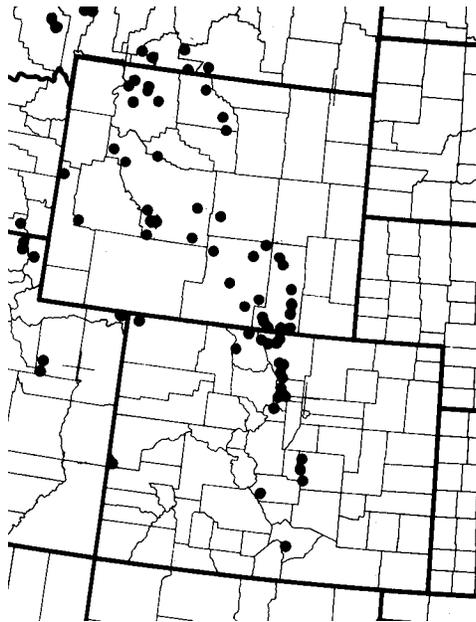


Figure 2. Distribution of limber pine dwarf mistletoe in the Rocky Mountain Region (from Hawksworth and Wiens 1996).

Impact—Limber pine dwarf mistletoe causes extensive mortality of limber pine in many partsteation white pines in the West; only white pine blister rust is more damaging. Lateral spread in single-storied stands is estimated to be 1.5-2 ft (45-61 cm) per year.

Please see the Introduction to Dwarf Mistletoes entry for disease cycle and management information.



Figure 3. Tightly clustered brooms are a symptom of limber pine dwarf mistletoe. Photo: Brian Howell, USDA Forest Service

1. Hawksworth, F.G.; Wiens, D. 1996. Dwarf mistletoes: biology, pathology and systematics. Agricultural Handbook 709. Washington, DC: U.S. Department of Agriculture, Forest Service. 410 p.
2. Taylor, J.E.; Mathiasen, R.L. 1999. Limber pine dwarf mistletoe. Forest Insect and Disease Leaflet 171. Washington, DC: U.S. Department of Agriculture, Forest Service. 7 p.