

Scots Pine Is Susceptible to Southwestern Dwarf Mistletoe

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ABSTRACT

Hawksworth, F. G., and Laut, J. G. 1981. Scots pine is susceptible to southwestern dwarf mistletoe. *Plant Disease* 65:263.

In a small field test in Colorado, *Pinus sylvestris* was found to be very susceptible to the ponderosa pine dwarf mistletoe, *Arceuthobium vaginatum* subsp. *cryptopodum*. Twelve of 16 seedlings were infected after exposure for eight seasons. Thus, Scots pine is not suitable for underplanting in infected ponderosa pine forests.

Southwestern dwarf mistletoe (*Arceuthobium vaginatum* subsp. *cryptopodum* (Engelm.) Hawksw. & Wiens) is very damaging in urban forests along the Colorado Front Range. One method recommended for regenerating stands of ponderosa pine (*Pinus ponderosa* Laws.) infested by southwestern dwarf mistletoe is to underplant with unsusceptible species.

Scots pine (*Pinus sylvestris* L.) is frequently planted in this area. Other

dwarf mistletoes (*A. americanum* Nutt. ex Engelm., *A. campylopodum* Engelm., and *A. laricis* (Piper) St. John) are known to parasitize Scots pine in the Pacific Northwest (2). We tested the susceptibility of Scots pine to southwestern dwarf mistletoe.

Twenty-five Scots pine seedlings (about 5 yr old and 0.3 m tall) were planted in a 3 × 3 grid under a heavily infected ponderosa pine stand at Douglas Valley, U.S. Air Force Academy, near Colorado Springs in 1971. The stand was about 60 yr old, and all trees in and near the plot were infected. The overstory trees averaged 18 cm in diameter at breast height and 9 m in height. Their average

dwarf mistletoe rating was 5.2 on the 6-class scale in 1980 (1).

When the Scots pine trees were examined in 1980, 16 were still alive; the other nine had either been removed or had died from causes other than mistletoe. The trees ranged from 0.6 to 2.0 m tall (average 1.1 m). Seventy-five percent (12 of 16 trees) were infected by dwarf mistletoe. The number of infections per tree ranged from one to seven (average 1.5).

Thus, Scots pine is very susceptible to *A. vaginatum* subsp. *cryptopodum* and should not be planted near mistletoe-infected ponderosa pines.

ACKNOWLEDGMENT

We thank Mel Rezac, Forester, U.S. Air Force Academy, for establishing and maintaining the Scots pine plantings.

LITERATURE CITED

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