

*Tholurna dissimilis* in Oregon

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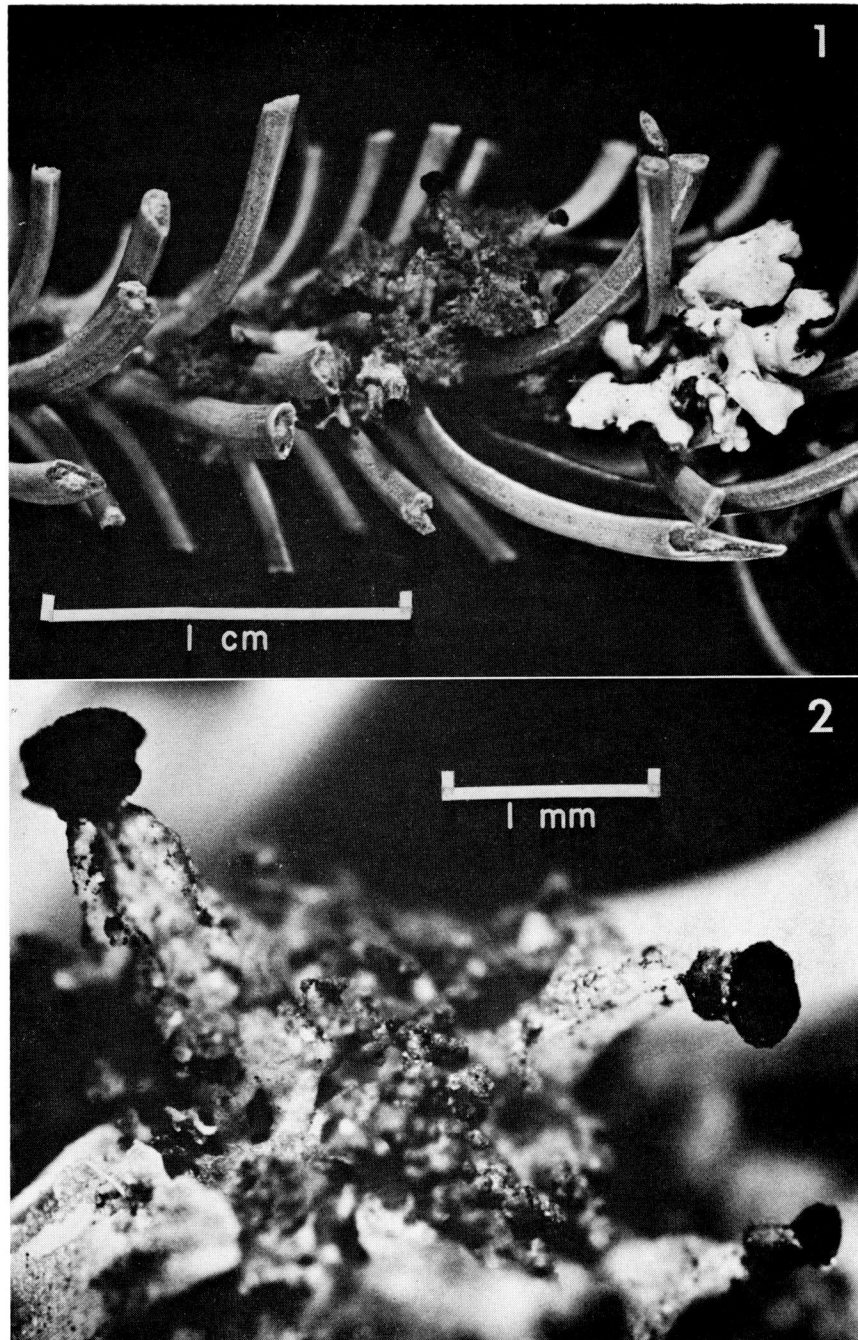
### *Tholurna dissimilis* in Oregon

Abstract. *Tholurna dissimilis* has been found in the state of Oregon on Carpenter Mtn., 300 km south of the Mt. Rainier localities in Washington.

*Tholurna dissimilis* Norm. (Caliciales, Sphaerophoraceae), once thought to be endemic to Scandinavia, is known from several localities in British Columbia and the state of Washington (Otto, 1972). Since its discovery on the Olympic Peninsula and on Mt. Rainier during the XI International Botanical Congress (Otto, 1970), I have been trying to locate Oregon populations. Until recently my searches, which included the vicinities of Mt. Hood and Mt. Jefferson, have failed to turn up populations of *Tholurna*.

The first known locality for *Tholurna* in Oregon is in the H. J. Andrews Experimental Forest, 75 km east of Eugene in Linn County. This forest is located in the Western Cascades and is an intensive study site for the Coniferous Forest Biome of the International Biological Program. *Tholurna* was discovered growing on twigs of *Abies lasiocarpa* (Hook.) Nutt. about 3 m below and to the northeast of the rocky summit of Carpenter Mtn. (122°8'W, 44°17'N; 1630 m alt.). My collection (Pike 3083) is from the tree closest to the summit. This tree is about 2 m high and stunted; it has been heavily infested by *Adelges piceae* (Ratz.), the balsam woolly aphid. The thalli of *Tholurna* are poorly developed and are widely scattered along the needle-bearing portion of the twigs (Fig. 1, 2). Within about 10 m from this tree additional, healthy individuals of *Tsuga mertensiana* (Bong.) Sarg., *Taxus brevifolia* Nutt., and *Abies lasiocarpa* were examined but no *Tholurna* was found on them.

Species growing associated with the *Tholurna* included *Alectoria fremontii* Tuck., *A. sarmentosa* (Ach.) Ach., *Hypogymnia imshaugii* Krog, *Parmelia exasperatula* Nyl., and *Platismatia glauca* (L.) W. Culb. & C. Culb.



FIGURES 1-2. *Tholurna dissimilis* on twigs of *Abies lasiocarpa* (Pike 3083). — 1. Habit, with needles partly cut away to expose the thalli. — 2. Closeup showing thallus, podetia, and ascocarps. — Photographs by William C. Denison.

The Carpenter Mtn. locality is 300 km south of the closest known locality (Mt. Rainier), and is now the southernmost locality recorded in North America. Carpenter Mtn. is in a region receiving approximately 250 cm of precipitation annually, occurring mainly between the end of September and mid-May; the summer months are extremely dry. The sparseness and stunted condition of the *Tholurna* thalli found on Carpenter Mtn. suggest that the conditions found here are near the limit for the growth of this species.

Specimens are deposited at the following herbaria: osc, COLO, and us.

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#### LITERATURE CITED

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