single large lesion or multiple lesions occurred in 50% of the frost-injured sample, killing 2- to 4-year-old leaders. In all cases, a branch assumed dominance and little evidence of damage could be found after 11 years.

Thirty percent of the sunscald injuries had the sapwood exposed, and all callused over in 3 years, except one, which took 8 years.

Height growth of the frost- and sunscald-injured trees was reduced for 1-2 years following the injury (Fig. 1).

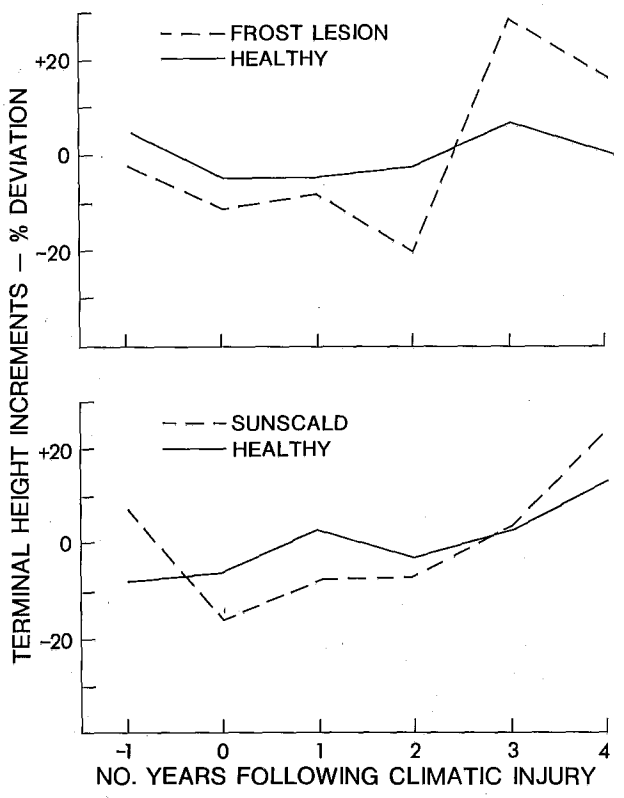


FIGURE 1. Percent deviation of terminal height increments for healthy trees, frost- and sunscald-injured trees.

Five hundred isolations were taken from the frost lesion samples and 452 from sunscald ones. Infection by wood destroying fungi was insignificant; 2% of the isolates were wood decay fungi; over 28% were non-Basidiomycetes, and over 69% failed to show any organism. No explanation is evident for the lower percentage of fungi isolated, compared with that of Foster and Johnson. *Sistotrema* (*Trechispora*) *brinkmannii* (Bres.) Erikss. was isolated from only one tree, a frost-lesion killed top, in which it was restricted to the sapwood. *Lenzites saepiaria* (Wulf. ex Fr.) Fr. was found in one sunscald lesion only; decay was confined to the scar face. *Haematostereum* (*Stereum*) *sanguinolentum* (Fr.) Pouzar was isolated from two trees; one infection originated from a 2-year-old lesion, the other from a branch stub.

This study revealed that even with severe sunscald and frost injury, Douglas-fir of these age classes recover rapidly with little lasting defect. A.L.S. Johnson, Forest Research Laboratory, Victoria, B.C.

**Forceps: a Time-Saver in Agar Slant Work.**—Polyfoam tube plugs, as apposed to cotton plugs, speed up the plugging process of agar slants. However, rather than follow the directions of the manufacturer (Gaymar Industries Inc., Buffalo 10, N.Y.), the use of straight 6-inch forceps with blunt serrated ends to insert the plugs will increase the plugging speed 2-3 times.

Simply pick up the plug so that most of it is held between the arms of the forceps (Fig. 1); squeeze and insert to the desired depth in the tube and, while holding the plug in position with the forefinger, withdraw the forceps. This technique can be used to replace sterile plugs by employing flame-sterilized forceps.

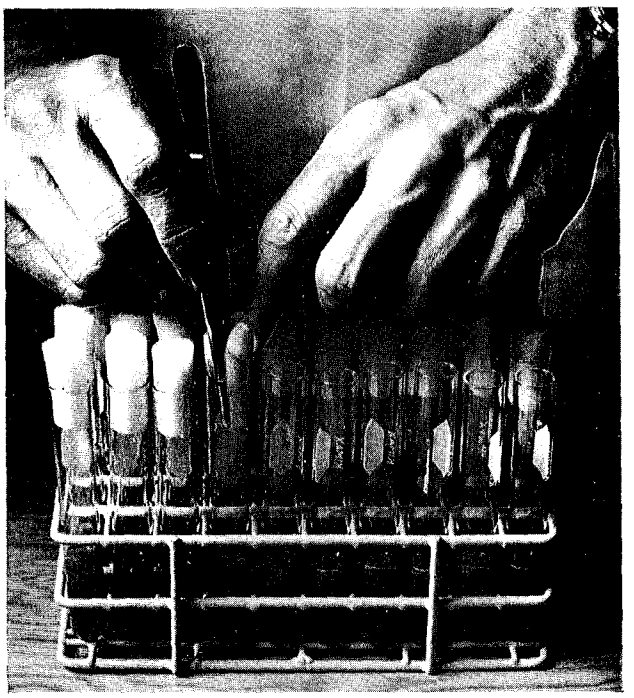

FIGURE 1. Forcep-plugging of racked agar slants with polyfoam plugs.

The method also eliminates individual handling of tubes when plugging racks of agar slants. A.L.S. Johnson, Forest Research Laboratory, Victoria, B.C.

**Discoloration and Decay Following Inoculations of Yellow Birch and Sugar Maple with** *Pholiota aurivella*.—In central and eastern Canada, yellow birch [*Betula alleghaniensis* Britt.] and sugar maple [*Acer saccharum* Marsh.] are often affected by the decay fungus *Pholiota aurivella* (Batsch ex Fr.) Kummer (Basham and Morawski, Can. Dep. Forest. Pub. 1072, 1964; Lavallée, Phytoprotection 50:16-22, 1969; Stillwell, Forest. Chron. 31:74-83, 1955). In the present study, trees were inoculated at Dudswell, and at Duchesnay, Quebec. At Dudswell, trees of both species were about 50 years old and 4-10 inches dbh, while at Duchesnay trees averaged 30 years of age and were 3-5 inches dbh. The inoculum was a yellow birch dowel colonized by *P. aurivella*. Controls were tested with sterile dowels.

In both hosts at Dudswell and in yellow birch at Duchesnay, the bark was surface-sterilized with ethyl alcohol (95%) before boring a 0.8 x 10 cm hole, with a sterilized bit, 2 or 4 feet above ground level at right angles to the axis of the trunk. On sugar maple at Duchesnay, a piece of bark was removed and the wood surface-sterilized before the boring was made. After inoculation, wounds were covered with a commercial dressing ("Braco").

Over a period of 2 years, trees were felled and sectioned and the sections split longitudinally. Isolations were made from discolored or decayed zones and from the surrounding unchanged wood. Chips of wood, varying in number between 15 and 116, were taken around each inoculation and placed on a 2% malt extract agar medium; a total of 4,661 chips were thus tested. Results are given in Tables 1 and 2.

*Pholiota aurivella* was recovered from all inoculations. The fungus was found at greater distances longitudinally from the source of inoculum in tissues close to the center of the trunk (Fig. 1A). Therefore, conditions in the central part of a living tree are more favourable for the fungus than in the outer region of the trunk. In inoculations through the bark, the surrounding dis-