ADDITIONAL HOSTS OF DIPLODIA TUMEFACIENS (SHEAR) ZALASKY (=MACROPHOMA TUMEFACIENS SHEAR)[1]

H. Zalasky[2]

Numerous branch galls and roughbark caused by Diplodia tumefaciens (Shear) Zalasky (2, 3) were recently found on the native poplars (Populus tremuloides and P. balsamifera) at Pineland Forest Nursery, Hadashville, Manitoba. Native aspen trees growing near diseased black poplar and vice versa were often free of infection. Annual ring counts showed that infections dated back about 20 years. At the entrance to the nursery, infected aspen and black poplar were part of the natural stand that was cleared of brush and dead materials in 1955, and spot planted with trees and shrubs in 1956-57. In this location several saplings of lombardy poplar (Populus nigra var. italica originally obtained from Skinner's Nursery, Inglis, Manitoba) and Brooks poplar (Populus deltoides x Russian? of natural hybrid origin from the Horticultural Experimental Station, Brooks, Alberta) were spaced 20 to 30 feet from these naturally infected poplars.

These poplars were examined in September 1964 and were found to have small branch galls up to 1/2 inch in diameter, caused by Diplodia tumefaciens. The first infections appear to have started in 1960. Damage at this stage is of minor importance because the fungus is slow to establish. The fungus persists in the bark for many years, however, and is capable of weakening the trees (2) and of contributing to the loss in ornamental and shelterbelt value of the trees. The presence of pycnidia allowed positive identification of the pathogen. This is the first record of D. tumefaciens on lombardy poplar and hybrid cottonwood.

One requisite of hybrid poplars distributed for shelterbelt plantings is the ability to root readily from cuttings (1). This suggests that cuttings taken from material in the incipient stage of infection may be important in the transmission of the disease. The discovery of this disease on Brooks and lombardy poplars suggests that other hybrid poplars may be attacked.

Three-year-old hybrid cottonwood (Populus tristis) developed at Skinner's Nursery and Indian Head Forest Nursery were examined for galls but none were found. This may be due to the fact that these trees were located on cleared, cultivated land some distance away from natural infection.

Literature Cited

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