

THELEPHORA TERRESTRIS ON DOUGLAS-FIR SEEDLINGS -
CHAMPION TIMBERLANDS NURSERY, PLAINS, MONTANA

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Nursery Disease Notes #70

August 1988

Epiphytic fungal growth on conifer seedlings produced at nurseries is often of concern to growers. The major concern involves possible problems once seedlings are lifted and placed in cold storage. If fungal growth is evident prior to placing seedlings in storage, growth may expand to encompass many more seedlings during the time seedlings are stored.

During the spring of 1988, samples of recently-lifted bareroot Douglas-fir (Pseudotsuga menziesii Franco) seedlings from the Champion Timberlands Nursery, Plains, Montana with black epiphytic fungal growth were evaluated. Fungal growth was most noticeable at the base of seedlings, especially around the main stem. The lower foliage of some seedlings were also covered with fungal growth.

Examination of the seedlings indicated that this fungal growth was primarily that of the common fungus Thelephora terrestris Ehr. This fungus may be mycorrhizal (Hepting 1971) and is a common inhabitant of bareroot nursery beds. It has also been identified as growing on the under surface of styroblock containers at several nurseries in the Northern Rocky Mountains. During periods of cool, wet weather this fungus can grow prolifically and spread from the soil surface upwards into seedlings (James 1986). The only time when it might be considered a problem is when its growth is so extensive as to smother the foliage of slow-growing seedlings (Burt 1914; Weir 1921). It usually does not invade seedling tissues and cause necrosis as a pathogen would. Also, it has not been reported as causing "disease" in storage. However, it is possible that other fungi which are associated with T. terrestris might be capable of causing storage mold. Therefore, when this fungus is encountered, it might be useful to physically remove it from seedlings or cull seedlings that are extensively covered with it rather than placing them in storage.

LITERATURE CITED

- Burt, E. A. 1914. The Theleporaceae of North America. I. Ann. Missouri Bot. Gard. 1:185-228.
- Hepting, G. H. 1971. Diseases of forest and shade trees of the United States. USDA Forest Service, Agr. Handbook # 386. 658p.
- James, R. L. 1986. Mortality of bareroot Colorado blue spruce seedlings, Clifty View Nursery, Bonners Ferry, Idaho. USDA Forest Service, Northern Region. Nursery Dis. Notes #37. 3p.
- Weir, J. R. 1921. Thelephora terrestris, T. fimbriata, and T. caryophyllea on forest tree seedlings. Phytopathology 11:141-144.