Disease Notes

*Diplodia pinea*, the Cause of Diplodia Blight of Pines, Confirmed in Alabama, Louisiana, and Mississippi

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Loblolly pine (*Pinus taeda*) is the major commercial pine species cultivated in the Gulf Coast Region of the southern United States. Symptoms of Diplodia shoot blight (including yellow and brown needles and resin-soaked, dead, small twigs), pycnidia with conidia typical of *Diplodia pinea* on blighted shoots, and damaged, immature seed cones were observed during the summer of 2007 in loblolly pine seed orchards near Ward, AL, Winn Parish, LA, and Moselle, MS. Similar conidia also were obtained from pycnidia on opened seed cones of longleaf pine (*P. palustris*) collected on the campus of Mississippi State University, Starkville. Pure cultures obtained from specimens collected at each location were confirmed as *D. pinea* using species-specific PCR primers (3) that allow differentiation of *D. pinea* from the similar pine shoot blight pathogen *D. scrobiculata*. Isolates from loblolly pines in Alabama (07-58), Louisiana (07-38), and Mississippi (06-45) were used individually to inoculate potted 6- to 7-month-old loblolly pine seedlings grown from seed in a greenhouse in each of two independent trials. Elongating terminal shoots of seedlings to be inoculated were wounded by removing a needle fascicle ~2 cm below the shoot apex. A 4-mm-diameter plug cut from an actively growing colony on water agar (WA) was placed on the wound, mycelium side toward the stem. Noncolonized WA plugs were placed in the same manner on similarly wounded control seedlings and nonwounded control seedlings also were used. Parafilm was wrapped around the shoots to hold the agar plugs in place and was removed after 1 week. Each of the five isolate-treatment combinations was applied to seven (trial 1) or eight (trial 2) seedlings (35 and 40 seedlings per trial, respectively). One week after inoculation, small, brown lesions were visible at the point of inoculation on stems of most of the inoculated seedlings. At 25 days after inoculation, all inoculated seedlings exhibited needle browning and stem cankers ranging from 0.6 cm to 9.0 cm long (mean 2.5 cm) that girdled and killed distal portions of the shoots of ~25% of the inoculated seedlings in each trial. Wounded control and nonwounded control seedlings did not develop symptoms. Stem segments including the point of inoculation (or comparable segments of wounded and nonwounded control seedlings) were excised, surface disinfested, and incubated on tannic acid agar with sterile red pine needles. *D. pinea* was cultured from all inoculated seedlings and also from one wounded control seedling. Although occurrence of *D. pinea* on Cedrus spp. is included in an index (1), to our knowledge this is the first confirmed report of *D. pinea* on pines in Alabama, Louisiana, and Mississippi. The degree of risk presented by *D. pinea* to loblolly pine, longleaf pine, and other pine species native to the southern United States when grown in their native ranges is unknown. Reports of Diplodia shoot blight of southern U.S. pines when grown as exotics in the southern hemisphere (4) and the potential for epidemics to develop suddenly under severe weather conditions (2,4) justify additional studies to evaluate the potential for damage to these hosts in their native ranges.