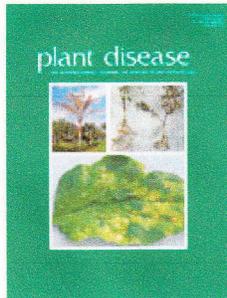


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## Disease Notes

### First Report of *Pyrenophora seminiperda* in Turkey and Greece

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*Pyrenophora seminiperda* (Brittleb. & D.B. Adam) Shoemaker (anamorph *Drechslera campanulata* (Lév.) B. Sutton) is a generalist seed pathogen that can cause high mortality in the seed banks of annual and perennial grasses and a minor leaf spot disease. Its current reported distribution is mainly temperate grasslands, deserts, and winter cereal-growing regions in Argentina, Australia, Canada, Egypt, New Zealand, South Africa, and the United States (2). *P. seminiperda* was originally described in France in the mid-1800s, but there are no recent reports from eastern Europe or Asia (2). In May of 2008, we observed what appeared to be *P. seminiperda* on seeds from seed bank samples collected in Turkey. Evidence of disease was observed as macroscopic black stromata protruding from the seed. The characteristic club-shaped stromata were collected from a *Taeniatherum caput-medusae* seed near Pamukkale, Turkey and six *Bromus tectorum* seeds in Love Valley near Goreme, Turkey. An additional collection from a single undispersed *B. tectorum* seed was obtained from Perissa, Greece. Identity of the pathogen was tentatively established by evaluating morphological characteristics for nine isolates in V8 agar culture. After 4 days of incubation at 20°C with a 12-h photoperiod, the cultures produced white mycelium. Following wounding, the mycelium produced black, club-shaped stromata (2 to 8 × 0.4 to 0.9 mm) in a radial pattern. These produced branched conidiophores bearing crescent-shaped, multicellular conidia (79 to 125 μm long). These attributes are consistent with those of the anamorph of *P. seminiperda* as described by Shoemaker (4) and Campbell et al. (1). The teleomorph was not observed. The identity of the isolates as *P. seminiperda* was confirmed with ribosomal DNA internal transcribed spacer (ITS) genetic sequencing analysis. ITS sequences obtained were identical to sequences for North American haplotypes of this species. Four of the Love Valley isolates, (representative isolate: GQ168725, BPI 879142, NRRL 54032) matched the HTA haplotype (GQ168724), while the other four (representative isolate: GQ168736, BPI 879143, NRRL 54033) matched the HTJ haplotype (GQ168735). The isolate from Perissa, Greece (GQ168728, BPI 879144, NRRL 54034) matched the HTC haplotype (GQ168727). Pathogenicity of several Love Valley isolates was confirmed

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by producing conidia in culture, dusting nondormant *B. tectorum* seeds with 0.003 g of conidial inoculum per 50 seeds, and incubating for 14 days at 10/20°C with a 12-h photoperiod. Stromata developed on >90% of inoculated seeds and mortality as high as 34% was observed. Morphological similarities combined with ITS sequence data provide conclusive evidence that *P. seminiperda* occurs in Turkey and Greece. The discovery of this pathogen in these countries indicates that it may be widespread in Eurasia and that it could have arrived in North America on seeds of *B. tectorum* (3) rather than representing a novel pathogen for this important weed in its North American range.

*References:* (1) M. A. Campbell et al. *Plant Pathol.* 52:448, 2003. (2) R. W. Medd et al. *Australas. Plant Pathol.* 32:539, 2003. (3) S. E. Meyer et al. *Can J. Plant Pathol.* 30:525, 2008. (4) R. A. Shoemaker. *Can. J. Bot.* 44:1451, 1966.

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