First Report of *Sclerotinia minor* Infecting *Eclipta prostrata* in Texas

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Accepted for publication 25 September 2017.

Sclerotinia blight, caused by the soilborne fungus *Sclerotinia minor* Jagger, is an economically important disease of peanut (*Arachis hypogaea* L.) in North Carolina, Oklahoma, Texas, and Virginia. The fungus has a broad host range capable of infecting plants from 21 different plant families (Melzer et al. 1997) including numerous weeds commonly found in peanut fields (Hollowell et al. 2003).

Symptoms characteristic of Sclerotinia blight were observed on *Eclipta prostrata* L., which belongs to the family Asteraceae (Fig. 1). Samples were collected from the perimeter of three peanut fields known to be infested with *S. minor* near Stephenville, TX, in September of 2009. Infected plants were wilted and exhibited yellow leaves (Fig. 2). Stems of infected plants were covered with white mycelia and had a bleached appearance (Fig. 3). Small black sclerotia (diameter <2.0 mm) later formed abundantly on diseased stems. Similar symptoms were observed on peanut cultivar Tamnut OL02 in the field (Fig. 4). Symptomatic *E. prostrata* stem sections ($n = 10$) were rinsed in tap water, surface disinfested in 0.5% sodium hypochlorite for 1 min, air dried, and placed in Petri dishes containing potato dextrose agar (PDA). Pure cultures of *S. minor* consisting of white, aerial mycelia and small, black, irregular sclerotia (Fig. 5) were recovered from all samples. Pathogenicity tests were conducted by inoculating detached shoots of *E. prostrata* that were transplanted in one-gallon plastic pots containing sterile potting mix and peanut seedlings cv. Flavorrunner 458 ($n = 5$) with PDA plugs obtained

from the edges of four-day-old *S. minor* cultures. Plants were incubated in a dew chamber at 20°C and 95% relative humidity for three days. Plants inoculated with sterile PDA plugs ($n = 3$) served as controls. Symptoms typical of Sclerotinia blight (Porter and Melouk 1997) were observed on all inoculated plants, but not on the non-inoculated controls. Cultures of *S. minor* were recovered from both

FIGURE 1

Overview of mature *Eclipta prostrata* plants showing leaves and flowers.

FIGURE 2

Appearance of *Eclipta prostrata* plants exhibiting symptoms of Sclerotinia blight and signs of the causal agent *Sclerotinia minor*.

FIGURE 3

Matting of leaves and bleaching of stems from *Eclipta prostrata* infected by *Sclerotinia minor*.

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FIGURE 4

Characteristic symptoms and signs of *Sclerotinia* blight of peanut, caused by *Sclerotinia minor*, in a field near Stephenville, TX.

symptomatic peanut and *E. prostrata* tissues. Inoculations were repeated and similar results were observed.

Eclipta prostrata has been reported as a host of *S. minor* in Oklahoma (Melouk et al. 1989) and several other weed species including *Ipomoea hederacea* and *I. coccinea*, which have also been identified as alternative hosts for *S. minor* in Texas (Woodward et al. 2008). To our knowledge, this is the first report of *S. minor* infecting *E. prostrata* in Texas. Weed management decisions should be included in the overall development and implementation of disease management strategies for *S. minor*. Failure to properly

FIGURE 5

Culture characteristics of a *Sclerotinia minor* isolate obtained from *Eclipta prostrata* growing on the edge of a peanut-production field near Stephenville, TX.

manage weeds in rotational crops or fallow periods will potentially lead to an increase in densities of sclerotia in the soil that will serve as inoculum for *Sclerotinia* blight development in subsequent peanut crops. The lack of control of weeds that serve as a host for *S. minor* would reduce the effectiveness of crop rotation as a part of a disease management plan.

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