



A Boxwood Blight New to the US, *Cylindrocladium pseudonaviculatum* (= *Cylindrocladium buxicola*) teleomorph: *Calonectria pseudonaviculata*

In late October 2011, USDA, APHIS, Plant Protection and Quarantine's (PPQ) national mycologist confirmed a new US record for the fungal pathogen *Cylindrocladium pseudonaviculatum*, on boxwood, *Buxus* sp. nursery plants in North Carolina. Soon after, the pathogen was confirmed from a residential planting in Connecticut and a nursery in Virginia.

Cylindrocladium pseudonaviculatum is only known from *Buxus* spp. hosts, has synonymy with *C. buxicola*, and the teleomorph is *Calonectria pseudoaviculata*. This pathogen is known to occur in Europe and New Zealand. Symptoms begin with leaf spots and progress to die back with characteristic sporodochia appearing on the stems. The roots are not affected but experience in North Carolina shows plants mortality can take place within two weeks of infection.



Fig. 1. Symptoms of *Cylindrocladium pseudonaviculatum* on *Buxus* sp. plant. Kelly Ivors, NCSU, Dept of Plant Pathology



Fig. 2. Symptoms of *Cy. pseudonaviculatum* on *Buxus* sp. leaf. Landis Lacey and Kelly Ivors, NCSU, Dept of Plant Pathology



Fig. 3. Sporodochia of *Cy. pseudonaviculatum* on *Buxus* sp. stems Landis Lacey and Kelly Ivors, NCSU, Dept of Plant Pathology

Fig. 4. Sporodochia on infected *Buxus* sp. stem. Landis Lacey and Kelly Ivors, NCSU, Dept of Plant Pathology

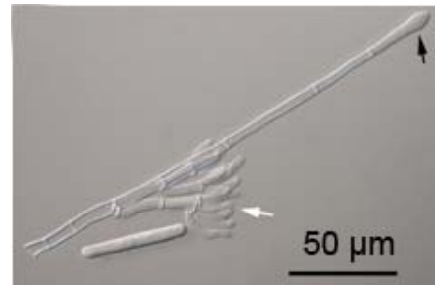


Fig. 5. Asexual structures of *Cy. pseudonaviculatum*. Black arrow at apical sterile vesicle on stipe. White arrow at conidiogenous cells. Joseph Bischoff, USDA-PPQ, NIS.

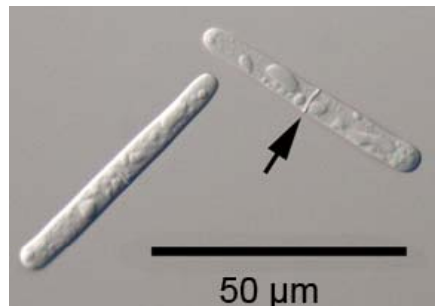


Fig. 6. Conidia of *Cy. pseudonaviculatum*. Black arrow at septum. Joseph Bischoff, USDA-PPQ, NIS.

A more detailed datasheet on this organism is available from USDA-PPQ CPHST. If NPDN laboratories receive boxwood samples with the above symptoms and examination of appropriate morphology of macroconidiophores indicates a suspect *Cy. pseudonaviculatum*, please forward a sample to the national mycologist address below for confirmations of new state records. After the first record, NPDN laboratories, working in conjunction with their state department of agriculture, can make final diagnosis confirmations for additional detections within their state, or send for national confirmation if necessary.

For national confirmations, notify your SPRO and send suspect samples by overnight carrier Mon-Thu with a completed PPQ form 391 to the National Mycologist address. Ensure the samples are fresh, kept cool, and in a sturdy crushproof container. If intending to send samples, please notify by e-mail joe.bischoff@aphis.usda.gov, john.mckemy@aphis.usda.gov, ppq.nis.urgents@aphis.usda.gov, and include the tracking number and PDF of the PPQ form 391. Contact Joel Floyd, PPQ Domestic Diagnostics Coordinator if there are questions about sample routing and results communications: telephone: 301-734-4396, e-mail: joel.p.floyd@aphis.usda.gov

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