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Disease Notes

Occurrence of *Meloidogyne spartinae* on *Spartina alterniflora* in Connecticut and Massachusetts

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Meloidogyne spartinae (Rau & Fassuliotis, 1965) was described from roots of smooth cordgrass (*Spartina alterniflora* Loisel) in Florida, Georgia, North and South Carolina, New Jersey, and New York (1,2). Affected plants were sampled in declining saltwater marshes at the Cape Cod National Seashore in Wellfleet, MA in May 2006 and Hammonassett State Park in Madison, CT in August 2006. Plants in adjacent, healthy stands were also sampled. Females, males, juveniles, and eggs of nematodes identified as *M. spartinae* were visible in roots stained with acid fuschin or were dissected from terminal galls at the root apex and from pockets in the root cortex where no galling was evident. The circular to ovoid terminal galls typically stopped root elongation. Morphological characteristics were used to identify this nematode as *M. spartinae*. Mature females in the root cortex were visible under a discolored lesion that appeared to result from a split in the cortex, probably from female expansion during development. Females were oval to lemon shaped with the neck protruding markedly to one side. Females also exhibited protruding perineal regions. In terminal galls, females were oriented toward the root tip; however, in the root cortex they were oriented either toward the root tip or toward the crown, with no obvious pattern. Egg masses were not observed and the eggs were deposited freely inside the gall or root cortex. Second-stage juveniles were long (730.3 µm, n = 60) with an elongate tail terminus. Males (2,203 µm, n = 40) were present in galls containing females. No morphological differences were observed between nematodes from the terminal galls or root cortex. *M. spartinae* was widespread in declining and adjacent healthy *S. alterniflora*. To our knowledge, this is the first report of *M. spartinae* from Connecticut and Massachusetts and the first report of *M. spartinae* development within root cortical tissues without gall formation. The role of this nematode in the sudden wetland dieback phenomenon (3) is being investigated.

References: (1) J. D. Eisenback and H. Hirschmann. Nematology 3:303, 2001. (2) G. J. Rau and G. Fassuliotis. Proc. Helminthol. Soc. Wash. 32:159, 1965. (3) E. C. Webb and I. A Mendelssohn. Am. J. Bot. 83:1429, 1996.

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Supplemental Material

M. spartinae juvenile in a terminal root gall