Journal of Nematology 2017 49 (4): 530

MOLECULAR AND MORPHOLOGICAL CHARACTERIZATION OF PLANT-PARASITIC NEMATODES FROM GREECE. Skantar, **Andrea M.[1] , Z.A. Handoo[1] , M. Kormpi[2] , and E.A. Tzortzakakis[3]** . [1] Mycology and Nematology Genetic Diversity and Biology Laboratory, USDA-ARS, 10300 Baltimore Ave., Bldg 010A BARC West Rm. 113, Beltsville, MD 20705; [2] Benaki Phytopathological Institute, Athens, Greece; [3] Subtropical Crops and Viticulture, N.AG.RE.F., Hellenic Agricultural Organization-DEMETER, Heraklion, Crete, Greece.

The occurrence of Heterodera spp. was investigated in soil samples collected from fields of potato, beet, and other crops in Greece. Molecular and morphological studies were conducted to identify several species, including *H. carotae, H. goettingiana, H. schachtii, H. trifolii, H. latipons, H. filipjevi, and H. avenae*. Species identifications were based upon molecular phylogenetic trees constructed using sequences from the internal transcribed spacer (ITS) and 28S rDNA regions. In many instances, morphological analyses were in clear agreement with molecular data, while a few species were resolved by molecular analysis when morphometrics were overlapping or unresolved. An expanded phylogenetic analysis of Hsp90 sequences was able to further resolve some species boundaries and should aid future molecular diagnostics of these cyst nematodes. *Heterodera trifolii, H. goettingiana, and H. filipjevi* represent new country records for Greece.