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Steinernema apuliae sp. n. (Rhabditida: Steinernematidae): a new entomopathogenic nematode from southern Italy

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Abstract

Steinernema apuliae sp. n. has been found in soil samples collected along a saltpan border habitat in southern Italy characterized by a salted silt soil. This species belongs to the long-IJ nematode group represented by *Steinernema glaseri* (Steiner, 1929) and *Steinernema arenarium* (Artyukhovsky, 1967) among others. However, it differs from these taxa in some morphometric values such as V%, H%. Females possess asymmetrical, oblique slit vulva, slant vagina and small flap in the vulval opening. These characteristics are more distinct in second generation females which is different from most other steinernematids; the vulva position is behind the mid-body about 57% to 61% of the body length. First-generation females have a conical-like tip bearing 2 to 3 papilla-like protuberances. Male mucron is absent in both generations. Lightly brown spicules have bluntly pointed tip and elongated manubrium. Third-stage infective juveniles are on average over 1000 µm long; the position of the excretory pore is posterior (D% – 66) and the hyaline layer is less than half the tail length (H% – 41–42). Lateral fields are formed by 8 equally distributed ridges. *S. apuliae* differs from *S. glaseri* and *S. arenarium* and is separated by PCR-RFLP analysis of the ITS region. There were no positive cross-breedings among these species.

Key words: *Steinernema apuliae*, new species, differentiation, entomopathogenic nematode, southern Italy

Introduction

During a survey of entomopathogenic nematodes from southern Italy conducted from 1995 to 2001, nine isolates belonging to the long-EPN group of *Steinernema glaseri* (Steiner) Wouts, Mráček Gerdin & Bedding, 1982, were collected from soils of different

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