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Description of *Ektaphelenchoides fuchsi* n. sp. (Nematoda: Ektaphelenchinae) from western Iran

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Abstract

Ektaphelenchoides fuchsi **n. sp.,** recovered from a soil sample around the rhizosphere of *Cucurbita maxima* in western Iran, is described and illustrated based on morphological and molecular characters. The new species is characterized by its body length of 529–712 µm, continuous lip region, lateral fields with three incisures, total stylet length of 14–18 µm with rounded basal knobs, excretory pore 70–84 µm and hemizonid 87–96 µm from the anterior end, post-uterine sac short, 6–9 µm long in female and tail conoid with long filiform terminus in male. Based on morphological and molecular characters, the new species is close to *E. kelardashtensis, E. attenuata,* and *E. musae*. It differs from the closest species *E. kelardashtensis* by its longer sylet (14–18 *vs* 13–16 µm) and stylet with basal knobs *vs* not, longer post uterine sac (6–9 *vs* 3–6 µm), more posterior position of excretory pore and hemizonid (70–84 *vs* 55–66 and 87–96 *vs* 67–78 µm, respectively), and longer spicules (12–13 *vs* 8–10 µm). Comparisons with other species of *Ektaphelenchoides* are also discussed. Molecular analyses were performed based on 631 bp of the partial ribosomal RNA large subunit gene (D2/D3 of LSU) and showed that *E. fuchsi* **n. sp.** is unique when compared with other species of the genus for which sequences of that region are available.

Key words: *Ektaphelenchoides*, Iran, molecular phylogeny, new species, partial ribosomal RNA LSU gene, taxonomy

Introduction

During the past few years, extensive surveys in Iran have been conducted to recover aphelenchid nematodes. Most surveys were conducted on bark samples and resulted in descriptions of five species of the genus *Ektaphelenchoides* Baujard, 1984*,* namely *E. hunti* Atighi, Purjam, Pedram, Ye & Robbins, 2012, *E. sylvestris* Pedram, Pourjam, Atighi, Ye & Houshmand, 2012, *E. kelardashtensis* Atighi, Pourjam, Pedram, Ye, Robbins & Namjou, 2013, *E. andrassyi* Atighi, Pourjam, Pedram, Ye & Aliramaji, 2013, *E. poinari* Aliramaji, Pourjam, Atighi, Ye, Roshan–Bakhsh & Pedram, 2014 and *E. ruehmi* Yaghoubi, Pourjam, Atighi & Pedram, 2014.

Recently, we conducted some surveys on aphelenchids associated with soils from Iran. Although some other aphelenchid genera are found with the rhizosphere of plants, e.g. *Aphelenchus* Bastian, 1865 and *Aphelenchoides* Fischer, 1894, this is only the second time that a member of the genus *Ektaphelenchoides* was recovered from soil samples (The first one was *E. ruehmi*). Surveys to find the likely host (insects) were unsuccessful. During our surveys, a new species of *Ektaphelenchoides* was recovered from the collected soil samples and is described in the present paper.

Kanzaki (2014) demonstrated the predatory feeding habit of *E. spondylis* Kanzaki, Giblin-Davis & Center, 2009 on *Pseudodiplogasteroides* sp. Previously, *E. sylvestris* was successfully co-cultured with aphelenchid and rhabditid nematodes (Pedram *et al.,* 2012).

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