



<http://dx.doi.org/10.11646/zootaxa.3785.4.6>

<http://zoobank.org/urn:lsid:zoobank.org:pub:987B039E-9EF7-475C-BFC4-ECBB8E0EB95F>

## Description of *Helicotylenchus persiaensis* sp. n. (Nematoda: Hoplolaimidae) from Iran

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### Abstract

In order to identify the species of *Helicotylenchus* Steiner, 1945 present in Iran, 497 soil and root samples were collected from the rhizosphere of different plants and localities throughout the country during 2009-2010. A new and several known species of *Helicotylenchus* were identified from the collected material. *H. persiaensis* sp. n. is characterized by its short tail (8-11  $\mu\text{m}$ ,  $c = 54.2-79.0$ ,  $c' = 0.6-1.2$ ), usually with smooth terminus or with 1-3 very coarse annules, rarely with minor ventral, dorsal or lateral projection, conical and truncate head with 4-5 distinct annules, stylet 22-26  $\mu\text{m}$  long with anteriorly flattened knobs, relatively short body length (570-730  $\mu\text{m}$ ) and absence of males. This species was collected from the rhizosphere of zelkova (*Zelkova carpinifolia*) and maple (*Acer* sp.) forest trees in Golestan province, northern Iran. Also observed were *H. abunaamai* Siddiqi, 1972, with a small ventral projection at the tail terminus, and *H. crenacauda* Sher, 1966, with long projection and indented terminus, collected from sugarcane (Haft-Tapeh, Khuzestan province) and rice rhizosphere (Chabok-Sar, Gilan province), respectively. This is the first report of *H. abunaamai* from Iran. New data on *H. crenacauda* are provided.

**Key words:** *Helicotylenchus arachisi*, *Helicotylenchus bihari*, *Helicotylenchus wajihii*, morphology, morphometrics, new species, taxonomy, Tylenchomorpha, Tylenchoidea

### Introduction

The cosmopolitan genus *Helicotylenchus* Steiner, 1945 is one of the ten most important plant parasitic nematodes in the world (Sasser 1989). This genus, with about 250 species, is the richest genus in the family Hoplolaimidae and infraorder Tylenchomorpha (Siddiqi 2000; De Ley & Blaxter 2004; Decraemer & Hunt 2006; Andr ssy 2007). Because of the helical body posture, it is often easy to identify presumptive members of the genus under lower magnification, but separation of the species is very difficult (Andr ssy 2007).

To date, 28 species of *Helicotylenchus* have been identified and reported from different plants and localities in Iran (Table 1).

In this paper we propose *H. persiaensis* sp. n., describe *H. abunaamai* Siddiqi, 1972 as a new record and provide some new data for *H. crenacauda* Sher, 1966, which has already been reported from the rhizosphere of rice in northern Iran (Kheiri & Barooti 1985, Pedramfar *et al.* 2002) and grapevine in central Iran (Mohammad Deimi & Mitkowski 2010).

### Material and methods

497 soil and root samples were collected from several localities in Iran during 2009-2010. Nematodes were extracted using the tray method of Whitehead & Hemming (1965), killed by hot FPG (4:1:1, formaldehyde:propionic acid:glycerin), processed to anhydrous glycerin (de Grisse 1969) and studied by light microscope, equipped with drawing tube and digital camera (Dino Capture 2.0). Identifications were made using different keys (Sher 1966; Siddiqi 1972; Boag & Jairajpuri 1985; Fotedar & Kaul 1986; Krall 1990; Firoza &

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