



Laimaphelenchus persicus n. sp. (Nematoda: Aphelenchoididae) from Iran

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Abstract

Laimaphelenchus persicus n. sp. is described and illustrated from the Caspian region of Iran, where it was extracted from bark collected from *Pinus sylvestris*. The new species is characterized by females with a body length of 615–925 µm, *a* (35.9–48.7), *b* (6.5–8.0), *b'* (3.9–5.4), *c* (17.5–24.7), *c'* (2.8–3.7), *V* (66.6–69.0%), stylet 10.0–11.5 µm, long post-vulval uterine sac of 100–162 µm, vulva having a flap, anteriorly sloping vagina massively sclerotized, and tail with an offset terminus bearing 4 clearly pedunculate tubercles ending in 4–6 finger-like protrusions; and males with spicules 19–21 µm long, and three pairs of caudal papillae: one pre-anal, one at *ca* half tail length and one small pair anterior to tail terminus. The phylogenetic relationships of this new species were analysed using sequences of the D2/D3 region of the 28S ribosomal RNA gene. SEM's were prepared for morphologically informative parts and a dichotomous key to the genus *Laimaphelenchus* is given.

Key words: Aphelenchoididae, *Laimaphelenchus*, *Pinus sylvestris*, 28S rRNA, SEM, key

Introduction

To date, fourteen valid species reported from all continents are known in the genus *Laimaphelenchus* Fuchs, 1937 (Hunt 1993; Swart 1997; Peneva & Chipev 1999; Zhao *et al.* 2006a,b; Zhao *et al.* 2007; Negi *et al.* 2009). These species are: *Laimaphelenchus penardi* (Steiner 1914) Filipjev & Schuurmans Stekhoven, 1941, *L. pannocaudus* Massey 1966, *L. pensobrinus* Massey 1966, *L. phloesini* Massey 1974, *L. deconincki* Elmiligy & Geraert 1972, *L. pini* Baujard 1981, *L. cocuccii* Doucet 1992, *L. australis* Zhao, Davies, Riley & Nobbs 2006b, *L. patulus* Swart 1997, *L. unituberculus* Bajaj & Walia 2000, *L. helicostoma* Peneva & Chipev 1999, *L. simlaensis* Negi, Kalia, Walia & Bajaj 2009, *L. heidelbergi* Zhao, Davies, Riley & Nobbs 2007 and *L. preissii* Zhao, Davies, Riley & Nobbs 2006a. Five are regarded as *species inquirenda*, including *L. corticilis* Truskova & Eroshenko 1977; *L. exilis* Truskova & Eroshenko 1977; *L. sapinus* Truskova & Eroshenko 1977; *L. tenarius* Truskova & Eroshenko 1977 and *L. vescus* Truskova & Eroshenko 1977 (Baujard 1985; Hunt 1993).

During a survey of nematodes in the north of Iran, a new species of *Laimaphelenchus* was found from bark of a dead pine tree (*Pinus sylvestris* L.) in the Caspian region of Golestan province. The new species is described and illustrated here as *Laimaphelenchus persicus* n. sp. A phylogenetic analysis was performed based on the sequence of the D2/D3 expansion fragment of the 28S ribosomal RNA gene of the new species and other available DNA sequences of aphelenchids. An identification key is also given for the valid species.

Material and methods

Nematode extraction. Bark samples were collected from dead *Pinus sylvestris* trees in the Caspian region in the north of Iran. Using a hatchet, bark samples were chipped from the trunk of the tree. Then, the pieces were placed on a mesh tray with 1 mm openings suspended over a dish containing sufficient water to slightly cover the bark