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A NEW SPECIES OF *ZELDIA* THORNE
(NEMATODA: CEPHALOBIDAE) FROM TUNISIA

by
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A new species of *Zeldia* Thorne, 1937 was found in soil samples from an olive grove in Sousse, Tunisia.

The nematodes were heat relaxed, fixed in cold TAF and processed to glycerine by a slow method (Hooper, 1970) for light microscopy. For scanning electron microscopy (SEM) studies, the specimens were fixed for > 24 hours in TAF, postfixed in 1% OsO₄ in redistilled water for one hour and dehydrated in an acetone/redistilled water series to pure acetone. The specimens were critical point dried, mounted on stubs, sputter coated with gold and examined with the SEM at 15 kV as described in Boström and Gydemo (1983).

ZELDIA BREVICAUDA n. sp.

(Fig. 1 and 2)

Measurements

Holotype ♀: L = 911 μm; a = 18; b = 4.1; c = 27; V = 66;
T/ABW = 1.5.

Paratypes: 5 ♀♀ (SEM): L = 660-850 μm; a = 17-25.

Male not found.

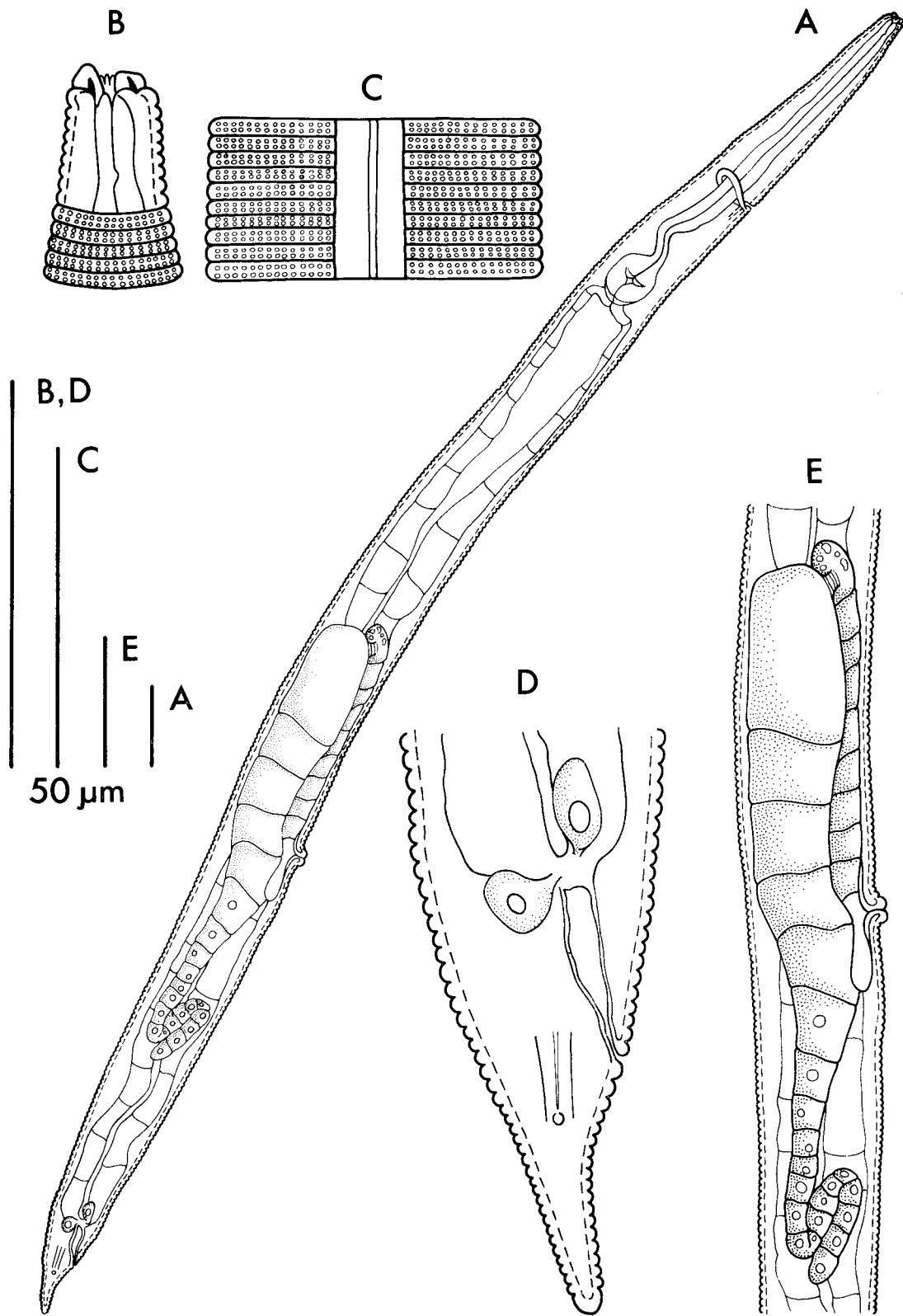


Fig. 1 - Holotype female of *Zeldia brevicauda* n. sp.: A, Entire body; B, Anterior end; C, Lateral field; D, Tail end; E, Reproductive organs.

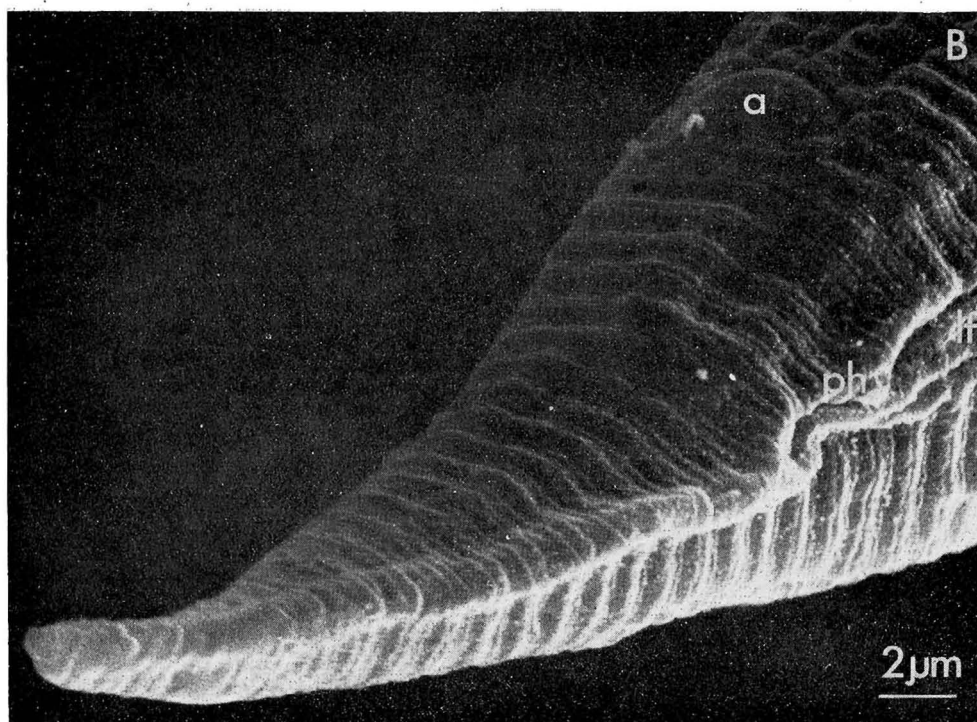
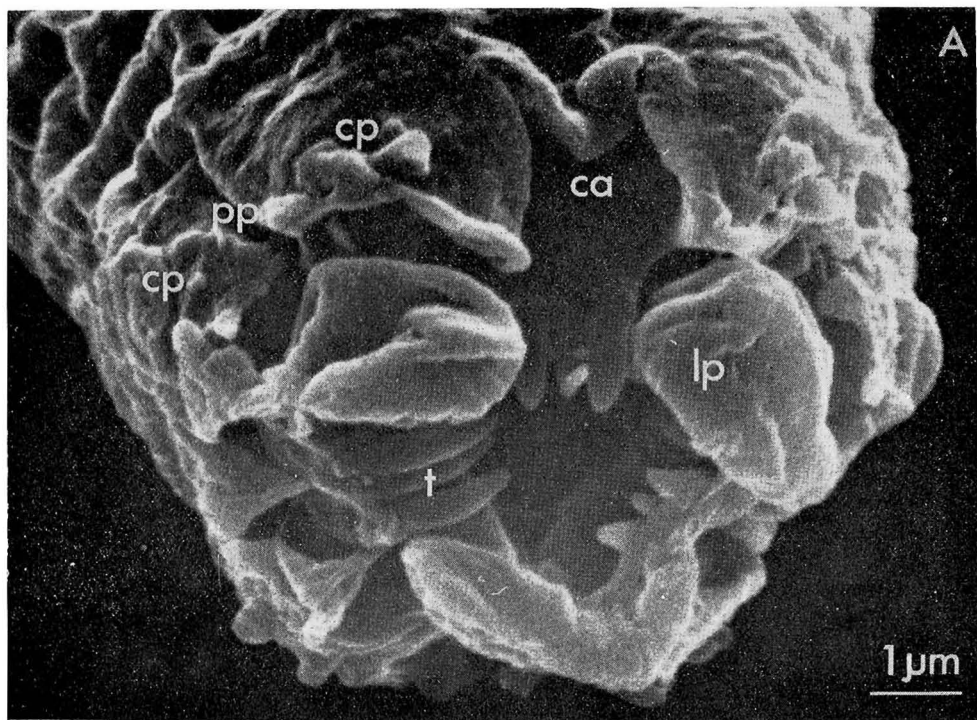


Fig. 2 - SEM-micrographs of paratype females of *Zeldia brevicauda* n. sp.: A, Cephalic region, ca = cephalic axil, cp = cephalic papilla, lp = labial probola, pp = prelabial probola, t = teeth associated with cheilorhabdions; B, Tail, a = anus, lf = lateral field; ph = phasmid.

Description

Female: Body slightly ventrally arcuate when heat killed. Cuticle with annules about 2.0-2.5 μm wide formed by two transverse rows of punctations. Lateral field, marked with four incisures, which continues to phasmid. The two middle incisures close together forming a narrow ridge. Deirids and hemizonid not seen. Prelabial probolae three pairs, separated by deep axils, each with a broad guarding process (Fig. 2, A). Each prelabial probola bearing one median anterior papilla, the sub dorsals and subventrals possess one posterior papilla each, while the laterals have amphid aperture. Labial probolae rounded, extending well above the prelabial probolae (Fig. 2, A). Alternating with the labial probolae are three tooth-like projections associated with each cheilorhabdion. Cheilostom wide, other buccal elements forming a narrow canal. Pharynx cephaloboid, 224 μm long in holotype ♀. Corpus cylindroid, isthmus narrow, bulb ovate with valves. Cardia enveloped by intestinal cells. Nerve ring surrounding metacarpus, excretory pore opposite nerve ring. Rectum about one anal body width (ABW) long. Phasmids 4-5 annules posterior to anus. Tail 34 μm long in holotype ♀, somewhat dorso-ventrally flattened, convex-conoid with rounded terminus (Fig. 2, B). Vulva protruding. Gonad mono-prodelphic, reflexed at oviduct, ovary posterior to vulva with two flexures. Oogonia and oocytes in single row. Spermatheca (?) small, pouch-like, empty. Post-uterine branch 30 μm long in holotype ♀.

Type habitat and locality: Sandy soil of an olive grove in the outskirts of Sousse, Tunisia.

Type material: Holotype ♀ at Swedish Museum of Natural History, Section for Invertebrate Zoology, S-104 05 Stockholm, Sweden. Access no. 3308. Paratype ♀♀ (SEM) at Department of Zoology, University of Stockholm, S-106 91 Stockholm, Sweden.

Differential diagnosis: *Z. brevicauda* n. sp., in having three teeth associated with each cheilorhabdion, differs from all other species of *Zeldia*, except *Z. tridentata* Allen et Noffsinger, 1972. It can be distinguished from *Z. tridentata* by its higher labial probolae, lateral field with four incisures (three in *Z. tridentata*), shorter tail (<2 ABW) (>3 ABW in *Z. tridentata*), and more posterior phasmids.

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S U M M A R Y

A new species of *Zeldia* Thorne, 1937, *Z. brevicauda*, with three teeth associated with each cheilorhabdion is described from sandy soil in Tunisia. The new species differs from the closely related *Z. tridentata* Allen *et* Noffsinger, 1972 by higher labial probolae, lateral field with four incisures, shorter tail (< 2 ABW), and phasmids in a more posterior position.

L I T E R A T U R E C I T E D

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Added in proof

Due to a late change of the terminology in the manuscript and a parallel use of names for different structures, the terms prelabial probolae and labial probolae have unfortunately been mixed-up throughout the paper. The inconvenience caused by this is much regretted.

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