Dolichodorus aestuarius n. sp. (Nematode: Dolichodoridae)[1]

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Abstract: Dolichodorus aestuarius n. sp. from an estuarine habitat near Cedar Key, Florida is described. This nematode has a stylet range of 62-76 μm in females and 60-72 μm in males. The stylet is shorter than those of all described species except *D. brevistilus*. The probable host plant is *Juncus roemerianus*. *Key Words:* nematode, taxonomy.

During May 1976, a survey of nematode fauna in estuarine habitats in the Cedar Key, Florida area was conducted, and a new species of the awl nematode *(Dolichodorus)* was found in a habitat where *Juncus roemerianus* Scheele was the only plant. It is presumed that the nematode was feeding upon the roots of this plant.

Dolichodorus aestuarius n.sp.

DIMENSIONS:

Paratypes (14 females): L 2.66 mm (2.50-2.87 mm), a 42.6 (38.8-47.8), b 11.3 (10.1-12.1), c 34.7 (30.9-44.8), V 55% (51-59%), stylet 68.1 μm (62-76 μm).

Holotype (female): L 2.87 mm, a 44.2, b 11.9, c 39.9, V $^{28.2}$, 53%, $^{30.8}$, stylet 68 μm.

Paratypes (11 males): L 2.32 mm (2.11-2.59 mm), a 48.1 (39.1-60.0), b 10.1 (9.2-11.7), c 58.9 (52.6-67.9), stylet 66.2 μm (60-72 μm). Spicule 49.43 μm (47-51 μm) and gubernaculum 26.8 μm (26-29 μm) (average of 7 specimens).

Allotype (male): L 2.31 mm, a 51.3, b 9.7, c 60.8, stylet 68 μm, spicule 48 μm, gubernaculum 29 μm.

DESCRIPTION:

Females.—Body long and cylindrical, somewhat ventrally curved; tapers gradually anteriorly and abruptly posteriorly to concave, conoid terminus (Fig. 1-C,H). Cuticle very finely striated, 1.5 μm/annule at midbody; lateral field areolated with three incisures on most of the body; incisures start as one, about 15 annules posterior to head, and end as one, just anterior to phasmid (Fig. 1-C,E,H). Head with six lips; laterals bear amphid (Fig. 1-B). Stylet with comparatively broad shaft and rounded knobs; stylet slopes gently at posterior; guiding ring not seen. Esophagus typical for genus; dorsal gland orifice about 5 μm behind

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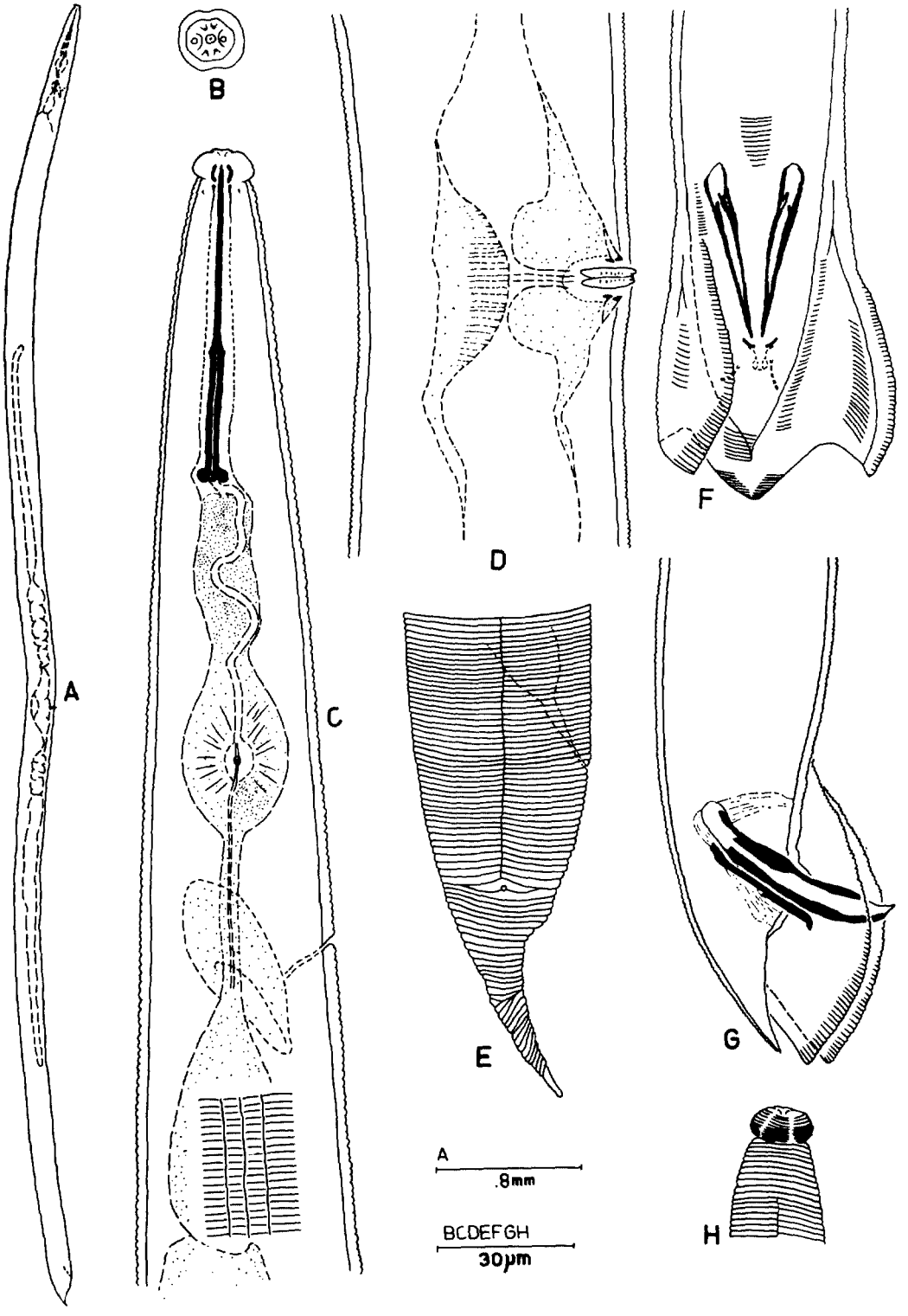

FIG. 1-(A-H). *Dolichodorus aestuarius* n. sp. *A)* Entire female and reproductive system, lateral view. *B)* Female, en face view. *C)* Female, anterior end, lateral view. *D)* Female, vulval region, lateral view. *E)* Female tail, lateral view. *F)* Male tail, ventral view. *G)* Male tail, lateral view. *H)* Female, head region, lateral view.

stylet knob; nerve ring encircles posterior part of isthmus (Fig. 1-C). Excretory pore located slightly anterior to basal bulb. Hemizonid not observed. Intestine without peculiar characteristic. Vulva slit-like and deep with four peg-like cuticularized structures around opening; muscles of vagina uterina well developed (Fig. 1-D). Ovaries outstretched (Fig. 1-A). Concave conoid point of tail with more abrupt reduction in diameter ventrally than dorsally. There are about 60 annules on the tail; anal body diameter is about 37 μm; the last 15 annules on the tip are at an angle of 30-45° to preceding annules (Fig. 1-E). Phasmids located about 25-30 μm posterior to anus (Fig. 1-E).

Males.—About 10-12% shorter but about as wide as females; similar to females as regards anterior part, nerve ring, excretory pore, intestine, annulation, and lateral field. Bursa tri-lobed with striations to tips (Fig. 1-F,G); spicules massive, heavily cuticularized; gubernaculum mostly straight with curved and pointed distal end (Fig. 1-G).

DISTRIBUTION:

Holotype (female).—Collected on May 12, 1976 by F. H. Chow and D. E. Stokes. Type collection, Nematology Laboratory, U.S.D.A., Beltsville, Maryland, U.S.A.

Allotype (male).—Same as holotype.

Paratypes.—Same data as holotype, and distributed as follows:

Four females, four males: Department of Entomology and Nematology, University of Florida, Gainesville, Florida, U.S.A.

Four females, four males: Department of Entomology and Nematology, University of Florida, Gainesville, Florida, U.S.A.

Two females, one male: Same as holotype.

Two females, one male: Department of Nematology, University of California, Riverside, California, U.S.A.

Two females, one male: Laboratorium voor Nematologie, Binnenhaven 15, Wageningen, The Netherlands.

One female, one male. Nematology Department, Rothamsted Experimental Station, Harpenden, Herts., England.

TYPE LOCALITY:

Around roots of *Juncus roemerianus* Scheele, a common brackish marsh plant, found 1.4 km from state road 24, on the unpaved road southwest of Cedar Key city dump area, Cedar Key, Florida, U.S.A.

DIAGNOSIS:

Dolichodorus aestuarius n. sp. has three incisures in the lateral field, which distinguishes it from *D. obtusus* Allen, 1957; *D. arenarius* Clark, 1963; *D. adelaidensis* Fisher, 1964; *D. brevistilus* Heyns and Harris, 1973; and *D. cassati* Luc and Dalmasso, 1971, all of which have four incisures (1, 2, 4, 7, 11). *D. aestuarius* may be separated from other species having three incisures as follows: from *D. silvestris* Gillespie and Adams, 1962; *D. pulvinus* Khan and Seshadri, 1971; *D. profundus* Luc, 1960; and *D. nigeriensis* Luc and Caveness, 1963 in that the excretory pore is a little anterior to the basal bulb in *D. aestuarius* and opposite the medium bulb in the others (5, 8, 9, 10). In *D. similis* Golden, 1958, the excretory pore is opposite the middle of the basal bulb (6). The stylet of *D. heterocephalus* is more than 100 μm long (3) in comparison with 68 μm in *D. aestuarius.*

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