

Criconemella anastomoides n. sp. (Nematoda: Criconematina) from Pakistan¹

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Abstract: *Criconemella anastomoides*, described and illustrated herein, is characterized by the presence of regular anastomosis on the body, two zig zag lateral lines, stylet knobs sloping posteriorly, short stylet, and short body length.

Key words: taxonomy, *Criconemella*.

A new species of *Criconemella* collected from the rhizosphere of *Saccharum officinarum* is described and illustrated.

Specimens were killed by gentle heating, fixed in TAF, and processed to dehydrated glycerine.

SYSTEMATICS

Criconemella anastomoides n. sp. (Figs. 1-6)

Holotype (female): L = 0.30 mm, a = 7.1, b = 3.3, c = 21, c' = 0.6, V = 94, stylet = 28.8 μ m, R = 66, RV = 4, R Van = 1, R an = 3, R ex = 22.

Paratypes (nine females): L = 0.28-0.30 (0.29) mm, a = 5.4-7.9 (6.8), b = 2.6-3.5

(3.1), c = 17.7-22.3 (20.3), c' = 0.6-0.8 (0.7), V = 93-95 (94), stylet = 28.8-29.6 (29.3) μ m, R = 64-67 (65), R V = 3-4, R Van = 0-1, R an = 3, R ex = 21-23.

Male: Not known.

Description of females: Body strongly ventrally arcuate, bluntly rounded at both extremities, assuming "C" shape. Cuticle thick, marked with 64-67 annules on ventral side and 69-70 annules on dorsal side. Annules not retrorse, 3.0-5.6 μ m wide at mid body, posterior margins irregular, slightly crenate toward the posterior region. Anastomosis of annules very prominent, forming a thick regular zig zag structure, distributed longitudinally over the body. Double zig zag lateral lines originating at R 9 or 10 run along body and end at tail tip. Head with two annules—the first 9.0-10.4 μ m wide, slightly anteriorly directed; the second slightly thicker (12-13 μ m wide), retrorse, and larger than first annule. Submedian lobes prominent, protruding from first annule.

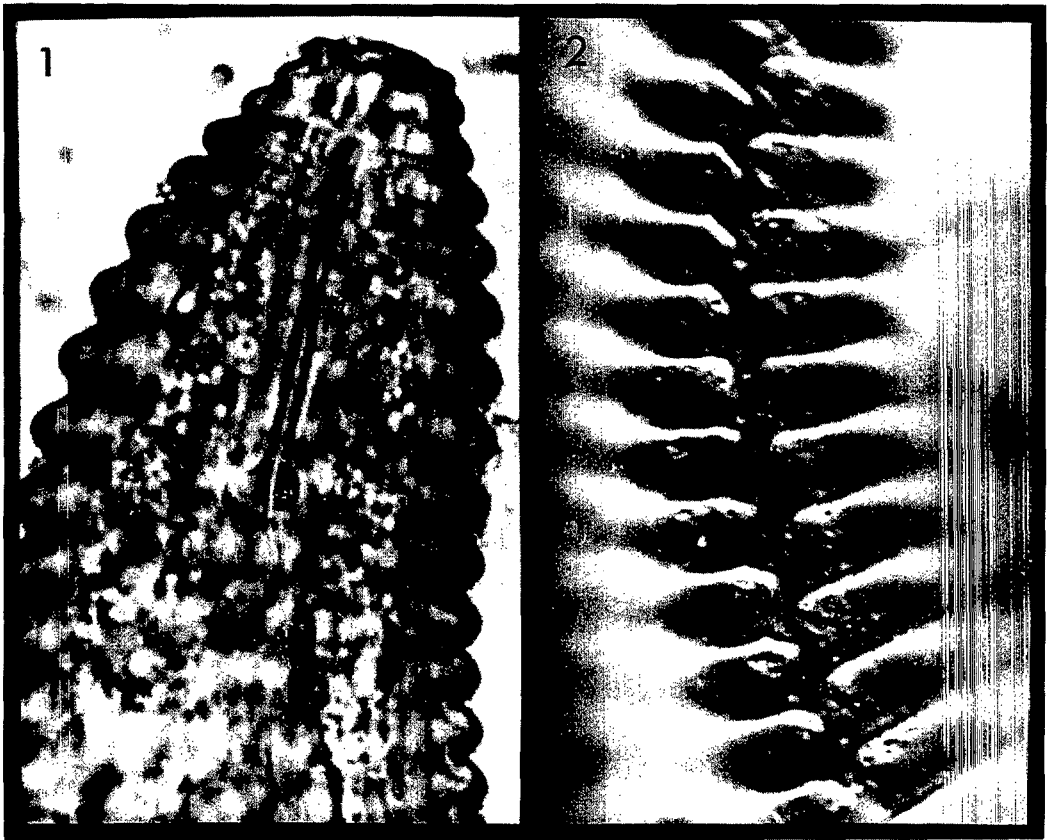
Stylet small, robust, about 10% of total body length; cone 17-18 μ m long, slightly more than half of the stylet length. Basal knobs small, without typical forward projection (not anchor shaped) but distinctly sloping downwards, flattened at base and forming a conical structure 4 μ m across. Dorsal esophageal gland opening into lu-

Received for publication 12 June 1984.

¹ This research was financed in part by a grant from the United States Department of Agriculture under the PL-480 program.

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The authors thank Dr. A. M. Golden for confirming the identification, giving guidance, and reviewing the manuscript.



FIGS. 1, 2. Photomicrographs of *Criconemella anastomoides* n. sp. (female). 1) Stylet shape. 2) Zig zag lateral lines.

men of procorpus 5.0–6.5 μm behind spear base. Esophagus 94–98 μm long; corpus 7–8 μm wide, fused with median bulb. Isthmus short, narrow. Esophageal bulb 15–18 $\mu\text{m} \times 8$ –10 μm . Nerve ring distinct, located 18–21 annules from anterior end. Excretory pore near the base of esophageal bulb, 21–24 annules from the anterior end.

Vulva closed, located on 3–4 annules from tail terminus. Vagina straight. Spermatheca filled with round spermatozoa. Ovary single, outstretched, short, less than one-third of body length. Anus one annule posterior to vulva. Tail rounded with 2–3 lobes on terminus.

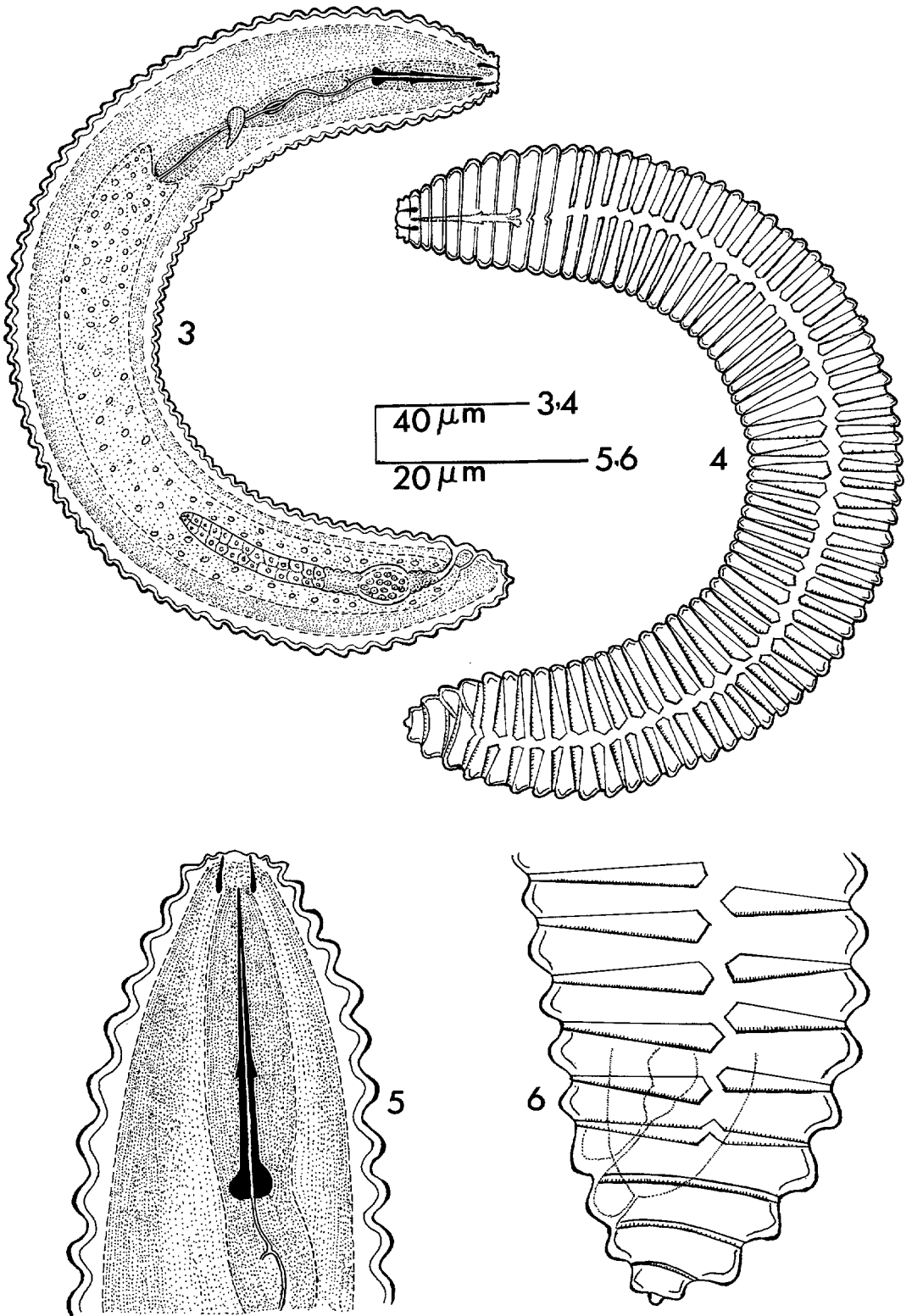
Type habitat and locality: Specimens collected in July 1982 from soil around the roots of sugarcane (*Saccharum officinarum*), Hyderabad, Pakistan.

Holotype: Slide No. NNRC/1007 deposited in the National Collection of the National Nematological Research Centre, University of Karachi.

Paratype: Slide Nos. NNRC/1008–1010, six females (same data as holotype), deposited in the National Collection of National Nematological Research Centre, University of Karachi, Karachi-32, Pakistan. Slide No. NNRC/1011 (three females), also deposited in USDA Nematode Collection, Nematology Laboratory, Beltsville, Maryland.

Diagnosis and relationship: *Criconemella anastomoides* n. sp. is closely related to *C. microdora* (De Grisse, 1964) Luc & Raski, 1981. From *C. microdora* it differs by being shorter length, longer stylet, fewer body annules, presence of zig zag lateral lines and anastomoses, fewer RV and R Van, and rounded tail (in *C. microdora* L = 0.36–0.43 mm, stylet = 25–26 μm , R = 83–87, lateral fields absent, RV = 7–10, R Van = 6–8, tail more or less pointed with a very irregular terminus).

This new species can also be compared with *C. sphaerocephala* (Taylor, 1936) Luc



FIGS. 3-6. Drawings of *Criconemella anastomoides* n. sp. (holotype female). 3) Entire nematode showing esophageal region stylet knob, annulation, and posterior region. 4) Anastomosis and zig zag lateral line on entire nematode body. 5) Anterior region. 6) Posterior region.

& Raski, 1981. In the latter species, simple anastomosis of the annules and joints are more or less zig zag but are irregularly distributed on the body, stylet is 30–69 μm , and stylet knobs are anchor shaped. In *C. anastomoides* n. sp., regular anastomosis and two lateral lines are present along the body length, stylet is 28–29 μm , and stylet knobs are not anchor shaped but sloping posteriorly (Fig. 5).

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