

# *Belonolaimus lineatus* n.sp. (Nematoda: Tylenchida)

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## INTRODUCTION

Described species of the genus *Belonolaimus* are characterized by having a single incisure in the lateral fields. Recently specimens with four lateral incisures, but possessing other diagnostic characters of the genus, were found associated with declining sugarcane in Isabela, P.R. During the study of this new species a posterior circle of eight labial papillae was observed. To determine whether this was a characteristic of this species only, specimens of *B. gracilis* and *B. longicaudatus* from Florida were studied. These eight papillae were found in both *B. gracilis* and *B. longicaudatus*, but were not reported by Steiner (6)<sup>2</sup> nor Rau (3,4,5). Specimens of *Dolichodoros heterocephalus* from Florida were also studied and found to have the same number of papillae. Cobb (1), in describing *D. heterocephalus* specified, "No papillae have been seen on the lips, but minute papillae might readily be present without having been observed." However, he illustrated these papillae in pl. VI, fig. 16. The presence of an anterior circle of four papillae and a posterior of eight is characteristic of both genera.

Colbran (2), described *B. hastulatus* which has four lateral incisures but this species is being transferred to *Telotylenchus* by M. S. Jairajpuri (in press).

## *BELONOLAIMUS LINEATUS* N.SP.

### Measurements

*Females:* 1.6-1.8 mm.; *a*-36-38; *b*-5.8-8.0; *c*-15-22; *V*-16-33/  
50-54/16-31

*Holotype:* 1.6 mm.; *a*-38; *b*-5.8; *c*-19; *V*-19/50/20

*Males:* 1.4-1.5 mm.; *a*-34-44; *b*-5.5-7.3; *c*-14-17; *T*-46-47

*Allotype:* 1.4 mm.; *a*-44; *b*-7.0; *c*-14; *T*-47

### Description

*Female:* Body practically straight when relaxed by gentle heat, cylindrical, tapering anteriorly of intestine and posteriorly of anus. Lip region

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<sup>2</sup> Italic numbers in parentheses refer to Literature Cited p. 134.

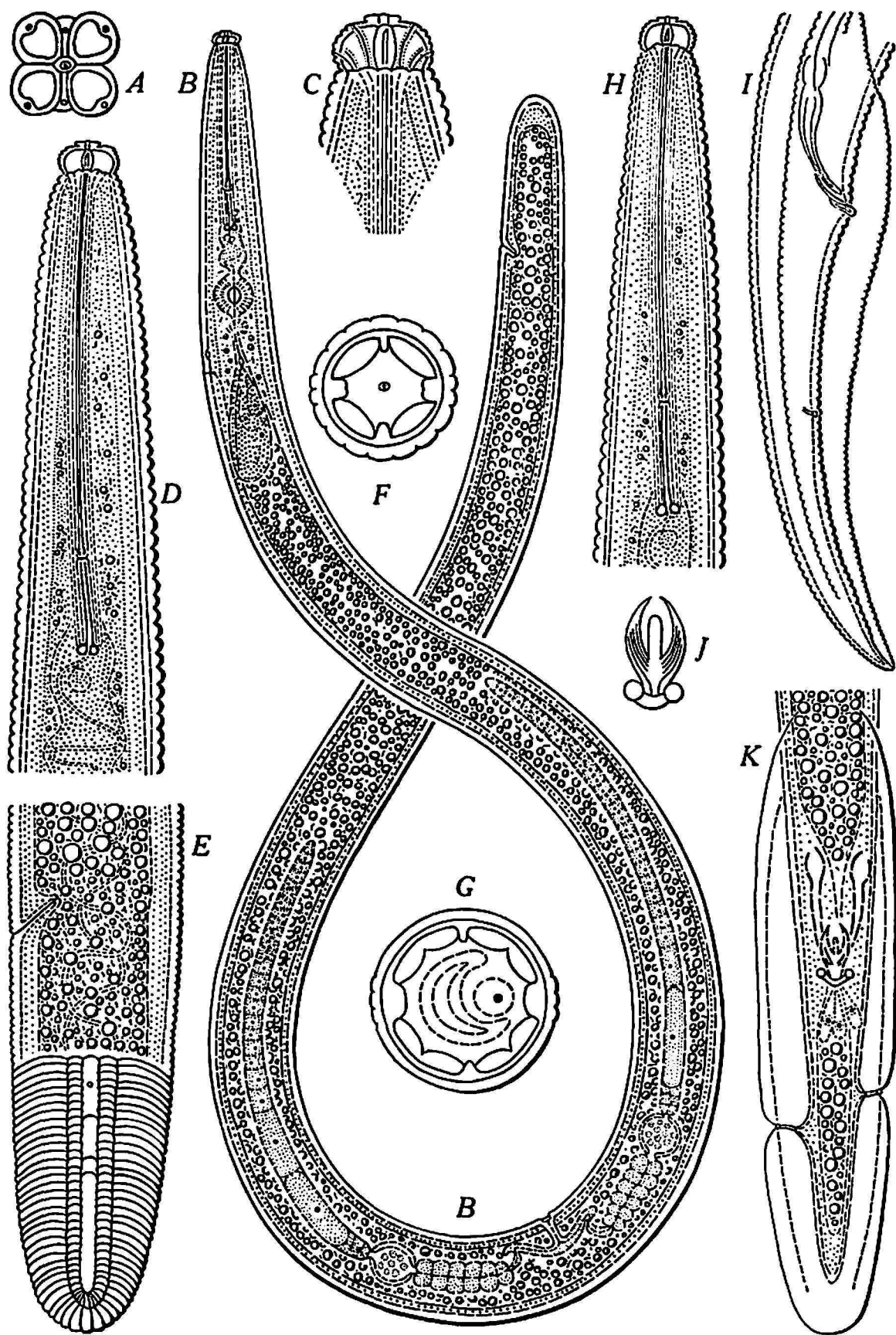


FIG. 1.—*Belonolaimus lineatus*: A, C, F, J,  $\times 3000$ ; B,  $\times 600$ ; D, E, G, H, I, K,  $\times 2000$ . A-G, Female: A, Face view, B, entire body, C, head, showing papillae, D, anterior end, E, tail, F, cross-section through middle of stylet, G, cross-section through anterior ovary; H-K, male: H, Anterior end, I, tail lateral, J, gubernaculum ventral; K, tail ventral.

distinctly offset, 4-lobed and bearing 7 annules and a labial disk. Cephalic framework conspicuous. Head possessing at least 12 papillae, an anterior circle of 4 which are readily visible in face-view, and a second circle of 8 visible from a lateral view. Cuticle coarsely annulated, interrupted in the lateral fields by 4 incisures over the greater part of the body and 3 anteriorly to the esophageal glands. All incisures crenate except the central one in the anterior portion of the body. Lateral bands completely aerolated except for the middle one which is interrupted by only a few transverse striae. Cuticle in the anterior portion of the body marked by longitudinal striae which disappear in the region of the esophageal glands, 12 being present in a cross-section near middle of stylet. Stylet 98–100  $\mu$  long, with rounded basal knobs. Outlet of dorsal esophageal gland 3  $\mu$  behind stylet. Median bulb slightly elongate. Esophageal glands left-submedian, overlapping intestine. Hemizonid 5–6  $\mu$  long, 3 to 4 annules anterior to excretory pore. Deirids not observed. Intestine coarsely granulated, extending into tail cavity. Rectum short, attached to ventral side of intestine. Phasmids small but distinct, located about midway of the tail. Terminus broadly rounded, annulated. Vulva equatorial. Ovaries paired, outstretched, usually located on left side of intestine. Oöcytes in single file except for a short region of multiplication near distal end. Spermathecae spheroid, usually filled with granular spermatozoa.

*Male:* Resembling female. Stylet 91–95  $\mu$  long. Bursa extending from about one body-width anterior to spicula to terminus. Spicules curved, cephalated proximally, 26–28  $\mu$  long. Gubernaculum 14–15  $\mu$  long, of complicated structure in ventral view as illustrated in fig. 1,J.

*Holotype:* Female from soil about declining sugarcane collected by Dr. Mario Pérez, Jan. 17, 1963, at Finca Miguel A. Guevara, Barrio Jobos, Isabela, P.R. Slide *Belonolaimus* 1, Nematology Collection, Entomology Department, Agricultural Experiment Station, Río Piedras, P.R.

*Allotype:* Male. Same data as for holotype. Slide *Belonolaimus* 1.

*Paratypes:* Same data as for holotype. Slides *Belonolaimus* 1 through 1g.

*Type Locality:* Finca Miguel A. Guevara, Barrio Jobos, Isabela, P.R.

*Habitat:* Soil about roots of sugarcane, *Saccharum officinarum* L.

### Diagnosis

*Belonolaimus lineatus* is distinguished from all other members of the genus by the presence of 4 incisures in the lateral fields and by longitudinal striae on the neck region.

### SUMMARY

A new species of plant parasitic nematode, *Belonolaimus lineatus*, was found associated with declining sugarcane in Isabela, P.R. This species is

mainly characterized by the presence of four incisures in the lateral fields and longitudinal striae on the neck region. A posterior circle of eight labial papillae is illustrated, the first report of such structures in the genus *Belonolaimus*.

#### RESUMEN

En la zona cañera de Isabela, Puerto Rico, se encontró una nueva especie de nemátodo parasítico, *Belonolaimus lineatus*, relacionado con cepas de caña en franca decadencia. Esta especie se caracteriza, principalmente, por la presencia de cuatro incisiones en las regiones laterales y estrías longitudinales en la región del cuello. Ilústrase un círculo posterior compuesto de ocho papilas labiales, detalle morfológico que por primera vez se informa en relación con este género.

#### LITERATURE CITED

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