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XIPHIDORUS YEPESARA N. GEN., N. SP.
(NEMATA: LONGIDORIDAE) FROM BRAZIL

by

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Investigations of the nematode fauna from soil around roots of passion fruit (*Passiflora edulis* Sims.) revealed a new genus and species of Longidoridae (Thorne, 1935) Meyl, 1961.

Observations were made on specimens killed by heat, fixed in TAF and mounted in glycerin.

Data on oesophageal glands follow Loof and Coomans (1972), the length of oesophageal basal portion as percentage of neck length being represented by *oes. b.*

XIPHIDORUS N. GEN.

Diagnosis: Longidoridae. Lip region not set off by an incisure, expanded. Amphid pouches large, bilobed symmetrically. Odontostyle base well forked. Odontophore bearing basal flanges. Spear guiding apparatus with an anterior tubular sheath, located near odontostyle base. Oesophageal dorsal gland nucleus and nucleolus smaller than those of the anterior subventral pair and located far from the expansion (DN = 25.6-33.8%). Oesophageal dorsal gland aperture located at some distance behind the expansion (DO = 12.2-17.6). Distance DO-DN large (12.2-16.2). Ventral median series of supplements well spaced with a gap to the adanal pair. Tails similar in both sexes, convex-conoid to digitate.

Type species: *Xiphidorus yepesara* n. sp.

Xiphidorus n. gen., resembles *Xiphinema* Cobb, 1913 in having a guiding ring of same type located near odontostyle base, odontophore provided with basal flanges, odontostyle base well forked but showing amphids (Siddiqi, 1965, Aboul-Eid, 1970) and oesophageal gland patterns (Loof and Coomans, 1972) like those of *Longidorus* (Micoletzky, 1922) Filipjev, 1934.

XIPHIDORUS YEPESARA N. SP.

Dimensions. The measurements of eight females (holotype and seven paratypes), seven males (allotype and six paratypes), seven fourth stage juveniles and three third stage juveniles are shown in table I.

Description. Body slender, strongly curved ventrally in a open spiral or C shape when relaxed. Cuticle smooth, its thickness being 2 μm in median portion of body and 6 μm on dorsal side of tail. Lateral chords one fourth of body diameter; lateral cells conspicuous, each one opening by a central pore; there are about two hundred lateral cells on each side of body. Dorsal and ventral glands (and pores) also conspicuous in the cervical region but not in remainder of body. Lip region low, rounded, set off by a deep depressions, as wide as half body diameter at level of cardia, with the usual circles of papillae which are conspicuous but do not modify the head contour. Amphid pouches large, lobed, practically encircling the corresponding body width; amphid apertures hardly visible, minute slits. Spear guiding sheath *Xiphinema*-like, its distance (posterior margin) from anterior end being 57-94 (n = 13, mean = 78.7) μm . Odontophore with moderately developed basal flanges. Anterior portion of oesophagus convoluted. A mucro (odontostyle piece) is present in some specimens. Nerve ring surrounding anterior portion of oesophagus at 145-179 (n = 6, mean = 171) μm from anterior end. Basal part of oesophagus about four times as long as wide. Dorsal gland nucleus and nucleolus small, rounded and situated at the second fourth of oesophageal basal portion; dorsal gland aperture in the half way between the beginning of basal portion and nucleus; anterior subventral gland pair usually with very conspicuous, large

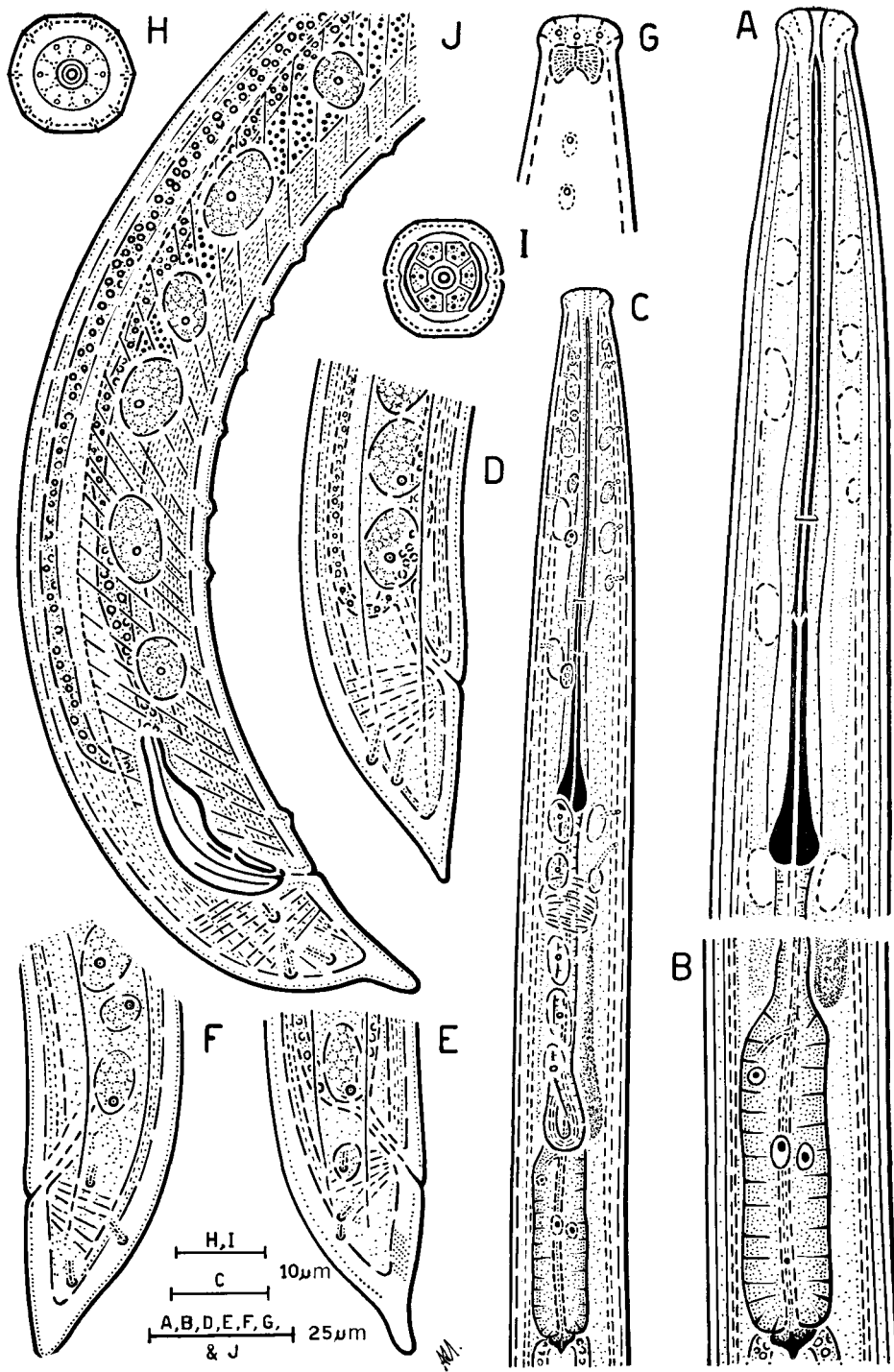


Fig. 1 - *Xiphidurus yepesara* n. gen., n. sp.; A and C: anterior region; B: oesophageal bulb, and D: posterior region of the holotype; E and F: female tails; G: amphidial pouch; H: en face view; I: cross section at the level of the amphidial pouch; J: posterior region of the allotype.

Table I - *Measurements of Xiphidorus yepesara n. gen., n. sp.*

Characters	female holotype	male allotype	female paratypes	male paratypes	4th stage juveniles	3rd stage juveniles
n	1	1	7	6	7 (b=6)	3
length (mm)	3.8	3.8	3.5 (3.2-3.8)	3.4 (3.2-3.7)	2.5 (2.4-2.7)	1.8 (1.7-1.9)
odontostyle (μm)	97	97	98 (93-103)	98 (96-100)	80 (77-83)	68 (60-76)
odontophore (μm)	43	41	43 (41-44)	42 (40-43)	38 (34-41)	34 (33-34)
spear (μm)	140	139	142 (136-143)	140 (137-141)	118 (111-121)	102 (94-109)
spare odontostyle (μm)	—	—	—	—	96 (93-99)	82 (80-84)
a	94	102	96 (91-108)	99 (89-108)	82 (78-86)	64 (63-64)
b	12.9	13.5	12.6 (11.0-13.9)	12.6 (10.7-14.5)	10.0 (8.4-12.1)	8.0 (7.7-8.3)
c	115	116	117 (103-145)	108 (94-120)	80 (76-86)	57 (53-63)
c'	1.3	1.1	1.4 (1.1-1.6)	1.3 (1.1-1.4)	1.5 (1.4-1.6)	1.8 (1.6-2.0)
V or T%	8 ₄₇ 6	49	8 ₄₉ 7 (7-9 ₄₈₋₅₂ 6-10)	—	—	—
spicules (μm)	—	39	—	35.7 (31.4-38.6)	—	—
guiding pieces (μm)	—	10.0	—	11.4 (10.0-12.9)	—	—
DO	12.2	16.7	14.2 (12.5-15.8)	15.0 (13.2-17.6)	—	—
DN	25.6	30.6	27.9 (25.6-30.3)	30.6 (28.9-33.8)	—	—

and rounded nuclei and nucleoli situated near the middle of basal portion; their apertures about the same level; posterior subventral gland nuclei not detected but a pair of apertures are situated at about 80% of the basal portion length. Cardia small, conical, with an inconspicuous flat disc shaped base; intestine with vacuolated cells; prerectum long (243-458 μm); a short post-rectal pouch is seen in almost all specimens. Tail conoid to digitated, longer than anal body diameter, with two papillae on each side.

Female. Vulva transverse, vagina 50% of the width. Gonads paired, reflexed, both well developed. Uteri usually shorter than oviducts, cylindrical when empty, without Z-organ and separated from oviducts by a sphincter. Ovaries short, with a single row of oocytes.

Male. Testes two, dorylaimid. Spicules dorylaimid, with lateral guiding pieces. Apart from the adanal pair, there are 6 (one specimen), 7 (three specimens) or 8 (three specimens) well spaced ventromedian supplements; the proximal (posterior) one is located at 51-59 μm and the distal (anterior) one at 126-142 μm from the cloacal opening.

Juvenile. Both third and fourth stages are similar to the adults, except for the dimensions.

Type locality and habitat. All specimens obtained from soil around passion fruit roots collected in a plantation situated in the São Francisco river valley, at Pernambuco State, Brazil.

Holotype: female on slide 457/05. *Allotype:* male on slide 457/08. *Paratypes:* 7 females, 6 males and 10 juveniles on slides 457/01 to 457/08. These are held in the nematology collection of the Zoology Department, Escola Superior de Agricultura « Luiz de Queiroz », Universidade de São Paulo, Piracicaba, Brazil.

I am grateful to Prof. Dr. L. G. E. Lordello for his valuable suggestions and critically reviewing the manuscript.

S U M M A R Y

Xiphidorus n. gen. is erected to contain a new species, *X. yepesara*, found in soil around roots of passion fruit (*Passiflora edulis* Sims.) cultivated in Pernambuco, Brazil. In the new genus the guiding sheath, odontostyle and odontophore are like those of *Xiphinema* but amphidial pouches and oesophageal gland patterns are of the *Longidorus* type.

RIASSUNTO

Xiphidorus yepesara n. gen., n. sp. (Nemata: Longidoridae) trovato in Brasile.

È stato eretto il nuovo genere *Xiphidorus* per comprendere una nuova specie *X. yepesara*, trovata nella rizosfera di *Passiflora edulis* Sims., a Pernambuco in Brasile. Questa specie possiede apparato guida, odontostile ed odontoforo come quelli di *Xiphinema*, mentre le tasche amfidiali e la disposizione delle ghiandole esofagee sono simili a quelle di *Longidorus*.

R É S U M É

Hiphidorus yepesara n. gen., n. sp. (Nemata: Longidoridae) trouvé au Brésil.

Xiphidorus n. gen. a été érigé pour comprendre une nouvelle espèce, *X. yepesara*, trouvée en sol de *Passiflora edulis* Sims., cultivée à Pernambuco (Brésil). Cette espèce possède, guide, odontostyle et odontophore des *Xiphinema*, mais les amphides et la glande oesophagienne semblables à celles des *Longidorus*.

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

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Accepted for publication on 7 July, 1975.