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REDESCRIPTION OF *XIPHINEMA YAPOENSE* AND DESCRIPTION  
OF MALE AND JUVENILES OF *X. DOUCETI* (NEMATODA:  
LONGIDORIDAE)

BY

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*Xiphinema yapoense* Luc, 1958, originally described from a single female, is redescribed from a population of 26 females and third- and fourth-stage juveniles. Two aberrant females are also described: one lacks a posterior genital branch; in the other, the body is shorter than normal and the vulva abnormally posterior. The male of *X. douceti* Luc, 1973, unknown until now, and the

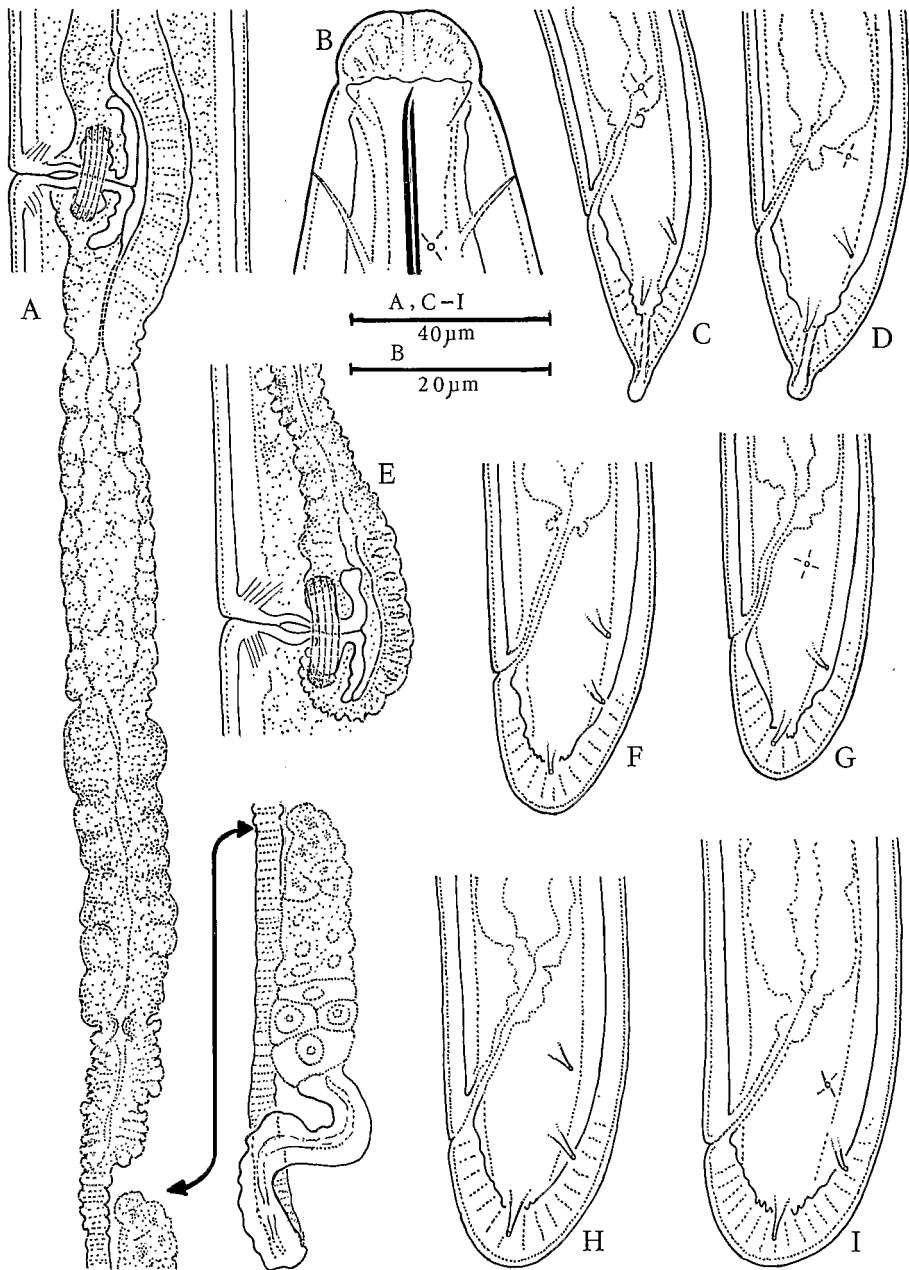


Fig. 1. *Xiphinema yapoense* Luc, 1958. Female: A, posterior genital branch. B, labial region. H, I, tails. Abnormal female: E, vulval area and ovejector. Juveniles 3rd stage: C, D, tails. Juveniles 4th stage: F, G, tails.

TABLE I

*Xiphinema yapoense* Luc, 1958. Measurements of females, J3 and J4

	Holotype (Luc, 1958)	Topotypes (original)	Population from Tai (original)		
			Females	J3	J4
n	1	2	26	14	12
L (mm)	3.028	2.82, 2.95	2.25-3.38 (2.72)	1.29-1.77 (1.52)	1.77-2.46 (1.99)
a	51.3	52.6, 54.3	38.1-54.6 (47.7)	34.2-46.7 (41.0)	45.1-56.7 (49.5)
b	6.7	8.7, 9.1	6.0-9.7 (7.7)	4.6-7.8 (5.7)	4.9-7.0 (5.6)
Tail length ( $\mu\text{m}$ )	27	24, 29	20-27 (23)	28-41 (33.5)	23-28 (26.5)
c	110.9	98.3, 115.0	98-147 (117)	38.0-63.2 (46.3)	64.1-98.4 (75.7)
c'	0.7	0.7, 0.8	0.6-0.8 (0.7)	1.0-1.6 (1.3)	0.7-1.0 (0.9)
V	43.9	39.3, 41.7	36.2-42.0 (39.0)	—	—
Od. styl. ( $\mu\text{m}$ )	138	142, 148	125-144 (133)	73-99 (89.5)	107-118 (112)
Od. ph. ( $\mu\text{m}$ )	71	69, 68	62-74 (67)	50-59 (54.5)	55-65 (60)
Tot. styl. ( $\mu\text{m}$ )	209	211, 216	188-215 (200)	130-155 (144)	166-180 (172)
Rep. od. st. ( $\mu\text{m}$ )	—	—	—	102-118 (111.5)	117-134 (126.5)

encircling the body, edge more or less wavy rather than straight; amphidial opening at level of the groove. Stylet, tubular guide, oesophagus and intestine normal. Hemizonid 6.5-9  $\mu\text{m}$  wide, at 170-201  $\mu\text{m}$  from front end; hemizonion 2.5  $\mu\text{m}$  wide, at 220-260  $\mu\text{m}$  from front end. Nerve ring normal; a second, posterior and less developed, nerve ring observed in some specimens. Genital tract with two equally developed branches of the same structure; vaginal slit about half a body diam. with well developed cuticularization; circular muscle thin, ovejector muscular, elongated. Uterus short, lumen wide, composed of small cells; uterine pouch poorly defined, about as wide as the rest of the uterus but with thicker wall. Uterus without Z-differentiation, internal spines or differentiated muscular area. Sphincter separating uterine pouch from oviduct pouch less developed than usual, often difficult to observe. Oviduct pouch small, wall thin and irregular; proximal part of oviduct thin, straight; junction between oviduct and ovary usually convoluted. Genital tract massive and relatively short compared with the length of the body. No spermatozoa seen. Tail almost perfectly hemispherical, without peg or bulge; tail cuticle thick, especially at the extremity (up to 12  $\mu\text{m}$ ); without internal mucro or blind canal; one pair of caudal pores rather far back (in the posterior third); another pair (rarely two), medio-dorsal, at level of anus.

*Third-stage juveniles.* — Body massive, ventral curvature weak, more pronounced in the posterior third. Labial area as in female, but amphidial slit straight. Tail conical, dorsally convex, with terminal peg more or less well defined; tail cuticle thick, especially at extremity where crossed by blind canal; two pairs of caudal pores.

*Fourth-stage juveniles.* — Body massive, ventral curvature more pronounced than in I 3, generally in loose I-shape. Labial area as in I 3. Tail rounded.

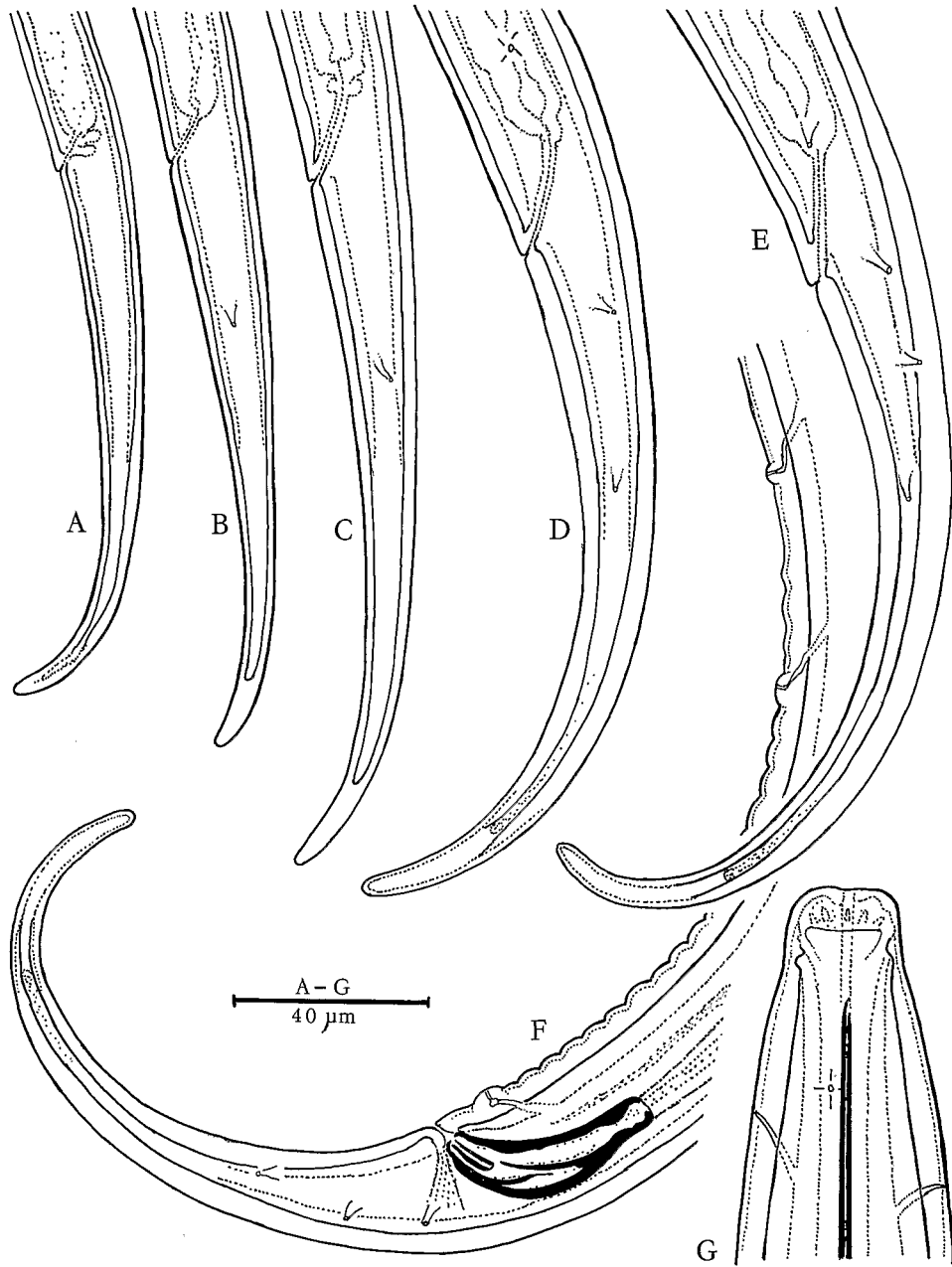


Fig. 2. *Xiphinema douzeti* Luc, 1973. Juveniles: A, tail, J1. B, tail, J2. C, tail, J3. D, tail, J4. Female: E, tail. Male: F, posterior part. G, anterior part.

*Xiphinema douceti* Luc, 1973 (Fig. 2)

Measurements of females and juveniles from Taï are in Table II.

*Male*: L = 2.52 mm; a = 74.1; b = 6.6; tail length = 146  $\mu\text{m}$ ; c = 17.3; c' = 5.6; odontostyle = 199  $\mu\text{m}$ ; odontophore = 62  $\mu\text{m}$ ; length of spicules (med. line) = 48  $\mu\text{m}$ ; max. width of spicules = 12  $\mu\text{m}$ ; accessory piece = 9  $\mu\text{m}$ ; h = 41  $\mu\text{m}$ ; h% = 28.1.

*Female*: measurements and morphological characteristics agree well with those of the type population and nothing needs to be added to the original description. In spite of the presence of a male in the population, no spermatozoa were observed in females.

*Male*: Body ventrally curved when heat relaxed; curvature more pronounced in the posterior part. Anterior end abruptly rounded, separated from the rest of the body by a very weak constriction. Cervical pores rare (one ventral, one

TABLE II

*Xiphinema douceti* Luc, 1973. Population from Taï. Measurements of females and juveniles stages

	J1	J2	J3	J4	Females
n	2	3	3	6	21
L (mm)	0.94, 0.98	1.15-1.32	1.60-1.72	1.98-2.19 (2.08)	2.41-2.79 (2.62)
a	46.7, 47	44.2-47.7	55.5-60.4	55.6-68.3 (60.1)	59.3-74.1 (65)
b	4.7, 4.9	4.1-5.7	5.6-6.2	5.6-6.8 (6.3)	6.0-8.3 (7.2)
Tail length ( $\mu\text{m}$ )	115, 124	118-140	138-150	148-160 (156)	141-173 (155)
c	7.6, 8.5	8.8-10.5	11.4-11.8	12.8-13.7 (13.4)	16.0-19.9 (17.0)
c'	6.7, 8.9	6.9-8.7	6.7-7.7	6.9-7.4 (7.2)	6.6-7.9 (7.0)
V	—	—	—	—	44.8-48.0 (46.9)
Od. styl ( $\mu\text{m}$ )	56, 59	71-73	84-94	98-105 (103)	116-126 (119)
Od. ph. ( $\mu\text{m}$ )	37, 39	46-47	53-54	59-63 (62)	62-68 (65)
Total styl. ( $\mu\text{m}$ )	95, 96	117-120	138-147	160-172 (165)	178-193 (184)
Repl. Od. st. ( $\mu\text{m}$ )	71, 71	86-90	104-107	114-121 (119)	—
h*	15, 18	15-19	19-21	24-31 (28)	28-42 (36)
h% **	13, 14.5	12.9-14.5	13.6-15.2	16.2-20.3 (18.2)	17.0-28.6 (23.5)

\* length,  $\mu\text{m}$ , of the hyaline (non protoplasmic) terminal part of tail.

\*\* same, as percentage of tail length.

dorsal, two lateral), situated rather far from anterior end. Ventral and latero-subdorsal pores present on about the anterior half of the body; no latero-subventral pores. Lateral chord narrow, 7  $\mu\text{m}$  at mid-body or 1/6 of body diameter. Hemizonid flat, 6  $\mu\text{m}$  wide, at 168  $\mu\text{m}$  from anterior end; hemizonid not seen. Tail regularly tapered with pronounced ventral curvature.

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