

Xiphinema abrantinum sp. n. (Nematoda : Longidoridae)

from Portugal

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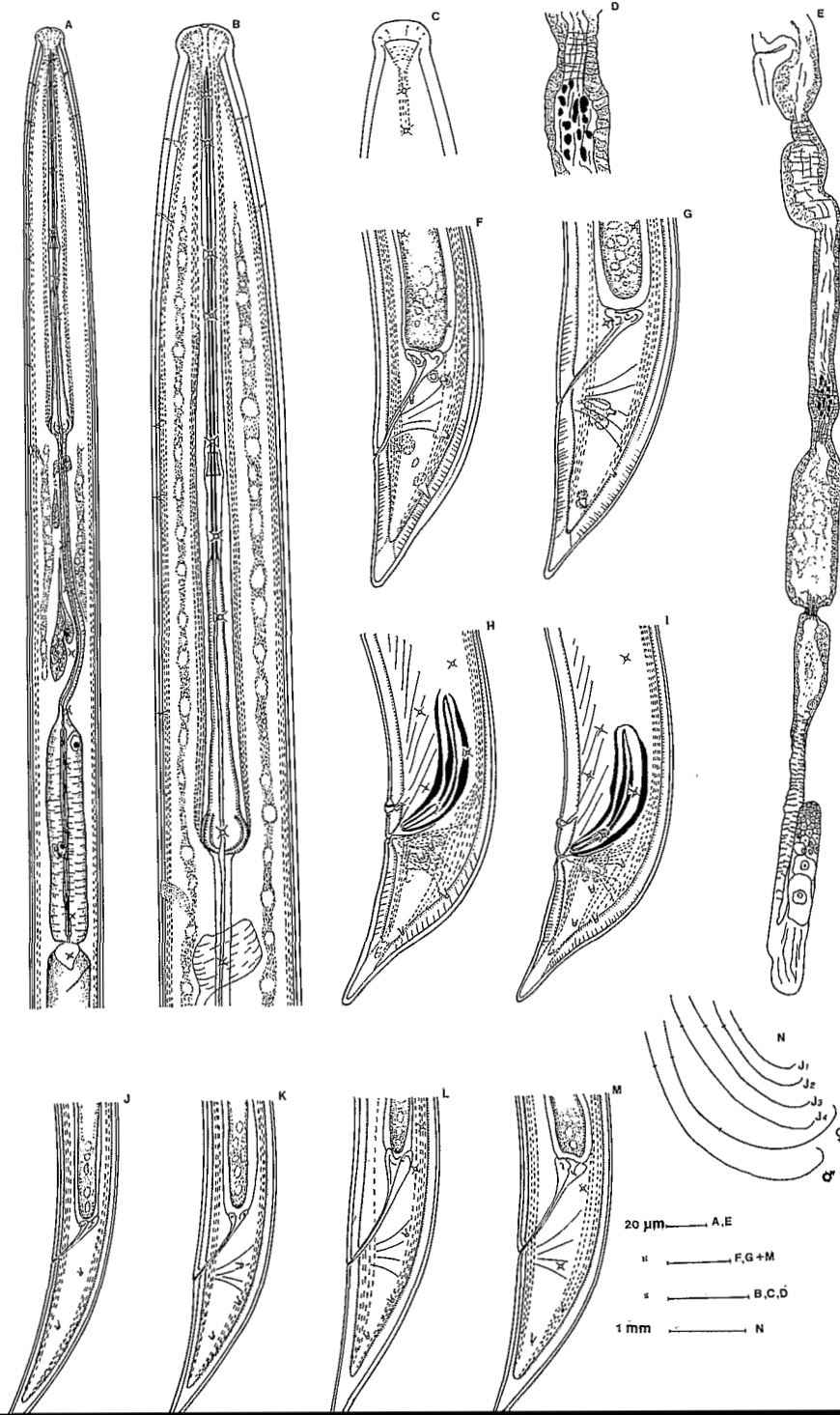
SUMMARY

Xiphinema abrantinum sp. n. is described and illustrated. It was found in the rhizosphere of peach (*Prunus persica* Stokes) at Casal Coelheira, Tramagal, Abrantes, province of Ribatejo, Portugal. The new species is similar to *X. dissimile* Roca, Pereira & Lamberti, 1988, *X. israeliae* Luc, Brown & Cohn, 1982, *X. meridianum* Heyns, 1971, *X. sahelense* Dalmasso, 1969 and *X. coxi europaeum* Sturhan, 1985. *X. abrantinum* is characterized by the pseudo-Z-organ and one rudimentary ventro-median single supplement in the male.

RÉSUMÉ

Xiphinema abrantinum sp. n. (Nematoda : Longidoridae) provenant du Portugal

	<i>f1</i>	<i>f2</i>	<i>f3</i>	<i>f4</i>	<i>Females</i>	<i>Males</i>
n	4	9	11	4	31	20
L (mm)	1.3-1.4 (1.3 ± 0.03)	1.7-2.1 (1.9 ± 0.17)	2.0-2.5 (2.3 ± 0.12)	2.5-2.8 (2.6 ± 0.16)	3.1-4.5 (3.6 ± 0.45)	3.0-4.0 (3.4 ± 0.23)
a	52.0-59.0 (54.5 ± 3.2)	53.3-81.1 (61.7 ± 8.61)	58.1-76.5 (69.5 ± 5.15)	66.2-76.0 (71.6 ± 4.34)	73.2-131.2 (88.1 ± 16.89)	76.0-97.2 (86.3 ± 5.68)
b	4.2-4.9 (4.4 ± 0.32)	4.6-5.8 (5.1 ± 0.37)	4.8-8.7 (5.8 ± 1.02)	5.8-6.7 (6.1 ± 0.40)	6.9-9.8 (7.9 ± 0.83)	6.6-8.1 (7.4 ± 0.38)
c	22.0-24.3 (23.1 ± 0.93)	29.9-33.9 (31.5 ± 1.24)	34.3-47.6 (42.3 ± 3.48)	48.0-55.7 (51.1 ± 3.59)	63.4-107.3 (79.1 ± 10.99)	54.4-73.9 (66.6 ± 5.36)
c'	3.1-3.6	2.4-4.1	1.9-2.4	1.8-2.2	1.2-2.3	1.5-1.9



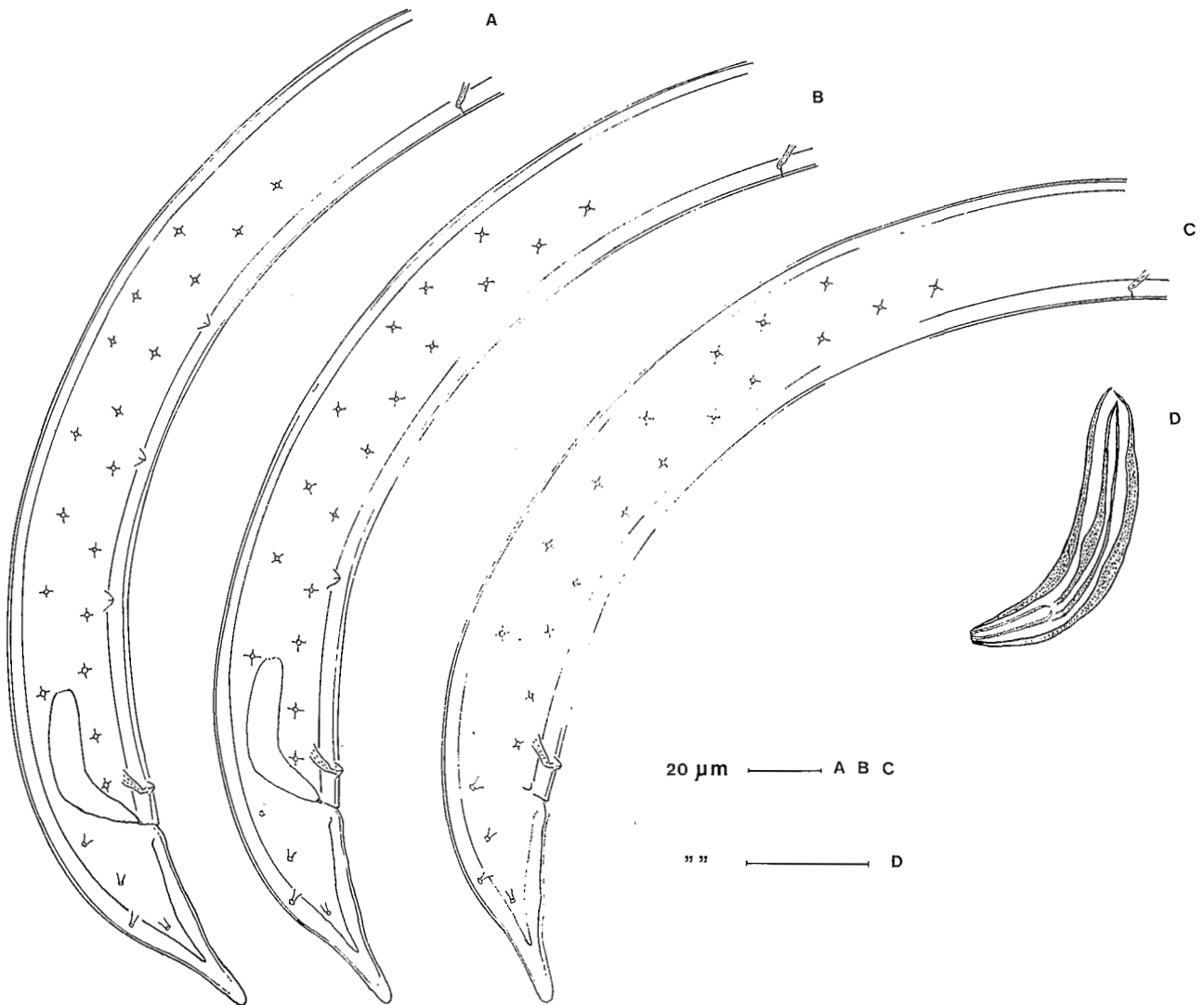


Fig. 2. *Xiphinema abrantinum* sp. n. Male. A-C : Posterior part of the body showing position of ventral atrophied supplement and of ventromedian papillae; D : Spicules.

body, more thickened in the neck region, where it measures 3.5-4 μm at the base of lip region, and in the caudal region where it is 4.5-5 μm ventrally and dorsally in the post anal portion; lateral hypodermal cords readily visible throughout the length of the body, 7-8 μm wide at mid-body or 18-20 % of the corresponding body diameter; lateral body pores, 5-6 in the range of the odontostyle, arranged in a single row in the neck region

and in a double row in the rest of the body from the level of the intestine; two dorsal and four ventral body pores in the range of the odontostyle, well evident in the neck region and in the rest of the body. Labial region 7-8 μm high, hemispherical, widely rounded laterally and less so frontally, offset from the rest of the body by a wide depression; amphids large, stirrup-shaped, with aperture a wide, straight, transverse slit; odontostyle

Table 2

Xiphinema abrantinum sp. n. Position of the ventral rudimentary supplement and ventro-median papillae in 20 paratype males (in μm).

N ^o	Cloaca-double pap.	Double pap. SI
1	11	215
2	9	207
3	8.5	197
4	8.5	210
5	9.5	202
6	9.5	235
7	8	223
8	10	182
9	11	213
10	11	227
11	10	129
12	10	117
13	11	191
14	9	no atrophied supplement
15	11	191, 1 ventro-median papilla
16	10	129, 1 ventro-median papilla
17	8	210, 3 ventro-median papillae
18	9	189, 3 ventro-median papillae
19	10	217, 3 ventro-median papillae
20	11	198, 3 ventro-median papillae

1.5-2 μm in diameter; basal flanges 12.5-13 μm wide and guiding "tube" well evident, variable in length from 6 to 18 μm , with robust guiding ring, 4.5-5 μm wide; oesophagus dorylaimoid with the anterior part tubular; basal enlarged portion 110-120 μm long and 18-20 μm wide, containing three nuclei well evident: the dorsal located at the beginning of the basal bulb, the two subventral almost at the middle of the glandular oesophagus; oesophageal-intestinal valve heart-shaped. Reproductive system amphidelphic, with equally developed branches; vulva slit-like, situated slightly anterior to mid body; vagina extending about 2/3 of the corresponding body diameter; uterus 280-300 μm in length, consisting of a proximal tubular portion and a distal part in which a pseudo-Z-differentiation occurs; no spines or other structures visible along the whole length of the uterus; pseudo-Z-organ consisting of a variable number

almost straight, in line with body contour, without peg, but with a blind terminal canal; two or three caudal pores are evident on each side of the tail.

Male: General appearance similar to female with posterior part of the body more curved. Morphology and anatomy similar to female except in the genital apparatus and the somatic structures associated with it; testis well developed; spicules curved, not cephalated; lateral guiding pieces rounded posteriorly and bifid at the anterior end. Precloacal pair of papillae very evident preceded by one rudimentary ventral supplement; on six of twenty specimens examined, one or three ventro-median papillae (Luc & Cohn, 1982), are visible between double papilla and atrophied supplement; only one male without atrophied supplement (distribution and position of double papilla and of rudimentary supplement is given for each of the males in Table 2.) Tail similar to that of female but more curved dorsally, with the rounded extremity ventrally located in relation to the body axis; three or four caudal pores on each side of the tail.

Juveniles: Morphologically similar to adult females but smaller; tail of first stage conoid-elongated.

TYPE HOST AND LOCALITY

Rhizosphere of *Prunus persica* Stokes, at Casal Coelheira, Tramagal, Abrantes, Province of Ribatejo, Portugal.

TYPE SPECIMENS

Holotype, allotype, 25 paratype females, 14 paratype males and juveniles in the collection of the Istituto di Nematologia Agraria del Consiglio Nazionale delle Ricerche, Bari, Italy; two paratype females and two paratype males in each of the following collections: Muséum national d'Histoire naturelle, Laboratoire des Vers, Paris, France; Nematology Department, Rothamsted Experimental Station, Harpenden, Herts, England; Plant Nematology Laboratory Collection, United States Department of Agriculture, Beltsville, Maryland, USA.

DIAGNOSIS AND RELATIONSHIPS

The new species belongs to the *X. coxi*-group. On the other aspects *X. abrantinum* sp. n. is similar to *X. limicola* Roca, Pereira & Lombardi, 1988, also found in

coxi europaeum in having slightly a shorter body (generally more than 4.00 mm in *X. coxi europaeum*), differently shaped lip region (almost continuous with