

Xiphinema coronatum sp. n. (Nematoda : Longidoridae)
from Italy

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SUMMARY

Xiphinema coronatum sp. n. is described and illustrated. It was found in the rhizosphere of grapevine at Limiti, province of Perugia, Italy. The new species belongs to the *X. coxi*-group and is similar to *X. clavatum* Heyns, 1965, *X. colombiense* Hunt, 1982, *X. ...* 1990, *X. ...* 1991, *X. ...* 1992, *X. ...* 1993, *X. ...* 1994, *X. ...* 1995, *X. ...* 1996.

42 μm ; h = 8.8 μm ; body diameter at lip region = 12.5 μm ; body diameter at guiding ring = 47.5 μm ; body diameter at base of oesophagus = 57.5 μm ; body diameter at mid-body = 57.5 μm ; body diameter at anus = 44.5 μm ; body diameter at beginning of h = 30.5 μm ; spicules = 75.5 μm ; gubernaculum = 16 μm ; cloaca to double papilla = 19 μm ; double papilla to first supplement = 105 μm .

DESCRIPTION

Female : Habitus in specimens killed by gentle heat usually almost straight anterior to the vulva, more curved behind the vulva, occasionally C-shaped; body cylindrical, tapering very gradually towards the anterior extremity. Cuticle with very fine transverse striations in the innermost layer, more evident in the caudal region, less so in the rest of the body; cuticle 3-3.5 μm thick along the body, more thickened in the neck region, where it measures 5.5-6 μm at the base of the lip region, and in the caudal region where it is 7-7.5 μm ventrally and 9.5-10 μm dorsally in the post anal portion. Lateral hypodermal cords readily visible throughout the length of the body, 11.5-12 μm wide at mid-body or 18-20% of

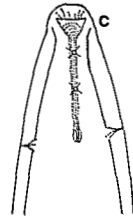
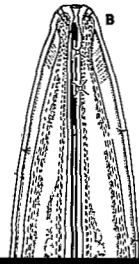
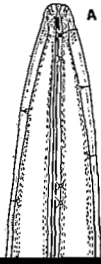
varying in length and shape, needle-like with broad base, somewhat lanceolate, appear irregularly pointed and rarely attached to the uterine wall. A few small globular bodies are visible among the spines in the pseudo-Z-organ, more evident in the portion adjacent to the *pars dilatata uteri*. Prerectum 530 (470-570) μm long; rectum extending two thirds of the anal body width. Tail rounded, hemispherical, bearing three caudal pores on each side.

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 moderately sclerotized, almost straight, slightly rounded proximally and bifid at the distal end. Precloacal pair of papillae preceded by four ventral supplements. Tail similar to that of female but slightly more elongated, with the rounded extremity ventrally located in relation to the body axis; four caudal pores are visible on each side of the tail.

Juveniles : Morphologically similar to adult but smaller; tail of first stage elongate-ovoid with a long clavate

Table 1
 Morphometrics of *Xiphinema coronatum* sp. n. (paratypes)
 (all measurements in μm , except L).

	$f1$	$f2$	$f3$	$f4$	Female
n	9	11	9	8	9
L (mm)	1.5-1.8 (1.7 ± 0.10)	1.8-2.1 (1.9 ± 0.09)	2.4-3.1 (2.8 ± 0.23)	3.3-3.8 (3.6 ± 0.18)	3.8-4.6 (4.3 ± 0.29)
a	51.2-60.4 (55.8 ± 3.24)	48.2-62.1 (59.4 ± 3.98)	52.9-66.2 (62.4 ± 4.25)	67.7-72.8 (69.5 ± 1.80)	65.5-75.5 (71.2 ± 3.23)
b	3.9-5.0 (4.5 ± 0.39)	4.3-4.9 (4.6 ± 0.24)	4.8-6.0 (5.4 ± 0.39)	5.6-6.7 (6.1 ± 0.38)	6.6-8.4 (7.2 ± 0.52)
c	18.9-23.4 (21.2 ± 1.52)	45.4-61.2 (51.1 ± 4.24)	57.9-83.6 (71.7 ± 8.74)	87.7-108.6 (93.7 ± 6.58)	94.4-131.2 (115.3 ± 11.4)
c'	3.1-3.7 (3.3 ± 0.18)	1.1-1.6 (1.4 ± 0.14)	0.9-1.3 (1.1 ± 0.14)	0.8-1.0 (0.9 ± 0.05)	0.7-0.9 (0.8 ± 0.08)
V	—	—	—	—	47.1-51.8 (49.6 ± 1.63)



Dalmasso, 1964. From *X. globosum* it differs in having longer body (L of *X. globosum* : female 2.6-3.9 mm, male 3.03-3.54 mm), longer odontophore (90-101.2 vs 79-92 μ m), longer distance from oral opening to guiding ring (142.3-154.1 vs 111-141 μ m), longer tail (34.1-40.6 vs 27-34 μ m), posteriorly situated vulva (47.1-51.8 vs 37.6-43.8), presence of spiniform structures in the uteri, differently shaped pseudo-Z-organ and absence of a peg in the second larval stage. From *X. turcicum* the new species differs in having shorter odontostyle (147-154 vs 152-160 μ m), presence of spiniform structures in the uteri (absent in *X. turcicum*) and differently shaped pseudo-Z-organ.

Similarities with species without uterine differentiations belonging to other groups were observed

and presence of the male; from *X. guillaumeti* in having longer body (3.8-4.6 vs 3.2-3.7 μ m), shorter odontostyle and odontophore (147-154 vs 190-202 μ m and 90-101.2 vs 100-108 μ m, respectively), longer tail (34.1-40.6 vs 25-26 μ m) and anteriorly situated vulva (V = 47.1-51.8 vs 51.9-54.8); from *X. guirani* in having longer body (3.8-4.6 vs 2.16-2.57 mm), longer odontostyle and odontophore (147-154 vs 103-118 μ m and 90-101.2 vs 61-68 μ m, respectively) and longer tail (34.1-40.6 vs 22-30 μ m); from *X. porosum* in having shorter body (3.8-4.6 vs 4.8-5.3 mm), shorter odontostyle (147-154 vs 168-200 μ m), anteriorly situated vulva (V = 47.1-51.8 vs 51-53) and presence of the male (absent in *X. porosum*).