

# *Amplimerlinius siddiqii* (Nematoda : Tylenchorhynchidae) a new species from Italy

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## SUMMARY

*Amplimerlinius siddiqii* sp.n. found in Piedmont Northern Italy, associated with maize roots, is related to *A. icarus*, *A. nectolineatus* and *A. intermedius*; it differs from the first in having a shorter body, fewer annules on the female tail and stylet knobs of different shape; from the second in having greater body length and fewer annules on the lip region, and from the third species in having fewer annules on the lip region and tail.

## RÉSUMÉ

*Amplimerlinius siddiqii* (Nematoda : Tylenchorhynchidae), nouvelle espèce en Italie

Les auteurs décrivent un nouveau nématode Tylenchidae du genre *Amplimerlinius* provenant d'un champ de maïs, au Piémont (Italie). *Amplimerlinius siddiqii* n.sp. : femelle longue de 1,27 à 1,49 mm ; stylet long de 32 à 35  $\mu\text{m}$  avec boutons basaux arrondis ; queue avec 37-54 annélations et extrémité arrondie. Cette espèce, proche de *A. icarus*, s'en différencie par sa taille plus petite, le nombre inférieur d'anneaux sur la queue et la forme des boutons du stylet. Egalement proche de *A. nectolineatus*, elle en diffère par le corps plus grand et le nombre inférieur d'anneaux labiaux. Enfin elle se différencie de *A. intermedius* par le plus faible nombre d'anneaux labiaux et caudaux.

In the spring of 1981, during routine examination of soil samples from maize fields in Piedmont (Northern Italy), an undescribed species of *Amplimerlinius* Siddiqi, 1976 was found.

Specimens were fixed in TAF and processed to glycerol by the Seinhorst method (1959).

***Amplimerlinius siddiqii* sp.n.**  
(Fig. 1 A-H)

## MEASUREMENTS

*Female* (20 paratypes): L = 1.27-1.49 (1.42) mm ; a = 28-35 (32.4) ; b = 5.6-7.3 (6.4) ; c = 20-26 (22.4) ; c' = 1.4-2.3 (2.0) ; V = 53.4-60.2 (57.1) ; spear = 32-35 (34.1)  $\mu\text{m}$  ; m = 43-45 (44.4) ; MB = 48-55 (51.7).

*Holotype (female)*: L = 1.42 mm ; a = 32 ; b = 6.4 ; c = 21.1 ; c' = 2.0 ; V = 56.4 ; spear = 34.5  $\mu\text{m}$  ; m = 44 ; MB = 53.3.

*Male* (20 paratypes): L = 1.18-1.39 (1.30) mm ; a = 32-36 (34.0) ; b = 5.6-6.4 (5.9) ; c = 15.0-18.9 (17.0) ; c' = 2.3-3.0 (2.7) ; spear = 32.2-35.3 (33.6)  $\mu\text{m}$  ; m = 43-48 (44.7) ; MB = 50.0-54.3 (52.4) ; spicules = 35.3-44.5 (41.0)  $\mu\text{m}$  ; gubernaculum = 10.7-13.0 (11.8)  $\mu\text{m}$ .

*Allotype (male)*: L = 1.30 mm ; a = 35 ; b = 5.9 ; c = 16.0 ; c' = 2.9 ; spear = 33  $\mu\text{m}$  ; m = 44.2 ; MB = 50.3 ; spicules = 40  $\mu\text{m}$  ; gubernaculum = 13  $\mu\text{m}$ .

## DESCRIPTION

*Female*: Body ventrally arcuate, strongly curved to spiral shape, almost cylindrical tapering to anterior end. Lip region about one-third midbody width. Cuticle in two distinct layers, outer one markedly annulated; width of annules about 1.4  $\mu\text{m}$  near extremities and 1.0-1.1  $\mu\text{m}$  near midbody. Lateral fields originate near middle of spear

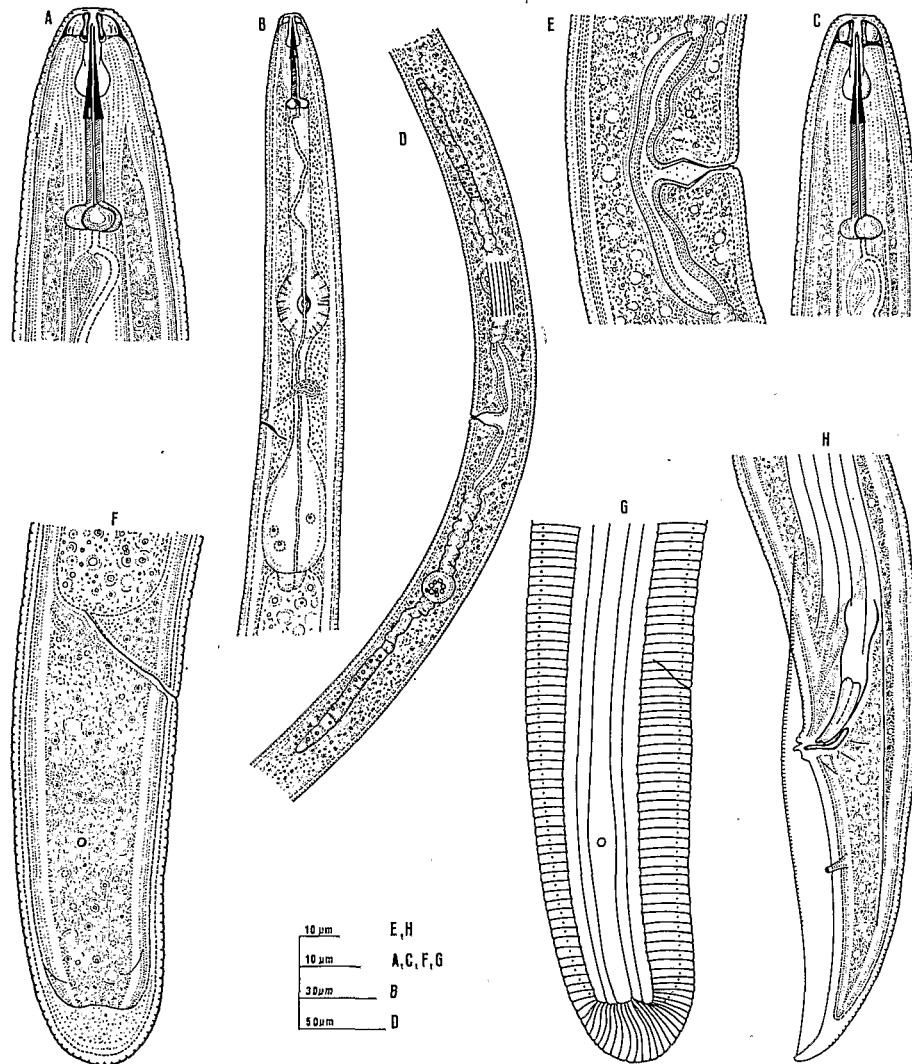


Fig. 1, A-H. *Amplimerlinius siddiqii* sp.n. C and H : Male, remainder females. A and C : Head ends ; B : Oesophageal region ; D : Reproductive system ; E : Vulval region ; F-H : Tail ends.

shaft and gradually enlarge, 13.4  $\mu\text{m}$  wide in the middle region, i.e.; about three-tenths body width, and on tail little more than half of body width ; not areolated except in oesophageal region as far as metacarpus ; the two outermost incisures are slightly crenate while the inner four are almost smooth. Deirids distinct, near or a little anterior to level of excretory pore. Excretory pore lies 166 (156-175)  $\mu\text{m}$  from anterior end, at level of or two annules behind hemizonid which is three or four annules long. Lip region hemispherical, continuous with body contour, with six distinct annules, 12.5  $\mu\text{m}$  wide at base and

its height equal to about one third of its width. Cephalic framework heavily sclerotized with outer margins conspicuous, extending four body annules from basal plate.

Spear guiding apparatus very conspicuous, drop-shaped, 10-11  $\mu\text{m}$  long when measured from basal plate. Anterior cephalids just behind the cephalic framework and the posterior ones 9-11 annules behind them.

Spear robust, basal knobs rounded, well developed, 8.5 (6.2-9.3)  $\mu\text{m}$  across and 4.0 (3.8-4.5)  $\mu\text{m}$  high.

Orifice of dorsal oesophageal gland 3.1-3.8  $\mu\text{m}$  behind spear base. Procorpus elongate-cylindrical; gradually enlarging into oval median bulb  $21 \times 29$  ( $18-25 \times 26-34$ )  $\mu\text{m}$  with an oval valvular apparatus  $6 \times 8$   $\mu\text{m}$ . Isthmus narrow, 40  $\mu\text{m}$  long, crossed by nerve ring. Basal bulb elongate-oval,  $24 \times 51$  ( $22-28 \times 46-60$ )  $\mu\text{m}$  with three oesophageal glands; cardia well developed. Vulva with epiptygma apparently single, weak and posterior (Fig. 1 D); vagina not sclerotized, dilated inwardly with angular walls. Reproductive system amphidelphic outstretched, each branch having a round spermatheca with sperms. Oviduct fairly elongated, half as long as the ovary. Oocytes in a row. Post-rectal sac absent. Rectum and anus distinct. Tail cylindrical with hemispherical terminus, with 48 (36-54) annules; terminal hyaline cuticular portion 10 (7-12)  $\mu\text{m}$  long, about one sixth of tail length, its surface marked with fine longitudinal striae.

Phasmids distinct, 27 (18-36)  $\mu\text{m}$ , i.e. about 18 (12-22) annules, from anus.

*Male*: Body slightly spiral shaped, annules near extremities about 1.2  $\mu\text{m}$  wide and near middle about 1  $\mu\text{m}$ . Lateral fields 12  $\mu\text{m}$  wide, about one-third of body width. Lip region hemispherical, slightly narrower than adjacent body, with five to six annules; cephalic framework heavily sclerotized. Oesophagus as in female, median bulb about  $19 \times 27$   $\mu\text{m}$  with valvular apparatus  $5 \times 7$   $\mu\text{m}$ ; basal bulb about  $22 \times 46$   $\mu\text{m}$ . Excretory pore 151-178  $\mu\text{m}$  from anterior end. Hemizonid distinct, three or four annules long, at level of excretory pore or up to three annules anterior to it.

Testis single, outstretched; spicules slightly curved, cephalated, with distal end notched. Gubernaculum single, cymbiform, 11-13  $\mu\text{m}$  long, hypoptygma prominent. Bursa finely crenate, enveloping tail which is elongate-conoid, 69-89  $\mu\text{m}$ , or about 2.5-3 anal body widths long, with terminal hyaline cuticular portion 12-18  $\mu\text{m}$  long. Phasmids, extending into the bursa, a little anterior to middle of tail.

Juvenile head, oesophagus, spear and tail as in female.

#### TYPE HABITAT AND LOCALITY

Maize rhizosphere in Fresonara (Alessandria) Piedmont, Northern Italy.

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#### TYPE MATERIAL

Holotype ♀ and 20 ♀♀, 20 ♂♂ at Osservatorio per le Malattie delle Piante, Torino, Italy; 5 ♀♀ and 5 ♂♂ at Laboratoria voor Morfologie en Systematiek, Museum voor Dierkunde, Gent, Belgium; 5 ♀♀ and 5 ♂♂ at Rothamsted Experimental Station, Harpenden, England; 3 ♀♀ and 3 ♂♂ at Muséum national d'Histoire naturelle, Paris, France.

#### RELATIONSHIP

*Amplimerlinius siddiqi* sp.n. differs from *A. icarus* (Wallace & Greet, 1964) and from *A. nectolineatus* Siddiqi, 1976 in having, respectively, a shorter and a longer body; from *A. nectolineatus* it differs in having fewer annules on the lip region (6 compared with 8-10) and from *A. icarus* in having fewer annules on the female tail (37-54 against 50-59) and in the different shape of the stylet knobs. It is similar to *A. intermedius* (Bravo, 1976) in dimensions but is distinguished by having fewer annules on the lip region and tail (6 and 37-54 compared with 8-10 and 53-75, respectively).

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