

Notes brèves

ON THE DISTRIBUTION OF *XIPHINEMA ITALIAE* MEYL, 1953 AND *X. SAVANICOLA* LUC & SOUTHEY, 1980 (NEMATODA : LONGIDORIDAE)

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The distribution of *Xiphinema italiae* Meyl, 1953 is roughly circummediterranean, it having been recorded in the following countries (Cohn, 1977) : Italy (including Sicily and Sardinia), France, Israel, Tunisia, Algeria, Greece, Bulgaria, Rumania, Turkey, Spain and Portugal; Cyprus (Antoniou, 1981) must be added to the list.

However, two records fall outside this area, South Africa (Heyns, 1974) and Cameroon (Chavez & Geraert, 1977), so it was reasonable to question the identity of these populations.

CAMEROON

Chavez and Geraert (1977) recorded *X. italiae* in a maize field near Yagoua, Cameroon, and gave the measurements of five females. These measurements present some noticeable differences from those of *X. italiae*.

We were able to examine three females of this Cameroonian population. Their measurements are : L = 2.52, 2.47, 2.70 mm; a = 60.0, 68.7, 65.9; b = 7.4, 7.4, 7.7; tail = 85, 89, 90 μ m; c = 29.6, 27.8, 30.0; c' = 4.7, 3.9, 3.8; V = 40.3, 40.6, 39.6; odontostyle = 78.5, 80, 80 μ m; odontophore = 51.5, 52, 56.5 μ m, stylet = 130, 132, 136.5 μ m.

These numeric data as well as several morphological characters disagree with those of *X. italiae*; the Cameroon population has a somewhat shorter body, but mainly the vulva is more anteriorly situated, the stylet is shorter, and the tail is longer, with a more pronounced and more regular ventral curvature; moreover the internal structure of the tail extremity is somewhat different in the two species. On the other hand these data fit very conveniently with those of *X. savanicola* Luc & Southey, 1980, and consequently we consider the Cameroon population to pertain to that species.

Such a record of *X. savanicola* in Cameroon constitutes a link between the two areas where the species has been previously recorded (Senegal, Gambia and Ivory Coast in West Africa; Malawi in East Africa), and confirms the hypothesis that *X. savanicola* is associated with Gramineae and may constitute a vicariant species

of *X. insigne* Loos, 1949 in the savannah areas of Africa (Luc & Southey, 1980).

SOUTH AFRICA

We were able to examine ten females of *X. italiae* from four localities in South Africa. These females fit very conveniently with the neotype population of the species and with the populations subsequently described. The only difference, as noted too by Heyns (1974), is concerning the tail, somewhat shorter in South African specimens : for the ten females observed c' value is 2.2-2.7 (2.4) whereas in the neotype population it is 3.2-3 (3.8), but other mediterranean populations link these values.

As reported by Heyns (1974) the distribution of *X. italiae* in South Africa is limited to some places in northern part of Natal and in Eastern Transvall Lowveld, including uncultivated veld. Thus *X. italiae* appears to be indigenous in this part of Africa, a fact which is difficult to link with the circummediterranean location of all other records.

ACKNOWLEDGEMENTS

Thanks are due to Dr F. Puylaert, Musée de l'Afrique centrale, Tervuren, Belgium, for the loan of specimens of the Cameroon population of *X. savanicola*, and to Prof. J. Heyns, Rand Afrikaans University, Johannesburg, South Africa, for the loan of specimens of *X. italiae* from that country.

REFERENCES

- ANTONIOU, M. (1981). A nematological survey of vineyards in Cyprus. *Nematol. Medit.*, 9 : 133-137.
- CHAVEZ, E. & GERAERT, E. (1977). Observations sur quelques Mononchides et Dorylaimides du Cameroun et du Zaïre (Vermes-Nematoda). *Revue Zool. afric.*, 3 : 766-780.
- COHN, E. (1977). *Xiphinema italiae*. C.I.H. *Descript. Pl. — parasit. Nematodes*, Set 7, n° 95 : 3 p.

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HEYNS, J. (1974). The genus *Xiphinema* in South Africa II; *X. elongatum* group (Nematoda : Dorylaimida). *Phytophylactica*, 6 : 249-260.

LUC, M. & SOUTHEY, J. F. (1980). Study of biometrical variability in *Xiphinema insigne* Loos, 1949 and *X. elongatum* Schurmans Stekhoven & Teunissen, 1938; description of *X. savanicola* n. sp. (Nematoda : Longidoridae) and comments on thelytokous species. *Revue Nématol.*, 3 : 243-269.

Accepté pour publication le 21 septembre 1984.

SOME SEM DATA ON *NEOCROSSONEMA AQUITANENSE* (FIES, 1968) EBSARY, 1981
(NEMATODA : CRICONEMATIDAE)

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The use of the SEM in nematological taxonomic research renders now possible the study of external characters which were difficult or even impossible to observe with light microscope. Some of these characters, mainly those related to the lip area, seem to be of primary importance in the Tylenchina for the definition of genera and understanding of relationships at generic and specific levels. So it appears useful to publish any new valuable information obtained from such techniques.

SEM pictures given here are concerning *Neocrossonema aquitanense* (Fies, 1968) Ebsary, 1981. The specimens studied are topotypes, sampled by the senior author; they have been processed following De Grisse's (1974) method, later modified (Baujard, 1978). The SEM used was a CAMECA MEB 07.

Figures 1 A and B show the structure of the anterior end of the female : the dorso-ventral elongated oral aperture is separated by ridges from the amphidial apertures, this whole area being surrounded by a rounded circular ridge formed by the fusion of the anterior part of the six pseudolips; the posterior parts of the pseudolips join separately the first annule giving to the face the appearance of a six-branched star. The first and second annules are of the same diameter, but the edge of the first annule is nearly smooth, whereas the second annule shows regular slight indentations which continue throughout the length of the body.

The Figure 1 C, a ventral view of the female, shows further detail of annular ornamentation, the smooth anterior vulval lip, slightly overlapping the posterior lip, and the position of the anus on the sixth annule posterior to vulva.

Accepté pour publication le 3 octobre 1984.

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The Figure 1 D, a lateral view of the anterior end of a male, shows the annulation nearly terminal, the continuous profile of the lip area, and the rather anterior beginning of the lateral field, which at that level comprises only one band (two lines).

The Figure 1 E, a lateral view of the posterior part of the male, shows the absence of bursa (contrary to the original description) and structure of the lateral field which comprised two bands, in some places slightly separated, finally reaching the tail extremity.

ACKNOWLEDGMENTS

The authors thank M. L. Le Ribault (Laboratoire Central, Compagnie Française des Pétroles, Talence, France) who made the SEM pictures.

REFERENCES

BAUJARD, P. (1978). Technique modifiée de préparation des nématodes pour l'observation au microscope électronique à balayage. *Revue Nématol.*, 1 : 266-267.

DE GRISSE, A. T. (1974). A method for preparing nematodes and other soft tissues for scanning electron microscopy. *Meded. Fak. Landbouwwet. Gent.*, 38 : 1685-1695.

FIES, M. (1968). *Criconema aquitanense* n. sp. (Nematoda : Criconematidae). *Nematologica*, 14 : 47-54.