PLANT PARASITIC NEMATODES FROM BAHIA STATE, BRAZIL:
THE GENUS XIPHINEMA COBB, 1913 (DORYLAIMOIDEA)

BY

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A review is given of the Xiphinema species occurring in the south-eastern part of Bahia, Brazil. Nine species were found, two of which are new: X. dimidiatum with mammillate tail, females are pseudomonodelphic; and X. paritaliae, differing from X. italica chiefly by larger size, not expanded lip region and weak Z differentiation in the uteri. The name X. vulgare Tarjan, 1964 is provisionally retained. Brazilian males of X. surinamense differ from those from Surinam in possessing two to four supplements. The other species found are: X. brevicolle, X. brasiliense, X. elongatum, X. hrugi and X. ifacolum. Morphology of juveniles is dealt with where possible. Younger stages often have a more generalized tail shape than adults. Tail length tends to decrease slightly during ontogeny, whereas anal body width increases strongly.

From 1972 onwards a survey for plant parasitic nematodes occurring in the south-eastern part of the State of Bahia, Brazil, is being carried out, the samples being collected by the second author and the nematodes identified by the first one. Partial results have been published already (references see Loof & Sharma, 1976). During this survey many representatives of the genus Xiphinema were found; the present paper deals with them. The nematodes were killed and fixed in a small drop of water by hot formalin and processed to glycerin by the Seinhorst method. Types marked WT are in the nematode collection of the Landbouwhogeschool, Wageningen, Netherlands.

Xiphinema brevicolle Lordello & Da Costa, 1961

Syn. X. saopaoloense Khan & Ahmad, 1975; possibly also X. neoamericanum Khan & Ahmad, 1975 nec X. neoamericanum Saxena, Chhabra & Joshii, 1973 (see Lamberti & Loof, 1977)

(Figs 1 & 2)

Females (n = 35): L = 2.02 mm (1.85-2.29); a = 45 (40-52); b = 6.3 (5.4-8.1); c = 79 (70-88); V = 52 (49-54); G1 = 11 (7-18); G2 = 12 (8-23); odontostyle = 103 μm (90-110); odontophore = 58 μm (53-62); spear = 161 μm (144-168); (distance) guiding ring (to head end) = 85 μm (82-91); oesophagus = 319 μm (256-368); tail = 26 μm (23-29); anal body width = 28 μm (25-30); T/ABW = 0.91 (0.81-1.05).

One male: L = 2.10 mm; a = 49; b = 6.8; c = 83; VD = 9315; odontostyle = 97 μm; odontophore = 56 μm; spear = 153 μm; guiding ring = 88 μm; oesophagus = 309 μm; tail = 25 μm; T/ABW = 0.81; spicules = 58 μm.
All females have the ovaries filled with bacteria, as is the case in *X. americanum* Cobb, 1913 (see Adams & Eichenmüller, 1964). This was observed also by Martelli & Lamberti (1967).

Males have so far been recorded only from Israel (Cohn, 1969) and South Africa (Heyns, 1974). Whereas Cohn and Heyns reported their males to possess eight mid-ventral supplements, the Brazilian male has nine; the series is somewhat irregular and starts in the spicular region. Spicules dorylaimid, weakly curved. Heyns could not find lateral guiding pieces, whereas Cohn reported their presence. The Brazilian male seems to possess long (14 μm), slender guiding pieces. Testes two, dorylaimid, the anterior much longer than the posterior and containing apparently normal sperm; however, no sperm was found in the genital duct.

**Juveniles:**

Fig. 1. *Xiphinema brevicolle*, posterior end of male.

Fig. 2. *Xiphinema brevicolle*, tails. A: L-3; B: L-4; C: adult female.