MORPHOLOGICAL OBSERVATIONS ON TWO SCUTELLONEMA SPECIES (NEMATODA: HOPLOLAIMINAE) FROM TANZANIA

by

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Summary. Scutellonema brachyurus and S. unum from Tanzania are briefly described and compared with other populations. Descriptions are complemented with SEM micrographs.

The genus Scutellonema, established by Andrassy in 1958 is mainly recognized by the enlarged phasmids (scutella). It includes about 20 species most of them occurring only on the African Continent (Germani et al., 1985).

In a plant parasitic nematode survey recently conducted in Tanzania two species of Scutellonema (S. brachyurus and S. unum) were frequently detected. This note provides additional information on their morpho-anatomy and illustrates the main characters (seen by SEM) used for species differentiation. Specimens were fixed in hot acqueous solution of 4% formaldehyde, dehydrated slowly in an ethanol saturated chamber and mounted in dehydrated glycerine. Wergin's (1981) methods were used for the preparation of nematodes for scanning electron microscope observations.

Habitat and locality. Soil samples collected from the rhizosphere of unidentified grasses at Boko near Dar es Salaam.

Remarks. According to Sher, 1964 this is the most cosmopolitan Scutellonema species. The Tanzanian specimens correspond well with the original description and others reported from Africa (Williams, 1960; Sher, 1964; Germani et al., 1985). Scutellonema brachyurus, S. clathricaudatum and S. truncatum all lack males and are areolated in the scutella region but specific lip region characteristics distinguish each of them.

SCUTELLONEMA UNUM (Sher, 1964) (Figs. 1 E-H, 2 E-G)

Measurements, female (n = 12): L = 0.51-0.76 mm; a = 18-27; b = 4.0-7.5; c = 55-90; stylet 26-31 μm long; scutellum diameter = 4.0-5.6 μm.

Description. Body C-shape. Lip region hemispherical with 4-5 annuli. Basal annulus with 15-18 longitudinal striations. Excretory pore opposite the oesophageal gland. Body annuli 1.6-2.1 μm wide. Epitygma double. Lateral field 1/4-1/5 of the body width, areolated from the level of oesophageal lobe to anterior end and at level of scutellum. Tail rounded, slightly more convex on dorsal side with 8-10 annuli.

Male not found.

Habitat and locality. Soil samples collected from the rhizosphere of Ficus sp. at Manyoni, 50 km from Dodoma.

Remarks. The morphometrical data of the Tanzanian specimens were compared with those of two populations reported from Zaire and South Africa (Ali et al., 1973 and

Observations

SCUTELLONEMA BRACHYURUM (Steiner, 1938) Andrassy, 1958 (Figs. 1 A-D, 2 A-D)

Measurements, female (n = 12): L = 0.5-0.7 mm; a = 20-32; b = 4.6-9.8; c = 40-60; stylet 22-28 μm long; V = 55-62; scutellum diameter = 2.8-4.1 μm.

Description. Body spiral when relaxed. Lip region roughly hemispherical with 4-5 annuli. Excretory pore opposite the oesophageal lobe. Body annuli 1.3-1.5 μm wide. Spermatheca not seen. Epitygma usually double. Lateral field areolated at level of scutella and from level of oesophageal lobe to the anterior end. Tail varies in shape (usually bluntly rounded), 10-14 μm long, 8-12 annuli. Scutellum rounded, 2.8-4.1 μm in diameter at anal level or 2-3 annuli anteriorly or posteriorly.

Male not found.
Fig. 1 - A-D, *Scutelonema brachyurum*: A) face view; B) position of female when killed; C) anterior part of female body; D) female tail. E-H, *Scutelonema unum*: E) face view; F) female death position; G) anterior part of female body; H) female tail.
Fig. 2 - SEM micrographs of *S. brachyurum* (A-D) and *S. unum* (E-G). (Scale bar = 5 μm). A, F) anterior part of female body; B, F) vulval area; C, D, G) tails.
Van der Berg et Heyns, 1973). They correspond well with these two populations as well as with the original description of the species (Sher, 1964).

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Literature cited


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