

Aphasmatylenchus straturatus sp. n. (Nematoda: Hoplolaimidae) from West Africa

G. GERMANI

Office de la Recherche Scientifique et Technique Outre-Mer Centre d'Adiopodoumé, Abidjan,
Côte d'Ivoire

ABSTRACT: *Aphasmatylenchus straturatus* sp. n., found around roots of *Arachis hypogaea* L. from Haute-Volta (West Africa), is described and figured. The new species is distinguished by the longitudinal striation of the cuticle, and by the measurements of the male.

Sher (1965) described a new genus, *Aphasmatylenchus*, with the type and only species *A. nigeriensis*. *Aphasmatylenchus straturatus* sp. n. was recovered from soil around the roots of the peanut (*Arachis hypogaea* L.) in Haute-Volta. The description of this species is based on specimens fixed and mounted in glycerin by Seinhorst's method (1962).

Measurements

FEMALES (36): L = 1.43 (1.18–1.75) mm; a = 31.1 (26–35.6); b = 7.8 (6–9.1); c = 22.4 (18–27.5); V = 52.9 (15.3–24.3₅₀₋₅₆ 13.8–26); spear = 33 (30–36) μ .

MALES (6): L = 1.13 (0.99–1.26) mm; a = 34.8 (29.1–38); b = 6.8 (6.1–7.2); c = 16.4 (14.6–17.4); T = 28.7 (28–29.4); spear = 29 (28–30) μ .

HOLOTYPE (FEMALE): L = 1.47 mm; a = 33.4; b = 7.7; c = 23.7; V = 51.9, spear = 32 μ .

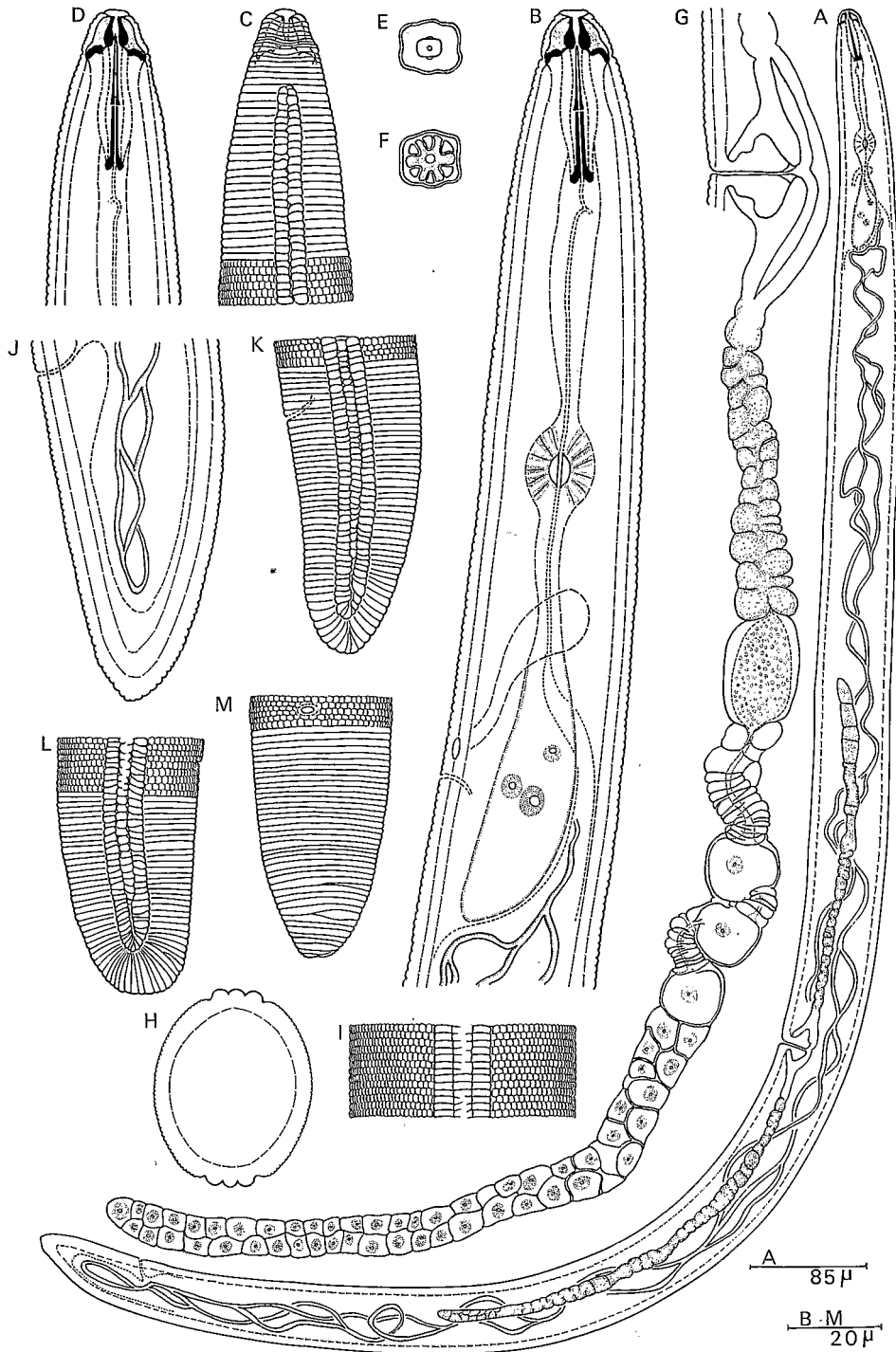
ALLOTYPE (MALE): L = 1.18 mm; a = 37; b = 7.24; c = 16.5; spear = 28 μ .

Description

FEMALES: Body curved ventrally to C-shape sometimes forming a closed curve. Annules 1.4–1.8 μ wide in center of body. Cuticle

→

Figure 1. *Aphasmatylenchus straturatus* sp. n. Female: A; entire body, lateral view. B, C, D; anterior region. E; face view. F; cross section through basal annule of lip region. G; ovary. H; cross section at center of body. I; areolation of lateral field in middle of body. J, K, L; posterior end, lateral view showing cuticular ornamentation diagrammatically. M; posterior end, ventral view.



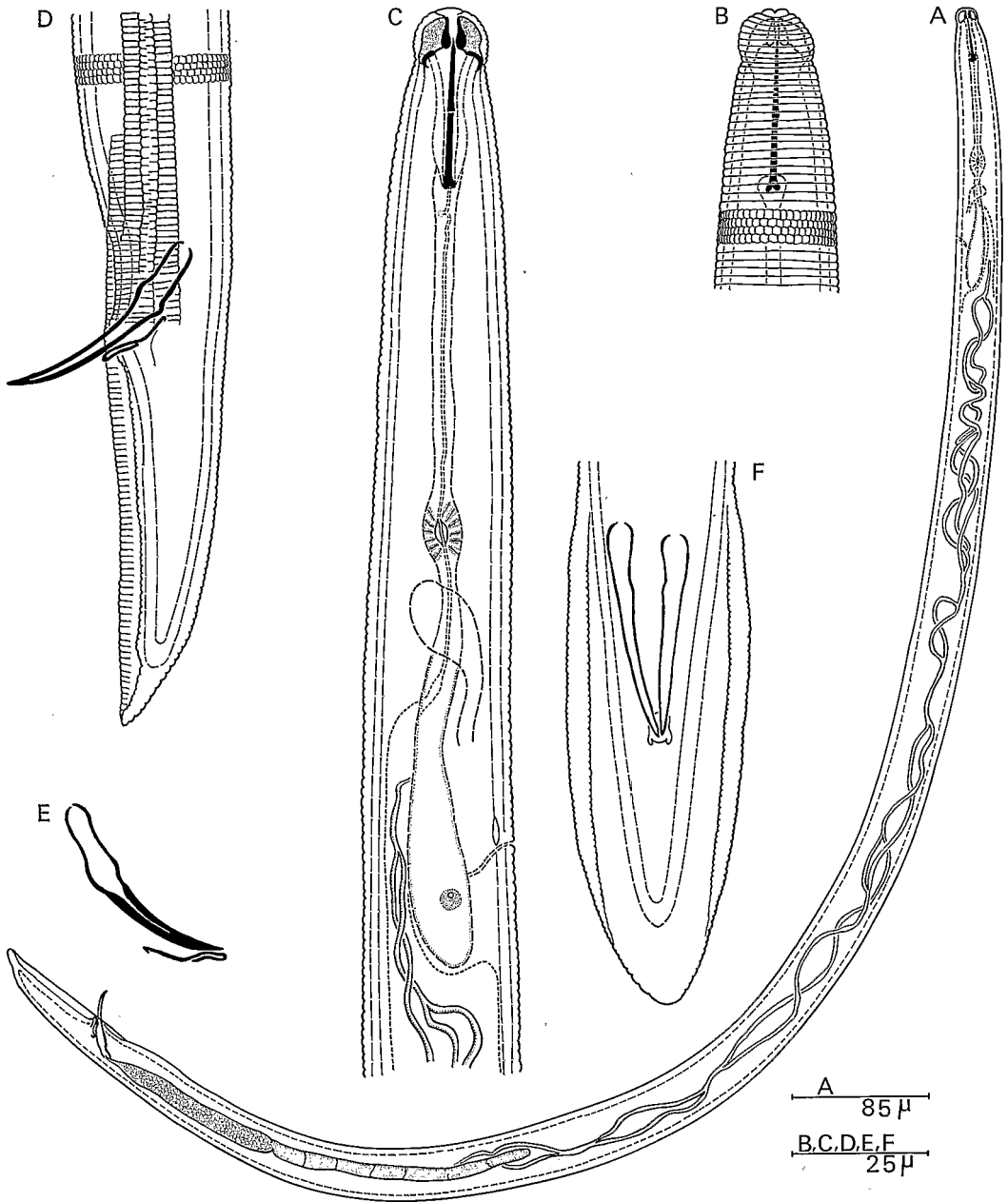


Figure 2. *Aphasmatylenchus straturatus* sp. n. Male: A; entire body, lateral view. B; anterior end, ventral view, showing cuticular ornamentation diagrammatically. C; anterior region, lateral view. D; posterior end, lateral view showing articular ornamentation diagrammatically. E; spicules and gubernaculum. F; posterior end, ventral view.

exhibits an irregular corn-cob pattern, each body annule being divided (with the exception of the lateral field) by fine cross-striae. Lateral field occupying about $\frac{1}{4}$ of body width, with four incisures (three longitudinal bands); outer bands striated transversally areolation of central band inconspicuous and incomplete.

Lip region a truncated cone, subhexagonal and flattened laterally in face view, set off from body contour, with 8–11 annules, the anterior one being conspicuously larger. Length of stylet 30–36 μ (anterior part: 13–17 μ).

Esophagus: procorpus sometimes slightly narrowing at posterior end; dorsal esophageal gland opening 8–9 μ behind spear base; esophageal glands with three distinct nuclei.

Excretory pore situated 142–196 μ from anterior end, 1–3 annules below hemizonid, the latter being 2–3 annules wide. Spermatheca almost rectangular, with sperm-like bodies.

Tail cylindro-conical, tapering to round or bluntly-round, 44–82 μ or 1.4–2.5 anal-body width long.

MALES: Lip region almost hemispherical, distinctly set off, with 9–10 annules. Stylet and esophagus not as well developed as in female. Only one esophageal nucleus could be observed in the small number of male specimens available. Cuticular ornamentation and areolation as in female. Excretory pore situated 150–164 μ from anterior end. Testis single, outstretched. Spicules curved, 42–44 μ long; gubernaculum 14–16 μ long, with titillae. Caudal alae enveloping tail, edges of the bursa annulated. Tail 3 to 3.3 body widths long at cloaca.

A tube-like or "serpentine" resembling that described by de Guiran and Germani, 1968 in *Brachydorus tenuis* can be seen within the intestinal walls winding its way over the entire length of the intestine, the post-anal sac included. A "serpentine" has also been observed by us in type specimens of *A. nigeriensis* Sher, 1965.

TYPE HABITAT AND LOCALITY: Soil around roots of peanut (*Arachis hypogaea* L.). I.R.H.O. Station, Niangoloko, Haute-Volta.

HOLOTYPE: Female, slide n° 5872—Laboratoire de Nematologie, O.R.S.T.O.M., Abidjan, Ivory Coast.

ALLOTYPE: Male, slide n° 3878, same collection.

PARATYPES: 17 females, 4 males in same collection; 2 females: Nematology Department, Rothamsted Experiment Station, Harpenden, Herts., England; 3 females: Nematology Department, Plantenziektenkundige Dienst, Wageningen, the Netherlands; 3 females: Nematology Department, Instituut voor Plantenziektenkundig Onderzoek, Wageningen, the Netherlands; 2 females: Nematology Department, University of California, Davis USA; 5 females, 1 male: USDA Nematode collection, Beltsville, Maryland, USA; 3 females: Department of Nematology, University of California, Riverside, California, USA.

Diagnosis

Aphasmatylenchus straturatus sp. n. can be differentiated from the single species of the genus, *A. nigeriensis* Sher, 1965 by the ornamentation of the cuticle.

The male of *A. straturatus* sp. n. differs from the male of *A. nigeriensis* Sher by its greater length (L = 0.99–1.26 mm against 0.82–0.96 mm) and its longer spear (stylet = 28–30 μ against 24–27 μ) and spicules (42–44 μ against 31–36 μ).

Acknowledgments

The author is most grateful to Mr. G. de Guiran for reviewing the original drawings and the manuscript, to Mr. J. J. Smit for the English translation of the text, and to Dr. S. A. Sher for providing type material of *A. nigeriensis*.

Literature Cited

- de Guiran, G., and G. Germani. 1968. *Brachydorus tenuis* n. g., n. sp. (Nematoda: Dolichodorinae), associé à *Ravenala madagascariensis* sur la Côte Est malgache. *Nematologica* 14(3): 447–452.
- Seinhorst, J. W. 1962. On the killing, fixation and transferring to glycerin of nematodes. *Nematologica* 8(1): 29–32.
- Sher, S. A. 1965. *Aphasmatylenchus nigeriensis* n. gen., n. sp. (Aphasmatylenchinae n. subfam.: Tylenchoidea: Nematoda) from Nigerian Soil. *Proc. Helm. Soc. Wash.* 32(2): 172–176.

Phyl.

Aphasmatylenchus straturatus sp. n. (Nematoda :
Hoplolaimidae) from West Africa

G. GERMANI

Reprinted from PROCEEDINGS OF THE HELMINTHOLOGICAL SOCIETY OF WASHINGTON
Vol. 37, No. 1, January 1970
p. 48-51
Made in United States of America

G. R. S. T. O. M.

Collection de Référence

n° 14090

GERMANI 9 JUIN 1970