

***Rhigonema trichocephalum* * sp. n.**
(Figs 1-3)

MEASUREMENTS

Female (n = 10) : L = 6.65 ± 0.47 (5.56-7.23) mm; width = 308 ± 36 (237-335) μm ; oesophagus = 473 ± 16 (432-488) μm ; basal bulb (length \times width) = $128 \pm 6.4 \times 155 \pm 6.7$ μm ; head to vulva = 3.95 ± 0.32 (3.16-4.24) mm; anal body width = 118 ± 8 (107-133) μm ; tail = 260 ± 21 (234-296) μm ; uterine eggs (n = 10) = $82 \pm 3.6 \times 64 \pm 1.9$ μm ; a = 21.6 (19.5-27.5); b = 14.1 (12.0-15.0); c = 25.6 (21.9-29.2); c' = 2.2 (2.0-2.6); V = 59.4 (56.7-61.1).

Male (n = 6) : L = 4.71 ± 0.35 (4.14-5.08) mm; width = 228 ± 17 (208-250) μm ; oesophagus = 426 ± 13.5 (403-445) μm ; basal bulb (length \times width) = $115 \pm 4.9 \times 133 \pm 4.7$ μm ; anal body width = 108 ± 12 (88-120) μm ; tail (n = 5) = 196 ± 20 (163-211) μm ; left spicule (n = 5) = 281 ± 23.6 μm ; right spicule (n = 6) = 286 ± 22.5 μm ; a = 20.7 (19.5-21.7); b = 11.1 (9.7-11.8); c = 24.0 (19.6-35.9); c' = 1.8 (1.6-2.4).

Holotype (female) : L = 6.88 mm; width = 328 μm ; oesophagus = 488 μm ; head to vulva = 4.13 mm; anal body width = 114 μm ; tail = 254 μm ; a = 21.0; b = 14.1; c = 27.1; c' = 2.2; V = 59.9.

DESCRIPTION

Adults : Medium to long nematodes. Cephalic region heavily cuticularized and consisting of a broad cephalic cap followed by a narrower cephalic collar. Cephalic cap circular in *en face* view and bearing four mammilliform papillae, two subdorsal and two subventral with the amphids located laterally at the junction of the cap and the cephalic collar. Cuticle with fine transverse striae, anteriorly pilose with numerous, hair-like spines or microtrichs along the posterior margin of the striae. Pilose region restricted to the anterior part of the body, extending posterior to the cephalic collar for about 1.5 to 2 oesophagus lengths. Microtrichs very short and delicate, but longer (4-5 μm) and denser at the cephalic extremity. Oral opening triradiate, the dorsal and two subventral sectors being of equal development. Three jaw-like structures at the anterior end of the oesophagus, the dorsal and two subventral sectors being of equal development and bearing a number of teeth and cuticular ridges. Oesophagus typical of the genus, comprising a powerful, muscular, cylindrical corpus which is distally expanded; redundant isthmus; powerful basal bulb broader than long and tapering towards the oesophago-intestinal junction. Basal bulb anchored to the body wall by muscles attached to its broadest point and extending

to the body wall. Three cardia extending from the bulb into the intestine; intestinal cells packed with brown granules. Nerve ring encircling the corpus at about its mid-point. Excretory pore just anterior to the corpus/basal bulb junction; excretory duct vesiculate. Nine very prominent brown-tinted arcade cells forming a palisade around the oesophagus just posterior to its distal expansion.

Female : Vulva in the form of a broad, transverse slit covered by a long, flap-like extension of the anterior lip and located in the posterior half of the body. A brownish or amber coloured deposit usually found around the vulval opening and flap. Vagina long, anteriorly directed before flexing posteriorly and comprising a powerful sphincter muscle; a short, muscular, thick-walled *vagina vera* and a longer, thin-walled *vagina uterina* with weaker circular muscles. Vaginal diverticulum absent. Ovejector structure conforming to Type 2 of Adamson (1987). Spermatozoa visible in the vagina of several specimens. Two opposed, reflexed genital tracts, each with its own uterus. Genital tracts replete with numerous (100 or more), subovoid eggs with smooth, thick-walled shells. Contents of the uterine eggs showing no sign of differentiation. Tail of medium length, conoid at first and then tapering evenly to a spicate terminus. Posterior anal lip markedly salient, offset from the rest of the tail and with powerful *dilator ani* muscles attached.

Male : Spicules paired, similar in size and appearance and ventrally arcuate. Dorsal limb thickened and slightly hamate proximally. Each spicule exhibiting cuticular sculpturing on the lamina for a substantial distance prior to the distal tip. Distal tip of each spicule virtually solid cuticle, apparently articulated with the dorsal and ventral shaft elements. Tip enveloped by a velum-like cuticular membrane more strongly developed along the dorsal margin [this feature was also recorded for *R. madecassum* by Van Waerebeke (1984) and appears to be present in the illustration of *R. seychellarum*, although not mentioned in the text by Adamson (1987)]. Spicule retractor muscles attached to the head of each spicule and extending anteriorly for about five cloacal body widths before diverging and attaching to the lateral body walls. Powerful spicule protractor muscles running to the subventral walls of the tail. Twenty three copulatory papillae disposed thus : four pre-cloacal pairs (the posteriormost of which being more prominent and closer together than the others) with a single ventromedian papilla located slightly more posterior on the anterior cloacal lip; seven post-cloacal pairs comprising four subventral pairs, one lateral or sublateral pair and two subdorsal pairs. Caudal alae absent. Tail short, conoid, dorsally convex and usually with a ventrally located spike about 42 ± 14.2 μm long (completely absent in one specimen, the tail terminus being irregularly rounded). Thin protoplasmic core extending into the tail spike.

* Derived from the Greek words *trichodes* and *peplos*, meaning hairy cloak or robe and referring to the pilose appearance of the worms.

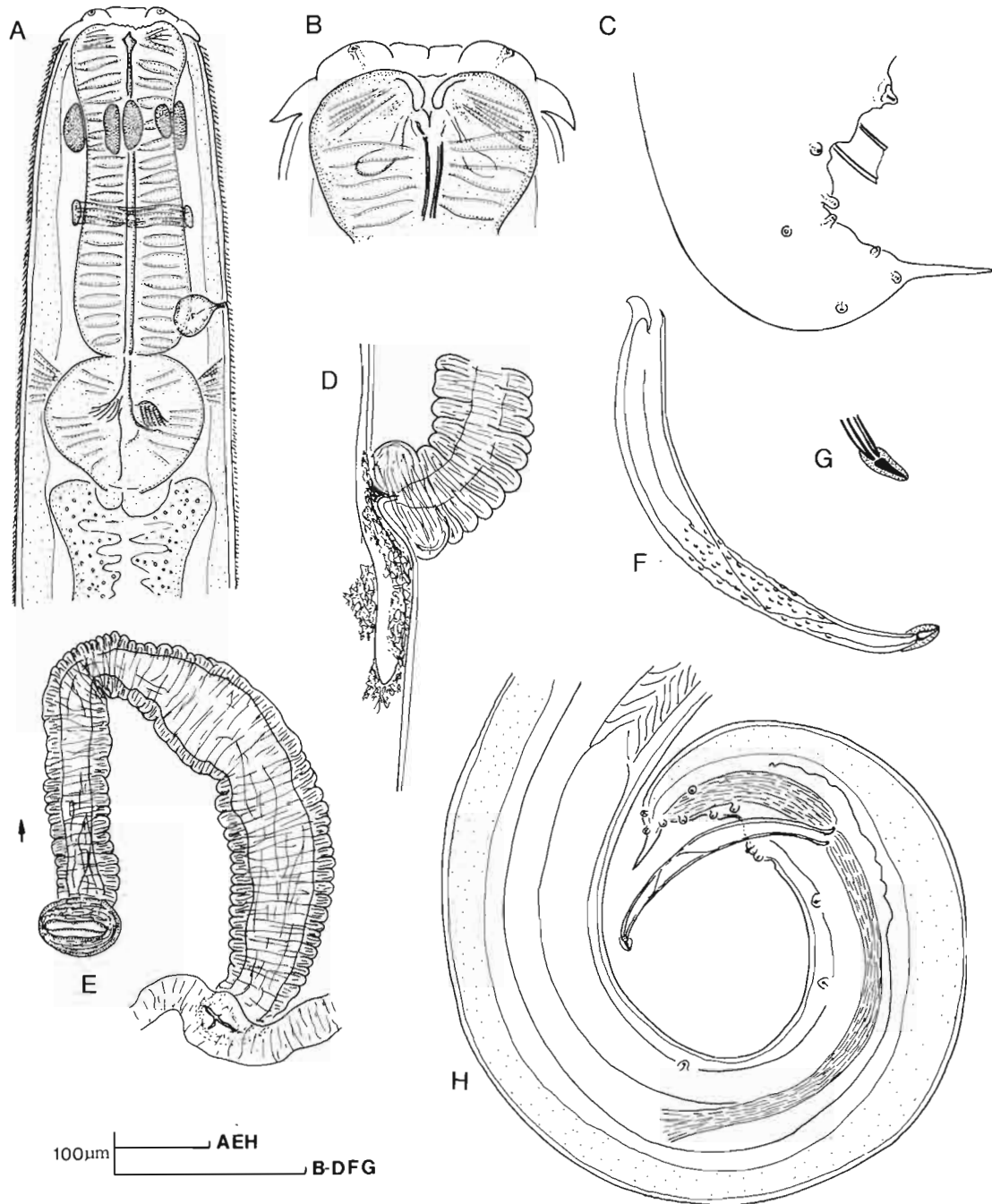


Fig. 1. *Rhigonema trichoepelum* sp. n. A: Female oesophagus; B: Cephalic region; C, H: Male tail; D: Vulval region; E: Vaginal structure; F: Spicule; G: Spicule tip and velum.

TYPE HOST AND LOCALITY

Posterior gut of an unidentified spirobolid millipede about 12 cm long collected by the roadside about 20 km south of Pyay on the Pyay/Yangon highway, Myanmar (formerly known as Burma), in June, 1994 by Dr. D. Moore.

TYPE MATERIAL

Holotype female, seven paratype females and four paratype males in the type collection of the International Institute of Parasitology, St Albans, Herts, UK (slide numbers T504/4/1 to T504/4/8); two paratype females and two paratype males in the type collection of the

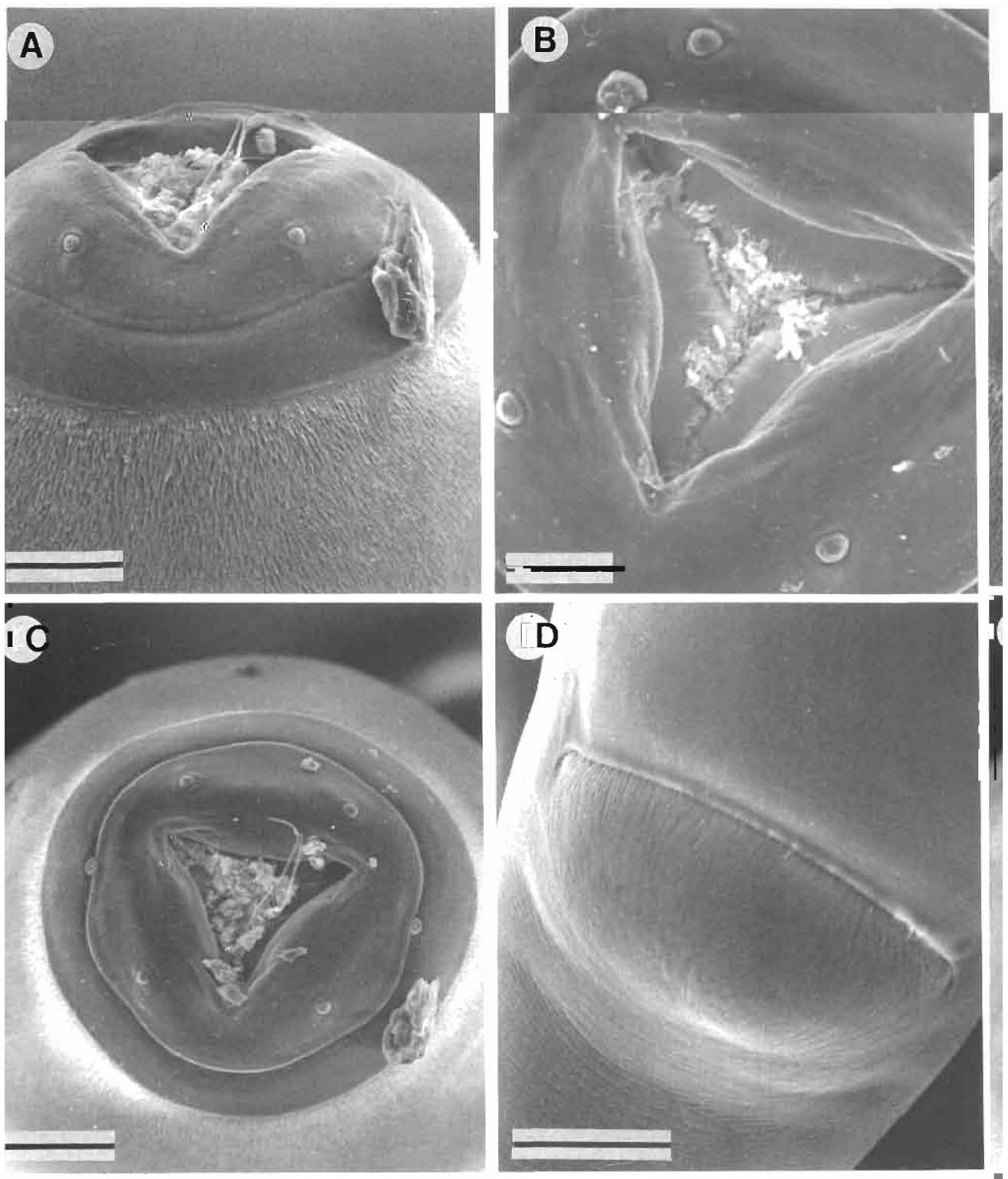


Fig. 2. *Rhigonema trichopeplum* sp. n. : SEM studies of female. A : Cephalic region; B : Oral cavity; C : En face; D : Salient posterior anal lip. (Scale bar : A, C = 20 μ m; B = 10 μ m; D = 35 μ m.)

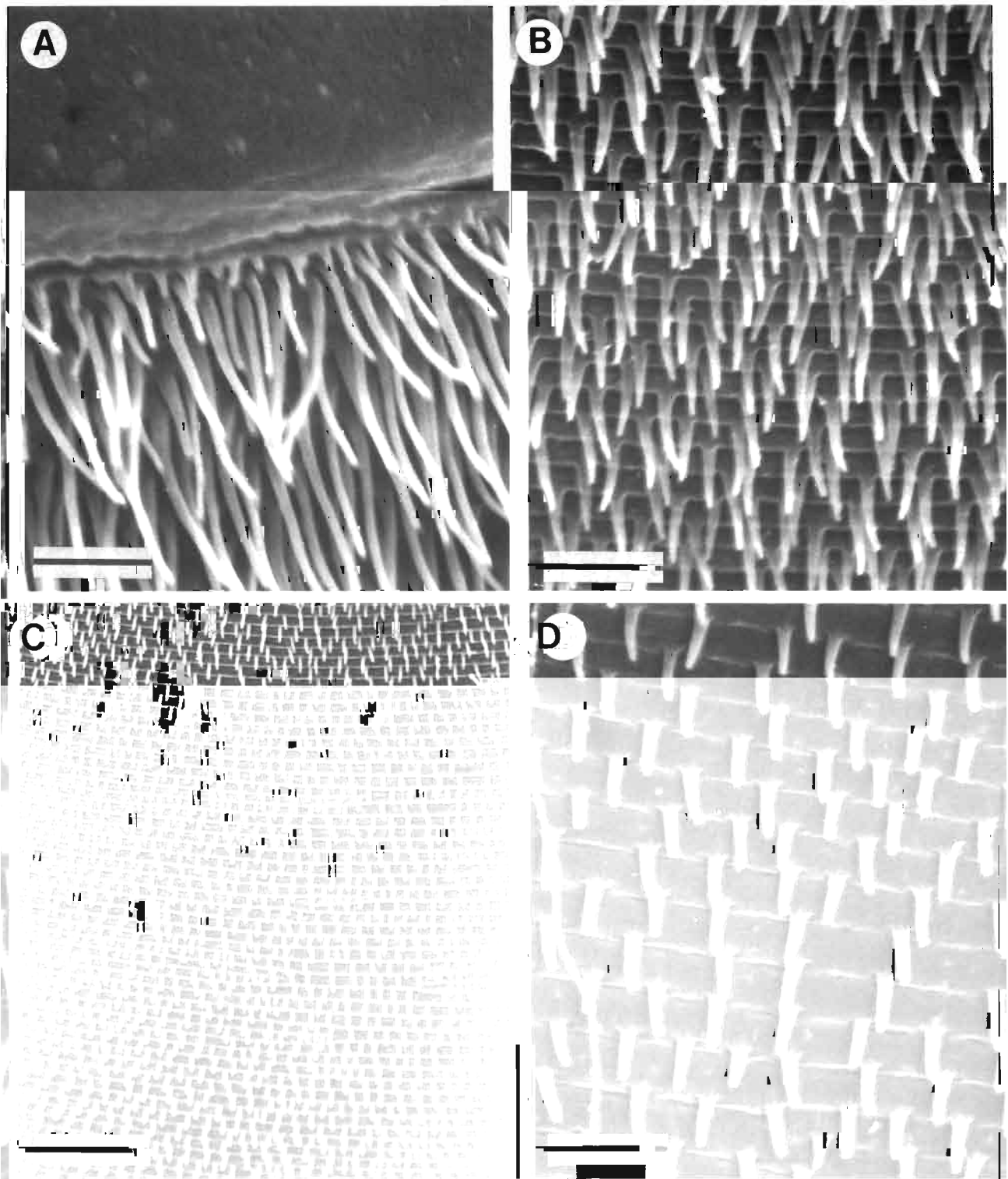


Fig. 3. *Rhigonema trichoepelum sp. n.* : SEM studies of female microtrichs. *A* : Cephalic collar region; *B* : Mid-oesophageal region; *C*, *D* : Just anterior to the point where the pilose region terminates. (Scale bar : *A*, *B*, *D* = 2 µm; *C* = 8 µm.)

