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TRICOMINAE (NEMATODA — DESMOSCOLECIDA)
FROM THE NORTHERN PART OF THE MOCAMBIQUE CHANNEL,
WITH FIVE NEW SPECIES AND ONE NEW GENUS

BY

W. DECRAEMER

(With 9 plates)

BULLETIN

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ABSTRACT

Five new species of Tricominae (Desmoscolecida) from the N. E. of the Mozambique Channel are described: *Antarcticonema inaequalis*, *Tricoma curvespiculata*, *T. bullapophysa*, *T. gloriosa* and *Desmotricoma spinicauda*. *Desmotricoma* gen. n. is mainly characterized by the ornamentation of the body-cuticle i.e. provided with prominent protruding concretion masses around long spines and dispersed over the whole body in a more or less regular way.

RESUME

Cinq nouvelles espèces de Tricominae (Desmoscolecida) du N.E. du Canal de Mozambique sont décrites: *Antarcticonema inaequalis*, *Tricoma curvespiculata*, *T. bullapophysa*, *T. gloriosa* et *Desmotricoma spinicauda*. *Desmotricoma* gen. n. est essentiellement caractérisée par l'ornementation de la cuticule du corps. Cette ornementation se compose de concrétions proéminentes autour de soies épineuses, dispersées tout au long du corps d'une façon plus ou moins régulière.

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I. INTRODUCTION

This paper comprises a detailed study of Tricominae (Desmoscolecida), collected during the 'Campagne Benthédi' in the northern part of the Moçambique Channel, i.e. in the environment of Iles Glorieuses, Banc du Geysier and Banc du Leven. The Desmoscolecinae from the former localities and the Desmoscolecida (Tricominae and Desmoscolecinae) from around Ile de Mayotte will be described in two separate papers.

The material was kindly put at my disposal by Dr. M. SEGONZAC (Centre National de Tri d'Océanographie Biologique, CENTOB, BREST).

Five new species were found and described: *Antarcticonema inaequalis*, *Tricoma curvespiculata*, *Tricoma bullapophysa*, *Tricoma gloriosa* and *Desmotricoma spinicauda* belonging to a new genus *Desmotricoma*. Additional information is given on *Tricoma similis* COBB, 1912, *Tricoma brevirostris* (SOUTHERN, 1914) STEINER, 1916 and *Tricoma longirostris* (SOUTHERN, 1914) STEINER, 1916; the systematic position of *Antarcticonema comicapitatum* TIMM, 1978 is discussed.

II. MATERIAL AND METHODS

In the samples examined the desmoscolecid fauna appeared to be rich in species but poor in individuals. The species observed were found at the localities listed in Table 1.

The samples were taken by dredging with a jute sack (DS) and sieved on a sieve with 1 mm mesh, or by dredging on rocks (DR) or by otter trawl (CH). They were fixed in 4% formalin. For the transfer from fixative into pure glycerine the methods of SEINHORST (1959) and DE GRISSE (1965) were followed.

In sample n° 93(DS) from south-west of Grande Glorieuse, lat. 11° 32' 3, long. 47° 16' 4, taken at - 480 m to - 550 m depth and in sample n° 2 (DS) from Banc du Leven, lat. 12° 35', long. 47° 40', taken at - 1800 m to - 1750 m depth, no Tricominae specimens were found. Among the several unidentified or undescribed *Tricoma*-species (see Table 1) are many new species, but due to their poor condition and to the few specimens available, they remain undescribed.

III. ABBREVIATIONS

- c s : length of cephalic setae
 gub : length of gubernaculum
 hd : maximum head dimensions (length by width)
 L : length of body
 LD : sub-dorsal, left side
 LV : sub-ventral, left side

TABLEAU 1
Location of species of Tricominae (Desmoscolecida)

Sample	Method sampling	Location	Depth (m)	Date	Species
Iles Glorieuses					
8	DR	West of the isles lat. 11°29'2 long. 47°18'2	— 250	19-III-1977	<i>Tricoma curvespiculata</i> sp. nov. : 1 ♂, 3 ♀♀ <i>Tricoma</i> spec. ₁ : 2 ♀♀ (58-61 rings) <i>Quadricoma noffsingeria</i> : 1 ♂
10	DS	West of the isles lat. 11°28'5 long. 47°17'7	— 440	19-III-1977	<i>Tricoma brevirostris</i> : 1 ♀ <i>Tricoma</i> spec. ₂ : 1 ♂ (61-62 rings) <i>Tricoma</i> spec. ₃ : 1 ♀ (64 rings) <i>Quadricomoides</i> spec. ₁ : 1 ♂.
90	CH	South-east of the isles lat. 11°44' long. 47°30'	— 3700	4-IV-1977	<i>Antarcticonema inaequalis</i> sp. nov. : 2 ♂♂, 2 ♀♀ <i>Desmotricoma spinicauda</i> gen. n., sp. nov. : 1 ♀ <i>Tricoma</i> spec. ₄ : 1 ♀ (43-44 rings) <i>Tricoma</i> spec. ₅ : 1 ♀ (47 rings) <i>Tricoma</i> spec. ₆ : 1 ♂ (37 rings) <i>Tricoma</i> spec. ₇ : 2 ♀♀ (40-42 rings) <i>Tricoma</i> spec. ₈ : 1 ♀ (44 rings)
94	DS	South-west of Grande Glorieuse lat. 11°32'2 long. 47°16'4	— 450	7-IV-1977	<i>Tricoma</i> spec. ₉ : 1 ♂ (50 rings)
120	DS	South-east of the isles lat. 11°30' long. 47°24'7	— 335 to — 390	12-IV-1977	<i>Tricoma gloriosa</i> sp. nov. : 3 ♂♂, 4 ♀♀ <i>Tricoma</i> spec. ₁₀ : 1 ♂, 2 ♀♀ (36-37 rings) <i>Tricoma</i> spec. ₁₁ : 1 ♀ (54 rings)

TABLE 1 (follow and end)

Sample	Method sampling	Location		Date	Species
122	DS	South-east of the isles lat. 11°32' long. 47°24'6	- 615 to - 625	12-IV-1977	<i>Tricoma bullapophysa</i> sp. nov. : 1 ♂, 1 ♀ <i>Tricoma longirostris</i> : 1 ♂ <i>Tricoma</i> spec. ¹² : 1 ♂ (80 rings) <i>Tricoma</i> spec. ¹³ : 1 ♂ (68 rings) <i>Tricoma</i> spec. ¹⁴ : 1 ♀ (76-77 rings) <i>Quadricoma noffsingeria</i> : 1 ♀
102	DS	North of Ile du Lys lat. 11°24'5 long. 47°22'7	- 440 to - 110	8-IV-1977	<i>Tricoma amydrampida</i> : 1 ♂
104	DR	North of Ile du Lys lat. 11°26'4 long. 47°22'3	- 550 to - 330	8-IV-1977	<i>Tricoma bullapophysa</i> sp. nov. : 1 ♀ <i>Tricoma gloriosa</i> sp. nov. : 1 ♂ <i>Tricoma brevirostris</i> : 1 ♂ <i>Tricoma longirostris</i> : 1 ♂ <i>Tricoma similis</i> : 2 ♂♂ <i>Tricoma</i> spec. ¹⁰ : 1 ♀ (37 rings) <i>Tricoma</i> spec. ¹⁵ : 1 ♂ (78-79 rings) <i>Tricoma</i> spec. ¹⁶ : 1 ♂ (54-55 rings)
Banc du Geysier					
11	DS	North-east of Banc du Geysier lat. 12°16'3 long. 46°42'2	- 2450 to - 2300	20-III-1977	<i>Quadricoma</i> spec. ¹ : 1 ♀ (39 rings)

- mbd : maximum body diameter
 (mbd) : maximum body diameter (foreign material not included)
 oes : length of oesophagus
 RD : sub-dorsal, right side
 RV : sub-ventral, right side
 sd₁ : length of sub-dorsal setae on the first main ring
 sl₁ : length of sub-lateral setae on the first main ring
 spic : length of spicules, measured along the median line
 sv₁ : length of sub-ventral setae on the first main ring
 t : tail length
 tmr : length of terminal ring
 tmrw : width of terminal ring, foreign material included
 V : position of the vulva as percentage of the total body length from anterior.

All measurements are in micrometers (μm).

All type specimens and all other material are deposited in the collection of the Muséum national d'Histoire naturelle, Paris; some paratype specimens are deposited in the nematode collection of the Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussel (RIT 34-37).

IV. DESCRIPTIONS

Subfamily TRICOMINAE LORENZEN, 1969

Genus *Desmotricoma* gen. n.

Diagnosis. — Tricominae. Body cuticle finely annulated, covered by a continuous layer of fine particles, and provided with prominent protruding concretion masses dispersed over the whole body in a more or less regular way, i.e. forming rows. Two kinds of concretion masses, both formed by concretion around long spines. Somatic setae homogeneous with tricomoid arrangement. Head more or less triangular in side view. Oesophagus cylindrical. Female reproductive system didelphic-amphidelphic.

Genotype: *Desmotricoma spinicauda* gen. n., sp. nov.

Differential diagnosis. — *Desmotricoma* gen. n. can be distinguished from all other genera of Tricominae by the peculiar ornamentation of the body cuticle i.e. provided with prominent protruding concretion masses around long hairy spines, more or less arranged in rows and by the tail shape.

Within the Tricominae, *Desmotricoma* is closest to *Haptotricoma boucheri* DECRAEMER, 1979 concerning the ornamentation of the body cuticle. However, in *H. boucheri* the body annules bear numerous small scale-like structures, formed by secretion around a peg.

Desmotricoma also resembles *Spinodesmoscolex* DECRAEMER, 1983 in ornamentation of the body cuticle. In *Spinodesmoscolex* the main rings are provided with a transverse row of spine-like setae, almost completely surrounded by concretion. In *Desmotricoma*, however, the spine-like setae are less numerous, finer (hairy), and not arranged in clear transverse rows. The concretion masses are more irregular in outline and two different types can be distinguished.

Desmotricoma spinicauda gen. n., sp. nov.
(Plate I, Fig. A-D)

Material

Holotype: female slide AN 351.

Type locality. — South-east of Iles Glorieuses, lat. 11° 44', long. 47° 30', collected at 3700 m depth; sample n° 90.

Measurements

Holotype female: L = 750, hd = 24 × 21, cs = 22, sd₁ = 25, sd₂ = 25, sd₃ = 36, sd₄ = 40, sd₅ = 38, sv₁ = 35, sv₂ = 36, oes = 59, (mbd) = 25, t = 157, V = 50.5 %.

Remark: the somatic setae are numbered according to their location, with sd₁: the anteriormost sub-dorsal seta.

Description

Female. — Body long, slender, tapered towards the extremities, especially in tail region. Cuticle finely annulated, covered by an almost continuous layer of fine concretion particles, and provided with prominent protruding concretion masses, dispersed over the whole body in a more or less regular way. They give the animal a patchy appearance. On both sides of the body I observed about 26 rows or groups of large concretion masses; each row mainly composed of two masses (except anteriorly where they are united and posteriorly where they may be splitted up). On the dorsal and ventral body side thinner feather-like concretion patches were observed. Both kind of concretion masses are formed by concretion material around hairy-like spines (setae?): a fine spine on the dorsal and ventral body side (14-17 μm long) and a stout spine on the lateral sides (25 μm long); measurements are from spines devoided of concretion.

Somatic setae stout, distally tapered to a pointed tip; usually paired, inserted on low peduncles. Five sub-dorsal setae on both sides and three sub-ventral setae on the right side, two on the left body side were observed. The setae become longer posteriorly.

Head about as long as wide. Cuticle thickened and sclerotized, anteriorly covered by a thin layer of fine concretion particles and posteriorly, i.e. behind the insertion of the cephalic setae, by a thick layer of coarse concretion. In the labial region the cuticle is thin and naked. Cephalic setae, 29 μ m long, inserted on high peduncles just anterior to halfway the length of the head. Amphids broad, rounded vesicular structures largely covering the posterior head-region laterally. They are surrounded and covered by a layer of concretion. Opening amphidial canal obvious, situated just behind the insertion of cephalic setae.

Ocelli, light brownish oval pigment spots, situated opposite the 4th and 5th row of concretion masses.

Stoma small, thick-walled. Oesophagus cylindrical, slightly narrowing posteriorly. Intestine with narrower anterior part, gradually widening posteriorly to a broad granular cylinder, with many small globules. Anal tube small.

Reproductive system didelphic-amphidelphic. Spermathecae obscure. Vulva situated halfway along the body length.

Tail long, slender, with prominent long, fine end and spinneret.

Male. — not found.

Diagnosis. — *Desmotricoma spinicauda* gen. n., sp. nov. is characterized by its head-structure, the amphids, the arrangement of the somatic setae and the shape of the tail.

Genus *Tricoma* COBB, 1893

Tricoma bullapophysa sp. nov.

(Plate II, Fig. A-F)

Material

Holotype : male slide n^o AN 355.

Paratypes : female slide n^o AN 355 from sample n^o 122

female slide n^o RIT 34 from sample n^o 104.

Type locality. — South-east of Iles Glorieuses, at - 615 m to 625 m depth, sample n^o 122.

Measurements

Holotype male : L = 395, hd = 13 \times 13, cs = 15, sd₅ = 16, sd₁₃ = 17, sd₂₀ = 16, sd₅₅ = 16, sd₆₃ = 17, sv₃ = 12, sv₆ = 16, sv₁₁ = 18, sv₁₆ = 18, sv₅₅ = 16, sv₆₁ = 11, sv₆₃ = 19, t = 79, tmr = 31, tmrw = 8, mbd = 25, oes = 60, spic = 27, gub = 18.

Paratype female 1 (slide n^o AN 355) : L = 500, hd = 14 \times 15, cs = 18, sd₆ = 16, sd₂₁ = 18, sd₅₀ = 17, sd₆₃ = 22, sv₄ = 13, sv₆ = 20,

$sv_{11} = 20$, $sv_{15} = 19$, $sv_{56} = 20$, $sv_{63} = 24$, $t = 84$, $tmr = 31$,
 $tmrw = 8$, $oes = 69$, $mbd = 33$; $V = 56\%$.

Paratype female 2 (slide n^r RIT 34): $L = 345$, $hd = 13 \times 13$, $cs = 20$,
 $t = 72$, $tmr = 31$, $oes = 51$; $V = 51\%$.

Description

Male. — Body tapering towards the extremities, especially in tail region. Cuticle with 66-67 main rings ventrally to 68 main rings dorsally; difference in number of main rings due to the presence of partial rings. Cuticular zone of each main ring with a slight secondary annulation, covered by a desmos of secretion and fine granular concretion. The desma of the main rings are interconnected by hyaline material covered by fine granular concretion.

Somatic setae arranged as follows in holotype male :

sub-dorsal : right side : 5, 13, 20, 27, 35, 43, 55, 63 = 8
 left side : 6, 13, 19, 28, 37, 45, 55, 63 = 8
 sub-ventral : right side : 3, 6, 11, 16, 22, 30, 38, 48, 55, 61, 63 = 11
 left side : 3, 6, 11, 16, 23, 31, 39, 47, 53, 59, 61 = 11

with anterior pair of setae (on main ring 3) shifted laterally. Somatic setae stout, slightly distally tapered to an open, rounded end. They are inserted on peduncles, hardly protruding from the desma. Sub-dorsal and sub-ventral setae about equal in length. First pair of setae and pair of sub-ventral setae inserted just posterior to the cloaca shorter than the remaining setae.

Head triangular in side view, from the peduncles of the cephalic setae anteriorly tapered to a broad truncated end. Cuticle thickened and sclerotized. Labial region with six minute papillae. Cephalic setae slender, tapering, flanked over their whole length by a membrane and inserted on to high peduncles protruding from the terminal part of the head. Amphids large vesicular, covering the head completely in side view. Amphidial canal ending in a groove in posterior head region.

Stoma large and deep. Oesophagus typical for the genus. Oesophago-intestinal junction opposite main ring 10. Intestine broad cylindrical, with large globules and granular inclusions; the ventral wall of the anterior intestinal region shows a conspicuous band of granulae. Postrectal blind sac absent. Cloacal tube, a small tube protruding from the ventral body wall at the posterior end of main ring 58 on the right body side and ring 57 on the left side. Ocelli ochrous, irregularly shaped, situated at the level of main ring 11.

Reproductive system typical. Spicules small, slightly arched, distally tapered to a pointed tip and proximally to a barely offset capitulum. Gubernaculum with a thin more or less sclerotized distal part, widened to a knob-like apophyse about at right angle with the distal part.

Tail gradually tapered, consisting of 9 main rings. Terminal ring conical, anterior part covered with concretion, posterior part with thickened cuticle ending on a finer spinneret. Phasmata located posteriorly in the desmos of the endring. Three successive caudal glands well developed, extending to the cloacal region.

F e m a l e . — In most characters identical with male.

Body with 61 (female 2) or 67-68 main rings (female 1). Somatic setae arranged as follows in female 1 (slide AN 355) :

- sub-dorsal : right side : 7, 13, 19, 27, 38, 46, 54, 63 = 8
 left side : 6, 12, 21, 26, 34, 42, 50, 63 = 8
sub-ventral : right side : 4, 6, 10, 16, 21, 25, 29, 35, 42, 48, 55, 63 = 12
 left side : 4, 6, 11, 15, 18, 22, 25, 29, 34, 41, 48, 56, 63 = 13

The anteriormost pair of somatic setae is shorter than the other setae. Anal tube clearly protruding from the ventral body wall at the posterior end of main ring 52 or 58 (right side), 53 or 59 (left side).

Reproductive system didelphic-amphidelphic, both branches outstretched. Uteri overlapping each other in front of the vulva, containing small globular spermatozooids. Vulva situated in main ring 39 (female 1) or between main rings 34-35 (female 2) (right body side). Spermathecae not offset.

Tail with 9 main rings. Three caudal glands well developed, extending anteriorly shortly beyond the anal region. Phasmata present.

D i a g n o s i s . — *Tricoma bullapophysa* sp. nov. is characterized by a combination of the following features: 61 to 68 main rings, interconnected; the structure and arrangement of the somatic setae (8 sub-dorsal and 11 sub-ventral setae on each side in male and 12-13 in female), the broadly truncated triangular head-shape, the copulatory apparatus with gubernaculum provided with a knob-like apophyse and the structure of the female reproductive system with overlapping uteri and spermathecae not offset.

D i f f e r e n t i a l d i a g n o s i s . — *Tricoma bullapophysa* sp. nov. is closest to *T. platapophysa* DECRAEMER, 1978 in having a similar number of main rings, a more or less comparable head-shape and a gubernaculum with the apophyse at right angles with the distal part.

Tricoma curvespiculata sp. nov.
(Plate III, Figs A-D)

M a t e r i a l

Holotype : male slide AN 359.

Paratypes : 3 females : slides AN 359, AN 360, RIT 35.

Type locality. — West of Iles Glorieuses, lat. 11° 29' 2, long. 47° 18' 2, collected at 250 m depth; sample DR 8.

Measurements

Holotype male : L = 215, hd = 11 × 11, c_s = 10, sd₂ = 7, sd₆ = 9, sd₈ = 9, sd₁₂ = 11, sd₂₁ = 14, sd₂₇ = 10, sd₃₄ = 12, sv₂ = 7.5, sv₄ = 9, sv₆ = 7.5, sv₈ = 8.5, sv₂₆ = 7, sv₃₀ = 8, sv₃₆ = 12, t = 48, tmr = 23, tmrw = 6.5, oes = 52, spic = 52, gub = 30, mbd = 26, (mbd) = 19.

Paratype females (n = 3) : L = 205-265, hd = 11 × 11-12, c_s = 12-15, sd₂ = 9-11, sd₅ = 10-11, sd₈₍₉₎ = 11, sd₁₂ = 10, sd₂₂ = 13, sd₂₈₍₂₉₎ = 12-15, sd₃₄₍₃₅₎ = 14-16, sv₃₍₂₎ = 9.5-12, sv₄₍₅₎ = 10-11, sv₆ = 12, sv₈ = 12, sv₂₇₍₂₈₎ = 12-13, sv₃₁ = 14-15, sv₃₆₍₃₅₎ = 15-17, t = 48-52, tmr = 22-27, tmrw = 6.5-7, mbd = 31, oes = 57-66, V = 53-55 %.

Description

Male. — Body small and slender, tapering towards the extremities, especially in the tail region. Cuticle with 37 tricomoid main rings; cuticle of each main ring with secondary annulation (not pronounced) and covered with a band of fine concretion particles (desmos).

Somatic setae arranged as follows :

- sub-dorsal : right side : 2, 6, 8, 12, 16, 21, 27, 34 = 8
 left side : 3, 6, 8, 11, 15, 19, 24, 28, 34 = 9
 sub-ventral : right side : 2, 4, 6, 8, 11, 14, 18, 22, 26, 30, 36 = 11
 left side : 2, 4, 6, 8, 11, 14, 18, 22, 27, 30, 36 = 11

Somatic setae relatively stout, short setae, tapered to an open tip and inserted on peduncles as high as the concretion rings. Sub-dorsal setae and sub-ventral setae equal in length; both series of setae becoming longer posteriorly.

Head about as long as its maximal width, from the peduncles of the cephalic setae tapering slightly anteriorly towards a broad truncated end. Its cuticle thickened and sclerotized, except extreme anterior border. Cephalic setae with broad base, tapering towards a fine open tip. They are almost as long as the head and insert on low peduncles about halfway the length of the head. Amphids large vesicular, posteriorly extending beyond the head border on to the first main ring. Amphidial pore well marked, situated just in front of the posterior head border.

Stoma narrow, relative deep. At the bottom of the stomatal cavity, the oesophagus slightly protrudes, apparently with three minute teeth. Oesophagus cylindrical. Oesophago-intestinal junction opposite main ring 8. Intestine, a broad cylinder with many large globules and fine granula. No postrectal intestinal overlapping. Cloacal tube protruding from the medio-ventral body wall in main ring 31.

Small yellow pigment spots along the oesophagus, i.e. opposite main rings 6 and 7 on the right side.

Reproductive system typical (DECRAEMER, 1978). Spicules long, fine structures, tapering to a pointed distal tip and proximally shaped like the head of a looped Shepherd's crook. About halfway their total length i.e. opposite the tip of the gubernaculum, the spicules show a slight bend. At this level they become very fine and lie close together (? or join each other in a common distal part). Gubernaculum fine, arched structure, parallel with the distal half of the spicules, proximal end with slight broadening.

Tail consisting of six main rings. Terminal ring, 23 μm long, cylindrical, ending on a fine and naked spinneret, 5.5 μm long. Three caudal glands. Phasmata not observed.

F e m a l e . — In most characteristics identical with male. Body with 38 main rings. The anteriormost main rings and the posterior tail rings, may be more or less quadricomoid in shape. Somatic setae with 9 sub-dorsal and 11 sub-ventral setae on each body side. They are arranged as follows in a female specimen (slide RIT 35) :

sub-dorsal : right side : 2, 5, 9, 12, 17, 21, 24 (*), 28, 34 = 9
 left side : 3, 6, 9, 12, 16, 20, 24, 29, 34 = 9
 sub-ventral : right side : 3, 5, 7, 8, (*), 11, 14, 18, 22, 27, 31, 35 = 11
 left side : 2, 4, 7, 9, 11 (*), 14, 18, 22, 27, 31, 36 = 11

Oesophago-intestinal junction opposite main ring 10 or 11. Anal tube short, sometimes hardly protruding from the ventral body wall in main ring 32. Small globular yellow pigment spots at level of main ring 9 or between main rings 8 and 9.

Reproductive system didelphic-amphidelphic; both branches outstretched. Two spermathecae. Vulva situated between main rings 23 and 24, is lying at 53-55 % of the total body length from the anterior end.

Tail with six main rings. Posterior ring long, more or less cylindrical, anteriorly with oval phasmata, posteriorly ending on a fine spinneret, 5.5-8.5 μm long.

D i a g n o s i s . — *Tricoma curvespiculata* sp. nov. is characterized by the number of body rings (37 in male, 38 in female), the arrangement of the somatic setae (9 sub-dorsal and 11 sub-ventral setae on each side), by the head-shape, by the long oesophagus, by the location of pigment-spots along the oesophagus; and in males by the shape and structure of the copulatory apparatus with spicules having a looped proximal end.

D i f f e r e n t i a l d i a g n o s i s . — According to the number of body rings and the setal pattern *Tricoma curvespiculata* sp. nov. resembles *T. pedunculata* TIMM, 1970. It differs, however, from *T. pedunculata* by its small body length, the absence of high peduncles of insertion of somatic

(*) Setae broken off.

setae, by its head-shape, by the location of the cephalic setae and by the shape of the endring. However a smaller male specimen, similar to the types of *T. pedunculata* was found from another cruise in the Indian Ocean (TIMM, 1970).

T. curvespiculata sp. nov. shows some slight resemblances with *Quadricoma noffsingeriae* DECRAEMER, 1977 (see specimen from between One Tree Island and Wistari Reef) in number of main rings, in structure of head and oesophagus, in location of the ocelli along the oesophagus. It differs from it e.g. by the copulatory apparatus in male, by the shape of the main rings and endring.

Tricoma gloriosa sp. nov.

(Plate IV, Figs A-D)

Material

Holotype: male slide AN 361.

Paratypes: 1 ♂ (slide AN 361), 1 ♂ (slide RIT 36); 4 ♀♀ (two without complete tail) (slide AN 362).

Type locality. — South-east of Iles Glorieuses, lat. 11° 30', long. 47° 24' 7, collected between 335 m and 390 m depth; sample n° 120.

Measurements

Holotype male: L = 280, hd = 15 × 14, cs = 19, sd₃ = 18, sd₆ = 18, sd₉ = 19, sd₂₃ = 20, sd₂₈ = 23, sd₃₃ = 23, sv₂ = 16, sv₄ = 22, sv₇ = 18, sv₂₁ = 21, sv₂₅ = 16, sv₂₉ = 18, sv₃₁ = 7.5, sv₃₄ = 30, t = 61, tmr = 9, tmrw = 6.5, mbd = 29, oes = 48, spic = 26, gub = 18.

Paratype males (n = 2): L = 260-305, hd = 15 × 13-14, cs = 19-22, sd₃ = 16, sd₆ = 16-18, sd₉ = 19, sd₂₂₍₂₃₎ = 19-21, sd₂₇ = 22, sd₃₃ = 23, sv₂ = 16-20, sv₅ = 19, sv₈ = 18-20, sv₁₁ = 16-19, sv₂₄ = 16-20, sv₂₉ = 20-22, sv₃₁ = 10-15, sv₃₄ = 28, t = 60, tmr = 27-30, tmrw = 7.5-8.5, oes = 48-55, mbd = 30-32, spic = 25-28, gub = 17.

Paratype females (n = 2): L = 325-335, hd = 15-16 × 15, cs = 21-22, sd₃ = 17-18, sd₇ = 17-19, sd₁₀ = 16, sd₂₄ = 20, sd₂₈ = 21, sd₃₃₍₃₄₎ = 21-23, sv₃ = 18, sv₅ = 18-19, sv₇ = 19, sv₂₅ = 19, sv₃₀ = 22, sv₃₂ = 21-22, sv₃₅ = 25-28, t = 67-71, tmr = 29-35, tmrw = 8-10, oes = 53, mbd = 33-34; V = 49-54 %.

Description

Male. — Body small, tapering towards the extremities. Cuticle with 37 tricomoid main rings with secondary annulation covered by desma or

(*) Species name deduced from the locality Isles Glorieuses, canal of Moçambique.

concretion bands composed of secretion and fine foreign material. Anteriormost rings and posterior tail rings may be more or less quadricomoid; where the body is curved the rings telescope into each other like quadricomoid rings.

Somatic setae arranged as follows in holotype male :

- sub-dorsal : right side : 3, 6, 9, 13, 17, 23, 28, 33 = 8
 left side : 3, 6, 9, 13, 18, 22, 27, 33 = 8
 sub-ventral : right side : 2, 4, 7, 10, 14, 17, 21, 25, 29, 31, 34 = 11
 left side : 2, 5, 8, 11 (*), 14, 17, 21, 25, 29, 31, 35 = 11

Somatic setae, stout glandular setae, slightly tapered distally to an open tip, often observed with a secretion plug. They are inserted on peduncles as high as the concretion rings and surrounded with concretion. Sub-dorsal and sub-ventral somatic setae differ little in length, both become longer posteriorly. Last pair of sub-ventral setae elongated. Sub-ventral setae on anal ring differentiated by their length and shape; shorter and finer than the remaining setae.

From peduncles of cephalic setae, head gradually tapering anteriorly towards a broad truncated end. Labial region with a crown of six minute papillae. Cuticle, except in labial region, sclerotized and thickened, especially at base of peduncles of cephalic setae. Cephalic setae fine, tapered and flanked over their whole length by a membrane. They are longer than the head, and inserted on low peduncles in posterior half of the head. Amphids covering the head almost completely, extending anteriorly to the labial region and posteriorly beyond the head to main ring 1 or on to the second main ring.

Stoma small, shallow. Oesophagus typical. Nerve ring surrounding oesophagus opposite posterior end of main ring 4. Oesophago-intestinal junction at the level of main ring 7. Intestine with large globules. Post-rectal blindsac absent. Cloacal tube protruding medio-ventrally from posterior border of main ring 31. Ocelli dark yellowish, oval, situated opposite main ring 8 or 9.

Reproductive system typical. Spicules almost straight; corpus distally tapered to a pointed tip, and proximally provided with a bent capitulum. Muscles of spicular apparatus typical (DECRAEMER, 1978). Gubernaculum with a 12-13 μm long, narrow, sclerotized distal part along the spicules, slightly widened towards two weakly sclerotized dorsocaudally curved apophyses, 4-5 μm long. Muscles of gubernaculum typical.

Tail composed of six main rings. Terminal ring nearly cylindrical; its cuticle largely covered with concretion, except for the naked spinneret. Concretion material on endring fine, granular, forming a thicker ring anteriorly. Phasmata present in covered anterior part of endring. Three

(*) Seta broken off.

successive caudal glands well developed, extending anteriorly beyond the cloacal tube.

Female. — In most characters identical with the male. Body with 37 or 38 main rings (depending when anterior part of endring becomes a separate ring or not). Somatic setae with 8 sub-dorsal and 11 sub-ventral setae on each side. Sub-ventral setae on anal ring not differentiated. Somatic setae arranged as follows in a paratype female with 37 main rings :

sub-dorsal : right side : 4, 7, 10, 14, 19, 23, 28, 33 = 8
 left side : 3, 7, 10, 14, 19, 24, 28, 33 = 8
 sub-ventral : right side : 3, 5, 8, 11, 14, 17, 21, 25, 29, 32, 35 = 11
 left side : 3, 5, 8, 11, 14, 17, 21, 25, 30, 32, 35 = 11

Intestine with large globules; anterior to the reproductive system, its ventral wall is provided with a band of small globules. No postrectal blindsac. Anal tube small, protruding from the ventral body wall at the posterior end of main ring 32. Ocelli dark yellowish or brownish, situated at the level of main ring 7 or 8.

Reproductive system didelphic-amphidelphic, with both branches outstretched. The uterus shows a differentiation in 1) a large sac with large cells and 2) a finely granular part, common for both uteri and lying opposite the vulva. Two thin-walled rounded spermathecae with spermatozooids, situated at the level of the junction between both parts of the uterus. The uterine sac and the spermatheca of each branch ly on opposite sides of the uterus.

Tail with six or seven main rings. Three successive caudal glands well developed, extending to slightly beyond the anal tube. Phasmata present.

Diagnosis. — *Tricoma gloriosa* sp. nov. is characterized by a combination of the following characters: its small body length and the number of main rings (37-38), the arrangement (8 sub-dorsal and 9 sub-ventral setae) and structure of the somatic setae (large glandular setae), the differentiation of the anal pair of sub-ventral setae in male (sexual dimorphism), the narrow triangular head-shape with broadly truncated anterior end, the shape of the copulatory apparatus and the structure of the female reproductive system.

Differential diagnosis. — By all the features mentioned in the diagnosis *T. gloriosa* sp. nov. is distinguished from the other *Tricoma*-species with the same number of main rings: *T. bathycola* FREUDENHAMMER, 1975, *T. meteora* FREUDENHAMMER, 1975 and *T. pedunculata* TIMM, 1970.

T. gloriosa is closest to *T. fisheri* TIMM, 1970 a.o. in head-shape, the presence of glandular somatic setae, but differs from it e.g. by the smaller number of main rings, the smaller number of sub-ventral somatic setae and the shape of the copulatory apparatus.

Tricoma brevirostris (SOUTHERN)

(Plate V, Figs A-C)

Desmoscolex brevirostris SOUTHERN, 1914, pp 63-64.*Tricoma brevirostris* STEINER, 1916, p. 339.syn. *Tricoma euxinica* PALADIAN & ANDRIESCU, 1963, p. 171 in TIMM (1970), p. 51.*Tricoma brevirostris* (SOUTHERN, 1914) STEINER, 1916 in DE-CRAEMER (1978), p. 29-35.

Material

One male specimen slide AN 357, sample DR 104.

Measurements

Male (n = 1) : L = 460, hd = 18 × 20, cs = 21, sd₁ = 18, sd₁₄ = 15, sd₂₂ = 16, sd₃₀ = 14, sd₆₇ = 14, sd₇₁ = 17, sl₁ = 13, sv₇ = 18, sv₁₃ = 19, sv₂₀ = 18, sv₆₅ = 12, sv₆₉ = 10, sv₇₄ = 9.5, t = 83, tmr = 29, tmrw = 10, mbd = 25, (mbd) = 18, oes = 61, spic = 25, gub = 21.

Remarks. — The male specimen from the environment of the Iles Glorieuses resembles the Australian specimens of *T. brevirostris* in general habitus and in measurements. It shows, however, some differences with the Australian males in :

— the arrangement of the somatic setae (8-10 sub-dorsal setae and 12 sub-ventral setae on each side with the anteriormost setae laterally on ring 4 instead of 9 sub-dorsal setae and 16 sub-ventral setae with the first pair of setae laterally on ring 1);

— the number of tail rings (11 rings instead of 12 main rings in Australian males);

— the shape and length of the gubernaculum with a longer and more caudally orientated apophyse than in Australian males;

— the presence of very large ocelli instead of small ones and in the absence of a ventral organ and a dorsal arch of the intestine, and

— the presence of a preanal setiform supplement on main ring 57, not observed in the Australian males.

However, the male specimen found is comparable with the Australian female in the arrangement of the somatic setae and in the number of tail rings.

Tricoma longirostris (SOUTHERN)

(Plate VI, Figs A-C)

Desmoscolex longirostris : SOUTHERN, 1914, p. 62-63.*Tricoma longirostris* : STEINER, 1916, p. 339-340.

Tricoma glutinosa: STEINER, 1916, p. 340-341: new synonymy.

Tricoma glutinosa: sp. inq. op. FREUDENHAMMER (1975), p. 25.

Tricoma septentrionalis: TIMM, 1978, p. 233: males only: new synonymy.

Original description emended, based on two male specimens from the Moçambique Channel.

Material

1 male slide AN 358, 1 male slide AN 355, respectively from sample DR 104 and sample DS 122.

Measurements

Male₁: L = 300, hd = 15 × 12, cs = 17, sd₆ = 12, sd₁₃ = 12, sd₄₆ = 10, sd₅₁ = 11, sd₅₇ = 12, sl₃ = 14, sv₆ = 14, sv₁₀ = 14, sv₁₅ = 15, sv₄₈ = 5, sv₅₃ = 5, sv₅₉ = 12, t = 60, tmr = 16, tmrw = 6, mbd = 19, (mbd) = 15, oes = 60, spic = 32, gub = 14.

Male₂: L = 420, hd = 19 × 16, cs = 21, oes = 72, mbd = 21, (mbd) = 17, t = 84, tmr = 23, tmrw = 8.5, spic = 35, gub = 15.

Description

Males. — Body small and slender. Cuticle with 63 tricomoid main rings in Male₁ and 72 rings in Male₂, with desma composed of secretion and fine foreign material.

Somatic setae arranged as follows in male₁:

- sub-dorsal : right side : 6, 13, 22, 27, 33, 39, 46, 51, 57 = 9
 left side : 6, 14, 20, 24, 33, 39, 46, 50 (*), 57 (*) = 9
 sub-ventral : right side : 3, 6, 10, 15, 19, 23, 28, 33, 38, 43 (*), 48, 53,
 59 = 13
 left side : 3, 7, 13, 17, 22, 27, 33, 38, 43, 48, 53, 59 = 12

with the first pair of setae on main ring 3 displaced laterally. Somatic setae fine, tapered distally to a fine tip, inserted on a peduncle surrounded by concretion and slightly elevated above the main ring. Sub-dorsal setae equally long, sub-ventral setae becoming shorter posteriorly except for terminal one.

Head with narrow triangular shape in side view, maximally wider than long and anteriorly truncated. Cuticle sclerotized, except in labial region, gradually thickened towards base of peduncle of cephalic setae; cuticle devoided of concretion. Six minute labial papillae, distinctly demarcated by rounded interruptions in the cuticle in male₂ (cf. *T. riemanni* in DECRAEMER (1978), fig. 24). Cephalic setae fine, tapered, and flanked over their whole length by a membrane; setae slightly longer than the head,

(*) Setae broken off.

inserted on high peduncles, protruding in the posterior part of the head. Amphids rounded vesicular, apart from the stomatal region nearly completely covering the head, extending posteriorly on to the first main ring. Amphidial canal ending in the posterior head border.

Stoma narrow, 2.5 μm deep in male₁. Oesophagus typical. At the level of the interzone between main rings 7 and 8, oesophagus surrounded by the nerve ring. Oesophago-intestinal junction at level of main ring 11. Oesophageal glands protruding. Cardia present. Intestine typical, with a short arch dorsally, beginning behind the cardia and ending posteriorly to the ocelli. No ventral organ observed. Behind the arch, the intestine widens to a broad cylinder. Postrectal blind sac absent. Cloacal tube protruding from the ventral body wall in main ring 51 (male₁) or 62 (male₂).

Ocelli very large, brownish pigment spots situated opposite main rings 13 to 15.

Reproductive system typical for the genus. Vas deferens terminally flanked by a finely granular ejaculatory gland in male₁. Spicules, 32-35 μm long, arched; tapered distally. Spicular pouch clearly demarcated. Muscles of spicular apparatus typical. Gubernaculum, 14-15 μm long, consisting of a distal part, along the spicules (a small central part or cuneus between the spicules was observed in male₁) and a stout dorso-caudally proximal part or apophyse ending on a conspicuous knob. Muscles of gubernaculum typical. In male₁ two short fine spine-like preanal structures were observed respectively on main rings 41 and 44.

Tail composed of 12 main rings in male₁ and 11 in male₂. Terminal ring conical, with desmos and phasmata anteriorly. Three caudal glands present.

Diagnosis. — *T. longirostris* is characterized by a combination of the following characters: a slender body with 63 to 77 main rings, a long and narrow head-shape, the arrangement of the somatic setae and the structure of the copulatory apparatus with a gubernaculum provided with a stout knobbed apophyse.

Discussion. — The male specimens from the present collection show a great resemblance with the original description of *T. longirostris* and *T. glutinosa* respectively based on two male specimens and on a single male specimen; original description essentially restricted to few outer characteristics.

T. longirostris and *T. glutinosa* (original description) closely resemble each other in general habitus, in head-shape, but differ in number of main rings (respectively with 70 and 77 rings), in body-length (650 μm against 250 μm) and in shape of the gubernaculum. However, the latter is figured in an oblique ventral position in *T. longirostris*, so its complete structure was presumably not totally visible nor totally represented (see fig 29D, SOUTHERN, 1914).

Taking into account the variability found in the number of main rings and in the body length between specimens observed, I consider *T. glutino-*

sa synonymous with *T. longirostris*. The two male specimens observed belong to *T. longirostris*. In view of the new data available, *T. glutinosa* can no longer be considered a sp. inq. (see FREUDENHAMMER, 1975, p. 25).

The male specimens of *Tricoma septentrionalis* TIMM, 1978 belong to *T. longirostris*.

Tricoma similis COBB

(Plate VII, Figs A-C)

Tricoma similis COBB, 1912, p. 483.

Tricoma similis in TIMM (1970), p. 67-68.

Tricoma similis in DECRAEMER (1978), p.91-102.

Tricoma similis in DECRAEMER (1979), p. 18.

ABERRANT FORM

Material

1 male specimen slide AN 356, sample DR 104.

Measurements

Male (n = 1): L = 870, hd = 21 × 29, cs = 26, sd₇ = 20, sd₁₅ = 19, sd₂₃ = 18, sd₉₀ = 17, sd₁₀₃ = 16, sd₁₁₄ = 12, sl₁ = 11, sv₅ = 17, sv₁₁ = 17, sv₂₂ = 18, sv₁₀₁ = 15, sv₁₀₇ = 13, sv₁₁₃ = 12, sv₁₂₄ = 11, supplement 1 = 2.5, supplement 2 = 4, t = 70, tmr = 32, tmrw = 12, oes = 85, mbd = 30, (mbd) = 23, spic = 36, gub = 19.

Description

Male. — Body long and slender, slightly tapered towards the extremities. Cuticle with 126-127 tricomoid main rings dorsally and 128 rings ventrally; difference in number due to the presence of partial rings. Cuticle of the main rings, with slight secondary annulation, covered by a desmos of secretion and fine granular concretion particles. By accidental removal of the desmos we observe in the middle of the main ring a transverse row of short (2 μm) hairy spines.

Somatic setae arranged as follows :

sub-dorsal : right side : 7, 15, 23, 31, 39 (*), 45 (*), 59, 71, 81, 90, 103, 114 = 12
left side : 8, 14, 22, 29, 35 (*), 54, 66, 74, 86, 98, 108 = 11
sub-ventral : right side : 1, 5, 11, 17, 22, 27, 36, 43, 50, 57, 65, 72, 79, 87, 94, 101, 107, 113, 124 = 19
left side : 1, 6, 11, 17, 21, 28, 33, 46, 55, 63, 70, 77, 84, 91, 96, 103, 110, 116, 124 = 19

(*) Setae broken off.

with the first pair of setae on ring 1, inserted sub-laterally. Somatic setae fine, tapering to a pointed distal tip, inserted on low peduncles not protruding from the desma. Sub-dorsal and sub-ventral setae both shorter posteriorly; first pair of somatic setae shorter than the following setae.

Head, cephalic setae and amphids similar to the type form (see COBB, 1912; TIMM, 1970; DECRAEMER, 1978).

Digestive system with similar structure as type form. Nerve ring surrounding the oesophagus opposite main ring 6. Oesophago-intestinal junction at the end of main ring 10. Ventral organ not observed. Three successive finely granular pseudocoelomocytes with large pale nuclei flank on each side the intestine shortly behind the pigment spots (ocelli). Post-rectal blind sac absent. Cloacal tube protruding from naked medioventral part of body wall in main ring 115. Ocelli very large, dark brownish pigment spots, 15 μm long by 13 μm wide on the right side, situated opposite main rings 13 and 14.

Reproductive system typical (DECRAEMER, 1978). Ejaculatory glands (2) well developed. Rounded cell caudally from gubernaculum (see Pl. VIII, fig. C). Spicules 36 μm long, structured as in type form, but capitulum marked. Muscles spicular apparatus well developed. Gubernaculum 19 μm long, with 6 μm long apophyses, similarly structured as in type form. Muscles of gubernaculum well developed.

Two short, setiform medio-ventral supplements present, respectively on main ring 99 (2.5 μm long) and on main ring 104 (4 μm long).

Tail with 13 main rings. Terminal ring, conical, anteriorly with a desmos and oval-shaped phasmata (3.5 μm wide).

Discussion. — The male specimen from Iles Glorieuses was considered to belong to *Tricoma similis* COBB, 1912 since it possesses the most important diagnostic features of this species i.e. the same copulatory apparatus and two preanal setiform supplements. It also shows a similar head-structure, structure of digestive- and of reproductive system.

It is considered an aberrant form (? geographical race) in having a larger number of main rings: 126-128 rings compared with 77-84 rings in the type form (see COBB, 1912; TIMM, 1970, DECRAEMER, 1978); and in showing a slight difference in number of somatic setae with 11-12 sub-dorsal and 19 sub-ventral setae on each side instead of 14-16 sub-dorsal and 19-27 sub-ventral setae in the type form. Its body length is larger than the largest known specimen of *T. similis* and its spicules and gubernaculum are somewhat smaller than the smallest copulatory apparatus known within this species. However, the variability of the spicule length e.g. may be large, varying between 41-76 μm in Australian specimens; consequently the small differences in length of the copulatory apparatus between the aberrant form and the type form is not of diagnostic importance.

Genus *Antarcticonema* TIMM, 1978

Diagnosis emended. — Tricominae. Body cuticle with homogeneous annulation, ornamented with transverse rows of hairy spines. Arrangement and structure of somatic setae tricomoid. Oesophagus mainly cylindrical. Female reproductive system didelphic-amphidelphic with branches outstretched. Male reproductive system with two testes.

Type species: *A. comicapitatum* TIMM, 1978.

Other species: *A. inaequalis* sp. nov.

Antarcticonema comicapitatum TIMM

(Plate VIII, Figs A-E)

Antarcticonema comicapitatum TIMM, 1978, p. 233-234.

Remarks and additional information based on the study of type material:

Cephalic cuticle thickened and sclerotized, forming a kind of helmet provided with numerous spine-like structures (see 'fine radial tubelike elements' in TIMM, 1978, p. 233) with fine material caught between them. Labial region with two crowns of 6 labial sensory papillae each. Amphidial pore situated at posterior head end. In females with a comparable body length as males, the head dimensions are somewhat smaller.

Oesophagus about cylindrical, narrowing posteriorly. Oesophageal glands clearly protruding (see Fig. A of a female specimen). Intestine a broad cylinder.

Female reproductive system didelphic-amphidelphic, with outstretched branches. Two globular spermathecae. Both uteri overlapping in front of the vagina.

Male reproductive system apparently with two testes (distinguishable in a paratype specimen, other type specimens in poor inner condition). On both sides of the vas deferens, a large, conspicuous ejaculatory gland. Gubernaculum parallel to spicules, proximally with a thicker portion (apophyse) in direct line with distal part.

*Discussion systematic position of *Antarcticonema comicapitatum**:

Comparing *A. comicapitatum* with the other desmoscolecoid-species, I found that it resembles the Tricominae-species in the following features:

- general habitus and head-shape,
- arrangement and structure of somatic setae, different from Greefiellinae FILIPJEV, 1929,
- cephalic setae inserted on a distinct peduncle, absent in Greefiellinae,

— head with the primitive arrangement of the sensory organs in three crowns: 2 crowns of 6 labial papillae each and one crown of 4 cephalic setae as observed in several Tricominae-species; until now not observed in the Desmoscolecidae SHIPLEY, 1896,

— tail structure and tail cone,

— the presence of protruding oesophageal glands, common in Tricominae, not in Desmoscolecidae,

— two testes; in Desmoscolecidae (Desmoscolecinae and Greeffiellinae) always one testis (see DECRAEMER & JENSEN, 1982, p. 324).

Taking the former features into account, especially the last one, I consider *A. comicapitatum* to belong to the Tricominae (Meyliidae DE CONINCK, 1965).

Antarcticonema inaequalis sp. nov.

(Plate IX, Figs A-E)

Material

Holotype: male slide AN 352.

Paratypes: 1 ♂ slide RIT 37, 1 ♀ slide AN 353, 1 ♀ slide AN 354.

Type locality. — South-east of Iles Glorieuses, lat. 11° 44', long. 47° 30', collected at 3700 m depth.

Measurements

Holotype male: L = 580, hd = 25 × 22, cs = 21-28, sd₂₀ = 25, sd₃₄ = 28, sd₄₁ = 38, sd₆₅ = 38, sd₇₂ = 40, sd₉₅ = 42, sd₁₁₃ = 36, sd₁₃₀ = 45, sl₆ = 17, sv₁₇ = 22, sv₅₄ = 20, sv₉₅ = 22, sv₁₂₂ = 10, t = 134, tmr = 48, oes = 41, spic = 20 (left), spic = 24 (right), gub = 8.5.

Paratype male (n = 1): L = 525, hd = 25 × 18, cs = 21-28, sd₁₈ = 27, sd₃₃ = 28, sd₄₅ = 37, sd₆₁ = 38, sd₈₀ = 41, sd₉₈ = 41, sd₁₁₇ = 28, sd₁₃₃ = 43, sl₆ = 27, sv₁₀ = 22, sv₃₇ = 22, sv₅₁ = 21, sv₇₇ = 20, sv₁₀₃ = 15, t = 121, tmr = 60, oes = 55, spic = 23 (left), spic = 16 (right).

Paratype females (n = 2): L = 680-710, hd = 30 × 30-31, cs = 29-37, sd₂₂ = 22-39, sd₃₇ = 20-39, sd₅₅ = 35-47, sd₈₁ = 27-45, sd₉₉ = 36-50, sd₁₁₅ = 38-40, sd₁₃₁ = 41-44, sd₁₄₃ = 40-47, t = 134-, tmr = 67-, oes = 52-64; V = 45-45.5 %.

Description

Body tapered at both ends, especially in tail region. Cuticle consisting of 143 to 156 narrow homogeneous annules. Each annule with a transverse row of hairy spines, 4.5-6 μm long, with fine concretion particles caught between them.

Somatic setae, inserted on minute peduncles, show no differentiation in structure; they all taper distally to a fine open tip. The two anterior-most sub-dorsal setae on each side, are slenderer and shorter than the following setae which are large and stout setae. The sub-ventral setae are shorter than the sub-dorsal ones.

Head more or less triangular in side view, slightly tapered to a broadly rounded end with six minute papillae. Its cuticle thickened and sclerotized. Cephalic setae, distally tapered and over their whole length flanked by a membrane, inserted on low peduncles about halfway along the length of the head or in the posterior head-region. They are unequal in length (except in a female paratype) with the sub-ventral cephalic setae being shorter than the sub-dorsally inserted setae i.e. 21-22 μm against 26-28 μm in males and 29-30 μm against 37 μm in female. Amphids, large vesicular, anteriorly almost reaching to the stomatal region and posteriorly extending on to the first body annule. Amphidial pore at the level of, or just posterior to the insertion of the cephalic setae.

Buccal cavity small (4 μm deep), sclerotized. Oesophagus short cylindrical, with narrower end-part surrounded by the nerve ring. Intestine not, or slightly overlapping the rectum.

Tail slender, tapered towards a long, fine conical ending with spinneret. Three caudal glands. Phasmata not observed.

Males. — Somatic setae arranged as follows: holotype male:

sub-dorsal : right side : 18, 33, 45, 61, 80, 98, 117, 133 = 8
 left side : 18, 36, 47, 68, 83, 103, 110, 135 = 8
 sub-ventral : right side : 6 (*), 10, 37, 64, 93, 122 = 6
 left side : 6 (*), 19, 52, 86, 125 = 5

Paratype male:

sub-dorsal : right side : 21, 35, 49, 66, 88, 111, 129, 145 = 8
 left side : 20, 34, 53, 77, 95, 111, 128, 145 = 8
 sub-ventral : right side : 7 (*), 17, 44, 98, 131 = 5
 left side : 6 (*), 18, 58, 118, 139 = 5

Ocelli very large, light-yellow pigment patches with brownish nucleus (?).

Reproductive system diorchic; testes opposed, left testis reflexed. Spicules straight, with slightly marked capitulum and distally tapered to a fine tip. They are unequal in length and show a differentiation (pronounced or not) in shape between left and right spicule (see fig. holotype). Gubernaculum, a short rod-like structure in side view; only observed in the holotype. Cloacal tube clearly protruding from the ventral body wall.

(*) Shifted to a sub-lateral position.

Females. — Somatic setae arranged as follows in a paratype female :

- sub-dorsal : right side : 22, 37, 55, 81, 99, 115, 131, 143 = 8
 left side : 22, 36, 53, 80, 98, 113, 129, 143 = 8
 sub-ventral : right side : 7 (*), 18, 45, 64, 91, 112, 140 = 7
 left side : 7 (*), 19, 45, 62, 91, 110, 140 = 7

Ocelli rounded dark-brownish pigment spots, smaller than in males.

Reproductive system didelphic-amphidelphic with outstretched branches. Both uteri overlapping in front of vagina. Vulva in ring 72 in a paratype female, is at 45-45.5 % of total body length from anterior. Two spermathecae, not clearly marked off. No anal tube protruding from the ventral body wall.

Diagnosis. — *Antarcticonema inaequalis* sp. nov. is characterized by the combination of the following characters : a homogeneous annulation of the body cuticle, ornamented with transverse rows of hairy spines, a slightly triangular head-shape (in side view) with thickened sclerotized cuticle, a slender tail with fine long conical endring, the structure and distribution of the somatic setae, the unequal length of the cephalic setae and the unequal length of the spicules.

Differential diagnosis. — *A. inaequalis* sp. nov. differs from *A. comicapitatum* in head-structure, possessing no crown of spines and concretion, by the length and shape of the cephalic setae, by the larger and thin-walled amphids, by the arrangement of the somatic setae, by the ornamentation of the body cuticle with shorter hairy spines than in *A. comicapitatum*, by the tail-shape and the shape of the endring and by the shape of the copulatory apparatus.

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VI. REFERENCES

- COBB, N. A.
 1912. Helminthology. Further notes on *Tricoma*. — *J. Wash. Acad. Sci.*, 2, 480-484.
 DE CONINCK, L.
 1965. Classe des Nématodes. — In *Traité de Zoologie* (ed. P. P. GRASSE), Tome IV : Nematelminthes (Nématelminthes, Nématodes). Fasc. II, (Masson : Paris).

(*) shifted to a sub-lateral position.

DECRAEMER, W.

1978. Morphological and taxonomic study of the genus *Tricoma* COBB (Nematoda : Desmoscolecida), with the description of new species from the Great Barrier Reef of Australia. — *Aust. J. Zool., Suppl. Ser.*, 55, 1-121.
1978. Scientific report on the Belgian expedition to the Great Barrier Reef in 1967. Nematodes IX. Four new species of *Quadricoma* FILIPJEV (Nematoda, Desmoscolecida). — *Zoologica Scripta*, 6, 275-292.
1978. Taxonomic problems within the Desmoscolecida (Nematoda). — *Annales Soc. r. Zool. Belg.*, 108, 1-2, 13-20.

DECRAEMER, W. & JENSEN, P.

1982. Revision of the subfamily Meyliinae DE CONINCK, 1965 (Nematoda : Desmoscolecoidae) with a discussion of its systematic position. — *Zoological Journal of the Linnean Society*, 75, 317-325.

FILIPJEV, I.

1929. Classification of freelifving Nematoda and relations to parasitic forms. — *J. Parasit.*, 15, 281-282.

FREUDENHAMMER, I.

1975. Desmoscolecida aus der Iberischen Tiefsee, zugleich eine Revision dieser Nematoden-Ordnung. — *Meteor-Forschungsber.*, Reihe D, No 20, 1-65.

PALADIAN, G. & ANDRIESCU, I.

1963. Contributions à l'étude des Desmoscolecidae (Nematoda) des eaux roumaines de la Mer Noire. — *Trav. Mus. Hist. Nat., Grigore Antipa*, 4, 167-173.

SCHRAGE, M. & GERLACH, S. A.

1975. Über Greeffiellinae (Nematoda, Desmoscolecida). — *Veröff. Inst. Meeresforsch. Bremerhaven*, 15, 37-64.

SHIPLEY, A. E.

1896. Nematelminthes. In *The Cambridge Natural History* (ed. S. F. HARMER & A. E. SHIPLEY), Vol. 2 (Cambridge, Weldon u. Wesley). Reprint 1959, Weinheim, Engelmann.

SOUTHERN, R.

1914. Nematelmia, Kinorhyncha and Chaetognatha (Clare Island survea, part 54). — *Proc. R. Ir. Acad.*, 31, 1-80.

STEINER, G.

1916. Neue und wenig bekannte Nematoden von der Westküste Afrikas I. — *Zool. Anz.*, 47, 322-351.

TIMM, R. W.

1970. A revision of the nematode order Desmoscolecida FILIPJEV, 1929. — *Univ. Calif. Publ. Zool.*, 93, 1-99.
1978. Marine nematodes of the order Desmoscolecida from McMurdo Sound, Antarctica. — *Biology of the Antarctic Seas VI. Antarctic Research Series*, 26, 225-236.

EXPLANATION OF THE PLATES

PLATE I

Desmotricoma spinicauda gen. n., sp. nov.

- Fig. A. — Female, surface view of head (holotype).
Fig. B. — Female, anterior body region (holotype).
Fig. C-D. — Female, entire specimen in surface view (holotype).

PLATE II

Tricoma bullapophysa sp. nov.

- Fig. A. — Male, surface view of head (holotype).
Fig. B. — Female, surface view of head (paratype slide RIT 34).
Fig. C. — Female, surface view of head (paratype slide AN 355).
Fig. D. — Female, entire specimen (paratype slide AN 355).
Fig. E. — Male, copulatory apparatus (holotype).
Fig. F. — Male, copulatory apparatus and tail (holotype).

PLATE III

Tricoma curvespiculata sp. nov.

- Fig. A. — Male, entire specimen (holotype).
Fig. B. — Male, surface view of head (holotype).
Fig. C. — Female, tail partly in surface view (paratype slide AN 360).
Fig. D. — Female, surface view of head (paratype slide AN 360).

PLATE IV

Tricoma gloriosa sp. nov.

- Fig. A. — Male, surface view of head (paratype slide AN 361).
Fig. B. — Male, surface view of head (holotype).
Fig. C. — Male, entire specimen (holotype).
Fig. D. — Female, entire specimen (paratype slide AN 362).

PLATE V

Tricoma brevirostris (SOUTHERN)

- Fig. A. — Male, surface view of head (slide AN 357).
Fig. B. — Male, anterior body region (slide AN 357).
Fig. C. — Male, copulatory apparatus and tail (slide AN 357).

PLATE VI

Tricoma longirostris (SOUTHERN)

- Fig. A. — Male, surface view of head (slide AN 358).
Fig. B. — Male, anterior body region (slide AN 358).
Fig. C. — Male, copulatory apparatus and tail (slide AN 358).

PLATE VII

Tricoma similis COBB (aberrant form)

- Fig. A. — Male, surface view of head (slide AN 356).
Fig. B. — Male, anterior body region (slide AN 356).
Fig. C. — Male, posterior body region (slide AN 356).

PLATE VIII

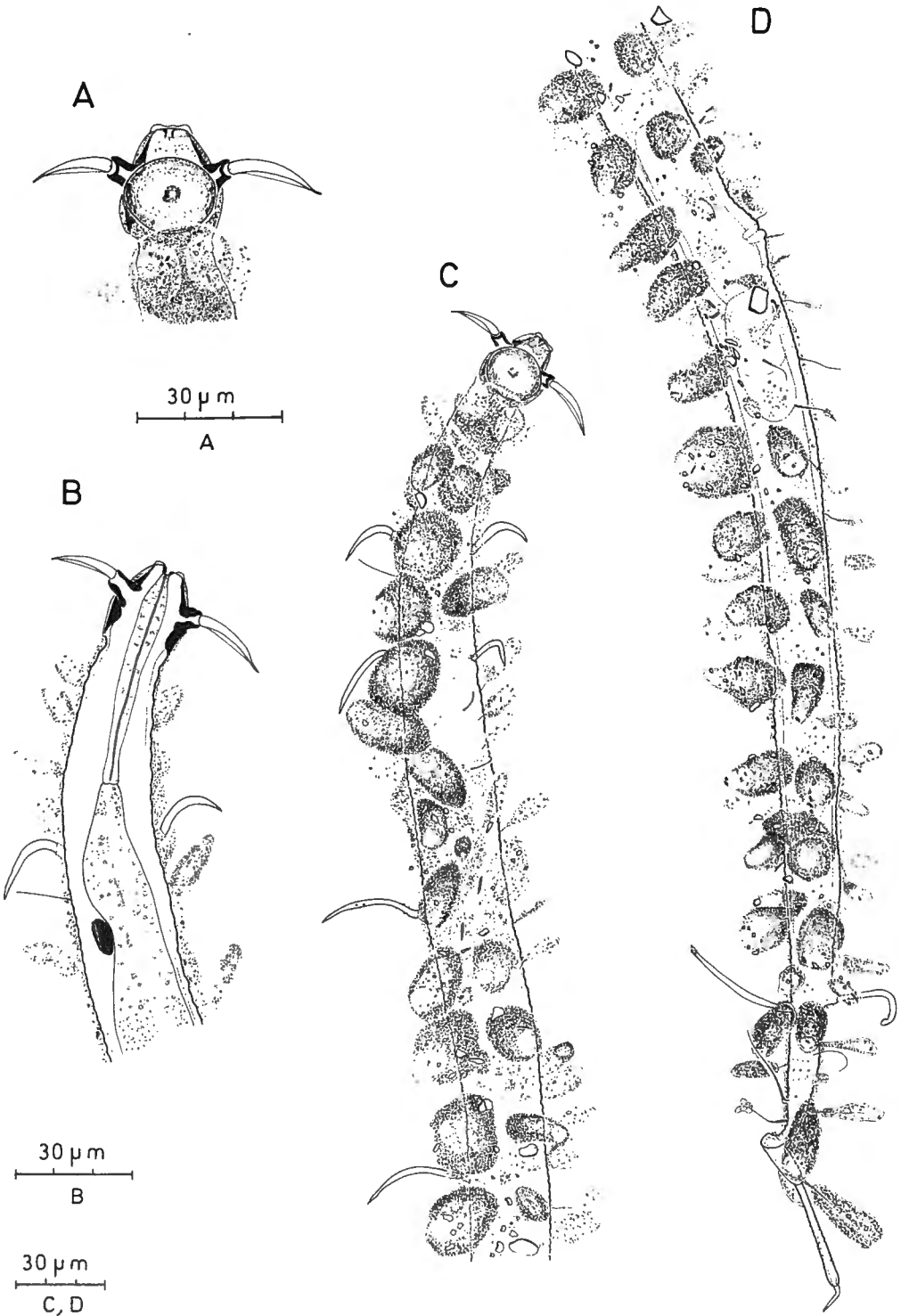
Antarcticonema comicapitatum TIMM

- Fig. A. — Female, anterior body region (paratype slide NMNH 67636).
Fig. B. — Female, surface view of head (paratype slide NMNH 49998).
Fig. C. — Female, reproductive system (paratype slide NMNH 67637).
Fig. D. — Male, surface view of head (paratype slide NMNH 67632).
Fig. E. — Male, posterior body region (paratype slide NMNH 67632).

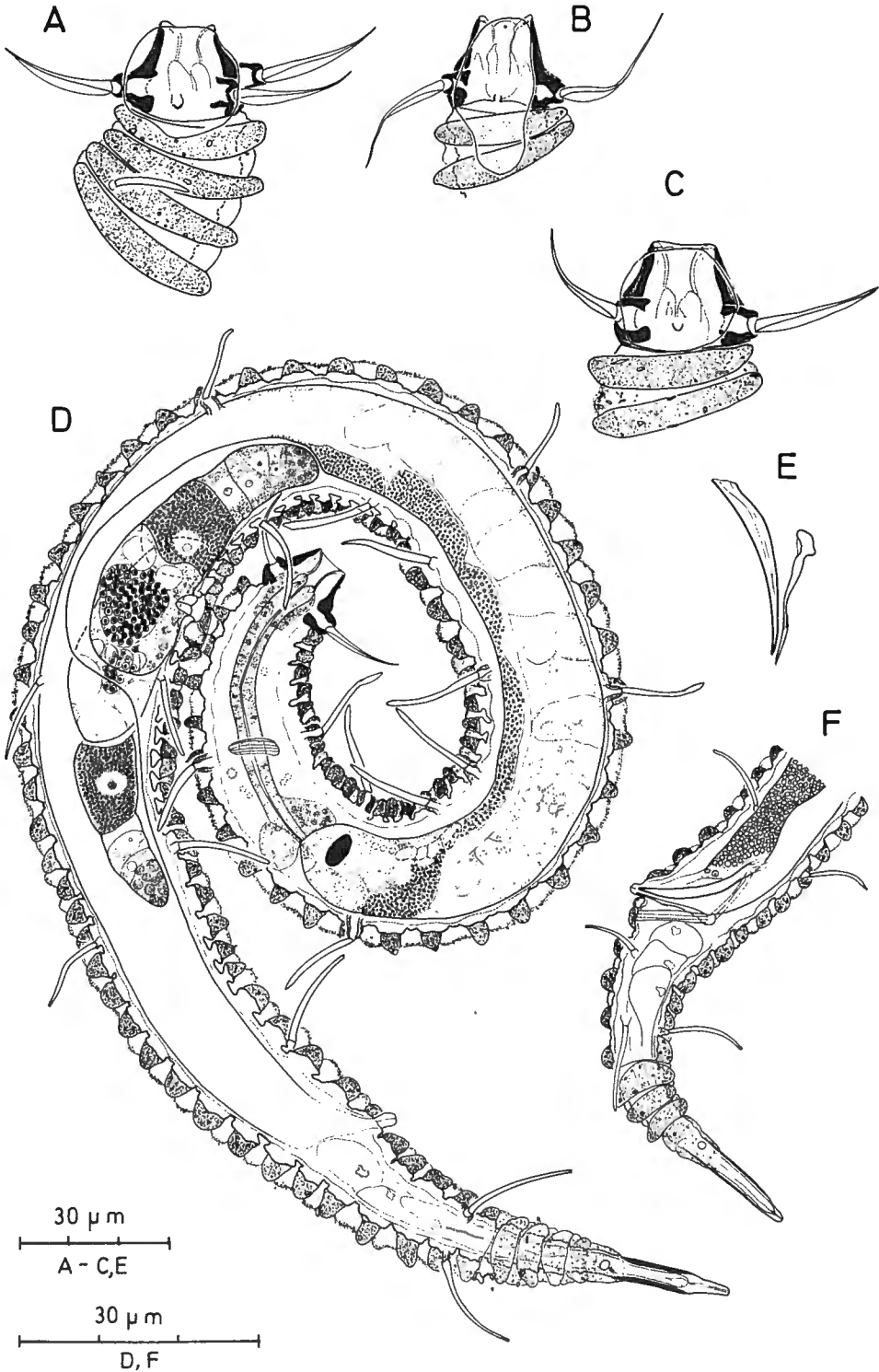
PLATE IX

Antarcticonema inaequalis sp. nov.

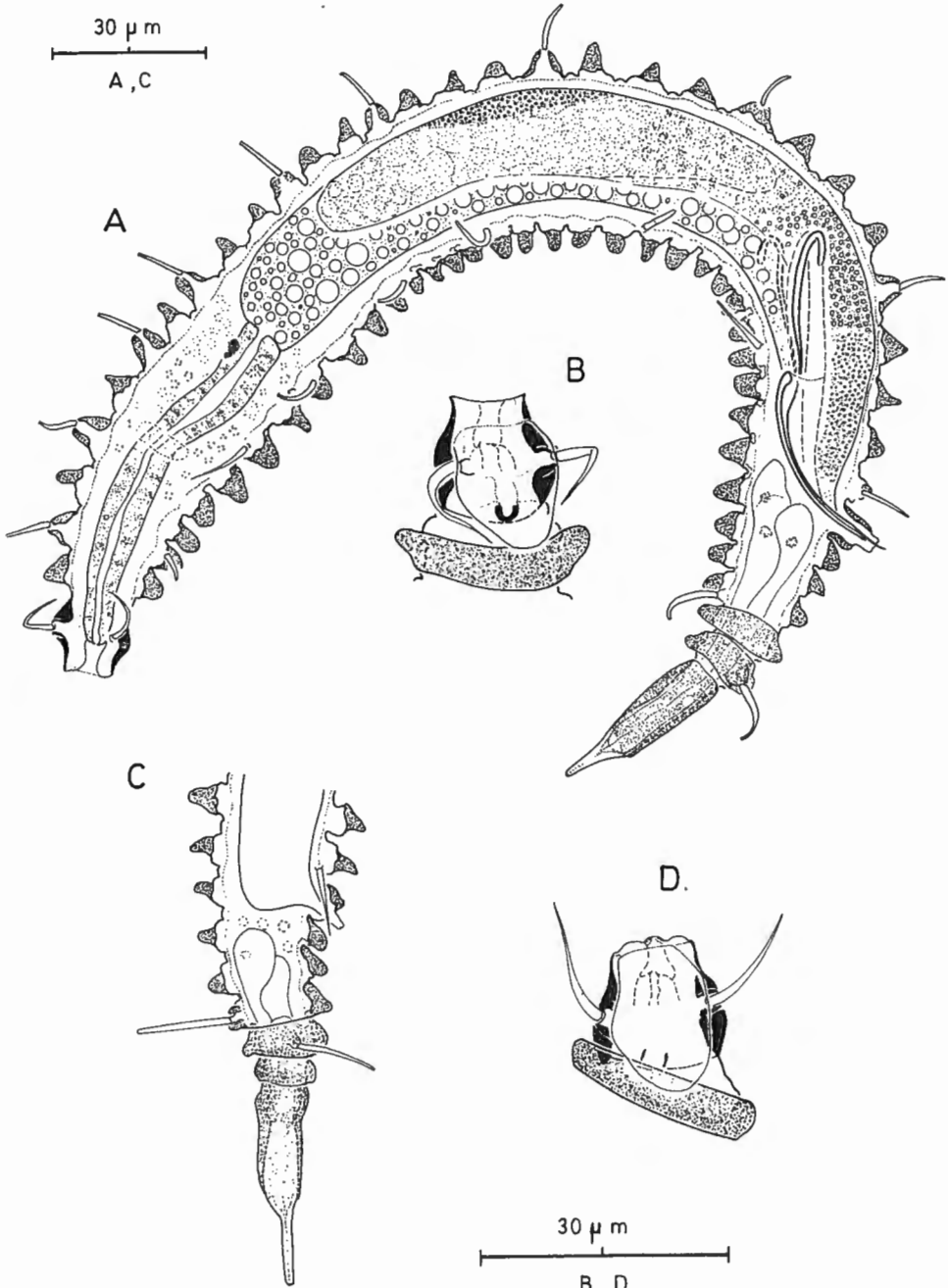
- Fig. A. — Male, surface view of head (holotype).
Fig. B. — Male, entire specimen (holotype).
Fig. C. — Male, posterior body region (paratype slide RIT 37).
Fig. D. — Female, surface view of head (paratype slide AN 353).
Fig. E. — Female, tail (paratype slide AN 353).



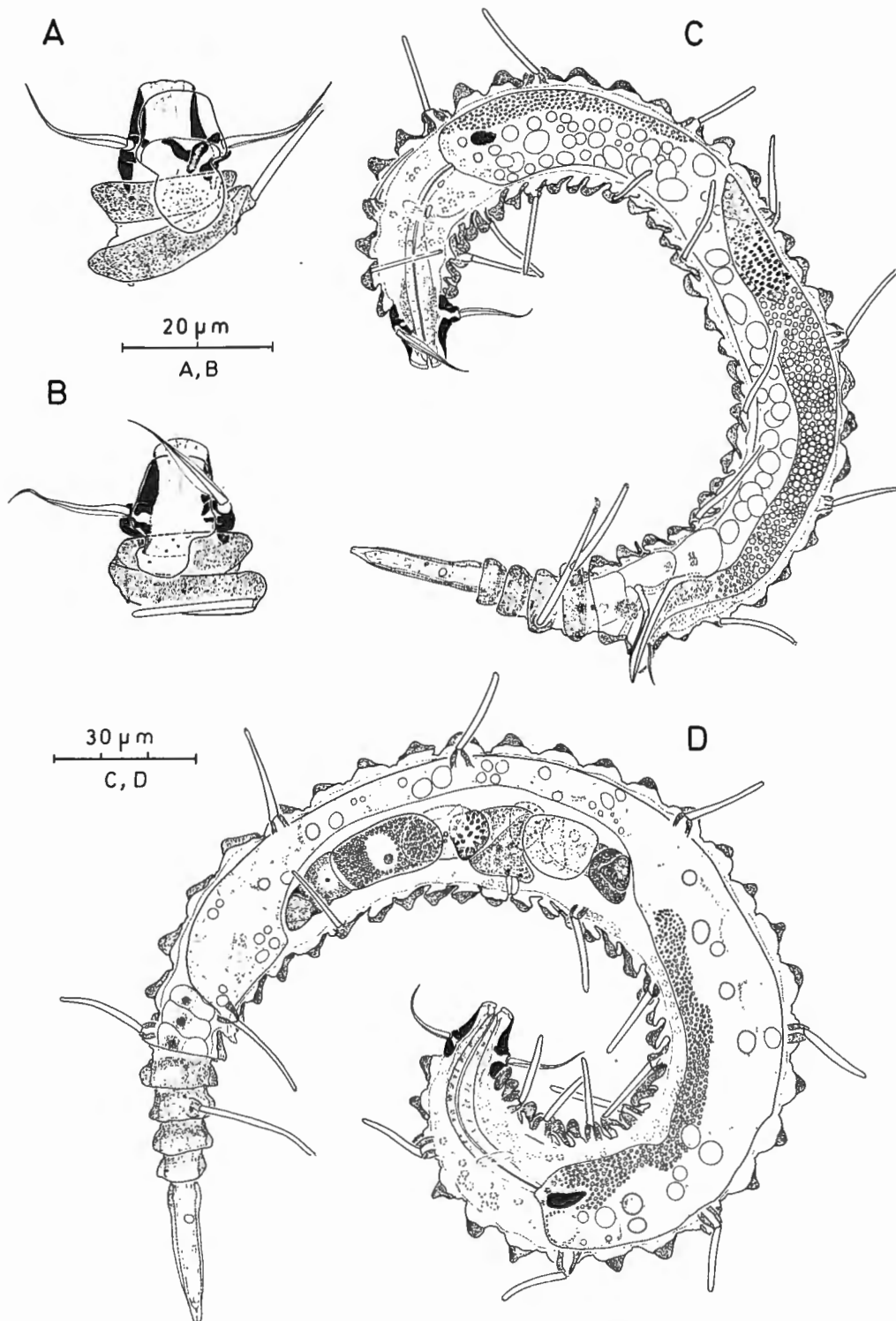
W. DECRAEMER. — Tricominae (Nematoda — Desmoscolecida)
from the northern part of the Moçambique Channel,
with five new species and one new genus



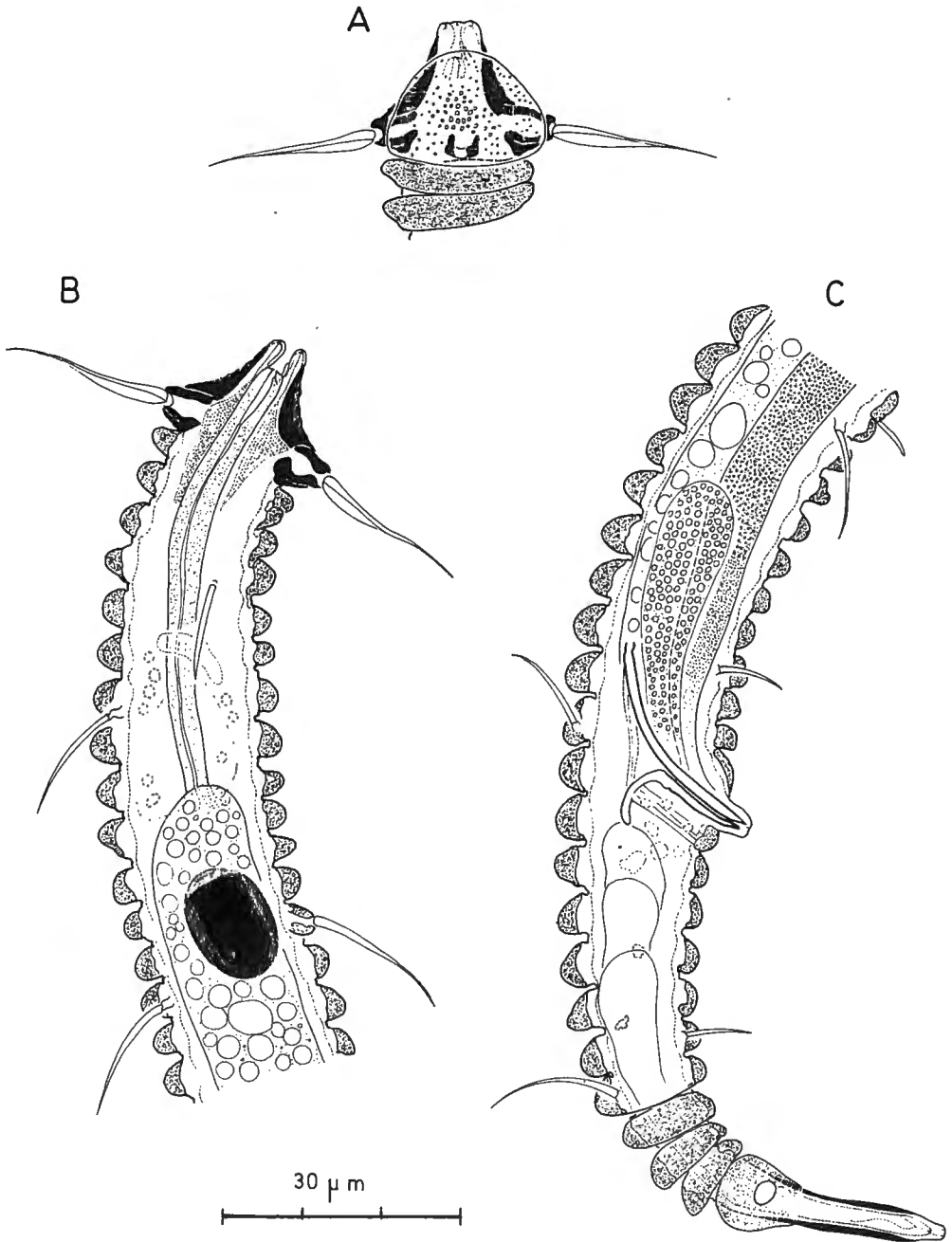
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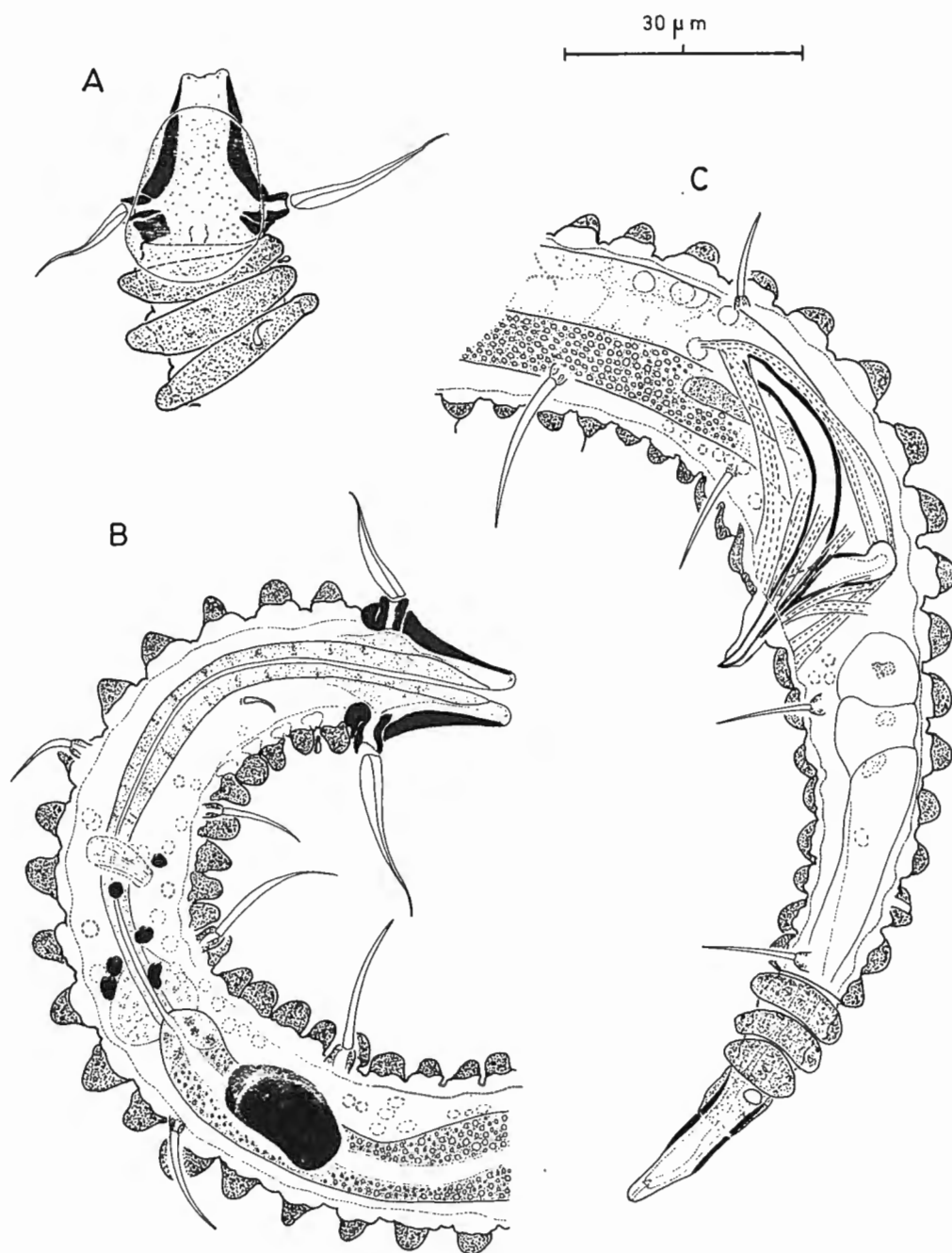
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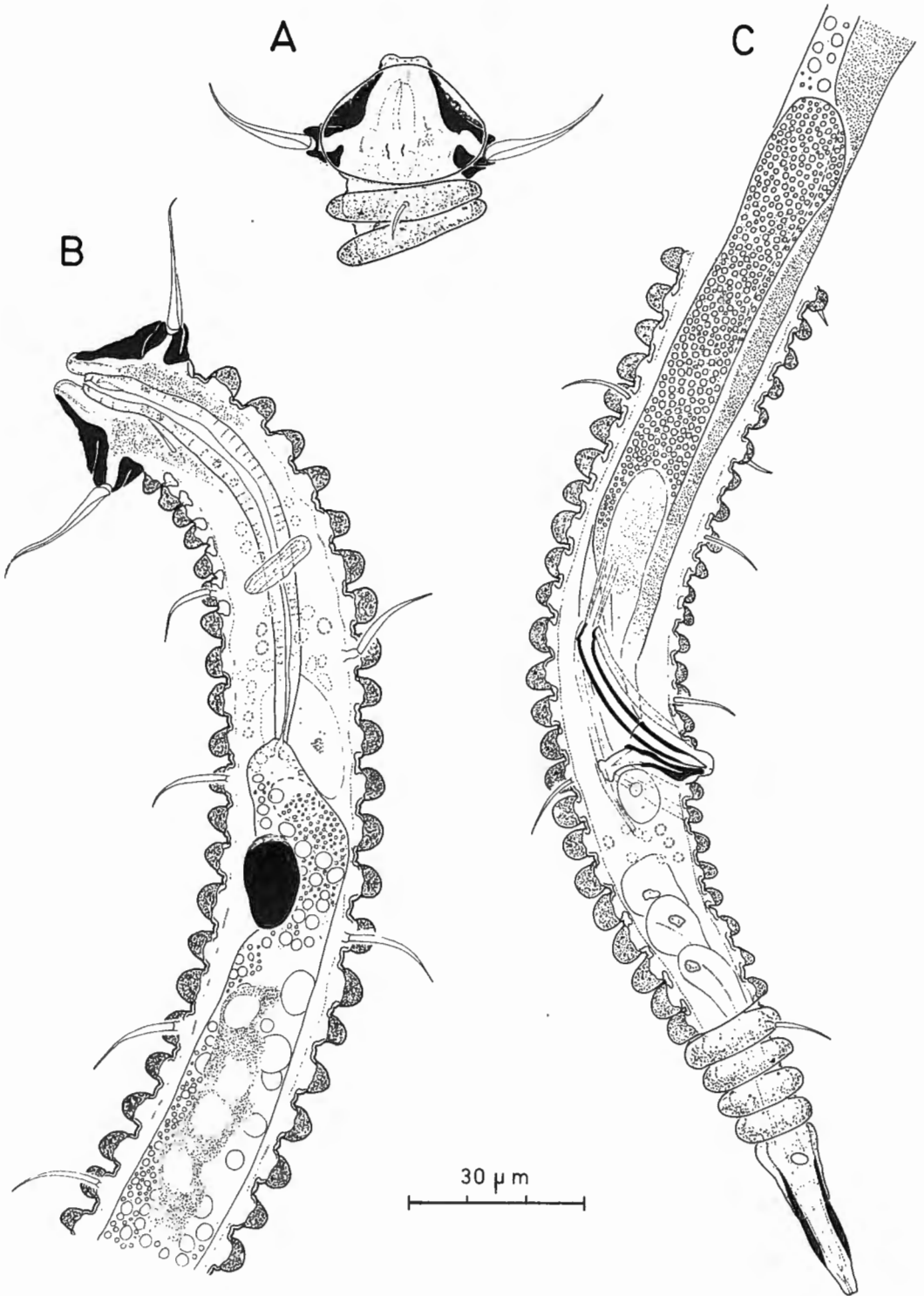
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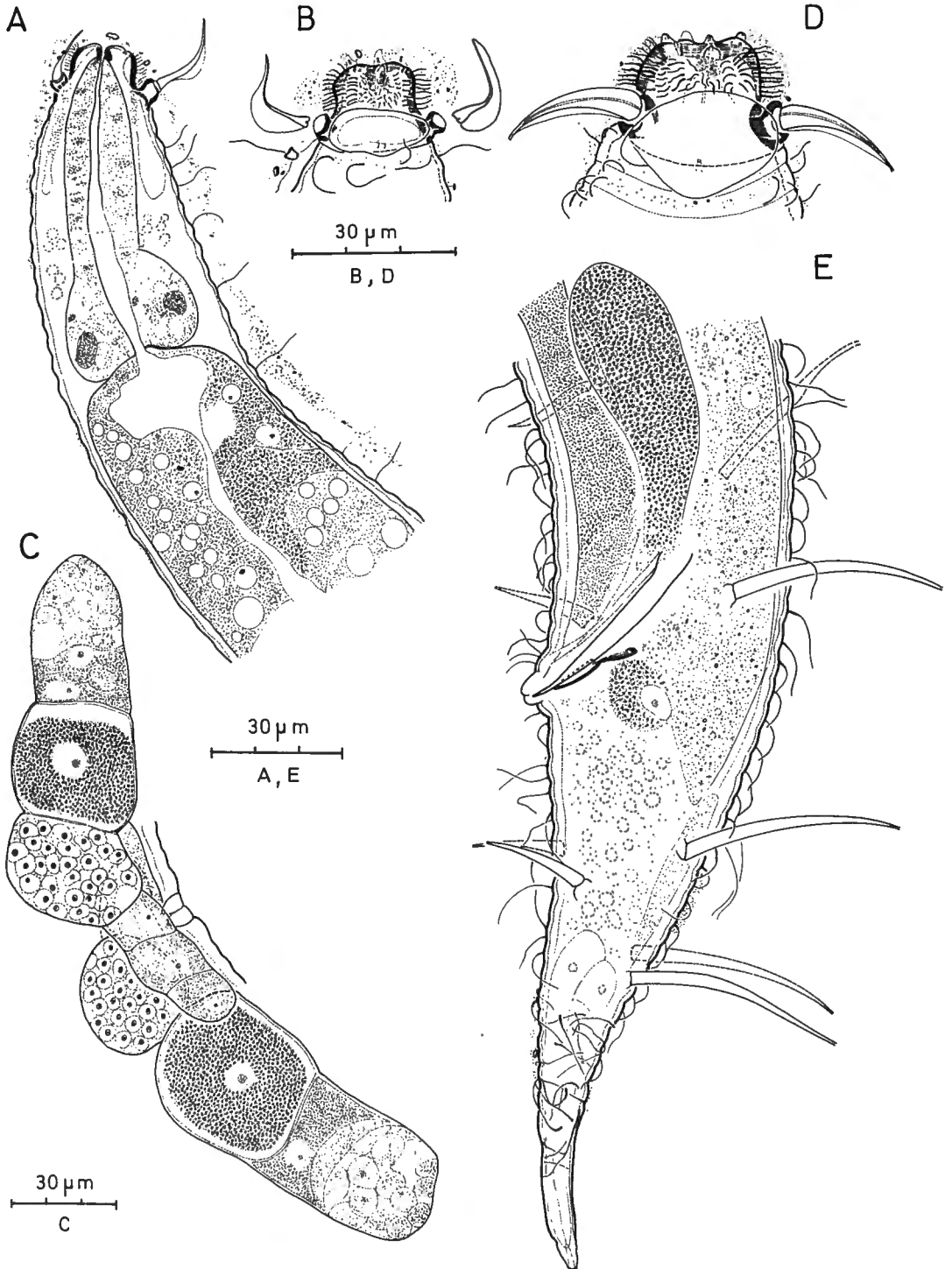
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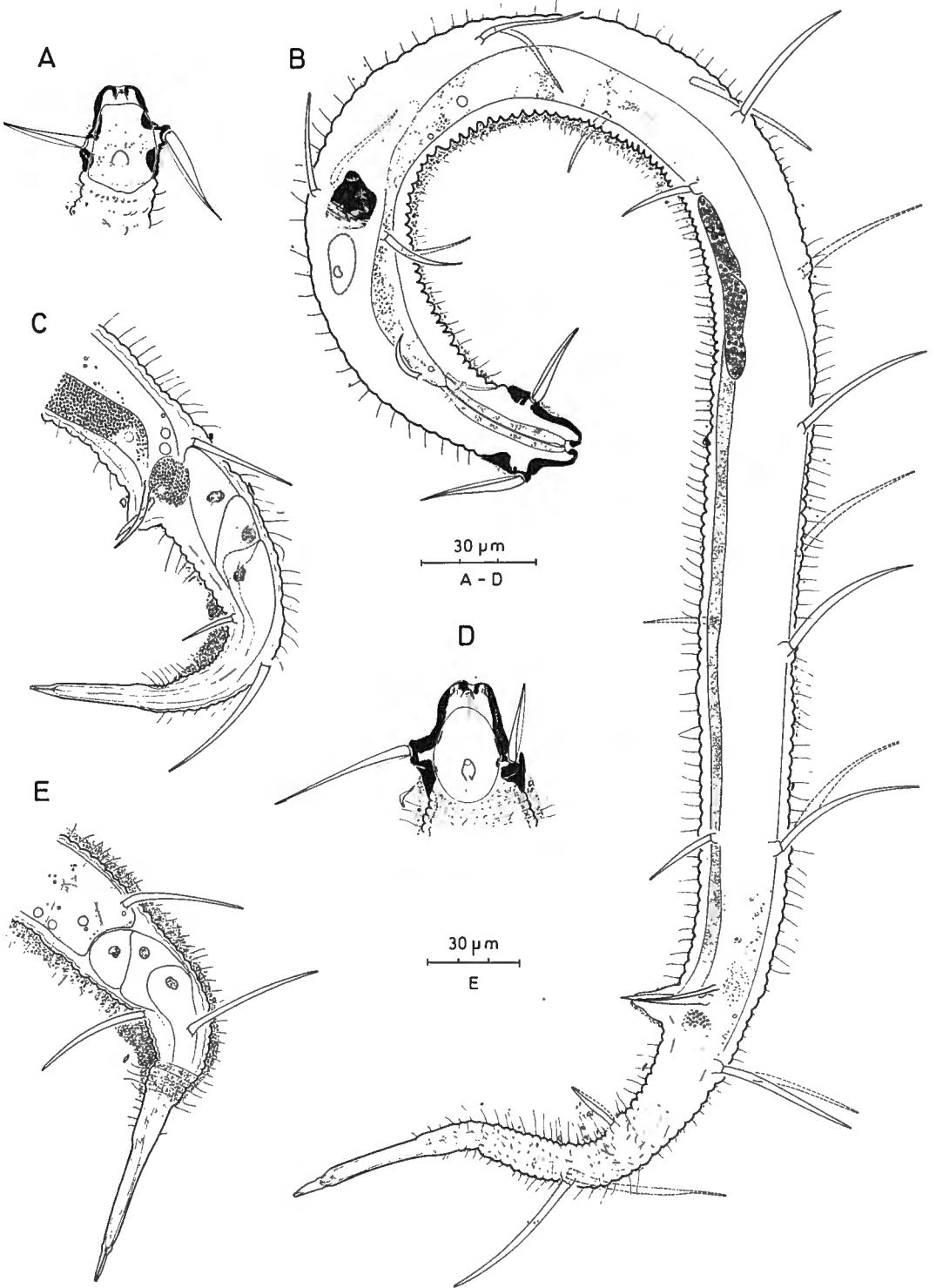
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