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MEYLIIDAE (NEMATODA-DESMOSCOLECOIDEA)
WITH FOUR NEW SPECIES AND TWO NEW GENERA

BY

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(With 4 plates)

SUMMARY

Seven Meyliidae-species are described, four of them are new : *Boucherius spinosus* (GERLACH, 1956) comb. n., *B. floridanus* sp. n., *Gerlachius lissus* (GERLACH, 1956) ANDRASSY, 1976, *Meylia alata* GERLACH, 1956, *M. vangoethemi* sp. n., *Noffsingeria omeri* gen. n., sp. n. and *N. grandiamphis* sp. n.

The different types of ornamentations of the body cuticle are considered significant features, separating the seven species in four genera, two of which were already described : *Meylia* GERLACH, 1956 and *Gerlachius* ANDRASSY, 1976 and two new genera : *Boucherius* gen. n. and *Noffsingeria* gen. n.

RESUME

Sept espèces de Meyliidae dont quatre espèces nouvelles sont décrites : *Boucherius spinosus* (GERLACH, 1956) com. n., *B. floridanus* sp. n., *Gerlachius lissus* (GERLACH, 1956) ANDRASSY, 1976, *Meylia alata* GERLACH, 1956, *M. vangoethemi* sp. n., *Noffsingeria omeri* gen. n. sp. n., et *N. grandiamphis* sp. n.

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Les différents types d'ornementation de la cuticule du corps sont considérés comme des caractères valables qui permettent de répartir les sept espèces en quatre genres. Deux de ces genres ont déjà été décrits, *Meylia* GERLACH, 1956 et *Gerlachius* ANDRASSY, 1976, et deux sont nouveaux, *Boucherius* gen. n. et *Noffsingeria* gen. n.

INTRODUCTION

When describing the three *Meylia*-species, GERLACH (1956, pp. 107-108) already marked their possible generic differences, but because of limited material they were described under the same genus.

In samples from Øresund (Denmark), Brittany (France), Loch Eve (Scotland) and Carl Sound (Florida), we came across seven *Meylia*-species; three of them : *M. alata*, *M. lissa* and *M. spinosa* are described by GERLACH (1956), the other four are new species.

MATERIAL AND SPECIMENS

Present study of Meyliidae includes 16 specimens, differentiated in 7 species deriving from four marine habitats :

- Western Channel, Brittany, France, at sampling station Pierre Noire (G. BOUCHER, 1980, p. 9), 19 m depth, fine sand, collected in 1972-1973 by G. BOUCHER. Species found : *Boucherius spinosus*, *Gerlachius lissus*, *Meylia alata*, *M. vangoethemi*, *Noffsingeria omeri*, *N. grandiamphis*.
- Øresund, Denmark, at Ellekilde Hage (P. JENSEN, 1980, p. 213), 16 m depth, fine sand, collected in 1979-1980 by P. JENSEN and T. TURPEENNIEMI.
Species found : *Boucherius spinosus*.
- Firemore Bay, Loch Eve, Scotland, at sampling station II (McINTYRE & MURISON, 1973) intertidal, fine sand, collected in 1965.
Species found : *Boucherius spinosus*.
- Carl Sound, Florida, fine sand, collected on 15-1-1971 by B. HOPPER.
Species found : *Boucherius floridanus*.
An additional female specimen of *B. spinosus* from the collection of Dr. S. LORENZEN from the North Sea, was examined.
All specimens were fixed in 4 % formalin and mounted in glycerol.

The specimens are deposited in the following institutes and collections :

- Zoological Museum, University of Copenhagen, Denmark (ZMUC) : *Boucherius spinosus* slides ZMUC 200e-g, ZMUC 200i.
- Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, Belgium (KBIN) : *B. spinosus* slides RIT 4-5.

- National Museum of Natural History (NMNH) Smithsonian Institution, Washington : *B. floridanus* slide USNM N° 67469.
- Centre d'Etude d'Océanographie et de biologie marine, Roscoff, France : *B. spinosus* slide R 1952, *Meylia alata* slide R 3291, *M. vangoethemi* slide R. 1631, *Noffsingeria omeri* slides PNG 286, R 1280, *N. grandiamphis* slide R 3130, *Gerlachius lissus* slide 11897.
- Zoological Institute at the University of Kiel, D. B. R., collection of S. LORENZEN : *B. spinosus* slide B 139.
- Collection of Dr. B. HOPPER, Nepean, Ontario, Canada : *B. spinosus* slide 9A.

ABBREVIATIONS

- L : length of body
 hd : head diameter (length \times width)
 hl : length of head
 hw : head width
 cs : length of cephalic setae
 sd₁ : length of first subdorsal seta
 sd_t : length of subdorsal seta(e) on the tail
 sv₁ : length of first subventral seta
 amph.-ant. : distance of amphid from anterior body end
 oes. : length of oesophagus
 mbd : maximum body diameter
 t : tail length
 spic. : length of spicules, measured along the median line
 gub : length of gubernaculum
 apof. gub. : length of apofyse of gubernaculum
 tmr : length of terminal ring
 V : position of the vulva as percentage of the body length
 a, b, c : proportions of DE MAN (1880).

All measurements are in μm .

DESCRIPTIONS

Boucherius spinosus GERLACH, 1956, gen. n., comb. n.

(Plate I, Fig. 1-6)

Syn. *Meylia spinosa* GERLACH, 1956, pp. 108.

Material. — 4 ♀♀, 2 ♂♂ from Øresund, Denmark, 1 ♀ from Brittany, France; 1 ♀ from Loch Ewe, Scotland; 1 ♀ from North Sea, Germany.

Boucherius gen. n. is dedicated to Dr. G. BOUCHER, Station Biologique, Roscoff, France.

Measurements

Specimens from Øresund

Female 1 (slide RIT 4): $L = 650$, $hd = 7.5 \times 9.5$, $sd_1 = 8$, $sd_2 = 6$, $sd_4 = 7$, $sd_5 = 6.5$, $cs = 15$, $sv_1 = 7$, $sv_4 = 10$, $sv_5 = 11$, $sv_6 = 8$, $amph.-ant. = 12$, $oes. = 51$, $mbd = 23$, $t = 84$; $a = 28.2$, $b = 12.7$, $c = 7.7$; $V = 54$.

Female 2 (slide ZMUC 200e): $L = 680$, $mbd = 26$, $t = 86$; $a = 26.1$, $c = 7.9$; $V = 55$.

Female 3 (slide ZMUC 200f): $L = 650$, $hd = 10 \times 10$, $cs = 15$, $sv_1 = 7$, $sv_2 = 9.5$, $sv_3 = 11$, $amph.-ant. = 11$, $oes. = 55$, $mbd = 23$, $t = 83$; $a = 28.3$, $b = 11.8$, $c = 7.8$; $V = 57$.

Female 4 (slide ZMUC 200g): $L = 770$, $hd = 9 \times 9.5$, $cs = 14$, $sv_1 = 8$, $amph.-ant. = 12$, $oes. = 56$, $mbd = 25$, $t = 100$; $a = 30.8$, $b = 13.7$, $c = 7.7$; $V = 55$.

Male 1 (slide RIT 5): $L = 800$, $hd = 8.5 \times 10$, $cs = 18$, $sd_1 = 7$, $sd_2 = 8.5$, $sd_3 = 8.5$, $sv_1 = 8$, $sv_2 = 8.5$, $sv_3 = 6.5$, $sv_4 = 11$, $sv_5 = 12$, $amph.-ant. = 15$, $oes. = 61$, $mbd = 21$, $spic. = 36$, $gub. = 10$, $apof. gub. = 9$, $t = 100$; $a = 38.0$, $b = 13.1$, $c = 8.0$.

Male 2 (slide ZMUC 200i): $L = 720$, $hd = 10 \times 9.5$, $cs = 15$, $amph.-ant. = 11$, $spic. = 38$, $gub. = 10$, $apof. gub. = 9.5$, $t = 96$; $mbd = 19$; $a = 37.8$, $c = 7.5$.

Female specimen from Scotland, slide 9A.

$L = 1195$, $hd = 9.5 \times 9.5$, $cs = 20$, $amph.-ant. = 10$, $oes. = 63$, $mbd = 32$, $t = 90$, $spines 4.5-7$; $a = 42.5$, $b = 21.5$, $c = 13.3$; $V = 51$.

Description Øresund specimens

Body relatively broad, mainly uniformly wide, but tapering towards both extremities. Cuticle finely annulated (403-412 rings in a female specimen); each ring with a transverse row of fine spines, 3-5 μm long.

Somatic setae fine, 6-11 μm long; usually there is one subdorsal and one subventral seta on each body side in the oesophageal region and three subventral setae on each body side in the tail region; but in a female specimen six subventral and five subdorsal to dorsosublaterally inserted setae on each body side and in two male specimens ten subventral setae and nine subdorsal setae on each body side were observed. Somatic setae in tail region somewhat longer than the other body setae.

Head truncated triangular in lateral view, about as long as wide. Head not offset from the rest of the body, extending posteriorly to just behind the peduncles of insertion of the cephalic setae, where the obvious body annulation begins. Head cuticle neither thickened nor sclerotized; a very fine annulation may be observed in longitudinal optical section, except in the stomatal region. The rows of fine spines observed on the body cuticle continue on the head and become scarce and irregularly anteriorly near the stomatal region. Labial region rather obscure, apparently with six lips; labial sensorial organs obscure.

Cephalic setae, slender, with broader basal part tapered to a fine distal part, 15-18 μm long, inserted on short peduncles.

Amphids large vesicular in surface view (Pl. I, Fig. 2, 5), sometimes rather obscure; in longitudinal optical section they appear as smaller, distinct (cuticular?) rings with inner spiral structure and with a single coil continuing in a fine canal and widened ampulla. Amphids situated in the subcephalic region, slightly varying in position with the individual, the anterior border of the amphidial ring lying at 12 to 15 μm from the extreme anterior border.

Stoma short, about 1.5 μm deep; unarmed. Oesophagus consisting of an anterior muscular part (66-69 % of the total oesophageal length), slightly widening posteriorly and continuing in a very slender nonmuscular end part, terminally surrounded by several nuclei. Nerve ring surrounding the oesophagus terminally. Dorsal oesophageal gland strongly developed, protruding as a large posteriorly swollen lobe, which extends far posteriorly along the anterior part of the intestine. The enlarged posterior glandular part with distinct nucleus and nucleolus, partly surrounds the intestine dorsally to dorsosublaterally. Both subventral oesophageal glands seen as obscure, small protruding lobes extending to the cardiacal region. Cardia, 5.5-6.5 μm long elongated structure bulging out into the intestinal lumen. Intestine anteriorly narrow cylindrical with finely granular wall, gradually widening posteriorly to a broad cylinder with fine and larger granula. No postrectal intestinal overlapping.

Posterior to the protruding dorsal oesophageal gland lies a series of small, finely granular pseudocoelomocyte cells with each a distinct nucleus and nucleolus: 2 or 4 consecutive cells in dorsal position and one in dorsolateral position. They are followed by two large finely granular cells, partly surrounding and constricting the intestine: the anterior cell surrounds the intestine dorsally and laterally on the left body side; the posterior one surrounds the intestine dorsally and laterally on the right body side in male as well as in female. In a female specimen the posterior cell lies shortly anterior to the anterior ovary.

Tail gradually tapering posteriorly towards a smooth end without spines; spinneret present. Three caudal glands with distinct nuclei well developed; they may extend beyond the anal opening in male as in female.

Males. — Reproductive system with two extended testes, the left testis posteriorly reflected and smaller than the right anterior one.

Spicules, 36-38 μm long, arched, gradually widening proximally to a hardly offset capitulum, distally with pointed end. Muscles of spicular apparatus typical; M. protractor spiculi well developed and the M. retractor spiculi obscure.

Gubernaculum consisting of a 10 μm long distal part, parallel with the spicules, proximally provided with two well developed dorsocaudally orientated apophyses, 9-9.5 μm long. Muscles of gubernaculum obscure.

Females. — Reproductive system didelphic-amphidelphic with reflexed ovaries; the anterior branch situated left to the intestine, the posterior branch right to the intestine. Spermatozooids stored in a large sac — close to the connection between uterus and oviduct — functioning as spermatheca and possibly also as uterus. Both large branches of the uterus continuing in a narrower common uterine sac opposite the vagina. Vulva slightly protruding from the ventral body wall at 54-55 % of the body length from the anterior extremity.

Remarks. — The ovaries in *Boucherius spinosus* (syn. *Meylia spinosa*) are reflexed and not extended as mentioned in LORENZEN (1981, p. 250, 437). A female specimen of *B. spinosus* from the collection of LORENZEN was examined. It formed no exception to other specimens of *B. spinosus*, its ovaries are also reflexed.

Discussion. — Present study confirms the observations by GERLACH (1956, p. 108) and provides new information about the digestive system, the reproductive system, pseudocoelomocytes and caudal gland cells; somatic setae are here depicted for the first time and the amphids figured in detail; no membrane-like structure was observed connecting the body spines as originally depicted.

Boucherius spinosus was originally described belonging to *Meylia*. Present study revealed that its cuticular ornamentation on which feature a new genus *Boucherius* is created, is very different from the other *Meylia*-species.

Type species: *B. spinosus*.

Boucherius floridanus sp. n.

(Plate II, Fig. 1-5)

Material. — 1 ♂.

Measurements

Holotype male (USNM N° 67469): L = 1335, hw = 13, cs = 25, amph.-ant. = 4.5, sd_t = 5-6, sv_t = 5.5-7.5, oes. = 63, mbd = 26, t = 101, spic. = 48, gub. = 9, apof. gub. = 10; a = 51.3, b = 21.1, c = 13.2.

Male. — Body relatively slender, mainly uniformly wide. Cuticle finely annulated (about 800 rings); each ring with a transverse row of fine spines, 2-2.5 μ m long; in the posterior body region and in the tail, the spines are more or less lying in longitudinal rows (Pl. II, Fig. 5).

Somatic setae fine 5-7.5 μ m long, scarce, with two subventral and three subdorsal setae on each body side in the tail region.

Head rounded triangular in lateral view, nearly twice as wide as long. Head not offset from the rest of the body, extending posteriorly to just

behind the insertion of the cephalic setae. Head cuticle neither thickened nor sclerotized; a very fine annulation may be observed in longitudinal optical section, except in the stomatal region. The rows of fine spines observed on the body cuticle continue on the head; stomatal region devoided of spines.

Cephalic setae long, with broader basal part, tapered to a fine distal part, and inserted directly on the head cuticle.

Amphids large vesicular, with inner spiral structure. They are situated subcephalic with the anterior border at level of the insertion of the cephalic setae i.e. at $4.5 \mu\text{m}$ from the head top. The amphids are $11 \mu\text{m}$ wide i.e. 73.3 % of the corresponding body width.

Stoma minute, unarmed. Oesophagus with an anterior muscular part and posteriorly narrowing. Nerve ring surrounding the oesophagus terminally. Dorsal oesophageal gland strongly developed, protruding as a large posteriorly swollen lobe along the anterior part of the intestine. Posterior to the dorsal oesophageal gland lies a single series of small and two large granular pseudocoelomocyte cells. Shortly behind the dorsal oesophageal gland lobe lies a pair of subdorsal fine granular glandular cells.

Reproductive system with two testes, the left testis posteriorly reflected. Spicules strongly arched, gradually widening proximally to a hardly offset capitulum, distally with pointed end. Muscles spicular apparatus well developed. Gubernaculum, a single structure between the spicules, consisting of a $9 \mu\text{m}$ long part parallel with the spicules and two posteriorly orientated cuticularized bars (= apofyses), $10 \mu\text{m}$ long.

Tail gradually tapered posteriorly towards a smooth, blunt end with spinneret. Three caudal glands with nuclei, well developed.

Type locality. — Carl Sound, Florida.

Differential diagnosis. — *Boucherius floridanus* sp. n. closely resembles *B. spinosus* in general habitus, cuticular ornamentation, head- and amphid-structure, the presence of pseudocoelomocytes. It can be distinguished from *B. spinosus* in head-shape, in the position of the amphids close to the head top, in the long and slender body, in the shape of the spicules and the structure of the gubernaculum.

Meylia alata GERLACH, 1956

(Plate III, Fig. 4-7)

Material. — 1 ♀.

Measurements

Female 1 (slide R 3291): L = 655, hw = 12, cs = 9, amph.-ant. = 8, mbd = 22, oes. = 40, t = 70; a = 30.2, b = 16.6, c = 9.5; V = 56.

Remarks. — The single female from France agrees with the original description of *M. alata* (male type) in body annulation and cuticular differentiation in longitudinal rows of alternating elevated or higher and lower zones (Pl. III, Fig. 7), in an offset head with smooth cuticle, and in large vesicular amphids with inner spiral structure.

It differs from *M. alata* in the following features: ornamentation body cuticle less pronounced, head without elongated rostral zone, smaller body length, shorter cephalic setae, a more subcephalic position of the amphids instead of cephalic as in the male type specimen of *M. alata*.

The differences found may be partly due to sexual differentiation (see head, amphids), and fixation artefact (anterior head region, ornamentation body cuticle).

The reproductive system is didelphic-amphidelphic with reflexed ovaries; the anterior branch situated left of the intestine, the posterior branch on the right side of the intestine. Pseudocoelomocytes were observed; shortly anterior to the anterior ovary lies a large cell surrounding the intestine dorsally and laterally.

Meylia vangoethemi sp. n.

(Plate III, Fig. 1-3)

Material. — 1 ♂.

Measurements

Holotype male (slide R 1631): L = 570, hd = 12 × 14, cs = 11, sd₁ = 7.5, sd₂ = 8, sd₃ = 7, sv₁ = 7.5, amph.-ant. = 4, mbd = 19, t = 70, spic. = 30, gub. = 7.5, apof. gub. = 10; a = 30, c = 8.1.

Male. — Body relative broad. Cuticle finely annulated; each ring bearing about 12 (at mid-body) minute spines 1-1.5 μm long, forming longitudinal rows extending over the whole body length, except in the anterior head region (i.e. anterior to the cephalic setae) and in the terminal tail cone. Somatic setae scarce.

Head rounded, anteriorly tapered, offset from the rest of the body. Head cuticle, non-annulated, thickened and sclerotized, except in the stomatal region. Cephalic setae, slender, jointed, 11 μm long, inserted on low peduncles in the anterior half of the head. Amphids large vesicular with inner spiral (?) structure obscure, and situated on the head region.

Digestive system consisting of an oesophagus with broader anterior part and posteriorly narrowing, large granular dorsal oesophageal gland lobe protruding along the anterior intestinal region. No pseudocoelomocytes observed.

M. vangoethemi sp. n. dedicated to Dr. J. VAN GOETHEM, Head of Department of Invertebrates, « Koninklijk Belgisch Instituut voor Natuurwetenschappen », Brussels, Belgium.

Reproductive system with two extended testes, the left one posteriorly reflected. Spicules strongly arched, gradually widening proximally to an offset capitulum, distally with pointed end. Gubernaculum consisting of a 7.5 μm long distal part along the spicules, bearing proximally two well developed dorso-caudally orientated apofyses, 10 μm long. Muscles copulatory apparatus well developed. Three short (3 μm) and rather stout preanal setae are situated ventrally, respectively 18 μm , 32 μm and 49 μm anterior to the anal opening.

Type locality. — Western Channel, Brittany, France; sample station Pierre Noire.

Diagnosis. — *Meylia vangoethemi* sp. n. is characterized having a finely annulated cuticle with longitudinal rows of minute spines and by the offset head, with thickened and sclerotized cuticle.

Noffsingeria omeri gen. n., sp. n.

(Plate IV, Fig. 5-8)

Material. — 2 ♂♂.

Measurements

Holotype male (slide PNG 286): L = 940, hd = 15 × 13, cs = 13, sd_t = 7, sv_t = 6.5, mbd = 24, t = 75, spic. = 38, gub. = 10, apof. gub. = 11; a = 39.1, c = 12.5.

Paratype male (slide R 1280): L = 870, cs = 12, mbd = 22, t = 67, spic. = 29, gub. = 7, apof. gub. = 7; a = 39.5, c = 12.9.

Males. — Body relative broad. Cuticle annulated; annules interrupted by a narrow (2 μm) lateral field. Somatic setae scarce.

Head more or less conical, slightly marked off from the rest of the body by its smooth cuticle. In a second specimen the labial region is more pronounced. Cephalic setae slender, jointed (?), inserted on a very low peduncle in the anterior half of the head. Amphids large vesicular with inner spiral structure and cuticularized opening, lying on the head region.

Digestive system consisting of an oesophagus with broader anterior part and posteriorly narrowing. Pseudocoelomocytes present.

Reproductive system with two extended testes, the left one posteriorly reflected. Spicules arched, gradually widening proximally to an offset capitulum, distally with pointed end. Gubernaculum parallel with the spicules, provided with two dorsocaudally orientated apofyses, about halfway its length.

Type locality. — Western Channel, Brittany, France; sample station Pierre Noire.

Noffsingeria is dedicated to Dr. E. May NOFFSINGER, Senior Museum Scientist, Davis, California.

Differential diagnosis. — *Noffsingeria omeri* gen. n., sp. n. is differentiated from *N. grandiamphis* in head structure and shape of the amphids, in a larger body length and length of spicules, about twice the length of the spicules in *N. grandiamphis*.

Remark. — The new genus *Noffsingeria* is created in order to accommodate the two new species *N. omeri* and *N. grandiamphis*, characterized in having body annules interrupted by a narrow lateral field.

Type species: *Noffsingeria omeri* sp. n.

Noffsingeria grandiamphis sp. n.

(Plate IV, Fig. 3-4)

Material. — 1 ♂.

Measurements

Holotype male (slide R 3130): L = 410, hd = 14 × 12, cs = 6.5, amph.-ant. = 9.5, oes. = 35, mbd = 16, t = 58, spic. = 22, gub. = 8.5, apof. gub. = 7.5; a = 25.6, b = 11.7, c = 7.1.

Male. — Body relative broad. Cuticle annulated with annules interrupted by a narrow lateral field, 1.5 μm wide. Somatic setae scarce.

Head with smooth cuticle, offset from the rest of the body. Head cuticle thickened and sclerotized, except in the tapered anterior part with thin cuticle. Cephalic setae, slender, short, inserted far anteriorly on the head. Amphids large vesicular, rather obscure; no inner structure observed.

Reproductive system with two testes, left one posteriorly reflected. Spicules strongly arched, slightly widened proximally towards a hardly marked capitulum. Gubernaculum with a thin distal part along the spicules, at right angle with two thin sclerotized apofyses.

Type locality. — Western Channel, Brittany, France; sample station Pierre Noire.

Differential diagnosis. — *Noffsingeria grandiamphis* sp. n. differs from *N. omeri* sp. n. in the head structure with sclerotized cuticle, in the shape of the amphids and in the smaller body length and shorter spicules, only half as long as in *N. omeri*.

Gerlachius lissus (GERLACH, 1956)

(Plate IV, Fig. 1-2)

Syn. *Meylia lissa* GERLACH, 1956, p. 108.

Gerlachius lissus ANDRASSY, 1976, p. 105.

Material. — 1 ♂, 1 juvenile.

Measurements

Male 1 (slide 11897) : L = 320, hw = 11, cs = 8.5, amph.-ant. = 3, oes. = 45, mbd = 19, t = 60, spic. = 38, gub. = 18, apof. gub. = 5.5; a = 16.3, b = 7.1, c = 5.3.

Juvenile : L = 250, hw = 9, oes. = 25, mbd = 18, t = 49; a = 13.8, b = 10.0, c = 5.1.

Male. — Body broad. Body cuticle with smooth appearance, is extremely finely annulated and partly covered by some fine foreign material.

Somatic setae fine, 4.5-5.5 μ m long and scarce.

Head tapered towards a broad, truncated anterior end; posteriorly not offset from the body. Cephalic setae fine, inserted on short peduncles. Amphids large vesicular in surface view, with rather obscure inner spiral structure. The amphids are situated posterior to the insertion of the cephalic setae, i.e. subcephalic (?).

Stoma shallow; oesophagus well developed. Dorsal oesophageal gland protruding as a large, posteriorly swollen lobe along the anterior intestinal region; subventral oesophageal glands rather obscure. Intestine partly surrounded by two large cells; the posterior most cell situated shortly anterior to the anterior testis.

Reproductive system with two testes. Spicules strongly arched; proximally with slightly marked capitulum, distally strongly tapered to a pointed tip. Gubernaculum with a narrow apofyse at right angle.

Tail with three well developed caudal glands with conspicuous nucleoli.

Juvenile. — General habitus and morphology as in adults. Oesophageal glands not protruding; no pseudocoelomocytes observed. Genital primordium with several cells; the juvenile specimen is probably a female juvenile. The specimen is no longer available.

Discussion. — Present male specimen has a general habitus and head shape as originally depicted. However, its cuticle is very finely annulated and it possesses vesicular amphids; the male type specimen was described having a smooth cuticle and without amphids.

TABEL 1

Key to the genera of Meyliidae

1. — Body annulation weakly developed, with smooth appearance and without ornamentation	<i>Gerlachius</i>
— Body annulation distinct, with or without ornamentation ...	2
2. — Body annules, each with a transverse row of spines	<i>Boucherius</i>
— Body annules without transverse rows of spines	3
3. — Body annules without ornamentations, lateral field present	<i>Noffsingeria</i>
— Body annules with longitudinal differentiations of ridges or spines	<i>Meylia</i>

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EXPLANATION OF THE PLATES

PLATE I

Boucherius spinosus (GERLACH)

- Fig. 1. — Female, entire specimen.
Fig. 2. — Female, surface view of head.
Fig. 3. — Male, posterior body region.
Fig. 4. — Male, surface view of head.
Fig. 5. — Female from Scotland, surface view of head.
Fig. 6. — Female from Scotland, posterior body region with a zone in surface view.

PLATE II

Boucherius floridanus sp. n. : holotype male

- Fig. 1. — Anterior body region.
Fig. 2. — Head region in surface view.

Fig. 3. — Posterior body region.

Fig. 4. — Surface view of detail of body wall, shortly anterior to the top of the right testis.

Fig. 5. — Detail of body wall of tail in surface view.

PLATE III

Meylia vangoethemi sp. n. : holotype male

Fig. 1. — Surface view of head.

Fig. 2. — Posterior body region with detail of body wall in surface view.

Fig. 3. — Surface view of detail of body region at level of the vas deferens.

Meylia alata GERLACH, 1956

Fig. 4. — Female, surface view of head.

Fig. 5. — Female, anterior body region.

Fig. 6. — Female, posterior body region.

Fig. 7. — Female, surface view of detail of body wall just posterior of the vulva.

PLATE IV

Gerlachius lissus (GERLACH)

Fig. 1. — Male, entire specimen.

Fig. 2. — Male, head region in surface view.

Noffsingeria grandiamphis sp. n. : holotype male

Fig. 3. — Anterior body region with head and part of the body wall in surface view.

Fig. 4. — Posterior body region.

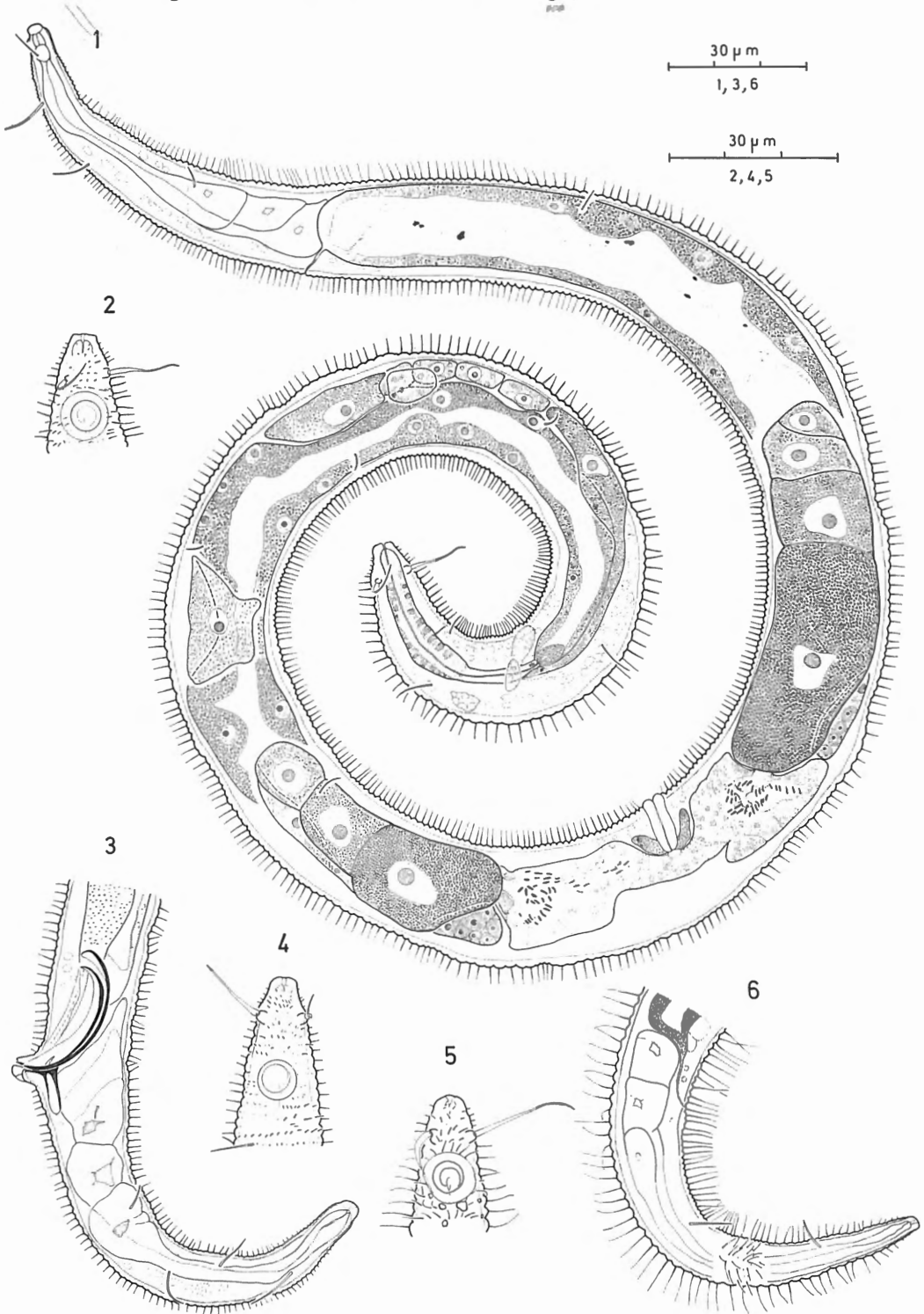
Noffsingeria omeri sp. n.

Fig. 5. — Holotype male, head in surface view.

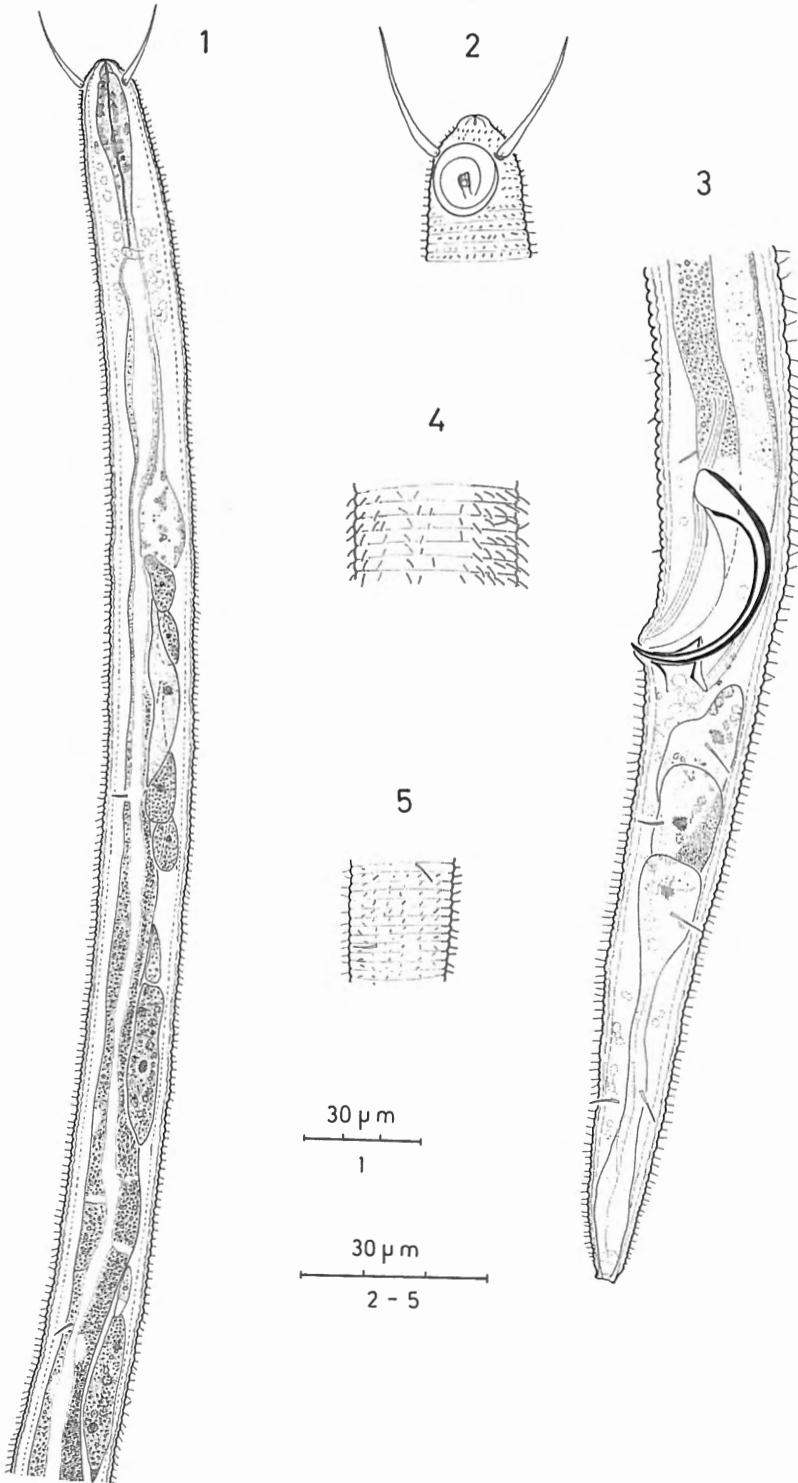
Fig. 6. — Male, anterior body region in surface view.

Fig. 7. — Male, posterior body region.

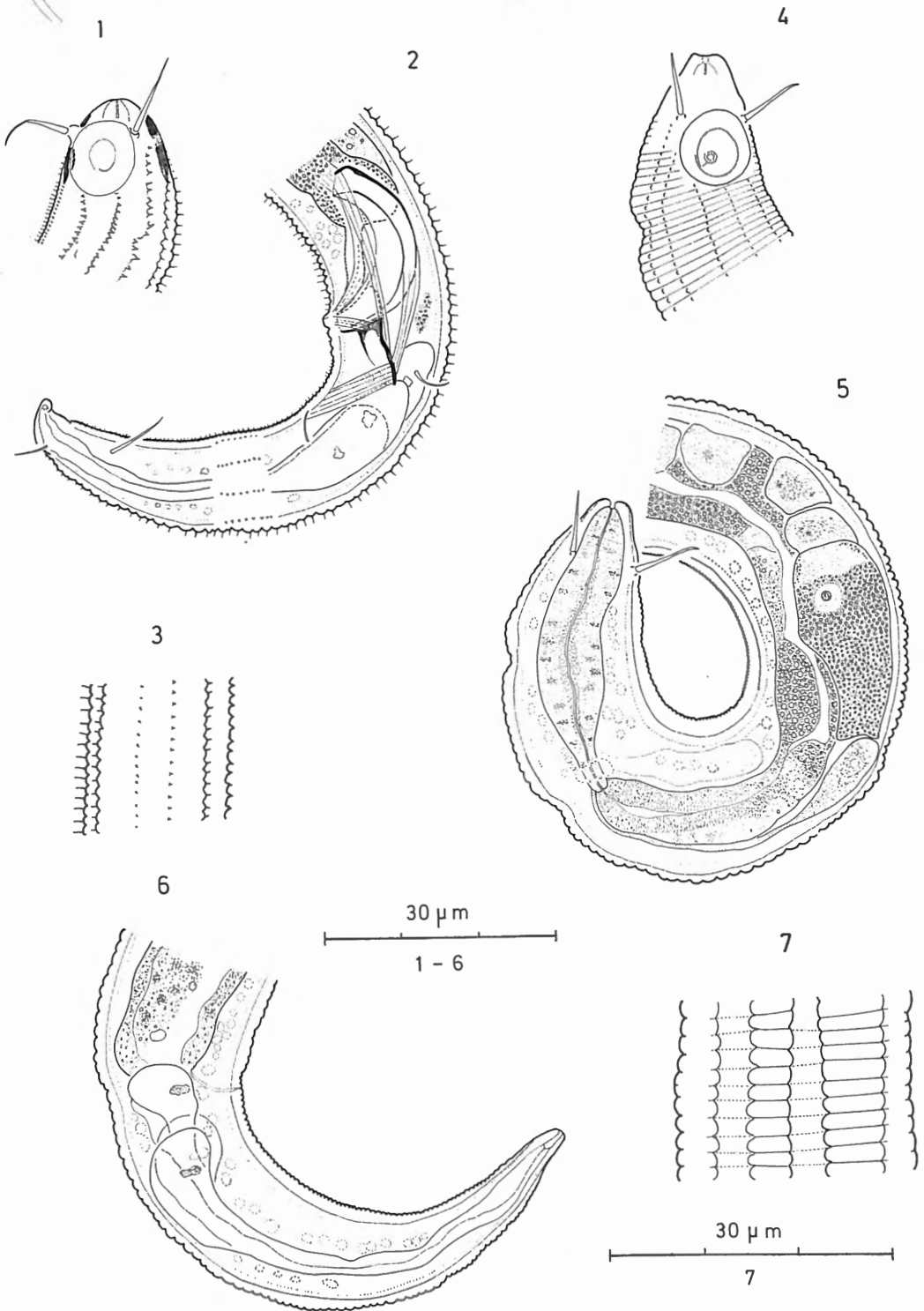
Fig. 8. — Male, detail of body wall in surface view.



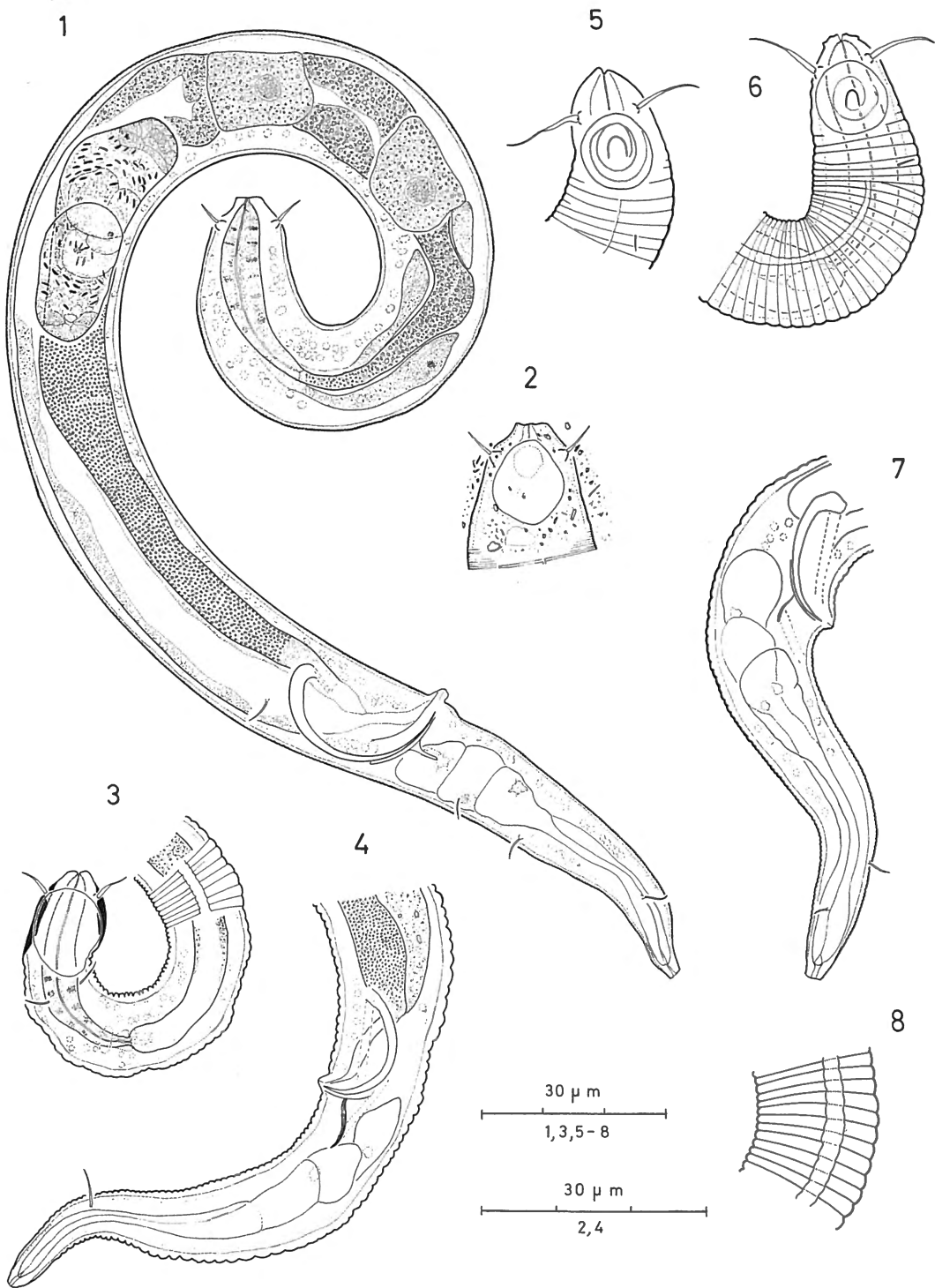
W. DECRAEMER and P. JENSEN. — Meyliidae
(Nematoda-Desmoscolecoida) with four new species and two new genera.



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