

NEW AND LITTLE KNOWN NEMATODES FROM THE NORTH SEA

by

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Résumé

Nématodes nouveaux ou peu connus de la Mer du Nord

Deux espèces nouvelles de Nématodes libres marins sont décrites. Elles proviennent d'une région sublittorale de la Mer du Nord, en face de la côte belge. Il s'agit de *Richtersia deconincki* sp.n. et *Pomponema coomansi* sp.n. *Gonionchus villosus* Cobb, 1920 est redécouverte et redécrite. *Calomicrolaimus monstrosus* (Gerlach, 1953) comb. n. est discutée et *Microlaimus conspicuus* Lorenzen, 1973 est mise en synonymie avec *C. monstrosus*. Des individus juvéniles et femelles de *Microlaimus annelisiae* Jensen, 1976 ont été trouvés et sont mis en discussion; l'holotype de cette espèce ayant disparu, un néotype est décrit.

Introduction

During an ecological investigation of the marine benthos from a sanddredged region in front of the Belgian coast (Kwintebank), several new and interesting nematode species were found. As the diversity in this habitat is very high and the density relatively low, there were only a few individuals per species. Therefore, further systematic and ecological elucidation of most of the material is postponed until other individuals are found in the surrounding regions of the North Sea (ongoing research). Most of the species are new for the Belgian fauna, as earlier research was restricted to the littoral zone (exception Jensen, 1976).

A paper concerning ecological data of the meiobenthos of this sandflat is in preparation.

Material and methods

The samples were taken with a Reineck-box-corer covering a surface area of 170cm². A subsample (surface area 10.17cm²) was drawn to study the meiofauna. This subsample was fixed with warm (70°C) 4 percent formaline-seawater solution. The transfer from fixative into pure glycerine was done by the method of De Grisse (1965). The drawings were made with the aid of a camera lucida and a Leitz dialux 20 EB.

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The type-material is deposited in the collection of the Instituut voor Dierkunde, Rijksuniversiteit, Gent, Belgium.

All measurements (except the ratios) are in micrometers. Values in the formula indicate:

adults:								total length
level of cephalic	setae	nerve ring	oesoph. end	(ant. ov. end)	vulva testes	(post. ov. end)	anus/cloacal opening	
corresponding body diameter								
juveniles:								total length
level of ceph. set.	nerve ring	oesoph. end	M	anus				
corresponding body diameter								

DESCRIPTION OF THE SPECIES

RICHTERSIA DECONINCKI sp.n. (Fig. 1 and 2)

Material and locality.

— Two males, one female and six juveniles.

— Type locality: Kwintebank ZB1 : 51°20'30"N—2°41'40"E
 ZB4: 51°18'40"N—2°40'45"E
 ZB6: 51U7'30"N—2°39'30"E
 ZB8: 51°16'20"N—2°38'15"E
 ZB9: 51°15'35"N—2°37'35"E

All stations have medium to fine sand with medium size of the sand fraction between 211µm and 402µm. The silt-clay fraction is very low (0.05 percent—1.61 percent).

Depth: 14-16m.

All animals were found at a sediment depth from 2 to 10cm.

Collected 5 September 1978.

Measurements.

holotype

♂ ₁	L = 633	a = 21.8	b = 3.2	c = 14.7	
	R spic. = 86.4	L spic. = 45.6			
	— ?	198	324	590	
	21	—	29	26	23
				633	(slide N° 461)

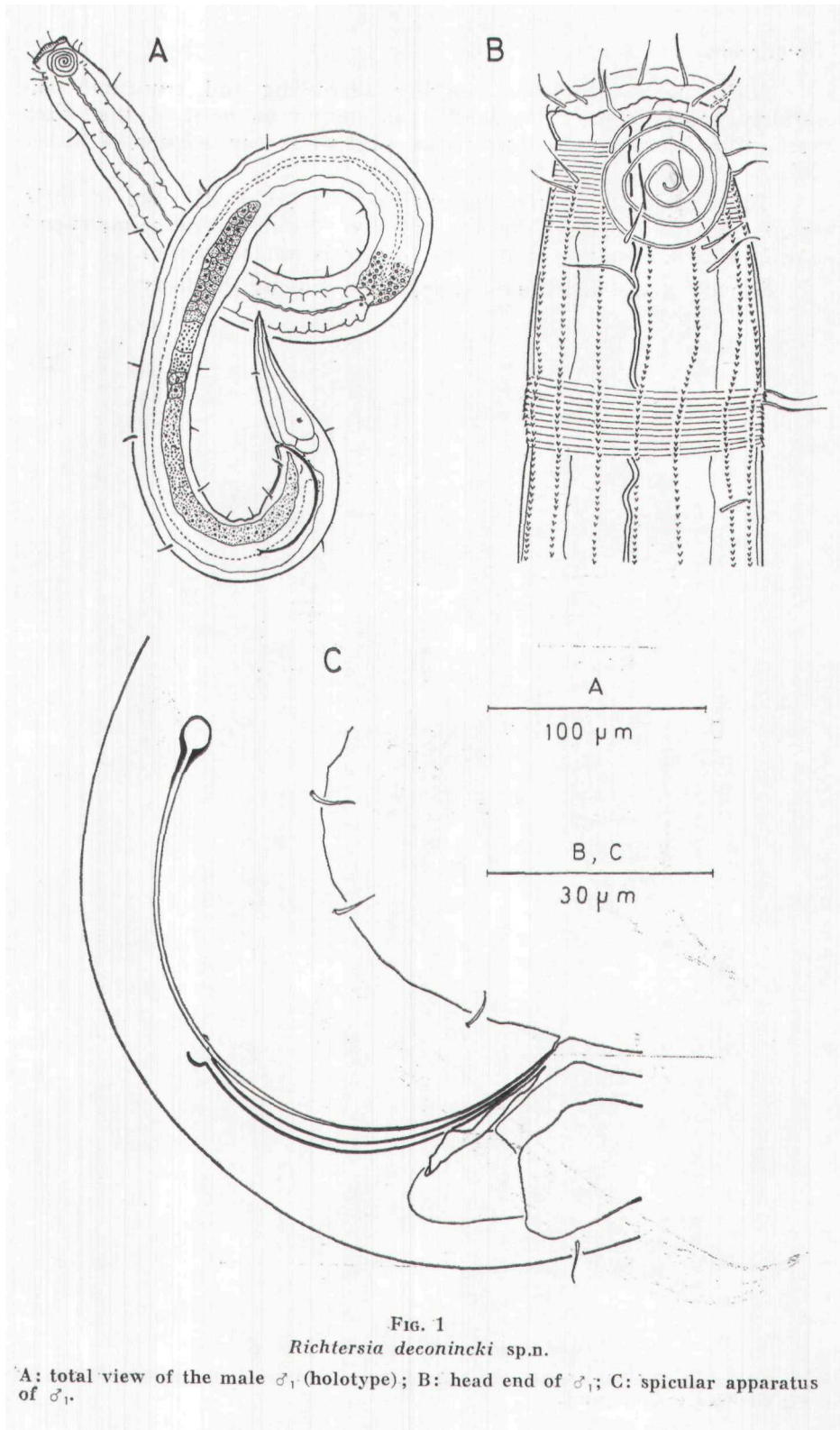
paratypes

♀ ₁	L = 1036	a = 18.5	b = 3.5	c = 8.9	V = 65.4 percent
	— ?	295	678	919	
	30	—	44	56	51
				1036	(slide N° 462)
juv ₁	L = 303	a = 14.4	b = 2.3	c = 10.1	
	— ?	129	M	273	
	14	—	20	21	17
				303	(slide N° 463)

other specimens

♂ ₂	(damaged specimen)	L = 666
	R spic.: 72.5	L spic.: 47.3

The other juveniles could not be precisely measured.

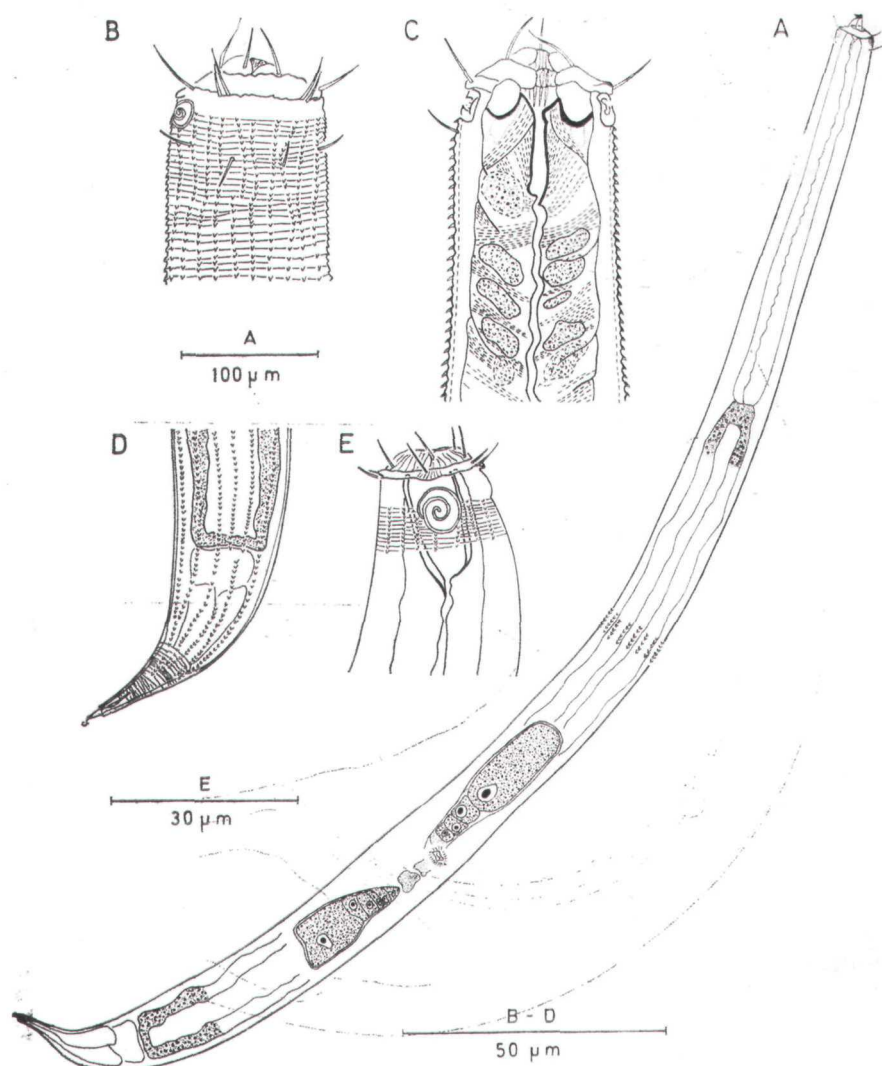


Description.

Male: body cylindrical, slightly narrowing and truncated anteriorly, tapering posteriorly. Not as clumsy as most of the other species of the genus *Richtersia* (the adults have an a-index of about 20).

The cuticle is annulated; numerous longitudinal rows of little spines: 24 rows behind the amphid-level, 20 at the oesophagus-end and 16 in the cloaca] region. The tail-tip is not annulated.

Somatic setae distributed in eight rows along the body.

**FIG. 2***Richtersia deconincki* sp.n.

A: total view of the female ♀₁; B: head end of ♀₁; D: posterior end of ♀₁; E: head end of juv 1.

Six retractile lips are separated from the head region by a "thick cuticular formation"; six internal labial setae (6.8 μ m) followed by one circle of six external labial setae (7.5 μ m) and four cephalic (7 μ m) setae.

Amphids very large (diam. 16.3 μ m or 86 percent of the corresponding body width), spiral with 3 3/4 turns, ventrally wounded. Sublateral from the amphid are 4X2 subcephalic setae; posteriorly to the amphid, 4X2 setae.

The shape of the mouth cavity varies according to the contraction of the surrounding oesophageal muscles. It is more cuticularized than the oesophageal lumen. Teeth lacking.

Oesophagus long, cylindrical with crenated wall. Cardia small. The intestinal cells are large with strongly coloured granules. Nerve ring not observed; ventral gland and pore not found. Reproductive system monorchic. The two spicules are unequal in shape and size: right spicule 72-86 μ m long, very fine and slightly bent; left spicule 46 μ m long and wider. Both with a capitulum and pointed distal end. The gubernaculum (21 μ m long) is plate-shaped and encloses the distal end of the spicules.

The tail is conical; three caudal glands end together.

Female: only differences from the male will be mentioned. Larger than the male. 24 longitudinal rows of spines posterior to the amphid. 34 at the end of the oesophagus, 38 at the level of the vulva and 36 in the anal region.

The six internal labial setae are 10 μ m long; six external labial (9.5 μ m) and four cephalic (6.1 μ m) setae at the same level. Amphids much smaller, flattened and spiral with 2 1/2 turns. Posterior to the amphids are eight setae.

The genital tract is didelphic-amphidelphic with reflexed ovaries; the germinative zone reaches the level of the vagina; two short uteri. Large glands in the neighbourhood of the vagina; vulva small and slitlike.

Juvenile: the six internal labial setae are 4 μ m long. The six external labial setae (4.8 μ m) and the four cephalic setae (3.4 μ m) are at the same level. The amphids of juvl have a diameter of 6.8 μ m (or 40 percent of the corresponding body-diameter) with 2 1/2 turns. Other juveniles have flattened spiral amphids with 1 1/4 turns.

Discussion.

Within the genus *Richtersia* is the most characteristic feature of *Richtersia deconincki*, the asymmetric spicules. Nevertheless, six *Richtersia*-species with asymmetrical spicules are described: *R. erinacei* Gerlach, 1964 (Red Sea), *R. farcimen*, Gerlach, 1964 (Red Sea) *R. iberica* Riemann and Sehrage, 1977 (Iberischen Tiefsee), *R. inaequalis* Riemann, 1966 (North Sea), *R. imparis* Gerlach, 1956 (Kiel Bay) and *R. spicana* Vitiello, 1973 (Mediterranean).

These species have following characteristics:

species	tot. length	a-index	length R spic	length L spic	RL	gubemaculum length
<i>erinacei</i>	627— 695	5.3— 8.8	225	95	2.4	35
<i>farcimen</i>	660— 800	5.8— 9.4	110	66	1.7	33
<i>iberica</i>	555	21.3	33(31)	22(23)	15	?8
<i>imparis</i>	398— 466	8.0— 9.1	50	134	2.7	32
<i>inaequalis</i>	585— 695	10.5—14.4	113—126	39—47	2.9	21
<i>spicana</i>	575— 658	12.1—14.0	120	55	2.2	?
<i>deconincki</i>	633—1036	15.5—21.8	72—86	45—47	L9	21

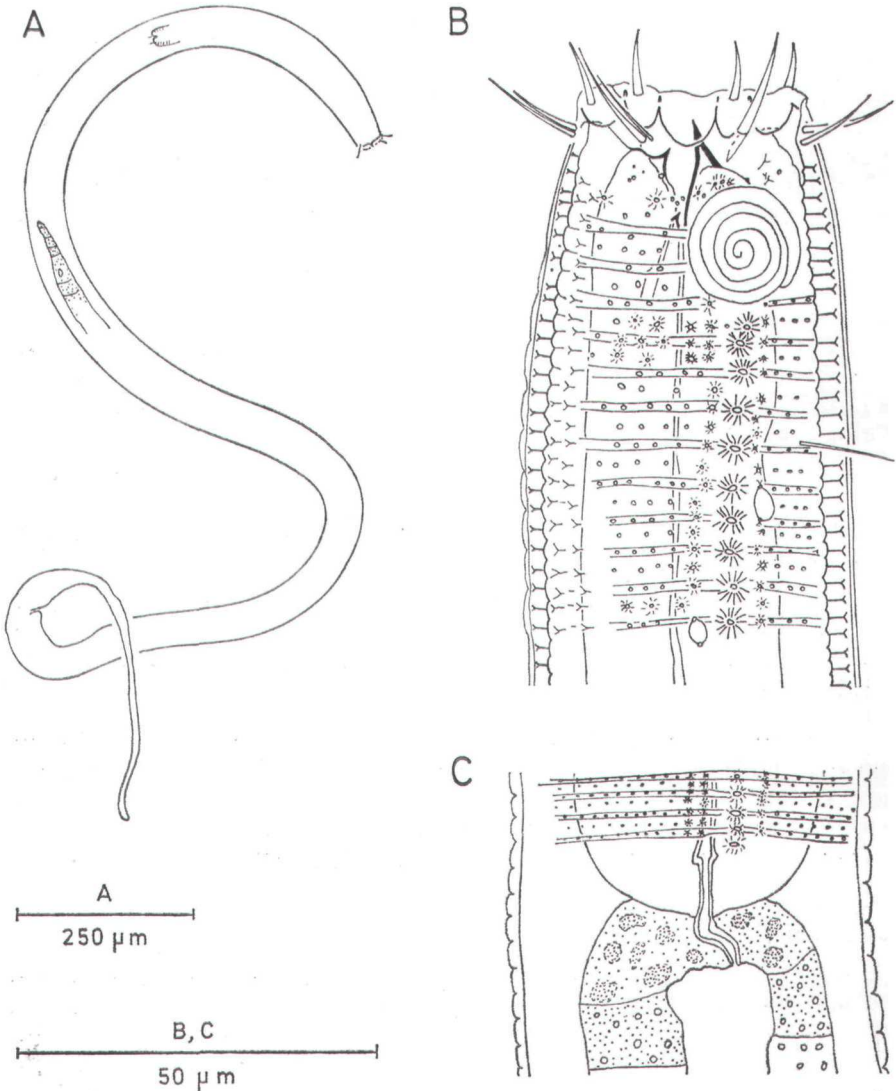


FIG. 3

Pomponema coomansi sp.n.A: total view of the male σ_1 (holotype); B: head end of σ_1 ; C: oesophagus end of σ_1 .

The general shape of *R. deconincki* sp.n. agrees with *R. iberica*; but the last species has eight longitudinal rows of long, fine "hairs" (2-6µm long) which have not been found in the new species and the spicules of *R. iberica* are much smaller.

All the other mentioned *Richtersia* species are more clumsy.

R. erinacei differs from the new species by having eight longitudinal rows of spines. The amphid also is different.

R. farcimen has a complexly built amphid different from that in *R. deconincki* sp.n.. *R. imparts* has several longitudinal rows of small spines ("difficult to count") in the cephalic region.

The male of *R. inaequalis* has longitudinal rows of especially large spines (from the cervical region to the cloaca) on its ventral side. *R. spicana* has eight longitudinal rows of very strong spines. On the base of these differences, it is believed that *R. deconincki* can be established as a new species.

More material is necessary for the interpretation of the intra-specific variation.

POMPONEMA COOMANSI sp.n. (Fig. 3 and 4)

Material and locality.

— Two males and two juveniles.

— Type locality: Kwintebank ZB1 : 51°20'30"N—2°41'40"E
ZB4: 51°18'40"N—2°40'45"E

Both stations have medium to fine sand with medium size of the sand fraction between 234µm and 402µm. Gravel-content: 1-7 percent; silt-clay fraction: ± 1 percent.

Depth: 20m.

Collected 5 September 1978.

Measurements.

holotype

♂ ₁	L = 2326	a = 47.5	b = 6.0	c = 4.7	
	— 131	388	673	1836	2326 (slide N° 464)
	31	46	48	49	44

paratypes

♂ ₂	L = 2094	a = 42.7	b = 6.0	c = 6.2	
	— ?	349	873	1620	2094 (slide N° 465)
	35	?	47	49	42

juv ₁	L = 834	a = 29.8	b = 4.4	c = 3.8	
	— ?	191	M	613	834 (slide N° 466)
	20	?	26	28	22

juv ₂	L = 1006	a = 32.5	b = 4.2	c = 4.2	
	— ?	241	M	765	1006 (slide N° 467)
	22	?	30	31	28

Description.

Male: body cylindrical with a truncated head-end and a long filiform tail.

Cuticle thick with punctuations arranged in transverse rows. Lateral differentiation of the cuticle starts directly behind the am-

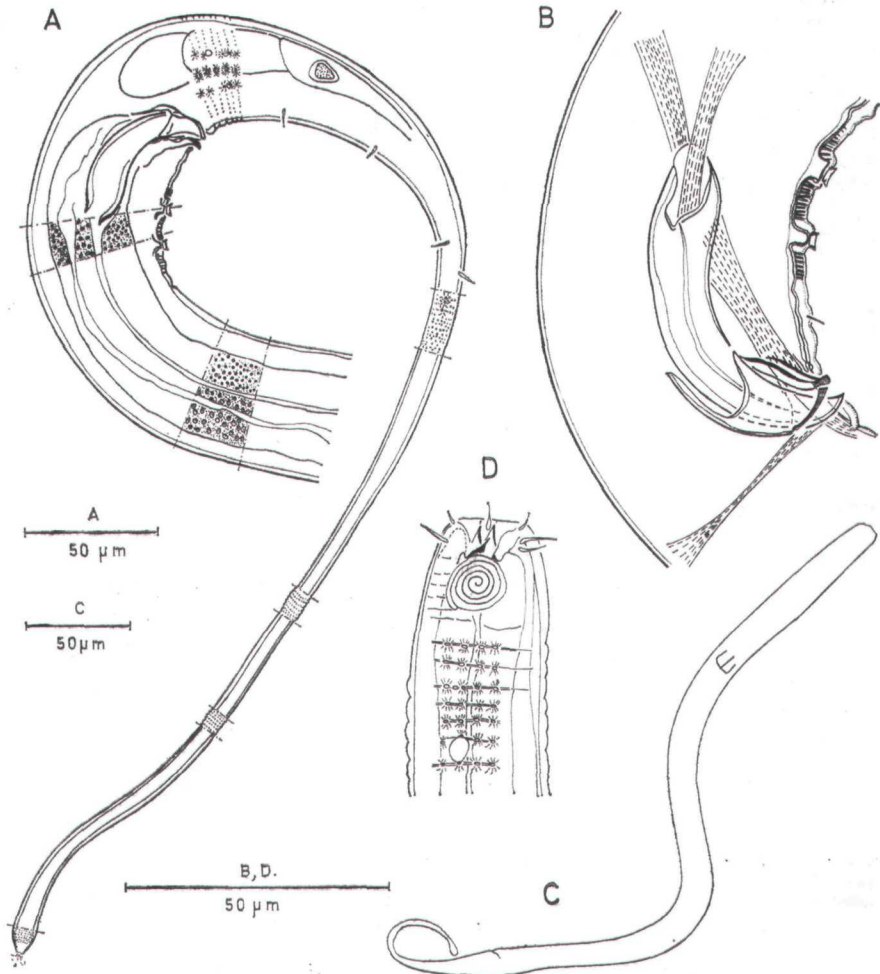


FIG. 4

Pomponema coomansi sp.n.

A: posterior end of the male σ_1 (holotype); B: spicular apparatus of σ_1 ; C: total view of juv 2; D: head end of juv 2.

phids: three longitudinal rows of dots throughout the entire body length till the conical part of the tail. The middle-most row has the largest dots. All punctuations are surrounded by startlike "figures". Each transverse row of punctuations, connected by internal cuticular rods, alternates with a row of "free" points; the latter row has no large lateral dots. In the outermost longitudinal lateral rows are some

larger, oval dots, formed by some fused branches of the starlike figures around the dots.

Head-end truncated with a slightly cuticularised lip region. Six pairs of cheilorhabdia present. Six internal labial setae (8.3µm); six external labial setae (16µm) and four cephalic setae (14µm) arranged in one circlet. Six lips. Spiral amphids have 5 1/3 turns and occupy 38 percent of the corresponding head diameter.

Mouth cavity large; one big dorsal and two small ventrosublateral teeth. A supplementary ventral tooth situated more posteriorly. Mouth cavity not entirely surrounded by the oesophagus.

Oesophagus cylindrical with a strongly cuticularised lumen and strong musculature. Cardia large. Intestine with large cells containing dark granules.

Ventral gland opens at the level of the nerve ring.

One testis. The spicules and the gubernaculum are strongly cuticularised; two preanal sucker-like supplements encircled by cuticular ridges.

Tail very long with a short conical and a very long and fine cylindrical portion. Three caudal glands. A few scattered setae are present in the conical portion.

Juvenile: characteristic on the juveniles is the long cylindrical portion of the tail.

General shape: cfr. males.

In juv2, the lateral differentiation of the cuticle begins at the end of the oesophagus. In juv1, the differentiation starts at the middle of the oesophagus. According to the larger body size of juv2, juv2 is a later stage than juv1: the lateral differentiation of the cuticle begins more anteriorly in older specimens.

Amphids have 5 turns.

Neither in juv1 nor in juv2, a gonadal primordium could be recognized.

Discussion.

Pomponema coomansi sp.n. is closely related to *P. astrodes* Lorenzen, 1972 on the base of the following characteristic features: the cuticle has three longitudinal lateral rows of punctations; the long filiform, cylindrical tail-end. *P. coomansi* sp.n. differs from *P. astrodes* by its length, the presence of two preanal supplements, the presence of cuticular ridges also posteriorly to the last preanal supplement. The gubernaculum is differently built. Every two rows, the cuticular dots are interconnected by bars. No preanal setae.

Another related species is *Pomponema effilatum* Boucher, 1976. The latter has an analogous filiform tail and the body length is similar. The cuticular dots are connected every two rows by bars. Differences with the new species: no starlike figures around the punctations; no lateral differentiation at all in the cuticle. 10-14 preanal supplements. Spicules have a distally elongated part; gubernaculum different.

GONIONCHUS VILLOSUS Cobb, 1920 (Fig. 5 and 6)

Material and locality.

— Four males, four females and four juveniles.

— Locality: Kwintebank ZB1 : 51°20'juve30'N—2°41'juve40'E.

Fine sand with médium size of the sand fraction 234 μ m.

Silt-clay fraction 1.61 percent; 6.84 percent gravel.

Depth: 15m.

Collected 5 September 1978.

Measurements.

σ_1	L = 1394	a = 35.7	b = 4.2	c = 5.8	
	— ?	334	M 1154		1394 (slide N° 468)
	20	? 37	39 33		
σ_2	L = 1303	a = 37.2	b = 4.2	c = 5.8	
	— ?	310	M 1077		1303 (slide N° 469)
	17	? 28	35 30		
φ_1	L = 1339	a = 37.2	b = 4.0	c = 4.7	V = 67.1 percent
	— ?	331	899 1057		1339 (slide N° 470)
	20	? 34	36 25		
φ_2	L = 1532	a = 42.6	b = 4.6	c = 5.5	V = 70.2 percent
	— ?	332	1076 1251		1532 (slide N° 471)
	16	? 32	36 24		
juv ₁	L = 766	a = 31.9	b = 3.6	c = 5.5	
	— ?	213	M 627		766 (slide X° 472)
	11	? 24	23 16		
juv ₂	L = 780	a = 31.2	b = 3.9	c = 5.2	
	— ?	199	M 631		780 (slide N° 473)
	10	? 22	25 15		

Description.

Male: body cylindrical, tapering at the anterior end; tail long and very slender.

Cuticle transversely striated, not very thick, without lateral differentiation. The annulation starts behind the lips and continues till the tail-end. Annule-width: 2 μ m in the oesophageal region; 2.5 μ m in the body-middle; 1.6 μ m in the cloacal region; 1.1 m on the tail.

Six lips clearly separated from the head region, very high and weakly cuticularized. Six internal labial setae (1.5 μ m) look like projections of the lips. Six external labial (18 μ m) and four cephalic (11 μ m) setae in one circlet. The six longer setae are segmented (3 parts) but, in most of the specimens, this is not clearly visible.

At the level of the amphids are four subcephalic setae (8 μ m). Four submedian groups, each consisting of two to four long setae, are located posteriorly to the amphids. Along the body, we find long, fine setae, irregularly placed. The amphids have a (slightly) elliptical apertura; the corpus gelatum is spiral with many turns.

Amphidial duct not observed. Amphids occupying 65 percent of the corresponding body width.

The mouth cavity is large with strongly cuticularized walls, leading through a narrowing, conical part to the oesophageal lumen. Two large ventrosublateral teethlike structures present.

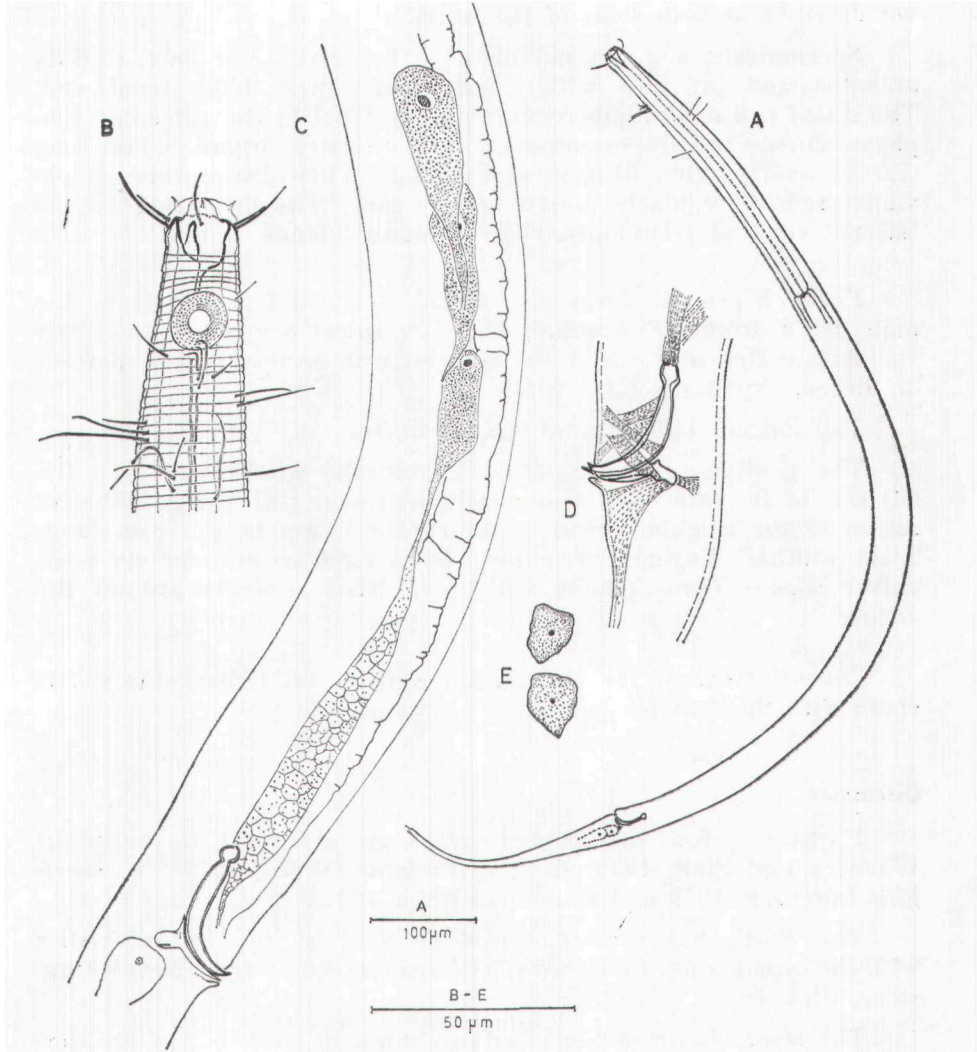


Fig. 5

Gonionehus villosus Cobb, 1920

A: total view of the male σ_1 ; B: head end of σ_1 ; C: cloacal region of σ_1 ; D: spicular apparatus of σ_1 ; E: sperm cells.

Oesophagus long and cylindrical. Cardia small, surrounded by the anterior part of the intestine.

Intestine cells large, containing granules. The lumen of the intestine contains fine sandgrains.

Ventral gland and pore not observed.

Nerve ring only seen in the juveniles.

Two testes; the posterior one on the right side of the intestine; the anterior one on the left side. The proximal end of the anterior testis is situated just behind the cardia.

Three ejaculatory gland cells flank the posterior region of the vas deferens at both sides of the body.

Spermatozoa angular, not oblong. Spicules 37 μ m long, slightly arcuated and provided with a capitulum; with bifid distal end. The distal end of the gubernaculum is parallel to the spicules; apophyse dorso-caudally orientated. No accessory organs. Taii long (7.5 X anal width); filiform at the end. Cuticular annulation obvious; setae irregularly placed on the tail. The last setae on the tail not situated terminally. Three caudal glands (1 outlet?).

Female: general form cfr. male. Only differences from the male are mentioned. Amphids circulai" spiral origin not so clearly visible; situated at 27 μ m of the anterior end, occupying 40.4 percent of the corresponding head width.

Tail longer: 11.3 X anal body diameter.

The genital apparatus situated over the whole length on the left side of the intestine. One ovarium present with the germinative region in the neighbourhood of the cardia. Eggs large (78 μ m long; 23 μ m width). Vagina surrounded by a circular muscle; no post-vulvar sack. Three glands with granulated contents around the vagina.

Juvenile: except for the genital system, no remarkable differences with the female.

Discussion.

Up to now, four *Gonionchus* species are described: *G. inaequalis* Warwick and Platt, 1973; *G. longicaudatus* (Ward, 1972); *G. sensibilis* Lorenzen, 1977 and *G. villosus* Cobb, 1920.

The North Sea species agrees in most of the characteristics with the type species *Gonionchus villosus*, described from New Hampshire, USA.

The resemblance of the spicules cannot be assessed, as the description of Cobb is not illustrated.

Diagnostic characters of *G. villosus* are: cuticular annulation clearly developed, no lateral differentiation of the cuticle; four submedian groups of long setae posterior to the (spiral) amphids; lips thin and stretched out; two plate-like teeth; filiform tail; three ejaculatory glands on both sides of the vas deferens.

Differences with the other species:

G. inaequalis has two unequal spicules and a gubernaculum with paired caudal apophyses. Amphids at the level of the mouth cavity. Three separated outlets of the caudal glands. *G. longicaudatus* has

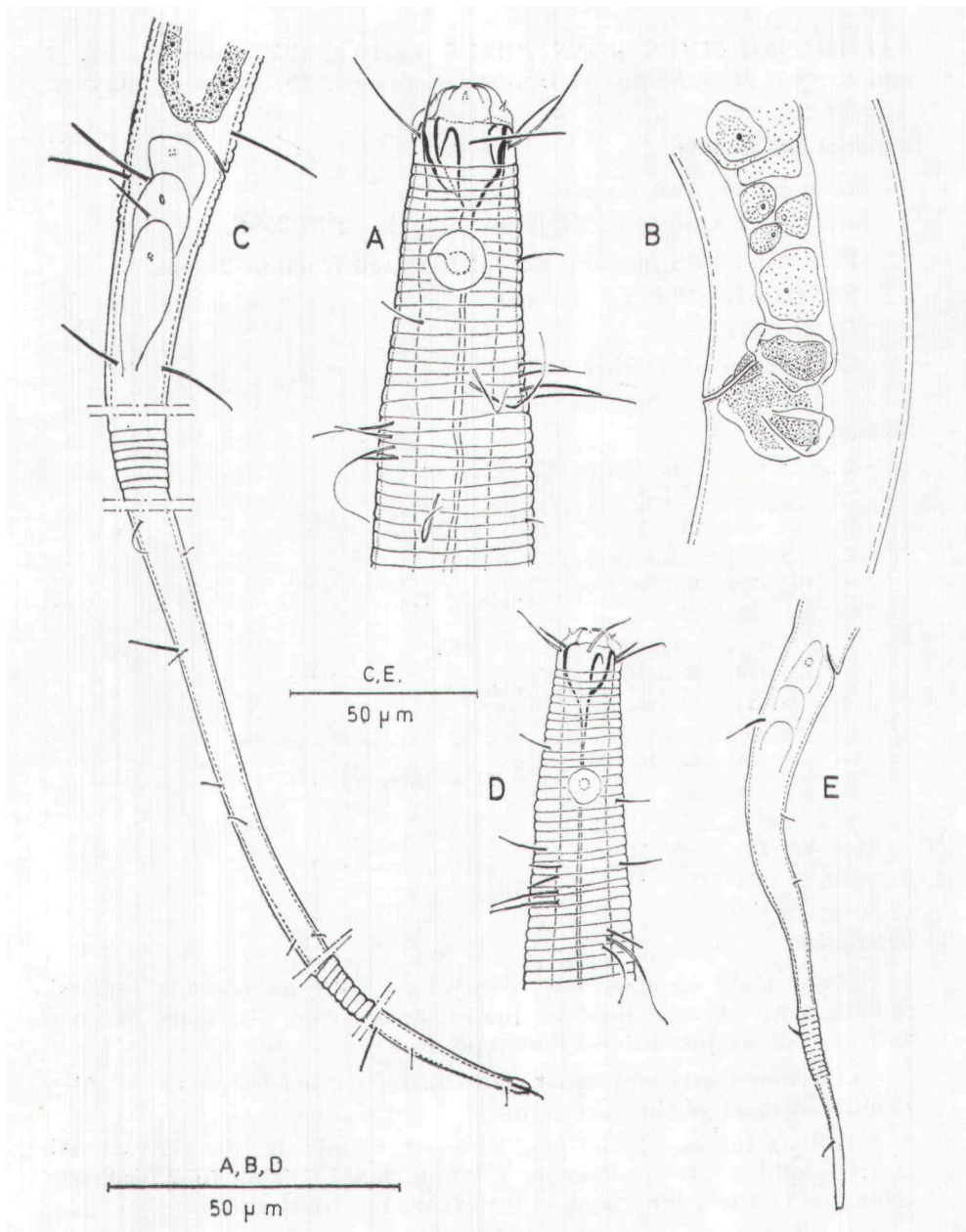


FIG. 6

Gonionchus villosus Cobb, 1920

A: head end of ♀₁; B: vulvar region of ♀₁; C: posterior end of ♀₁; D: head end of juv 1; E: posterior end of juv 1.

a strongly developed longitudinal cuticular ornamentation. No ventro-sublateral teeth; 2X6 cephalic setae. *G. sensibilis* is a smaller species. Cuticular annules decorated with longitudinal bars. No ventrosublateral teeth. Somatic setae short.

CALOMICROLAIMUS MONSTROSUS (Gerlach, 1953) comb.n. (Fig. 7 and 8) syn. *Microlaimus conspicuus* Lorenzen, 1973, new synonymy.

Material and locality.

— Seven males, two females.

— Locality: Kwintebank ZB9: 51°15'35"N—2°37'35"E.

Fine sand with medium size of the sand fraction 211µm.

Silt-clay fraction 1.0 percent.

Depth:

11m.

Collected 5 September 1978.

Measurements.

♂ ₁	L = 1536	a = 45.2	b = 10.5	c = 14.6					
	— ?	146	M	1432					
	10	?	25	25	25	1537	(slide N° 474)		
♂ ₂	L = 1446	a = 55.6	b = 11.2	c = 14.5					
	— 90	129	M	1346					
	12	25	23	26	21	1446	(slide N° 475)		
♂ ₃	L = 1104	a = 53.1	b = 9.3	c = 16.9					
	— ?	119	M	1039					
	8	?	23	26	(26)	1104	(slide N° 476)		
♀ ₁	L = 1455	a = 46.9	b = 9.6	c = 13.3	V = 52.8 percent				
	— 91	151	543	768	1002	1346			
	23	29	29	29	31	30	23	1455	(slide N° 477)
♀ ₂	L = 1387	a = 44.7	b = 10.8	c = 11.4	V = 54.1 percent				
	— 72	129	530	751	1047	1265			
	10	25	25	29	31	29	22	1387	(slide N° 478)

Description.

Male: body slender, brownish-yellow with an obvious cervical constriction. At the level of the cephalic setae, the body is only half as wide as just behind the amphids.

Cuticle clearly annulated.. The unstriated head-region is slightly swollen in most of the specimens.

The six internal labial papillae are very minute; the six external labial papillae are prominent ($\pm 1\mu\text{m}$ Jong)..... The four cephalic setae are 11-13µm long, and at 9µm from the front end.

Amphids very conspicuous, varying from 50—100 percent of the corresponding body width. A "central spot" may be present; this indicates the spiral origin of the amphid. The anterior border of the amphids at 10µm posterior to the front end. A few cervical setae are situated posteriorly to the amphids.

Four submedian rows of short somatic setae are distributed along the body; those setae are the outlets of underlying epidermal gland cells. In the region of the oesophagus, there is a supplementary dorsal and ventral series of cells (cfr. type B according to Jensen, 1978). The epidermal gland cells are not always obvious and

often, poorly defined limited granular content is recognizable. A short setae anterior to the anus is present.

The buccal cavity is poorly sclerotized, with one small dorsal and two small ventrosublateral teeth.

Oesophagus surrounding the buccal cavity and slightly swollen anteriorly; posteriorly enlarged to an obvious bulb. Cardia well developed.

Excretory pore at the level of the nerve ring. Renette cell behind the cardial level.

Nerve ring at 69 percent of the oesophagus-length.

Gonads diorchic with testes opposite and outstretched. Sperm cells elongate oval. Two spicules, weakly bent, 35-37 μ m long along

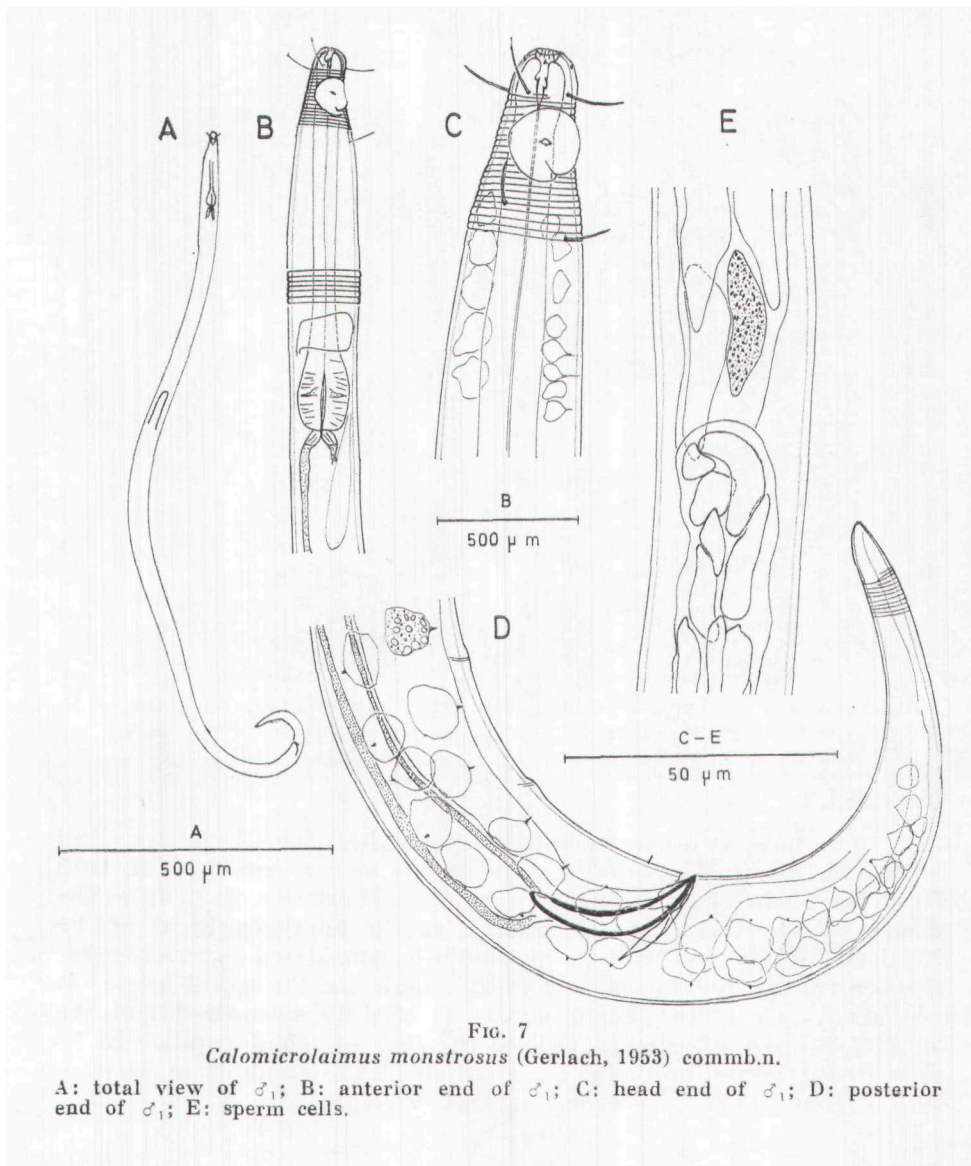


FIG. 7

Calomicrolaimus monstrosus (Gerlach, 1953) comb.n.

A: total view of σ_1 ; B: anterior end of σ_1 ; C: head end of σ_1 ; D: posterior end of σ_1 ; E: sperm cells.

the arc. Gubernaculum 21 μ m long, distal part dilated. Tail conical, with an elongation at the end; 4.2-4.8 anal diameters long. Three caudal glands.

Female: on the whole, the same form as the male with following differences: cephalic setae only 9 μ m long, at 8 μ m from the front end; amphids 7.5-9.0 μ m wide (50-55 percent of the corresponding body diameter) at 19 μ m posterior to the front end; spiral origin obvious; reproductive system didelphic-amphidelphic with outstretched ovaries, spermathecae very large.

Juvenile: not found.

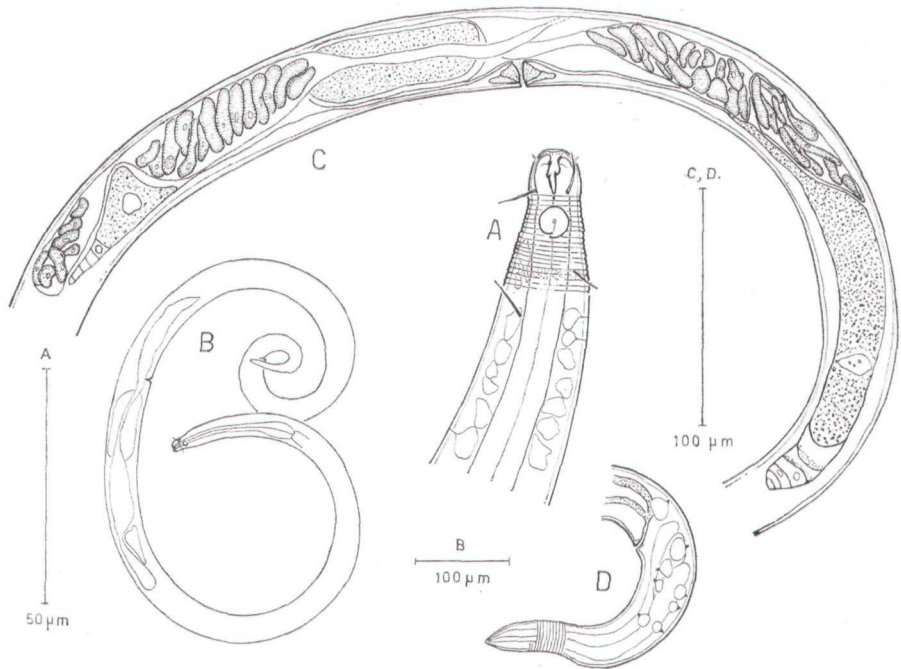


FIG. 8

Calomicrolaimus monstrosus (Gerlach, 1953) comb.n.

A: head end of ♀₁; B: total view of ♀₁; C: genital apparatus of ♀₁; D: tail of ♀₁.

Discussion.

Up to now, two species with large amphids have been described within the genus *Microlaimus*: *Microlaimus monstrosus* Gerlach, 1953 from the Mediterranean and *M. conspicuus* Lorenzen, 1973 from the Kieler Bucht. Our study of animals of the Southern Bight of the North Sea shows that both forms should be considered as one species: the central spot in the amphid (which indicates the spiral origin) is not always clear; the buccal cavity is slightly sclerotized and the small teeth are not always visible; the lack of labial papillae in *M. monstrosus* seems unlikely; the position of the amphids in relation to the front end is, to a certain extent, variable.

According to the diagnosis of *Calomicrolaimus* in Jensen, 1978, we place this species within this genus, although Jensen places *M. monstrosus* as well as *M. conspicuus* within the genus *Microlaimus*. *Calomicrolaimus monstrosus* (Gerlach, 1953) comb.n. is characterized by an elongated cervical region, somatic setae reduced to "spinelike" setae, amphids at the end of the cervical region, cephalic setae long and slender, female reproductive system with outstretched ovaries, tail slender, gradually tapering.

Sperm cells elongate; as a consequence, this feature is not diagnostic for the Molgolaimidae as claimed by Jensen (1978). The arrangement and structure of the epidermal gland cells is similar to that of *M. cyatholaimoides* de Man, 1922. The outlets of the cells are associated with "spinelike" setae which Jensen, 1978 has overlooked. He classifies *M. cyatholaimoides* within the type A where only a pore is present. The setae of the latter species could be arranged within the type B according to Jensen, 1978.

MICROLAIMUS ANNELISAE Jensen, 1976 (Fig. 9 and 10)

Material and locality.

- Two males, one female and ten juveniles.
- Only two juveniles were found in the type locality M 14 (51°50'50" N—2°50'08"E), 32-40m depth.

The animals described here are from the Kwintebank: ZB2: 51°19'4"N—2°41'00"E, 13m depth; medium sand with medium size of the sand fraction 369 μ m; silt-clay fraction: 0.14 percent.

Collected 5 September 1978.

Measurements.

Neotype									
σ_1	L = 1097	a = 41.5	b = 9.1	c = 10.2					
	— 72	118	M 973						
	8	25	26	24	22	1097 (slide N° 479)			
Other specimens									
σ_2	L = 1288	a = 46.0	b = 10.6	c = 10.2					
	— 76	122	M 1177						
	9	25	26	28	23	1288 (slide N° 480)			
φ_1	L = 1096	a = 36.5	b = 9.4	c = 10.9	V = 51.8 percent				
	— 60	117	477	568	736	995			
	8	27	25	30	29	28	22	1096 (slide N° 481)	
juv ₁	L = 549	a = 30.5	b = 5.3	c = 7.5					
	— 66	103	M 516						
	8	18	18	17	13	549 (slide N° 482)			
juv ₂	L = 455	a = 23.9	b = 4.8	c = 5.5					
	— ?	94	M 372						
	7	?	19	18	14	455 (slide N° 483)			

Description.

Male: the description of the male-holotype (Jensen, 1976) is satisfactory and, in general, the characteristics are in agreement with

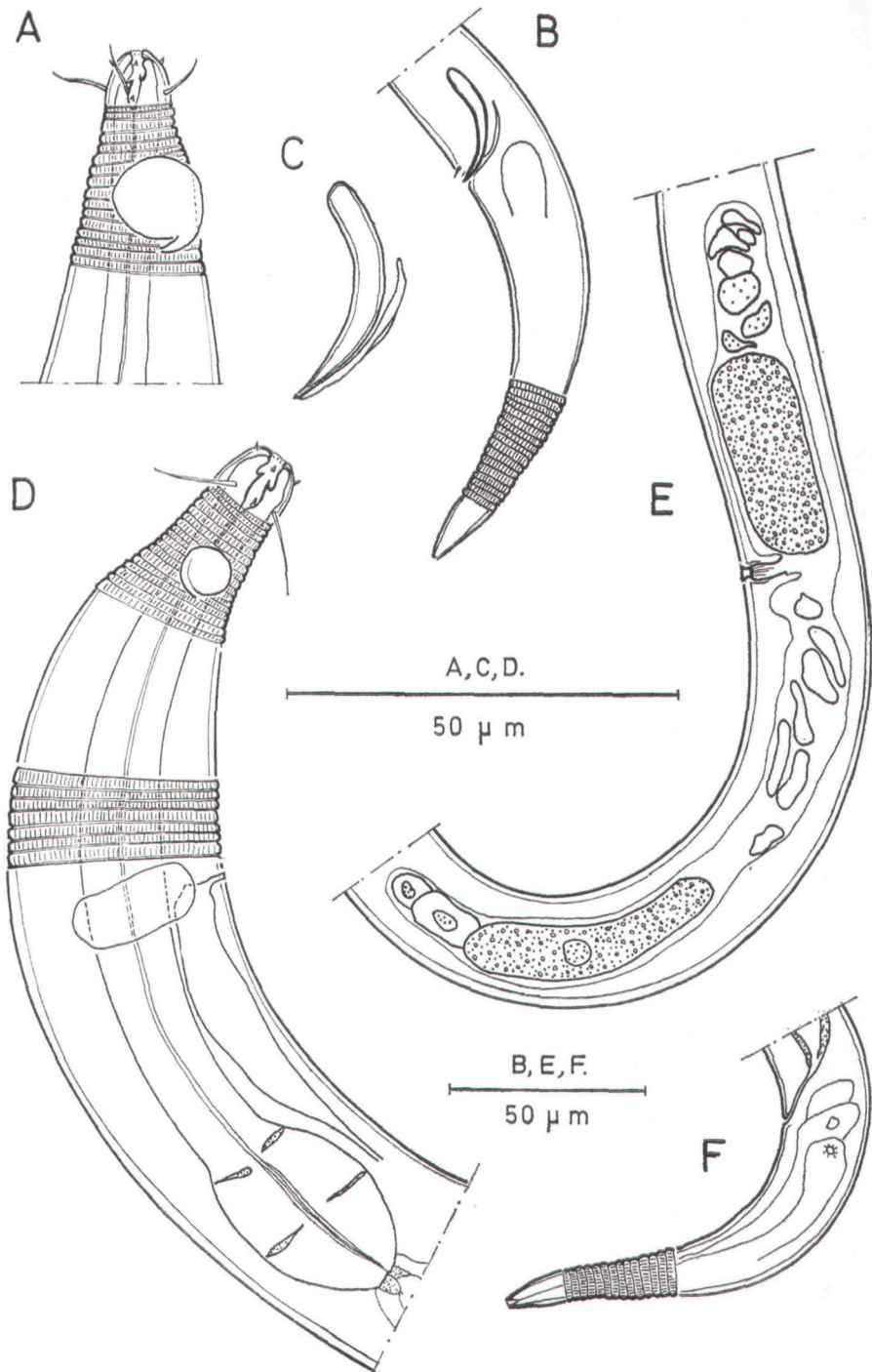


FIG. 9

Microlaimus annelisiae Jensen, 1976

A: head end of the male σ_1 (neotype); B: posterior apparatus of σ_1 ; C: spicular apparatus of σ_1 ; D: anterior end of φ_1 ; E: genital apparatus of φ_1 ; F: posterior region of φ_1 .

those of the males we found. However, a few remarks should be made: —the cuticular ornamentation is the same all over the body: the longitudinal bars of the cuticular annules are also present in the anteriormost cervical region and on the posterior part of the tail;

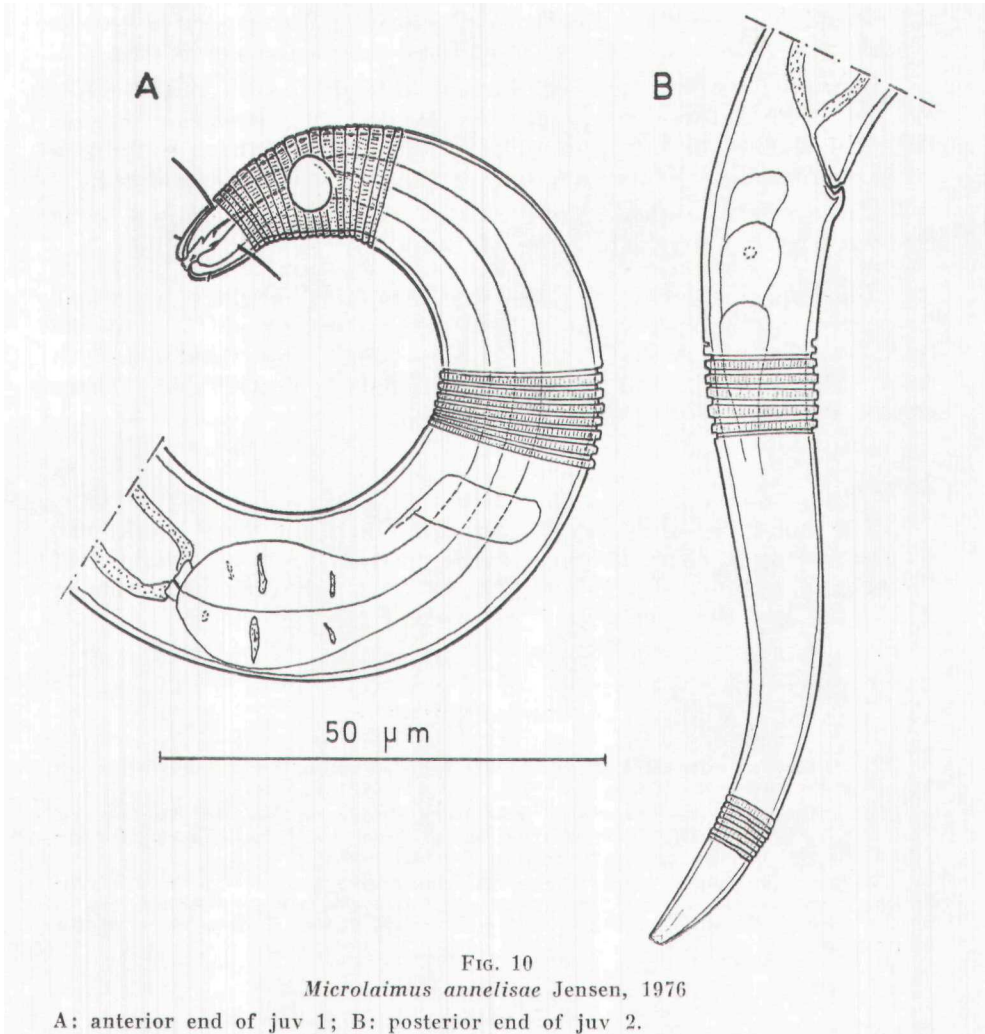


FIG. 10

Microlaimus annelisiae Jensen, 1976

A: anterior end of juv 1; B: posterior end of juv 2.

— amphids with slightly elliptical aperture ($15\mu\text{m}$ width, i.e. 80 percent of the corresponding body diameter); anterior border at $13\mu\text{m}$ from the front end; —spicules $27\text{--}31\mu\text{m}$ along the arc; —terminal setae on the tail not observed.

Female: body cylindrical, slender; cervical region narrowing toward the head-end. Somatic setae not observed. Cuticular annules from head to tail tip with longitudinal bars. Head with six internal labial papillae, six external labial papillae ($1\mu\text{m}$ long) and four cephalic setae ($10\mu\text{m}$ long). Amphids with spiral fovea ($7\mu\text{m}$ wide, i.e. 57 percent of the corresponding body diameter); the anterior

border at 15am posterior to the front end. Vestibulum not striated. Buccal cavity slightly sclerotized with one small dorsal tooth and two small ventrosublateral teeth. Oesophagus surrounding the whole buccal cavity, slightly swollen anteriorly, posteriorly dilated to a pyriform bulb. Cardia small. Nerve ring at 52 percent of the oesophagus length. Renette cell conspicuous, posterior to the oesophageal bulb; excretory pore at the level of the nerve ring.

Reproductive system didelphic-amphidelphic, with outstretched ovaries. The anterior ovary lies on the left, the posterior one on the right side of the intestine. The posterior spermatheca contains a lot of sperm cells. Vagina not very large, but strongly sclerotized.

Tail cylindro-conical; three caudal glands. No terminal setae observed, neither a seta in front of the anus.

Juveniles: resemble the female. Amphids slightly elliptical, 53 percent of the corresponding body diameter and at 15µm of the front end. Four cephalic setae 7.7µm long. The slender tail in comparison with the tail of male and female is remarkable. Three caudal glands obvious.

Remark.

The holotype (slide N' 201 in the "Instituut voor Dierkunde, Rijksuniversiteit, Gent, Belgium") disappeared through a mistake of the original author. For this reason, we have redescribed this species and designated the specimen ♂, as neotype.

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Summary

Two new species of free-living marine nematodes from a sublittoral region in the North Sea off the Belgian coast are described: *Richtersia deconincki* sp.n. and *Pomponema coomansi* sp.n.. *Gonionehus villosus* Cobb, 1920 is rediscovered and redescribed. *Calomicrolaimus monstrosus* (Gerlach, 1953) comb.n. is discussed and *Microlaimus conspicuus* Lorenzen, 1973 is synonymized with it. Females and juveniles of *Microlaimus annelisiae* Jensen, 1976 were also found and are discussed; since the holotype of this species is lost, a neotype has been designated.

Samenvatring

Twee nieuwe soorten vrijlevende mariene nematoden, *Richtersia deconincki* sp.n. en *Pomponema coomansi* sp.n., afkomstig van het sublittoraal van de Noordzee vóór de Belgische kust, zijn beschreven. *Gonionehus villosus* Cobb, 1920 is teruggevonden en beschreven. *Microlaimus conspicuus* Lorenzen, 1973

wordt gesynonimiseerd met *Calomicrolaimus monstrosus* (Gerlach, 1953) comb.n. Vrouwtes en juvenile exemplaren van *Microlaimus annelisiae* Jensen, 1976 zijn onderzocht; daar het holotype van deze **soort** verdwenen is, werd een neotype **aangeduid**.

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