

# Some Desmoscolecids from the White Sea (Nematoda: Desmoscolecida)

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**Summary.** Thirty samples, mainly from the sublittoral zone from several localities of in the Velikaja Salma Strait, Kandalaksha Bay, White Sea contained a relatively high species diversity of the family Desmoscolecidae, but a low representation per species. Four species, new to science are described. *Antarcticonema paracomecapitata* sp. n. characterized by an annulated body cuticle with 97-112 annuli, ornamented with tubular and hair-like projections and a lateral differentiation with hair-like setae only, two types of somatic setae: short setae with fine end and long stout setae with sucker-like end and in male by the length of the spicules (36 µm); *Tricoma (Tricoma) albimaris* sp. n. by a high number of main body rings (greater than 100), a somatic setal pattern with 10-12 subdorsal setae and 19-25 (male)/19-22 (female) subventral setae, broad triangular head shape, and in male by the shape of the gubernaculum with thick-walled apophyses; *T. (T.) paracapitata* sp. n. by a small body with 76-77 main rings, narrow triangular head shape in lateral view, somatic setal pattern with 9-10 subdorsal and 19-20 subventral setae, fine spicules with knob-like manubrium and the presence of two medioventral genital setae in male and *Desmoscolex (Desmoscolex) paragranulatus* sp. n. by a short body, a typical desmoscolecoid setal pattern, a broad head largely covered by the amphids which reach far anteriorly, presence of a concentration of pigment granules and in male by the 36 µm long, curved spicules. Additional data are given on *Tricoma (Tricoma) similis* Cobb, 1912, *Desmoscolex (Desmoscolex) labiosus* Lorenzen, 1969 and *D. (D.) petaloides* Lorenzen, 1972 found for the first time in the White Sea.

**Key words:** Desmoscolecida, White Sea, taxonomy.

Until recently, no desmoscolecoid species were recorded from the White Sea. Thirty samples, mainly from the sublittoral zone from several localities in the Velikaja Salma Strait, Kandalaksha Bay, White Sea contain a relatively high species diversity of the family Desmoscolecidae. Typically, there was a low representation per species. The 32 specimens found belong to eighteen species; nine are potentially new to science. The genus *Antarcticonema* Timm, 1978 is represented by one new species; the genus *Tricoma* Cobb, 1893 by ten species, seven belonging to the subgenus *Tricoma*, three to the subgenus *Quadricoma*; the genus *Desmoscolex* Claparède, 1863 by six species of the subgenus *Desmoscolex* and the genus *Greeffiella* Cobb, 1922 by one species. Four species new to science are described: *Antarcticonema paracomecapitata* sp. n., *Tricoma (Tricoma) albimaris* sp. n., *T. (T.) paracapitata* sp. n. and *Desmoscolex (Desmoscolex) paragranulatus* sp. n. The other new species are not described herein due to the restricted number of specimens per species and the lack of obvious

discriminating diagnostic features. Additional information is given on *Tricoma (Tricoma) similis* Cobb, 1912, *Desmoscolex (Desmoscolex) labiosus* Lorenzen, 1969 and *D. (D.) petaloides* Lorenzen, 1972. Within *Tricoma*, four species were observed possessing 37/38 main body rings; only one of them showed a clear inversion in the direction of the quadricomoid main rings, and was assigned to the subgenus *Quadricoma*.

## MATERIALS AND METHODS

All samples were taken using SCUBA-diving technique. We acknowledge Mr. Safonov for collecting material. Nematodes were fixed with 4% formalin in sea water, processed and mounted in glycerin on glass or on Cobb slides. The location of the species is presented in Table 1. The drawings and photographs were made with a Reichart Polyvar camera lucida, using interference contrast. Type material is deposited in the nematode collection of Moscow State University (Nos. Ic) and at the Koninklijk

**Table 1.** Location of species found in the White Sea, Kandalaksha Bay, near Karela Shore.

Location	Date	Depth	Substrate	Species found
Velikaja Salma Strait samples 1, 2, 4	14/7/1992	10 m	coarse sand and broken shells	<i>Tricoma (T.)</i> sp.1 <i>apud T. (T.) dimorpha</i> : 1 female, <i>T. (T.) albimaris</i> sp.n.: 1 male, <i>T. (T.)</i> sp. 4: 1 female.
Velikaja Salma Strait, Probkina Guba sample 3	15/7/1992	25 m	fine sand	<i>T. (Q.) nematoides</i> : 1 female.
Velikaja Salma Strait, opposite Cross Cape samples 5-7, 9-15	7/7/1992	12 m	medium sand	<i>T. (T.) similis</i> : 1 female, <i>T. (T.) albimaris</i> sp.n.: 1 male, 2 females, <i>T. (T.) paracapitata</i> sp. n.: 1 male, <i>Desmoscolex (D.) paraganulatus</i> sp. n.: 1 male, 2 females, <i>Antarcticonema paracomecapitata</i> sp. n.: 1 female.
Velikaja Salma Strait sample 8	17/7/1992	12 m	medium sand	<i>T. (T.) albimaris</i> sp.n.: 1 male, <i>Desmoscolex (D.) apud D. (D.) nymphianus</i> : 1 female <i>Desmoscolex</i> sp.: 4? females
Velikaja Salma Strait, Probkina Guba sample 16	end of July 1989	10 m		
Velikaja Salma Strait sample 18, 19	19/7/1988	20 m	muddy sand	<i>T. (T.)</i> sp. 3: 1 male, ? <i>Tricoma</i> : 1 female.
Velikaja Salma Strait sample 20, 21	7/7/1989	10 m	muddy sand	<i>T. (T.)</i> sp. 2 <i>apud T. (T.) apophysis</i> : 1 male, 1 female.
Velikaja Salma Strait in vicinity of the Biological station (Moscow University) sample 22	15/8/1986	supralittoral	roots of <i>Puccinella</i> sp.	<i>Desmoscolex (D.) labiosus</i> : 1 female.
Velikaja Salma Strait sample 23	June 1989	10 m	muddy sand	<i>Desmoscolex (D.) petaloides</i> : 1 female.
Kassyan Island sample 24	4/8/1987	15 m	slit	<i>T. (Q.)</i> sp. 2: 1 female.
Velikaja Salma Strait sample 25	July 1990	20 m	silty sand	<i>Desmoscolex (D.) apud D. (D.) nudus</i> : 1 female.
Velikaja Salma Strait in between Big and Small Ereemeev Islands sample 26	1/7/94	8 m	coarse sand	<i>A. paracomecapitata</i> sp. n.: 1 male,
sample 29	5/7/94	15 m	sand and broken shells	<i>Desmoscolex (D.) apud D. (D.) vanoyei</i> : 1 female.
Velikaja Salma Strait sample 27, 30	3/7/94	15 m	silty sand	<i>A. paracomecapitata</i> sp. n.: 1 female, <i>T. (Q.)</i> sp.1: 1 female.
Velikaja Salma Strait, Kindo Cape sample 28	15/7/94	22 m	silty sand	<i>T. (Q.)</i> sp.1: 1 female.

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**Abbreviations:** L: body length; mbd: maximum body diameter, foreign material included; (mbd): minimum body diameter at level of interzone; hd: head diameter, width by length; cs: length of cephalic setae; ph: length of pharynx; t: tail length; tmr: length of end ring; vsl<sub>n</sub>/sv<sub>n</sub>: length of the n<sup>th</sup> ventro-sublateral/subventral somatic seta from anterior end in Tricominae; dsl<sub>n</sub>/sd<sub>n</sub>: length of the dorso-sublateral/subdorsal somatic seta from anterior end in Tricominae; sv<sub>n</sub>/sd<sub>n</sub> in Desmoscolecinae: length of subventral/subdorsal somatic seta on main ring n; spic: length of spicule measured along the corpus; gub: length of gubernaculum; a, b, c: ratios of de Man; V: position of vulva as a percentage of total body length from anterior end; T: length of male genital

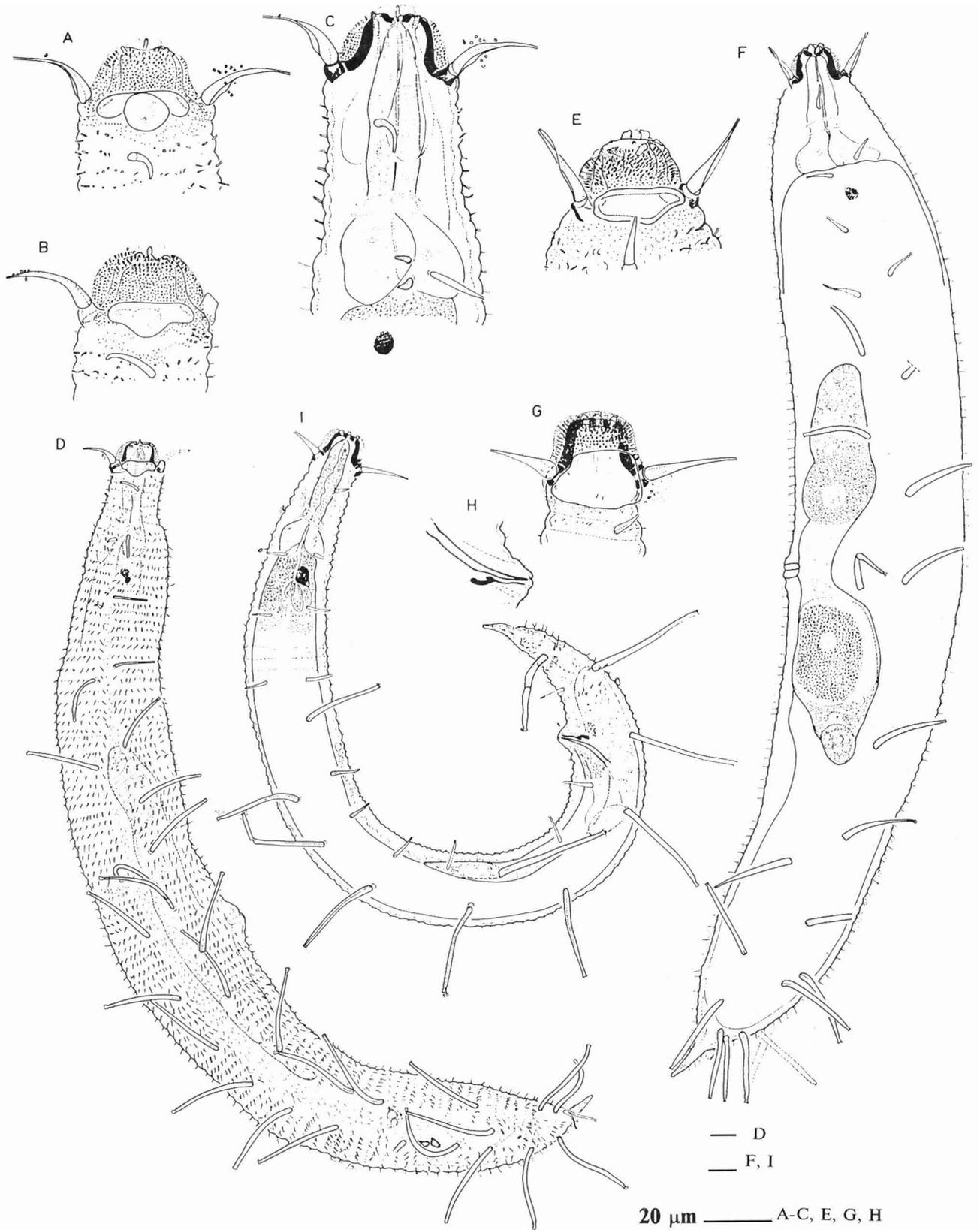
system as a percentage of total body length; N: number of main body rings.

## DESCRIPTIONS

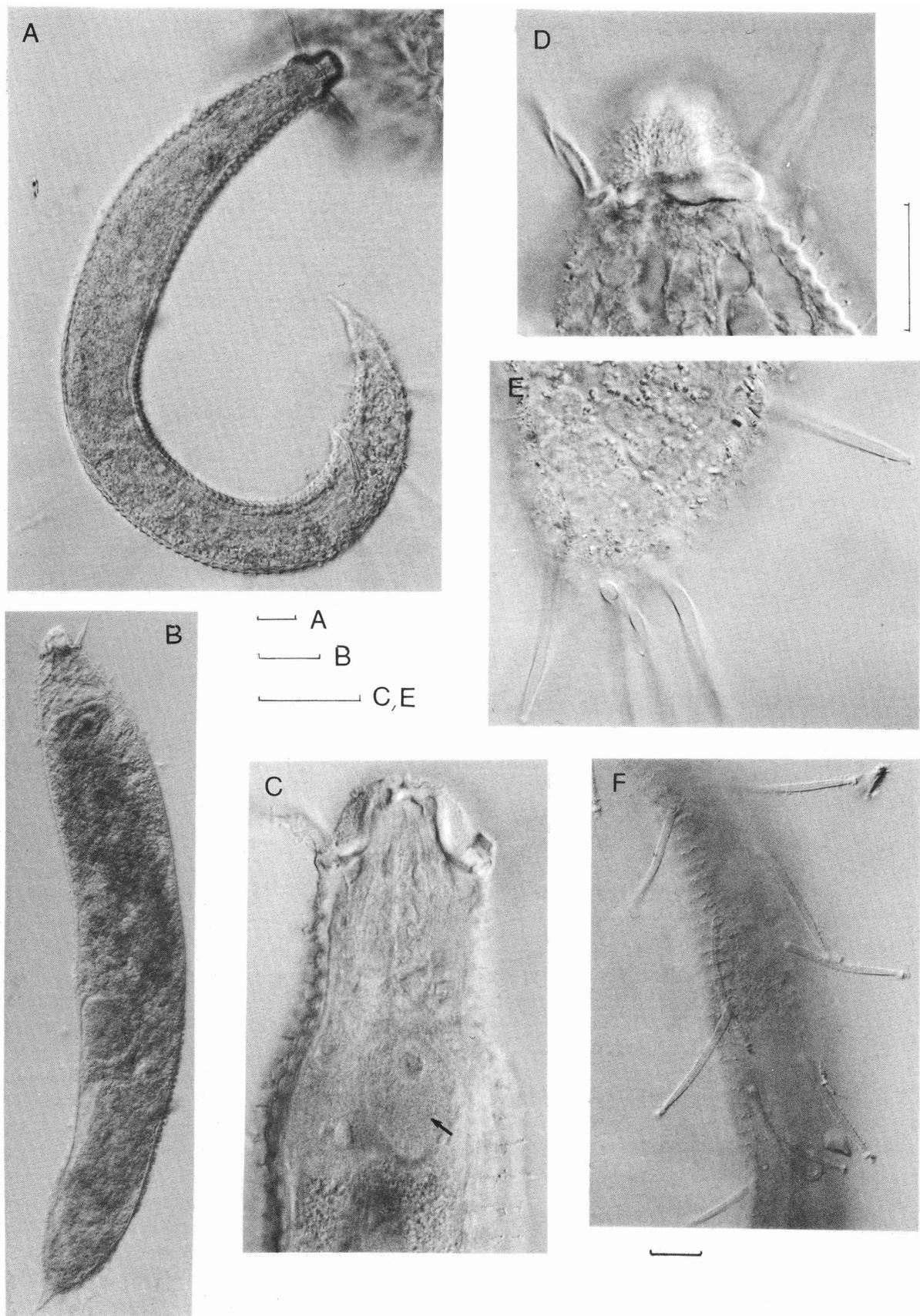
### Subfamily Tricominae Lorenzen, 1969

#### *Antarcticonema paracomecapitata* sp. n. (Figs. 1A-I & 2A-F)

**Holotype female:** L = 835 µm; mbd = 102 µm; hd = 41x22 µm; cs = 31.5 µm; ph = 83 µm; t = -; tmr = 21 µm; vsl<sub>1</sub> = 22 µm; vsl<sub>2</sub> = 24 µm; vsl<sub>3</sub> = 30 µm; vsl<sub>4</sub> = 32 µm; vsl<sub>5</sub> = 50.5 µm; vsl<sub>14</sub> = 73 µm; vsl<sub>15</sub> = 60 µm; vsl<sub>16</sub> = 25 µm; vsl<sub>17</sub> = 30 µm; dsl<sub>1</sub> = 14 µm; dsl<sub>2</sub> = 26.5 µm; dsl<sub>3</sub> = 46 µm; dsl<sub>4</sub> = 59 µm; dsl<sub>15</sub> = 71.5 µm; dsl<sub>16</sub> = 71.5 µm; a = 8.2; b = 10.1;



**Fig. 1.** *Antarcticonea paracomecapitata* sp. n. Holotype female. A-B: Head region, left side and right side respectively; C: Anterior body region; D: Entire female in surface view. Paratype female. E: Head region; F: Entire body. Paratype male. H: Copulatory apparatus; I: Entire male specimen; G: Head region, surface view.



**Fig. 2.** *Antarcticoneima paracomecapitata* sp. n. A: Male paratype, total view; B: Female paratype, total view; C: Female holotype, anterior body region (arrow points on ventro-sublateral pharyngeal gland); D: Head region, surface view, female paratype; E: Tail region, surface view, female paratype; F: Detail of somatic setae, holotype female. Scales: A, C-F - 20 µm, B - 60 µm.

c=-; V= 51.4%.

**Paratype female** (n=1): L= 725  $\mu$ m; mbd = 115  $\mu$ m; hd = 41x27  $\mu$ m; cs = 29  $\mu$ m; ph = 82  $\mu$ m; t = 71  $\mu$ m?; tmr = 32  $\mu$ m; vsl<sub>1</sub> = 16  $\mu$ m; vsl<sub>2</sub> = 20  $\mu$ m; vsl<sub>3</sub> = 17  $\mu$ m; vsl<sub>4</sub> = 20  $\mu$ m; vsl<sub>5</sub> = 24  $\mu$ m; vsl<sub>6</sub> = 43  $\mu$ m; vsl<sub>7</sub> = 43  $\mu$ m; vsl<sub>8</sub> = 52  $\mu$ m; vsl<sub>9</sub> = 53  $\mu$ m; vsl<sub>10</sub> = 55  $\mu$ m; dsl<sub>1</sub> = 17  $\mu$ m; dsl<sub>2</sub> = 22  $\mu$ m; dsl<sub>4</sub> = 48  $\mu$ m; dsl<sub>10</sub> = 49  $\mu$ m; dsl<sub>11</sub> = 45  $\mu$ m; dsl<sub>12</sub> = 44  $\mu$ m; a = 6.3; b = 8.8; c=10.2; V= 49.7%.

**Paratype male** (n=1): L = 655  $\mu$ m; mbd = 46  $\mu$ m; hd = 30x27  $\mu$ m; cs = 30  $\mu$ m; ph = 72  $\mu$ m; t= 104  $\mu$ m; tmr = 22  $\mu$ m; spic = 36  $\mu$ m; gub = 19  $\mu$ m; vsl<sub>1</sub> = 15  $\mu$ m; vsl<sub>3</sub> = 16  $\mu$ m; vsl<sub>4</sub> = 17  $\mu$ m; vsl<sub>5</sub> = 53.5  $\mu$ m; vsl<sub>9</sub> = 17  $\mu$ m; vsl<sub>10</sub> = 70  $\mu$ m; vsl<sub>11</sub> = 17  $\mu$ m; vsl<sub>12</sub> = 19  $\mu$ m; vsl<sub>13</sub> = 17.5  $\mu$ m; vsl<sub>14</sub> = 76.5  $\mu$ m; dsl<sub>1</sub> = 15  $\mu$ m; dsl<sub>3</sub> = 16  $\mu$ m; dsl<sub>4</sub> = 57  $\mu$ m; dsl<sub>10</sub> = 73  $\mu$ m; dsl<sub>11</sub> = 75  $\mu$ m; a = 14.2; b = 9.1; c = 6.3; T = 41.8%.

**Female.** Body stout, tapered at both ends. Cuticle annulated, 104-112 narrow homogeneous annuli, 4.5  $\mu$ m wide. Each annulus with a transverse row of short, fine tubular projections, posteriorly intermingled with hair-like projections; lateral differentiation with hair-like ornamentation irregularly distributed and more obviously posteriorly on the body (Fig. 1B, D); additional fine dot-like particles cover the body cuticle. Somatic setae arranged in a ventro-sublateral and a dorso-sublateral longitudinal row on each side, respectively shifting dorsally and ventrally in the tail region. Setal pattern in holotype female, dorso-sublateral, right side: 9, 18, **25, 35, 48, 55, 63, 69, 74, 79, 84, 90, 96, 100, 104, 108** = 16 (112 annuli), left side: 10, 21, **26, 36, 47, 54, 63, 70, 78, 85, 91, 97, 100, 104, 109** = 15 (113 annuli) and ventro-sublateral, right side: 3, 9, 16, 23, **32, 39, 45, 51, 57, 62, 70, 79, 82, 92, 94** (lateral), **94, 99, 101, 103, 103** = 19 (104 annuli), leftside: 2, 10, 11, 20, **29, 37, 45, 51, 67, 74, 84, 95, 98, 101, 105** = 15 (108 annuli); paratype female, left side: dorso-sublateral: 11, 22, 32, **45, 54, 71, 81, 92, 99, 105, 107, 108** = 12 (110 annuli) and ventro-sublateral: 3, 11, 17, 24, **29, 37, 43, 52, 86, 94, 100** = 11 (107 annuli). Somatic setae of two types: (1) in anterior third of body and terminal subdorsal setae short, tapered to a fine open tip; and (2) posteriorly, setae long, stout, with sucker-like end (indicated as bold in setal pattern) and associated with a gland cell.

Head widest posteriorly at level of peduncles of insertion of the cephalic setae, anteriorly slightly tapering to a broadly rounded end. Its cuticle thickened and sclerotized, surrounded by a more or less translucent capsule with oval elements (bacteria?). Lip region with six protruding lip flaps; the lateral ones with indication of inner labial papillae; six outer

labial papillae situated at the anterior border of the rostrum (Fig. 1A & E). Four cephalic setae, about 30  $\mu$ m long, with broad base, tapered to a fine tip and with membrane-like flange; inserted on short peduncles at posterior head border. Amphidial fovea, thick-walled, smooth vesicle lying laterally between the peduncles of the cephalic setae; amphidial pore at head base.

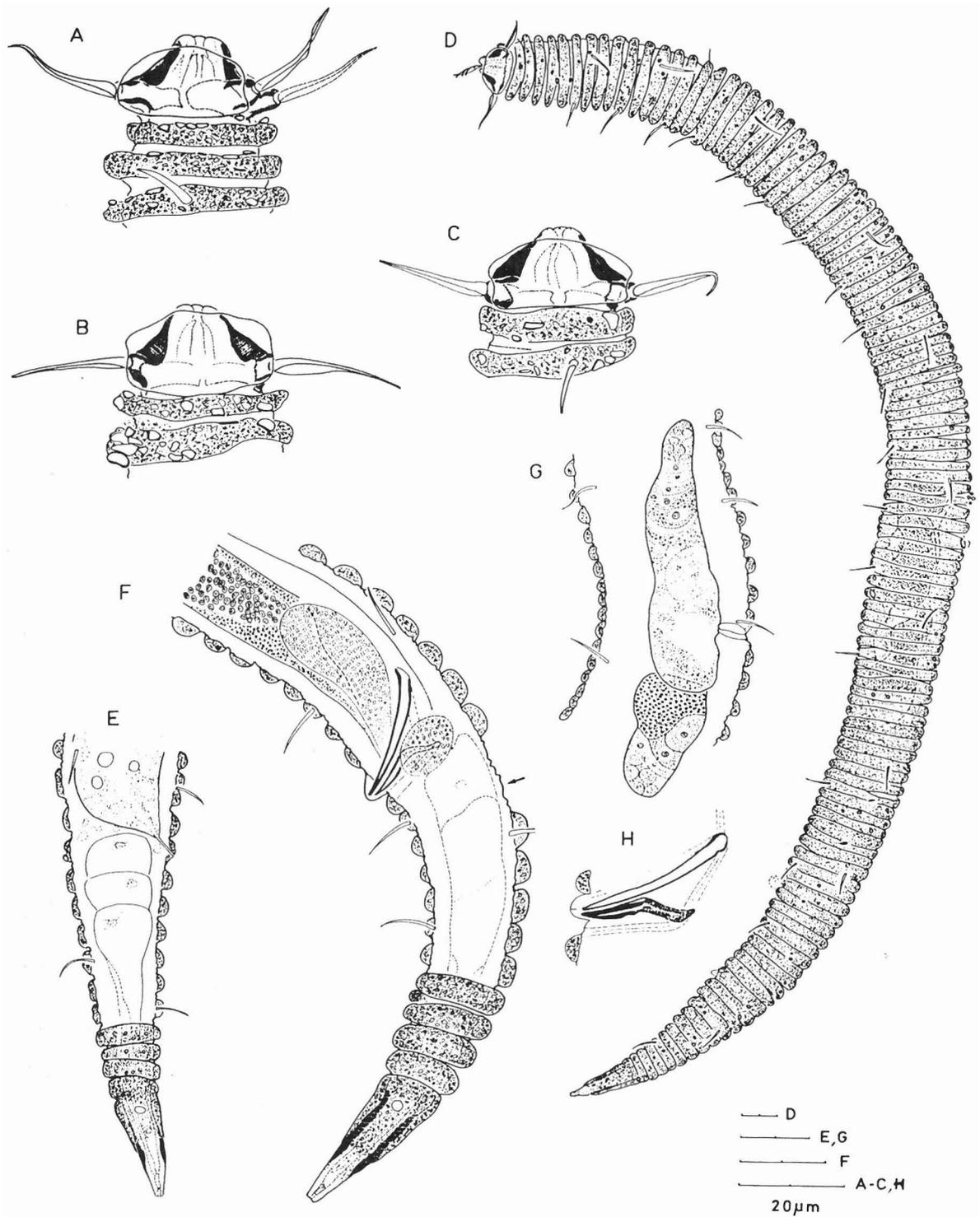
Stoma minute. Pharynx short, about cylindrical i.e. to the level of the nerve ring, then enlarged due to the strongly protruding dorsal and ventro-sublateral pharyngeal glands, each with a distinct nucleus. Pharyngo-intestinal junction at level of annulus 11 in holotype; no cardia observed; intestine large cylindrical, with granules and large globules, extending almost to the end ring; anus not clearly observed, probably at level of ring 75. Brownish pigment concentrations (ocelli) opposite the anterior intestine.

Reproductive system didelphic-amphidelphic with outstretched branches, anterior genital branch right of the intestine, posterior genital branch left; two spermathecae with small globular sperm; vulva slightly protruding at mid-body; vagina surrounded by finely granular gland cells. No caudal glands observed; end ring cone shaped, anteriorly provided with short hair-like structures.

**Male.** Largely similar to female. Body somewhat more slender, with 97 annules ventrally, 106 dorsally; ornamented as in female. Setal pattern as follows: dorso-sublateral, right side: 10, 16, 22, **34, 40, 49, 60, 70, 80, 88, 97** = 11, left side: 9, 17, 22, **26, 35, 43, 52, 64, 73, 78, 87, 95, 101** = 13 and ventro-sublateral, right side: 2, 9, 15, 22, **26, 32, 38, 46, 54, 60, 69, 78, 90, 95** = 14, left side: 7, 12, 19, 25, 34, 41, 49, 59, 67, 73, **79, 88, 95** = 13. Somatic setae with similar differentiation in shape and length as in female but with a smaller number of large glandular setae with sucker-like end (bold in setal pattern) in ventro-sublateral position.

Head region as in female, but lips less protruding, amphidial fovea larger, extending between mid-head and posterior head border.

Pharyngo-intestinal junction opposite annulus 9. Intestine with well developed postcloacal blindsac. Pigment concentration at level of annuli 11-12, followed by three small, finely granular pseudocoelomocytes with pale nucleus. Reproductive system with two short testes, posterior one reflexed; vas deferens flanked on both sides by a large ejaculatory gland. Spicules, 36  $\mu$ m long, slightly curved, cephalated and posteriorly gradually tapered to a pointed tip. Gubernaculum, 19  $\mu$ m long, largely parallel to spicules, proximally with slightly marked apophyses nearly in direct line with distal part. Cloacal tube protruding at level of annuli 85-87.



**Fig. 3.** *Tricoma (Tricoma) albimaris* sp. n. Head region in surface view. A: Female paratype; B-C: Male paratypes. D: Entire female paratype in surface view; E: Female tail; F: Male holotype, posterior body region; G: Female reproductive system; H: Detail of copulatory apparatus, paratype.

Tail tapered to a conical end ring with spinneret, and anteriorly ornamented with hairy spines.

**Type locality.** White Sea, Kandalaksha Bay, Velikaja Salma Strait, silty sand, at 15 m depth, collected on 3.07.1994.

**Other localities.** White Sea, Kandalaksha Bay, Velikaja Salma Strait, Karela Shore, opposite the Cross Cape, at 12 m depth; collected by M. Safonov on 7.07.1992 (paratype female) and White Sea, Kandalaksha Bay, Velikaja Salma Strait, in between Big and Small Eremeev Islands, coarse sand at 8 m depth; collected on 1.07.1994.

**Type material.** Holotype female, slide no Ic395; one paratype female, slide RIT 483; one paratype male slide No. Ic396.

**Etymology.** The name of the new species refers to the close relationship with *Antarcticonema come-capitata* Timm, 1978.

**Diagnosis.** *Antarcticonema paracomecapitatum* sp. n. is characterized by the arrangement, length and structure of the somatic setae with clear differentiation in two types: short setae with fine distal end and long stout setae with sucker-like distal end, the ornamentation of the body cuticle with tubular and hair-like projections and a lateral differentiation with hair-like setae only; and in male by the length of the spicules: 36  $\mu\text{m}$ .

**Relationship.** The new species most closely resembles *Antarcticonema come-capitata* described from deep sea Antarctic in habitus, number of body annuli, general head shape and spicule structure, but differs by former diagnostic characters.

### *Tricoma (Tricoma) albimaris* sp. n. (Fig. 3A-G)

**Holotype male:** L = 930  $\mu\text{m}$ ; mbd = 38  $\mu\text{m}$ ; (mbd) = 31  $\mu\text{m}$ ; hd = 30x20  $\mu\text{m}$ ; cs = 26  $\mu\text{m}$ ; ph = 89  $\mu\text{m}$ ; t = 130  $\mu\text{m}$ ; tmr = 40  $\mu\text{m}$ ; spic = 35  $\mu\text{m}$ ; gub = 21  $\mu\text{m}$ ; sl<sub>1</sub> = 13  $\mu\text{m}$ ; sv<sub>2</sub> = 20.5  $\mu\text{m}$ ; sv<sub>3</sub> = 19  $\mu\text{m}$ ; sv<sub>21</sub> = 11  $\mu\text{m}$ ; sv<sub>22</sub> = 15.5  $\mu\text{m}$ ; sd<sub>1</sub> = 18.5  $\mu\text{m}$ ; sd<sub>11</sub> = 15  $\mu\text{m}$ ; a = 24.5; b = 10.5; c = 7.2; N = 113-114; n°sd = 11-12; n°sv = 22.

**Paratype male (n=2):** L = 745-830  $\mu\text{m}$ ; mbd = 47-48  $\mu\text{m}$ ; (mbd) = 41  $\mu\text{m}$ ; hd = 26-30 x 17-18  $\mu\text{m}$ ; cs = 23-24  $\mu\text{m}$ ; ph = 77-105  $\mu\text{m}$ ; t = 114-116  $\mu\text{m}$ ; tmr = 41-41.5  $\mu\text{m}$ ; spic = 33-35  $\mu\text{m}$ ; gub = 18.5-21  $\mu\text{m}$ ; 1st sd = 15.5-16  $\mu\text{m}$ ; tsd = 13.5  $\mu\text{m}$ ; 1st sv = 11-12  $\mu\text{m}$ ; tsv = 14  $\mu\text{m}$ ; a = 15.9-17.3; b = 7.9-9.7;

c = 6.4-7.3; N = 110-116; n°sd = 10-11; n°sv = 19-25.

**Paratype female (n=2):** L = 800-900  $\mu\text{m}$ ; mbd = 49-53  $\mu\text{m}$ ; (mbd) = 42-49  $\mu\text{m}$ ; hd = 29-30 x 15.5-17  $\mu\text{m}$ ; cs = 23.5-26  $\mu\text{m}$ ; ph = 83-  $\mu\text{m}$ ; t = 103-108  $\mu\text{m}$ ; tmr = 37-42  $\mu\text{m}$ ; 1st sd = 18-19  $\mu\text{m}$ ; tsd = 14-16  $\mu\text{m}$ ; 1st sv = 12-13.5  $\mu\text{m}$ ; tsv = 14.5-15  $\mu\text{m}$ ; a = 17.0-22.9; b = 9.6-; c = 7.4-8.7; V = 47.5-52%; N = 109-117; n°sd = 10-12; n°sv = 19-22.

**Male.** Body relative slender, tapering towards extremities, especially in tail region. Cuticle with 113 tricomoid main rings ventrally and 114 rings dorsally in holotype, 111-116 main rings ventrally and 110-113 rings dorsally in paratypes. Main rings with secondary cuticular annulation consisting of three rings with the middle one larger and lower (Fig. 2F, arrow). Difference in number of main rings between dorsum and ventrum due to the presence of forked rings.

Somatic setae arranged as follows in holotype: subdorsal, right side: 7, 14, 21, 26, 38, 50, 62, 74, 84, 93, 101, 108 = 12, left side: 6, 14, 26, 35, 44, 56, 68, 79, 90, 99, 105 = 11; subventral, right side: 2 (sublateral), 6, 11, 15, 19, 23, 27, 31, 36, 48, 54, 59, 64, 70, 75, 80, 86, 91, 95, 99, 104, 107 = 22, left side: 2 (sublateral), 7, 11, 16, 19, 23, 28, 32, 38, 43, 48, 54, 60, 65, 72, 77, 84, 89, 93, 98, 103, 107, = 22; paratype specimens with 10 or 11 subdorsal setae on left or right side, and 19-20 and 23-25 subventral setae in two paratype specimens respectively. Somatic setae fine, tapering to an open tip, inserted directly onto cuticular rings, without peduncle. Subdorsal and subventral setae about equally long; first ventro-sublaterally inserted setae (when present) and posterior setae shorter.

Head triangular in side view, tapering anteriorly to a truncated end. Cuticle thickened and sclerotized, except in labial region. Anterior end apparently with six lips; each with a small papilla. Cephalic setae slender, tapering, flanked over their whole length by a membrane tapering towards the setae tip; nearly as long as maximum head width, inserted on high peduncles protruding from posterior head region. Amphidial fovea vesicular, covering head laterally almost completely, except for lip region. Amphidial canal ending in groove in posterior head border.

Stoma small, slightly widening at the base, embracing protruding end of pharynx with three minute teeth (one dorsal, two ventro-sublaterals). Pharynx typical, surrounded by nerve ring opposite main ring 6 and posteriorly with shortly protruding pharyngeal glands. Pharyngo-intestinal junction at level of main ring 10 or 11. Intestine without post-rectal blind-sac. Cloacal tube protruding from main ring 101 in

holotype, rings 104-106 in paratypes. Ocelli large oval, 17x6.5  $\mu\text{m}$  in holotype, dark yellowish, and located opposite main rings 13 to 15 (holotype).

Reproductive system typical, with two testes, the left one posteriorly reflected; a large ejaculatory gland and a small granular glandular cell lateral to apophyses of gubernaculum observable on each side. Spicules 35  $\mu\text{m}$  in holotype, nearly straight, with marked manubrium and corpus posteriorly tapered. Gubernaculum, 21  $\mu\text{m}$  long in holotype: distal part parallel to spicule, 12  $\mu\text{m}$  long, with well sclerotized wall, widened proximally where continuing on each side in a weakly sclerotized but thick-walled apophyse, dorsally orientated and tip slightly curved anteriorly.

Tail with 12 complete main rings; end ring conical, 40  $\mu\text{m}$  long in holotype and covered by a 21  $\mu\text{m}$  long desmos. Phasmata small, rounded, 3  $\mu\text{m}$  diameter, located in anterior part of endring. Three caudal glands and spinneret present. One male paratype with two Suctorea on tail.

**Female.** In most characters similar to male. Body with 109-110 main rings (female<sub>1</sub>) and 115-117 rings (female<sub>2</sub>). Somatic setal pattern as in male, e.g. female<sub>1</sub>: subdorsal, right side: 7, 13, 20, 27, 39, 51, 61, 71, 79, 88, 97, 105 = 12, left side: 7, 13, 23, 34, 44, 56, 64, 76, 84, 90, 98, 104 = 12; subventral, right side: 3 (sublateral), 6, 10, 13, 16, 20, 23, 26, 32, 37, 42, 47, 52, 57, (62), 74, 85, 91, 97, 105 = 20, left side: 3 (sublateral), 7, 10, 13, 17, 20, 23, 27, 32, 36, 41, 45, 51, 56, 61, 67, 72, 79, 84, 90, 97, 105 = 22 (setae between brackets are broken off); female<sub>2</sub> with 10 or 12 subdorsal setae and 19 subventral setae.

Digestive system as in male. Anal opening in main ring 99 (female<sub>1</sub>) and ring 106 (right side, female<sub>2</sub>) respectively; no protruding anal tube, no postrectal blindsac. Ocelli small rounded, 5.5  $\mu\text{m}$  diameter, located opposite main ring 12.

Reproductive system typical; vulva at interzone of main rings 57-58 (female<sub>1</sub>) and rings 62-63 (female<sub>2</sub>) respectively; vagina short, well developed; two large spermathecae, may be obscure.

Tail with 8-10 main rings; end ring largely (1/3 to 2/3rd) covered by secretion and foreign particles, anteriorly with phasmata. Three consecutive caudal glands present.

**Type locality.** White Sea, Kandalaksha Bay, Karela Shore, Velikaja Salma Strait, opposite to the Cross Cape, 12 m, medium sand, collected by M. Safonov on 7.07.1992.

**Type material.** Holotype male, slide No. Ic397; 4 paratype specimens: 2 males (slide No. Ic398,

RIT484), 2 females (slide Nos. Ic399, RIT485).

**Etymology.** The species name *albimaris* refers to the type locality White Sea (Latin: *albus* = white, *mare* = sea).

**Diagnosis.** *Tricoma (Tricoma) albimaris* sp. n. is characterized by the high number of main rings (110-116 in male; 109-117 in female), the setal pattern (10-12 subdorsal setae, 19-25 subventral setae in male; respectively 10-12 and 19-22 in female), the broad triangular head shape in side view and the shape of the gubernaculum in male (distal part well sclerotized, widened proximally to two weakly sclerotized but thick-walled apophyses, dorsally orientated with tip slightly anteriorly bent).

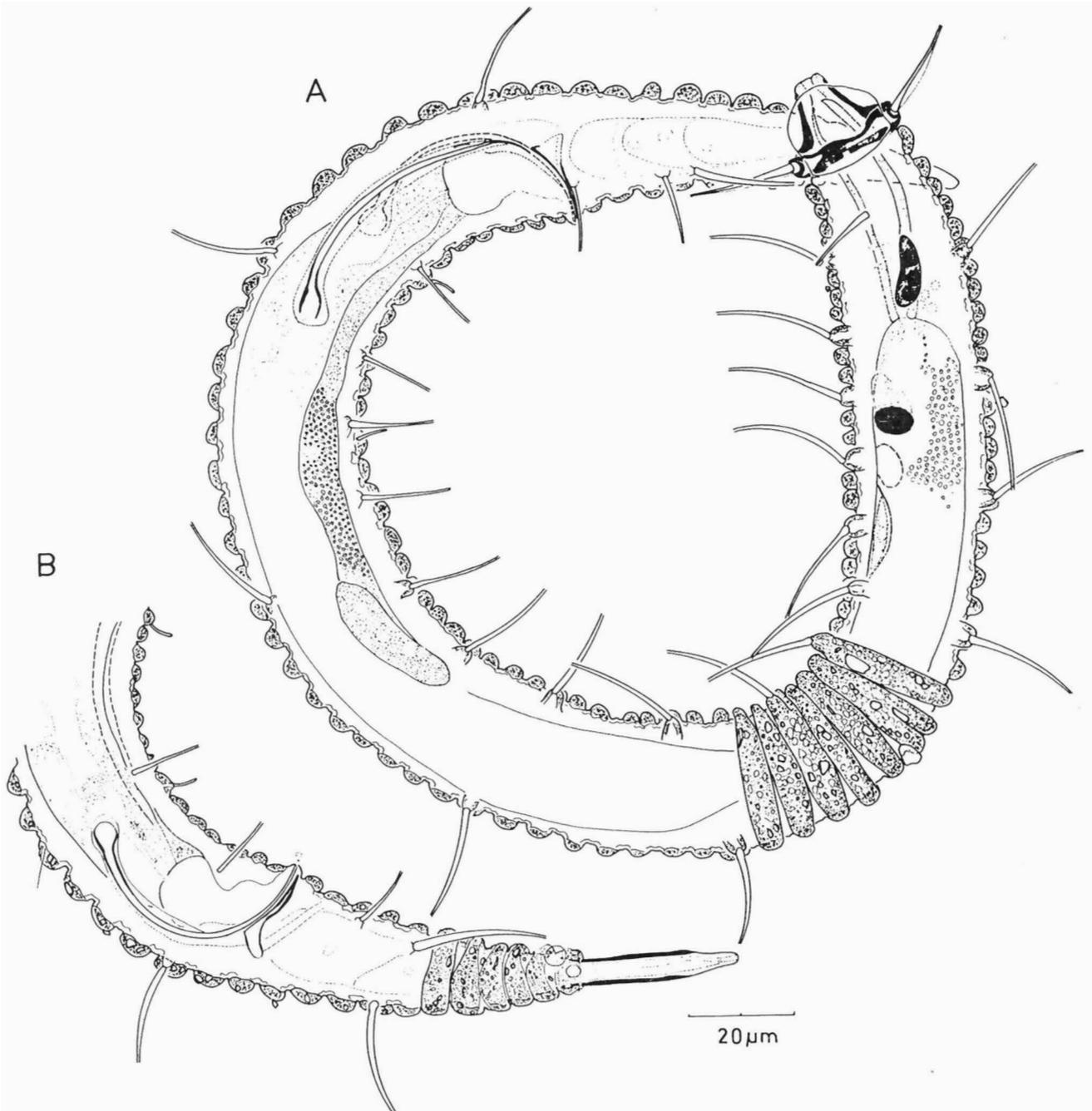
**Relationship.** The new species differs from all but two species by the high number (more than 100) of main rings. Currently, only two species of the subgenus *Tricoma* are known with a higher number of main rings: *T. (T.) islandica* Kreis, 1963 with 139 annuli and *T. (T.) multiannulata* Kreis, 1937 with 230-240 main rings. An aberrant male specimen of *Tricoma (Tricoma) similis* Cobb, 1912 with 126-127 tricomoid main rings has been recorded from the Mozambique Channel (Decraemer, 1984).

Blome (1982) described *Tricoma tertia* based on 2 males, 3 female and 1 juvenile and characterized the species by the high and variable number of main body rings (2 males with 80 and 99 annuli, 4 females with 83-144 annuli) and body length, showing sexual dimorphism. Upon examination of type specimens, the slide with paratype specimens contained 1 female and 1 male (= male<sub>2</sub> paratype) of *T. tertia* and 2 females belonging to a different, undescribed species. Currently, *T. (T.) tertia* is characterized by 80 main rings in male, 76-77 in female; the undescribed *Tricoma* species by 100-101 main rings in male, 101-114 rings in female (Decraemer, 1996).

### *Tricoma (Tricoma) paracapitata* sp. n. (Fig. 4A & B)

**Holotype male:** L = 445  $\mu\text{m}$ ; mbd = 28  $\mu\text{m}$ ; (mbd) = 25  $\mu\text{m}$ ; hd = 20x17.5  $\mu\text{m}$ ; cs = 22  $\mu\text{m}$ ; ph = 56  $\mu\text{m}$ ; t = 89  $\mu\text{m}$ ; tmr = 33  $\mu\text{m}$ ; spic = 58  $\mu\text{m}$ ; gub = 17  $\mu\text{m}$ ; sl<sub>1</sub> = 16.5  $\mu\text{m}$ ; sv<sub>2</sub> = 25  $\mu\text{m}$ ; sv<sub>3</sub> = 26  $\mu\text{m}$ ; sv<sub>18</sub> = 15.5  $\mu\text{m}$ ; sv<sub>19</sub> = 27.5  $\mu\text{m}$ ; sd<sub>1</sub> = 23  $\mu\text{m}$ ; sd<sub>9</sub> = 25  $\mu\text{m}$ ; a = 15.8; b = 7.9; c = 5.0; N = 76 (ventral) - 77 (dorsal); n°sd = 9-10; n°sv = 19-20.

**Male.** Body small, slightly tapered anteriorly, more pronounced in tail region. Cuticle with 76-77 main body rings.



**Fig. 4.** *Tricoma (Tricoma) paracapitata* sp. n. Holotype male. A: Total view with part of the body cuticle in surface view; B: Posterior body region with tail end in surface view.

Somatic setal pattern as follows: subventral, right side: 3, 5, 8, 11, 15, 18, 21, 24, 28, 32, 37, 41, 45, 49, 54, 58, 63, 68, 70 = 19, left side: 3, 5, 9, 12, 15, 18, 21, 24, 28, 33, 38, 42, 45, 49, 52, 55, 59, 65, 68, 71 = 20; subdorsal, right side: 6, 11, 16, 22, 30, 38, 48, 56, 64, 70 = 10, left side: 6, 12, 17, 22, 32, 40, 48, 58, 64 = 9; pair of setae on ring 3 in ventro-sublateral position. Somatic setae rather stout, tapered to an open tip; inserted on low peduncles not or hardly protruding out of main rings. Subdorsal

setae and subventral setae in anterior body region long (=about as long as corresponding body width), posteriorly subventral setae shorter except for the elongated terminal pair of subventral setae.

Head slightly wider than long, from insertion of cephalic setae, anteriorly tapered to a rather narrow truncated end (4.5  $\mu\text{m}$  wide). Cuticle slightly thickened and sclerotized, except in labial region. Lips hardly marked, six minute labial papillae present. Cephalic setae longer than maximum head width

(measured dorso-ventrally between peduncles), fine, with pointed tip, for their whole length flanked by a membrane; inserted on relative high peduncles near the posterior head end. Amphidial fovea, large vesicular, covering the head almost completely laterally (from posterior end of lip region to anterior border of first main ring). Amphidial canal ending in posterior border of head.

Stoma 4.5  $\mu\text{m}$  deep, narrow, widened at base where embracing protruding end of pharynx with three denticles. Pharynx typical, about cylindrical; pharyngo-intestinal junction opposite main ring 9. Intestine anteriorly with small ventral organ, just posterior to ocellus. No post-rectal blind sac. Cloacal tube short (3  $\mu\text{m}$ ), protruding medioventrally between main rings 65 and 66. Two large, dark yellowish ocelli at left side, one at right body side.

Reproductive system typical, with two short testes. Spicules 58  $\mu\text{m}$  long; manubrium large knob-like; corpus slender, distally tapered to a pointed tip, and curved. Gubernaculum 17  $\mu\text{m}$  long; distal part 12  $\mu\text{m}$  long, with thin sclerotized wall and proximally widening towards two weakly sclerotized triangular apophyses, dorso-caudally orientated. Two short, 6  $\mu\text{m}$ , slightly curved medioventral genital setae present, respectively on main rings 51 and 59.

Tail with 11 main rings. Terminal ring, 33  $\mu\text{m}$  long (= 33% of total tail length), anteriorly surrounded by a narrow (= as wide as the other main rings) ring of secretion and foreign particles, embracing circular phasmata of 2  $\mu\text{m}$  diameter; uncovered part of end ring largely cylindrical with thickened and sclerotized cuticle, terminal part tapered and cuticle thin and weak. Three consecutive caudal glands with terminal spinneret structure.

**Female.** Unknown.

**Type locality.** White Sea, Kandalaksha Bay, Karela Shore, Velikaja Salma Strait, opposite to the Cross Cape, at 12 m depth, medium sand, collected by M. Safonov on 17.07.1992.

**Type material.** Holotype male, slide No. Ic400.

**Diagnosis.** *Tricoma (Tricoma) paracapitata* sp. n. is characterized by its habitus (small body with 76-77 main rings and narrow triangular head shape in side view), setal pattern (9-10 subdorsal setae; 19-20 subventral setae) with elongated terminal pair of subventral setae, length (58  $\mu\text{m}$ ) and shape of the spicules (corpus fine, manubrium large knob-like) and presence of two precloacal, medioventral genital setae.

**Relationship.** *Tricoma (T.) paracapitata* sp. n.

male resembles *T. (T.) capitata* Decraemer, 1987 in the structure of the copulatory apparatus with long slender spicules with large knob-like manubrium, but differs in other diagnostic characters such as number of main rings, somatic setal pattern, head shape, sperm size and structure and supplements. *T. (T.) paracapitata* forms with *T. (T.) similis* Cobb, 1912 the only species of desmoscolecids with two short medioventral precloacal genital setae. It has a comparable number of main rings (80-84 in *T. (T.) similis*) and number of subventral somatic setae (19-27 in *T. (T.) similis*) but differs in other diagnostic features as e.g. habitus, head shape, shape of the copulatory apparatus and morphometric data.

### *Tricoma (Tricoma) similis* Cobb, 1912

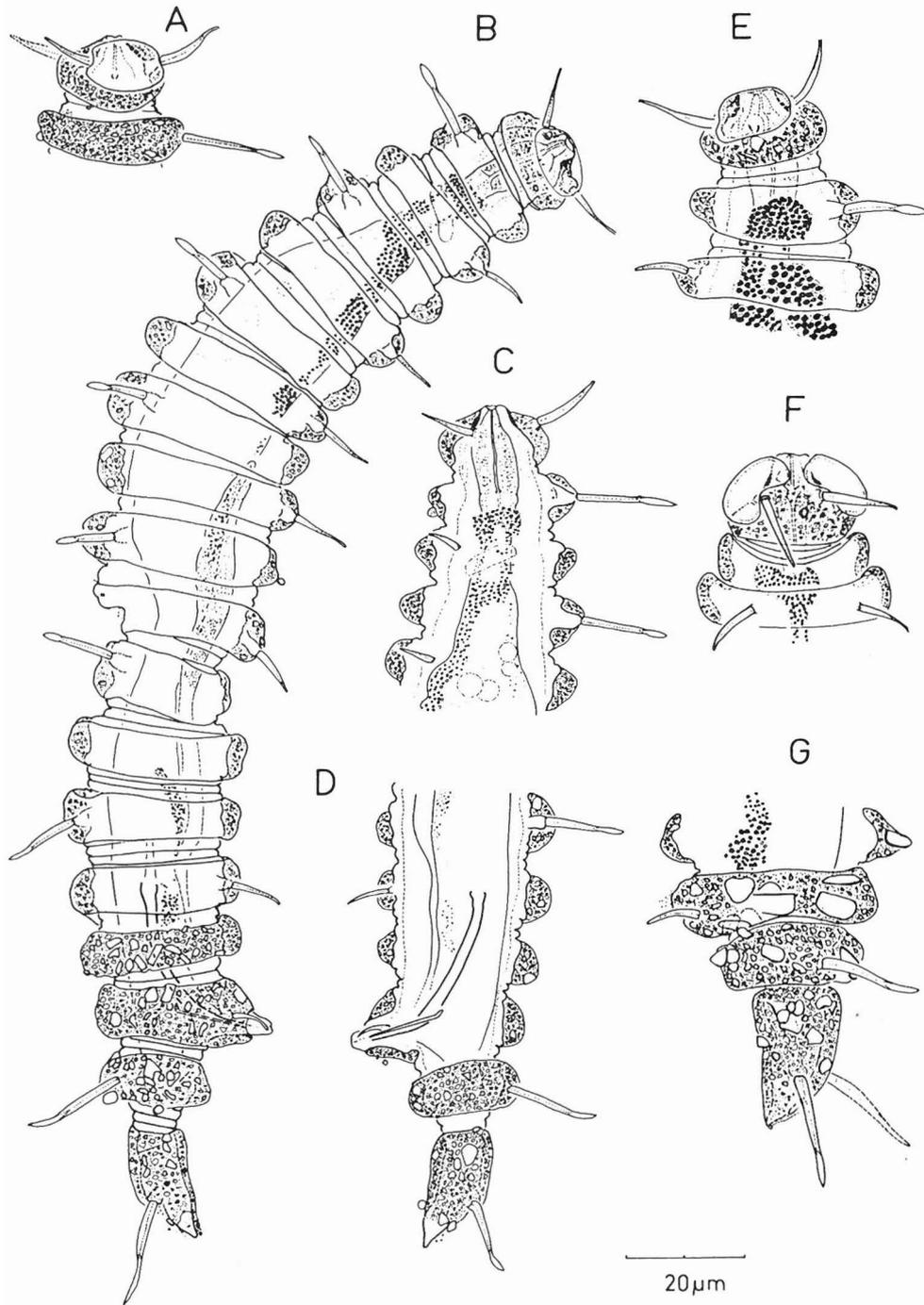
*Tricoma similis* is a rather wide spread species known from the East Indies (Cobb, 1912), Bermuda (Timm, 1970) and the Great Barrier Reef (Decraemer, 1978) showing a large variation in the number of main rings (77-84). An aberrant form (in relation to number of main rings and somatic setal pattern) has been recorded from Isles Glorieuses, Mozambique Channel (Decraemer, 1984).

#### Additional information.

**Female** (n=1): L = 705  $\mu\text{m}$ ; mbd = 47  $\mu\text{m}$ ; (mbd) = 41  $\mu\text{m}$ ; hd = 30x21  $\mu\text{m}$ ; cs = 27  $\mu\text{m}$ ; ph = 76  $\mu\text{m}$ ; t = 122  $\mu\text{m}$ ; tmr = 35  $\mu\text{m}$ ; sl<sub>1</sub> = 17.5  $\mu\text{m}$ ; sv<sub>2</sub> = 22  $\mu\text{m}$ ; sv<sub>3</sub> = 22  $\mu\text{m}$ ; sv<sub>21</sub> = 15.5  $\mu\text{m}$ ; sv<sub>22</sub> = 17.5  $\mu\text{m}$ ; sv<sub>23</sub> = 17.5  $\mu\text{m}$ ; sd<sub>1</sub> = 25  $\mu\text{m}$ ; sd<sub>12</sub> = 17.5  $\mu\text{m}$ ; a = 15.0; b = 9.3; c = 5.8; V = 50.4%; N = 82; n°sd = 12; n°sl+sv = 23-25.

**Female.** This specimen from the White Sea largely agreed with former species descriptions (except aberrant form from Mozambique Channel). Body with 82 main rings. Somatic setal pattern as follows: subventral, right side: 3, 5, 8, 10, 13, 16, 18, 21, 24, 28, 32, 35, 38, 41, 44, 48, 52, 58, 62, 66, 69, 73, 76, 78 = 25, left side: 3, 5, 8, 12, 15, 18, 20, 23, 27, 30, 34, 38, 41, 44, 47, 52, 56, 61, 65, 70, 74, 76, 78 = 23 (pair on ring 3 ventro-sublaterally inserted), subdorsal, right side: 7, 12, 19, 28, 35, 41, 47, 55, 63, 70, 76 = 12, left side: 7, 10, 17, 22, 29, 39, 51, 57, 63, 67, 74 = 12.

Pharyngo-intestinal junction at level of main ring 10; ventral organ present along anterior intestine, flanked by two pseudocoelomocytes; anal tube protruding from the posterior border of main ring 73; no post-rectal blind sac, caudal glands slightly extending anteriorly beyond anus. Ocelli large, dark brownish, located opposite main rings 10 and 11. Reproductive system typical; vulva located at level



**Fig. 5.** *Desmoscolex (Desmoscolex) paraganulatus* sp. n. Holotype male. A: Head region, surface view; B: Total view, with head and tail region in surface view; C: Anterior body region; D: Copulatory apparatus and tail. Female paratypes. E: Anterior body region, surface view; F: Head region, ventral view; G: Tail region, surface view.

of main ring 45; spermathecae filled with numerous sperm. Tail with 9 main rings.

**Material.** One female specimen.

**Locality.** White Sea, Kandalaksha Bay, Velikaja Salma Strait, Karela Shore, opposite to the Cross Cape, at 12 m depth in medium sand; collected by M. Safonov on 7.07.1992.

**Subfamily Desmoscolecinae Shipley, 1896*****Desmoscolex (Desmoscolex) species with 18 main rings***

Currently, 14 species of *Desmoscolex (Desmoscolex)* are known possessing 18 main rings both in male and female, or in male or female only. Four species have been described from a freshwater habitat (*D. (D.) algivorous* Coomans, Vincx & Decraemer, 1985, *D. (D.) aquaedulcis* Stammer, 1935, *D. (D.) dussarti* Juget, 1969, *D. (D.) lemani* Juget, 1969), four species from brackish soils (*D. (D.) koloensis* Decraemer, 1984, *D. (D.) parakoloensis* Decraemer, 1984, *D. (D.) vanoyei* De Coninck, 1943 and *D. (D.) sieverti* Freudenhammer, 1975 (exceptionally with 18 main rings) and the remaining species from a marine environment (*D. (D.) antarcticos* (Timm, 1970) Freudenhammer, 1975, *D. (D.) eftus* Freudenhammer, 1975, *D. (D.) granulatus* Decraemer, 1975, *D. (D.) italicus* Timm, 1970, *D. (D.) membranosus* Decraemer, 1975) and *D. (D.) parvospiculatus* Decraemer, 1996.

**Remarks.** *Desmoscolex (D.) italicus* however, is a 17-ring species with ring 14 splitted and a tail with two main rings; *D. (D.) sieverti* rarely has 18 main rings i.e. 1 male, 2 females out of 8 males and 9 females. *D. (D.) eftus*, described upon a single female, has a two ring tail; however, the position of the anal tube is not clear.

Among the specimens from the White Sea, two species were found possessing 18 main rings: *D. (D.) paragranulatus* sp. n. and *D. (D.)* sp. apud *D. (D.) vanoyei* De Coninck, 1943.

***Desmoscolex (Desmoscolex)*  
*paragranulatus* sp. n.  
(Figs. 5A-G & 7B-C)**

**Holotype male:** L = 235 µm; mbd = 37 µm; (mbd) = 27.5 µm; hd = 19x11 µm; cs = 12.5 µm; t = 42 µm; tmr = 23 µm; t/tmr = 1.8; sd<sub>1</sub> = 18.5 µm; sd<sub>3</sub> = 16 µm; sd<sub>5</sub> = 14 µm; sd<sub>13</sub> = 14.5 µm; sd<sub>17</sub> = 19 µm; sd<sub>18</sub> = 22 µm; sv<sub>2</sub> = 9 µm; sv<sub>4</sub> = 9 µm; sv<sub>6</sub> = 10.5 µm; sv<sub>10</sub> = 11 µm; sv<sub>12</sub> = 8 µm; sv<sub>14</sub> = 10 µm; sv<sub>16</sub> = 8 µm; spic = 36 µm; gub = 12.5 µm; a = 8.5; b = 7.8; c = 5.6; N = 18; n°sd = 9, n°sv = 8.

**Paratype female (n=2):** L = 215-225 µm; mbd = 48-51 µm; (mbd) = 38-42 µm; hd = 22 x 13-15.5 µm; cs = 14-16 µm; t = 42-45 µm; tmr = 25-31 µm; sd<sub>1</sub> = 17.5 µm; sd<sub>3</sub> = 15.5 µm; sd<sub>5</sub> = 14 µm; sd<sub>11</sub> = 17 µm; sd<sub>13</sub> = 16.5 µm; sd<sub>17</sub> = 18-19 µm; sd<sub>18</sub> = 19-21 µm; sv<sub>2</sub> = 10-11 µm; sv<sub>4</sub> = 9.5-10 µm; sv<sub>12</sub> = 10-11.5 µm; sv<sub>14</sub> = 10-11 µm; sv<sub>16</sub> = 9-11.5 µm; a =

5.1-5.9; b = 6.7-6.8; c = 4.8-5.4; N = 18; n°sd = 9; n°sv = 8.

**Male.** Body small, tapered towards both extremities; cuticle annulated, with 18 main rings separated by narrow interzones of two uncovered annuli. Each main ring consisting of a band of secretion and granular foreign material with coarse particles adhered (= desmos). Optical longitudinal section of a main ring shows about three annuli beneath the desmos.

Somatic setae arranged according to the typical desmoscolecoid pattern (Lorenzen, 1969): subdorsally, left and right side, 9 setae on main rings: 1, 3, 5, 7, 9, 11, 13, 17, 18; subventrally, left and right side, 8 setae on main rings: 2, 4, 6, 8, 10, 12, 14, 16. Somatic setae inserted on short peduncles; the subdorsal setae longer than the subventral ones, with longer setae on main rings 1, 17 and 18. Subdorsal setae with a large basal shaft tapered to a lance-shaped end, 5-6 µm long; subventral setae tapered to a fine open tip.

Head wider than long, tapered to a broadly truncated anterior end; cuticle largely covered by a layer of secretion and foreign material, except in the labial region and the mid-amphidial region. Cephalic setae, about as long as the head length, with broad basal shaft tapering to a fine distal part; inserted on low peduncles in the anterior third of the head. Amphidial fovea, large vesicular, laterally extending from lip region to posterior head region. Amphidial pore located about mid-head.

Digestive system with a minute oral opening, a shallow stoma, a short about cylindrical pharynx (extending to the end of main ring 2), strongly muscular except posteriorly where narrower thin-walled and surrounded by the nerve ring. The transition between muscular part and the thin-walled finely granular posterior end is obscured by a globular concentration of yellow to brownish pigmented granules (haemoglobin see Decraemer, 1974, Fig. B). The pigmented granules continue posteriorly in a narrow strand lining the ventral wall of the intestine, to the rectum. The intestine overlaps the rectum dorsally, extending to main ring 17.

Reproductive system typical with a single testis extending to main ring 7. Spicules, relatively long, 36 µm, posteriorly curved; capitulum hardly marked, corpus largely cylindrical. Gubernaculum 12.5 µm long, fine, largely parallel to spicules.

Tail with two main rings; the end ring cylindrical to insertion of subdorsal somatic setae, then tapering and ventrally orientated; end tip uncovered.

**Female.** Similar to male except for reproductive system which is didelphic-amphidelphic with both

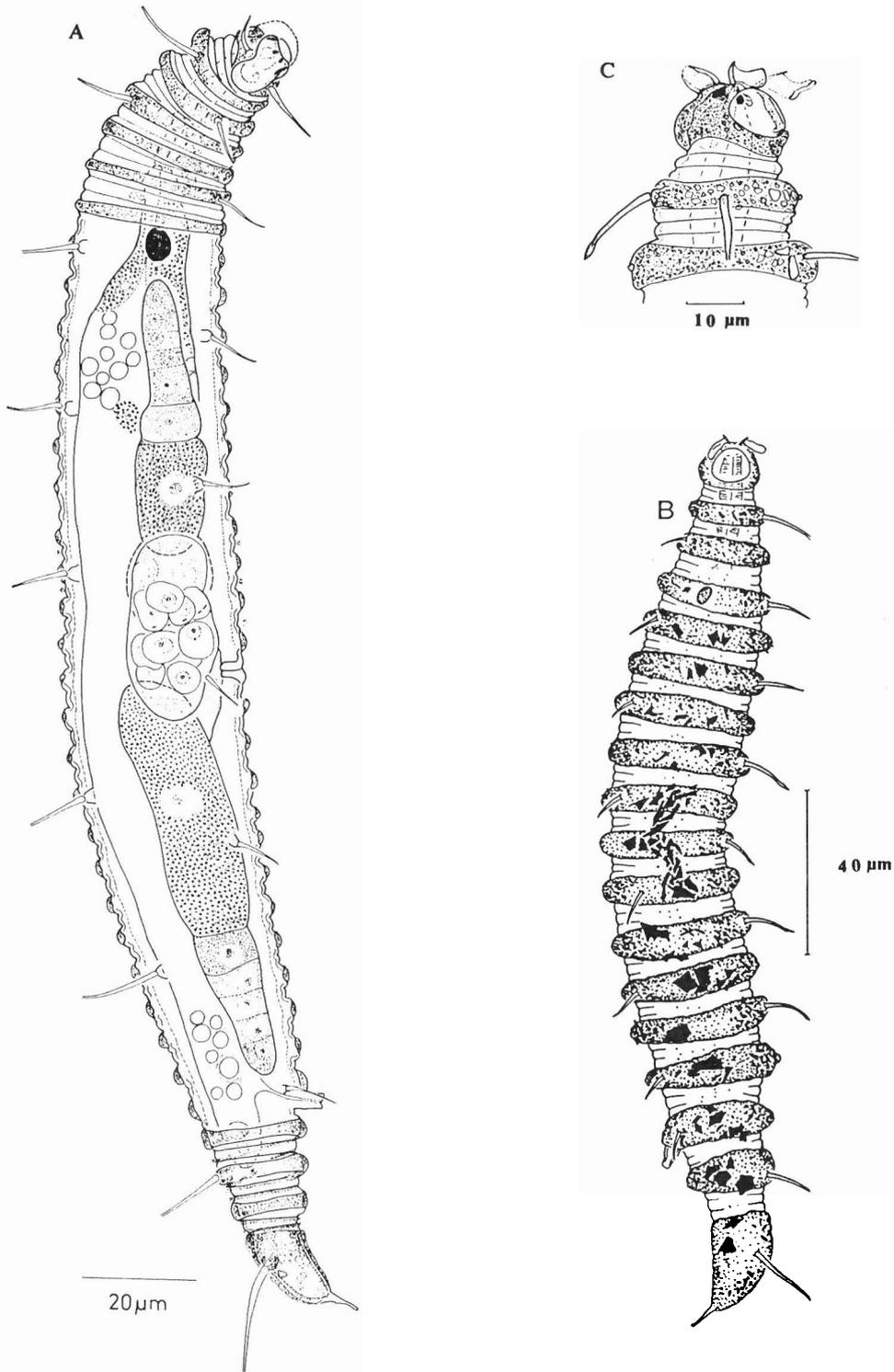


Fig. 6. *Desmoscolex (Desmoscolex) labiosus* Lorenzen, 1969. A: Total view of female. *Desmoscolex (Desmoscolex) petaloides* Lorenzen, 1972. Female, surface view. B: Total view; C: Anterior body region.

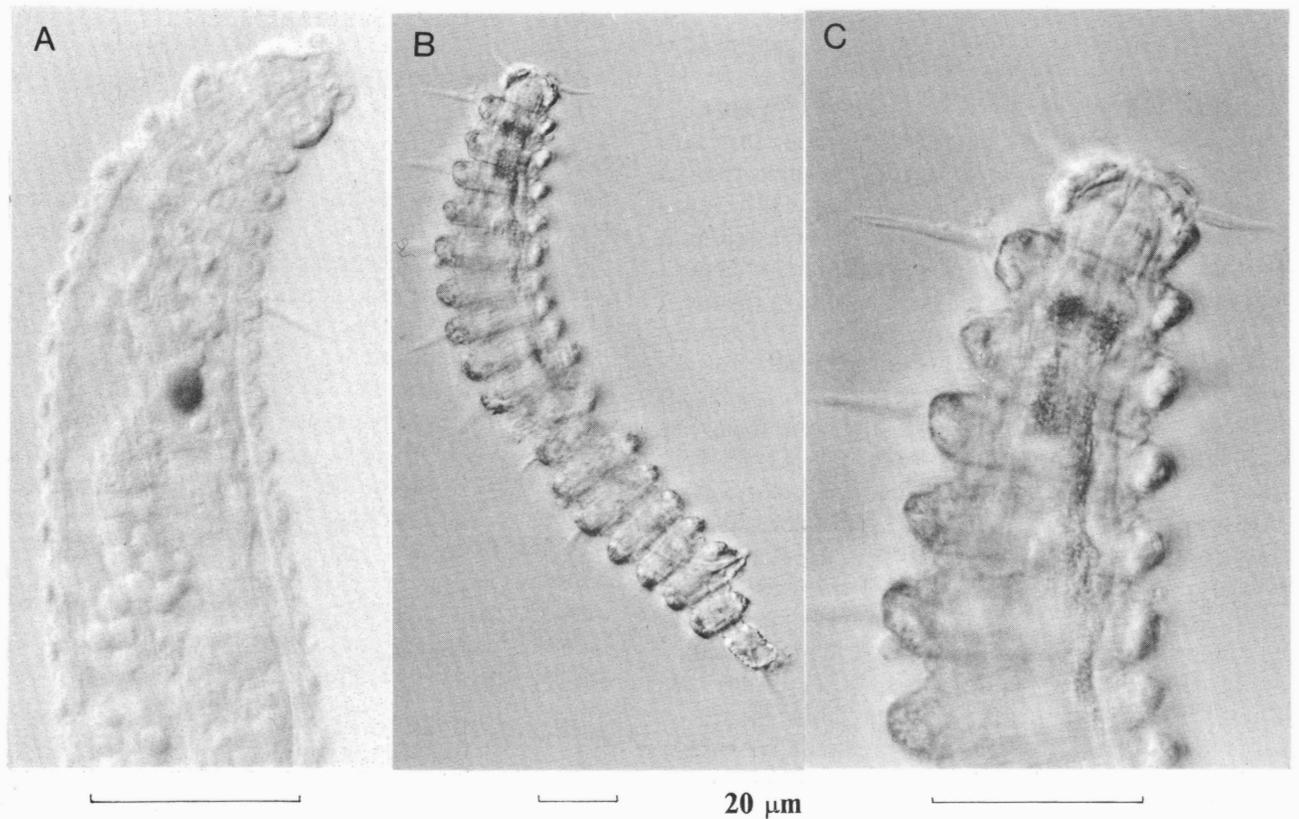
branches outstretched. Vulva situated at the posterior end of main ring 10.

**Juveniles.** No juvenile specimens observed.

**Type material.** Holotype male (slide No. Ic401), two paratype females (slide Nos. Ic402, RIT).

**Type locality.** Velikaja Salma Strait, Karela shore, opposite Cross Cape, White Sea, samples 12, 14, 15.

**Diagnosis.** *Desmoscolex (Desmoscolex) paragranelatus* sp. n. is characterized by a short body (235 µm in male, 215-225 µm in female), typical desmoscolecoid setal pattern (9 subdorsal, 8 subventral), broad



**Fig. 7.** *Desmoscolex (Desmoscolex) labiosus* Lorenzen, 1969. A: Anterior body region. *Desmoscolex (Desmoscolex) paraganulatus* sp. n., holotype male; B: Anterior body region; C: Total view.

head largely covered by the amphids which reach far anteriorly, the presence of a concentration of pigment granules and the 36 µm long, curved spicules.

**Relationship.** The new species resembles *D. (D.) granulatus* Decraemer, 1975, *D. (D.) membranosus* Decraemer, 1975 and *D. (D.) parvospiculatus* Decraemer, 1996 by the presence of an anterior concentration of pigment granules and absence of ocelli. It differs from *D. (D.) membranosus* by a different lip region, i.e. without a membrane-like structure and from *D. (D.) granulatus* by shorter spicules (36 µm vs 55-63 µm) and shorter end ring (23 µm vs 35-49 µm in *D. (D.) granulatus*), and from *D. (D.) parvospiculatus* by longer spicules (36 µm vs 15-20 µm), longer end ring (23 µm vs 12-18 µm) and by a narrower lip region with different structure (broadly truncated and provided with a low cuticular rim in *D. (D.) parvospiculatus*).

***Desmoscolex (Desmoscolex) labiosus*  
Lorenzen, 1969  
(Figs. 6A & 7A)**

*Desmoscolex (D.) labiosus* was originally described from salt marshes along the German coast of the Baltic (Lorenzen, 1969), later also from salt marshes

in West Germany (Decraemer & Sturhan, 1982) and from Terschelling Island, The Netherlands, without data on the biotope (Timm, 1970). The record from Antarctica probably concerns a different species (see below).

**Additional information.**

**Female:** L = 250 µm; mbd = 32; hd = 13x12 µm; cs = 15 µm; t = 44 µm; tnr = 22 µm; sd<sub>1</sub> = 13.5 µm; sd<sub>3</sub> = 11 µm; sd<sub>7</sub> = 11 µm; sd<sub>11</sub> = 12.5 µm; sd<sub>15</sub> = 11-12 µm; sd<sub>21</sub> = 11-12 µm; sd<sub>26</sub> = 13.5 µm; sd<sub>34</sub> = 22 µm; sv<sub>5</sub> = 8.5 µm; sv<sub>9</sub> = 8.5 µm; sv<sub>13</sub> = 7.5-8.5 µm; sv<sub>18</sub> = 7.5-8.5 µm; sv<sub>23</sub> = 7 µm; sv<sub>30</sub> = 9.5 µm; a = 7.8; b = 8.1; c = 5.7; V = 50.5%; N = 34; n°sd = 7; n°sv = 9.

**Female.** The specimen from the White Sea is mounted with the head slightly upward (Fig. 6A) showing the amphid of the left side in front of the head border. It largely agrees with former descriptions except for *Desmoscolex labiosus* apud Timm (1978) (see remark below). Oval ocelli (4x4.5 µm, right side) at level of main ring 7 and adjacent interzones. Anal tube well developed, 4.5 µm long, protruding from main ring 30.

Genital system well developed, anterior branch

reaching to ocelli region and posterior branch with ripe oocyte (48x15  $\mu\text{m}$ ) reaching the precloacal ring (anterior end of ring 29). Uterus with large sperm cells; vulva in ring 18.

Tail composed of four main rings; terminal ring 24  $\mu\text{m}$  long, with a long spinneret. Neither phasmata nor caudal glands discernible.

**Remark.** The female specimen of the White Sea largely agrees with former descriptions, except for Timm (1978). The morphometric data fall within the range known (see Lorenzen, 1969; Timm, 1970 and Decraemer & Sturhan, 1982). The Antarctic female specimen in Timm (1978) has a somewhat longer body ( $L = 354 \mu\text{m}$  vs 205-230  $\mu\text{m}$  (type population), 215-300  $\mu\text{m}$  and 270-335  $\mu\text{m}$  for females of two populations in Decraemer & Sturhan, 1982), smaller amphids and shorter cephalic setae; its setal pattern is aberrant for the subventral setae (missing seta on ring 2, additional setae on rings 24, 26, 28/29). The Antarctic specimen apparently belongs to a different species.

**Material.** One female.

**Locality.** White Sea, Kandalaksha Bay, Karela Shore, northern coast of the Kindo Peninsula, supralittoral zone, brackish soil in the rhizosphere of the grass *Puccinella* sp. (Table 1).

*Desmoscolex (Desmoscolex) petaloides*  
Lorenzen, 1972  
(Fig. 6 B & C)

For the first time since its original description on two males and a single female from the North Sea, *Desmoscolex petaloides* is found again. The White Sea specimens largely agree with the type specimens (Lorenzen, 1972) in habitus and measurements.

**Females** ( $n=2$ ):  $L = 285-351 \mu\text{m}$ ;  $hd = 18-24 \mu\text{m}$  x13-14  $\mu\text{m}$ ;  $mbd$  (2n main ring) = 18-24  $\mu\text{m}$ ;  $mbd$  (main ring 9) = 38-55  $\mu\text{m}$ ;  $abd = 34-35 \mu\text{m}$ ;  $tmr = 38 \mu\text{m}$ ;  $tmrw = 18 \mu\text{m}$ ;  $sd_1 = 18-15 \mu\text{m}$ ;  $sd_3 = 13-11.5 \mu\text{m}$ ;  $sd_5 = 13 \mu\text{m}$ ;  $sd_7 = 13 \mu\text{m}$ ;  $sd_9 = 10-13 \mu\text{m}$ ;  $sd_{11} = 13-15 \mu\text{m}$ ;  $sd_{13} = 12.5-15 \mu\text{m}$ ;  $sd_{16} = 16.5-14 \mu\text{m}$ ;  $sd_{17} = 23-18 \mu\text{m}$ ;  $sv_2 = 10-6.5 \mu\text{m}$ ;  $sv_4 = 10 \mu\text{m}$ ;  $sv_6 = 8.5-10 \mu\text{m}$ ;  $sv_8 = 11.5-13 \mu\text{m}$ ;  $sv_{10} = 11-11.5 \mu\text{m}$ ;  $sv_{12} = 9-10 \mu\text{m}$ ;  $sv_{14} = 9-10 \mu\text{m}$ ;  $sv_{15} = 10-8.5 \mu\text{m}$ ;  $a = 5.23$ ;  $b = 7.83-8.43$ ;  $c = 4.42-5.91$ ;  $N = 17$ ;  $n^\circ sd = 9$ ;  $n^\circ sv = 8$ .

**Female.** Main body rings with desmen of secretion and numerous coarse foreign particles; interzones with two to three narrow cuticular annuli.

Head rounded triangular, 13-14  $\mu\text{m}$  long. Cephalic setae strongly modified: provided with a 10-12  $\mu\text{m}$  long flag-like process originating from a 6-7  $\mu\text{m}$  long setae bar. Amphid rounded vesicular, confined to the lateral side of the head; its diameter is 10  $\mu\text{m}$  (= 54% of the corresponding head width).

Arrangement of the paired somatic setae typical for 17 ring *Desmoscolex* species i.e. with nine pairs of subdorsal and eight pairs of subventral setae. Somatic setae strong, weakly bent, wider at their base and apical end of the subdorsal setae slightly modified to a lancet-like tip. Subdorsal setae longer and thicker than the subventral setae; the subdorsal setae on the first and on the 17th main ring exceed neighbouring subdorsal setae in length; the setae on main ring nine are a little shorter than the others and situated more laterally. The subventral setae on main ring 10 are displaced to a more lateral position than the other subventral setae.

Stoma minute, surrounded by cuticular reinforcement at the insertion of the cephalic setae. Pharynx short, muscular, ending at the level of the 2nd main ring by a narrower end part surrounded by the nerve ring. Two small oval ocelli at the level of the third main ring. Anal tube on main ring 15.

Female reproductive system didelphic-amphidelphic with short outstretched ovaries, ventrally of the intestine. Vulva, a small transverse slit on the posterior border of main ring 10.

Tail with two main rings; terminal ring with a 5-6  $\mu\text{m}$  long caudal tube. Phasmata not observed.

**Material.** Two female specimens.

**Locality.** White Sea, Kandalaksha Bay, Karela Shore, Velikaja Salma Strait, 10 m deep, fine sand, collected by A. Tzetlin at the end of June 1989.

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**Декрамер В., Чесунов А. В.** Некоторые десмосколециды из Белого моря (Nematoda: Desmoscolecida).

**Резюме.** В тридцати пробах из пролива Великая Салма (Кандалакшский залив) обнаружено довольно большое разнообразие десмосколецид, в том числе четыре новые для науки вида, описание которых приводится. *Antarcticonema paracomecapitata* sp. n. характеризуется наличием на теле 97-112 колец кутикулы, покрытых мелкими трубчатыми и волосовидными шипиками; латеральных полей только с волосовидными шипиками; двух типов соматических щетинок: коротких с тонким окончанием и длинных с присосковидным концом; спикул длиной 36 мкм. *Tricoma (Tricoma) albimaris* sp. n. характеризуется большим числом главных колец туловищной кутикулы (более 100), наличием 10-12 субдорсальных щетинок и 19-25 (у самцов) и 19-22 (у самок) субвентральных соматических щетинок; широкой треугольной головой; наличием у самцов своеобразного руляка с плотным апофизом. *T. (T.) paracomecapitata* sp. n. характеризуется небольшим телом с 76-77 главными кутикулярными кольцами; узкой треугольной головой; наличием 9-10 субдорсальных и 19-20 субвентральных соматических щетинок; тонкими спикулами с обособленными головками; наличием двух медио-вентральных генитальных щетинок у самца. *Desmoscolex (Desmoscolex) paragranulatus* sp. n. отличается коротким телом с типично десмосколецидным расположением соматических щетинок; широкой головой с очень большим амфидом, заходящим далеко вперед; скоплением пигментных гранул; изогнутыми спикулами длиной в 36 мкм. Приводятся также дополнительные сведения и замечания к впервые обнаруженным в Белом море *Tricoma (Tricoma) similis* Cobb, 1912, *Desmoscolex (Desmoscolex) labiosus* Lorenzen, 1969 и *D. (D.) petaloides* Lorenzen, 1972.

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