

Two new species of the genus *Macrostylis* G.O.Sars, 1864 (Crustacea Isopoda Asellota Macrostylidae) from the Antarctic.

Два новых вида рода *Macrostylis* G.O.Sars, 1864 (Crustacea Isopoda Asellota Macrostylidae) из Антарктики.

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KEY WORDS: new species, *Macrostylis*, Antarctic.

КЛЮЧЕВЫЕ СЛОВА: новые виды, *Macrostylis*, Антарктика.

ABSTRACT: Illustrated descriptions of *Macrostylis setulosa* sp.n. and *M.vinogradovae* sp.n. are given. These are the first reliable records of the genus in the Antarctic.

РЕЗЮМЕ: Даны иллюстрированные описания *Macrostylis setulosa* sp.n. и *M.vinogradovae* sp.n. Определенные до вида представители рода впервые отмечены в Антарктике

R.Menzies et al. [1973] gave some records of *Macrostylis* G.O.Sars, 1864 species in the northern Atlantic sector of the Antarctic. However, this material was never described, and the author's attempts to find it for re-examination have been unsuccessful. The present description of two new species of *Macrostylis* are the first reliable records of the genus in the Antarctic. Material, collected on board R/V "Akademik Kurchatov" (AK; 11th Cruise) and "Dmitri Mendeleev" (DM; 43rd Cruise) (Table 1), has been deposited in the collection of the

Zoological Museum of the Moscow State University.

Family Macrostylidae

Genus *Macrostylis* G.O.Sars, 1864.

Macrostylis setulosa Mezhov, sp.n.

Fig. 1, Tabs. 1,2.

MATERIAL. Holotype 1♀, No. Mc-1274, length 3.2 mm, with 3 embryos of 3rd stage (lengths to 1 mm), AK station 880. Paratypes: 1♀ without oostegites, Mc-1275, length 2.8 mm, station as in holotype; 1♂ damaged, Mc-1276, length ca. 2.2 mm, AK station 927; 2♀♀ without oostegites, Mc-1277, 1278, lengths 2.1 and 2.3, resp., DM station 4085.

DESCRIPTION. FEMALE. Length 3.2 mm (holotype)*. The cover smooth, a little transparent, with visible granules under cuticle, without macrosulpture; setation consisting of short thin hairs, mainly on lateral portions of tergites V-VII and on pleotelson.

* Sternal surface and antennae II are described after the paratype Mc-1275.

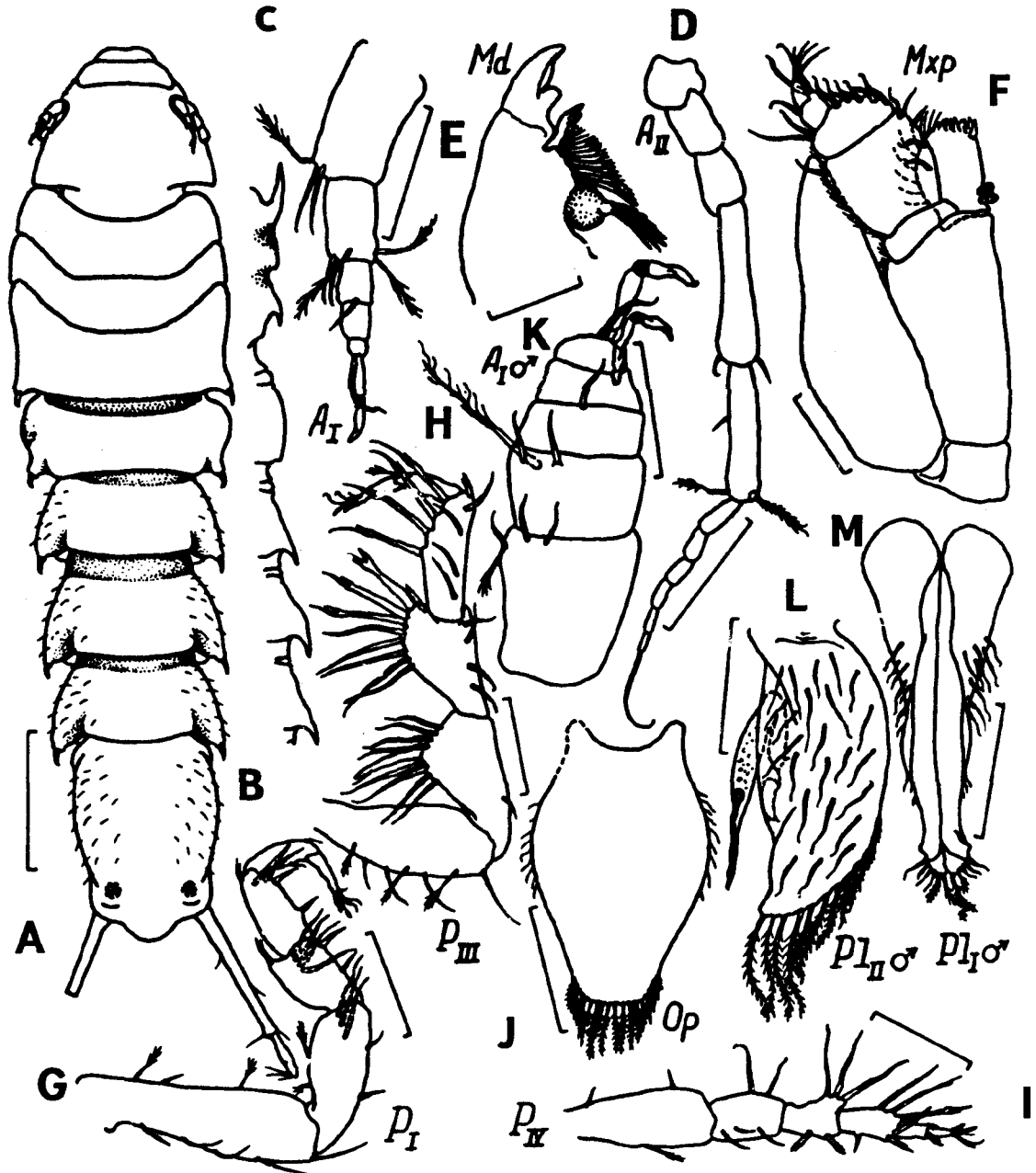


Fig. 1. *Macrostylis setulosa* Mezhov, sp.n. Holotype female: a) general appearance, lateral view, c,e-j) appendages; paratype female: b) sternites, lateral view, d) antenna II; paratype male: k-m) appendages. Scale: 0.05 mm (c,k), 0.1 mm (d-g, i,l,-m), 0.2 mm (h), 0.3 mm (j), 0.5 mm (a,b).

Рис. 1. *Macrostylis setulosa* Mezhov, sp.n. (голотип): общий вид сверху (а) и с придатками (с,е-ж). Самка (паратип): стерниты сбоку (б) и антенна II (д). Самец (паратип): придатки (к-м). Масштаб 0,5 мм (а,б), 0,05 мм (с,к), 0,1 мм (д-г,и,л,-м), 0,2 мм (h) и 0,3 мм (j).

Head/body length ratio about 1/5; head maximal width/length ratio ca. 1.2; medial part trapezoid, with lateral surfaces slightly convex; visible portions of postfrontal sclerite and cervical isthmus about 1/6 and 1/5 of head length, respectively; frontal margin slightly convex.

Lateral surfaces of anterior division of pereion a little convex in frontal part and a little depressed in hind one. Pereion maximal width/length ratio as 1.1; its sternal surface subdivided into segments by shallow transverse depressions, forming not only anterior and pos-

Table 1. Locality stations.
Таблица 1. Станции сбора материала

Number of station, sampling equipment* Номер станции и орудие сбора*	Coordinates Координаты	Depth, m Глубина, м
	S ю.ш. W з.д.	
	"Ак. Курчатов", 11th cruise "Ак. Курчатов", 11-й рейс	
880 D q	57°07,4' 26°40'	757
927 D 1/3	56°08,4' 52°40'	1660
	"Дм. Менделеев", 43rd cruise "Дм. Менделеев", 43-й рейс	
4084-I D 4/5	70°40,6' 15°47,8'	4335
4084-II D 4/5	70°53,17' 15°04,51'	2925
4085 D 4/5	60°33,35' 35°37,1'	2705

* D - bottom sampler "Okean", 0.25 m², q - qualitative sampling; 1/3 and 4/5 - extracts from samples.

terior spines, but also a distinctly angled medial protrusion in the place of sternite II. Sternite IV without spine, sternites V-VII each with one spine. Tergite IV with strongly convex lateral surfaces. Posterolateral part of tergites III-VII attenuated (especially III-IV), each with a distal seta.

Pleotelson ovoid, with somewhat smoothed dorsal surface, distinct posterolateral protrusions and a semicircular mediodistal lobe. Caudal organs distinctly visible, fissure-shaped openings transverse.

Antenna I with 5 articles, apical one with one sensorial apophysis. Length ratio of antennae II/I as 4.0. Antenna II with a six-articled flagellum and a one-article rudiment of exopodite. Mandible with a slightly serrate cut edge; movable plate with 3-4 teeth; dental row with 8-9 saw-shaped setae; dental apophysis swollen, with a short, attenuating distal part bearing 7-8 apical setae. Exterolateral margin of maxillipede straight proximally and slightly depressed distally.

Table 2. Some proportions of body, segments and limbs.
Таблица 2. Некоторые пропорции тела, сегментов и конечностей.

Proportion Пропорция	<i>M. setulosa</i> sp.n.		<i>M. vinogradovae</i> sp.n.	
	♀	♂	♂	♀
L:B	4.1			4.1
B:bp _I	1.5			2.0
l _I :l _{II} :l _{III}	1.0:0.8:1.1			1.0:1.0:1.4
b _{IV} :l _{IV}	3.5			4.0
l _V :l _{VI} :l _{VII}	1.0:1.1:0.8			1.0:1.1:0.9
l _{pI} :bp _I	1.4			1.6
l _{API} :l _{AI}	4.1			5.0
l _{epMxp} :b _{epMxp}	3.0			3.2
l _{PIII} :b _{PIII}	1.5			1.9
l _{PIII} :b _{PIII}		2.2		
l _{Op} :b _{Op}	1.7			1.8
b _{Op} :b _{Opdist}	1.8			2.2
l _{Up} :l _{pI}	0.95	1.0		1.15
l _{protUp} :l _{endUp}	2.9	1.75		2.8

L - general body length, B - maximal body width; l, b - respectively, length and maximal width of segments, limbs and articles, t - tergites, ep - epipodite, l - lachypodite, prot - protopodite, end - endopodite, dist - distal; others are generally accepted.

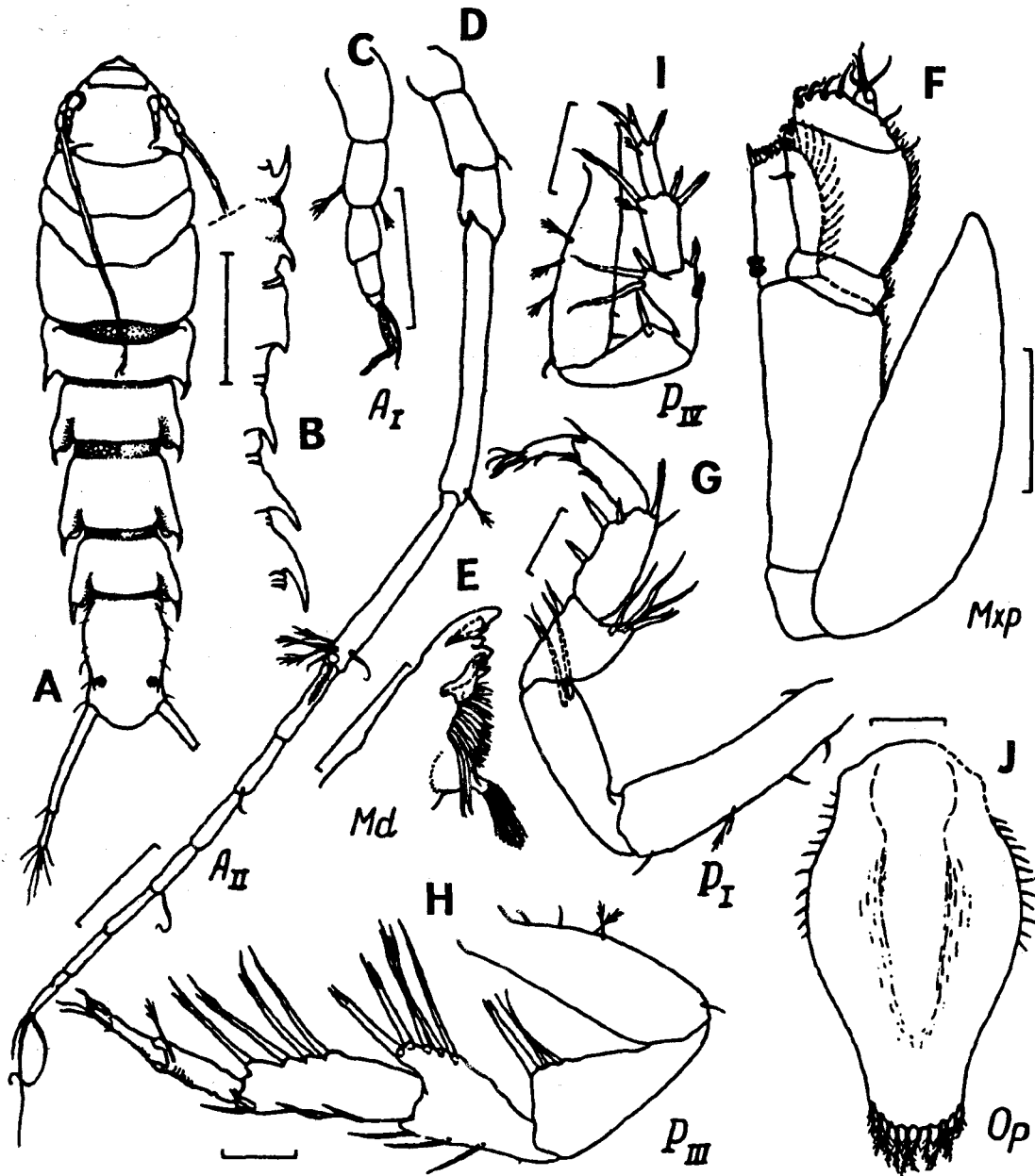


Fig. 2. *Macrostyle vinogradovae* Mezhov, sp.n. Holotype female: a) general appearance, dorsal view, b) sternites, lateral view, c-j) appendages. Scale: 0.1 mm (c-j), 0.5 mm (a,b).

Рис. 2. *Macrostyle vinogradovae* Mezhov, sp.n. Самка (голотип): общий вид сверху (а), стерниты сбоку (б) и придатки (с-ж). Масштаб 0,5 мм (а,б) и 0,1 мм (с-ж).

Ischyopodite of pereopod III with an angular lobe bearing a slightly curved and enlarged seta; length of the seta subequal to maximal width of ischyopodite; crests of both mero-podite and carpopodite bearing 8 and 4 setae, respectively. Operculum with rounded lateral margins and a slightly narrowing distal part; distal margin with 10-12 setae. Uropods a little shorter than pleotelson.

MALE. Antenna I with two short sensorial apophyses at both preapical and apical articles. Pleopod I with a very slightly convex postero-lateral apophysis. Pleopod II semicircular, with 12 setae at distal margin. Length of uropod and pleopod equal. Uropod with a relatively shortened protopodite.

DIAGNOSIS. Morphologically, *M.setulosa* sp.n. is close to *M.longiremis* (Meinert, 1890),

but differs by the somewhat shorter pleotelson, angular protrusion in the place of the sternite II, relatively short articles of the antenna I, six-articled flagellum of the antenna II, lesser number of setae on the dental apophysis of the mandible, the female operculum shortened and without distal depression, the uropods longer than the pleotelson, and the pleotelson with relatively elongated protopodites (cp. Meinert, 1890).

DERIVATIO NOMINIS. From the Latin "setulosus" = with small setae.

DISTRIBUTION AND ECOLOGY. A western Antarctic bathyal-abyssal species found in sandy silt with diatomeans and stones (depth 757 m), in a sandy globigerinous silt (depth 1660 m) and in a gravelly-grainy sand with pebble and gravel (depth 2705 m).

Macrostylis vinogradovae Mezhov, sp.n.

Fig. 2, Tabs. 1,2.

MATERIAL. Holotype 1♂, Mc-1279, without oostegites, length 2.6 mm, DM station 4084-II; paratype ♀ fragment, Mc-1280, from pereionite V to pleotelson, length 1.2 mm, DM station 4084-I.

DESCRIPTION. FEMALE. Length without oostegites 2.6 mm (holotype). Body cover dull shining; most distinct granulation at intersegmental constrictions, macrosculpture not expressed; lateral parts of pleotelson finely and sparsely setose. Head length about 1/5 of body length; head maximal width/length 1.2; medial part of head trapezoid, with convex lateral surfaces; length of either visible part of postfrontal sclerite or cervical constriction about 1/5 of head length; frontal edge straight.

Frontal division of pereion with convex lateral surfaces; its maximal width and length subequal; sternal surface subdivided into segments by shallow transverse depressions, forming both anterior and posterior spines. Sternite IV with a very short spine directed caudad. Sternites V-VII with increasingly elongated spines. Attenuated posterolateral part of tergites IV-VII each with a distal seta.

Pleotelson reversely jug-shaped, with distal edge rounded all along its width. Caudal organs visible. Fissure-shaped openings poorly visible, vague in outline.

Antenna I with 5 articles, apical one with a sensorial apophysis in middle part. Length ratio of antenna II/I as 5. Antenna II with a 7-articled flagellum and a 1-articled rudiment of exopodite; when stretched, it reaches hind edge of tergite III. Mandible with serrate cut edge; movable plate with no less than 4 teeth; dental row with no less than 8 saw-shaped setae; dental apophysis with a wide conical base and an oblong attenuating distal part carrying no less than 10 long setae. Epipodite of maxillipede with a regularly rounded exterolateral edge; lobe of palpal article III with 4 setae; apical palpal article very short, not protruding beyond lobe of preapical one.

Ischyopodite of pereopod III oblong-triangular, with lobe almost rectangular; lobe with one straight, enlarged, apical seta, as long as maximal width of ischyopodite; crests of both meropodite and carpopodite bearing 5 and 4 setae, respectively. Operculum with rounded lateral margins and a narrowed distal part; distal edge with 10-12 short setae. Uropods longer than pleotelson.

MALE unknown.

DIAGNOSIS. The new species is close to *M. longiremis* (Meinert, 1890), but differs from it by the more wedge-like body, absence of posterolateral apophyses on the tergite III, oblique distal edge of the second article of the maxillipede palp, presence of 4 setae on the lobe of the third article and considerably reduced apical one, female operculum strongly narrowed distally, and uropods longer than the pleotelson.

DERIVATIO NOMINIS. The new species is dedicated to Dr. N.G. Vinogradova (Institute of Oceanology, Russian Academy of Sciences, Moscow), the famous investigator of the abyssal bottom-dwelling fauna of the World Ocean.

DISTRIBUTION AND ECOLOGY. A high-Antarctic abyssal species from Weddell Sea, found in terrigenous sandy aleurite and fragmented pelite with some spongean spicules.

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