

***Peritobrilus vipriensis* sp. n. (Enoplida: Tobrilidae) and *Allodorylaimus rarus* sp. n. (Dorylaimida: Qudsianematidae) from Northern Siberia**

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Summary. *Peritobrilus vipriensis* sp. n. and *Allodorylaimus rarus* sp. n. are described from fresh-water bodies of the Lena estuary from the Laptev Sea. *Peritobrilus vipriensis* sp. n. is similar to *P. heptapapillatus* and *P. peregrinator*, but differed from the first species by having a different stoma construction, shorter tail, and longer spicules, and from the second species by having shorter cephalic setae, a longer tail, fewer supplementary organs and longer spicules. *Allodorylaimus rarus* sp. n. resembles *A. bokori* from which it differs by having a shorter spear and longer spicules.

Key words: freshwater bodies, free-living nematodes, *Peritobrilus vipriensis* sp. n., *Allodorylaimus rarus* sp. n., Siberia.

During June and July 1990 a faunistic study was done on lakes in the "Lena-Estuary Reserve", situated in Northern Siberia at the mouth of the Lena river at its entry to the Laptev Sea. The samples contained numerous free-living nematodes, including two new species that are described here.

MATERIAL AND METHODS

Samples were collected from three unnamed lakes of the Reserve: 1) a lake on Tit-Ary Island, situated in the main canal of the Lena river; 2) a lake on Dunaj Island in the main canal of the Lena river; 3) a lake on Tas-Ary Island in the Lena river. Each of these fresh-water lakes is small and shallow. The samples were muddy sand from a lake on Tit-Ary, detritus and moss from a lake on Dunaj Island, and silted moss from a lake on Tas-Ary Island. They were collected close to the bank of each lake at depths of 0.2-0.5 m, with a 0.08 mm size mesh hand-net. The samples were fixed with 4% formalin and the nematode specimens hand-picked from the samples and stained with methylene-blue and mounted in glycerin on slides. Head diameter was measured at the level of the cephalic setae and spicule length was measured along the chord.

DESCRIPTIONS

***Peritobrilus vipriensis* sp. n. (Fig. 1A-J)**

Holotype male: L=2.42 mm, a=21.6, b=5.2, c=14.4, c'=3.0, suppl. 5, spic.=91 μ m.

Paratype male: L=2.79 mm, a=23.4, b=5.9, c=15.9, c'=3.0, suppl. 6, spic.=90 μ m.

Paratype females (n=9): L=2.58-2.91 (2.72) mm, a=16.7-20.8 (17.8), b=5.1-6.0 (5.4), c=7.8-8.8 (8.3), c'=4.9-6.0 (5.5), V=43.9-48.9 (46.3)%.

Females. Body curved ventrally. Cuticle finely striated, 1 μ m thick at midbody. Body setae numerous, irregularly distributed on body, 3-4 μ m long. Numerous crystals in the body cavity appearing as short rods, 7-9 μ m long. Cephalic end bluntly truncated; vestibulum not prominent. Cephalic diameter 32-40 μ m. Lips well developed. Inner labial papilla high and acute. Outer labial and cephalic setae joined. Outer labial setae and cephalic setae 14-15 μ m and 7-8 μ m long, respectively. Buccal cavity cup-shaped, with pockets almost entirely overlapping each other. Pockets with depth less than that of the buccal cavity and shaped as small rounded pits in the internal oesophageal lumen: one dorsal (ante-

rior), the other right subventral (posterior). Each pocket with an onchus (small immovable tooth), situated dorsal and ventral, respectively. Total length of the body cavity 31-34 μm . Amphid apertures at the level of anterior margins of the pockets. Amphid apertures 10-12 μm wide. Oesophagus 483-535 (502) μm long. Nerve ring at about one-third of oesophagus length. Cardial glands well developed, spherical. Maximal body width 140 μm . Ovaries paired, antidromous, moderately sized. Gonaduct situated ventrally to the intestine. Vulva lips weakly sclerotized, not protruding outside the body contour. Spermatheca indistinct; spermatozoa observed in uterus. Uterus without muscular wall. Two glandular cells on each side of vulva. Vagina short, about 1/3 of corresponding body diameter in length. Uterus containing one to three eggs, 63-71x70-80 μm . Tail slender, gradually attenuated, 308-340 (326) μm long. Subterminal setae absent. Three large caudal glands connected with a short conical spinneret.

Males. Smaller than females. Somatic setae 5-6 μm long, numerous, especially on the tail and the region of the supplements, where the setae are situated subventrally. Cephalic diameter 30-32 μm . Oesophagus 460-469 μm long. Maximal body diameter 115 μm . Testes paired. Supplementary organs, 5 to 6 in number, equal in size, echinaceous, with unequal distances between them; the longest distance being between the cloaca and the nearest (posterior most) supplement and between the second and third supplements; the smallest distance being between the third and fourth supplements. Distance between supplements: cloaca to first, 73, 74 μm ; first to second, 60, 58 μm ; second to third, 64, 64 μm ; third to fourth, 42, 36 μm ; fourth to fifth, 55, 57 μm ; and fifth to sixth, 53, 53 μm . Gubernaculum 25-26 μm long. Tail length 168-175 μm . Three large caudal glands connected with a short conical spinneret.

Type locality. Northern Siberia, Lena river mouth, "Lena-Estuary Reserve". Four females and one juvenile collected on 12th June 1990 from an unnamed lake on Tit-Ary Island in the main Lena River canal, shore zone, 0.2 m deep, muddy sand; two males (including holotype), three females, and two juveniles collected on 5th July 1990 from an unnamed lake on Tas-Ary Island in the main Lena River canal, 0.5 m deep, silted moss; and two females and two juveniles collected on 25th June 1990 from an unnamed lake on Dunaj Island, the Lena River delta, shore zone, 0.3 m deep, moss and detritus.

Type material. Holotype male (slide 70/31), paratype male and nine paratype females deposited in the nematode collection of the Institute of Parasitology of the Russian Academy of Sciences, Moscow.

Differential diagnosis. The new species is similar to *Peritobrilus heptapapillatus* Joubert & Heyns, 1979 and *P. peregrinator* Tsalolikhin, 1983 because of the body length (2-3 mm), size of the longer cephalic setae (outer labial setae 40-50% of the corresponding cephalic diameter), and absence of subterminal setae at the tail tip. *Peritobrilus vipriensis* sp. n. differs from *P. heptapapillatus* by having a different stoma construction in which the pockets of the buccal cavity do not overlap, shorter tail (in *P. heptapapillatus* females $c=5.7-7.2$, $c'=10$), fewer supplementary organs (5-6 vs 7), and longer spicules (63-69 μm along the chord in *P. heptapapillatus*). *Peritobrilus vipriensis* sp. n. differs from *P. peregrinator* by having shorter cephalic setae (outer labial setae in *P. peregrinator* 23-30 μm long, being 50% of corresponding cephalic diameter; cephalic setae of *P. peregrinator* 12-15 μm), longer tail (females of *P. peregrinator* $c=13.7-16.6$, $c'=2.5-3.5$), fewer supplementary organs (*P. peregrinator* males have 6-10 supplementary organs), and spicule size (spicule length in *P. peregrinator* 65-70 μm) (Joubert & Heyns, 1979; Tsalolikhin, 1983).

Alloedorylaimus rarus sp. n. (Fig. 2 A-H)

Holotype female: L=1.99 mm, a=27.3, b=4.5, c=22.9, c'=2.4, V=42.3%.

Paratype females (n=10): L=1.61-2.37 (1.70) mm, a=21.3-34.3 (26.6), b=3.8-5.2 (4.4), c=15.2-23.4 (19.6), c'=2.2-3.7 (3.0), V=39.2-49.7 (44.0)%.

Paratype male: L=1.76 mm, a=18.0, b=4.1, c=29.3, c'=1.3, suppl. 6, spicul.=63 μm .

Females. Cuticle smooth, without visible cross-striation and longitudinal alae. Cuticle 1.5 μm wide at midbody and 2.0 μm in the tail. Lateral chord about one-fifth of the midbody diameter, without granular appearance. Lateral pores obscure. Labial region offset from the adjacent body by a deep, angular, constriction almost twice as wide as high and almost as wide as the body width at neck base. Head diameter 16-18 μm . Labial and cephalic papillae prominent. Amphid opening at level of cephalic depression, its aperture occupying about half of the corresponding body width. Odontostyle 20-21 μm long, 2 μm wide. Odontophore linear, 36-38 μm long. Guiding ring clear, double. Oesophagus mus-

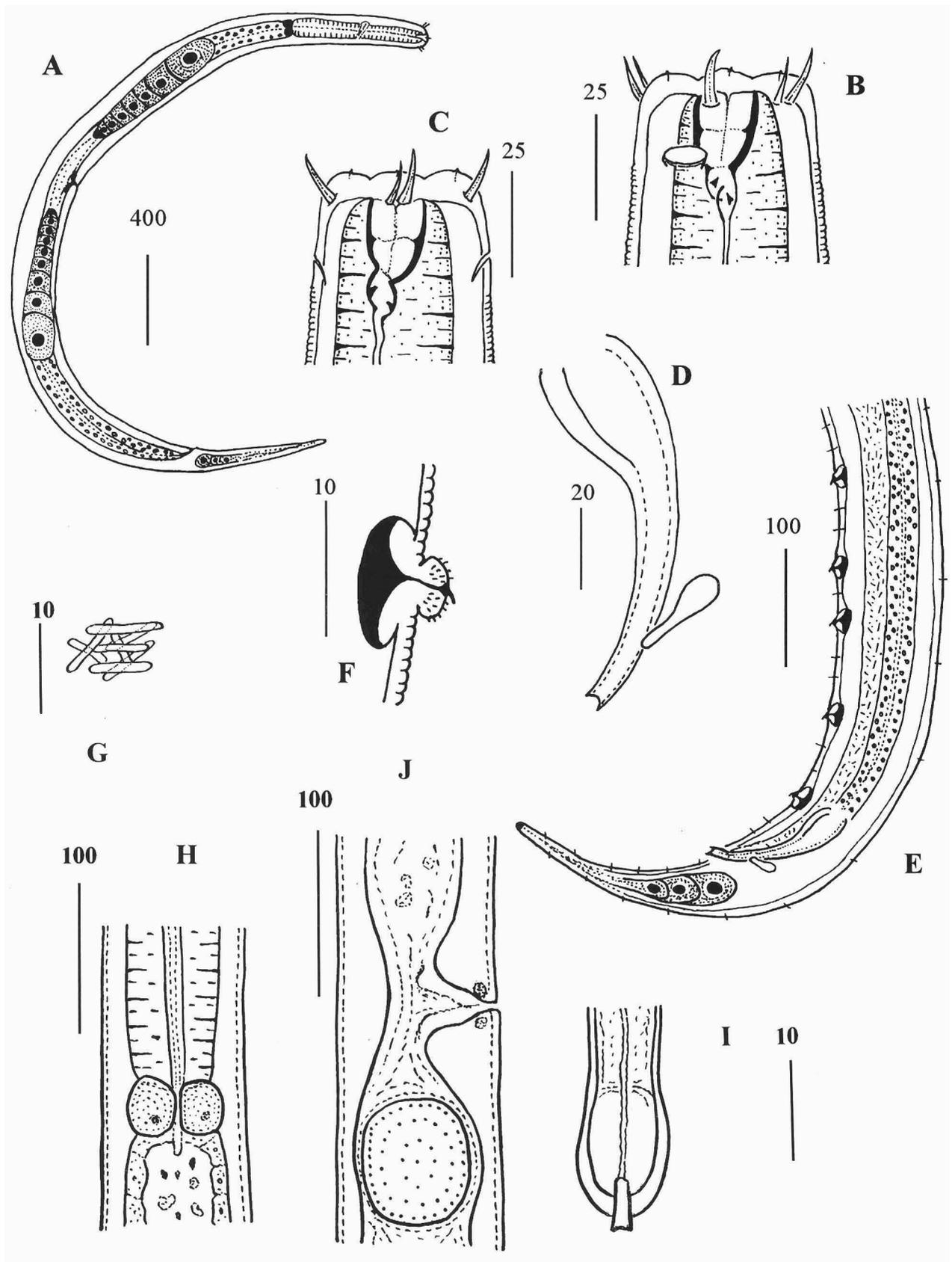


Fig. 1. *Peritobrilus vipriensis* sp. n. A: Female; B, C: Female head; D: Spicules and gubernaculum; E: Male posterior end; F: Supplement; G: Crystals; H: Female cardia region; J: Vulva region; I: Tail terminus. Scale bars in μm .

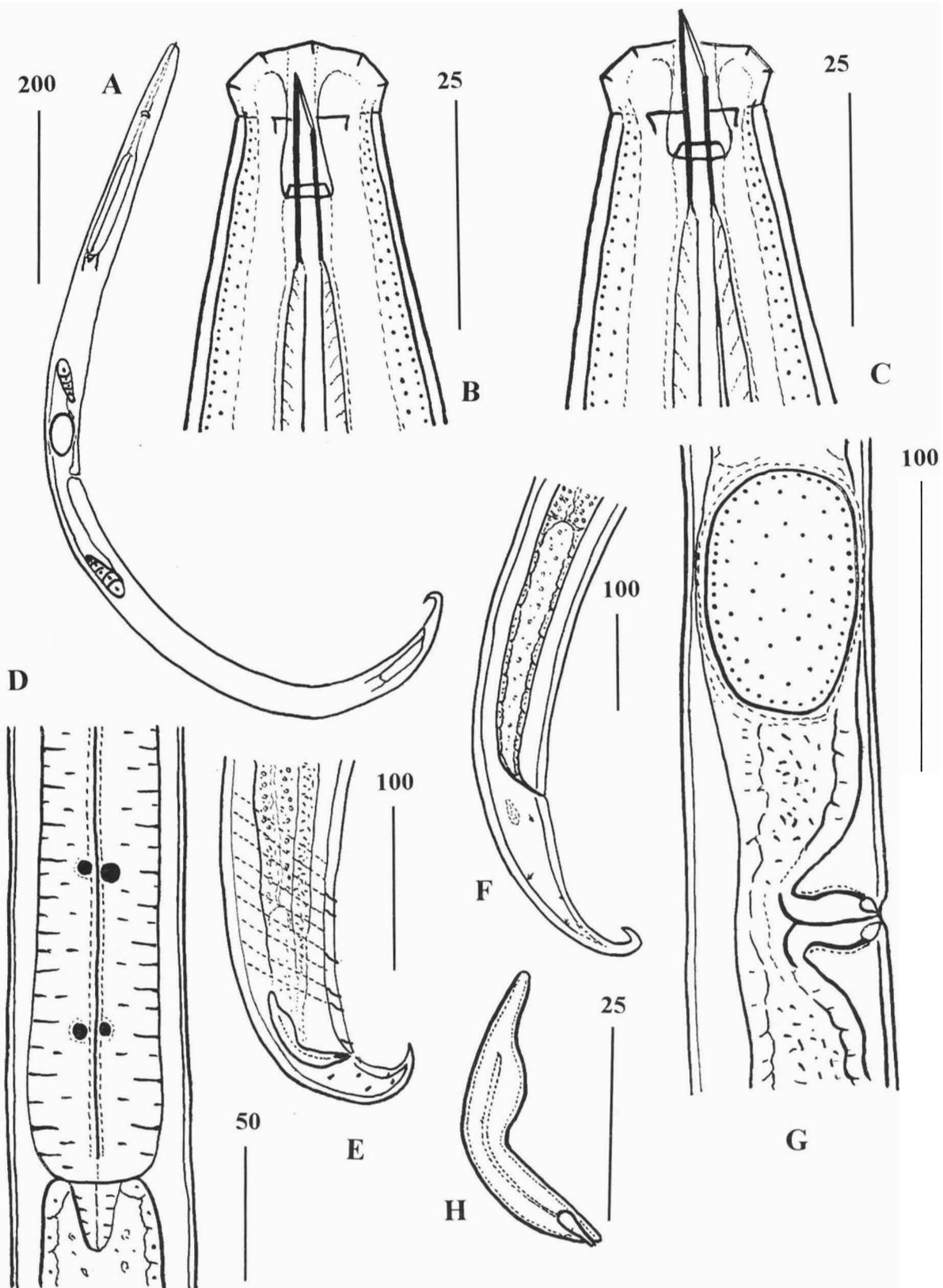


Fig. 2. *Allodorylaimus rarus* sp. n. A: Female; B, C: Female head; D: Cardia region; E: Posterior end of male; F: Posterior end of female; G: Vulva region; H: Spicules and lateral guiding pieces. Scale bars in μm .

cular, 395-479 (443) μm long. Nerve ring encircles the oesophagus at about 30-31% of oesophageal length from head end. Cardiamuscular, elongated, triangular. In some specimens pharyngeal gland visible, but outlets obscure: $\text{DN}=61-63\%$; $\text{S}_1\text{N}=73\%$, $\text{S}_2\text{N}=88-90\%$. Females amphidelphic; ovaries antidiromous; $\text{G}_1=510-550 \mu\text{m}$, $\text{G}_2=540-600 \mu\text{m}$. Vulva a transverse slit-like opening. Pores and papilla absent in vulva region. Vagina extending inwards about half of the body diameter; *pars proximalis vaginae* 30-32 μm long, with weakly sigmoid contours; *pars refringens vaginae* consisting of two well developed and triangular sclerotizations; *pars distalis vaginae* very short. Uterus shorter than oviduct, frequently containing spindle-shaped, 10 μm long sperm. Uterus containing 1-2 eggs; 74-91x48-64 μm . Uterus separated from oviduct by a prominent sphincter. Ovaries variable in length, usually not reaching the oviduct-uterus junction. Prerectum well developed, 42-120 μm long. Tail hook-like, 70-123 μm long.

Male. Cuticle smooth. Labial region 16 μm wide. Spear length 20 μm . Guiding ring double. Oesophagus 429 μm long. Prerectum 91 μm long; anterior end at the level of anterior supplements. Spicules typically dorylaimoid, 63 μm long. Lateral guiding pieces 7 μm . Six small supplementary organs, not touching one another. Second last supplement from anterior edge of body at the level of the spicule proximal endings. Tail hook-like, as in females, 60 μm long. Five pairs of papilla on the tail.

Type locality. Northern Siberia, Lena river delta. Male, five females (holotype) and nine juveniles collected on 12th June 1990 from an unnamed lake on Tas-Ary Island in the Lena river main canal, shore zone, 0.2 m deep, muddy sand; six females and seven juveniles collected from an unnamed lake

on Tas-Ary Island in the Lena river main canal, 0.5 m, silted sand.

Type material. Holotype female, paratype females and male deposited in the nematode collection of the Institute of Parasitology, the Russian Academy of Sciences, Moscow. Holotype on slide 70/27.

Differential diagnoses. The new species resembles *Allodorylaimus bokori* (Andrássy, 1959) in body length, relative tail sizes of male and juveniles, and the number and position of the supplementary organs. The latter species was described from a single male and several juveniles found in a puddle inside Baradla Cave, Hungary (Andrássy, 1959). *Allodorylaimus rarus* sp. n. differs from *A. bokori* by having a shorter spear (20 μm vs 24 μm) and longer spicules (60 μm vs 52 μm).

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Гагарин В.Г. *Peritobrilus vipriensis* sp. n. (Enoplida: Tobrilidae) и *Allodorylaimus rarus* sp. n. (Dorylaimida: Quadsianematidae) из Северной Сибири.

Резюме. *Peritobrilus vipriensis* sp. n. и *Allodorylaimus rarus* sp. n. описаны из пресноводных водоемов в эстуарии Лены в море Лаптевых. *Peritobrilus vipriensis* sp. n. близок к *P. heptapapillatus* и *P. peregrinator*, но отличается от первого вида иным строением стомы, коротким хвостовым концом и более длинными спикулами, а от второго вида - короткими головными щетинками, более длинным хвостовым концом, меньшим количеством супплементарных органов и более длинными спикулами. *Allodorylaimus rarus* sp. n. сходен с *A. bokori*, от которого отличается более коротким копьём и длинными спикулами.
