

***Mesodorylaimus dolichurus* sp. nov. (Nematoda, Dorylaimida)  
from freshwater body of Vietnam**

***Mesodorylaimus dolichurus* sp. nov. (Nematoda, Dorylaimida)  
из пресного водоема Вьетнама**

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A new species of *Mesodorylaimus* Andr ssy, 1959 is described and illustrated from Vietnam. *Mesodorylaimus dolichurus* sp. nov. is similar to *M. flagellifer* Andr ssy, 2002 and *M. dermi* Loof, 1969 and differs from both by longer odontostyle, longer tail in females, longer spicules and larger number of preloacal supplements in males.

Приводятся описание и иллюстрации нового вида рода *Mesodorylaimus* Andr ssy, 1959 из Вьетнама. *Mesodorylaimus dolichurus* sp. nov. близок к *M. flagellifer* Andr ssy, 2002 и *M. dermi* Loof, 1969, но отличается от обоих более длинным копьем, более длинным хвостом у самок и более длинными спикулами и большим количеством преклоакальных супплементов у самцов.

**Key words:** Nematoda, Dorylaimidae, new species, taxonomy, lake, Vietnam

**Ключевые слова:** Nematoda, Dorylaimidae, новый вид, таксономия, озеро, Вьетнам

## INTRODUCTION

Numerous adult and juvenile individuals of a new species *Mesodorylaimus dolichurus* sp. nov. were found in one of meiobenthos samples from inland water bodies of Vietnam. The sample was collected in October 7, 2010. Preservation was made in 4% formalin. The nematodes after extraction from bottom sediment were mounted in glycerol. Measurements and drawings were made using light microscope MBA-1A.

## TAXONOMIC PART

Order DORYLAIMIDA Pearse, 1942

Family DORYLAIMIDAE de Man, 1876

Subfamily LAIMYDORINAE Andr ssy, 1969

*Mesodorylaimus* Andr ssy, 1959

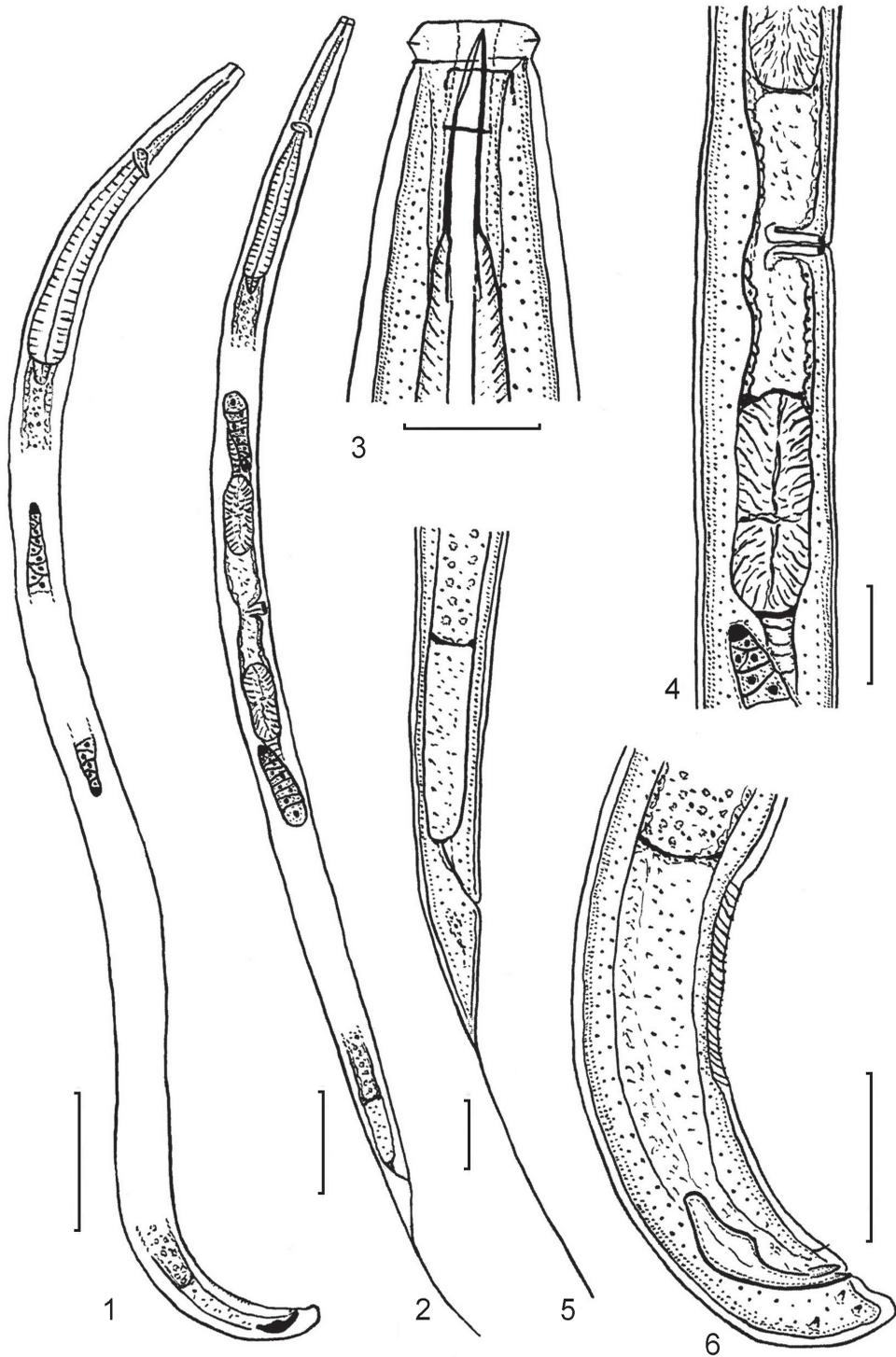
*Mesodorylaimus dolichurus* sp. nov.  
(Figs 1–6; Table: measurements)

*Holotype.* Male; Vietnam, Khanh Hoa (Kh nh H a) Prov., Cam Ranh (Cam Ranh) Peninsula,

small lake nearby Cam Ranh airport, altitude 1 m, plant-filled (blanket algae and macrophytes) littoral (11°58.976'N, 109°12.684'E), sand with a considerable quantity of plant residues (peat-like), depth 0.4 m, water temperature 33.7 °C, dissolved oxygen 4 mg/l, pH 7.6, conductivity 1406 µS/sm; 07 Oct. 2010; leg. V.A. Gusakov. Slide 100/45 deposited in the nematode collection of the Institute of Ecology and Evolution, Center of Parasitology, Russian Academy of Sciences, Moscow.

*Paratypes.* Ten males, 10 females; same locality and habitat as for holotype. Slide deposited in the nematode collection of the Institute for Biology of Inland Waters, Russian Academy of Sciences, Borok, Yaroslavl Prov.

*Description.* Male. Body comparatively long and thin, tapering toward both extremities. Cuticle smooth, 4.5–5.0 µm at mid-body. Lateral pores not visible. Lips well developed, labial and cephalic papillae distinct. Labial region well off set. Amphidial fovea cup-like, wide, occupying 45–52% of the corresponding body diameter and situated at the base of lips. Odontostyle straight and slender, 1.6–1.8 times as long



**Figs 1–6.** *Mesodorylaimus dolichurus* sp. nov.: 1, entire male; 2, entire female; 3, male anterior region; 4, vulva region; 5, female posterior region; 6, male posterior region. Scale bars: 150 μm (1, 2), 20 μm (3), 50 μm (4–6).

**Table.** Morphometrics of *Mesodorylaimus dolichurus* sp. nov. (mean  $\pm$  standard deviation, with range in parentheses). All absolute lengths are in  $\mu\text{m}$ .

Character	Holotype		Paratypes	
	male	10 males	10 females	
<i>L</i>	1821	1828 $\pm$ 70 (1729–1931)	2151 $\pm$ 84 (2014–2315)	
<i>a</i>	29	28 $\pm$ 2 (24–31)	31 $\pm$ 2 (28–34)	
<i>b</i>	3.7	3.9 $\pm$ 0.1 (3.7–4.4)	4.5 $\pm$ 0.1 (4.4–4.8)	
<i>c</i>	79	76 $\pm$ 6 (69–86)	6.7 $\pm$ 0.3 (6.1–7.2)	
<i>c'</i>	0.7	0.7 $\pm$ 0.1 (0.6–0.8)	10.0 $\pm$ 0.8 (8.7–10.9)	
<i>V</i> , %	–	–	44.7 $\pm$ 1.8 (42.2–47.2)	
Labial region width	17	17 $\pm$ 1 (16–18)	16 $\pm$ 1 (16–17)	
Odontostyle length	29	28 $\pm$ 1 (27–29)	28 $\pm$ 1 (26–29)	
Odontophore length	17	17 $\pm$ 1 (16–19)	18 $\pm$ 1 (17–19)	
Pharynx length	491	464 $\pm$ 21 (430–491)	476 $\pm$ 19 (437–509)	
Distance from posterior end of pharynx to vulva	–	–	476 $\pm$ 49 (394–540)	
Distance from posterior end of pharynx to cloaca	1307	1340 $\pm$ 64 (1276–1463)	–	
Distance from vulva to anus	–	–	876 $\pm$ 45 (815–963)	
Spermatheca length	–	–	84 $\pm$ 11 (70–95)	
Prerectum length	180	182 $\pm$ 16 (164–211)	119 $\pm$ 21 (95–148)	
Number of supplements	24	23 $\pm$ 2 (21–25)	–	
Spicules length	52	53 $\pm$ 2 (50–55)	–	
Supplement row length	71	73 $\pm$ 4 (68–80)	–	
Distance from cloaca to supplement row	82	79 $\pm$ 5 (77–90)	–	
Tail length	23	24 $\pm$ 2 (23–27)	322 $\pm$ 11 (304–342)	

as the labial region diameter. Its aperture consisting about 40% its length. Odontophore rod-like, 0.5–0.6 times as long as the odontostyle. Guiding ring simple. Pharynx muscular, expanding gradually along its whole length. Pharyngeal gland nuclei indistinct. Cardia conoid, muscular, surrounded with intestinal tissue. Testes paired, opposed. Spicules dorylaimoid, 1.4–1.6 times as long as the cloacal body diameter, with two spindle-shaped lateral guiding pieces. In addition to adcloacal pair, a series of 21–25 contiguous ventromedial supplements are present. Length of supplement row some slightly less distance from cloaca to supplement row. Prerectum well developed, 4.6–5.8 cloacal body diameters long, intestine-prerectum junction is

located at level of anterior supplements in supplement row. Tail short, widely rounded, shorter than one cloacal body diameter and bearing 3–4 pairs of caudal papillae.

*Female.* General morphology is similar to that of males in structure of cuticle and anterior body end. Cuticle smooth. Labial region off set. Amphidial fovea cup-like, wide, situated at the base of lips. Odontostyle straight and slender, 1.6–1.7 times as long as the labial region diameter. Odontophore rod-like, 0.5–0.6 times as long as the odontostyle. Guiding ring simple. Pharynx muscular, expanding gradually along its length. Pharyngeal gland nuclei indistinct. Prerectum 3.0–4.2 times as long as the anal body diameter. Rectum 1.2–1.4 times as long as the anal body diameter. Reproductive sys-

tem didelphic, amphidelphic. Vulva lips not protruding outside the body contour. Ovaries relatively short. Oocytes numerous, first in two rows, then in a single row. Uterus spacious, 1.2–1.4 times as long as corresponding body diameter. Spermatheca 1.0–1.3 times as long as the corresponding body diameter. Vagina extending inwards approximately to half of the corresponding body diameter. *Pars proximalis vaginae* with straight walls, 32–37  $\mu\text{m}$  long; *pars refrangens vaginae* consisting of drops-like sclerotizations; *pars distalis vaginae* short, practically absent. Vulva in shape of the transverse slit. Tail long, with rather broad basal conical portion followed by rather narrow cylindrical posterior portion. Caudal papillae not observed.

**Diagnosis.** *Mesodorylaimus dolichurus* sp. nov. is characterized by comparatively long and slender body ( $L = 1729\text{--}2315 \mu\text{m}$ ,  $a = 24\text{--}34$ ), separated from the rest of body labial region, long and slender odontostyle, short odontophore, simple guiding ring, long prerectum end rectum (in males intestine-prerectum junction is located at level of anterior supplements in supplement row), long female tail ( $c = 6.1\text{--}7.2$ ,  $c' = 8.7\text{--}10.9$ ), short male tail ( $c = 69\text{--}86$ ,  $c' = 0.6\text{--}0.8$ ), presence of the adcloacal supplements and series of 21–25 contiguous ventromedian supplements in males, comparatively long spicules (50–55  $\mu\text{m}$  long).

**Comparison.** *Mesodorylaimus dolichurus* sp. nov. is one of largest species in the genus *Mesodorylaimus* Andr ssy, 1959. It is similar to *M. flagellifer* Andr ssy, 2002 and *M. dermi* Loof, 1969 in body size and tail length in females. From the former species it dif-

fers in the thicker body ( $a = 24\text{--}34$  vs  $a = 42\text{--}49$ ), longer odontostyle (26–29  $\mu\text{m}$  vs 14–15  $\mu\text{m}$ ), longer prerectum in females (3.0–4.2 anal body diameter vs 2.6–2.8 anal body diameter), longer spicule (50–55  $\mu\text{m}$  vs 38–42  $\mu\text{m}$ ), greater number of supplements in males (21–25 vs 12–13), shorter tail in females ( $c = 6.1\text{--}7.2$ ,  $c' = 8.7\text{--}10.9$  vs  $c = 6.2\text{--}6.7$ ,  $c' = 14$ ) (Andr ssy, 2002). From *M. dermi* it differs in the longer body (females  $L = 2014\text{--}2315 \mu\text{m}$ , males  $L = 1729\text{--}1931 \mu\text{m}$  vs females  $L = 1430\text{--}1790 \mu\text{m}$ , males  $L = 1020\text{--}1420 \mu\text{m}$ ), longer female tail ( $c = 6.1\text{--}7.2$  vs  $c = 7.5\text{--}8.6$ ), longer odontostyle (26–29  $\mu\text{m}$  vs 13–15  $\mu\text{m}$ ), longer spicules (50–55  $\mu\text{m}$  vs 39–48  $\mu\text{m}$ ), greater number of supplements in males (21–25 vs 16–20) (Loof, 1969).

**Etymology.** The species name means “sword-tailed”.

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