

## Redescription of *Tobrilus brevisetosus* (Filipjev, 1929) (Nematoda, Enoplida: Tobrilidae)

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Tsalolikhin, S.J. 2007. Redescription of *Tobrilus brevisetosus* (Filipjev, 1929) (Nematoda, Enoplida: Tobrilidae). *Zoosystematica Rossica*, **16**(1): 5-8.

The lectotype of *Tobrilus brevisetosus* is designated from the Gulf of Finland, Russia. Descriptions are given of the lectotype and a male from Ladoga Lake, Russia.

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The identity of some species of the genus *Tobrilus* described in the 19th and early 20th centuries is problematic because of the incomplete original descriptions and lack of the type material. The necessity appears to designate a lectotype (or a neotype) in the interests of nomenclature. The species *Tobrilus brevisetosus* requires such an action. Originally, this taxon was described (Schneider, 1925) as "*Trilobus gracilis* f. *typica* var. *brevisetosus* n. var." (infrasubspecific name). The description was very short and poorly illustrated. Subsequently, the variety was raised to species rank (Filipjev, 1929), and thus the name became available. After 1929, the species was seldom mentioned in faunal papers, however without illustration and description (Dekhtiar, 1976; Medvedev, 1986; Petukhov, 1988) or with a brief description (Gagarin, 1993). Not all these records are reliable.

The collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, contains a single male of *T. brevisetosus* from the collection of I.N. Filipjev. This specimen was described by Filipjev in 1929. It is designated here as the lectotype. Further, I give a description of the lectotype of *T. brevisetosus* and description of a male of this species from Ladoga Lake. The main morphological characteristics are presented in Tables 1 and 2.

### ***Tobrilus brevisetosus* (Filipjev, 1929)**

*Lectotype* (present designation): ♂, **Russia**, Gulf of Finland, 1.5 m depth, mud-sandy ground, 11.VIII.1924 (I.N. Filipjev), microscope slide no. F-087, Zoological Institute, St. Petersburg.

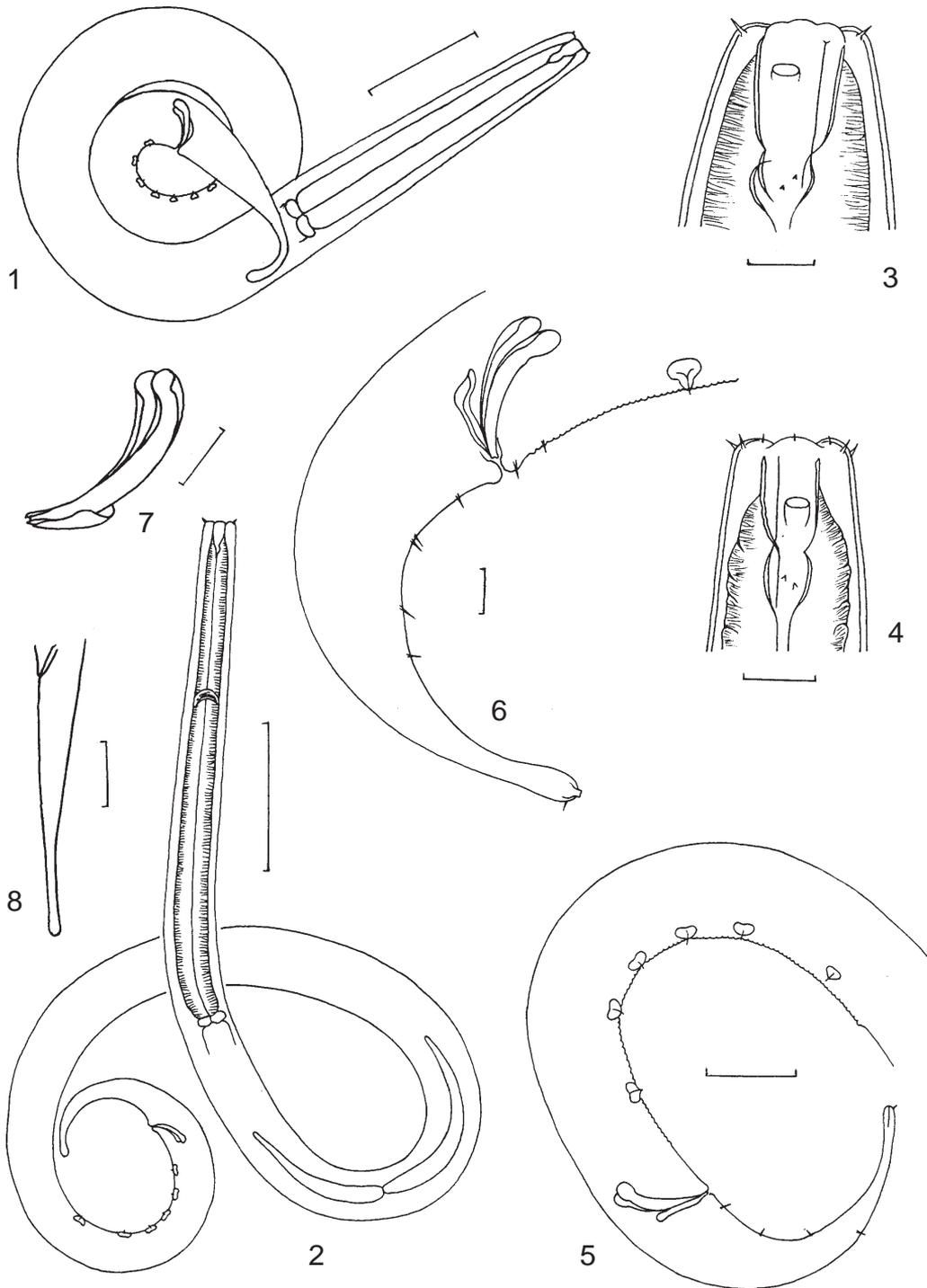
*Additional material*: 1 ♂, **Russia**, Ladoga Lake, near Valaam Island, sand littoral, July 1996 (E. Kirzedeli), microscope slide no. A-6571, Zoological Institute, St. Petersburg.

*Description of the lectotype* (Figs 1, 3, 7). ♂, L = 1280 µm, a = 23.3, b = 4.4, c = 10.1, spic. 32 µm, suppl. 7. Unfortunately, preservation of Filipjev's slides is very poor. Only spicules and stoma are fairly distinct. Cuticle very faintly annulated. Amphid aperture situated on the level of front third of buccal cavity. Total depth of stoma 22 µm. Pockets completely overlapping. Teeth very small, situated very close to each other. Oesophageal glands flattened. Testes and ductus ejaculatorius not distinguishable. Supplements small, submerged. Spicules not very wide.

*Description of the male from Ladoga Lake* (Figs 2, 4, 5, 6). Cuticle very faintly annulated. Amphid aperture situated on the level of front third of buccal cavity. Total depth of stoma 20 µm. Pockets completely overlapping. Teeth very small, situated very close to each other. Oesophageal glands slightly flattened. Testes symmetrical, about 110 µm long, situated nearly in the middle of body. There are micropapillae between supplements and behind the supplementary row (only 25 µm in front of 6th supplement). Supplements small, bottom of ampoules pressed. Spicules not very wide; length of gubernaculum about 15 µm. Tail with some small setae and a very small subterminal seta.

Morphological characteristics of female are presented in Table 1.

*Discussion.* *Tobrilus brevisetosus* is a very distinctive species. Its main characteristics are the very short cephalic setae, stoma with very large, nearly cylindrical, buccal cavity and very small teeth. It is a rare species. Schneider (1925) described only one male and one female; Filipjev (1929) described a single male, although his material included also 10 females; Gagarin (1993) reported 25 females and 4 males.



**Figs 1-8.** *Tobrilus brevisetosus* (1, 3, 7, lectotype; 8, female from Gulf of Finland; 2, 4, 5, 6, specimen from Ladoga Lake). 1, 2, body of male; 3, 4, head; 5, posterior end of male; 6, tail of male and spicules; 7, spicules; 8, tail of female. Scales: 1, 2: 100  $\mu\text{m}$ ; 5, 8: 30  $\mu\text{m}$ ; 3, 4, 6, 7: 10  $\mu\text{m}$ .

**Table 1.** Main morphological characteristics of *Tobrilus brevisetosus*.

| Characteristic            | Madüsee, or Medve Lake, Poland (Schneider, 1925) | Gulf of Finland (Filipjev, 1929, and my data) | Ladoga Lake, Russia (my data) | Rybinsk Reservoir, Volga R. (Gagarin, 1993); n = 4 ♂, 25 ♀; limits (mean) |
|---------------------------|--|---|-------------------------------|---|
| <b>Male</b>               |  |   |                               |   |
| L, µm                     | 1540   | 1280  | 1275                          | 1160-1240 (1200)  |
| a                         | 29.4   | 23.3  | 33.5                          | 23.2-25.7 (24.7)  |
| b                         | 4.4  | 4.4   | 3.8                           | 4.3-4.7 (4.5)   |
| c                         | 12.2   | 10.1  | 14.2                          | 10.2-12.4 (11.6)  |
| Tail/anal diameter        | –  | 4   | 4                             | 3   |
| Oesophagus, µm            | 350  | 290   | 322                           | (265)   |
| Trophico-genital part, µm | 1064   | 870   | 863                           | (828)   |
| Tail, µm                  | 126  | 120   | 90                            | (107)   |
| Cephalic diameter, µm     | –  | 3   | 2.5                           | 3   |
| Buccal cavity, µm         | –  | 7 × 16  | 7 × 16                        | –   |
| <b>Female</b>             |  |   |                               |   |
| L, µm                     | 1580   | 1045  | –                             | 1050-1580 (1230)  |
| a                         | 22.8   | 18.7  | –                             | 18.7-22.4 (20.7)  |
| b                         | 4.2  | 4.7   | –                             | 4.1-5.0 (4.4)   |
| c                         | 12   | 7.7   | –                             | 7.3-9.5 (8.4)   |
| V, %                      | 52   | 49  | –                             | 42-52 (47)  |
| Oesophagus, µm            | 376  | 223   | –                             | 272-321 (280)   |
| Tail, µm                  | 132  | 136   | –                             | 142-165 (146)   |

**Table 2.** Characteristics of the supplement row of *Tobrilus brevisetosus*.

| Characteristic  | Gulf of Finland* | Ladoga Lake |
|---|------------------|-------------|
| Length of supplement row, µm  | 140**            | 160         |
| Distance between supplements, µm (in parentheses: Distance between supplements / Length of supplement row, %) | Cl.-I            | 31 (22)     |
|   | I-II             | 16 (11)     |
|   | II-III           | 18 (13)     |
|   | III-IV           | 18 (13)     |
|   | IV-V             | 16 (11)     |
|   | V-VI             | 17 (12)     |
|   | VI-VII           | 24 (17)     |
| Length of spicule, µm   | 32***            | 28          |
| Length of spicule / Length of supplement row, %   | 23               | 18          |
| Length of spicule / Length of body, %   | 2.5              | 2.2         |

Notes: \* based on Filipjev, 1929, Fig. 10b; \*\* very likely understated in the figure; \*\*\* given as 40 µm in the text.

The morphological characteristics of *T. brevisetosus* from Gulf of Finland, Ladoga Lake, and Rybinsk Reservoir are similar. Specimens from Madýsee Lake are larger, but relevant data of male (de Man's indices) are also similar, although the female has a shorter tail. Specimens (only females) from Tanzania (Andrássy, 1968) are similar to specimens from NW Europe, but African nematodes have a longer tail ( $c = 6.4-7.2$ ) and not completely overlapping pockets. There is no absolute confidence in identifying the Tanzanian females as *T. brevisetosus*.

#### Acknowledgements

The collection of Zoological Institute, St. Petersburg, is supported by Rosnauka for UFC no. 2-2.20.

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Received 21 February 2007