

Geocenamus khashanicus sp. n. (Tylenchida: Merliniinae) from the Russian Far East

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Summary. A new species *Geocenamus khashanicus* sp. n. is described from the rhizosphere of *Carex cryptocarpa* and *Geranium soboliferum* from the south of the Primorje Territory. It is distinguished from *G. patternus* by the presence of a smooth terminus, absence of cuticular longitudinal lines and longer spicules and gubernaculum.

Key words: *Geocenamus khashanicus* sp. n., Merliniinae, taxonomy, stunt nematodes, Russian Far East.

The genus *Geocenamus* was proposed by Thorne and Malek (1968). Brzeski (1991) proposed the original conception for the classification of nematodes of the subfamily Merliniinae and synonymized the genera *Merlinius* Siddiqi, 1970, *Hexadorus* Ivanova & Shagalina, 1983, *Pathotylenchus* Eroshenko & Volkova, 1987 and *Scutylenchus* Jairajpuri, 1971 with *Geocenamus* and included 67 valid species into the genus. We support Siddiqi's (1981) rejection of this synonymization and accept only five species for this genus. Three of these species are present in the Russian Far East: the type species *G. tenuidens* Thorne & Malek, 1968, *G. patternus* Eroshenko & Volkova, 1987 and *G. squamatus* Eroshenko & Volkova, 1988. These latter two species are apparently endemic in this region. During a survey in the Primorje Territory nematodes recovered from a sample collected under meadow grass were identified as representing a new species of the genus *Geocenamus* and this species is described here.

MATERIAL AND METHODS

Specimens were collected during the summer, 1991, from the rhizosphere of meadowy grasses near lake Khasan in the south of the Primorje Territory. Nematodes were extracted using a centrifugal-flotation method (Jenkins, 1964), fixed in TAF,

processed to glycerol and mounted in anhydrous glycerol on glass slides (Seinhorst, 1959).

DESCRIPTION

Geocenamus khashanicus sp. n. (Fig. 1)

Holotype female: L = 0.84 mm; a = 23.0; b = 5.7; c' = 2.7; V = 57%; stylet = 27 μ m.

Paratype females (n = 4): L = 0.82 - 0.96 (0.89) mm, a = 19 - 23 (21.3); b = 5.5 - 6.4 (5.9); c = 12 - 14 (13.1); c' = 2.4 - 2.7 (2.5); V = 53 - 57 (55.4); stylet = 27 - 29 (28.2) μ m.

Paratype males (n = 6): L = 0.72-0.90 (0.83); a = 18 - 22 (20.2); b = 4.8 - 6.6 (5.8); c = 10 - 12 (11.0); c' = 2.6 - 3.3 (3.1); stylet = 24.5 - 28.0 (26.4) μ m; T = 41 - 56 (48.0); spicule = 32 - 35 (33.3) μ m; gubernaculum = 9 - 10 (9.6) μ m.

Female. Body slightly curved ventrally, very finely striated, annules 0.7 μ m wide at mid-body. Lateral fields with six incisures, longitudinal striation absent. Lip region hemispheroid, width 9 μ m, height 4 μ m, with six annules, set-off by a constriction from the body contour. Labial disc present. Stylet slender with small, posteriorly sloping knobs. Median bulb oval, cardia present. Deirids not observed. Excretory pore present at level of basal bulbs, 120-125 μ m from

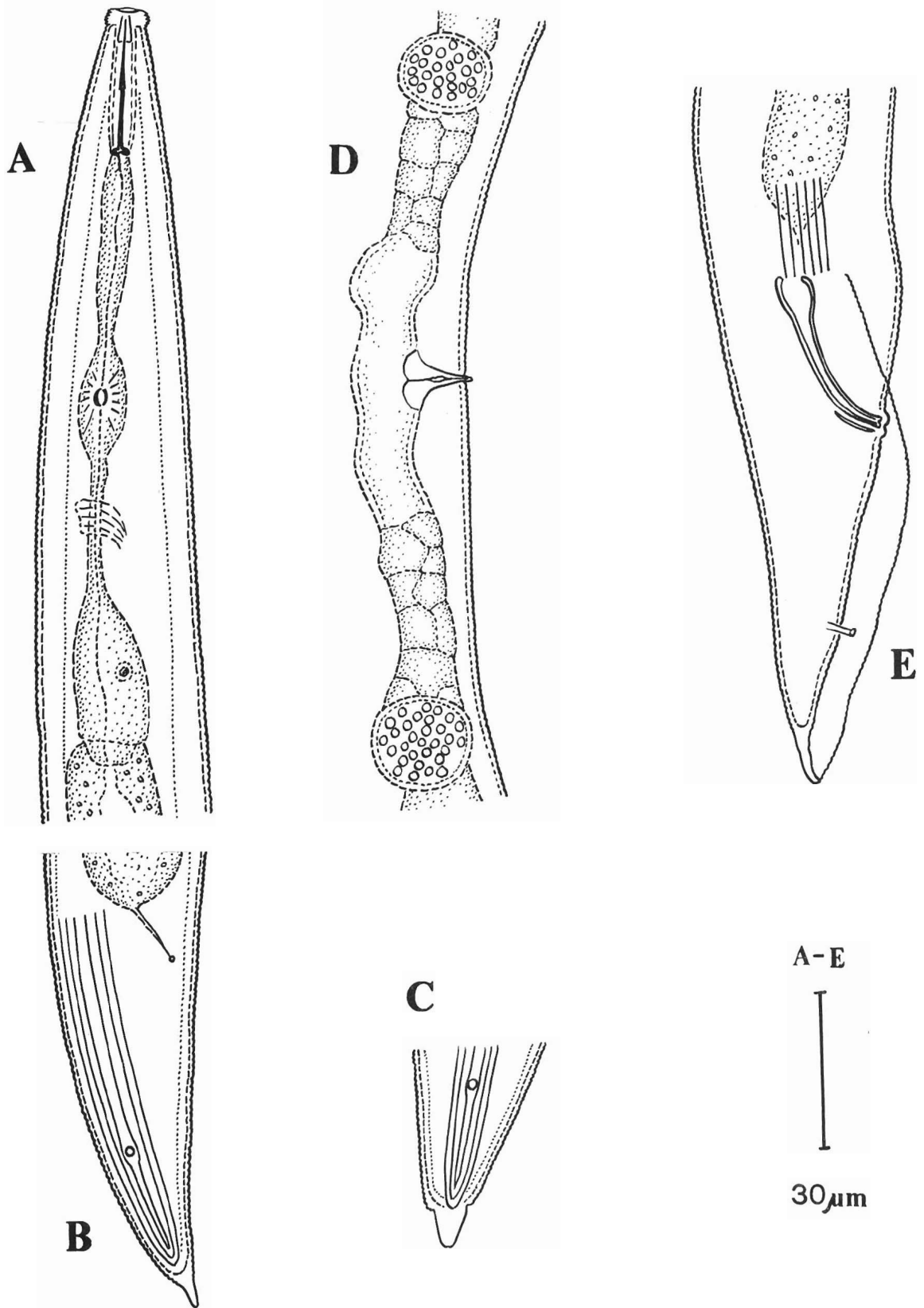


Fig. 1. *Geocenamus khashanicus* sp. n. A: anterior region of female; B, C: female tail; D: uterus-spermatheca region of female; E: posterior end of male.

anterior end. Spermatheca spheroid, containing rounded spermatozoa. Oocytes arranged as single or double rows. One specimen with long ovary reflexed near cardia and near tail. Epiptygma present. Tail 66-75 μm long, conoid, with 42-51 ventral annules. Terminus finger-like, smooth. Phasmids conspicuous, at level of 2/3 the tail length behind anus.

Male. Anterior end similar to those of female. Tail conical, 72-80 μm long. Terminus smooth. Spicules arcuate, notched on the distal end. Gubernaculum short petaloid. Hypoptygma present. Bursa well developed, with finely crenate margins, peloderan.

Type host and locality. *Geocenamus khashanicus* sp. n. was recovered from a soil sample collected from the roots of *Carex cryptocarpa* C. A. Mey and *Geranium soboliferum* Kom. in the valley of the river Lebedinka near lake Khashan in the south of the Primorje Territory, Russia. The soil sample was collected in June, 1991.

Type material. Holotype female (GKh 691/1) deposited in the collection of the Laboratory of Phytoneematology, Institute of Biology and Pedology, Vladivostok. Paratype females and males (GKh 691/2-5) are deposited in the same collection. Paratype females and males (71/39) deposited in the collection of the Institute of Parasitology, Russian Academy of Sciences, Moscow.

Differential diagnosis. The new species is closely related to *G. patternus* Eroshenko & Volkova, 1987,

but differs by having very fine cuticular annules, no longitudinal striations, smooth tail tip and longer spicules and gubernaculum (in *G. patternus*: spicules 23-25 μm and gubernaculum 6.3-7.0 μm long).

Etymology. The name *G. khashanicus* is derived from the geographical location - lake Khashan.

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REFERENCES

- Brzeski, M. W. 1991. Taxonomy of *Geocenamus* Thorne & Malek, 1968 (Nematoda: Belonolaimidae). *Nematologica* 37: 125-173.
- Eroshenko, A. S. & Volkova, T. V. 1987. [*Geocenamus patternus* n. sp. and *Pathotylenchus nurserus* n. gen. et n. sp. from the rhizosphere of the coniferous trees of Far East]. *Parazitologiya* 21: 595-598.
- Eroshenko, A. S. & Volkova, T. V. 1988. [*The Parasitic Nematodes of Plants from the South of Far East*]. Vladivostok, 138 p.
- Jenkins, W. R. 1964. A rapid centrifugation-flotation technique for separating of nematodes from soil. *Plant Disease Reporter* 48: 632.
- Seinhorst, J. 1959. A rapid method for the transfer of nematodes from fixative to anhydrous glycerin. *Nematologica* 4: 67-69.
- Siddiqi, M. R. 1986. *Tylenchida. Parasites of Plants and Insects*. Sant Albans, Commonwealth Agricultural Bureaux. 645 pp.
- Thorne, G. & Malek, R. V. 1968. *Nematodes of the Northern Great Plains*. Agricultural Experimental Station of South Dakota, 111 pp.

Волкова Т.В. *Geocenamus khashanicus* sp. n. (Tylenchida: Merliniinae) с Дальнего Востока России.

Резюме. Описывается *Geocenamus khashanicus* sp. n. из ризосферы *Carex cryptocarpa* и *Geranium soboliferum* с юга Приморского края. Новый вид отличается от *G. patternus* наличием гладкого терминуса, отсутствием кутикулярных продольных линий и большей длиной спикул и губернакулума.
