

TWO NEW SPECIES OF PLANT NEMATODES

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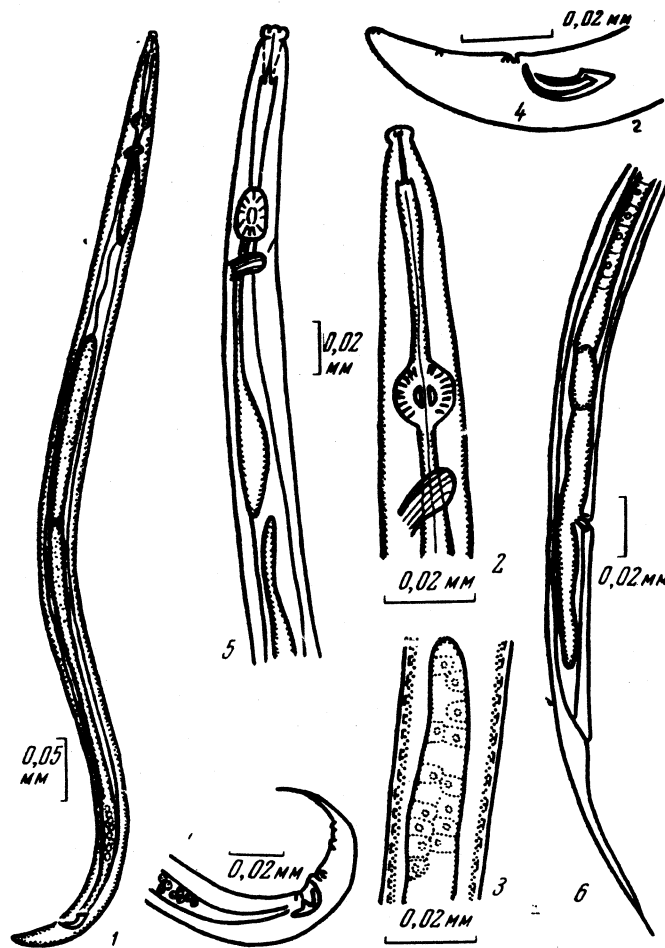
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In the course of the analysis of the roots of strawberries from the Moscow region in 1963 we found a new species of plant nematodes which according to its morphological characteristics must be attributed to the genus Aphelenchoides.

APHELENCHOIDES ROSEI SP. N. (see Figures 1 - 4)

One ♂ with 2 gonads selected from the roots of garden strawberry. According to morphological characteristics (excluding the gonads) the nematode differs from known species of the genus. Measurements: L = 670 μm; a = 33.5; b = 9.6; c = 17.7; T' = 60.4; T'' = 47; stylet = 14 μm. Cuticle with thin transverse annulation. Head separated from the body by a distinct constriction. Height of the head 3 μm; diameter, 6 μm. Stylet thin with small lateral basal knobs. Procorpus straight and thin. Median esophageal bulb oval (its length, 14 μm; its width, 12 μm). The corresponding diameter of the body is 20 μm. Esophageal glands 90 μm long on the dorsal side of the intestine. Nerve ring one bulb length below the bulb. Excretory pore somewhat below the nerve ring. Lateral field 1/6 the width of the body, with 2 lateral lines. There are 2 gonads with 1 common ejaculatory duct. The gonads are of different length: 405 and 315 μm. Spermocytes arranged in two rows. Tail reflexed by 90% (in the fixed specimen), and conical: tail tip bluntly rounded and without a mucro. On the tail there are 3 pairs of papillae. Tail length 40 μm. Anal body diameter 20 μm. Spicules aphelenchoid. Length of the dorsal arc of spicule 30 μm, of the ventral arc, 16 μm.

Differential diagnosis. The species is close to A. saprophilus Franklin, 1957 and A. limberi Steiner, 1936. It differs from the first species by the greater length of the body and stylet (670 μm instead of 620 μm and 14 μm instead of 13 μm), by the lesser number of lateral lines (2 instead of 4), by the form of the tip of the tail, and by the absence of a mucro. Our species differs from the second species by the greater length of the body and stylet (670 μm instead of 640 μm and 14 μm instead of 11 μm), and by the shape of the tail and of the esophageal bulb. Host: roots of garden strawberry. Place of observation: Moscow region. The preparation has been sent for keeping to the Zoological Institute of the USSR Academy of Sciences (Leningrad).



Aphelenchoides rosei sp. n. (1 - 4) and
Seinura chertkovi sp. n. (5 - 7)

1 - male; 2 - anterior end of body; 3 - part of the gonad; 4 - tail; 5 - anterior end of body; 6 - posterior end of female body; 7 - male tail.

A new species of Seinura was observed by us in the roots of tomatoes. Tomato plants infected with bacterial canker were received in the laboratory from Tyumen in January 1965.

SEINURA CHERTKOVI SP. N. (see Figures 5 - 7).

We carried out the determination of 2 ♀♀ and 6 ♂♂ with generic characteristics of Seinura. Measurements of 6 ♂♂: L = 489 - 550, μm; a = 32 - 36.7; b = 7.39 - 11; c = 10.67 - 15.4; T = 63 - 65.7; stylet = 20, μm.

Spicule bursaphelenchoid. Measurements of 2 ♀♀: L = 615 - 700 μ m; a = 41 - 35; b = 9 - 8.2; c = 8.2 - 10 μ m; V = 73 - 72.9%; stylet = 20 μ m. Holotype: ♂ L = 520 μ m; a = 34.7; b = 8; c = 11.6; T = 63; stylet = 20 μ m. Allotype: ♀ L = 700 μ m; a = 35; b = 8.2; c = 10 μ m; V = 72.9%. Cuticle with thin transverse annulation. Head separated from the body by a constriction. Stylet with very small elongated basal knobs, visible only on living specimens. Excretory pore on ventral side of the body, immediately behind the bulb. The nerve ring is behind the bulb by 1/3 [of the bulb] length. The length of the esophageal glands exceeds 6 times the width of the body. Males. The gonad varies greatly in length; it sometimes can reach the esophageal glands. Spermocytes arranged in one row. Tail conical, with a terminal filament at the end (visible only with immersion). There are 4 pairs of papillae on the tail: a preanal pair opposite the rostrum of the spicule, an adanal pair and two terminal pairs. Females. Anterior uterus without flexure. Oocytes arranged in one row. Posterior uterus equal in length to 3/4 the distance from vulva to anus. Tail conical and with a long terminal filament.

Differential diagnosis. The species is close to *S. tenuicaudata* (de Man, 1895) J. B. Goodey, 1960. It is distinguished by the presence of the stylet's basal knobs, by the smaller length of the stylet (20 μ m instead of 24 - 27 μ m), by the length of the posterior uterus (equal to 3/4 the distance from vulva to anus, instead of 0.5), and by the location of the excretory pore immediately behind the esophageal bulb (and not in the middle).

Type host: roots of tomatoes. Place of observation: city of Tyumen. Preparations were sent for keeping to the Zoological Institute, USSR Academy of Sciences.

We separated the listed nematodes from plants by the funnel technique and fixed them in a 6% solution of formalin. For the production of permanent micropreparations we used a solution of glycerine-gelatin. Measurements and sketches were made on the fixed material.

TWO NEW PHYTOHELMINTH SPECIES

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Summary

Aphelenchoides rosei sp. n. was found in the roots of *Fragaria grandiflora* in Moscow region. The species is close to *A. saprophilus* Franklin, 1957 and to *A. limberi* Steiner, 1936. The male found had two gonads.

Seinura chertkovi sp. n. was isolated from tomato roots (the town of Tumen). Tomato plants were injured by bacterial cancer of tomato. The species was close to *S. tenuicaudata* (de Man, 1895) J. B. Goodey, 1960.