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DESCRIPTION OF THE MALE OF *PUNGENTUS SILVESTRIS* (DE MAN, 1912) COOMANS *ET* GERAERT, 1962 (NORDIIDAE: NEMATODA) FROM BULGARIA

by

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Summary. Male specimens of *Pungentus silvestris* (de Man, 1912) Coomans *et* Geraert, 1962 are reported for the first time. They were found in three different places in Bulgaria. A short description and illustrations together with morphometric characteristics of female specimens of each population are given.

During different ecologo-faunistic studies in three regions of Bulgaria three males of *Pungentus silvestris* (de Man, 1912) Coomans *et* Geraert, 1962 were found. The male was not described in the original description (de Man, 1912), nor reported by other authors dealing with this species (Goodey, 1943; Coomans and Geraert, 1962; Achmad and Jairajpuri, 1979; Bongers, 1987; Eliava and Elashvili, 1990). There is no doubt that these specimens belong to *P. silvestris* because they were collected with abundant material of females whose morphometrics fit previous descriptions of this species.

Material and methods

Populations were collected respectively: in June 1988 at Vitosha mountain (West Bulgaria, near Sofia) at 1810 m above sea level from a grass association of *Festuca valida* (Uecht.) Penzes in mountain-meadow sod type soil (pH = 5.5); in June 1989 at Parangalitz reserve, Rila mountain (West Bulgaria), at 2000 m above sea level from grass association of *F. valida* in dark brown mountain soil (pH = 4); in July 1989 at Novo Panicharevo (East-southern Bulgaria near Bourgas), at 150 m above sea level from grass association of *Lolium perrene* L. in heavy loamy soil of leached cinnamon forest type (pH slightly acid to acid in KC1).

Extracted nematodes were gently heated and fixed in formalin (materials from the first and third population) or FAA (material from the second population). Specimens were stained in polychrome blue and mounted in glycerin (Paramonov, 1963).

Description (Fig. 1; Table I)

Male general morphology similar to that of female: body more curved at the region of preanal organs. There are 8 - 11 ventral cuticular pores in oesophagus region and 25-29 in the region between end of oesophagus and beginning of preanal organs. Three to four saccate bodies have been observed only in male specimens from the first and second populations. Testes paired; spicules typically dorylaimoid; lateral guiding pieces with bifurcated end; supplements begin at level of spicules close to adanal pair. The last pair is 127-169 μ m from cloacal opening. There are swellings between the supplements.

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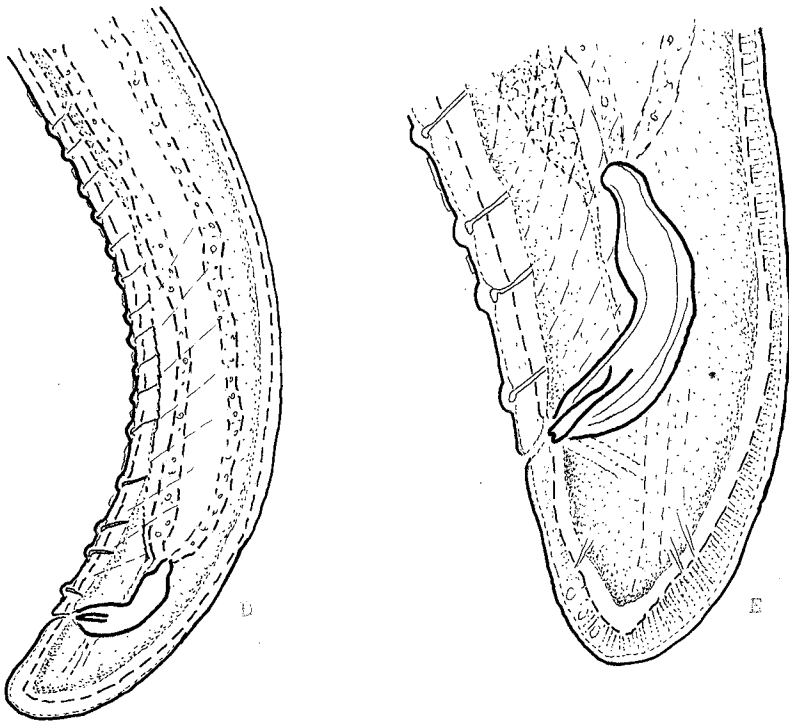
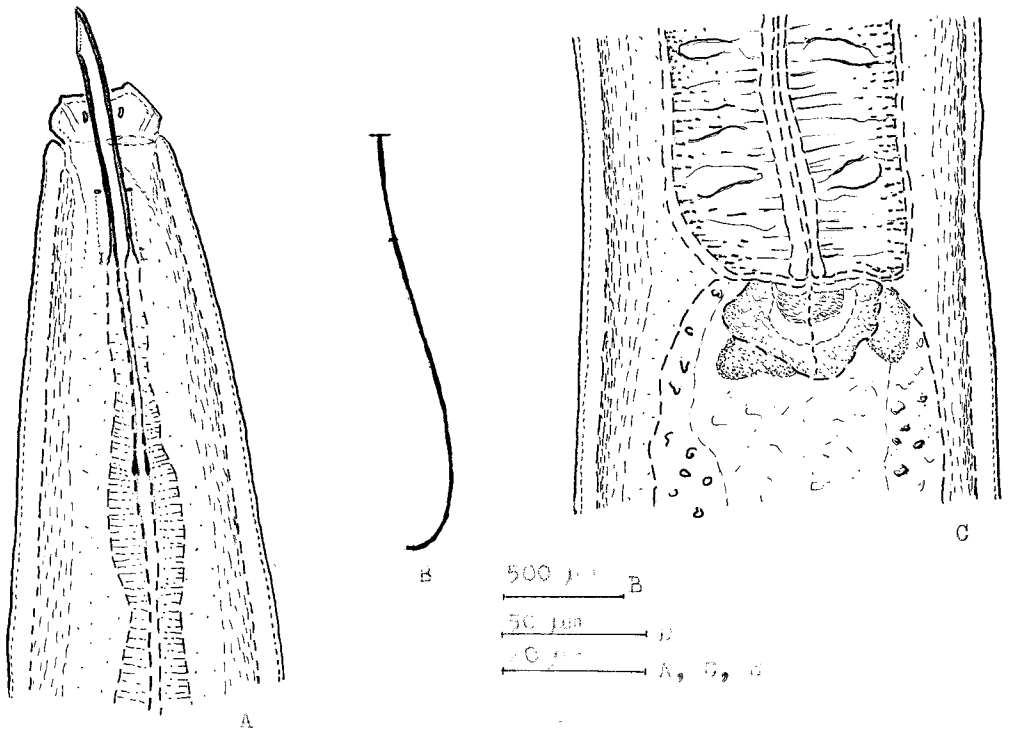


Fig. 1 - Male of *Pungentus silvestris*: A, neck region; B, habitus of body; C, region of cardia; D, posterior body region; E, tail.

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TABLE I - *Measurements of Pungentus silvestris*.

| Population n | Vitosha | | Parangalitzha | | Novo Panicharevo | |
|---|---------------------------------|-------|---------------------------------|--------------------------|----------------------------------|-------|
| | 20 ♀♀ | 1 ♂ | 20 ♀♀ | 1 ♂ | 20 ♀♀ | 1 ♂ |
| L (μm) | 1,909 \pm 95 (1,732-2,083) | 1,760 | 1,786 \pm 85 (1,623-1,946) | 2,063 | 1,777 \pm 148 (1,474-2,020) | 2,188 |
| a | 31,47 (28-37) | 38,5 | 32 (26-37) | 45 | 34.46 (31-41) | 48 |
| diameter at midbody (μm) | 61.15 \pm 6.15 (48-71) | 46 | 57.57 \pm 5.88 (48-63) | 46 | 51.9 \pm 5.99 (40-63) | 46 |
| b | 4.26 (4.0-4.7) | 4.3 | 4.1 (3.6-4.5) | 4.2 | 4 (3.7-4.3) | 4.4 |
| oesophagus length (μm) | 448.43 \pm 17.43 (410-470) | 380 | 436.85 \pm 28.26 (380-491) | 330 | 446.6 \pm 24.02 (414-489) | 439 |
| c | 59.09 (51-64) | 56 | 60.8 (54-66) | 66 | 60 (52-69.5) | 64 |
| tail length (μm) | 32.36 \pm 1.67 (31-37) | 31 | 29.64 \pm 1.38 (28-31) | 31 | 29.71 \pm 3.13 (23-37) | 34 |
| c' | 0.76 (0.7-0.9) | 0.7 | 0.74 (0.6-0.9) | 0.7 | 0.7 (0.6-0.9) | 0.75 |
| diameter at anus (μm) | 42.88 \pm 2.88 (38-48) | 46 | 40.75 \pm 4.66 (34-49) | 46 | 41.35 \pm 4.52 (34-49) | 46 |
| V (%) | 41.74 (39-43) | | 43.42 (40-48) | | 43.35 (41.6-47) | |
| T (%) | | 51.95 | | end of testes obscure | | 57.31 |
| odontostyle (μm) | 35.96 \pm 0.71 (34-38) | 33 | 33.53 \pm 0.85 (31-34) | 33 | 32.11 \pm 0.87 (30-33) | 34 |
| odontophore (μm) | 31.24 \pm 1.19 (30-34) | 33 | 34.09 \pm 1.18 (31-35.5) | 33 | 32.72 \pm 1.11 (30-35.5) | 31 |
| odontostyle aperture (μm) | 5.05 \pm 0.51 (4.4-5.6) | 5.6 | 5.03 \pm 0.47 (4.4-5.6) | 5.6 | 4.8 \pm 0.42 (4.4-5.6) | 5.6 |
| aperture (%) odontostyle | 13.98 (12.5-16) | 16.67 | 15.0 (13-16.7) | 16.67 | 14.96 (13.8-17) | 16.39 |

TABLE I - Continued from page 213.

| Population n | Vitosha | | Parangalitzta | | Novo Panicharevo | |
|-----------------------------------|---------------------------|------|---------------------------|------|---------------------------|---------|
| | 20 ♀♀ | 1 ♂ | 20 ♀♀ | 1 ♂ | 20 ♀♀ | 1 ♂ |
| diameter of lips (µm) | 15.72±0.52 (14-16.7) | 14 | 14.82±0.59 (13.9-15.6) | 14 | 14.52±1.2 (13-18) | 15 |
| amphid width (µm) | 7.8±0.76 (7-8.8) | 9 | 8.5±0.58 (7-8.9) | 7 | 7.93±0.74 (7-9) | obscure |
| OES-EXP* (µm) | 218.65±9.58 (201-238) | 116 | 182.15±11.07 (160-199) | 194 | 208.75±15.83 (171-237) | 200 |
| OES-EXP (%) oesophagus | 48.54 (44-52) | 44 | 45.92 (39-52.5) | 43.6 | 46.77 (41-50) | 46 |
| OES-EXPmax** (µm) | 241.67±14.58 (226-291) | 172 | 229.05±10.73 (211-243) | 231 | 236.6±21.39 (200-277) | 230 |
| OES-EXPmax (%) oesophagus | 53.9 (50.3-62) | 47 | 52.54 (47-58) | 52 | 52.47 (48-57) | 53 |
| <i>rectum</i> anus diameter | 0.65 (0.5-0.8) | | 0.84 (0.6-1.0) | | 0.85 (0.7-1.0) | |
| <i>prerectum</i> anus diameter | 3.87 (3.06-5.5) | | 3.64 (2.3-5.4) | 5.4 | 3.3 (1.2-5.6) | 3 |
| spicule (µm) | | 49 | | 45.5 | | 50 |
| lateral guiding pieces (µm) | | 14.4 | | 12.8 | | 14.4 |
| preanal organs | | 1+12 | | 1+14 | | 1+14 |
| egg length (µm) | 112.26±7.95 (90-122) | | 114-170 | | | |
| egg width (µm) | 49.59±6.2 (39-59) | | 42-54 | | | |

* OES-EXP - distance to the beginning of oesophageal expansion.

** OES-EXPmax - distance to the maximal oesophageal expansion.