

Pungentus porosus n. sp. (Nematoda:Dorylaimoidea) from Canada with a Key to the Species of *Pungentus*

B. A. EBSARY

Abstract: *Pungentus porosus* n. sp. is described and illustrated. The differential characters are a short odontostyle of 6–8 μm or slightly less than one head width, vulva at 44–50%, goblet-shaped amphids, presence of a prevulval uterine sac, and a hemispherical tail with a variable number of pores. *Pungentus sublatum*, *P. vesiculosus*, *P. orthocephalus*, *P. granosus*, and *P. parvus* sensu Eroshenko are considered to be *incertae sedis*. A key is provided to the 21 valid species of *Pungentus*. The following species are new Canadian records: *P. angulosus*, *P. clavatus*, *P. engradinensis*, *P. marietani*, *P. microdentatus*, *P. monohystera*, *P. obscurus*, *P. parvus*, *P. pungens* and *P. silvestris*. *Key words:* *Pungentus*, new species, taxonomy, key.

Journal of Nematology 15(3):363-366. 1983.

Although rarely found, over half of the known species of the genus *Pungentus* Thorne and Swanger, 1936 occur in Canadian soils. Examination of permanent slide mounts of 11 species of *Pungentus* collected over the past 25 years and housed in the Canadian National Collection of Nematodes revealed a new species which is described and illustrated herein.

DESCRIPTION

Pungentus porosus n.sp.

Holotype (female): L = 917 μm , a = 36, b = 4.1, c = 45, c' = 1.2, V = 48.

Paratypes (11 females): L = 1,037 μm (956–1,140), a = 35 (32–40), b = 4.3 (3.8–4.6), c = 51 (45–56), c' = 1.1 (0.9–1.3), V = 47 (44–50).

Body slightly curved ventrally. Cuticle and subcuticle with fine transverse striae, annule width less than 0.5 μm . Cuticle about 1.5 μm thick at midbody, 3.5 μm thick on ventral surface of tail. Lip region set off from body by constriction. Lips prominent,

Received for publication 28 December 1982.

¹Biosystematics Research Institute, Central Experimental Farm, Ottawa, Ontario, Canada, K1A 0C6.

The author thanks Drs. R. V. Anderson and C. D. Dondale of the Biosystematics Research Institute for their constructive criticisms of the manuscript and Mrs. S. Rigby for her assistance in illustration preparation.

projecting, angular. Peristomal region with four small, strongly sclerotized plates. Amphid goblet-shaped, aperture slit-like, 3.0–3.5 μm wide, about 40% of head width. Odontostyle 7.0 μm (6–8), slightly less than one head width long, aperture about 2 μm long. Odontophore rod-like, 11 μm (9–12) long. Guiding ring double, about 1.5 head widths posterior to head end. Basal bulb of esophagus occupying 40–44% of esophagus. Esophageal nuclei indistinct. Esophago-intestinal valve hemispherical, 9–11 μm long. Vulva a transverse slit. Vagina about one-half of corresponding body width. Female monodelphic, ovary posterior, reflexed nearly to vulva. Prevalval uterine sac 0.5–1.0 times vulval body width. Prerectum 102 μm (67–150) or 3.2–5.9 times anal body width long. Rectum 27 μm (14–40) long. Tail hemispherical with up to six pores and

a pair of subdorsal and subventral caudal papillae.

Male: unknown.

Type habitat and locality: Collected by B. E. Hopper in November 1960 from Basswood (*Tilia americana* L.) soil at North Gower about 30 km south of Ottawa, Ontario.

Type deposition: Holotype female mounted on slide 269 and deposited in the Canadian National Collection of Nematodes type collection, Ottawa. Eleven paratype females mounted on slides 269 a–269 e and deposited as above.

Differential diagnosis: *Pungentus porosus* n. sp. is most similar to *P. obscurus* Thorne, 1939 and *P. microdentatus* Thorne, 1939 but differs from the former by being shorter (917–1,140 μm versus 1,400 μm), by the shorter odontostyle (6–8 μm versus 12

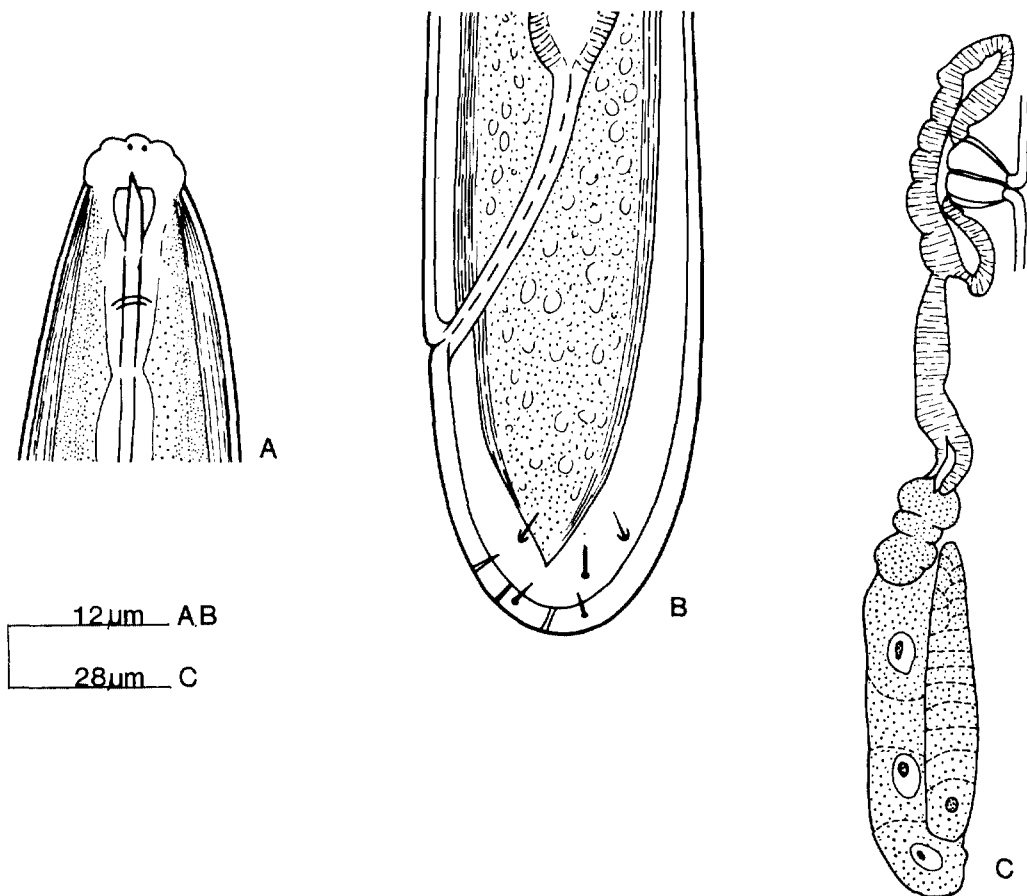


Fig. 1. *Pungentus porosus* n. sp. female. A) Head end. B) Tail end showing two caudal papillae and the caudal pores. C) Reproductive system showing the posterior, reflexed ovary, and small prevalval uterine sac.

μm), more anterior vulva ($V = 44\text{--}50$ versus 53), longer prerectum (3.2–5.9 versus 2 anal body widths) and by the hemispherical tail (conical rounded in *P. obscurus*). *Pungentus porosus* differs from *P. microdentatus* by the goblet-shaped amphid versus stirrup-shaped, odontostyle slightly less than one head width versus two-thirds head width, prevulval uterine sac 0.5–1.0 vulval body widths versus rudimentary and by the hemispherical tail versus conical rounded tail in *P. microdentatus*.

Key to the species of *Pungentus*
(*occurs in Canada)

1. L = 3.5 mm or more *textilis*
(Thorne & Swanger, 1936) Thorne, 1939
L = 2.2 mm or less 2
2. Two ovaries 3
One ovary 9
3. Odontostyle more than two head widths 4
Odontostyle less than two head widths 7
4. Lips angular, L = 2.0 mm 5
Lips rounded, L = 1.7 mm or less 6
5. a = 40–43, tail length 30 μm
..... *angulosus** Thorne, 1939
a = 31–33, tail length 40–44 μm
..... *crassus* Thorne, 1974
6. Amphids stirrup-shaped with a slight constriction near middle, aperture two-thirds head width
..... *pungens** Thorne & Swanger, 1936
Amphids goblet-shaped without constriction, aperture one-half head width
..... *marietani** Altherr, 1950
7. L = 2.2 mm
..... *brevidentatus* Thorne, 1939
L = 0.6–1.4 mm 8
8. L = 0.6–0.7 mm, odontostyle 9 μm
..... *pumilus* Andr ssy, 1963
L = 1.2–1.4 mm, odontostyle 16–17 μm
..... *gracilis* Eroshenko, 1976
9. Prevulval uterine sac greater than or equal to one vulval body width 10
Prevulval uterine sac less than one vulval body width 11
10. Prevulval uterine sac one vulval body width in length
..... *monohystera** Thorne & Swanger, 1936
Prevulval uterine sac three vulval body widths in length .. *sparsus* Thorne, 1939
11. Lips rounded 12

- Lips angular 16
12. Prevulval uterine sac absent 13
Prevulval uterine sac present 14
13. L = 0.5–0.6 mm
..... *mahunikai* Andr ssy, 1968
L = 1 mm *parvus** Thorne, 1939
14. L = 0.9 mm, tail conical, narrowly rounded
..... *microdentatus** Thorne, 1939
L = 1.5–2.0 mm, tail hemispherical 15
15. Body constricted anterior to anus
..... *clavatus** Ahmad & Jairajpuri, 1979
Body not constricted anterior to anus
..... *maorium* Clark, 1963
16. Odontostyle slightly less than one head width 17
Odontostyle more than one head width 18
17. Odontostyle 6–8 μm *porosus* n. sp.
Odontostyle 12 μm
..... *obscurus** Thorne, 1939
18. L = 1.7–2.2 mm *silvestris** (De-
Man, 1912) Coomans & Geraert, 1962
L = 0.8–1.2 mm 19
19. Post anal intestinal sac present
..... *juglensi* Mahajan, 1972
Post anal intestinal sac absent 20
20. a = 30–34 *engadinensis** (Altherr, 1950) Altherr, 1952
a = 46–52
..... *angulatus* Jairajpuri & Baqri, 1966

REMARKS

Eroshenko (2) described *Pungentus sublatum*, *P. vesiculosus*, *P. orthocephalus*, and *P. granosus* (*P. silvestris* Eroshenko, 1976 cf Ahmad and Jairajpuri [1]) as having elongate conoid, pointed tails which are atypical of the rounded *Pungentus* type. For this reason, Eroshenko's species were not included in the key to the species and are considered herein to be *incertae sedis*. Eroshenko also redescribed a *P. parvus* female with two ovaries. *P. parvus* Thorne, 1939 has only one ovary, and clearly the *P. parvus* of Eroshenko is not the same species; this species is also considered to be *incertae sedis* because of the apparent anomalous arrangement of the peristomatal plates which may possibly be a misinterpretation of the stoma lining.

LITERATURE CITED

1. Ahmad, M., and M. S. Jairajpuri. 1979. Nema-

todes of high altitudes in India. VIII. *Pungentus clavatus* n. sp. with a key to species of the genus (Nematoda: Dorylaimida). *Rev. Nematol.* 2:185-189.

2. Eroshenko, A. S. 1976. New species of nematodes of the genus *Pungentus* (Dorylaimidae) from forests of the Soviet far east. *Zool. Zh.* 55:1445-1454.