tional ones, have been reported previously (2,3,5).

Specimens of *Thecavermiculatus* were obtained also from Chile on potato (?) through the courtesy of Pedro Gallo Donoso, Universidad del Norte, Arica, and identified as *T. andinus* n.sp.

Key to the species of *Thecavermiculatus*

1. Females rounded posteriorly, vulva and anus not on a protuberance; males present ..................................................... 2
2. Female vulval/an al distance 19 μm; larval stylet 42.4 μm; male stylet 30.4 μm ..................................................... *T. gracililancea*

2. Female vulval/an al distance 59 μm; larval stylet 20.5 μm; male stylet 25.4 μm ..................................................... *T. andinus* n.sp

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**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. gramosus*, 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. engadinensis*, *P. marietani*, *P. microdentatus*, *P. monohystera*, *P. obscurus*, *P. parvus*, *P. pungens* and *P. silvestris*. Key words: *Pungentus*, new species, taxonomy, key.

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**LITERATURE CITED**


**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,
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. Prevulval 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 μm),...
μm). more anterior vulva (V = 44–50 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 ........ maritani* Altherr, 1950
7. L = 2.2 mm ........................................ pumilus Andrassy, 1963
   L = 0.6–1.4 mm ...................................... 8
8. L = 0.6–0.7 mm, odontostyle 9 μm .... pumilus Andrassy, 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, 1989
11. Lips rounded .................. 12
12. Prevulval uterine sac absent ............... 13
   Prevulval uterine sac present ......................... 14
13. L = 0.5–0.6 mm ............................... mahunkai Andrássy, 1968
    L = 1 mm ........ parus* Thorne, 1939
14. L = 0.9 mm, tail conical, narrowly rounded ................ microdentatus* Thorne, 1989
    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 ........................................ moarium 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 ............................................
18. L = 1.7–2.2 mm ........ silvestris* (DeMan, 1912) Coomans & Geraert, 1962
    L = 0.8–1.2 mm ........................................ 19
19. Post anal intestinal sac present ..................... rugulensi Mahajan, 1972
    Post anal intestinal sac absent ...................... 20
    a = 46–52 .........................................................
   angulatus Jairajpuri & Baqri, 1966

REMARKS

Eroshenko (2) described Pungentus sublatum, P. vesiculosus, P. orthocephalus, and P. granosus (P. silvestris Eroshenko, 1976 of 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.

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1. Ahmad, M., and M. S. Jairajpuri. 1979. Nema-
Morphological Characteristics of Hoplolaimus indicus Sher, 1963 in Canada, a Parasite of Wild Rice

R. V. Anderson

Abstract: Hoplolaimus indicus Sher, 1963 was found for the first time in North America as a parasite of wild rice. Supplemental descriptive data, supported by illustrations, are given which extend the known range of variability in this species. The body, stylet, and tail lengths were often greater than those in published reports from India, the esophageal gland overlap was consistently shorter than body width in most specimens, and the excretory pore and vulva were more posterior. Longitudinal striae of the basal head annule ranged from 6 to 20, number of tail annules from 8 to 22, and the excretory pore extended at most 27 μm anterior or 22 μm posterior of the esophagointestinal valve. A taxonomic key is provided to facilitate the separation of the 13 species of Hoplolaimus having five or six esophageal gland nuclei. Key words: taxonomy, morphology.

In late November 1980 a bisexual species of Hoplolaimus Daday, 1905 was extracted with Hirschmanniella pisquidensis Ebsary and Pharoah, 1982 from the roots of wild rice, Zizania aquatica var. angustifolia. The plants were growing in a meter of fresh, neutral or slightly alkaline water in Pisquid Pond, Prince Edward Island. Study of 27 females and 5 males convinced me that the species is conspecific with H. indicus Sher, 1963, which was previously known to occur only in India and Thailand. In India this species is a serious pest of a wide variety of fruit, vegetable, fiber, and cereal crops, including upland and lowland rice. The presence of H. indicus in Canada on wild rice establishes a new host and distribution record, and identifies a potential threat to wild rice. This paper amends the descriptive characters for H. indicus and extends the known range of variability.

Description of Canadian specimens of Hoplolaimus indicus Sher, 1963

Female (n = 27): L = 1,337 μm (1,090-1,629); a = 31 (25-37); b = 9.2 (8.1-10.6); c = 55 (33-81); c' = 0.8 (0.6-1.2); V = 55 (32-57); anterior ovary = 21% (13-31), posterior ovary = 21% (13-25). Anterior phasmid = 35% (33-45); posterior phasmid = 79% (76-88). Stylet length = 40 μm (33-47); M = 49 (46-55); O = 15 (13-18).

Body curved ventrally to varying degrees; width 44 μm (35-59). Transverse body annules 2 μm (1.4-2.4) wide, interrupted and open at lateral field, or delineated by irregular patterns of longitudinal of varying lengths (Fig. 1 G). Head set-off from body, hemispherical, with three or four transverse annules divided irregularly by longitudinal or oblique striae. Basal head annule of seven specimens having 6, 7, 10, 13, 14, 15, and 20 segments of variable size (Fig. 1 C). Head width 15 μm (13-18), height 7 μm (6-9).

Excretory pore 142 μm (111-174) posterior to head end, located 3-27 μm anterior to esophagointestinal valve in 17 specimens, at level of valve in 2 specimens, 5-22 μm posterior in 9 specimens. Hemizonid 1-8 body annules posterior to excretory pore. Esophagus 171 μm (132-214) long, 146 μm (117-179) to esophagointestinal valve. Isthmus 37 μm (27-43) long; basal esophageal glands 50 μm (31-64) long, extending 28 μm (8-49) posterior to esophagointestinal valve, with 59% (36-85) of the glands anterior to valve and 54% (26-80) posterior.