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Two new species of *Anatonchus* COBB, 1916 (Nematoda: Mononchida)

[With 19 Text-figures]

Abstract. Two new species of *Anatonchus* (COBB, 1916) DE CONICK, 1939 are described. *Anatonchus istvani* sp. n. collected in Poland differs from *A. hortensis* ANDRÁSSY, 1973 by the longer and wider body, larger buccal cavity, position of teeth apices, longer spicules, and from *A. amiciae* COOMANS et LIMA, 1965 by the well developed posterior gonad and larger buccal cavity. *Anatonchus australicus* sp. n. collected in Australia differs from *A. ginglymodontus* MULVEY, 1961 by the smaller buccal cavity, the tail shape, and from *A. killicki* CLARK, 1963 by the lack of papillae and pores in the vulval region, the tail shape and lack of the spinneret.

Anatonchus istvani sp. n.

(Figs. 1-10)

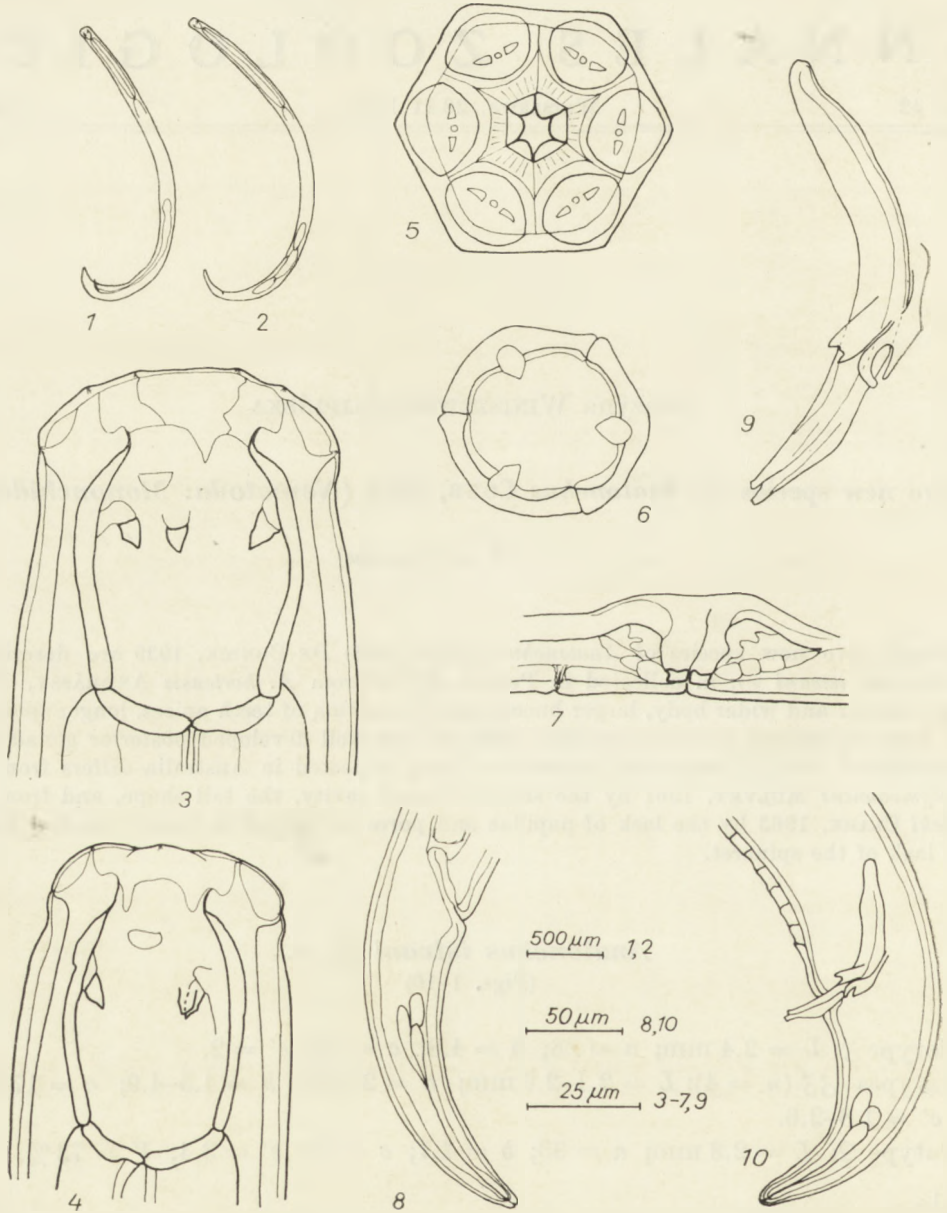
Holotype ♂: $L = 2.4$ mm; $a = 28$; $b = 4.8$; $c = 17$; $c' = 2$.

Paratypes ♂♂ ($n = 4$): $L = 2.1-2.6$ mm; $a = 27-33$; $b = 4.5-4.9$; $c = 17-19$;
 $c' = 1.8-2.6$.

Paratype ♀: $L = 2.8$ mm; $a = 33$; $b = 4.7$; $c = 15$; $c' = 3.4$; $V = 72\%$.

Male.

Body ventrally arcuate upon fixation. Cuticle smooth. Lateral chords $\frac{1}{4}-\frac{1}{3}$ of body-width near middle. Lip region rounded, set off, 52-56 μm wide, 19-20 μm high. Amphids small, cup-like, their apertures 8 μm wide and 18-19 μm from anterior extremity. Buccal cavity 51-61 μm long and 37-44 μm wide. Three medium-sized teeth, their apices at 41-47% from anterior margin of buccal cavity. Dorsal tooth 9 μm long and 5 μm wide at its base. Nerve ring encircles



Figs. 1-10. *Anatonchus istvani* sp. n. 1 — male; 2 — female; 3 — head end, female; 4 — head end, male; 5 — en face view; 6 — cross sections of body at teeth level; 7 — vagina; 8 — posterior body region, female; 9 — spicules; 10 — posterior body region, male.

oesophagus at about 20–22% of its length. Location of oesophageal gland orifices: DO = 43–45; S₁O = 63–64; S₂O = 94–95. Oesophago-intestinal junction tuberculate. Rectum 40–50 μm long. Testes paired. Spicules 88–108 μm long. Lateral accessory pieces 17–18 μm long. Supplements 16–18 in number. Tail 120–148 μm long. Caudal glands and terminal opening present.

Female.

Very similar to male. Buccal cavity 67 \times 49 μm . Apices of teeth about 38% from anterior margin of buccal cavity. Vulva transverse with small cuticularized pieces. Pre-vulval papillae absent, post-vulval two. Vagina about $1/5$ – $1/4$ as long as corresponding body-width. Both branches of female genital organs well developed; ovaries reflexed. Oviduct-uterus junction guarded by a strong sphincter. Tail 184 μm long.

Type locality, material and habitats.

Holotype δ and two paratypes (δ , f), Poland, province Bielsko-Biala, Łodygowice, 14 IX 1982, heavy moist soil around roots of beetroot; paratype δ , Wilkowice, province Bielsko-Biala, 14 IX 1982, heavy soil from a cultivated field; paratype δ , Chelmiec near Nowy Sącz, 24 VIII 1983, same habitat as above. All the specimens collected by M. W. BRZESKI. Type specimens: Holotype (δ), paratypes (4 δ , 1 f) on slides in the Institute of Zoology, Polish Academy of Sciences, Warsaw.

Diagnosis.

Anatonchus istvani sp. n. comes close to *A. hortensis* ANDRÁSSY, 1973 and *A. amiciae* COOMANS et LIMA, 1965. From *A. hortensis* it differs by having the longer and wider body, larger buccal cavity, longer spicules, much wider lip region and different position of teeth apices (in *A. hortensis*: L = 1.6–1.8 mm; buccal cavity = 46–49 \times 22–26 μm ; spicules length = 70–76 μm ; lip region width = 34–36 μm ; position of teeth apices = 51–56%). From *A. amiciae* it differs in having both genital branches well developed, and larger buccal cavity. In *A. amiciae* the posterior genital branch is reduced and buccal cavity smaller (28–35 \times 19–23 μm).

This new species is named after Prof. Istvan ANDRÁSSY.

Anatonchus australicus sp. n.

(Figs. 11–19)

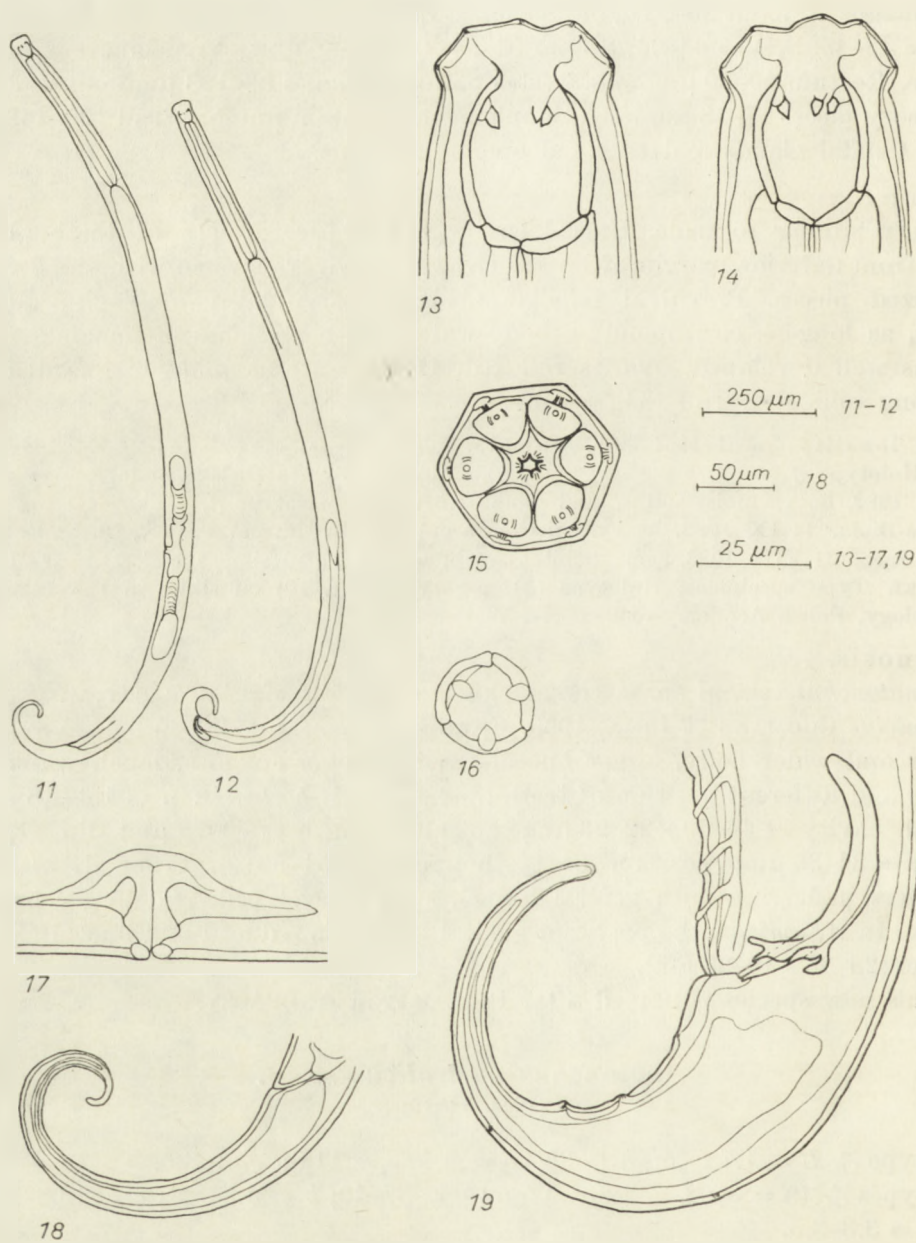
Holotype δ : L = 1.7 mm; a = 36; b = 5.4; c = 11.8; c' = 3.6.

Paratypes δ ($n = 3$): L = 1.8–1.9 mm; a = 37–40; b = 4.5–5.4; c = 12.8–13.4; c' = 3.3–3.5.

Paratype f : L = 2.0 mm; a = 35; b = 5.7; c = 7.4; c' = 7.2; V = 61%.

Male.

Body assumes J-shape when relaxed. Cuticle smooth, only tail region with transverse striae. Lateral chords $1/5$ of body-width near middle. Lip region



Figs. 11-19. *Anatonchus australicus* sp. n. 11 - female; 12 - male; 13 - head end, female; 14 - head end, male; 15 - en face view; 16 - cross sections of body at teeth level; 17 - vagina; 18 - posterior body region, female; 19 - posterior body region, male.

well developed, markedly set off, 38–40 μm wide, 15–16 μm high. Amphids not seen. Buccal cavity 34–36 μm long and 24–26 μm wide. Apices of teeth about 30–32% from anterior margin of buccal cavity. Dorsal tooth 6 μm long and 4 μm wide at its base. Nerve ring encircles oesophagus at about 26% of its length. Location of oesophageal gland orifices: DO = 47–51; S₁O = 66–67; S₂O = 93–94. Oesophago-intestinal junction tuberculate. Rectum 30–32 μm long. Testes paired. Spicules 64–68 μm long. Lateral accessory pieces 15–16 μm long. Supplements 9–12 in number. Tail 136–148 μm long. Terminal opening absent.

Female.

Similar to male. Buccal cavity 40 \times 30 μm . Vulva transverse with small cuticularized pieces. Advulval papillae absent. Vagina about $\frac{1}{3}$ as long as corresponding body-width. Female genital organ paired, ovaries reflexed. Tail 272 μm long.

Type locality and habitat:

Western Australia, Walpole, south of Perth; collected in organic soil near parking lot on the bank of Franklin River, 13 X 1978; collected by M. W. BRZESKI. Type specimens: Holotype (δ) donated to the Queensland Department of Primary Industries, Brisbane, Australia. Paratypes (3 δ , 1 f) on slides in the Institute of Zoology, Polish Academy of Sciences, Warsaw.

Diagnosis.

Anatonchus australicus sp. n. is close to *A. ginglymodontus* MULVEY, 1961 and *A. killicki* CLARK, 1963. From *A. ginglymodontus* it differs in having smaller buccal cavity (42–48 \times 40–42 μm in *ginglymodontus*) and in the tail shape. From *A. killicki* it differs by the lack of the papillae and pores in the vulval region, the tail shape and lack of the spinneret.

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STRESZCZENIE

[Tytuł: Dwa nowe gatunki *Anatonchus* COBB, 1916 (*Nematoda: Mononchida*)]

W pracy opisano dwa nowe dla nauki gatunki z rodzaju *Anatonchus* (COBB, 1916) DE CONICK, 1939. *Anatonchus istvani* sp. n. odkryty w Polsce różni się od *A. hortensis* ANDRÁSSY, 1973 dłuższym i stosunkowo szerszym ciałem, większą torebką gębową, pozycją wierzchołków zębów i dłuższymi spikulami. Gatunek ten odróżnia się od *A. amiciae* COOMANS et LIMA, 1965 dobrze rozwiniętymi obiema gałęziami rozrodczymi u samicy i większą torebką gębową. *Anatonchus australicus* sp. n. opisany z Australii różni się od *A. ginglymodontus* MULVEY, 1961 mniejszą torebką gębową i kształtem ogona, od *A. killicki* CLARK, 1963 zaś różni się brakiem papilli i porów w regionie wulwy, innym kształtem ogona i brakiem spinneretu.

РЕЗЮМЕ

[Заглавие: Два новых вида *Anatonchus* COBB, 1916 (*Nematoda: Mononchida*)]

Описали два новых для науки вида из рода *Anatonchus* (COBB, 1916) DE CONICK, 1939. *Anatonchus istvani* sp. n. обнаруженный в Польше отличается от *A. hortensis* ANDRÁSSY, 1973 более длинным и относительно более широким телом, большей стомой, положением верхушек зубов и более длинными спикулами. От *A. amiciae* COOMANS et LIMA, 1965 этот вид отличается хорошо развитыми обеими ветвями половой системы у самки и большей стомой. *Anatonchus australicus* sp. n. описанный из Австралии отличается от *A. ginglymodontus* MULVEY, 1961 меньшей стомой и формой хвоста, а от *A. killicki* CLARK, 1963 отсутствием папиллы и пор в районе вульвы, иной формой хвоста и отсутствием поры выводного протока.