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## NEW AND KNOWN SPECIES OF THE GENUS *OGMA* SOUTHERN, 1914 (CRICONEMATOIDEA: TYLENCHIDA) FROM INDIA

by

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**Summary.** A new and two known species of the genus *Ogma* Southern, 1914 are described and illustrated. *Ogma parvum* sp.n. has 0.26 — 0.29 mm long body, R = 78 — 83; RV = 12 — 13; Ran = 8; Spear = 39 — 45  $\mu$ m and is related to *O. rhombosquamatum* (Mehta et Raski, 1971) Andrassy, 1979 and *O. octangulare* (Cobb, 1914) Sch. Stekhoven et Teunissen, 1938. Additional data are provided on *O. tenuicaudatum* (Siddiqi, 1961) Siddiqi, 1986 and *O. octangulare*.

During a faunistic survey of plant parasitic nematodes from India, several populations of genus *Ogma* Southern, 1914 were collected. They were found to represent two known and a new species. The known species are *O. tenuicaudatum* (Siddiqi, 1961) Siddiqi, 1986 and *O. octangulare* (Cobb, 1914) Sch. Stekhoven et Teunissen, 1938. The new species is here described and named *O. parvum* sp.n.

The nematodes were killed and fixed in hot 4% formalin and processed to glycerine by the slow method. Measurements were taken and observations made on specimens mounted in anhydrous glycerine.

***OGMA TENUICAUDATUM*** (Siddiqi, 1961) Siddiqi, 1986

### *Morphometrics:*

#### I) *Apricot, Ranikhet, Uttar Pradesh population*

Females (11): L = 0.35 — 0.46 mm (0.41 mm); a = 7 — 8 (7); b = 2.6 — 3.2 (3); c = 8 — 14 (11); V = 84 — 91 (87); VL/VB = 1.1 — 2.0 (1.5); R = 59 — 63 (60); RV = 10 — 11 (10); Ran = 5 — 7 (6); RVan = 3 — 4 (3); Rst = 16 — 19 (18); Roes = 19 — 21 (20); Rex = 20 (n = 1); spear = 99 — 112  $\mu$ m (106  $\mu$ m); conus = 81 — 94  $\mu$ m.

#### II) *Wild tree, Chamoli; Uttar Pradesh population*

Females (6): L = 0.34 — 0.45 mm (0.39 mm); a = 6-8 (7); b = 2.5 — 3.3 (2.8); c = 8 (n = 1); V = 76 — 86 (83); VL/VB = 1.4 — 1.9 (1.6); R = 51 — 59 (55); RV = 9 — 10 (9); Ran = 5 (n = 1); RVan = 4 (n = 1); Rst = 18 — 20 (19); Roes = 22 — 23 (22); Rex = ?; Spear = 105 — 112  $\mu$ m (107  $\mu$ m); conus = 82 — 83  $\mu$ m.

***OGMA OCTANGULARE*** (Cobb, 1914) Sch. Stekhoven et Teunissen, 1938

### *Morphometrics:*

#### I) *Plum, Mussoorie, Uttar Pradesh population*

Females (4): L = 0.31 — 0.42 mm (0.38 mm); a = 8 — 10 (9); b = 3.2 — 4.2 (4.0); c = 8 — 17 (13); V = 84 — 86 (85); VL/VB = 1.4 — 1.9 (1.8); R = 60 — 69 (66); RV = 10 — 12 (12); Ran = 8; RVan = 2 — 4 (3); Rst = 11 — 13 (12); Roes = 15 — 17 (16); Rex = ?; spear = 61 — 62  $\mu$ m (62  $\mu$ m); conus = 45 — 48  $\mu$ m.

#### II) *Indian redwood, Dehradun, Uttar Pradesh population*

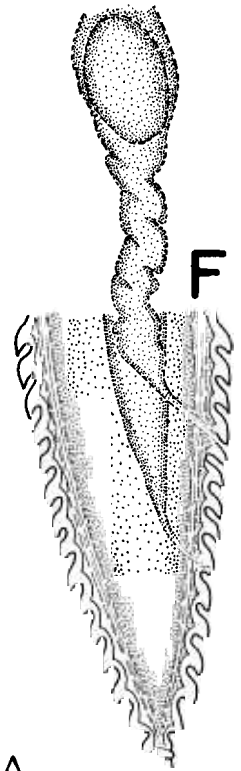
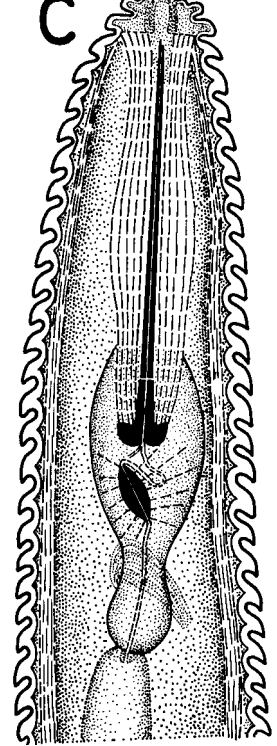
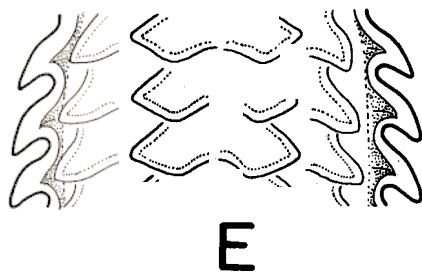
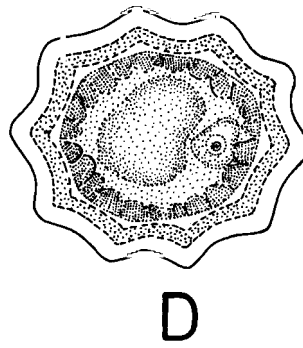
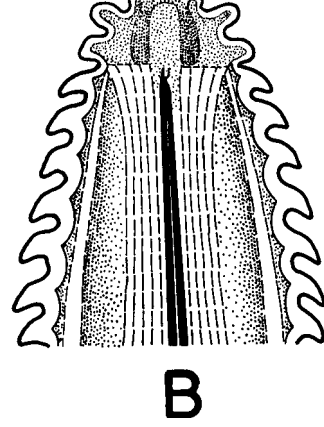
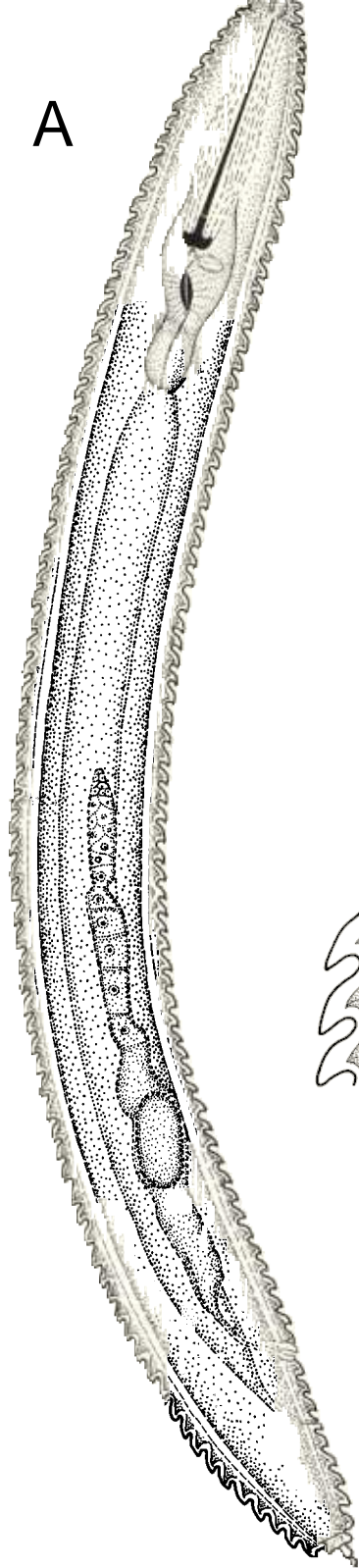
Females (2): L = 0.34 — 0.37 mm; a = 8; b = 3.4 — 3.9; c = 8 — 9; V = 84 — 85; VL/VB = 1.5 — 1.6; R = 67; RV = 12 — 13; Ran = 9 — 10; RVan = 3; Rst = 13 — 15; Roes = 15 — 16; Rex = ?; spear = 61 — 64  $\mu$ m; conus = 47 — 49  $\mu$ m.

#### III) *Apricot, Almora, Uttar Pradesh population*

Females (5): L = 0.37 — 0.44 mm (0.41 mm); a = 10 — 12 (12); b = 3.8 — 4.6 (3.9); c = 12 (n = 1); V = 84 — 88 (86); VL/VB = 1.8 — 2.1 (2.0); R = 70 — 71 (70); RV = 12 — 13 (12); Ran = 9 (n = 1); RVan = 3 (n = 1); Rst = 12 — 14 (14); Roes = 15 — 16 (15); Rex = 21 (n = 1); spear = 61 — 63  $\mu$ m (62  $\mu$ m); conus = 46 — 49  $\mu$ m.

#### IV) *Pinus, Srinagar, Jammu and Kashmir population*

Females (10): L = 0.35 — 0.45 mm (0.38 mm); a = 8 — 11 (8); b = 3.9 — 4.8 (4.2); c = 7 — 11 (10); V = 81 — 89 (86); VL/VB = 1.6 — 2.4 (2.0); R = 59 — 65 (62);



10  $\mu\text{m}$  | B, E

25  $\mu\text{m}$  | C, D, F

50  $\mu\text{m}$  | A

RV = 11 — 13 (12); Ran = 7 — 10 (9); RVan = 3 — 5 (4); Rst = 9 — 12 (11); Roes = 16; Rex = 21; spear = 60 — 62  $\mu$ m (61  $\mu$ m); conus = 45 — 48  $\mu$ m.

V) *Pear, Nepal population*

Female: L = 0.38 mm; a = 8; b = 4.2; c = 10; V = 86; VL/VB = 1.6; R = 71; RV = 12; Ran = 9; RVan = 3; Rst = 14; Roes = 19; Rex = ?; spear = 63  $\mu$ m; conus = 48  $\mu$ m.

*Remarks:* *Ogma octangulare* is one of the commonest species occurring at high altitudes in India. All the samples which yielded this species came from an altitude over 2000 m. The present specimens are similar in all respects to those described by Siddiqi (1961) and Andr assy (1979) except that they have fewer annules on the body.

*OGMA PARVUM* sp. n.  
(Fig. 1)

*Morphometrics:* Paratype females (4) : L = 0.25 — 0.29 (0.27 mm); a = 9 — 11 (10); b = 3.5 — 4.2 (3.8); c = 12 — 12.5 (12); V = 86 — 88 (87); VL/VB = 1.5; R = 78 — 83 (79); spear = 39 — 46  $\mu$ m (44  $\mu$ m).

Holotype female: L = 0.27 mm; a = 9; b = 3.7; c = 20; V = 88; VL/VB = 1.5; R = 83; spear = 45  $\mu$ m.

*Description:* Body slightly curved upon fixation, cylindrical, tapering towards extremities. Body annuli 3 — 4  $\mu$ m apart at midbody, 19 — 24 annuli in oesophageal region, 43 — 47 annuli from oesophago-intestinal junction to vulva, 4 annuli from vulva to anus and 8 annuli from anus to tail tip. Annuli retrorse, bearing 10 longitudinal rows of scales. Scales wider than long (Fig. 1 D) with smooth posterior margins. Lip region 4 — 5  $\mu$ m high, set off, with two unequal annuli, first annulus with anteriorly directed margins, 9 — 11  $\mu$ m wide, second lip annulus 11 — 13  $\mu$ m wide. The first body annulus 15 — 16  $\mu$ m wide, retrorse. Conus 33 — 39  $\mu$ m or 84 — 85% of spear length. Basal knobs of spear 7 — 8  $\mu$ m across, located at 14-16th

annulus from anterior extremity. Corpus 10 — 14  $\mu$ m wide and basal bulb 8 — 9  $\mu$ m wide at their widest point. Nerve ring 58 — 64  $\mu$ m, oesophago-intestinal junction 66 — 75  $\mu$ m from anterior extremity. Excretory pore and hemizonid obscure. Spermatheca present, filled with sperms. Vulva located on 12 or 13th annulus, anus on 8th annulus from posterior extremity. Vulva-anus 4 annuli apart, the distance about half of vulval body-width. Tail conoid, nearly one and half anal body width long or one and half to two vulva-anus distance long.

Male: not found.

*Type habitat and locality:* soil around roots of apple, *Malus pumila* from Chamoli, Uttar Pradesh.

*Type specimens:* collected in September 1978. Holotype on slide *Ogma parvum* n.sp./1; paratype females on slides *Ogma parvum* n.sp./2 and 3, deposited in the nematode collection of Zoology Department, Aligarh Muslim University, Aligarh, India.

*Differential diagnosis:* *Ogma parvum* sp.n. comes close to *O. rhombosquamatum* (Mehta et Raski, 1971) Andr assy, 1979 and *O. octangulare* (Cobb, 1914) Sch. Stekhoven et Teunissen, 1938. From *O. rhombosquamatum* it differs in having a smaller body, smaller spear and in the shape of tail (L = 0.33 — 0.40 mm; spear = 93 — 116  $\mu$ m and tail blunt in *O. rhombosquamatum*). From *O. octangulare* it differs in having a smaller body, but larger number of body annuli, and smaller spear (L = 0.31 — 0.44 mm; R = 58 — 62; spear = 60 — 64  $\mu$ m; in *O. octangulare*).

Literature cited

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Fig. 1 (Front page) - *Ogma parvum* sp.n: A, entire female; B, anterior end; C, oesophageal region; D, cross-section through midbody; E, surface of annules on midbody; F, posterior end.