

WILSOTYLUS BANGALOREIENSIS GEN. NOV., SP. NOV. (NEMATODA, PLECTIDAE) FROM SOIL AROUND ROOTS OF MANGO, (*MANGIFERA INDICA*) FROM BANGALORE, INDIA

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Wilsotylus bangaloreiensis gen. nov., sp. nov. (Nematoda : Plectidae) is characterised by having bulbiform cervical expansions without striations, with smooth lateral rims ; flabella extending well over labial region, without fimbriae ; amphid aperture dorsoventrally oblong.

An examination of the nematodes extracted from the soil around roots of mango, revealed the presence of *Xiphinema insigne*, *X. americanum*, *Trichodorus christei*, *Hemicriconemoides* sp., *Tylenchorhynchus* sp., *Tylenchus* sp., and some specimens of nematodes which belonged to the sub-family Wilsonematinae, but could not be placed in any of the three nominal genera when keyed after Anderson (1966). Hence, a new genus is proposed to accommodate these nematodes.

Wilsotylus, gen. nov.

Diagnosis : Wilsonematinae : Cervical expansion bulbiform, without striations, lateral rims smooth. Flabella extending well over labial region, without fimbriae. Amphid aperture dorsoventrally oblong. Stoma plectoid. Oesophagus narrow, cylindrical, extending to prohabdions, posteriorly terminating in an obovate bulb with a well-developed valvular apparatus. Female didelphic, ovaries reflexed. Tail conoid, ventrally arcuate. Spinneret with three associated glands, duct orifice at tail terminus cuticularized.

Relationships : *Wilsotylus* gen. nov. comes close to *Wilsonema* described by Cobb in 1913 and *Tylocephalus* by Crossman in 1933 (and hence the name). It differs from *Wilsonema* in having non-fimbriate flabella (fimbriate in *Wilsonema*) and dorsoventrally oblong amphid aperture (circular in *Wilsonema*). From *Tylocephalus* it can be distinguished by its bulbiform cervical expansions lacking any striations (cervical expansion gradual and annulated in *Tylocephalus*) and in having 'flabella' instead of 'cornua' (in *Tylocephalus*, hyperlabial extensions consisting of 2 dorso- and 2 ventrosubmedian convexoconcave 'cornua' and a medial dorsal and ventral cuticular extension inclined horizontally between the sub-median cornua).

Type species : *Wilsotylus bangaloreiensis*, sp. nov.

Other species : None.

Wilsotylus bangaloreiensis, gen. nov., sp. nov.

(Fig. 1, A-F)

Measurements : (13 Females). $L=0.197-0.249$ mm, $a=11-15.5$, $b=2.8-3.5$, $c=8.8-12.3$, $V=^{5.3-7.7} 51.2-56.7^{4.6-6.6}$

Holotype (Female) : $L=0.216$ mm., $a=13.0$, $b=3.1$, $c=10.7$
 $V=^{6.4} 54.7^{5.6}$

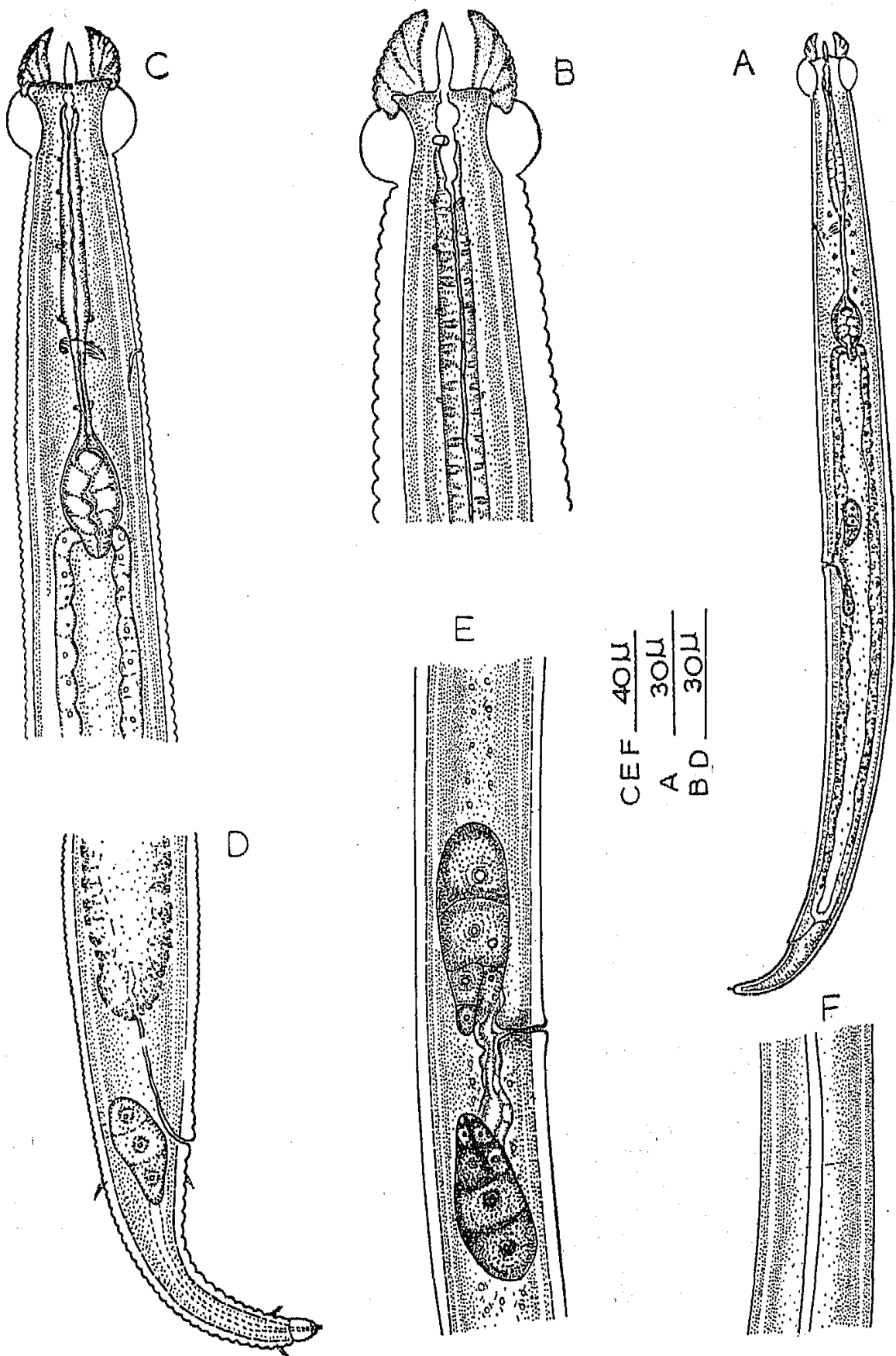


Fig. 1. *Wilsotylus bangaloreiensis* gen. nov., sp. nov. (lateral views) A. Female; B. Female, anterior end; C. Female, oesophageal region; D. Tail end; E. Female, vulval region; F. Female, lateral field.

Body small, fusiform, tapering rapidly posteriorly from the anus and anteriorly from base of cervical expansion. Body annules 1.0μ wide, neck and tail annules coarse, $1.3-1.5\mu$ wide. Lateral field marked with two incisures occupying $2/17$ ($1/6-1/10$) body width, extending from base of stoma to beginning of tail. Number and position of cervical and post-anal setae constant. First pair of cervical setae located almost in level with the beginning of cervical expansions, and 4th. in the beginning of isthmus. Distance between 1st. and 2nd. pair is about $2/3$ of the distance between 2nd. and 3rd. and $1/2$ of the distance between 3rd. and 4th. Fifth pair is located slightly anterior to the junction of isthmus and oesophageal bulb. In holotype 1st., 2nd., 3rd., 4th. and 5th. pairs are located 20 , 24 , 30 , 38 and 54μ respectively from anterior end. All are lateral in position. Caudal setae which are laterodorsal and lateroventral in position, are located slightly posterior to anus and anterior to tail terminus respectively as shown in figure (6μ behind anus and 6μ from tail terminus respectively in holotype).

Cervical expansion dorsally and ventrally bulbiform without striations, expanding rapidly anteriorly from a mid-dorsal and mid-ventral position, 15μ from anterior end; dorsally, ventrally, and submediolaterally, recurving slightly inward below level of lips. Lateral rims smooth. Cuticle of cervical expansion double, inner cuticle invaginated mid-dorsally and mid-ventrally. Dorsoventral width of cervical expansion 17μ . Flabella extending 7μ above labia, without fimbriae. Inner cuticle extending laterally from the submedian flabella axils, outer 'lamellate' contour gradually tapering inwardly to the mouth, covering lateral lips, meeting mid-laterally (right and left) creating the appearance of a cornu from a lateral view. Outer elevated margins at mid-lateral juncture bearing finger-like process.

Lips 6. Stoma plectoid, 8μ long, sclerotized prohabdions concentric, expanded. Amphid aperture located 11μ behind anterior end, dorsoventrally oblong, 1.5μ by 0.7μ . Oesophagus narrow, cylindrical, extending anteriorly to base of prostome; isthmus slightly narrower than corpus, 28.7 per cent of oesophageal length. Nerve ring encircling oesophagus at junction of corpus and isthmus. Excretory pore just behind level of nerve ring. Deirid not observed. Basal oesophageal bulb obovate, with well developed valvular apparatus in anterior portion, valvular plates adentate. Cardia conoid, continuous with contour of basal bulb, surrounded by intestinal cells. Rectum 1.4 times anal body diameter long, dorsoventrally elongate, rectal glands absent.

Female didelphic, ovaries reflexed. Tail conoid, ventrally arcuate, bearing a 'spinneret' at its tip. Caudal glands leading to a common gland duct that opens to the exterior through a cuticularized orifice located at tail terminus.

Material : Holotype, Female, mounted on slide No. 85, collected by Dr. D. J. Raski from soil around roots of mango, *Mangifera indica* from Bangalore, India. Paratypes 13 females, on slide Nos. 75-86, other data same as for holotype. Deposited with National Nematode Collection, Nematology Division, Indian Agricultural Research Institute, New Delhi-12.

Males : Not found.

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