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NYGOLAIMELLUS HEYNSI SP. N. (NEMATODA: NYGOLAIMINA) WITH A KEY TO SPECIES OF *NYGOLAIMELLUS* LOOS, 1949

by
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Soil samples collected from around the roots of mango, *Mangifera indica* L., from Bangalore, Karnataka State, yielded specimens of the genus *Nygolaimellus* which upon close examination were found to represent a new species. The genus is rare in occurrence and this is first report from India. Therefore we considered worthwhile to describe the new species which has been named in honour of Dr. J. Heyns who has done valuable work on nygolaims.

NYGOLAIMELLUS HEYNSI SP. N. (Fig. 1)

Paratypes: 3 females: L = 2.96-3.29 mm; a = 58-61; b = 4.1-4.3; c = 59-65; V = 53-55; G_1 = 7-13; G_2 = 6-9; tooth = 10-11 µm; oesophagus = 706-764 µm; prerectum = 40-50 µm; rectum = 46-49 µm; tail = 49-56 µm; ABD = 37-39 µm.

Holotype: female: L = 3.01 mm; a = 68; b = 4.1; c = 60; V = 54; G_1 = 8; G_2 = 8; tooth = 10 µm; oesophagus = 721 µm; prerectum = 49 µm; rectum = 41 µm; tail = 50 µm; ABD = 31 µm.

Description:

Female: Body slightly ventrally curved upon fixation. Cuticle finely striated, 2-3 µm thick at midbody and 6-7 µm on tail. Lateral chords about one-sixth of body-width at midbody. Lip region offset by deep constriction, wider than the adjoining body, 15-17 µm wide

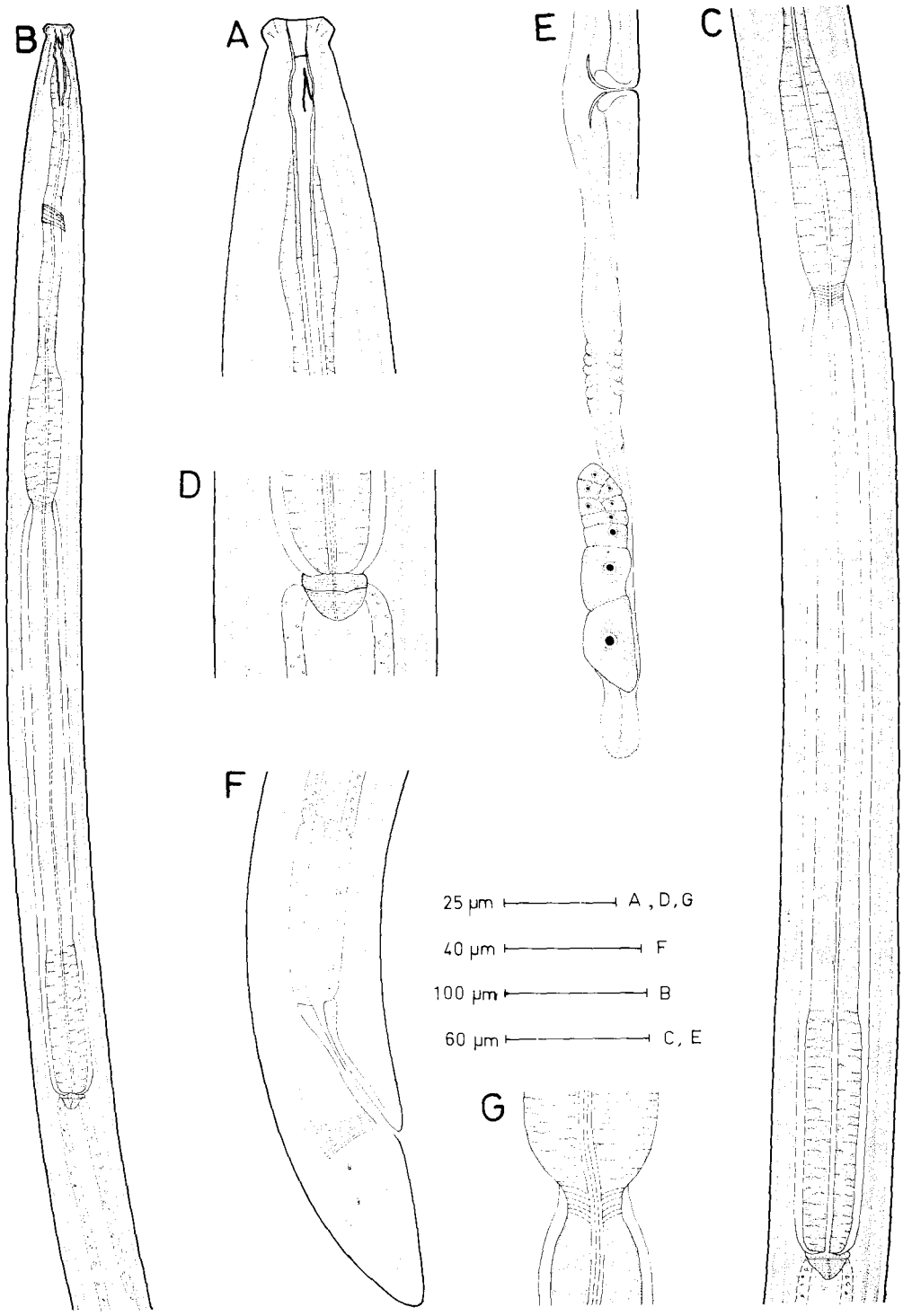

Fig. 1 - *Nygolaimellus heynsi* sp. n. A = Anterior region, B = Oesophageal region, C = Expanded part of oesophagus, D = Oesophago-intestinal junction, E = Female genital branch (posterior), F = Female posterior region, G = Oesophageal constriction.

or about one-third of body-width at base of oesophagus. Lips angular. Amphids stirrup-shaped, their apertures about half lip-width wide. Tooth deltoid, about two-thirds of lip-width long. Base of pharynx indistinct, merging gradually into the lumen of oesophagus. Nerve ring encircles the anterior slender part of oesophagus at 123-140 µm from anterior extremity. Basal expanded part of oesophagus consisting of three sections, the first and second parts are separated by a conspicuous constriction. Middle and basal sections of enlarged part surrounding by a sheath. A distinct cardiac disc present at base of oesophagus. Cardia hemispheroid. Reproductive system amphidelphic. Vulva transverse, vagina thick-walled, extending about half of corresponding body-width. Prerectum 1.2-1.6 anal body-widths long. Rectum 1.2-1.4 anal body-widths long. Tail dorsally convex-conoid, 1.3-1.6 anal body-widths long with one or two caudal pores on each side.

Male: Not found.

Type host: Mango (*Mangifera indica* L.)

Type locality: Bangalore, Karnataka State, India.

Type material: Holotype and paratypes (3 females) deposited in the Zoology Department, Aligarh Muslim University, Aligarh, India.

Diagnosis: *Nygolaimellus heynsi* sp. n. is close to *N. abnormis* Loos, 1949 and *N. hopperi* Heyns, 1968, but differs from the former in having a smaller tooth, prerectum and tail (tooth = 15-17 µm; c = 43-45; prerectum = 1.9 - 2.2 anal body-widths long in *N. abnormis*). From *N. hopperi* it differs in having a slightly shorter body, smaller tooth, a conspicuous constriction between the two parts of basal expanded part of oesophagus (L = 3.55-3.93 mm; tooth = 18-19 µm; constriction between the first and second parts of basal expanded part not conspicuous in *N. hopperi*).

KEY TO SPECIES OF *NYGOLAIMELLUS*
(Modified after Heyns, 1968)

1) Body length more than 4 mm (L = 4.6-6.7 mm) 2
   Body length less than 4 mm (L = 2.5 - 3.8 mm) 3
2) Tooth 16 µm long; oesophagus bibulbar
   macmacus Heyns, 1968
   Tooth 20-22 µm long; oesophagus not bibulbar
   rectalus Heyns, 1968

3) Oesophagus distinctly bibulbar 4
Oesophagus not distinctly bibulbar
quintus Heyns, 1968

4) Two bulbs of oesophagus separated by an abrupt, deep constriction 5
Two bulbs of oesophagus separated by a long shallow constriction *hopperi* Heyns, 1968

5) Tooth 10-11 µm long; tail shorter (c = 59-65)
heynsi sp n.
Tooth 15-17 µm long; tail longer *abnormis* Loos, 1949

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SUMMARY

A new species of *Nygolaimellus* Loos, 1949 is described and illustrated. *Nygolaimellus heynsi* sp. n. has L = 2.96-3.29 mm; a = 58-68; c = 59-65; V = 53-55; tooth = 10-11µm and is closely related to *N. abnormis* Loos, 1949 and *N. hopperi* Heyns, 1968 but differs from both in having a smaller tooth. A key to the species of the genus is also provided.

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