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NEMATODES FROM WEST BENGAL (INDIA) XIV. ON THE OCCURRENCE OF ECTOPARASITIC NEMATODES OF LONGIDOROIDEA AND TRICHODOROIDEA (DORYLAIMIDA), WITH REMARKS ON THE VALIDITY OF GENUS *SIDDIQIA* (LONGIDORIDAE)

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ABSTRACT

The male of *Paralongidorus citri* (Siddiqi, 1959) Siddiqi, Hooper and Khan, 1963 is reported for the first time. *Longidoroides droseri* (Sukul, 1971) Khan, Chawla and Saha, 1978 is being synonymised with *P. citri*. The genus *Siddiqia* Khan, Chawla and Saha, 1978 is considered a synonym of *Paralongidorus* Siddiqi, Hooper and Khan, 1963. *Paratrichodorus* (*Allantodorus*) *porosus* (Allen, 1957) Siddiqi, 1974 and *P.* (*Nanidorus*) *renifer* Siddiqi, 1974 are reported from soil around roots of tea at Darjeeling.

INTRODUCTION

Our knowledge about the occurrence of longidorid and trichodorid nematodes in West Bengal is very meagre despite their economic importance as ectoparasites of plants and most of them as vectors of viruses. Sukul (1971) described *Paralongidorus droseri* from Birbhum district. Chaturvedi and Khera (1979) have reported *Xiphinema americanum* Cobb, 1913 and *X. insigne* Loos, 1949 from Howrah and Hooghly districts respectively.

Jana and Baqri (1977) have already reported the following species from Darjeeling and Jalpaiguri districts of West Bengal: *Xiphinema radicicola* Goodey, 1936 ; *X. brasiliense* Lordello, 1951 ; *X. insigne* Loos, 1949 ; *X. reversi* Dalmasso, 1969 ; and *Paralongidorus citri* (Siddiqi, 1959) Siddiqi, Hooper and Khan, 1963. Further investigations have yielded a male of *Paralongidorus citri* for the first time which is described and illustrated herein. Besides, a soil sample collected from around roots of tea at Darjeeling contained the following two species of the genus *Paratrichodorus* Siddiqi, 1974: *P.* (*Atlantodorus*) *porosus* (Allen, 1957) Siddiqi 1974 and *P.* (*Nanidorus*) *renifer* Siddiqi, 1974. This is the first record of the genus *Paratrichodorus* from West Bengal.

The study of the topotype females of *Paralongidorus droseri* Sukul, 1971 (=now *Longidoroides droseri*) has revealed that it is a synonym of *P. citri*. The present paper also concludes that the genus *Siddiqia* is a synonym of *Paralongidorus*.

Paralongidorus citri (Siddiqi, 1959)
Siddiqi, Hooper and Khan, 1963
(Fig. 1, A-G)

Syn. *Xiphinema citri* Siddiqi, 1959, *Proc. helminth. Soc. Wash.*, **26** : 160-162.

Siddiqia citri (Siddiqi, 1959) Khan, Chawla and Saha, 1978, *Indian J. Nematol.*, **6** : 57.

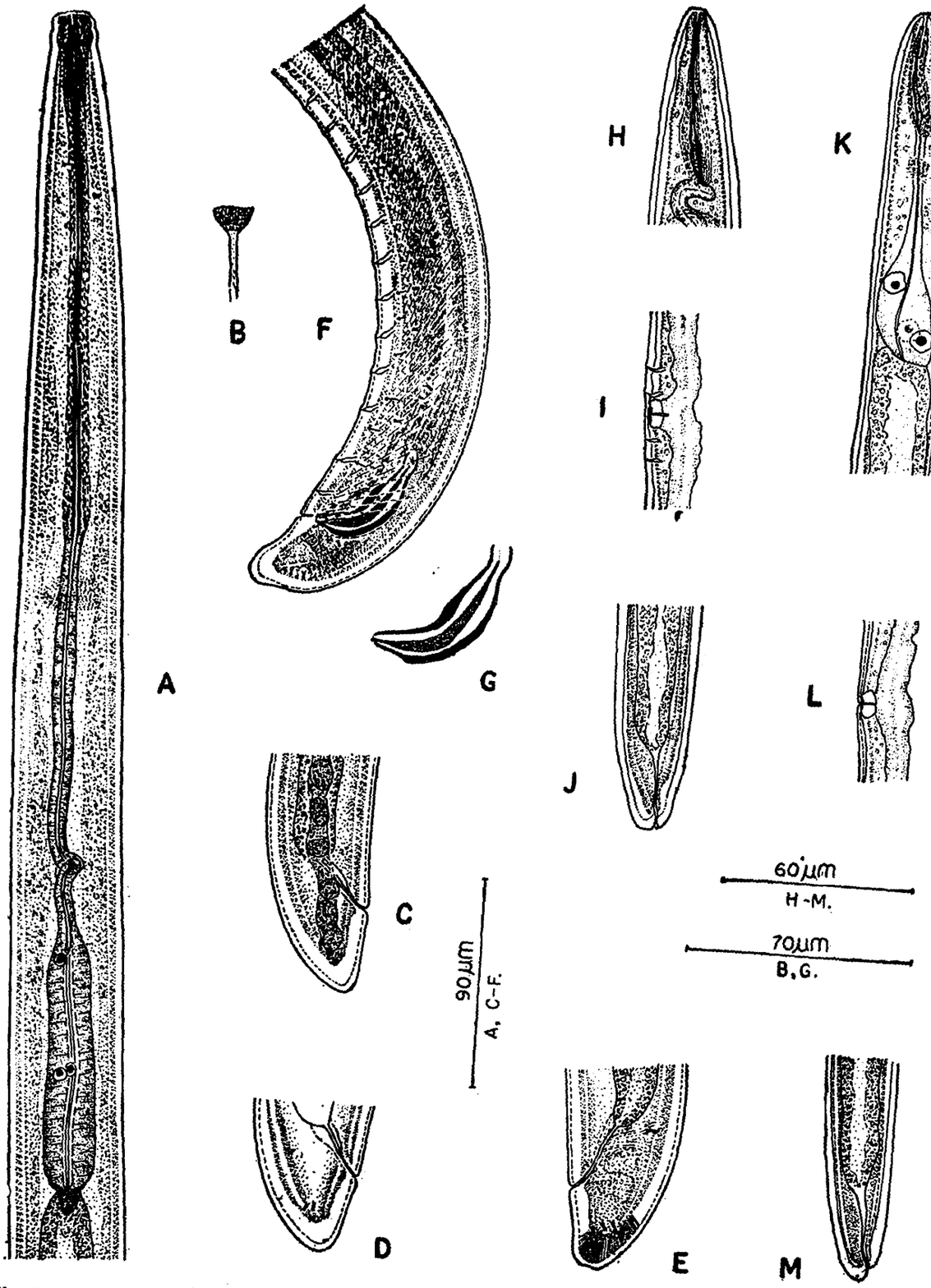

Fig. 1. A-G. *Paralongidorus citri*, A-Oesophageal region, B-Amphid, C-E, Female tails showing variation, F-Posterior region of male, G-Spicule. H-J. *Paratrichodorus* (*Atlantodorus*) *porosus*, H-Anterior end, I-Vulva region, J-Female tail. K-M. *Paratrichodorus* (*Nanidorus*) *renifer*, K-Anterior region, L-Vulva region, M-Female tail.

Paralongidorus droseri Sukul, 1971, *Bull. Ent.*, **12** : 85-88.

Longidoroides droseri (Sukul, 1971) Khan, Chawla and Saha, 1978, *Indian J. Nematol.*, **6** : 52, new synonymy.

Measurements :

Females (10) : L=6.30 – 8.66 mm ; a= 99 – 152 ; b=10.3 – 15.8 ; c=184 – 238 ; v=$^{4-5}$42 – 46$^{4-6}$; odontostyle= 126 – 141 μm ; odontophore=74 – 90 μm.

Male (1) : L=6.71 mm ; a=129 ; b= 13.2 ; c=197 ; T=42 ; odontostyle=139 μm ; odontophore=79 μm.

Description :

Female : Body ventrally arcuate upon fixation. Cuticle finely striated transversely, 3-13 μm thick (thickest on tail). Lateral chords 1/6th-1/4th of the body-width near middle. Lip region broadly rounded demarcated by a constriction. Amphids stirrup-shaped with a wide slit-like apertures, occupying 75% of the corresponding body-width ; amphidial basal lining not lobed. Odontostyle 7.6-8.2 lip region-width long. Guiding ring 1.8-2.1 lip region-width from anterior end. Odontophore 0.6-0.7 times the odontostyle length. Basal expanded part of oesophagus occupies 21-26% of the neck region. Vulva transverse ; vagina extending inward about half of the corresponding bodywidth. Female reproductive system amphidelphic. Prerectum 15-18 times the anal body-width. Tail convex—conoid with obtusely rounded or rounded terminus, 34-39 μm or 0.8-1.1 anal body-width long, with two caudal pores on each side.

Male : Similar to female in general shape and morphology except the male reproductive system and more ventrally curved posterior region. Supplements consist of an adanal pair and 11 ventromedians, spaced nearly at regular intervals, the first ventromedian supplement at about 0.8 anal body-width from cloacal opening. Six irregularly spaced subventral papillae visible up to fifth ventromedian supplement. Spicules 60 μm or 1.7 anal body-width long when measured along the curved median line. Lateral guiding pieces rod-shaped, 14 μm long. Prerectum 662 μm or about 19 anal body-width long. Tail almost similar to female, 34 μm or about one anal body-width long, with three caudal pores on each side.

Habitat and locality : Soil around roots of mango, *Mangifera indica* and Banana, *Musa* sp. at New Jalpaiguri, district Jalpaiguri.

Discussion

Sukul (1971) described a new species *Paralongidorus droseri* and distinguished it from the *P. citri* on the following differences : Shorter and differently shaped tail and longer body length. Khan *et al.*, (1978) proposed a genus *Longidoroides* under Longidoridae to accommodate the species of *Longidorus* and *Paralongidorus* having large amphids, pouch-like, slit-like apertures, with unlobed or bilobed basal lining. They also transferred *Paralongidorus droseri* under their newly proposed genus. The study of the topotype specimens of *P. droseri* obtained through the courtesy of Dr. N. C. Sukul has confirmed that he (1971) has correctly illustrated the structure of the amphids as stirrup-shaped and it is not pouch-like. The study finally reveals that these specimens belong to *Paralongidorus* and all the differentiating characters of *P. droseri* from *P. citri*, mentioned by Sukul (l. c.), are overlapping with the original description and measurements of the latter