FOLIA PARASITOLOGICA 35: 281–284, 1988.

REMARKS ON THE VALIDITY OF THE SPECIES NOTOPTEROIDES ALATAE MAJUMDAR, 1965

N. C. DE

Zoology Department, Kalyani University, Kalyani (West Bengal)

Abstract. Reexamination of the paratype specimens of *Notopteroides alatae* revealed the presence of a pair of submedian papillae and a lateral amphid on each pseudolabium, collarette behind the pseudolabia, thick cuticle all around the cervical region instead of lateral alae in that region, short and weakly sclerotized buccal capsule, area rugosa limited to the midventral zone anterior to cloaca, 4 pairs of preanal and 6 pairs of postanal papillae and a pair of lateral phasmids in male tail, markedly unequal and dissimilar spicules, short tail in female with subterminal phasmids and no larvae in the uteri. As the definition of *Heliconema longissimum* recovered from *Mastacembelus armatus* (the host of *N. alatae*) incorporates all these features, the species *N. alatae* is synonymized with *H. longissimum*.

A new species *Notopteroides alatae* was created by Majumdar (1965) to accommodate the worms recovered from the intestine of *Mastacembelus armatus* at Calcutta. Johnson and Khera (1967) synonymized the genus *Notopteroides* Chakravarty et Majumdar, 1962 with *Pseudoproleptus* Khera, 1955 and renamed *N. alatae* as *P. alatus*. Sahay et al. (1970), probably due to ignorance, independently transferred *N. alatae* to the genus *Pseudoproleptus* as *P. alatae*. However, later in their paper, in violation of the rules of nomenclature, Sahay et al. (loc. cit.) renamed this species as *Pseudoproleptus armati*. Singh (1970), whose paper, though preceding Sahay et al. (loc. cit.) in the same journal and same issue, also used the name *P. alatae* for this species. Margolis (1975) in his review on the genus *Pseudoproleptus* stated "*Pseudoproleptus alatus* is considerably larger with different oesophageal measurements and proportions than previously described species referable to this genus and seemingly represents an independent species. Although the structure of the anterior end, except for the stated absence of cephalic papillae, agrees with that of *Pseudoproleptus*, certain other characters are anomalous with respect to this genus and require verification". He particularly referred to the absence of spicules, the presence of only three pairs of preanal papillae in male, the presence of cervical alae and the condition of viviparity. Soota (1984), however, treated this species as synonym of *P. vestibulus* Khera, 1955.

The present study, based on the reexamination of the type specimens (Paratypes, 3♂♂, 3♀♀, Regd. No. W 6674/1) available at Zoological Survey of India, Calcutta reveals that:

1. Two large lateral pseudolabia are present, each carrying only an internal labial tooth, two submedian cephalic papillae and an indistinct lateral amphid (Fig. 1 A).

2. Body cuticle immediately behind pseudolabia is expanded to form a collarette and behind it the cuticle becomes thicker all around but does not form lateral inflation (= ala) at the cervical region (Fig. 1 A).

3. Mouth opens into a short, weakly sclerotized buccal capsule which in turn leads to the bipartite oesophagus, anterior short, muscular (0.42—0.50 mm long in male and 0.40—0.50 mm long in female) and posterior long, glandular (3.01—3.45 mm long in male and 3.12—3.35 mm long in female).

4. Male tail bears distinct caudal alae and area rugosa is limited to the medio-ventral zone anterior to cloacal margin (Fig. 1 B).

5. Ten pairs of caudal papillae are present in male, of which 4 pairs are preanal and 6 pairs postanal; a pair of lateral phasmids lies between the 2nd and 3rd pair of caudal papillae from the posterior end.
6. Spicules are markedly unequal and dissimilar, larger left spicule (0.40—0.54 mm long) tapering and gutter-like distally and shorter right spicule (0.21—0.30 mm long) with broad base and rounded distal tip, bearing a hyaline cap (Fig. 1 B).

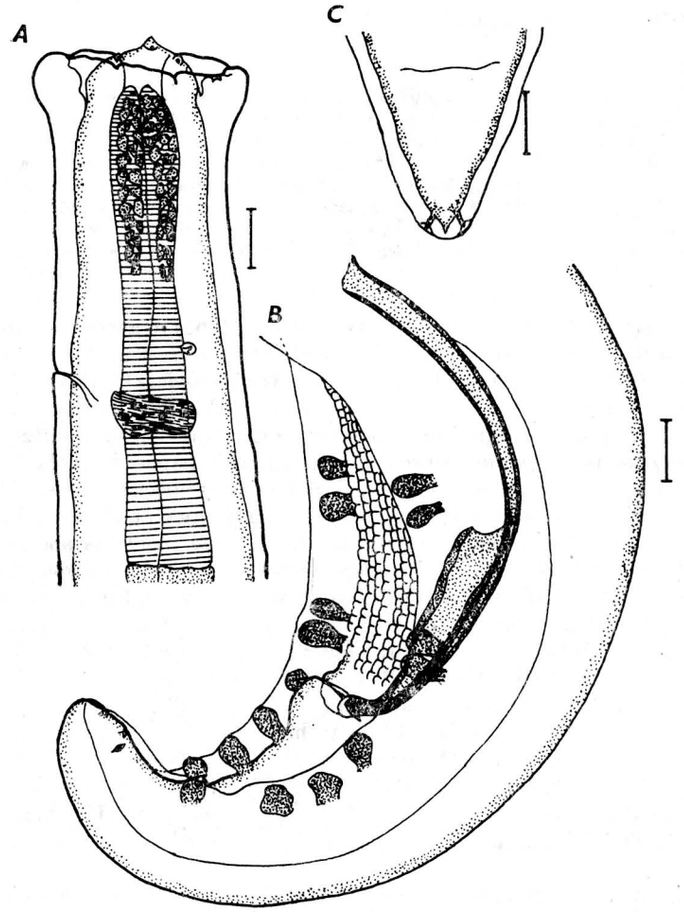

Fig. 1. *Heliconema longissimum* (drawings from the designated paratypes of *Notopteroides alatae*). Bar: 0.05 mm. A — anterior end of female, lateral view; B — posterior end of male, ventro-lateral view; C — posterior end of female, ventral view.

7. Short female tail (length 0.11—0.15 mm) with bluntly rounded tip and bears subterminal pair of phasmids (Fig. 1 C).
8. Vulva lies near the mid-body and divides the body in the ratio of 1 : 1.14—1.20.
9. No larvae are present in the uteri.

The data obtained from the present study agree with those on *Heliconema longissimum* Ortlepp, 1923 given by De et al. (1978). Their hosts are also identical. An unscrupulous study of the worms by the original author of *N. alatae* led him to describe the worm quite inadequately and erroneously which in turn caused its misallocation to the genus *Notopteroides* and unfortunate creation of a nominal species. Thus *N. alatae* hence-forth should be treated as the synonym of *H. longissimum* instead of *P. vestibulus*.

Acknowledgements. Thanks are due to the Director, Zoological Survey of India, Calcutta for the loan of type specimens of *Notopteroides alatae*.

ПРИМЕЧАНИЯ ПО ВАЛИДНОСТИ ВИДА *NOTOPTEROIDES ALATAE* MAJUMDAR, 1965

Н. Ц. Де

Резюме. При повторном обследовании паратипов *Notopteroides alatae* обнаружены следующие признаки: наличие одной пары субмедиальных сосочков и латеральная амфида на каждой псевдолабии, ожерелье за псевдолабией, толстая кутикула вокруг шейной области вместе латеральных крыл, короткая и слабо склеротизированная ротовая капсула, area rugosa ограничена только на мидвентральную зону перед клоакой, 4 пары преанальных и 6 пар постанальных сосочков и одна пара латеральных фазмид на хвосте самца, выразительно неравные и несходные спикулы и короткий хвост у самки с субтерминальными фазмидами и без личинок в матках. Так как все эти признаки отвечают виду *Heliconema longissimum* от *Mastacembelus armatus* (который является также хозяином вида *N. alatae)*, вид *N. alatae* считается синонимом вида *H. longissimum*.

REFERENCES

DE N. C., GHOSH M., MAJUMDAR G., 1978: Records of some little known nematodes from Indian fishes. Folia parasitol. 25: 317—322.

JOHNSON S., KHERA S., 1967: Observation on the taxonomy of the genera *Pseudoproleptus* Khera, 1953 and *Notopteroides* Chakravarty and Majumdar, 1962 (Spiruroidea: Nematoda). Indian J. Helminthol. 18: 148 to 150.

MAJUMDAR N., 1965: A new nematode *Notopteroides alatae* (Filarioidea: Spiruridae) from a fish in India. Bull. syst. Zool., Calcutta, 1: 35—37.

MARGOLIS L., 1975: Review of *Pseudoproleptus* Khera, 1955 (Nematoda: Spiruroidea) from freshwater fishes of Southern Asia and Africa, with notes on related species. Dr. B. S. Chauhan Comm. Vol., Zool. Soc. India, 21—31.

SAHAY U., SINHA A., SADHU T. K., 1970: A discussion on the validity of the species *Notopteroides alatae* Majumdar, 1965. Indian J. Sci. Industry (B. anim. Sci.) 4: 51—52.

SINGH M. M. P., 1970: On the occurrence of *Pseudoproleptus satendri* (family: Physalopteridae Leiper, 1908, Nematoda) Sahay, 1966 from a new host *Notopterus chitala*. Indian J. Sci. Industry (B. anim. Sci.) 4: 41—44.

SOOTA T. D., 1984: Studies on the nematode parasites of vertebrates. I. Fishes. Rec. Zool. surv. India, Misc. publ., Occasional paper no. 54: 1—352.

Received 18 May 1987

N. C. D., Zoology Department, Kalyani University, Kalyani, West Bengal, India 741 235