

## Short Communication

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## MARINE FISH NEMATODES OF PAKISTAN

Part XI. Occurrence of *Indocucullanus longispiculum diacanthi* in the Fish *Arius serratus* (Day) of Karachi Coast

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Among nematode parasites, great morphological variations exist within the species and sometimes it is difficult to point out definitely whether certain character differences in a population of nematodes represent variations or separate species. No doubt there are certain internationally approved rules for the classification of nematodes but no consideration for variations is included in such classifications. Sometimes, two widely separated species are reported as the same species considering that the host is

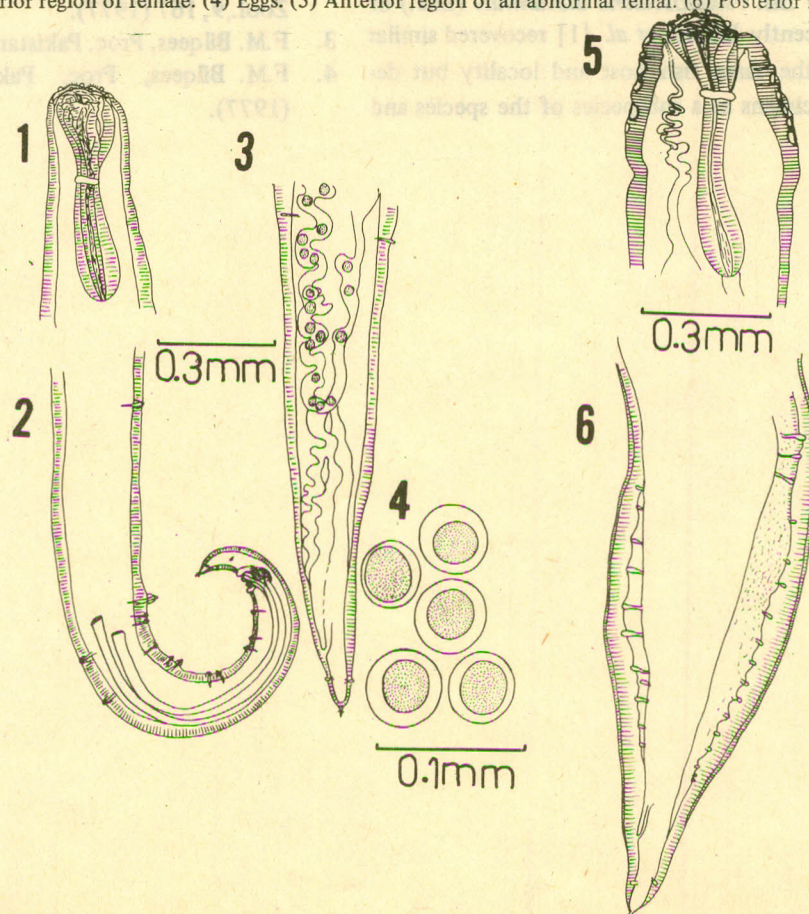
same and the genus is same. On the other hand one species by two different authors from two different localities and hosts is reported as two separate species. The author had discussed these points while reporting some trematodes of fishes [3,4].

At present the occurrence of *Indocucullanus longispiculum diacanthi* [2] is reported from the fish *Arius serratus* of Karachi coast and the validity of this subspecies is justified. This nematode was originally described from the fish *Pseudosciaena diacanthus* [2] from which closely related specimens *Indocucullanus longispiculum* [1] were reported by Khan [1]. The present findings indicate that constant occurrence of same morphological variations in a species, and occurrence of the same in different hosts can be used to justify the validity of a particular subspecies.

## MATERIALS AND METHODS

Eleven specimens of the fish *Arius serratus*, from the Karachi coast, were examined for nematode parasites during 1977. At three different occasions 3 fishes were found to harbour nematodes of the genus *Indocucullanus*. A total of 5 male, and 31 female specimens were recovered from the stomach and intestine of these hosts. The specimens were fixed in 70% alcohol and cleared in a mixture

Fig. 1-6. *Indocucullanus longispiculum diacanthi* Bilquees et al. 1977 from the fish *Arius serratus*: (1) Anterior region of male. (2) Posterior region of male. (3) Posterior region of female. (4) Eggs. (5) Anterior region of an abnormal female. (6) Posterior region of the same.



of equal quantity of 70% alcohol and glycerine. For a closer examination temporary mounts were prepared in glycerine. Diagrams were prepared with a camera lucida. Specimens are kept in the School of Parasitology, Department of Zoology, University of Karachi (Male specimen Nos. SPUK 2511 - SPUK 2518. Female specimen Nos. SPUK 2500-SPUK 2510).

## OBSERVATIONS AND DISCUSSION

### *Indocucullanus longispiculum diacanthi* Bilqees et. al. (Figs. 1-6)

#### Measurements of the Specimens

**Male.** Body size, 3.10-3.28 by 0.18-0.26 mm. Esophagus length, 0.45-0.57 mm. Pseudobuccal capsule, 0.14-0.18 by 0.14-0.15 mm. Distance of nerve ring from the anterior end, 0.19-0.26 mm. Right spicule, 0.84-1.01 mm in length and the left, 0.91-1.11 mm in length; caudal papillae, 10-14 pairs including 6-9 pairs preanal, 3-4 pairs postanal, and 1 pair adanal. Tail length, 0.10-0.13 mm.

**Female.** Body size, 2.38-3.4 by 0.3-0.6 mm. Pseudobuccal capsule, 0.15-0.18 by 0.14-0.16 mm. Esophagus length, 0.48-0.58 mm. Distance of nerve ring from the anterior end, 0.19-0.22 mm. Distance of vulva from the anterior end 1.44-1.75 mm. Ova 0.039-0.050 by 0.03-0.05 mm. Tail length, 0.13-0.15 mm.

The species *Indocucullanus longispiculum* [1] has been reported from the fish *Pseudosciaena diacanthus* (Lac.) of Karachi coast. Recently Bilqees et al. [1] recovered similar nematodes from the same fish host and locality but designated these specimens as a subspecies of the species and

named *I. longispiculum diacanthi* on the basis of considerable morphological variations between the specimens recovered by Khan [1] and Bilqees et al. [1].

It was desirable to find out if this subspecies occurs in host other than *Pseudosciaena diacanthus*. After a continuous examination of many species of fishes for several months, specimens similar to the subspecies were recovered from the fish *Arius serratus*. A closer examination revealed that these were *I. longispiculum diacanthi*. The repeated recovery of the subspecies from a different fish host suggests that it is a valid subspecies.

Some abnormalities were noticed in one female specimen which the author thinks worth reporting. This female specimen has 6 pairs of chitinous plates arranged in a single row at the anterior end of the body; 3 pairs on each side, embedded in the cuticle. Similarly at the posterior end in addition to the usual one pair of postanal papillae there were numerous preanal papillae (17 papillae at one side and 11 papillae at the other side).

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