DESCRIPTION OF A NEW ACANTHOCEPHALAN SPECIES **NEOECHINORHYNCHUS LONGIORCHIS** N.SP. (NEOECHINORHYNCHIDAE) FROM THE FISH **OTOLITHUS ARGENTEUS** (SCIAENIDAE) FROM KARACHI COAST, KARACHI, PAKISTAN

Shahina Khatoon and F.M. Bilqees

Department Of Zoology, Jinnah University For Women, Karachi, Karachi, Pakistan

**ABSTRACT**

An acanthocephala *Neoechinorhynchus longiorchis* n.sp of family Neoechinorhynchidae based on male specimens is described from the fish *Otolithus argenteus* (Sciaenidae) of Karachi Coast, Pakistan. The body size of specimens, number of proboscis hooks, size of leminisci, testes, cement glands, cement reservoir, saeffigen's pouch and seminal vesicle morphology serve to distinguish *Neoechinorhynchus longiorchis* n.sp from previously described species of the genus.

**Key words:** *Neoechinorhynchus longiorchis* n.sp, intestine, *Otolithus argenteus*, Karachi.

**INTRODUCTION**

*Neoechinorhynchus* Stiles and Hassall (1905) is one of the largest genera of Acanthocephala. The concept of *Neoechinorhynchus* was first formulated when Hamann (1892) designated *Neoechinorhynchus* as the type genus for his new family *Neoechinorhynchidae*. In their treatment of generic types, Stiles and Hassall (1905), Luhe (1911) provided the first generic diagnosis of "*Neoechinorhynchus* Ham". Of the 109 nominal species described belonging to *Neoechinorhynchus*, seven are related to other genera, 14 are considered invalid, 11 belong to the sub genus *Hebesoma*, 48 are in the sub genus *Neoechinorhynchus* and 29 are retained as valid but cannot be assigned to either subgenus (Amin, 2002) Many species of genus are known from the fishes of India, Japan, Pakistan and other countries (Yamaguti, 1961; Amin 2002, Bilqees, 1972).

The present work describes observations on *Neoechinorhynchus longiorchis* n.sp., found in *Otolithus argenteus* (Sciaenidae) collected from the West Wharf, Karachi Coast, Pakistan. The species name *N.longiorchis* refers to the elongate spindle-shaped testes.

**MATERIAL AND METHOD**

Acanthocephalans were collected in Petri dish with distilled water, refrigerated and then fixed in AFA for 24 hours under glass slides pressure, washed several times with 70% ethanol. These were stained with Mayer's carmalum, dehydrated in graded series of alcohol and cleared with clove oil. Parasite identification is according to Yamaguti (1961) and Amin and Christison (2005). All measurements are in millimeters (mm). Holotype is deposited in the department of Zoology, JUW, Karachi.

**DESCRIPTION**

*N. longiorchis* n.sp. (Fig,01,a-e)

Host: *Otolithus argenteus* (Sciaenidae)
Location: Intestine
Locality: Karachi Coast
No.of specimens: 02 males from 01 fish, 25 hosts examined.
Holotype No.: A-2 JUW

**Male:** Body is elongated, cylindrical, outer surface with alate cuticular folds. An antero-dorsal hump is present. Body 12.5-12.6x0.5-0.6 in size. Proboscis is armed with 3 rows of 6 hooks. Anterior hooks larger, middle and posterior smaller and equal in length. Anterior hooks are 0.17-0.18x0.01-0.02 while middle and posterior hooks are 0.02-0.03x0.005-0.01 in size. Proboscis is well developed. Proboscis receptacle is double-walled, 0.4-0.5x0.25-0.26 in...
size. Leminisci unequal, long, tubular, distant from the anterior testis and 2.5-2.6x0.13-0.14 in size. Testes two, long and spindle shaped. Anterior testis smaller than posterior 0.7-0.8x0.1-0.11 in size, while posterior testis is 1-1.2.1x0.15-0.16 and far from male genital organs. Cement gland large, rounded, 0.5-0.6x0.33-0.34, cement reservoir small, rounded, 0.15-0.16x0.14-0.15 in size, Saffitigen's pouch is somewhat elongated, posterior to the cement reservoir and 0.23-0.24x0.14-0.15 in size, seminal vesicle is large, rectangular measuring 0.34-0.35x0.24-0.25. Bursa is invaginated, elongated, 0.74-0.75x0.25-0.26 in size.

**Etymology:** The species name *N. longiorchis* refers to the elongate spindle-shaped testes.

**REMARKS**

Among the described species *N. tylosuri* is similar to the present species having hooks in three circles, anterior hooks three times larger than middle and posterior, proboscis hooks decrease progressively in length, middle and
posterior hooks are equal in length 60-69.30,30-35 in female while 75,35,35 mm long in male. These are slender worms, 16.0-42.0mm long , females 21.70 mm long. LeminiSci unequal at a distance from anterior testis. Posterior testis and cement gland equal and much longer than anterior testis. But N. tylosuri is distinguishable from the new species which has long spindle-shaped testes. In present species cement gland is larger and rounded, cement reservoir is small and rounded, Saefftigen’s pouch is elongated, seminal vesicle is much shorter in present species.

The present specimens can also be distinguished from three other species of Neoechinorhynchus previously reported from Pakistan. These are N. johnii (Yamaguti, 1939) Bilqees, 1972, and N. karachiensis Bilqees, 1972, N. formosanum (Harada, 1939) Bilqees, (1972). These are also different from the present specimens in morphological characteristics.

In N. johnii the testes are peculiar in being dissimilar in shape and size. The anterior proboscis hooks in male are slightly larger than in female, and the size of body, proboscis receptacle and leminisci are much smaller than in the present species.

In N. karachiensis hooks are longer and, leminisci extend posteriorly about half the anterior testis and the cement gland is much larger than testes as in the present species.

In N. formosanum proboscis is short and globular, proboscis receptacle is sub cylindrical and short, leminisci are filament, and testes are elongate but not spindle shaped.

In view of a different combination of characters as compared to other species present specimens are regarded as new species.

REFERENCES


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