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PJBS

ISSN 1028-8880

Pakistan Journal of Biological Sciences

ANSI*net*

Asian Network for Scientific Information
308 Lasani Town, Sargodha Road, Faisalabad - Pakistan

***Thynstenopera lobata* n.gen. n.sp. (Opecoeliidae: Plagioporinae) Another New Trematode from the Fish *Thynnus thunnia* of Karachi Coast, Pakistan**

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Abstract: A new trematode genus *Thynstenopera* was described here from the intestine of the fish *Thynnus thunnia* of Karachi coast, in the family Opecoeliidae and subfamily Plagioporinae. The genus is characterized by having flattened body with distinct demarcation of the forebody which is very short. Oral sucker is small, pharynx not visible, caeca long, narrow, terminating near posterior extremity of the body. Acetabulum larger than oral sucker, near anterior extremity. Testes tandem, close together, deeply lobed, postequatorial. Cirrus pouch is curved, very long reaching far posterior to acetabulum. Genital pore slightly submedian at the level of esophageal bifurcation. Ovary lobed, pretesticular and close to it, seminal receptacle lateral to ovary, Laurer's canal present. Vitellaria prominent in lateral fields of the hind body confluent in the testicular and post testicular region. Uterus was in diagonal spirals between ovary and acetabulum. Eggs relatively large without polar filaments. Species name *T. lobata* is proposed because of lobed ovary and testes.

Key words: *Thynstenopera lobata* n.gen. n.sp., fish, *Thynnus thunnia*, intestine, Karachi coast

INTRODUCTION

Trematodes are one of the common parasites of fishes of Karachi coast. Several species have been described in different fish species. The fishes of Karachi coast from which trematodes have been reported so far include *Erethestes elongata*, *Mureanesox cinereus*, *Crenidense indicus*, *Crenidense crenidense*, *Otolithus argenteus*, *Rastrelliger kanagurta*, *Cybbium* sp. *Arius serratus*, *Cynoglossus sindensis*, *Triacanthus brevirostris*, *Caranx affinis*, *Tetrodon lunaris*, *Lates calcarifer*, *Scatophagus argus*^[1-3], *Diodon (Chilomycterus) hystrix*^[4], *Psettodes erumei*, *Pseudosciaena diacanthus*^[5], *Platycephalus scabar*, *Pomadasyx olivaceum*, *Stromateus niger*^[6], *Stromateus sinensis* and *Chirocentrus dorab*^[6].

Trematodes have not been previously reported from the fish *Thynnus thunnia* except one species from *Thynnus* sp.^[4]. But recently a new genus *Neoenenterum* has been described from *Thynnus thunnia*^[7]. Another undescribed genus is reported here from the same fish and locality. Fishes were examined during October, 2001 to March, 2002 and the trematode recovered was described here. This trematode was assigned to family Opecoeliidae Yamaguti^[8] and subfamily Plagioporinae Manter^[9]. The genus name was proposed *Thynstenopera* n.gen. referring its affiliation with genus *Stenopera* Manter^[10] in the subfamily and species *T. lobata*

indicating lobed ovary and testes. This is the second genus from *Thynnus thunnia* in the subfamily Plagioporinae reported from Karachi coast.

MATERIALS AND METHODS

A single undescribed trematode has been collected from the intestine of the fish *Thynnus thunnia* of Karachi coast, out of 13 fish examined one has a single trematode in the intestine. This trematode was fixed, stained and mounted permanently in Canada balsam by usual procedures. Photograph was taken by Nikon (Optiphot-2) photomicroscope using Fuji colour film. Diagram was made with the help of a camera lucida. Measurements are given length by width in millimeters. Holotype specimen is in the first author's collection.

***Thynstenopera lobata* n.gen., n.sp.**

Host: *Thynnus thunnia*

Location: Intestine

Locality: Karachi coast, Pakistan

Number: A single specimen out of 13 hosts examined.

Cat. No.: BM coll T-1231

RESULTS

Small, flattened trematode with smooth body. Fore-body small, distinctly marked off. Body size 0.79 by

0.39, greatest width in the pre-ovarian region. Oral sucker small, cup-shaped, 0.041 by 0.067. Pharynx is weakly developed, esophagus small 0.031 in length, caeca long, narrow, terminating near posterior end of the body. Acetabulum much larger than oral sucker, near anterior extremity, 0.11 in diameter. Pre-acetabular region highly pigmented. Testes two, transversely flattened, deeply lobed, tandem, close together 0.07–0.081 by 0.049–0.089. Cirrus pouch very long, curved, reaching far posterior to acetabulum with posterior sac-like portion, anterior portion tubular. Length of cirrus sac 0.39, sac-like portion 0.17 by 0.09 in size enclosing elongate seminal vesicle. Genital pore at the esophageal bifurcation, submedian surrounded by highly pigmented area (Fig. 1 and 2).

Ovary irregularly lobed, transversely flattened, pretesticular and close to it. Vitelline follicles large, lateral in the hind body, confluent in the posttesticular region.

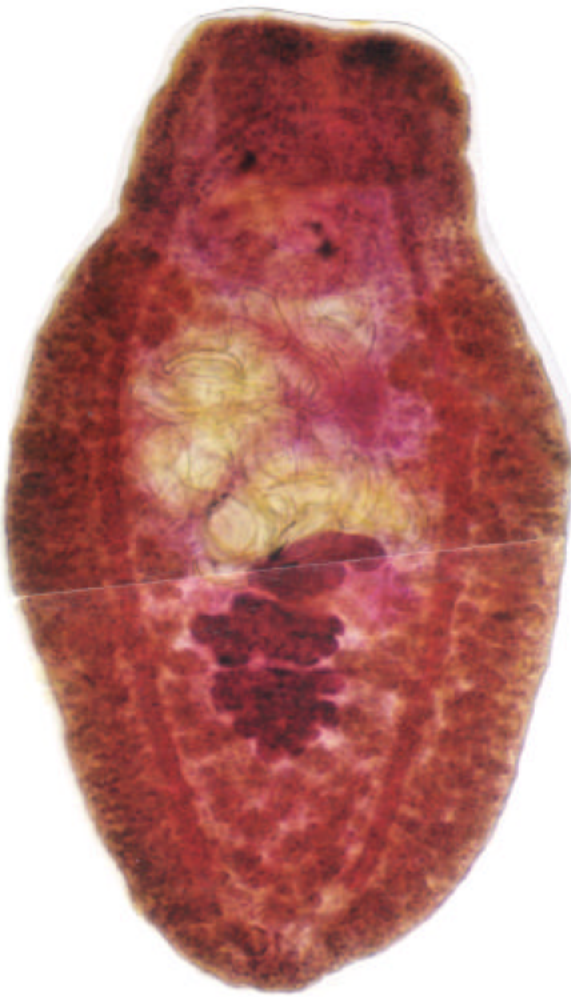


Fig. 1: Entire specimen, holotype, *Thynstenopera lobata*



Fig. 2: Anterior end showing suckers, cirrus sac and associated structures

Uterus in diagonal spirals between ovary and acetabulum. Metraterm not differentiated. Eggs are large 0.069–0.081 by 0.034–0.049. Excretory vesicle short, hardly reaching to posterior testis.

Thynstenopera new genus

Genus diagnosis: Opecoeliidae, Plagioporinae. Body small, flattened, smooth with distinct demarcation of forebody, anterior extremity flat, wide, oral sucker cup-shaped. Pharynx not developed, esophagus small, caeca long and narrow reaching to posterior extremity. Acetabulum much larger than oral sucker, near anterior extremity. Preacetabular region highly pigmented. Testes two, transversely flattened, deeply lobed, close together, postequaretorial. Cirrus sac very long, curved with posterior sac-like portion reaching far posterior to acetabulum containing seminal vesicle. Genital pore at the esophageal bifurcation with surrounding pigmented area. Ovary irregularly lobed, transversely flattened pre-testicular and close to it. Vitelline follicles large, lateral in the hind-body, confluent in the posttesticular region. Uterus in diagonal spirals between ovary and acetabulum. Metraterm not differentiated. Eggs large, without polar prolongations. Excretory vesicle small almost reaching to posterior testis. Intestinal parasite of marine fish.

Type species: *Thynstenopera lobata* in *Thynnus thunnia*, Karachi coast, Pakistan.

DISCUSSION

As mentioned above trematodes are common parasites of fishes of Karachi coast but these have not been reported previously in the fish *Thynnus thunnia* except a recent new genus^[7]. Although one species was described from *Thynnus* sp.^[11]. This study present the second new genus in the fish *Thynnus thunnia* of Karachi coast reported from Pakistan

Specimen of the new genus *Thynstenopera* is included in the family Opicoeliidae and subfamily Plagioporinae but cannot be included in any of the genera of the subfamily. As it shows variation in important diagnostic features. However the present specimen shows some similarities with the genus *Stenopera* Manter^[10] in having acetabulum larger than oral sucker, near anterior extremity; testes tandem, postequatorial, cirrus pouch very long, curved, reaching far posterior to acetabulum; ovary lobed, vitellaria confined to lateral fields of hind-body, uterus in diagonal spirals between ovary and acetabulum. But the present specimen shows some distinctly different characters such as flat anterior end of the body with demarcation of the fore-body, cirrus pouch having posterior sac-like portion, genital pore at the esophageal bifurcation not pre-bifurcal as in genus *Stenopera*, metraterm undifferentiated, eggs without polar prolongation and excretory vesicle reaching only upto posterior testis. While in *Stenopera* metraterm is differentiated, eggs are unipolar and excretory vesicle extending to level of ovary. These differences separate the present specimens from the genus *Stenopera* in addition to peculiar shape of the body. Therefore, a new genus is erected to accommodate the present specimen. Genus name *Thynstenopera* refers to the host and its affiliation to genus *Stenopera* while the species name *T. lobata* indicates lobed ovary and testes.

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