

**QADRIANA OTOLITHI N.SP., (HEMURIDAE: DINURINAE LOOSS, 1907) FROM THE FISH OTOLITHUS ARGENTEUS (SCIAENIDAE) OF KARACHI COAST, PAKISTAN**

**Fatima Mujib Bilqees<sup>1</sup>, Rana Hadi<sup>1</sup>, Khatoon, N<sup>2</sup>, Muti-ur-Rahman<sup>2</sup> and Shakila Perveen<sup>1</sup>**

<sup>1</sup>Department of Zoology, Jinnah University for Women, Karachi, Pakistan

<sup>2</sup>Department of Zoology, University of Karachi, Karachi, Pakistan

**ABSTRACT**

A new hemiurid trematode is described here parasitizing the intestine of the fish *Otolithus argenteus* of Karachi coast. *Qadriana otolithi* n.sp., is the third species of the genus *Qadriana* Bilqees, 1971. It is compared with previous species and is regarded new due to morphometric variations in the diagnostic features. Main differences are in the position of seminal vesicle, genital opening, ovary and vitellaria.

**Key words:-** New hemiurid trematode, intestine, *Otolithus argenteus*, Karachi coast.

**INTRODUCTION**

Digenetic trematodes are one of the most common parasites in fishes of Karachi coast (Bilqees, 1981; Shaukat & Bilqees, 2005). *Otolithus argenteus* is a popular host for trematode parasites. Several trematodes of different families have been reported from this fish (Shaukat & Bilqees, 2005).

During the present studies a new trematode *Qadriana otolithi* n.sp., is recovered from the intestine of *Otolithus argenteus*, is reported and described here.

By now only two species are known in the genus *Qadriana* Bilqees, 1971. Present is the third species of the genus.

**MATERIALS AND METHODS**

Seventy-nine fishes were collected from West Wharf, Karachi during a period of one year (December 2006-2007) and were examined for trematode parasites. Two trematodes from one fish and 3 from other were recovered from the intestine. Specimens were fixed in hot 70% ethyl alcohol, stained with Mayer's carmolum dehydrated in graded series of alcohols, cleared in clove oil and xylene and mounted permanent in Canada balsam. Diagrams are made with a camera Lucida and measurements are given length by width in millimeters. Specimens are in the collection of the first author in the Department of Zoology, Jinnah University for Women Karachi.

***Qadriana otolithi* n.sp.  
(Fig. 1)**

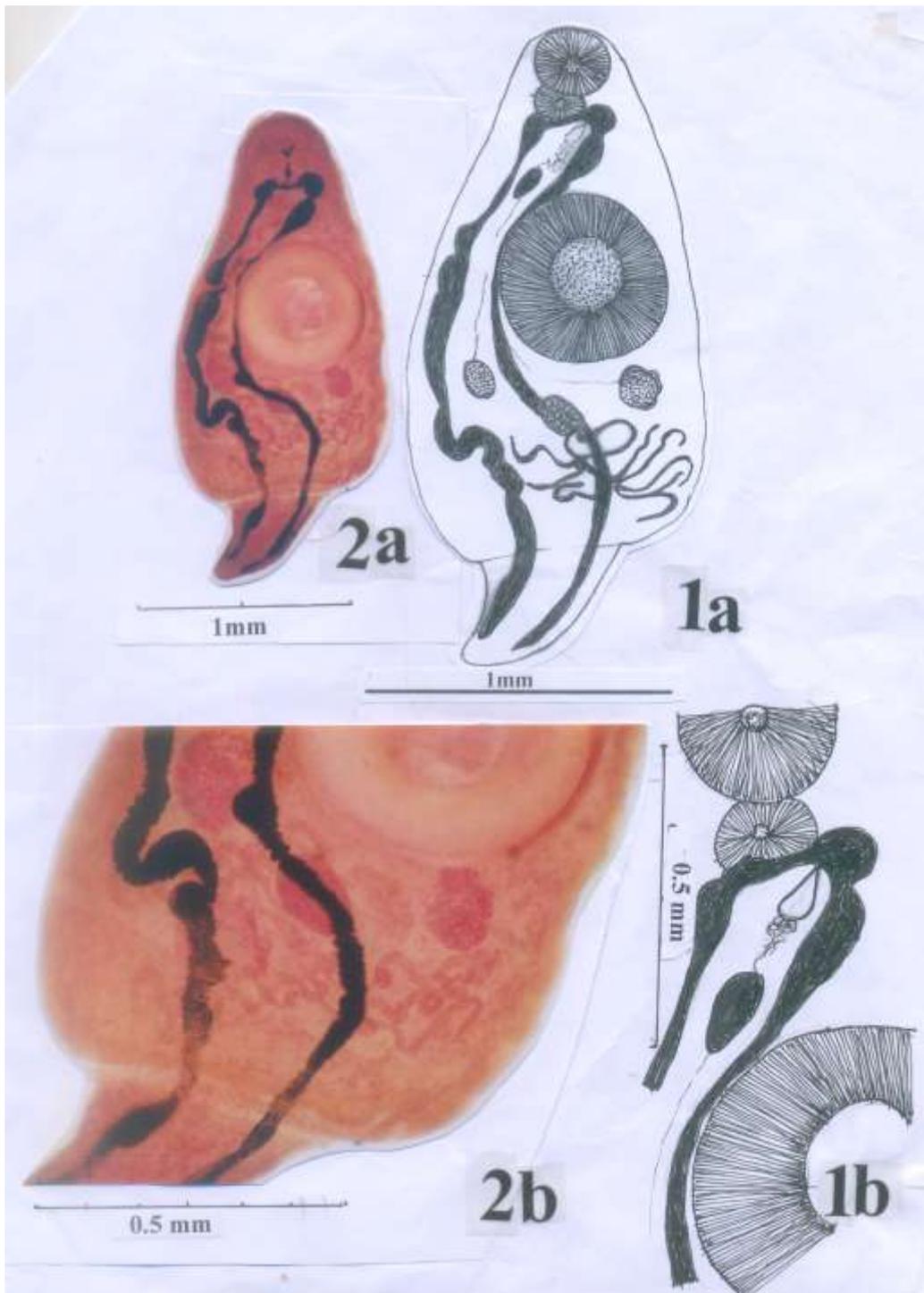
<b>Host:</b>	<i>Otolithus argenteus</i> (Sciaenidae)
<b>Location:</b>	Intestine
<b>Locality:</b>	West Wharf, Karachi coast
<b>No. of specimens:</b>	3 from one fish and 2 from other, 79 fishes examined
<b>Holotype:</b>	BMC = T270

Body stout, flattened, smooth, widest at the tail junction. Body length with tail 2.1-2.4, width 0.97-0.99. Oral sucker is slightly subterminal almost rounded, 0.20-0.21 x 0.24-0.26 in size. Prepharynx is absent, pharynx wider than long, 0.080-0.086 x 0.15-0.17. Esophagus not prominent, ceca long, reaching posteriorly to near about the tail end. Acetabulum much larger than oral sucker, rounded, 0.55-0.57 in diameter. Sucker width ratio 1:2.2-2.3. Testes two, rounded, symmetrical, smooth to slightly irregular, 0.11-0.13 x 0.08-0.11, nearer to acetabulum. Seminal vesicle is anterolateral to acetabulum, small, oval, 0.14-0.16 x 0.08-0.09, pars prostatica poorly developed. Sinus sac small cone-shaped, 0.09-0.11 in length, genital opening at the level of intestinal bifurcation.

**Remarks:**

The genus *Qadriana* was proposed by Bilqees (1971) to accommodate an undescribed trematodes which was named *Qadriana fusiformis* from the fish *Sciaena glauca* of Karachi coast. The present new species is from

a different fish host *Otolithus argentus* but of family Sciaenidae from the same locality. This species shows morphometric variations as compared to the genotype in having soma large, widest at the tail junction, tail small, conical, oval seminal vesicle, sinus sac small, cone-shaped, and genital pore at the level of intestinal bifurcation.



**Figs. 1.2. *Qadriana otolithi* n.sp.**

1a. Whole mount holotype specimen.

1b. Preacetabular region showing seminal vesicle and associated structures.

2a. Photomicrograph of holotype specimen.

2b. Postacetabular region showing ovary, vitellaria, testes and associated structures.

Another species *Qadriana zakaiae* (Hafeezullah, 1975); Gibson *et al.*, 2002; is also different in having elongate sinus sac, genital opening at the base of oral sucker, seminal vesicle far anterior to acetabulum, ovary and vitellaria are median. While in the present new species ovary and vitellaria are submedian, seminal vesicle is oval, relatively close to acetabulum, sinus sac is cone-shaped and genital pore at the level of intestinal bifurcation.

#### REFERENCES

- Bilqees, F.M. (1971). *Marine fish trematodes of West Pakistan*. Part-IV Description of three new genera and species. *Pakistan J. Sci. Ind. Res.*, 14: 254-257.
- Bilqees, F.M. (1981). *Trematodes of fishes of Karachi coast*. pp. 1. Kifayat Academy, Karachi.
- Gibson, D.I., Jones, A. and R.A. Bray (2002). *Keys to trematoda. Vol. 1. Family Hemiuridae Looss, 1899*. pp. 319-320. CABI Publishing and the Natural History Museum, London, UK.
- Hafeezullah, M. (1975). Two new trematodes (Digenea: Hemiuridae) from marine fishes from east coast of India. In: Tiwari, K.K. & Srivastava, C.B. (eds.) *Dr. B.S. Chauhan Commemoration Volume* (presented on his 60<sup>th</sup> birthday). Zool. Soc. India, Bhubaneswar. pp. 203-210.
- Shaukat, N. and F.M. Bilqees (2005). Checklist of digenetic trematodes of marine fishes of Pakistan. *Proc. Parasitol.*, 40: 95-118.

(Accepted for publication May, 2009)