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Plagioporus gibsoni, New Species (Trematoda: Opecoelidae) From a Freshwater Fish, *Labeo gonius* (Ham)

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Abstract.- A new trematode *Plagioporus gibsoni* is described here from the freshwater fish *Labeo gonius* from Keenjhar lake, Sindh, Pakistan. The new species is characterized by having oval, elliptical body; oral sucker round; pre-pharynx small; pharynx well developed; esophagus short; ceca terminating near posterior extremity; acetabulum larger than oral sucker; testes oval, postovarian genital pore, ovary median, bilobed; uterus winding between anterior testis, ovary and acetabulum; eggs are numerous, oval; excretory vesicle is tubular.

Key words: *Plagioporus gibsoni* new species, small intestine, *Labeo gonius*, trematode.

INTRODUCTION

Four species of genus *Plagioporus* (Stafford, 1904) have been reported from Pakistan from fresh and marine fishes. The species reported are *P. mujibi* Bilqees *et al.*, 1972; *P. heterorchis* Bilqees, 1977; *P. gonii* Bilqees and Khan, 1988 and *P. sindhensis* Shaikh and Bilqees, 2008. During the present studies a new species *Plagioporus gibsoni* is identified and reported here from the fish *Labeo gonius* (Ham.).

Species of the genus *Plagioporus* appear to be common in the fish genus *Labeo* in Pakistan (Bilqees and Khan, 1988; Shaikh and Bilqees, 2008; Shaikh *et al.*, 2009; Bilqees *et al.*, 2009).

The fish *Labeo gonius* (Ham.) were purchased from Keenjhar lake, Sindh, Pakistan. Specimens recovered were fixed in F.A.A. for 24 hours, washed several times with 70% ethyl alcohol, stained with Mayer's carmalum, dehydrated in graded series of alcohols, cleared in clove oil and xylene and mounted permanently in Canada balsam. Measurements are given length by width in millimeters. Drawings were made with the help of a camera Lucida. Holotype and paratype are in collection of Department of Zoology, University of Sindh, Jamshoro.

Plagioporus gibsoni, new species
(Fig. 1)

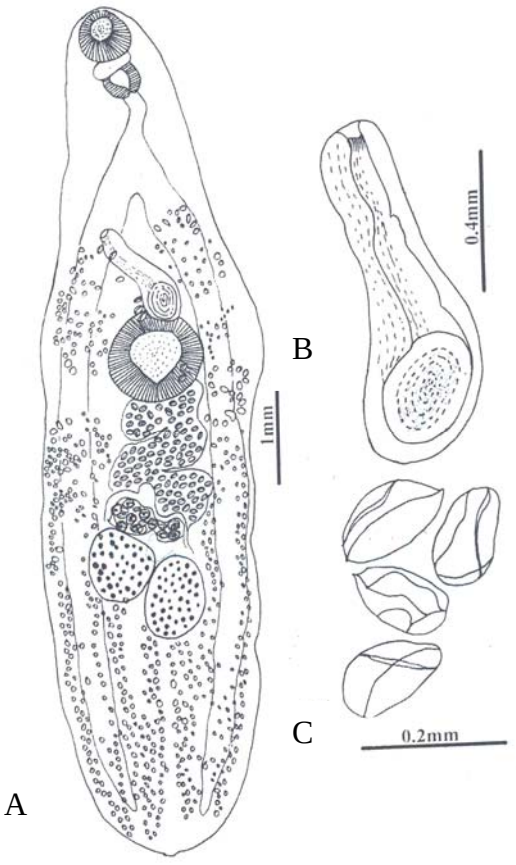

Fig. 1. *Plagioporus gibsoni* n. sp, A, entire specimen, holotype; B, cirrus sac; D, eggs.

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Host: *Labeo gonius*
Location: Intestine
Locality: Keenjhar lake, district Thatta, Sindh
No. of specimens: 4 from a single fish, 77 fishes examined.

Description

Body flattened, elliptical, oval, measuring 7.5-7.9 by 1.7-1.9. Oral sucker is round measuring 0.45-0.47 by 0.40-0.41. Prepharynx small, 0.30-0.31 by 0.30. Pharynx well developed, measuring 0.30-0.31 by 0.30-0.31. Esophagus is short, measuring 0.99 by 0.33-0.34. Ceca terminating near posterior extremity. Acetabulum larger than oral sucker, pre-equatorial, measuring 0.80-0.82 by 0.80-0.81. Testes oval, postovarian, slightly posterior to mid-body. The anterior testis measures 0.62-0.65 by 0.51-0.55, while the posterior 0.68-0.70 by 0.50-0.51. Distance between acetabulum and anterior testis 0.46. Genital pore post- bifurcal and between ceca. Ovary is at a distance of 0.42-0.43 from acetabulum. The ovary is median, bilobed, close to anterior testis, measuring 0.20-0.21 by 0.55-0.57. Cirrus sac, preacetabular, elongated, 0.93-0.95 by 0.38-0.39. Seminal receptacle and Laurer's canal present. Vitellaria reaching into forebody. Uterus is winding between anterior testis, ovary and acetabulum. Excretory vesicle is tubular. Eggs are numerous, oval, measuring 0.14-0.17 by 0.056-0.58.

DISCUSSION

The present species is being compared with the similar species of the genus *Plagioporus* Stafford, 1904 but different in one or more important characters.

As compared to the other species of the genus, the present species is much larger (7.5-7.9 by 1.7-1.9) in size as compared to *P. isaitschikowi* (Layman, 1930) (0.8-2.2 by 0.3-0.63); *P. japonicus* Yamaguti, 1938 (1.8-1.93 by 0.51-0.7); *P. pacificus* Yamaguti, 1938; *P. apogonichthydis* Yamaguti, 1938 (1.6-2.25 by 0.55-0.58); *P. sillagonis* Yamaguti, 1938 (2.1-2.3 by 0.9); *P. macassarensis* Yamaguti, 1952 (5 by 1.16); *P. longivesicula* Yamaguti, 1952 (3.5-4.0 by 1.0-1.3); *P. synagris* Yamaguti, 1952 (1.4 by 0.52); *P. sindhensis* Shaikh and Bilqees, 2008 (4.3-4.4 by 1.5-1.7).

The oral sucker (0.45-0.47 by 0.4-0.41) in the present species is larger as compared to *P. isaitschikowi* (0.09-0.17); *P. japonicus* (0.135-0.15); *P. pacificus* (0.09-0.015); *P. apogonichthydis* (0.15-0.19); *P. sillagonis* (0.16-0.18); *P. macassarensis* (0.3 by 0.35); *P. longivesicula* (0.24-0.29 by 0.26-0.31); *P. synargis* (0.10 by 11) and *P. heterorchis* Bilqees, 1977 (0.13–0.14).

Similarly acetabulum in the present species is larger (0.80-0.82 by 0.80-0.81) as compared to *P. isaitschikowi* (0.2-0.33 by 0.25-0.37); *P. japonicus* (0.25-0.32); *P. pacificus* (0.18-0.26); *P. apogonichthydis* (0.24-0.31); *P. sillagonis* (0.25-0.28); *P. macassarensis* (0.5 by 0.52); *P. longivesicula* (0.45-0.48); *P. synargis* (0.27) and *P. gonii* Bilqees and Khan, 1988 (0.50-0.75 by 0.54-0.75); *P. ula-ula* Yamaguti, 1970 (2.3–4.9 by 0.85–1.65 and *P. maorum* Allison, 1966 (3.3–7.3 by 1.6–2.8).

The eggs are larger (0.14-0.17) in length as compared to *P. isaitschikowi, P. japonicus, P. pacificus, P. apogonichthydis, P. sillagonis, P. macassarensis, P. longivesicula*; *P. synagris*; *P. gonii*; *P. aurinae*; *P. alacer*; *P. beringi*; *P. myoxocephalis*; *P. niloticus* and *P. variatus*.

The cirrus sac (0.93-0.95 by 0.38-0.39) is larger as compared to *P. heterorchis* (0.37-0.56 by 0.07-0.091), *P. mujibi* (0.39 by 0.11) and *P. gonii* (0.72-0.86 by 0.14-0.21).

In *P. mujibi* Bilqees *et al.*, 1972 the ovary is immediately posterior to the acetabulum, while in the present species they are at a distance. The testes in *P. gonii* are at a distance from each other while in the present species these are close together.

The above mentioned differences in diagnostic features of the present and previously described species of the genus *Plagioporus* substantiate the statement that the specimens understudy are new to science and named *Plagioporus gibsoni*. The species is named in honour of Dr. David I. Gibson, England.

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