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A new monogenea Hamatopeduncularia saketensis n.sp. form fresh water fish *Wallago attu*

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Abstract
The fresh water fish *Wallago attu* was collected from local market of Faizabad (Saket) and examined 32 specimens in which only five specimens were found infected with thirty five specimens of said species. The site of infection being the gill filaments of the host. The present form chiefly differs from *H. arri; H. australis* and *H. brisbanensis* in shape of haptoral anchors, transverse bar and copulatory complex. However, it differs from *H. indicus* and *H. lucknowenesis* in absence of compact tubular head organs, shape of transverse bars, shape of cirrus proper and size of eggs. Moreover, it differs from *H. yogendrai* and *H. sohani* in distribution of cephalic glands, shape of cirrus and presence of haptoral glands. The present form is therefore regarded as new species viz. *H. saketensis* n.sp. since it is recorded from Faizabad.

Keywords: New monogenea, Hamatopeduncularia saketensis, Wallago attu, Faizabad (Saket).

1. Introduction
Monogeneans are mainly ectoparasites of fishes, they constitute a group, which play an important role as pathogens of severe disease. This is because they affect those organs and tissues which are vital to the normal functioning such as gill and skin, the organs of respiration. In majority of cases, monogeneans cause dual type of injury to their hosts. Through their hooks and other organs of attachment, they break the continuity at the site of attachment and result is to localize hemorrhage. At the time they feed upon the blood and cells of ruptured tissue (Bychowsky, 1957 and Uspensskaya, 1962). Researches have established that the volume of the blood sucked from the fish quire appreciable and this leads to certain conditions like anemia, mortality etc. (Lutta, 1941 and Golovina, 1976).

2. Material and Methods
The monogeneans were collected by Mizelle's freezing techniques. They were kept in refrigerator from 8 to 48 hours. The low temperature not only relaxes the worm but also help in automatic removal of mucous in which there fluckes were entangled. Subsequantly, the gills were removed, placed in separate, tubes, half filled with water and shaked vigorously. This solution now poured in clean petridish diluted with water and examined under binocular microscope. The worms thus collected were washed and fixed in hot 70% ethyl alcohol or 10% neutral formaline. Study of chitinoid hard parts were made in either temporary glycerin, or in dehydrating through ascending grades of alcohol, clearing sketches were made both from temporary and permanent preparations. All measurements were taken with the help of stage micrometer and an occulometer.

3. Generic Diagnosis
Body small, elongate, opisthohaptor not well marked off from body proper, with two pairs of anchors supported by transverse bars, and 10 marginal hooklets, each of which is inserted at tip of more or less long peduncle. Two more pairs of hooklets are attached to the lobes bearing anchors. Head organs and eye present. Mouth sub-terminal, pharynx well developed, oesophagus short. Intestinal crura terminating blindly. Testis elongate, post equatorial. Vas deferens running around outside left caecum. Seminal vesicle large, anterior to copulatory organ, cirrus cuticularized, with accessory piece. Prostatic complex well developed. Male and female genital pores sub-median, separate, through close to each other. Ovary pre-testicular, elongate, shell gland, seminal receptacle and transverse vitelline ducts joining together in front of ovary. Vagina close to this junction. Vitellaria co-extensive with oesophagus and intestinal crura confluent behind testes.

4. Description

The body is elongated with narrow anterior and broad posterior end, measuring 1.66-1.71* 0.24-0.29 mm. The haptor is not distinctly set off from the body proper. The head is bilobed and provided with eight pairs of head organs. In some specimens these head organs are freely distributed while in other they show a precise pattern of distribution. Two pairs of eye spots are also present in the head region, posterior pair slightly larger than the anterior due to presence of greater number of milanistic granules. The pharynx is oral, muscular and measurers 0.06-0.07* 0.04-0.05 mm. The intestine is simple, bifurcated and caeca are united posteriorly.

The testis is single, elongate, equatorial, post-ovarian, inter-caecal and measures 0.31-0.34* 0.05-0.06 mm. A fine vas deferens arises from anterior border of testis, proceeds anteriorly and in the region of copulatory complex, dilate to form an elongate, oval seminal vesicle measuring 0.11-0.13* 0.02-0.04 mm. The copulatory complex consists of a cirrus, accessory piece of cirrus and prostatic reservoir. The cirrus proper is straight type, curved, chitinoid and double walled structure measuring 0.04-0.05 mm. The accessory piece of cirrus is elongated, dumble shaped with curved tips.

5. Discussion

The genus *Hamatopeduncularia* was erected by Yamaguti, 1953 with *H. arri* as type species. Hergis, 1955 added another species *H. bargee* to the genus but Tripathi, 1959 doubted the inclusions of this species under the genus and transferred it to the Genus *Hargitrema*. This was also agreed by Yamaguti, 1961 and the present auther also holds the same view. Besides this, Tripathi, 1959 also proposed to synonymies the genus *Hamatopeduncularia* with *Ancyrocephalus* by this synonymy was not accepted by Yamaguti, 1961. The auther also agrees with yamaguti, 1961 and treat the genus *Hamatopeduncularia* valid on account of the presence of pedunculate haptor. To the best of my knowledge following more species were added to the genus viz. *H. austrilis*, Young, 1967; *H. brisbanensis* Young, 1967; *H. indicus* Siddiqui and Kulkarni, 1983; *H. yogendrai*, Pandey and Mehta, 1986; *H. sohani* Tewari and Agrawal, 1986 and *H. lucknowensis* Agarwal and Sharma 1988.

The present form chiefly differs from *H. arrii; H. australis* and *H. brisbanensis* in shape of haptoral anchors, transverse bar and copulatory complex. However, it differs from *H. indicus* and *H. lucknowensis* in absence of compact tubular head organs, shape of transverse bars, shape of cirrus proper and size of eggs. Moreover, it differs from *H. yogendrai* and *H. sohani* in distribution of cephalic glands, shape of cirrus and presence of haptoral glands. The present form is therefore regarded as new species viz. *H. saketensis* n.sp. since it is recorded from Faizabad (Saket).

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