

ON THE OCCURRENCE OF *PROSTHOGONIMUS PUTSCHKOWSKII*
SKRJABIN, 1913, IN INDIA.¹

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Up to the present, there have been only three records of the occurrence of representatives of the genus *Prosthogonimus* in India. Gideon (1929) recorded *Prymnoprion* sp. from the rectum of *Ibis megalcephala* in Darwar but Braun (1902) had already pointed out that the genus *Prymnoprion* is a synonym of *Prosthogonimus*. *P. indicus*, obtained from the oviduct of a fowl at Mukteswar, was described by Srivastava (1938). Lal (1939) recorded *P. cuneatus* from the bursa fabricii of *Acridotheres tristis*. Recently one of the writers (Gideon) obtained some specimens of this genus from the intestine and rectum of the Pond Heron, *Ardeola grayi*. Lately Witenberg and Eckman (1939) have published a very useful, critical paper on the classification of the genus *Prothogonimus*. In this paper, they have dealt with twenty-three species of the genus, and reduced them to only seven valid species. According to these authors, the only characters that are useful in distinguishing the different species of the genus are (1) the relative size of the suckers, (2) the extent of the uterine coils and (3) the shape and distension of the vitellaria; all other characters are dependant upon the age and state of contraction of the worms and are subject to individual variations. They have also published a key for use in distinguishing the seven valid species of the genus. Applying this key to the Indian forms, the specimens from *Ibis megalcephala*, *Ardeola grayi* and the domestic fowl can be rightly referred to the species *P. putschkowskii* Skrjabin, 1913. *P. indicus* is distinguished from *P. putschkowskii* only by the posterior extent of the cirrus sac but according to Witenberg and Eckman (1939) this character is variable. The validity of this statement can be judged by a study of the figures of this species published by Skrjabin and the joint authors. In the former, the cirrus sac extends up to the anterior border of the ventral sucker, while in the latter it terminates much in front of this organ. It is therefore quite evident that *P. indicus* Srivastava, 1937, is synonymous with *P. putschkowskii* Skrjabin, 1913 and that the forms from *Ibis megalcephala* and *Ardeola grayi* also belong to this species.

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A few observations on the anatomy of these forms from *Ibis megalcephala* and *Ardeola grayi* are given below :—

The specimens from *Ibis megalcephala* are lanceolate and resemble that depicted in figure 1 of Witenberg & Eckman (1939), while the specimens from *Ardeola grayi* are broader, with a round posterior extremity, and are slightly attenuated anteriorly, resembling the specimen shown in figure 3 of Skrjabin (1913). They measure 4.695-7.396 mm. in length and 1.73-3.08 mm. in maximum breadth. The cuticle is spiny. The mouth is subterminal and is surrounded by the oral sucker which measures 0.249-0.365 mm. in diameter. The pre-pharynx is very small and measures 0.013-0.0152 mm. in length. The pharynx is globular and measures 0.16-0.238 mm. in diameter. The oesophagus is 0.173-0.479 mm. long. The intestinal caeca terminate 1.35-1.37 mm. from the posterior end of the body. The ventral sucker is situated at about the anterior fourth of the body and measures 0.81-0.84 mm. in diameter.

The excretory pore is situated at the posterior end of the body. The excretory bladder is Y-shaped, with a slightly sinuous and long stem, which bifurcates into two short arms at the level of the hinder border of the testes.

The genital pore is situated subterminally at the anterior end, on the left side of the oral sucker. The testes are oval or somewhat rounded bodies, situated slightly in front of the midbody. They measure 0.45-0.827 × 0.29-0.55 mm. and may be symmetrical or slightly oblique. The cirrus sac may be more or less sinuous and terminates some distance in front of the ventral sucker.

The ovary consists of about twelve to fifteen lobes and measures 0.4-0.85 × 0.27-0.7 mm. It lies slightly to the right of the middle line and its position with respect to the testes or the ventral sucker depends on the state of contraction of the worms. In the lanceolate form, it lies distinctly posterior to the ventral sucker and anterior to the zone of the testes, while, in slightly contracted and broader forms, it partially overlaps the ventral sucker and the testicular zone. The receptaculum seminis is pear-shaped, lies immediately behind the ovary and measure 0.25-0.275 × 0.135-0.17 mm. The vitellaria are lateral and consist of seven groups on the left side and eight or nine groups on the right side. Posteriorly they extend to a distance slightly short of the intestinal terminations but their anterior extent is variable. In the broader forms, they extend slightly in front of the zone of the ventral sucker, while in the lanceolate form they extend slightly anterior to the acetabular zone on the right side and on the left side they terminate in the middle of the acetabular zone. In the region of the intestinal caeca, the uterine coils are inter-caecal but, posterior to the terminations of the intestinal caeca, the uterine coils extend from one side of the body to the other. There is no special aggregation of the uterine coils in front of the ventral sucker. The eggs are operculate and measure 0.019-0.047 × 0.013-0.029 mm.

The material referred to in this paper has been deposited in the Zoological collection of the Indian Museum, Calcutta, as no. W3448-49/1.

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