

DESCRIPTION OF A NEW ACANTHOCEPHALAN *POLYMORPHUS FATIMAAE* N.SP. (ACANTHOCEPHALA: POLYMORPHIDAE) FROM CROW (*CORVUS SPLENDENS* VIEILLOT)

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ABSTRACT

Lühe, 1911 is described here from the crow (*Corvus splendens* Vieillot) from Hyderabad, Pakistan. The new species name is proposed *P. fatimae*. This species is characterized by having proboscis hooks in 9 to 12 rows each row having 6-12 hooks. Hooks measuring 0.030 – 0.057 by 0.0076 – 0.019 mm. Neck small, lemnisci sub-equal, testis oval, capsule shaped, cement glands four long tubular, cement reservoir small. Bursa well developed and Eggs oval measuring 0.060 – 0.068 by 0.022 – 0.030 mm.

Keywords: Acanthocephala, *Polymorphus fatimae* n.sp., crow, Pakistan

INTRODUCTION

Several species of *Polymorphus* Lühe, 1911 have been reported from aquatic and semi-aquatic birds from Russia, Poland, N. America, Pakistan, Sweden, Italy, Canada, etc. The species of the genus reported from birds of Pakistan are *P. nickoli* Khan and Bilqees, 1988 and *P. sindhensis* Khan *et al.*, 2002. This is the third record of the genus from the crow (*Corvus splendens* Vieillot) from Sindh, Pakistan.

MATERIALS AND METHODS

Living worms were fixed in F.A.A. (a solution of formalin, acetic acid and 50 percent alcohol in the ratio of 5:3:92) and stained in Mayer's carmalum and mounted permanently in Canada balsam. Measurements are in millimeters. Holotype and Paratype specimens described in this paper are in the collection of Parasitology Section, University of Sindh, Jamshoro.

Polymorphus fatimae n.sp.

(Figs. 1a-d)

Host: Crow (*Corvus splendens* Vieillot)

Location: Small intestine

Locality: Hyderabad, Sindh, Pakistan

Description

Polymorphidae, Polymorphinae. With the characters of the genus *Polymorphus*. Body elongate, trunk shallowly cylindrical, neck distinct. Proboscis receptacle double walled. Lemnisci cylindrical. Hypodermic nuclei small. Genital pore terminal.

Female

Body elongate measuring 21.6 – 23.80 by 0.80 – 1.20. Hypodermic nuclei small and numerous. Proboscis small 0.45 – 0.72 by 0.30 – 0.40 with 9 to 12 rows of hooks each row having 6-12 hooks. Hooks measuring 0.030 – 0.057 by 0.0076 – 0.0019. Neck small 0.15 by 0.18. Proboscis receptacle double walled 0.90 – 2.20 by 0.28 – 0.30. Lemnisci sub-equal the left measuring 2.60 – 3.15 by 0.075 – 0.20, while the right measuring 2.46 – 3.18 by 0.090 – 0.20. Eggs numerous oval, wider at middle measuring 0.060 – 0.068 by 0.022 – 0.030mm.

Male

Measuring 23.6 – 39.28, with greater width at the posterior level of the lemnisci measuring 1.0 – 1.2. Proboscis small measuring 0.48 – 0.58 by 0.28 – 0.40. The hooks rows number and size is similar to female. Neck 1.10 by

0.52. Proboscis receptacle 0.97 – 1.60 by 0.22 – 0.26. Lemnisci unequal in length, left measuring 1.84 – 2.04 by 0.12 – 0.32, the right measuring 2 – 2.04 by 0.12 – 0.32. Testes elongate in anterior half of the body at a distance of 0.92 – 1.28 from the posterior end of the lemnisci. The anterior testis 1.00 – 1.08 by 0.28 – 0.44. The posterior testis measuring 1.12 – 1.20 by 0.28 – 0.40. Distance between the two testis 0.04 – 0.42. Cement gland four, long, tubular, immediately posterior to posterior testis, cement reservoir small. Bursa well developed measuring 1.8 – 1.9 by 1.1 – 1.4mm.

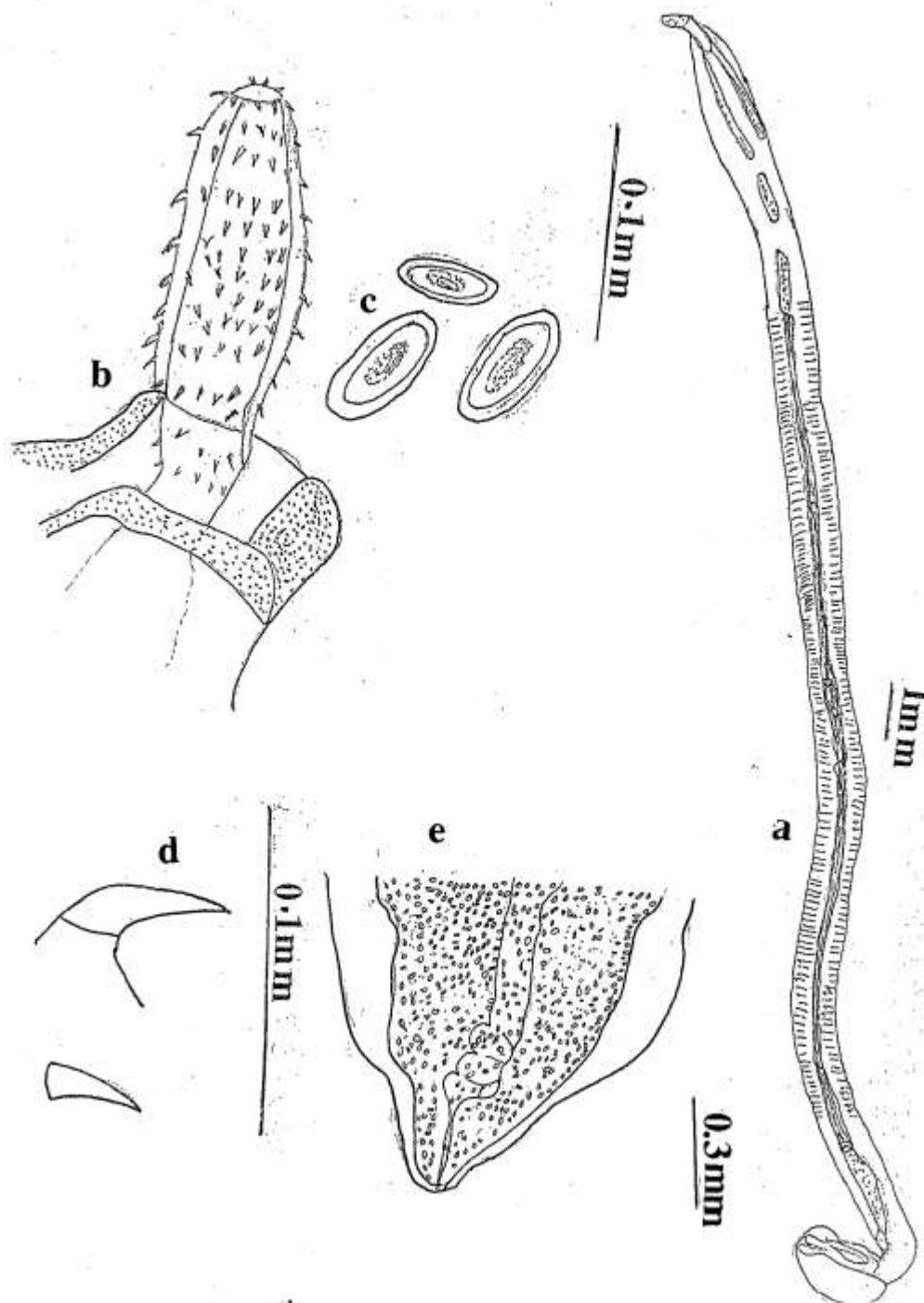


Fig.1. *Polymorphus fatimae* n.sp.

a. Entire male; b. Proboscis enlarged; c. Eggs; d. Hooks enlarged

DISCUSSION

Amin (1992) brought into focus the confused taxonomic status of the *Polymorphus* Lühe, 1911 and proposed a new diagnosis of the genus based on the designation of *Hexaglandula* Petrochenko, 1950 and *Subcorynosoma* Hoklova, 1967 as junior synonyms.

In the arrangement of proboscis hooks the present specimens differ (9-12 rows of hooks having 6 to 12 hooks each) from *P. actuganensis* Petrotschenko, 1949 (18 rows having 8 hooks); *P. acutis* Van Cleave *et* Starrett, 1940 (16 rows having 11-12 hooks); *P. ardeae* Belopolskaia, 1959 (20 rows having 14-15 hooks); *P. biziuræ* Johnston *et* Edmonds, 1948 (21-22 rows having 9-11 hooks); *P. botulus* (Van Cleave, 1916) Van Cleave, 1939 (16 rows having 7-8 hooks); *P. contortus* (Bremser, 1821) Travassos, 1926 (16 rows having 8 hooks); *P. crassus* Van Cleave, 1924 (18 rows having 8 hooks); *P. cucullatus* Van Cleave *et* Starrer, 1940 (22 rows having 12 hooks); *P. diploinflatus* Lundström, 1942 (14 rows having 12 hooks); *P. magnus* Skrjabin, 1913 (14-18 rows having 7-9 hooks); *P. marchii* (Porta, 1910) (having just 8 rows of hooks, the hooks in each row were not counted); *P. marilis* Van Cleave, 1939 (16-17 rows having 7-8 hooks); *P. methევossianae* Petrot Schenko, 1949 (20 rows having 11-12 hooks); *P. meyeri* Lundström, 1942 (16 rows having 6 hooks); *P. miniatus* Linstow, 1896 (16-18 rows having 6-8 hooks); *P. obtusus* Van Cleave, 1918 (16 rows having 7-10 hooks); *P. phippii* Kostylew, 1922 (16 rows having 6 hooks); *P. striatus* (Goeze, 1782) Lühe, 1911 (16 rows having 12-16 hooks); *P. strumosoides* Lundström, 1942 (16-18 rows having 11 hooks) and *P. spindlatus* Amin and Heckmann, 1991 (18-20 rows having 11-13 hooks). As compared with the other two species of *Polymorphus* from Pakistan, the female (21.6 – 23.80 by 0.80 – 1.20) in the present species is larger as compared *P. nickoli* (8.47 – 11.93 by 1.24 – 2.18) and *P. sindensis* (16.44 by 2.88). Similarly, the male (23.6 – 39.28 by 1.0 – 1.2) are larger as compared to *P. nickoli* (10.12 – 10.16 by 1.22 – 1.26) and *P. sindensis* (5.48 by 1.28).

The arrangement of hooks in the present species is (9 – 12) rows having 6 – 12 hooks) while in *P. nickoli* (10 rows of 16 hooks) and in *P. sindensis* (14 rows of 16 hooks) are present. The shape of testis in the present specimens is oval more or less capsule shaped while in *P. sindensis* and *P. nickoli* it is rounded.

Amin (1992) also suggested *Hexaglandula ariusis* Bilqees, 1971 and *Hexaglandula karachiensis* Bilqees, 1971 reported from the fishes of Karachi coast as junior synonyms of *Polymorphus*.

The above mentioned characteristic differences are sufficient to separate the present species from all other species of the genus.

Accordingly it is regarded as a new species with the specific name *Polymorphus fatimae*. The new species is named in the honour of late Dr. Haseen Fatima, Department of Zoology, University of Karachi.

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