



A new species of *Polymorphus* Lühe, 1911 (Acanthocephala: Polymorphidae) in Black Coot, *Fulica atra* (Aves: Rallidae), Pakistan

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As a consequence of geographical and climate factors, a high percentage of Pakistan's bird fauna is migratory with a great number of Palearctic winter visitors which come to exploit the improved availability of food. Palearctic winter visitors normally are species, mainly from Soviet Union, represented by non-breeding individuals. The Black Coot, *Fulica atra* Linnaeus, 1758 (Gruiformes: Rallidae), comes to Pakistan from Siberia in winter (October–March) each year. *Fulica atra* is an omnivore that feeds on pondweeds, invertebrates, seeds, fruit and variety of small live prey, including eggs of other water birds. Birds are found mainly on freshwater lakes, reservoirs, rivers and town park lakes and they have also been found living in man-made ponds in Pakistan. These habitats provide favorable environment for breeding as well as the development of populations of snails, crustaceans and insect fauna, which enhances likelihood of acquiring parasitic infection.

As part of this study, a total of 101 individuals of *F. atra* were collected from water bodies of Sindh Province, Pakistan. Birds were killed by overdose of anesthesia, dissected, and examined for helminth parasites. During examination, seven specimens (four males and three females) of an acanthocephalan belonging to *Polymorphus* Lühe, 1911 were collected from intestine of a single host. Specimens were fixed in Alcohol-Formalin-Acetic acid (AFA) solution, flattened under slight cover glass pressure, stained with Borax carmine, dehydrated in graded series of ethanol, cleared in clove oil and xylol, and mounted permanently in Canada balsam. Diagrams were made with help of Camera Lucida and photographs taken with an Olympus DP12 camera. All measurements are in millimeters (mm) except those of eggs, given in micrometer (µm). Specimens were deposited in the collection of the Department of Zoology, University of Sindh, Jamshoro, Pakistan.

Acanthocephalans of genus *Polymorphus* Lühe, 1911 are poorly known in Pakistan except for the reports by Mutiur-Rahman *et al.* (2008), Khan *et al.* (2008), Khan, Ghazi and Bilqees (2002) and Khan and Bilqees (1980). A new species, *Polymorphus fulicai*, is described and illustrated herein.

Polymorphus fulicai, n. sp.

Figs (1–8)

Diagnosis. Body in both sexes spinose, thick, fusiform. Proboscis globular, double walled. Neck long cylindrical. Proboscis receptacle cylindrical, double walled. Body of female worms filled with ovarian balls and eggs scattered in entire body up to proboscis receptacle. Second quarter of trunk in both sexes covered with small spines, distributed equally on ventral and dorsal surfaces in 46 longitudinal rows of 16 spines each; spines 0.03 mm long. Proboscis armed with 19 longitudinal rows of 8 hooks each. Basal hooks and apical hooks smaller in size than middle ones. Cement glands four, cylindrical. The new species differs from its congeners on the basis of distribution of cuticular spines, number of longitudinal rows of hooks, number of hooks per row, size of hooks, smaller lemnisci and oblique testes.

Description (Table 1).

Host. Black Coot, *Fulica atra* Linnaeus, 1758 (Aves: Rallidae)

Site of infection. Intestine

Etymology. Specific name refers to generic name of the host.

Remarks. Lühe (1911) proposed *Polymorphus* to accommodate acanthocephalans from birds, establishing the type species as *P. boschadis* (Schrank, 1788) Railliet, 1919, later recognized as a synonym of *P. minutus* (Goeze, 1782) Lühe, 1911. Several members of genus have been reported from birds, including the following species:

P. trochus Van Cleave, 1945; differs from the present species in having a larger body in both sexes, a pear shaped