



First record of genus *Amidostomum* Railliet and Henry, 1909 (Nematoda: Amidostomidae) in Pakistan

N. A. BIRMANI, A. M. DHAREJO AND M. M. KHAN

Department of Zoology, University of Sindh, Jamshoro, Sindh, Pakistan
Corresponding author: N. A. BIRMANI, Email: birmani@gmail.com Cell. No.92-3342612145

Received 25th July 2011 and Revised 10th August 2011

Abstract: During present studies on helminthofauna of Black Coot, *Fulica atra* (Gruiformes: Rallidae), in Sindh Province of Pakistan, 502 specimens (207♂ and 295 ♀) belonging to the genus *Amidostomum* Railliet and Henry, 1909 were collected from gizzards of 57 hosts. On the basis of diagnostic characteristics like body size, buccal capsule, shape and size of spicules, bursa and position of vulva, these specimens are identified as *Amidostomum fulicae* (Rudolphi, 1819) Seurat, 1918. This is first record of genus *Amidostomum* Railliet and Henry, 1909 from Pakistan.

Keywords: Avian nematode, *Amidostomum fulicae* (Rudolphi, 1819), *Fulica atra*, Sindh, Pakistan.

1. **INTRODUCTION**

A large number of migratory birds from Central Asia and European countries visit Pakistan in winter (October-March) every year. Sindh province with magnificent lakes and wetlands has always been regarded as welcoming ground for millions of migratory birds. Black Coot is an omnivore, feeds on pond weeds, invertebrates, seeds, fruit and variety of small live prey including eggs of other water birds (Roberts, 1991).

Akhtar (1955) first time recorded a nematode *Dispharynx alata* in *Tochus birostris* from, Punjab, Pakistan. Other reports of avian nematodes in Pakistan include Sarwar (1956), Akram (1972), Bilqees *et al.*, (1977), Khanum *et al.*, (1980), Bilqees *et al.*, (1983), Ahmed (1987), Farooq *et al.*, (1992), Akram (1996) Das *et al.*, (2009).

Reports on species of genus *Amidostomum* Railliet and Henry, 1909 from other countries of world include Kavetska *et al.*, (2011), Yoshino (2009), Borgsteede (2006), Lomakin (1991, 1993), Petrova (1987), Barus *et al.*, (1978), MacNeill (1970), Kobuley *et al.*, (1968) Czapliński (1962).

Since, Black Coot is a migratory game bird and considered as a palatable food throughout Pakistan. Therefore, this bird was investigated for the presence of endohelminths.

2. **MATERIAL AND METHODS**

Live 101 *Fulica atra* (Gruiformes: Rallidae), collected from different water bodies of Sindh Province, Pakistan were examined for endohelminths. A total of 502 live nematodes individuals (207♂ and 295 ♀) belonging to genus *Amidostomum* Railliet and Henry, 1909 were collected from gizzards of 57 hosts.

Live nematodes were killed in hot 70% ethanol, cleared in glycerol and lactophenol and preserved in alcohol glycerol solution. Illustrations were made with the aid of camera Lucida. All measurements are given in millimeter (mm) except eggs which are given in micrometer (µm). Specimens were identified and compared with the literature available. Specimens are deposited in the Department of Zoology, University of Sindh, Jamshoro, Pakistan.

3. **RESULTS AND DISCUSSION**

Family Amidostomidae Baylis and Daubney, 1926. Genus *Amidostomum* Railliet and Henry, 1909 *Amidostomum fulicae* Rudolphi, 1819 Seurat, 1918 (Fig. 1-4)

Description

Male:

Body measured 8.40-8.60 X 0.16-0.20. Buccal capsule wider than deep, 0.01 X 0.01-0.02 in size. Esophagus measured 0.46-0.58 X 0.03-0.05. Spicules complicated, equal in size 0.07-0.10, divided into two parts of which outer is shorter than inner. Gubernaculum club-shaped, 0.01-0.02 long. Caudal bursa has two lateral lobes, with their free margins bent towards ventral surface. All rays at bursa originate independently from base of lateral lobes. Ventral rays narrow, long, separated from each other. Lateroventral rays longer, reaching up to margins of the bursa. Lateral rays shorter and thicker than ventral rays; shortest rays of this group are externolateral rays which do not reach up to margins of bursa. Dorsal ray originates between bases of lateral lobes. No papillae observed at posterior end.

Female:

Body measured 5.34-9.30 X 0.15-0.23. Buccal capsule wider than deep, 0.01 X 0.01-0.03 in size. Tail

0.11-0.16 X 0.03-0.05 in size. Esophagus 0.47-0.48 X 0.04 in size. Vulva near middle of body. Eggs round to oval in shape, measured 60-90 X 40-70.

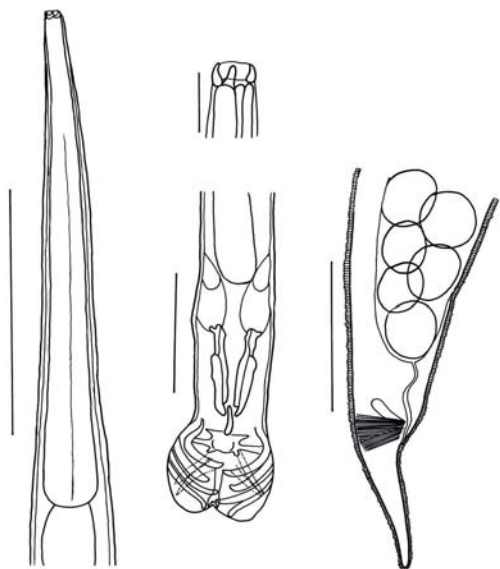


Fig. 1-4. *Amidostomum fulicae* (Rudolphi, 1819)

1. Buccal capsule; 2. Triangle teeth;
2. 3. Bursa; 4. Female posterior extremity.

The genus *Amidostomum* Railliet and Henry, 1909 was proposed to accommodate nematodes from birds. Type species is *Amidostomum anseris* (Zeder, 1800) Railliet and Henry, 1909 reported from gizzard of Water fowls. Species of genus *Amidostomum* Railliet and Henry, 1909 have been reported from avian hosts including *Anas acuta*, *A. clypeata*, *A. crecca*, *A. penelope*, *A. platyrhynchos*, *A. querquedula*, *A. strepera*, *A. poecilorhyncha*, *Anser albinoformis*, *A. fabalis*, *Anser anser*, *A. albifrons*, *Ardea purpurea*, *Aythya ferina*, *A. fuligula*, *A. marila*, *Bucephala clangula*, *B. islandica*, *Cygnus cygnus*, *C. columbianus*, *Fulica atra* (type host), Geese, *Himantopus himantopus*, *Lagopus lagopus*, *L. mutus*, *Larus ridibundus*, *Melanitta fusca*, *M. nigra*, *Mergus albellus*, *M. merganser*, *Olor buccinator*, *O. columbianus*, Pochards, *Podiceps ruficollis*, *P. nigricollis*, *Recurvirostra avocetta*, *Somateria mollissima*, Swans, *Tadorna tadorna*, *Tetrao urogallus* and *Tetrastes bonasia*. Present specimens have close resemblance with *Amidostomum fulicae* (Rudolphi, 1819) Seurat, 1918 collected from *Fulica atra*. Hence, it is identified as such. This genus is being reported for the first time from Pakistan.

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