

Two digenetic trematodes of mallard duck (*Anas platyrhynchos* L., 1758) in Al-Hammar marshes

S.A.M. Al-Daraji¹, M.A.A. Bannai¹ and A.A.K. Abbas²

¹Marine Science Centre, ²College of Education, University of Basrah, Iraq

Abstract Two species of digenetic trematodes viz (*Eucotyle* sp. and *Orchipeidum jolliei*) were infect the mallard duck *Anas platyrhynchos* in Al-Hammar marshes. The present finding of these two parasites is the first recored in the Iraqi aquatic birds.

Introduction

Mahdi and Georg (1969) mentioned that birds in Iraq are very numerous and comprise as many as 385 different species. Among those birds many species of aquatic birds could form an important source of animal protein which can be easily available to marsh people and villagers.

Aquatic birds are considered as one of the important members of the aquatic environment for their role as competitors with fish in farms as well as consuming young fishes (Mhaisen & Abul-Eis, 1992). It may also act as a definitive host of some helminthes parasites which can cause great losses in fish breeding or it may act as reservoir hosts to many parasites which in turn cause serious diseases to poultry (Nikolsky, 1963). Some species of aquatic birds were also well known to serve as a definitive host of parasites which are dangerous to man (Barus, 1974).

Recently, many species of aquatic birds were found to be capable of transmitting and distributing a dangerous infection called avian influenza to man and his domestic animals. This infection is caused by many strains of viruses particularly the strain H5N7.

In general and as stated by Awad *et al.* (1993), helminths fauna of Iraqi birds had received little attention. Recently Al-Mayah & Abdullah (2002) in their check-list on the parasitic fauna of the Iraqi aquatic birds reported that Mallard ducks (*Anas platyrhynchos*) was rarely referred to as a host. It was only studied in Basrah Province by Al-Hadithi & Mustafa (1991) and Al-Mayah & Abdullah (1999).

The present study aimed to evaluate the parasitic fauna of the Mallard duck (*A. platyrhynchos*) which is one of the commonest members of the birds in the environment especially in Al-Hammar marsh.

Materials and Methods

Three birds of Mallard duck (*Anas platyrhynchos* L.) were brought alive from Al-Mdaina market during September 2004. The birds were scarified by chloroform and dissected out searching for the parasites. The detected parasites were treated as explained by Al-Daraji *et al.* (2004).

Results

Two species of digenetic trematodes *Eucotyle* sp. and *Orchipeidum jolliei* were encountered in the ureters and Trachea of *Anas platyrhynchos*, respectively. Brief description of each parasite is given below.

1. *Eucotyle* sp. Fig. 1

Site: Ureters

Prevalence: 33.3%

Mean intensity of infection: 3

Description: (based on 3 specimens).

Eucotylidae: Body of the worm flattened, elongated, 3.0-5.1 mm long and 0.460-0.630 mm wide. Tegument spinous. Oral sucker terminal, muscular, rounded, 0.195-0.253 mm in diameter. Pharynx subrounded, overlapping with the oral sucker, 0.096-0.131 mm in diameter. Esophagus long, tubular, slender, 0.310-0.380 mm long. Intestinal bifurcation starting at the level of vitellarian follicles. Acetabulum absent. Ceca extending near to the posterior extremity of the body. Cirrus pouch absent. Genital pore median, posterior to the intestinal bifurcation.

Testes paired, lobed, with irregular shape, lateral, ventrointestinal in mid region of the body.

Ovary located at the beginning of the second third of the body, lobed. Vitellaria follicular and located laterally in narrow rows.

Uterus coiled and fills the intercecal space. Eggs operculate, ovoid, 0.024-0.031 mm long and 0.010-0.013 mm wide. Excretory pore terminal.

2: *Orchipedium jolliei* Schell Fig. 2

Site: Trachea

Prevalence: 66.6%

Mean intensity of infection: 3.5

Description: (based on 5 specimens).

Orchipedidae: Body fusiform, rounded anteriorly, elongated and tapered posteriorly, 17.5-18.3 mm long and 3.1-3.3 mm wide. Tegument non-spinous, posterior end has ridges. Oral sucker rounded, large, subterminal, 1.0-1.3 mm in diameter. Pharynx ovoid, muscular, overlapping with oral sucker dorsally, 0.640-0.713 mm long and 0.486-0.520 mm wide. Esophagus tubular curved anteriorly forward the Pharynx dorsally. Intestinal bifurcation occurred dorsally over the pharynx. The intestinal ceca narrow and extending laterally to the posterior extremity of the body. Acetabulum, spherical, large, muscular, 1.43-1.80 mm in diameter. Cirrus pouch absent. Genital pore anterior to acetabulum.

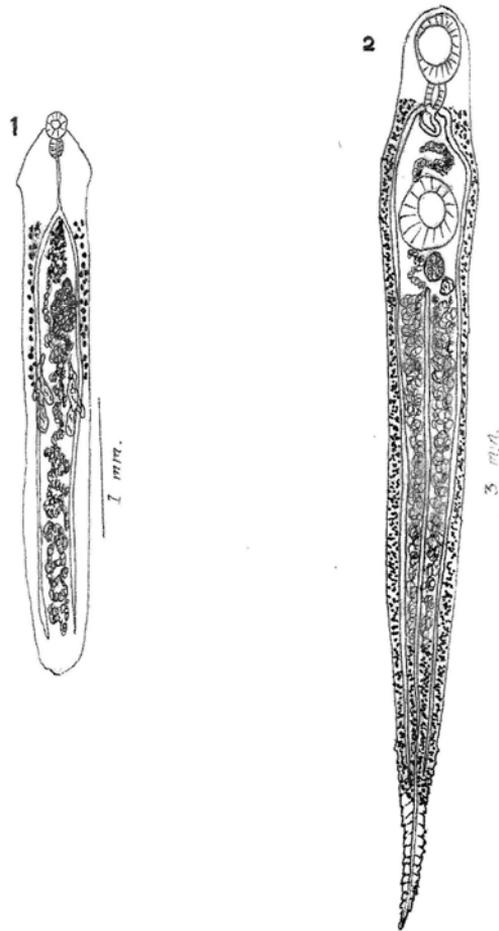
Testes numerous, follicular and filling the intercecal space posterior to ovary. Ovary rounded, located just posterior to the acetabulum at the left side of the body, 0.688-0.753 mm in diameter.

Vitellaria follicles small, numerous and extending laterally from the level of intestinal bifurcation up to posterior end of the body.

Uterus coiled and fills the intercecal space anterior of testes. Eggs oval, not operculate 0.081-0.106 mm long and 0.046-0.057 mm wide. Excretory pore terminal.

Discussion

The present specimens of *Eucotyle* sp. is closely resemble *E. wehri* Price, 1930 and *E. warreni* Schell, 1967 but it is larger than the former species and smaller than the later one.

Figure 1. *Eucotyle* sp.,Figure 2. *Orchipedium jolliei*

The present specimens can not be identified completely to species due to the difficulties in drawing and marking the tegument spines.

Previously twelve species of the genus *Orchipedium* have been described. Schell (1967) mentioned that all species of the genus *Orchipedium* are known as parasites of birds except *O. leanderi* Farooqi, 1958 which was found beneath the tergites of the freshwater shrimp *Leander fluminicola* in India.

The present specimens of *O. jolliei* are closely similar to the features and measurements of Schell's (1967) specimens, although the present parasite appeared in a small size in contrast with original specimen.

The present finding of *Eucotyle* sp. & *Orchipedium jolliei* represent its first record in Iraqi aquatic birds.

References

- Al-Daraji, S.A.M., Bannai, M.A.A. , Mansour, A.J. & Jassim, A.A.R. 2004. Some helminth parasites of common gull *Larus canus* L., 1758: Genus *Galactosomum* (Digenea), *Tetrameres* and *Seuratia* (Nematoda): First new record. Basrah J. Veterin. Res. (accepted).
- Al-Hadithi, I.A.W. & Mustafa, F.A.J. 1991. Some helminth parasites of two species of aquatic birds *Anas platyrhynchos* and *Larus ridibundus* from Basrah, Iraq. Basrah J. Agricult. Sci., 4(1-2): 245-252.
- Al-Mayah, S.H. and Abdullah, B.H. 1999. Respiratory system trematodes of the family Cyclocoelidae parasitized in some water fowls in Basrah. Marine Mesopotamica 14(1): 207-214.
- Al-Mayah, S.H. & Abdullah, B.H. 2002. Helminth fauna of Iraqi aquatic birds: A check-list (B). Marine Mesopotamica Vol. (1): 101-106.
- Al-hadithi , I.A.W.and Mustafa,F.A.J.1991.Some helminth parasites of two species of aquatic birds *Anas platyrhuchos* and *Larus ridibundus* from Basrah ,Iraq J.Agric.Sci.4(1):245-252.
- Awad, A.H.H. , Al-Mayah, S.H. & Abdullah, B.H. 1993. Aquatic birds helminth fauna in Basrah Province, Iraq: A check-list A. Basrah J.Scince 11(1): 115-131.
- Barus, V. 1974. Redescription and taxonomic position of *Trichosoma pachyderma* Linstow, 1877 (Capillaridae). Folia parasitol., Praha,21:381-384.
- Mehdi, N. & Georg, P.V. 1969. A systematic list of the vertebrates of Iraq. Iraq Natural History Museum, No.26: 1-104.
- Mhaisen, F.T. and Abu-Eis, E. 1992.Parasitic helminths of eight species of aquatic birds in Babylon fish farm, Hilla, Iraq. Zoology in the Middle East, 7:115-119.
- Nikolosky, G.V. 1963.The ecology of fishes .London, 352pp.
- Schell, S.C. 1967. New species of trematodes from birds in the Pacific northwest. Parasitol. 58(5):1000-1004.

نوعان من الديدان ثنائية المنشأ في طيور البط (*Anas platyrhynchos* L., 1758) من أهوار الحمار

سالم عبد مطلق الدراجي¹، ماجد عبد العزيز بناي¹ و عباس عبد الكريم عباس²
¹ مركز علوم البحار، ² كلية التربية، جامعة البصرة، العراق

المستخلص تم تسجيل نوعين من الطفيليات ثنائية المنشأ *Anas platyrhynchos* في طيور البط *Eucoyle* sp. and *Orchipedum jolliei* في هور الحمار، اعتبر تسجيل هذين النوعين من الطفيليات هو التسجيل الأول في الطيور المائية العراقية.