أول تسجيل وجود دودة بلهارزيلا بولونيكا
فى الشرشير الشتوى فى جنوب مصر

ع . ع . سكلا

قام الباحث بفحص بطة برية باسم الشرشير الشتوى حيث اكتشف اصابتها بدودة البلهارزيلا بولينكا . وهذه هى المرة الأولى التى تسجل فيها هذه الدودة فى مصر . وقد قام الباحث باعادة وصفها ومقارنتها مع من سبقه من الباحثين وجدت فروق طفيفه بينها وبين الأنواع السابقة والتى لا تستلزم أعتبارها نوع جديد . ولم يعرف مصدر اصابتها وانما يقترح الباحث استمرار الدراسة عن العائل الوسيط والاطوار اليرقية .

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BILHARZIELIA POLONICA (KOWALEWSKI, 1895) (TREMATODA, SCHISTOSOMATIDAE)A FIRST RECORD FROM NATURALLY INFECTED DUCK TEAL (ANAS C.CRECCA) IN UPPER EGYPT

(With One Plate)

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SUMMARY

Bilharziella polonica is reported for the first time from Egypt in the wild duck, Anas c. crecca. The adult worm was redescribed and some morphological differences were detected. The source of infection has not yet been determined and awaits further investigations.

INTRODUCTION

Bilharziella polonica was first described by KOWALEWSKI (1895, 1896) from Anas boschas L. in Poland. It was recovered later by EJSMONT (1929), BEZUBIK (1956), SULGOSTOWSKA (1958, 1960) and KHALIFA (1972) from Poland. It was also recorded in Europe and North America (LAPAGE, 1962). SZIDAT (1929) discovered the life cycle of the parasite.

In Egypt, LEIPER (1915) obtained cercariae from Melania tuberculata which he thought to be cercaria of Bilharziella polonica. However among the avian schistosomes, B. polonica has never been reported from Egypt, while Gigantobilharzia sp. was reported experimentally by FAHMY et al. (1976).

MATERIAL AND METHODS

A wild duck, Anas c. crecca was captured alife from EL-MONSHAH, SOHAG Governorate in January 1979. Adult flukes isolated from various blood vessels by dissection, were washed in physiological saline, fixed in 70% alcohol, stained in acetic acid alum carmine and mounted in canada balsma. Drawings were dome by the aid of camera lucida. Measurements were taken from the stained mounted specimens.

RESULTS

More than 50 specimens of immature and sexually mature males and females of Bilherziella polonica were obtained from the portal, intestinal, mesentric and renal blood vessels. Adult males were conmmoner than females. The body of adult males measures 2.8-3.0 mm. in length and 0.45-0.47 mm. in maximum breadth. It is flattened dorso-ventrally, lanceolate and spiny.The lateral margins are curved particularlly at the body equator forming a weak ill-developed gynaecophric groove. Such a groove is more clearly visible while the worm is living. The oral sucker is usually oval measuring 0.15 x 0.12 mm. and smaller than the ventral sucker. There is a clear constriction following the oral sucker. The ventral sucker is large, pedunculated when viewed laterally.It is nearly spherical measuring 0.19 x 0.18 mm. The mouth opening is located in the centre of the oral sucker. It leads to the oesophagus, measuring about 0.63 mm. in length. Its base is surrounded by a cluster of oesophageal glands. The bifurcation of the intestinal caeca occurs at the level of ventral sucker, but they reunite about

the middle of the body, 1.45 mm. from the anterior end. The common caecum forms acute curves and ends about 0.075 mm. from the posterior end. Dark pigments usually fill the digestive tract especially near the posterior end.

Male genital system is composed of numerous testicles (about 75) which vary in shape and distribution. Few of them are located infront of the intestinal union, but the majority are distributed on either side of the common caecum. The last testicle surrounds the end of the common caecum. The seminal vesicle and cirrus sac are located midway between the ventral sucker and the intestinal re-union. The ejaculatory duck and muscular cirrus lead to the genital pore which occurs laterally and anterior to the middle of the body. H-shaped area probably representing a part of the nervous system could be easily traced between the oral and ventral suckers. Eye spots are usually detected, however they are absent in some specimens. The excretory canal could easily be detected on both sides of the testicles forming an excretory bladder at the poserior end of the body (Plate 1, Fig. A).

The adult female is flattened dorso-ventrally and spiny. It measures 3.1-3.3 mm. in length and 0.14-0.16 mm. in maximum breadth. The anterior third appears to be broad and lancet-shaped, while the posterior two thirds are narrower with parallell margins. In fresh specimens the posterior two thirds were seen rolled with curved lateral edges. The oral sucker is oval measuring 0.060 x 0.045mm., followed by a constriction, while the ventral sucker measures 0.075 x 0.060 mm. The oesophagus measures about 0.38 mm. in length. It is surrounded distally by oesophageal glands. The bifurcation of the intestinal caeca

occurs at the level of ventral sucker. Re-union occurs approximately at the end of anterior third,at a distance of 1.15 mm. from the anterior end. The common caecum runs in a zigzag manner with gentle curves.

The female genital organs are composed of an elongate, folded or V-shaped ovary. The short branch measures 0.13 mm. and the long one is 0.15 mm. It lies infront of the re-union of the intestinal caeca. An oviduct arises from the posterior pole of the ovary and turns anteriorly to join the short uterus which contains one egg at a time. The genital pore is located medially just behind the ventral sucker. The vitelline follicles lie anterior to the re-union of the intestinal caeca and on either side of the common caecum. The nervous system and eye spots are easily seen in contrast to the excretory canal which is difficult to trace, (Plate 1, Fig. B).

DISCSSION

Bilharziella polonica was described by KOWALEWSKI (1895, 1896, 1898 and 1903) from Poland; PRICE (1929) from NORTH AMERICA;BAER(1932) from Switzerland; BEZUBIK(1956) and KHALIFA (1972) from Poland. The parasite under discussion was found identical to those described by fore-mentioned workers. Nevertheless, few morphological differences were detected viz. the female worm is usually narrower and slightly longer than the male. Besides a constriction was observed behind the oral sucker. The male ventral sucker is pedunculated in the lateral view and looks like that of the humman schistosomes.The common caecum is acutely curved in males, but gently curved in females. The excratory canal is mostly invisible in females. The

terminal testicle encloses the end of the common caecum. The body of the female fluke is divided into a broad short anterior third and narrow long posterior two thirds. These difference alone are not sufficient in the opinon of the author to creat a new species unless the life cycle is fully studied.

Anas c. crecca inhabit Europe and North Asia. It is considered as an emigrating bird, visiting Egypt during winter in large flocks looking for more suitable enviromental conditions, (EL-NEGUMY et al., 1947). It is quite possible to reside in Egypt and then considered as an Egyptian bird.

Bilharziella polonica has never been reported in Egypt, and this seems to be the first record in this country. The question of natural infection in domestic ducks and other local aquatic birds awaits further investigations. In this connection Planorbarius corneus, Planorbis planorbis and Bathyomphalus contortus was determined as snail intermediate hosts for B. polonica (KHALIFA, 1972).

The source of infection has not yet been determined. Extension of this work to find out the intermediate host and cercarial stage is highly recommended.

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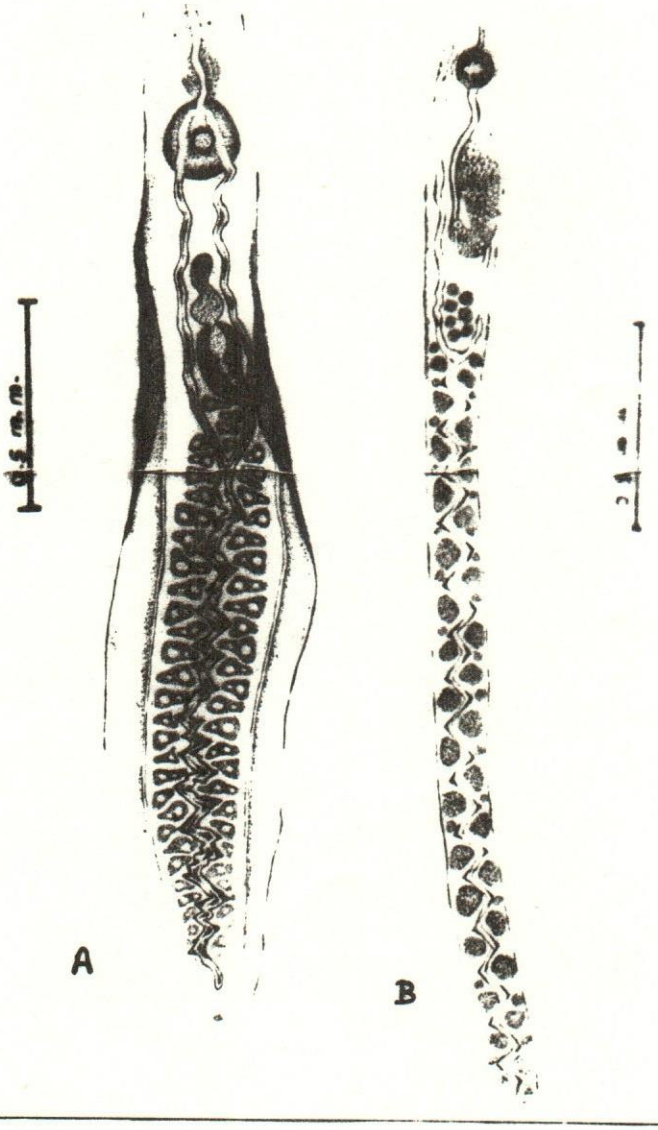

Plate I