

قسم الطفيليات  
كلية الطب - جامعة أسيوط  
رئيس القسم : أ.د/ أحمد مندور •

اكتشاف ووصف باتاجيفر بلاجاديدي ، نوع جديد ( اكينوستوماتيدي : تريماتودا )  
من طائر أبو منجل بصعيد مصر

عاطف سكلا ، محمود الهادي ، أحمد مندور

قام الباحثون بدراسة أنواع الديدان الورقية ( تريماتودا ) في أمعاء طائر أبو منجل الذي تم اصطياده بالقرب من مدينة أسيوط بصعيد مصر فوجدوا دودتين بالغتين هذا الى جانب خمسة ديدان أخرى غير بالغه وبدراسة هذه الديدان دراسة مستفيضة أمكن التوصل الى أن هذه الديدان تتبع جنس باتاجيفر (ديتنز ١٩٠٩) كذلك أمكن مقارنة هذا النوع بالأنواع الأخرى التي سبق دراستها ووصفها • ووجد الباحثون أن هناك اختلافات كبيرة في عدد الأشواك الجانبية وترتيبها هذا الى جانب قلة عددها بالنسبة لما سبق وصفه • ولهذا يعتبر هذا النوع من الديدان المفلحة الورقية نوعا جديدا ويقترح الباحثون تسميته باتاجيفر بلاجاديدي نسبة الى اسم الطائر ( العائل النهائي ) الذي وجدت به الإصابة •

Dept. of Parasitology,  
Faculty of Medicine, Assiut University,  
Head of Dept. Prof. Dr. A.M. Mandour.

**A DESCRIPTION OF NEW SPECIES *PATAGIFER PLEGADISI*  
(ECHINOSTOMATIDAE: TREMATODA) FROM NATURALLY INFECTED  
GLOSSY IBIS, *PLEGADIS F. FALCINELLUS* IN UPPER EGYPT  
(With 3 Figs.)**

By  
**A.A. SAKLA; M.E.M. MONIB and A.M. MANDOUR**  
(Received at 23/11/1987)

**SUMMARY**

The adults and five immature echinostomes were encountered in the intestine of *Plegadis falcinellus falcinellus* shot near Assiut City, Upper Egypt. Careful study of the worms proved that they belong to the genus *Patagifer* erected by DIETZ (1909). The present material was compared with the ten previously reported species and found to be different in having smaller number of collar spines. They were therefore considered to be a new species and named after their final host.

**INTRODUCTION**

During a routine survey of helminth fauna of aquatic birds in Assiut Governorate, echinostome parasites were encountered in one bird belonging to *Plegadis f. falcinellus*. The present work was done to relate these worms to their specific taxonomic position.

**MATERIAL and METHODS**

Adult and immature parasites were collected and carefully washed in saline and fixed in F.A.A. fixative. Slight pressure was exerted on the worms. Specimens were stained in acetic acid alum carmine and mounted in Canada balsam. Measurements were taken from the mounted specimens and drawings were made by the aid of camera lucida.

**RESULTS**

Adult worm is elongate with blunt posterior end. The length is 16.5-17.5 mm. Maximum breadth at the level of the acetabulum and is amounting to 2.00-2.10 mm. (Fig. 1). Cuticle aspinose. The head collar is well-developed and characterised by a notch reaching to the level of the oral sucker. The collar is about 2.00-2.10 mm. broad (the same maximum breadth of the body). It carries 54 collar spines; their arrangement was bilaterally symmetrical. On each half of the collar, they were as follows: five corner spines, four ventrals, eleven laterals, four dorsal and three medials, a total of twenty seven spines. Most of the spines are equal in size although they appear in the drawing as different because some spines were oblique in position than others. However, the innermost dorsals on both side are definitely smaller than other

dorsals. The upper lateral parts of the collar is provided with a group of glands which are more dense towards the periphery (Fig. 2). Oral sucker is subterminal, spheroidal measuring 0.430-0.442 x 0.460-0.471 mm. Ventral sucker is at about 2.0-2.2 mm. from the oral sucker and measures 1.45-1.60 x 1.56-1.66 mm. Ratio o.s./v.s = 1:4.7. No prepharynx. Pharynx 0.225-0.250 x 0.167 mm. Oesophagus is 0.500-0.550 mm. long. It bifurcate into two thin simple intestinal caeca anterior to the acetabulum and extending to the posterior extremity of the body. Testes tandem, smooth, oval in shape, anterior testis measure 0.950-0.970 x 0.475-0.482 mm. and lies at the end of the anterior half of the body. The posterior testis measure 0.941-0.948 x 0.470-0.474 mm. and lies at the beging of the posterior half of the body. Vasa differentia pass forwards and are joined together near the posterior border of the acetabulum. The two testes are 0.75-0.78 mm. away from each other. Cirrus pouch lies anterior to the acetabulum. Ootype lies anterior to the anterior trstis and it receive the vitelline ducts and the oviduct and is surrounded by Mehlis gland. Ovary anterior to the ootype and is more or less spherical, smooth, median in position and measures 0.350-0.450 mm. in diameter. Uterus short with very few coils and contains 140-150 ova. Genital pore median just posterior to the intestinal bifurcation. Vitellaria follicular confined to the lateral fields, overlapping the intestinal caeca but never confluent on the posterior testicular space which is about 6.50-7.00 mm.

#### Immature worm:

Five immature worms were at different stages of maturity. Their length differed from 5-12 mm. while their maximum breadth (at the level of the ventral sucker) was from 0.5-1.5 mm. They were aspinose. The head collar and the number and the arrangement of collar spines were similar to those described for the adult stage. Oral sucker was about 250-300 x 265-310 microns. While the ventral sucker was 780-930 x 820-980 microns i.e. the same o.s./v.s. ratio as in adult worms. Mouth opening was found in the bottom of the oral sucker; and followed by a short prepharynx. Oesophagus was about 380-420 in long. It bifurcated just anterior to the ventral sucker into two simple intestinal coeca. Only one of the immature worms (Fig. 3) was showing the rudiments of two testes and ovary. Vasa efferentia and their union to form the vas deference was clear and the cirrus pouch could be seen between intestinal bifurcation and ventral sucker. Vitellaria in the form of minute follicles began to appear inthe lateral fields of the lower half of the body in relation to the intestinal coeca.

Host : Glossy ibis, Plegadis falcinellus falcinellus.

Habitat : Small intestine.

Locality : Assiut Governorate, Upper Egypt.

Specimens : Deposited in the Dept. of Parasitology, Faculty of Medicine, Assiut University.

### **DISCUSSION**

Ten species belonging to the genus Patagifer Dietz, 1909 are already on record. These are Patagifer bilobus RUD (1819), DIETZ, 1909; P. consimilis DIETZ, 1909; P. acuminatus JOHNSTON, 1917; P. fraternus JOHNSTON, 1917; P. parvispinosus YAMAGUTI, 1923; P. wesleyi VERMA, 1936; P. simarai NIGAM, 1944; P. skrzjabini HILMY, 1949; P. srivastavaei PETER, 1954 and P. brygooi described by RICHARD, 1964. JAIN and SRIVASTAVA (1970) discussed the important morphological features which could be used in species differentiation, and among the important ones, they mentioned the number of the collar spines, the presence of a notch at the post-erior margin of the acetabulum, the extent of overlapping of the cirrus sac by the ventral sucker, the distance between the ovary and testes and the breadth of the collar in

## A DESCRIPTION OF NEW SPECIES PATAGIFER PLEGADISI

relation to that of the body. Furthermore, they synonymized P. simarai described by NIGAM (1944) with P. bilobus. Although PETER (1954) erected P. srivastavai as a new species after carrying on its life cycle, yet JAIN and SRIVASTAVA (1970) reduced it to a synonym with P. wesleyi VERMA, 1936.

The species under discussion differs from all the previously described species in having smaller number of collar spines (56) while the others have 58-60 collar spines. The number of spines was found to be constant in very young juvenile worms as well as in immature adults. This observation supports TUBANGUI'S (1932) general conclusion that there exists a specific resemblance between echinostome cercariae, juveniles and adults and disagree with IWATA and TAMURA (1933) who found the head crown of the adults E. revolutum armed with 37 spines while the younger ones has had only 35 spines. Furthermore, the spines of the species under discussion was found to be bigger in size than species described before and they were all equal in size. The new species is the first Patagifer parasite to be encountered in glossy ibis, Plegadis falcinellus falcinellus. Therefore, Patagifer plegadisi n. sp. is proposed for the species under discussion. This is the first species belonging to the genus Patagifer to be reported from Egyptian aquatic birds.

### REFERENCES

- Dietz, E. (1909): Die Echinostomiden der Vogel. Zool. Anz., 34, 180-192.
- Iwata, M. and Tamura, O. (1933): Some intestinal parasites in ducks from Japan. Annot. Zool. Jap., 14, 1-6.
- Jain, S.P. and Srivastava, O.N. (1970): On the validity of some species of the genus Patagifer (Trematoda : Echinostomatidae). Proc. Ind. Acad. Sci., Sect. B, 72, 156-161.
- Nigam, V.V. (1944): New trematodes of the family Echinostomatidae Poche, 1925 part III. genus patagifer. Allahabad Univ. Stud. Sec. Biol., 9-13.
- Peter, C.T. (1954): A note on the life cycle of Patagifer srivastavai n. sp. raised experimentally. Proc. Ind. Sci. Congress, 41st, part III, p. 221.
- Richard, J. (1964): Trematodes D'oiseaux de Madagascar. Note III. Espèces de la famille Echinostomatidae Poche, 1926. Ann. Parasit. hum. comp., 39, 607-620.
- Tubangui, M.A. (1932): Observations on the life history of Euparyphium murinum Tubangui, 1931 and Echinostoma revolutum Froel., 1802 (Trematoda). Phil. J. Sc., 47, 497-513.

### EXPLANATION OF FIGURES

- Fig. (1): Patagifer plegadisi n. sp., Camera lucida drawing.
- Fig. (2): Patagifer plegadisi, head collar.

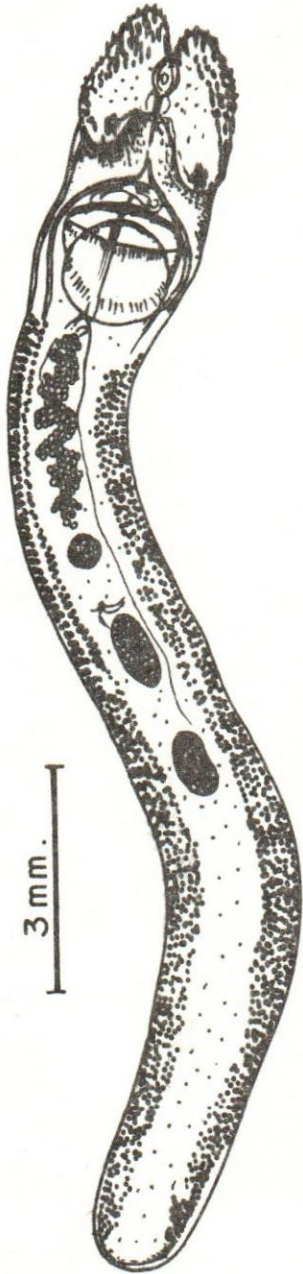


Fig.(1)

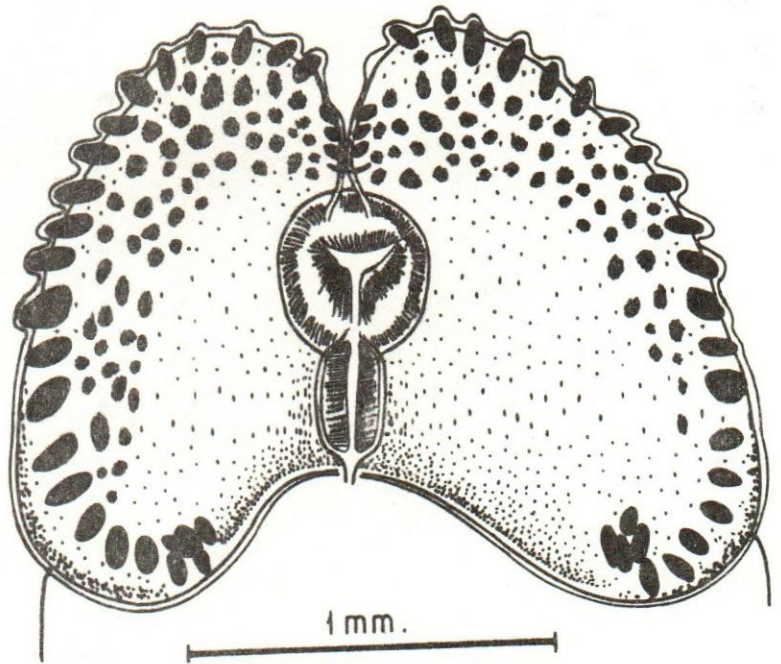


FIG.(2)

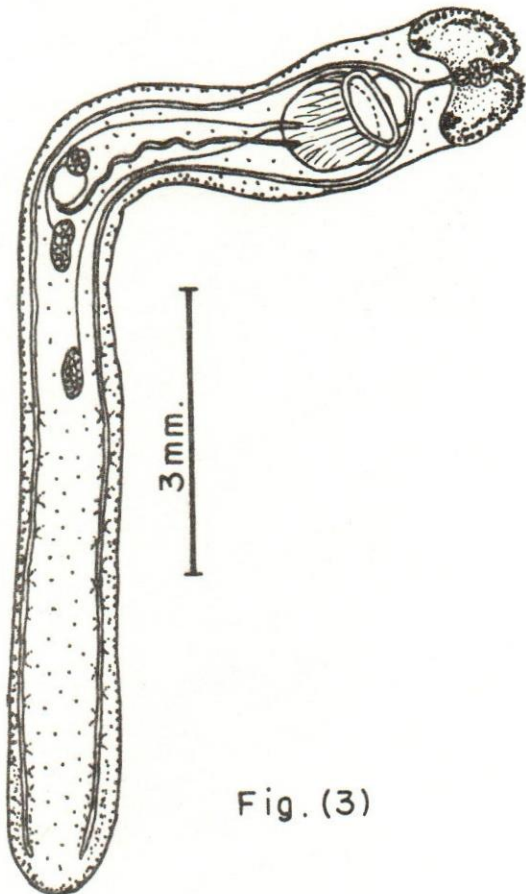


Fig.(3)

