Bull. zool. Surv. India, 7 (2-3) : 151-154, 1985

DJOMBANGIA CLARIAE N. SP. (CESTOIDEA : CARYOPHYLLIDEA : LYTOCESTIDAE) FROM A SILUROID FISH IN WEST BENGAL

By

D. K. KUNDU, S. B. BHATTACHARYA AND I. B. DATTA

Zoological Survey of India, Calcutta.

ABSTRACT

Djombangia clariae n. sp. is described from the fish *Clarias batrachus* from Bongaon in West Bengal and figured. It has been distinguished from the type species *D. penetrans* Bovien, 1926, *D. indica* Satpute and Agarwal, 1974 and *D. caballeroi* Sahay and Sahay, 1977.

INTRODUCTION

The genus *Djombangia* was erected by Bovien in 1926 from the fish *Clarias batrachus* as *D. penetrans* from Java. Satpute and Agarwal (1974) described *D. indica* from the duodenum of the same host species from Raipur, Madhya Pradesh. Sahay and Sahay (1977) described *D. caballeroi* from the fish *Heteropneustes fossilis* from Chotanagpur, Bihar State. The present communication deals with a fourth species, *D. clariae*, from *Clarias batrachus* from Bongaon, West Bengal.

Two specimens (one mature and the other immature) were recovered from the fish host. On study it was revealed that it significantly differs from *D. penetrans*, *D. indicas* and *D. caballeroi* in certain characters. When freshly recovered, the worm was milky white and highly contractile. After fixing in AFA under cover slip pressure, it contracted due to which deep denticulations appeared on the margin of the body. The neck region also contracted a little. Thus, the overall length and breadth of the body must have been affected to some extent. All measurements are in micron unless otherwise stated. The drawings have been made with the aid of a camera lucida.

SYSTEMATIC ACCOUNT

Family LYTOCESTIDAE Wardle and McLeod, 1952

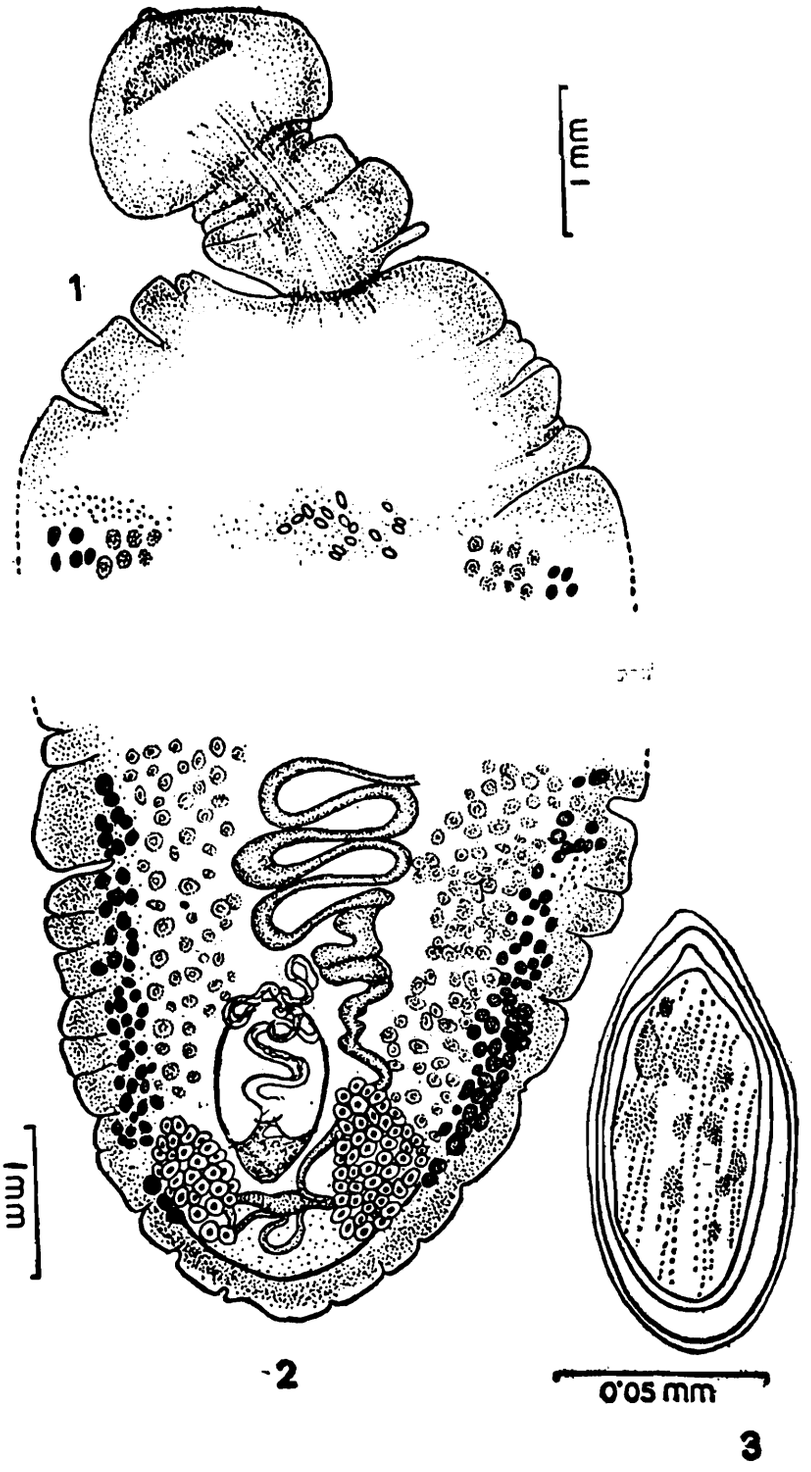
Genus **Djombangia** Bovien, 1926

Djombangia clariae n. sp.

(Figs. 1, 2, 3)

Description (with measurements on one mature specimen) : The body measures

14.035 mm in length and 5.087 mm in breadth. Tegument is very thick. Deep denticulations in tegumental layer developed due to contraction. The body can be easily distinguished into three regions—scolex, neck and body proper. Scolex measures 1.033 mm in length and 1.788 mm in breadth, roughly triangular. At the apex there seems



Figs. 1-3. 1. Anterior part of *Djombagia clariae* n. sp. showing scolex, neck and a part of body proper.
2. Posterior part of *Djombagia clariae* n. sp. showing details of internal organs.
3. An enlarged egg of *Djombangia clariae* n. sp.

to be some evagination (probably distorted form of terminal introvert). The scolex is profusely supplied with glandular cells along the margin. Such cells are heavily concentrated below the apex in a semilunar fashion. Scolex is followed by a contractile neck region, provided with thin muscle fibres. The body proper is marked off from the neck region which is of medium length.

In contracted from, the length of the body proper is 11.55 mm. It is oval or leaf-shaped with rounded posterior end. The testes are follicular, numerous, measuring 165 in diameter on average, distributed in lateral medullary field, from behind the neck to the ovary. Vas deferens tubular, narrow, much coiled and convoluted. It is followed by a short external seminal vesicle. Cirrus sac oval, muscular, discernible, situated in the median medullary zone in the posterior part of the body, enclosing convoluted cirrus, opening into genital atrium in front of ovarian isthmus.

Ovary dumb-bell shaped or bilobed, in two bunches of follicles, on either side of the median line, in the lateral medullary zone, connected by a wide isthmus. The ovarian lobes measure 893-962 by 485-555. The lobes of the ovary are held apart by an ovarian isthmus which measures 729 across. The oviduct arises from behind the ovary, descends and opens into the cotype. The uterus ascends, gets thrown into close intricate lateral coils, finally occupying the median medullary zone, and extending up to the level of testicular field. The eggs are nonoperculate, measuring 82-96 by 41. The uterovaginal duct opens into the genital atrium separately. The vitelline follicles are innumerable, measuring 132 in diameter on average, disposed in lateral cortical zone, surrounding the testicular field in a ring-like fashion, extending almost up to the level of testicular field anteriorly. No post-ovarian vitelline follicles. The common vitelline duct also opens into the ootype. Shell gland complex behind the ovarian isthmus.

Excretory pore terminal. Details of the canals could not be traced out.

Host :	*Clarias batrachus* (L.), Walking catfish, (Pisces. Clariidae)
Location :	Intestine
Locality :	Bongaon, West Bengal
Number of specimens :	1 mature specimen
Specimens deposited :	Z. S. I Reg. No. W 7476/1

Discussion : *Djombangia clariae* n. sp. differs from the type species, *D. penetrans*, in having discernible cirrus sac, smooth nonspinous eggs and presence of seminal vesicles. It differs from *D. indica* which is having a short neck, no receptaculum seminis, and in forming blind rather than perforated diverticula in host gut. Further, it comes close to *D. caballeroi* in many respects but differs mainly in the position of genital atrium which is in front of the ovarian isthmus and not anterior to the cirrus sac, and in the presence of a short seminal vesicle.

ACKNOWLEDGEMENTS

The authors are thankful to Dr. B. K. Tikader, Director, Zoological Survey of India, for providing laboratory and library facilities, and to Dr. M. Hafeezullah, Superintending Zoologist, for continuous encouragements.

References

Bovien, P. 1926. Caryophyllaeidae fro Java. *Vidensk. Meddr dansk. naturh. Foren.*, **82** : 157-181.

Satpute, L. R. and Agarwal, S. M. 1974. "Diverticulosis" of fish duodenum infested with cestodes. *Indian J. Expl. Biol.*, **12**(4) : 373-375.

Sahay, S. N. and Sahay, U. 1977. On a new caryophyllaeid eestode, *Djombangia caballeroi*, sp. nov., from a freshwater fish, *Heteropneustes fossilis*, in Chotanagpur, with an amendation of the generic characters. *Exerta Parasitologica En Memoria Del Doctor Eduardo Caballero Y Caballero*, 371-376.