SENGA MARULIUSI SP. NOV. (CESTODA : PTYCHOBOTHRIDAE) FROM THE INTESTINE OF A FRESH WATER FISH, CHANNA MARULIUS AT AZAMGARH

by
Rashmi Singh and A. K. Srivastava

Volume 16 (Zoological Science)
2010

Reprinted from
JOURNAL PURVANCHAL ACADEMY OF SCIENCES
JAUNPUR, INDIA
**SENGA MARULIUSI SP. NOV. (CESTODA : PTYCHOBOOTHRIDAE) FROM THE INTESTINE OF A FRESH WATER FISH, CHANNA MARULIUS AT AZAMGARH**

Rashmi Singh and A. K. Srivastava  
Department of Zoology, D. A. V. P. G. College, Azamgarh  
(Received on 22.06.2010)

**Abstract :** Senga maruliusi sp.nov. is described from the intestine of Channa marulius at Azamgarh. It differs from other species such as Senga puictasi in having number of testes, number of hooks and relative size of various organs.

**Introduction :** During the survey of cestode parasites of fresh water fishes, the authors collected many cestodes belonging to the genus of Polygonchothrium from the Basahi river of Azamgarh, U.P. One of them represent a new species.

**Materials and Methods :** The parasites were collected in 0.7% saline and fixed on slide using slight cover glass pressure to prevent curling. The Gower’s and Carmine stained specimens were dehydrated and mounted in Canada balsam. Camera lucida sketches were made and measured in mm.

**Description :** Body 50 to 100 long, 0.80 to 1.20 wide with more than 120 proglottids. Scolex rectangular 0.67 – 0.95 × 0.18 – 0.25 in size, slightly raised armed with a crown of 25 – 28 unequal hooks, 0.05 – 0.07 × 0.02 – 0.03 in size. Mature proglottides, 0.68 – 0.69 × 0.75 – 0.88 in size; gravid proglottide 0.24 – 0.75 × 0.80 – 1.04 in size.

Testes ovoid subspherical, 30 – 60 in number, located in the submedullary region, on post-lateral side of ovary equatorial ovary lobed each lobe is nearly equal.

Vitelline follicles scattered subcortically to submedullary region. Eggs numerous, suboval, shelled operculated, 0.02 – 0.03 × 0.2 – 0.4 in size.

**Host**  Channa marulius  
**Location**  Intestine
Locality
Azamgarh

Prevalence
6 parasites from 2 host, out of 60 examined.

*Senga maruliusi* sp. Nov.
Discussion: The new form belong to the genus *Polyonchobothrium*. The present form closely resembles to the species *P. clarias* and *Senga punctata* Gupta and Sinha[2] and Saayman et.al.[3] in having cirrovaginal opening, vitelline follicles lobed ovary, crown of hooks. It differs from all described species in having body situation, triangular scolex, lobed ovary nearly equal, subspherical testis and subcortically scattered vitelline follicles. The new species has been named after the location of host species. The generic diagnosis of *polyonchobothrium* given by Yamaguti[4].

Acknowledgement: The authors express their sincere thanks to Dr. Anoop Kumar Srivastava guide and Dr. Hasan Khalid Azami for help in this valuable work.

References:

***
Ref. No. TheBiosphere 30

Date 7.04.2011

To,

Dr RASHMI SINGH

It gives you immense pleasure that your paper A STUDY OF TETRAGONOCHELALUM SRIVASTAVAI (CESTODA : TETRAGONOCHELALIDAE, Yamaguti 1959) FROM THE INTESTINE OF A FRESHWATER FISH CLARIAS BATRACHUS AT AZAMGARI by Rashmi Singh and A k srivastava has been accepted by Editor Board of “The Biosphere” and editors agree to publish your paper in the forthcoming issue of “The Biosphere” Vol. 3, No.1, 2011

With warm regards.

Dr M.K. Pandey
Editor
C/O B.K. Singh,
Society Colony, Prabhu Nath Nagar
Po – P. Telpa
Chapra (Bihar) – 841302
Mob. 9835247114
E-mail – manoj_pandey45@yahoo.com
A STUDY OF TETRAGONOCEPHALUM SRIVASTAVAI (CESTODA: TETRAGONOCEPHALIDAE, Yamaguti 1959) FROM THE INTESTINE OF A FRESHWATER FISH CLARIAS BATRACHUS AT AZAMGARH

By:

Rashmi Singh and A.K. Srivastava

Dept. of Zoology, D.A.V.P.G. College, Azamgarh

E-mail id: singhrashmi828@gmail.com

ABSTRACT

*Tetragonocephalum srivastavai* Sp. Nov. is described from the intestine of *Clarias batrachus* at Azamgarh. It differs from other species such as *Tetragonocephalum ratnagiriensis*, in having number of testis, neck, shape of genital atrium, vitellaria and relative size of various organs.

INTRODUCTION

Cestodes are important parasites in freshwater (Wyatt and Kennedy, 1989). During the survey of cestode parasites of freshwater fishes, the authors collected many cestodes belonging to the genus of *Tetragonocephalum* from the Tons River of Azamgarh (U.P.). One of them represent a new species.
MATERIALS AND METHODS

The parasites were collected in 0.7% saline solution and fixed on slide using slight cover glass pressure to prevent curling. The Gower's and Carmine stained specimens were dehydrated and mounted in Canada balsam. Sketches were made by camera lucida and measured in mm.

DESCRIPTION

Body 12 to 38 long, 0.18-0.28 wide, scolex, somewhat large, divided into two parts, Anterior region smaller in size, while posterior region large, with four suckers, at four sides, somewhat dissimilarly placed, scolex measures, 0.15-0.21 X 0.08-0.14 in size. Short neck 0.05 X 0.02 in size. Mature proglottids almost four times longer than broad, cylindrical straight, 0.85-1.45 X 0.31 X 0.42 in size. Gravid proglottids 0.98-1.36 X 0.26 - 0.40 in size.

Testes oval, post ovarian, mid-ventral to proglottid, 16-36 in number, 0.09-0.11 X 0.09 - 0.10 in size. Seminal vesicle 0.16 - 0.17 X 0.05-0.06 in size. Cirrus pouch oval situated in mid-ventral of proglottid, open marginally, 0.27-0.31 X 0.15-0.17 in size. Genital atrium somewhat sucker like 0.23-0.25 X 0.17-0.21 in size.
Tetragonocephallum Srivastavoi N.sp.

Ovary large lobe like, single, 0.11-0.19 X 0.10-015 in size, vagina thick, anterolateral to cirrus pouch, 0.35-0.40 X 0.05-0.06 in size. O-type rounded, post ovarian, vitellaria lobed, sub-cortical laterally placed.

Excretory canal thin placed between vitellaria and testicular area.

Host : *Clarias batrachus*

Location : Intestine

Locality : Tons River, Azamgarh
Prevalence : 6 specimens from 4 host, out of 100 examined.

**DISCUSSION**

The new form belongs to the genus *Tetragonocephalum* (Shinde, Mohekar and Jadhav, 1976), family Tetragenocephaleodae (Yamaguti 1989) of which following species were known i.e., *T. shipleyi*, *T. bhawetti*, Shinde, Mohekar and Jadhav, 1985; *T. Yamaguti*, Muralidhar, 1990; *T. ratnagiri*, Shinde and Jadhav, 1990. Present form differs from all the known species except *T. ratnagiriensis* in having four sucker, division of proglottids, large ovary but if differs from all described species in having shape of body, size of scolex, presence of short neck, post ovarian testes, oval cirrus instead of absence of neck, pre-ovarian testes and anterolateral cirrus pouch and shape of genital atrium, lobed vitellaria than granular. These variations are considered as specific variation. Accordingly it is regarded as new species. With the specific name *T. Srivastavai* N.Sp. has been named in honour of Dr. A.K. Srivastava, Reader, Dept. of Zoology, D.A.V.P.G. College, Azamgarh (U.P.) India.

**ACKNOWLEDGEMENT**

The authors express their sincere thanks to Dr. A.K. Maurya, B.H.U. Varanasi for his kind co-operation during identification of parasites.

**REFERENCES**

4

