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Dr. Dhanraj T. Dhangar,
Assist. Prof. (Marathi)
MGV'S Arts & Commerce College,
Yeola, Dist - Nashik [M.S.] INDIA

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INDEX

No.	Title of the Paper	Author's Name	Page No.
English Section			
1	The Occurrence of Helminth Parasites, Phyllobothrium Diveagarensis N.SP from the Marine Fish, Trygon Sephen at Diveagar, Dist Raigad M.S., India	R.R.Dandawate	07
2	Noise Pollution of Silence Zone of P.M.C and P.C.M.C in Pune City (2012-2013)	Dr. Pandurang Patil	10
3	Focusing Growth and Characterization Studies of Potassium Chloride (KCL) Doped Bis Thiourea Cadmium Acetate (BTCA) Single Crystals	Siddique Aneesa, Rupali Kulkarni, Rals Shalkh, Mahendra Shirsat, S. S. Hussaini	13
4	Synthesis and Characterization of TiO ₂ Thin Films by Spray Pyrolysis Technique for Gas Sensing	N. B. Kothawade, S. V. Dhanwate	19
5	Rural Development : Challenges & Opportunities for Sustainable Development	Dr. Asha Patil	28
6	Lajja : A Study of Women in Media	Dr. Smita Chaudhari	33
7	Public Distribution System in India – An Overview	Dr. Pankaj Tayde	37
8	A Psychological Approach to Creative Women Writers	Dr. Aparna Mahajan	43
9	A Psycholinguistic Exploration Into 'All the World's Stage'	Narendra Tayade	48
10	India's Economic Development and Banking Sector	Dr. Shrivaji Yadav	53
11	Trauma Studies and Subaltern Literature of Marginalized Voices of Dissent in Literature of the Marginalized Gender, Class, Ethnic and Racial Identity	Dr. Jagdish Jangale	62
12	Confessions in the Poetry of Anne Sexton	Balasaheb Pawar	66
13	Impact of Small Agricultural Land Holdings on Rural Economy in Dhule District	Dr. Uttam Nile	71
14	Photo Catalytic Degradation of Azure : A Using Nanoscale ZNO in the Presence of Visible and Solar Light Radiations	Sudesh Ghoderao	79
15	The Physical Impact of Sounds	Prof. Vishal Korde	87
16	Physicochemical Study of Some Plant of Satpuda Region from Jalgaon District.(M.S.)	S. V. Patil	89
17	Herbal Mosquito Repellent Candles : Nano-technologically Prepared Product Useful for Eco-Friendly Control of Mosquitoes	Dr. A. R. Pandharbale	93
18	Achievement of Tourism Industry in India	Dr. Snehal Rajhans	95
19	An Analytical Study of Foreign Direct Investment in the Automobile Sector of Maharashtra State	Dr. Suvarna Kadam	99
20	Corona Virus : Challenges and Impact on the Indian Economy	Dr. Avinash Bhavsar	105
21	Studies on Antibacterial Properties of Fresh Water Fish, Channa Striatus	Deepak Hiwarale	110
22	Attitude of Family Members Towards Elderly People in Maharashtra	Dr. Ashok Walekar	115
23	Contemporary Relevance of Pandemic in English Literature	Dr. Valbhav Sabnis	121
24	Information Warfare and National Security	Dr. Priyanath Ghosh	127



**The Occurrence of Helminth Parasites, *Phyllobothrium Diveagarensis* N.SP
From the Marine Fish, Trygon Sephen at Diveagar, Dist Raigad M.S., India**

R. R. Dandawate

Department of Zoology,
Arts, Commerce and Science College,
Sonai Tal. Newasa, Dist. Ahmednagar M.S. India
(Affiliated to Savitribai Phule Pune University, Pune)

Email d_rajendra2006@rediffmail.com / drajendra2006@gmail.com

Abstract:

The present Cestode parasites were collected from Marine fish Trygon Sephen at Diveagar Dist. Raigad M.S., India during January 2016 to December 2016, i.e. one year period. The present cestode measures 12 mm in length, globular scolex, rounded accessory suckers, scolex is followed by short neck. Mature proglotids five times longer than broad, testes oval 90-95 in number, medium in size, vas deference short, V shaped ovary, narrow vagina, cirrus thin, straight, granular vitellaria. This cestode also infects the intestine of host, it infects the mucosal, sub mucosal, also damages the intestinal epithelium of villi, showing that cestode is highly destructive.

Key Words :- Cestode, Spiral valve, Proglotids, Bothridia, Scolex, Parasite

Material And Methods

The Marine fishes were collected from Diveagar Dist. Raigad for searching end parasites from their body. The cestodes were collected from intestines of Trygon Sephen during January 2016 to December 2016. All worms were flattened, fixed in 4% formalin, stained with Harris hemoglobin, passed through various alcoholic grades and mounted in DPX, drawings are made with camera lucida. All measurements were in millimeter.

For histopathological study different types of marine water fishes were dissected to observe the rate of infection. Some fishes were infected and some are non-infected. The intestine of both fishes were fixed in Bouin's fluids to study histopathological changes. The fixative inhibits the post-mortem changes of the tissue. Then tissues were washed, dehydrated through alcoholic grades, cleared in xylene and embedded in paraffin wax (58-62 °C).

Introduction:

The genus *Phyllobothrium* was erected by Linton, 1889 to accommodate a Cestode recovered from Dusky Shark, *Carcharias obscura* at Woods Hole with its type species, *P. lasium*. In 1901 reported *P. triculatum* from *Carcharias obscura* later on two species were added *P. exceptum*, *P. pectinatum*, Woods Hole later on Jadhav and Shinde, 1884 added *arabiansis*. Jadhav et al 1990 described *P. carchariasae* from *Carcharias acutus*.

Description:

Thirteen specimens of the cestode parasites, *Phyllobothrium diveagarensis* n.sp. were collected from the spiral valve of intestine of Trygon Sephen (Muller and Henle, 1841) at Diveagar Dist. Raigad M.S., India, West coast of India, from January 2017 to December 2017.

The tapeworm measures 10 in length and 0.7 in breadth. The scolex is globular, measures 2.821 (2.765-2.878) in length and 1.533 (0.719-2.348) in breadth, it bears four folded, petal-like



bothridia, measures 0.444 (0.435-0.454) in length and 0.310 (0.227-0.393) in breadth. Each bothridium bears rounded accessory suckers, measures 0.341 (0.303-0.378) in length and 0.151 (0.075-0.227) in breadth. Scolex is followed by a short neck, measures 0.587 (0.416-0.757) in length and 0.674 (0.651-0.696) in breadth.

The mature proglottids are longer than broad, almost four times longer than broad, broad in the middle where as narrow at both ends, measures 2.367 (2.348-2.386) in length and 0.416 (0.075-0.757) in breadth. Testes are medium in size, oval to rounded, 75-78 in number, pre-ovarian, 25-30 are placed anteriorly, above the cirrus pouch, remaining are placed posteriorly, measures 0.082 (0.075-0.909) in length and 0.030 (0.015-0.045) in breadth. Cirrus pouch is large, oval, obliquely placed at 1/3rd from the anterior margin of the segment, measures 0.427 (0.416-0.439) in length and 0.102 (0.030-0.174) in breadth. The cirrus is thin, straight, measures 0.397 (0.378-0.416) in length and 0.019 (0.007-0.030) in breadth. Vas deferens is short, measures 0.079 (0.0075-0.083) in length and 0.015 (0.0075-0.022) in breadth

The ovary is "V" shaped, bilobed with many acini, measures 0.731 (0.696-0.766) in length and 0.043 (0.017-0.069) in breadth. Vagina is a narrow tube, start from genital pore runs posteriorly to cirrus pouch, forms receptaculum seminis and measures 1.094 (1.075-1.114) in length and 0.041 (0.015-0.068) in breadth, receptaculum seminis is short, opens into ootype measures 0.393 (0.386-0.401) in length and 0.052 (0.023-0.083) in breadth. Ootype is oval in shape, measures 0.012 in diameter. The cirrus pouch and vagina open to a common genital pore, placed at 1/3rd from the anterior margin of the segment, measures 0.098 (0.090-0.106) in length and 0.015 (0.007-0.022) in breadth. Vitellaria are granular, in the lateral margin of the proglottids, extending from behind the ovary placed up to the anterior margin except cirrus pouch region

Discussion:

The present worm comes closer to *Phyllobothrium diveagarensis* n.sp. in the shape of the scolex globular and ovary 'U' shaped where as it differs from the same with the following characters.

- 1) Cirrus straight Vs. Coiled.
- 2) The number of testes 80 -80 Vs. 60 in number.
- 3) The arrangement of vagina posterior to cirrus pouch Vs. anterior to cirrus pouch.
- 4) The present form is collected from *Trygon Sephen* at Diveagar Dist.Raigad MS

. where as *PHYLLOBOTHRIUM DIVEAGARENSIS* N.SP was collected from *Trygon Sephen* Diveagar Dist.Raigad .The above noted characters are major hence it is described as a new species .

Type species:	<i>Pphyllobothrium diveagarensis</i> n.sp
Host:	<i>Trygon Sephen</i>
Habitat:	Spiral valve
Locality:	Diveagar Dist.Raigad MS
Period of Collection:	January 2016 to December 2016

Histopathological effect on host intestine:

In T.S. of intestine of *Trygon Sephen* it has been observed that the cestode attached to the mucosal, sub-mucosal and muscularis mucosa of intestine and slowly damaged the hosts

intestinal tissue causing very less breakage but it destroys the intestinal epithelium of villi showing that cestodes are highly destructing to *trygon Sephen*

Phyllobothrium Diveagarensis N.SP

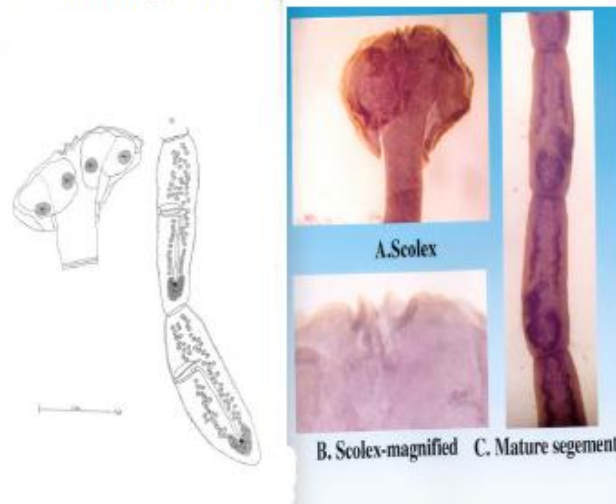


Fig.1 A Scolex B.Mature segment 2. Histopathological effect on Host Intestine

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