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PROTEIN ESTIMATION IN *TETRAGONOCEPHALUM AURANGABADENSIS N* SP

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ABSTARCT
The present cestode parasite is endoparasite of *Tetragonocephalum aurangabadensis n* sp, a fresh water fish. The cestode parasite secreate protein from host body due protein in host body get decreases level and in body of parasite i.e *Trygon sephon n.sp* get increases. Present paper deals with biochemical estimation of protein from *Trygon sephon n.sp* its results shows that the percentage of lipid is high in parasites as compared to their hosts. Parasite absorbing protein most of nourishment from host body and causing hindrance in the proper development of host parasite body.

Kew words: - *Cestode, host, protein, endoparasites.*

INDRODUCTION:

The genus *Tetragonocephalum aurangabadensis* n. sp is established by Shipley et Hornell in 1905 from Trygon siphon from Ceylon as type species T. trygonis. Later on, the following species are added to this genus.1 T. uarnak, Shipley et Hornell, 1906.2T. minimum, Southwell, 1925.3. T. raoii, Deshmukh & Shinde, 1979.4. T. alii, Deshmukh & Shinde, 1979.5.T. sepheni, Deshmukh & Shinde, 1979.In this species only a limited capacity for amino acids biosynthesis has been demonstrated and most of its amino acids appear to be desired from the host. Protein production is the biotechnological process of generating a specific protein. It is typically achieved by the manipulation of gene expression in an organism such that it expresses large amounts of a recombinant gene.

MATERIAL AND METHODS:

Fifteen intestines of Host *Trygon sephen* (Cuvier, 1871) were collected and examined at marine research center, Bhatye, Ratnagiri. Out of fifteen intestines only six intestines were heavily infected with cestode parasites. The identical parasites were sorted out by microscope, few of them were kept in 4% formalin and stained with Harris haematoxylene for identification. The morphological observations turn them new species of genus Tetragonocephalum (Shipley and Hornell, 1905).

DESCRIPTION

By using Lowry's method protein content in cestode and in host intestine was carried out. The collected worms were dried on blotting paper, removed the excess water and taken wet weight of tissue. This material was transferred into previously weighed watch glass and kept in Oven at 60°c till the material become dry. Take the dry weight of tissue. This weighed 150mgs on sensitive balance. Take 100mg of tissue, in this add 10ml T.C.A., Homogenate for 15 minutes 3000 RPM, discard the supernatent, dissolve the ppt in 100ml of 1N Naoh. Take 0.1ml solution and 4ml Lowry's "C" solution, add 0.4ml of folin phenol reagent and cool it for 30 minutes (Kept test tube in dark). Take 0.D. at 530mu filter, same procedure is applied for obtaining the protein from host intestine.

Formula: The amount of protein in the worms were calculated by the formula:

O.D. of unknown tissue X known Protein

% Protein = ---------- X 100 O.D. of standard

O.D. of unknown = 0.98., Known Protein 0.7mg/lit, O.D. of standard 2.5.

0.98 x 0.7 = ---------- X 100

2.5

= 27.44mg/gm wet weight tissue taken.

The Protein amount of host intestine *Trygon sephen* was estimated by same procedure. The obtained result showed that the intestine possessed 33.60mg/gm wet/wt. of tissue protein. The results when compared showed that the worms *Tetragonocephalum aurangabadensis* n.*sp.* obtained 27.44mg/gm wet weight of tissue protein from environment, which contained 33.60mg/gm wet weight of tissue Protein.

CONCLUSION

By present biochemical estimation of protein, it is concluded that the percentage of lipid is high in parasites as compared to their hosts. Hence it can be concluded that *Tylocephalum aurangabadensis* n.sp. could maintain a balance in protein content and the histopathological relation with the host *Trygon sephen*

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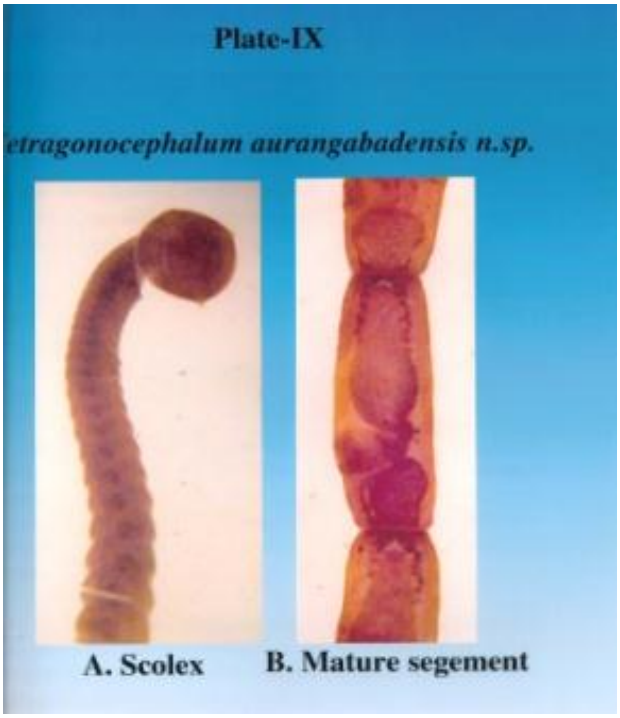

Parasite- *Tetragonocephalum aurangabadensis* n.sp.

Host- *Trygon sephen*