REVIEW OF RESEARCH
IMPACT FACTOR : 5.7631(UIF) ISSN: 2249-894X
VOLUME - 1 | ISSUE - 2 | MARCH - 2019

# BIOCHEMICAL LIPID ESTIMATION IN AMOEBOTAENIA JADHAVAE N. SP. FROM GALLUS DOMESTICUS AT SOYGAON, AURANGABAD (M.S. INDIA)

**B.S. Thorat**
**Department Zoology,Vasant Mahavidyalaya,Kaij, Dist:Beed, 431123 (MS)**

**ABSTRACT :**

*The present paper deals with description & Lipid estimation of Amoebotaenia jadhavae.n.sp.from Gallus domesticus at Soygaon.Dist.Aurangabad, Worms are medium ,having large number of segments;total number of proglottids are 44 in number;scolex large in size,rectangular in shape,broader than long;rostellum large,oval in shape;rostellar hooks arranged in single circle in rostellum; suckers medium,four in number,oval in shape;neck absent;mature segments two times broader than long;testes 53-56 in number,oval in shape,small,evenly distributed;cirrus pouch oval,small;cirrus small,thin,straight tube,contained within cirrus pouch;vas deferens small,thin tube;genital pores opening anterior side of segment,unilateral,oval,marginal & regularly alternate;genital atrium small,thin,oval;ovary transversely elongated,bilobed,marginally irregular;vagina thin tube,opening posterior to vas deferens in cirrus pouch,opens into ootype;vitelline gland posterior to ovary,oval;excretory canals longitudinally placed,lateral side of segment and thin & the worm is identified as Amoebotaenia jadhavae n.sp.The amountof lipid in the worm Amoebotaenia jadhavae n.sp.are 21.42 mgs/100 mg and the amount of lipid in the host infected intestine are 19.45 mgs/100 mgs.*

**Keywords**: Lipid,*Amoebotaenia jadhavae*,*Gallus domesticus.*

## INTRODUCTION

The genus *Amoebotaenia* was erected by Cohn in 1900 with its type species *Amoebotaenia brevis* (Linst,1884) collected from *Charadrius pluvialis* as *Amoebotaenia brevis*.The present paper deals with description and biochemical lipid estimation of new species *Amoebotaenia jadhavae* n.sp. from *Gallus domesticus* at Soygaon in the month of June,1998. Lipid content in the *Amoebotaenia jadhavae* n.sp. & its host *Gallus domesticus* of lipid in intestine can be observed.

## MATERIAL AND METHODS

The worms were collected from alimentary tract of *Gallus domesticus*.Then flattened and preserved in 4 % formalin.These cestodes stained by Harris haematoxyline or Borax carmine,Washed in distilled water ,dehydrated in ascending grades of Alcohol,cleared in Xylene,Mounted in D.P.X. & drawings are made with the aid of Camera Lucida.Identification was carried out with the help of Systema Helminthum vol.I.Yamaguti (1957) [15].

Fourteen intestines of Hen *Gallus domesticus* dissected & observed to see degree of infection of cestode parasite,few intestines heavily infected with cestode parasites,some cestode parasites free and collected in 4% formalin for taxonomic study ,some flattened processed and stained for morphological & anatomical studies and identified as *Amoebotaenia jadhavae* n.sp.

The intestines dissected and were found to be infected with cestode parasites.Those parasites of host were kept separately and intestines of host were also kept separately in previously weighed watchglass.This material was taken on a blotting paper to remove excess of water and then it was weighed on a sensitive balance to obtain the wet weight of the tissue.The tissue then kept at 80$^{o}$c till it dried

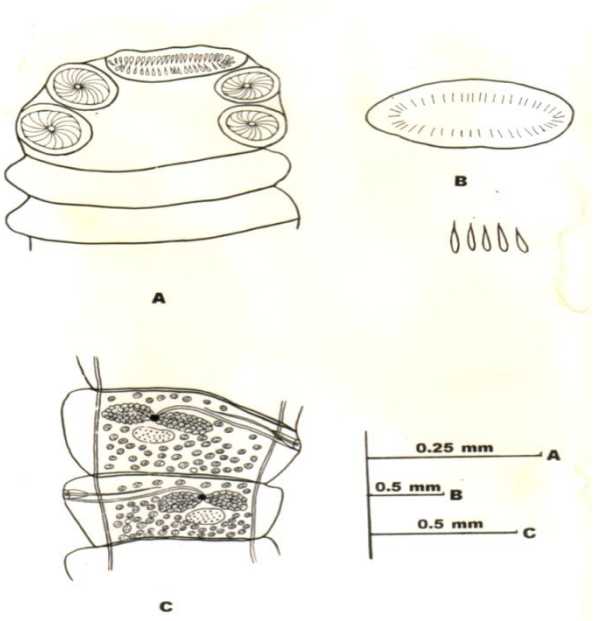
completely.The tissue then powdered in morter pastle and preserved for further studies.Lipid content was estimated by Barner's and Black Stock Method (1973).Few worms from host were kept for taxonomic studies.

## DESCRIPTION

Seventeen cestodes collected from intestine of Hen,*Gallus domesticus* from Soygaon Dist: Aurangabad, M.S. India in month of June, 1998.Worms are medium ,having large number of segments;total number of proglottids are 44 in number;scolex large in size,rectangular in shape,broader than long;rostellum large,oval in shape; rostellar hooks arranged in single circle in rostellum;suckers medium, four in number,oval in shape;neck absent;mature segments two times broader than long;testes 53-56 in number,oval in shape,small,evenly distributed;cirrus pouch oval,small;cirrus small,thin,straight tube,contained within cirrus pouch;vas deferens small,thin tube;genital pores opening anterior side of segment,unilateral,oval,marginal & regularly alternate;genital atrium small,thin,oval;ovary transversely elongated,bilobed,marginally irregular;vagina thin tube,opening posterior to vas deferens in cirrus pouch,opens into ootype;vitelline gland posterior to ovary,oval;excretory canals longitudinally placed,lateral side of segment and thin & the worm is identified as *Amoebotaenia jadhavae n.sp.* The amount of lipid in the worm *Amoebotaenia jadhavae* n.sp.are 21.42 mgs/100 mg and the amount of lipid in the host infected intestine are 19.45 mgs/100 mgs in its host,Gallus domesticus.

## RESULTS AND DISCUSSION

Worms are medium ,having large number of segments;total number of proglottids are 44 in number;scolex large in size,rectangular in shape,broader than long;rostellum large,oval in shape;rostellar hooks arranged in single circle in rostellum; suckers medium,four in number,oval in shape;neck absent;mature segments two times broader than long;testes 53-56 in number,oval in shape,small,evenly distributed;cirrus pouch oval,small;cirrus small,thin,straight tube,contained within cirrus pouch;vas deferens small,thin tube;genital pores opening anterior side of segment,unilateral,oval,marginal & regularly alternate;genital atrium small,thin,oval;ovary transversely elongated,bilobed,marginally irregular;vagina thin tube,opening posterior to vas deferens in cirrus pouch,opens into ootype;vitelline gland posterior to ovary,oval;excretory canals longitudinally placed,lateral side of segment and thin & the worm is identified as *Amoebotaeniajadhavae n.sp.*The lipid content was very high in worms as compared to their host.Lipid level was 21.42 mg/100 mgs in cestode parasite *Amoebotaenia jadhavae n.sp.* where as it was 19.45 mg/100 mgs in its infected intestine of host *Gallus domesticus* .It is revealed from the present study that there is high content of lipids in the parasites and is also reveals that the parasite is taking advantages of host and is absorbing the most of the nourishing material.The parasite is fulfilling its needs from the host and is in a way causing hindercane in the proper development of the host.In cestode infections lipid alternation in the parasite tissue commonly occur but no generalized trend can be given for such alterations.In the present investigation different quantities of lipids are observed by the parasite,probably due to the difference in the amount of unsaturated fatty acids that can permeate through parasite.



## REFERENCES


1. **Chhabra, M.B and Ruprah,N.S.(1983**):A note on the occurrence of *Amoebotaenia sphenoides* in domestic fowls in Hariyana.Hariyana Veterinarian 22 (1):45-46.
2. **Ginger,C.D and Fairbairn,D.(1966):-**Lipid metabolism in helminth parasitesII.The major origin of *Hymenolepis diminuta* at(Cestoda).J.Parasit.52:1097-1107.
3. **Harrington,G.W.(1965) :-**The lipid content of *Hymenolepis diminuta* &*H.citelli*Expt.Parasite:17:287-295.
4. **Jadhav,B., Shinde,G.B and Kadam,S.I.(1982) :**Lipid percentage variations according to the seasons of *Stilesia leiperia* from *Ovis bharal* at Aurangabad.Biology Journal Vol.II.No.4,68-70.
5. **Jadhav B.V.,Khadap R.M. and Thorat B.S. (2003):** A new species of the genus Amoebotaenia mohekarae n.sp.(Cohn,1900) from *Gallus domesticus* at Aurangabad.Dist,Aurangabad.Indian.Journal Helminth (N.S.)Vol.21.2003 pp.68-70.
6. **Jadhav B.V. and Thorat B.S. (2009):** A new species of the genus Amoebotaenia *jadhavae* n.sp.(Cohn,1900) from *Gallus domesticus* at Soygaon.Dist,Aurangabad.(M.S.India).Life Science Bulletin,6(2)2009(179-181)ISSN-0973-5453.
7. **Kalyankar,S.D. and Palladwar,V.D.(1976**): On a new species of ovarian cestode of genus *Amoebotaenia* (Dilepididae:Dilipidea) Cohn,1900 from India.Anales de lafawlted de Veterinaria de Leon,21:27-31.(En.Fr.Es.)
8. **Mitra, K.B and Shinde,G.B.(1980):** A study of the new species of A.indiana (Cohn,1900) from Gallus domesticus at Aurangabad.Current Science vol.49.No.5.206-207.
9. **Shinde,G.B.(1972):** New avian cestodes of genus *Amoebotaenia* Cohn,1900 in India.
10. Ibid,11:5-15.
11. **Shinde,G.B and Mitra,K.B. (1978):**Lipid percentage variations according to the seasons *of R.(R.) tetragona* (Molin,1858) after Southwell,1930,*G.domesticus* at Aurangabad,India.
12. Biology.Journal.Vol.II.No.4:20-21.
13. **Thorat B.S. (2015):** Biochemical lipid estimation in *Davainea shindei* n.sp. from *Gallus domesticus* at Vaijapur.Dist,Aurangabad.(M.S.India).Interlink Research Analysis Journal Vol.II.Issu.Jan.2015 to June 2015.ISSN-0976-0377.pp.23-27.
14. **Yamaguti,S (1959**): Systema Helminthum vol.I.The cestode of vertebrates.1-860
15. **Yamaguti,S (1959**): Systema Helminthum vol.II.The cestode of vertebrates.InterScience Publi,NewYork.