



## STUDY OF CYSTIC PROTOZOA IN FEACAL SAMPLE OF LAUGHING BIRD, AURANGABAD

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### ABSTRACT

Fecal sample of laughing bird analysis to study the parasite during breeding season In this investigation different 10-50 samples are analyzed . From protozoan parasite, order colpoda, species *Tilini magna* found abundantly with small and large size cyst .

**Key word:** laughing bird, parasites , cyst, *Tilini magna*



### INTRODUCTION

Laughing bird *Cspilopelia senegalensis* is small African pigeon that are named for their distinctive coo vocalization they also known as Indian little brown dove, palm dove, Senegal dove. These dove are residents (non migratory ) within their range and regionally common wide spread . The study is based on random sampling of feecal matter analysis . The feecal



matter of dove collected during its breeding season from Feb 2014 to Oct 2014 as the bird easily found in the nest passing large amount of fecal matter on the nest. And the same nest is also used by three to four pair of birds of the same species. Therefore it becomes more easy to collect the fecal matter from different bird of same species during the month of february to October. The analysis of different sample found positive for the presence of colpoda in the cyst stage which is *Tilini magna* Colpoda. These *Tilini magna* are consider as soil protozoa. But its presenc in fecal matter shows the parasite found as a facultative parasite of the laughing bird.

Inside the stomach and intestine of bird acidic nature help for encystment of the parasite which shows unfavourable condition for the formation of cyst and further development dosent proceed for some time period many study shows that presence of salt calcium ions are responsible for encystment (wato et al 2003)

## MATERIAL AND METHOD

Work carried out on the laughing bird randomly observed in windows sills, where they lay eggs in small bushes nest this is random study.

- 1 The freshly voided feaces are collected in to sterile petridish and the sample are stored and is brought to the laboratory with the help of distilled water sample kept dissolved for 3-5 days to observe actual mass of protozoa
- 2 On third day emulsified sample take on clear slide and cover with the coverslip, the minute microscopic movement is observed on slide.
- 3 The protozoan culture such as rice infusion, hay root infusion are applied for soil protozoa for increasing its size and clear morphological identification.
- 4 Morphological characteristic and peculiar cyst helped for identification of species as colpoda *Tilini magna*.

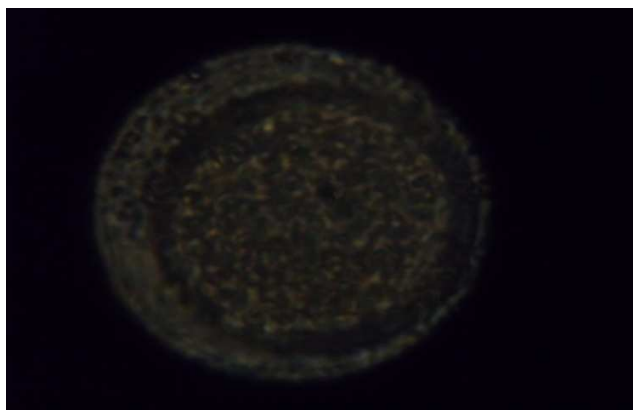
## RESULT AND DISSCUSSION

The study is an attempt to analyse the fecal matter of bird by simple random sampling method as the local bird (dove) randomly found on windows silts, specially in breeding season they observed in near by houses, on silts and under the roof of house where they lay the egg and

pored large quantity of fecal matter on the nest. One nest generally used by the 3-4 couple in breeding season. They lay at least two white eggs and incubate it for 15 -16 days and live there for 39 days for taking care of young one.

A Microscopic movement are observed when emulsified fecal sample taken on sterilized glass slide for observation. The sample has kept under continuous watch for 4-5 day. After five days two different kind of cilliate are found to be well developed in large amount with number of cyst of different sizes .The cyst are of two types :

1. Small cyst with no movement
2. Large cyst with continuous movement.



**Colpoda cyst without movement**

A fully developed organism are not found in earlier observation but only the movement are confirmed in 24 hours. And the well developd cyst are seen after 60 hours.(five days).

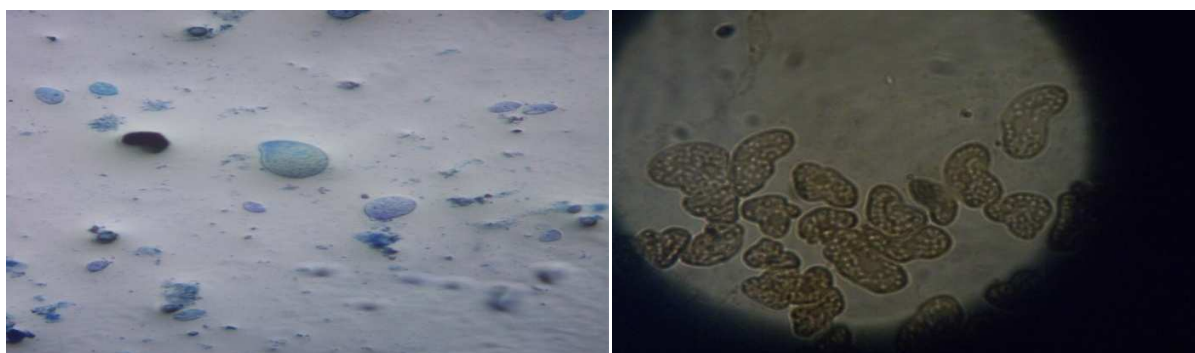
The cyst mostly without movement are found survived for long duration of time than moving cyst. The small cyst are observe with slight movement within. The cyst with less number of cillia that are not found to be moving along its axis. But, the conjugation among these cyst are observed many time during the study.

As compare to the small cyst the large cyst is very unstable with thick cillia around it they are found moving along its axis. The movement is clockwise and anticlockwise with centrally placed nucleus and food vacoules. Cyst formation by organism is a reaction of organism to the adverse environmental condition.

In present study beside the morphological characteristic of protozoa the type of cyst helped for the identification of fully grown protozoa as colpoda beside this references helped here to understand about the colpoda are the facultative parasite of the invertebrate and of homeotherm. In this investigation the colpoda found developing in birds fecal matter after favourable condition. Usually the cyst of colpoda are excyst and encyst by Beers 1944 . The colpoda cyst formation depend on the availability of food and temperature .The cyst can swept by the air current in random atmosphere. According to this when the cyst are kept under suitable culture such as rice and hay culture for five days, the large sized cyst found developing in fully grown 'Tillini magna'. Because they are reniform in shape with cilliary rows, spherical macronucleous and large contractile vacuole. Colpoda forms cyst to reproduce. But number of colpoda are seen that are forming cyst .



**Fully grown 'Tillini magna'**



**COLPODA STAIN WITH METHYLENE BLUE AND HEMATOXYLINE STAIN**



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