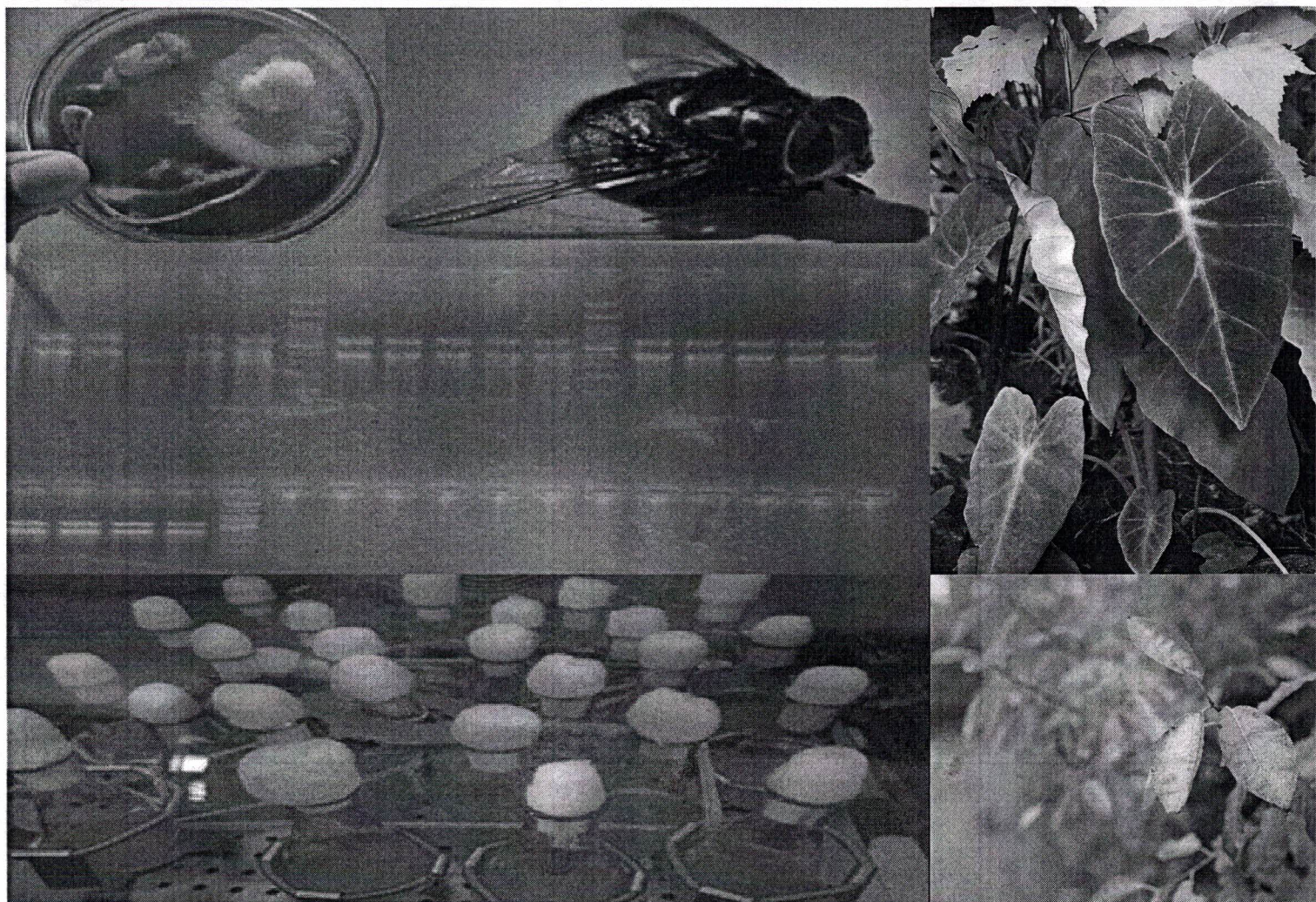


Avenues in Life Sciences



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Contents

Prevalance and Density of Cestode Parasite in Fresh Water Fishes from Latur District	1
– <i>Dr Prasenjit Shamrao Bele</i>	
Study of Etheno-Medicinal Plants on Dog Bite.....	7
– <i>Ladda R.G.</i>	
Isolation of Fungi in Coconut and Arecanut Fruits During Storage	11
– <i>Aradwad R. P. and Mandge S. V.</i>	
Role and Necessities of Plants in Food Security	20
– <i>Jige Sandipan Babasaheb</i>	
Tuberous Tribal Medicines of Kinwat Forest.....	29
– <i>Dr. S.R. Shinde</i>	
Medicinal Uses of <i>Chenopodium album</i> (Linn.).....	33
– <i>Bankar M.V., Bhosle N.P. and Ambhore J.S.</i>	
Uses of Biotechnology in Environmental Pollution Control.....	39
– <i>Dr. Rafiullah M. Khan</i>	
To Study in vivo growth of <i>Macrophomina phaseolina</i> on root slices of <i>Rauwolfia serpentina</i>	46
– <i>M. M. Dudhbhate</i>	
Mountain Dog Breeds from India.	50
– <i>Dr. Krushna Raju Nagare</i>	
Role of Wild Medicinal Plants in Human Health.....	56
– <i>Shinde Anjali</i>	

Advanced Research and Overview of Biologics in Biochemistry.....	60
– <i>Ankita V. Shirke</i>	
Behavioural Study of Freshwater Fish Clarias Batrachus Uncovered by Mercuric Chloride.....	72
– <i>Dr. B.S. Kamble</i>	
Chronic Impact of Sub Lethal Concetration of Malathion on Glycogen Content of Liver of Juvenile Labeo Rohita.....	77
– <i>R. S. Magar</i>	
Ethnobotanaical Study of Medicinal Plants Used to Treat Different Human Diseases in Mahur Range Forest of Nanded District, Maharashtra, India.....	81
– <i>Prakash Ramrao Kanthale</i>	
Study of Medicinal Plants for Remedies on Dental Infections	87
– <i>Ladda R.G. Ambhore J.S</i>	
Plasmodium Vivax- The Malaria Parasite	91
– <i>Dr. Sushil Shahaji Jawale</i>	
Phytoremediation-A Review	100
– <i>Harpreet Kaur</i>	

Prevalance and Density of Cestode Parasite in Fresh Water Fishes from Latur District

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Abstract

Present investigation deals with prevalence and density of Cestode parasite from Latur Distict. M.S. India. Total 150 fish samples of fresh water fishes collected from different areas of Latur district during the period of May 2013 to April 2014 Fish intestine of dissected and opened out for the infection of cestode parasite. Infected fish intestine was examined for cestode parasite about 34 fishes infected with 57 parasitic species Cestode. The present study is helpful for the status of prevalence and density of cestode parasite from Latur District.

Keywords: Prevalence, Density, Fresh water fishes, Cestode parasite, Latur

Introduction

India is third position in the world for the production of fish and second position in Inland fish production. In India fishes have a high economic value and it provides jobs to the people. Fishes are important protein food source in human life. Fishes show wide range of distribution in marine and freshwater, siluroid fishes are important naturally developed food fish group found in the catch in this region. It is found that various species of cestode worm invade in the small intestine of these fishes. Fishes are reach in protein and vitamins like A, D, E, B12.

Fishes are important protein food source in human life. Fishes show wide range of distribution in marine and freshwater, siluroid fishes are important naturally developed food fish group found in the catch in this region. It is found that fish disease due to cestode parasite is one of the important problems in fish culture and fish farming. The importance of fish parasite is related directly to the importance of the fish they may affect.

The environmental factors including climate, seasons and rainfall play an important role in the development of cestode parasite.

Methods and Materials:

The fresh water fishes were collected from different places of Latur district. Latur is situated in Marathwada region. Latur district occupying an area of 7371.90sq.km. is situated in Manjra River basin in Maharashtra state. The district lies between 18°05' north to 19°55' north latitude and 73°25' east to 77° 21' east longitude. The general elevation or height is 400-700 meters from sea level.

Fishes were dissected and internal organs examined. The entire digestive system was removed and placed in a large petridish and cut opened to observe the infection of cestode and nematode. Collected worms were washed in distilled water to render free from intestinal contents collected cestode stained with Borax carmine passed through various alcoholic grades cleared in xylene, mounted in D.P.X. and whole mount slide were prepared for further anatomical studies. Drawing was made with the aid of camera lucida. The identification done by "Systema Helminthum" Vol.II by Yamaguti 1959.

The Prevalence and density were calculated by following formulae

$$\text{Incidence of infection} = \frac{\text{Infected host}}{\text{Total host examined}} \times 100$$

$$\text{Density of Infection} = \frac{\text{No.of Parasite collected}}{\text{no.of infected host}}$$

Observation:

Prevalence and density of cestode parasites from Freshwater Fish from Latur District, during the year May 2013 to April 2014

Table No. 1

Sr. No	Month and Year	No. of host dissected	No. of host infected	No. of cestode parasite collected	Prevalance % (Incidence of infection)	Denisity of infection
1	May 2013	15	05	08	33.33	0.53
2	June 2013	15	03	04	20	0.26
3	July 2013	12	02	02	16.66	0.16
4	August 2013	10	01	02	10	0.2

5	September 2013	12	01	01	8.33	0.08
6	October 2013	13	01	02	7.69	0.15
7	November 2013	10	02	03	20	0.3
8	December 2013	12	03	05	25	0.41
9	January 2014	10	04	06	40	0.6
10	February 2014	12	03	07	25	0.58
11	March 2014	14	05	09	35.71	0.64
12	April 2014	15	04	08	26.66	0.53
	Total	150	34	57	26.66	0.38

Table No. 2

Infection of Cestode parasite in fresh water fishes in Latur District

Sr. No.	Name of Parasite	Parasite Genus	No. Of infection	Locality
1	Cestode	<i>Gangesia</i>	21	Intestine
		<i>Senga</i>	27	Intestine
		<i>Silurotenia</i>	06	Intestine
		<i>Total</i>	54	

Result and Discussion:

Total 150 fresh water fishes collected from different areas of Latur District In this study fish are *Mystus singhala*, *Mastacembalus armatus* (Lecepede, 1800), *Wallagoattu* (Bloch & Schneider), out of these 34 fishes infected with 57 cestode parasite in an annual cycle from May 2013 to April 2014. (Table No.1)

The result of present study of showing prevalence and density of cestode parasites presented in Table No. 1 Cestode consist of Three genera *Gangesia* Woodland (1924), *Senga* Dollfus (1934), *Silurotaenia*, Nybelin (1942). Shown in (Table No. 2)

It was found that high incidence of infection of cestode parasite (species) recorded in summer season (33.33%, 25%, 37.71%, 26.66%) followed by Winter Season (7.69%, 20%, 25%, 40%) and lowest in Monsoon season (20%, 16.66%, 10%, 8.33%)

The above results were compared with many different countries workers as Anderson (1976) worked on seasonal variation in population dynamics of *Caryophyllaeus*, Karnaev (1960) in carp. Availability of food and feeding activating, distribution and environment of host are influence. The parasitic development Kennedy (1978), the parasites cause depletion of the nutritional contents in host's body and result in the low productivity, loss in fish industry (Hiware, 1999). The occurrence of cestode parasites collected from some fresh water fishes Hiware (2010). Survey of helminth parasites in freshwater fishes from marathwada region(2010) Cestode prevalence and density Of fresh water fish, *Mastacembalus armatus* (2011) , Bhure D.B., Nanware S.S., Jadhav A.N., (2016) Prevalence and diversity of cestode parasite of fresh water fishes of Genus *Channa scopoli*,1777, Bindu Sharma (2016) Studies on prevalence of cestode parasite in freshwater fish *Channa punctatus* from Meerut (Uttarpradesh) , Bele P.S., (2020) Study of cestode Parasite in freshwater fishes from Latur District

Conclusion:

In the present investigation recorded observation show high incidence of infection of cestode parasite in summer season followed by Winter and low in Monsoon season.

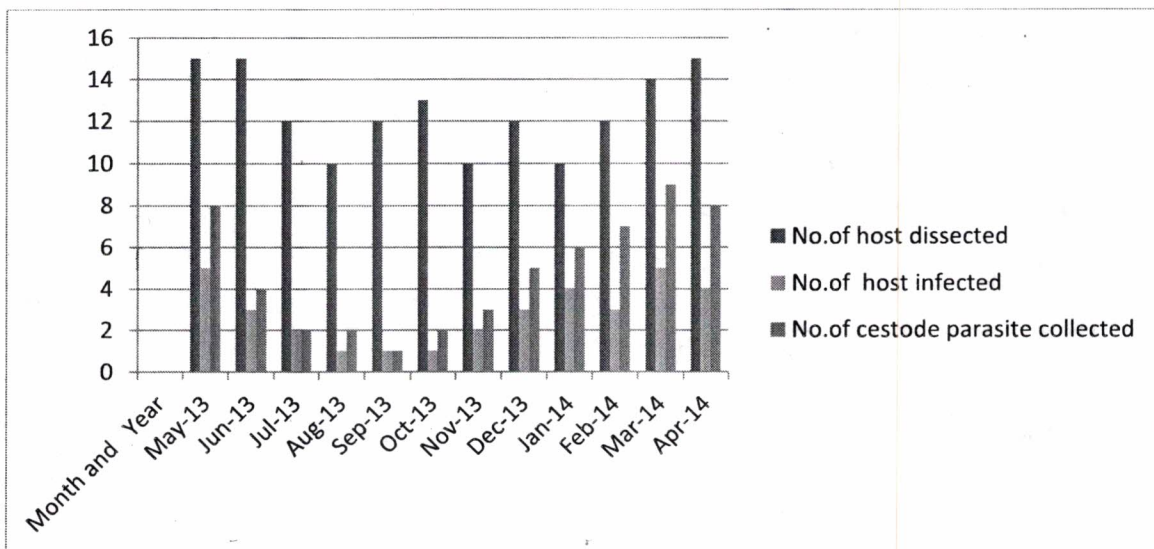
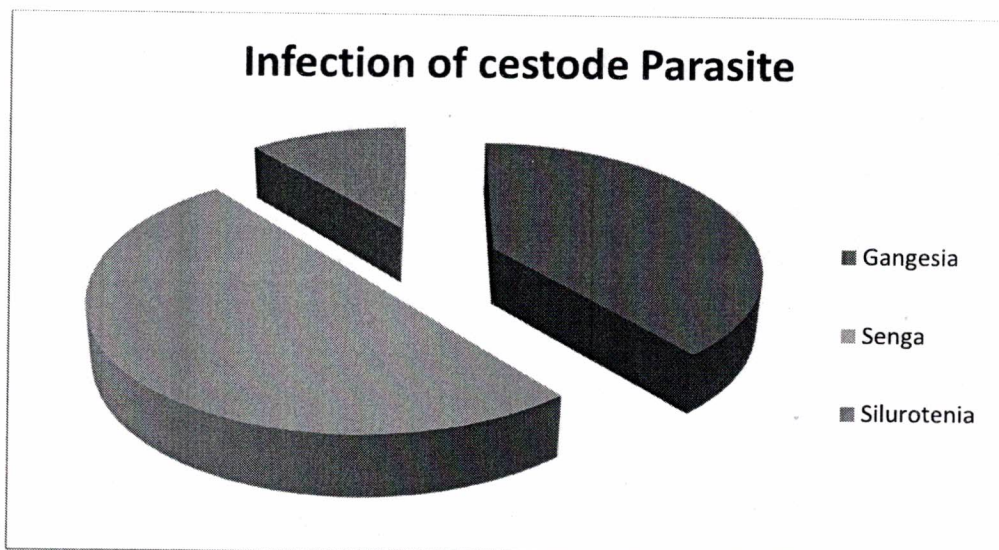


Diagram showing survey infection of cestode parasite in Fresh water Fishes during the Year (period May 2013 to April 2014)



Pie diagram showing infection of cestode parasite in Fresh water Fishes during the Year (period May 2013 to April 2014)

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