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INCIDENCE OF INFECTION OF CESTODE PARASITE, *BREVISCOLEX HINOTAENSIS* IN FRESH WATER FISH, *CLARIAS BATRACHUS*

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ABSTRACT

The present investigation deals with the incidence of infection of cestode, *Breviscolex hinotaensis*[18] parasitizing *Clarias batrachus* from Bundelkhand Region (M.P.) India. The incidence of infection were recorded in winter season (28.33%) followed by monsoon season (26.66%) whereas low in summer season (21.66%).

Figure : 01 References : 20 Table : 01

KEY WORDS : Bundelkhand region (M.P.), *Clarias batrachus*, Incidence of infection

Introduction

Very scanty work on the cestode parasite of catfish of Bundelkhand region of Madhya Pradesh was carried out. Fish are important components of ecosystem from ecological, medicinal, nutritional and economical point of view but most of the fish are infected by helminth parasites, which reduce food value. They infect man and also invade domestic animals and wildlife. Notable contributions were made in population dynamics of helminth parasites by earlier researchers[1,2,3,5,7,9,10,14]. The present study was designed to evaluate the prevalence of cestodes, *Breviscolex hinotaensis*[18] parasitizing fresh water fish, *Clarias batrachus*.

Materials and Methods

In this study, intestines of *Clarias batrachus* were examined for cestode infection during of Oct. 2008 to Jan. 2014 from different localities of Bundelkhand Region of (M.P.) India. Cestodes were collected, preserved in 5% formalin, dehydrated in various alcoholic grades, stained in Mayer's Hemalum, cleared in xylol and mounted in Canada balsum. These cestodes were prepared for identification by standard methods[13,20]. On taxonomic observations identified cestode was *Breviscolex hinotaensis*[18]. Obtained data were recorded, processed for study of incidence of infection.

Result and Discussion

Infection of cestode, *Breviscolex hinotaensis*[18] from *Clarias batrachus* are presented (Table 1, Fig. 1). The incidence of infection of *Breviscolex hinotaensis*[18] were recorded in winter (28.33%) followed by monsoon season (26.66%) whereas infection was low in summer (21.66%). It was reported that temperature, humidity, rainfall, feeding habits of host, availability of infective host and parasite maturation were responsible for influencing the parasitic infections[11]. Feeding

TABLE- 1: Incidence of infection of *Breviscolex hinotaensis*[18] from *Clarias batrachus* during Oct. 2008 to Jan. 2014

Season	Number of host examined	Number of host infected & their (incidence of infection) prevalence	Number of parasites collected
Summer	300	65 (21.66 %)	71
Monsoon	300	80 (26.66 %)	84
Winter	300	85 (28.33 %)	89

activity of the host is reason for seasonal fluctuation of infections[16]. Workers[8] reported high prevalence of parasites in the Indian Major Carp, *Labeo rohita* in Rajshahi, Bangladesh and highest prevalence (75%) and mean density (10.44) of parasites were found in the month of December and lowest (20%) in the month of February. There was high incidence of infection of *Senga* sp., *Gangesia* sp., *Proteocephalus* sp. Infected to *Channa* sp. In summer season (76.66%), 73.33% and 70.00%) followed by winter (65.21%, 52.17% and 56.52%) whereas infection was low in monsoon (36.84%,26.31% 31.57%)[4].The incidence of infection of *Senga microrostellata*[6] and their incidence of infection were recorded (80.00%) in summer season followed in winter (52.50%) where

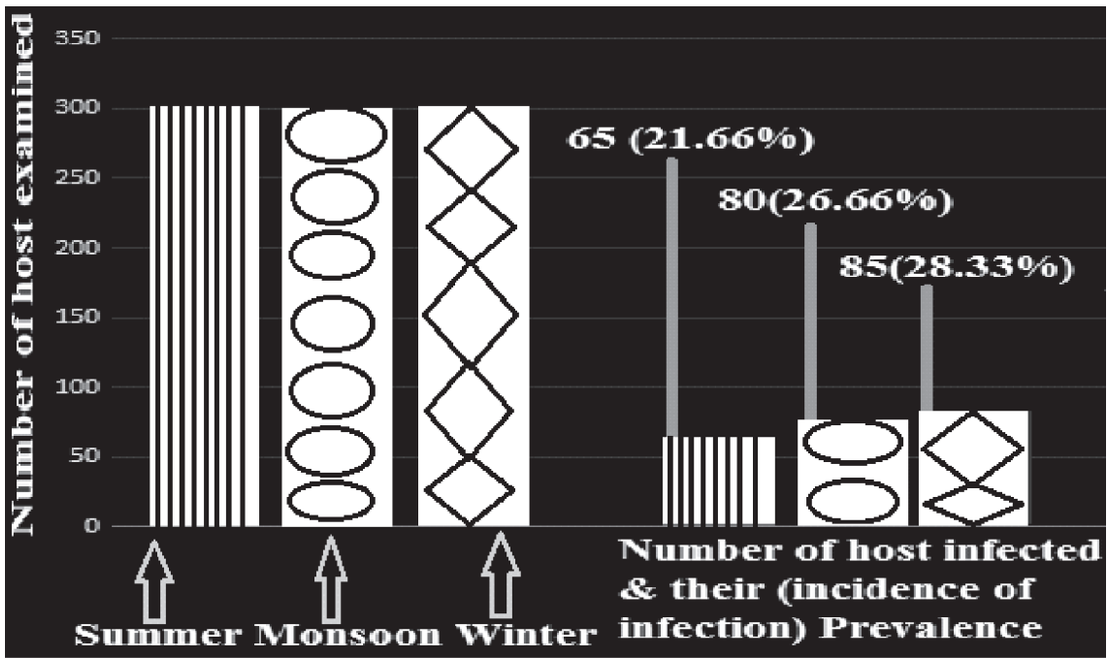

Fig.1 : Incidence of infection of *Breviscolex hinotaensis*[18] from *Clarias batrachus* during Oct. 2008 to Jan. 2014.

as low (37.50%) in monsoon season[17]. Parasitologists[19] reported that incidence of infection of *Mastacembelus armatus* highest prevalence during summer season and lowest in rainy season. High incidence of infection were recorded[15] in winter season (78.33%) followed by monsoon season (63.33%) whereas low in summer season (46.66%) . High incidence of infection were recorded in summer season (73.75%) followed by winter season (51.25%) whereas low in monsoon season (48.75%)[14].

Conclusion

On the basis of above discussion it can be concluded that the incidence of infection of cestode, *Breviscolex hinotaensis* from *Clarias batrachus* in Bundelkhand region of (M.P.) India is higher in winter season (28.33%) followed by monsoon season (26..66%) whereas low in summer season (21.66%).

Recorded data of present study show highest incidence of infection of cestodes in winter season followed by monsoon season whereas low in summer season due to environmental factors, breeding factor and feeding habitat influence of the seasonality of parasitic infection either directly or indirectly. Result of present study therefore is expected to be helpful for future research on helminth parasites of fresh water fish in this area.

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