

“Seasonal Variation of Cestode *Raillietina fridbergeri* Linstow,1877 Parasitizing *Columba livia* (Gemelin)”

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ABSTRACT

A study was conducted to investigate the Seasonal variation of Cestode *Raillietina fridbergeri* Linstow,1877 parasitizing *Columba livia* (Gemelin) from different localities of West Coast of Maharashtra State, India during December,2003 to November, 2005. High incidence of infection of *Raillietina fridbergeri* Linstow,1877 was reported in Summer followed by other season.

Key words- *Columba livia* (Gemelin), *Raillietina fridbergeri* Linstow,1877, Seasonal variation, West Coast of Maharashtra State.

INTRODUCTION

Gastrointestinal parasite infections are a world-wide problem for both small and large scale farmers, but their impact is greater in and the availability of a wide in India due to range of agro-ecological factors suitable for diversified hosts and parasite species. Economic losses are caused by gastrointestinal parasites in a variety of ways, they cause losses through lowered fertility, reduced work capacity, a reduction in food intake and lower weight gains, treatment cost and Mortality in heavily parasitized animals. Investigations of quantitative data provide data for prediction of integrated methods to achieve the regulation of number of parasites from various genera.

MATERIALS AND METHODS

One Hundred Twenty four Cestodes were collected from fourteen infected intestine out of Twenty four intestinal tract of *Columba livia* during December,2003 to November,2005 from West Coast of Maharashtra State. Cestodes were identified on the basis of their morphological characteristics. After staining, drawing by using Camera Lucida, the results showed that cestode was *Raillietina fridbergeri* Linstow,1877. Obtained data were recorded; processed for study of incidence of infection.

RESULTS AND DISCUSSION

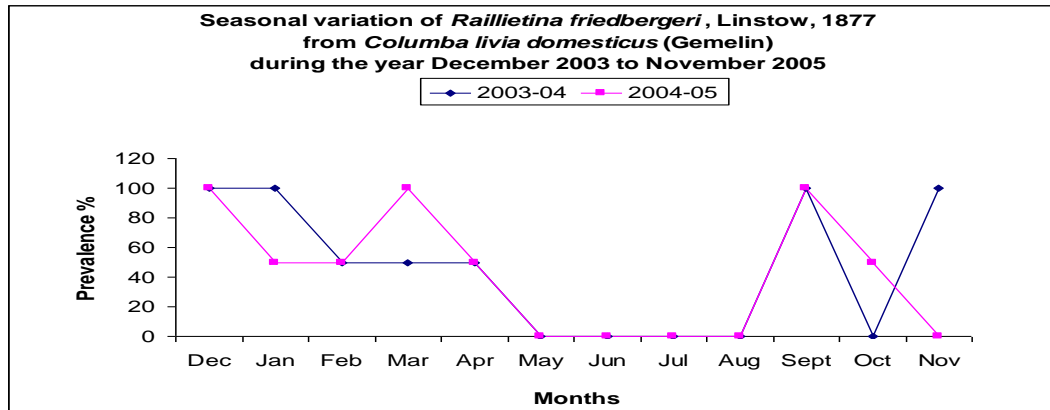
Results of present study on Seasonal variation of *Raillietina fridbergeri* Linstow,1877 of *Columba livia* (Gemelin) is presented in Table No. 01 & Graph 1.

Results of present study are in agreement with Bhure et. al.¹ reported high incidence (51.78%), intensity (1.18%) and density (0.613%) of *Rhabdocona sp.* in summer followed by winter and rainy season. Farhaduzzaman et.al.² noticed highest prevalence (75%) and mean density (10.44) of parasites of *Labeo rohita* in Rajshahi, Bangladesh were found in the month of December and lowest (20%) in the month of February. Shahin et.al.³ reported highest incidence of chicken cestode in summer 5.54% and Autumn 5.6% and lowest incidence during Winter 3.3% and Spring 2.2%. Bhure et al.⁴ studied high prevalence of avian cestodes in summer where as low in monsoon season. Bhure and Nanware⁵ reported high incidence of infection of *Cotugnia dignopora*, *Cotugnia diamarae* and *Raillietina (R.) domestica* in summer (75%, 67.85 % & 71.42%) followed by winter (60%, 52 % & 48%) whereas low infections in monsoon season (38.09%, 33.33% & 38.09%).

Table 1. Seasonal variation of *Raillietina fridbergerei* Linstow,1877 of *Columba livia* (Gemelin) during December 2003 to November 2005.

Month & Year	No. of Hosts Examined	No. of Host infected	No. of cestode parasites collected	Incidence of Infection %	Locality
December 03	01	01	10	100	Bhatye
January 04	01	01	12	100	Pawas
February 04	02	01	16	50	Pawas
March 04	02	01	12	50	Mirya
April 04	02	01	08	50	Mirkarwada
May04	01	00	00	00	Harne
June 04	Nil	Nil	Nil	Nil	Nil
July 04	Nil	Nil	Nil	Nil	Nil
August 04	Nil	Nil	Nil	Nil	Nil
September 04	01	01	06	100	Thane
October 04	Nil	Nil	Nil	Nil	Nil
November 04	01	01	07	100	Alibag
December 04	01	01	06	100	Bhatye
January 05	02	01	06	50	Pawas
February 05	02	01	10	50	Thane
March 05	01	01	12	100	Pawas
April 05	02	01	05	50	Malvan
May05	Nil	Nil	Nil	Nil	Nil
June 05	Nil	Nil	Nil	Nil	Nil
July 05	Nil	Nil	Nil	Nil	Nil
August 05	Nil	Nil	Nil	Nil	Nil
September 05	01	01	06	100	Thane
October 05	02	01	08	50	Pawas
November 05	02	00	00	00	Alibag
Total	24	14	124		

Graph 1. Seasonal variation of *Raillietina fridbergeri* Linstow,1877 of *Columba livia* (Gemelin) during December 2003 to November 2005.



Kennedy C.R.⁶ reported temperature; humidity, rainfall, feeding habits of host, availability of infective host and parasite maturation are responsible for influencing the parasitic infections. Feeding activity of the host is reason for seasonal fluctuation of infections (Pennuyuick⁷). Jadhav and Bhure⁸ noticed high temperature, low rainfall and sufficient moisture were necessary for development of parasite.

Bhure et.al.⁹ recorded seasonal variation of Caryophyllidean tapeworms, Which showed maximum infection in winter (71.66%) followed by summer (43.33%) whereas lower infection in monsoon (15.00%). Bhure et.al.¹⁰ noticed high incidence of infections of Piscean helminth were recorded in summer (Feb., 2014-May, 2014) followed by winter (Oct., 2013- Jan., 2014) where as low in monsoon (June, 2013 –Sept., 2013). Bhure and Nanware¹¹ described high prevalence of nematode *Procamallanus hyderabadensis* in Summer(Feb.,2014-May,2014) was 79.16% followed by Winter(Oct.,2013- Jan., 2014) was 43.75% whereas infection was low in monsoon (June, 2014 –Sept., 2014) was 37.50%. Bhure and Nanware¹²recorded high incidence of infection of *Senga sp.*, *Gangesia sp.*, *Proteocephalus sp.* infected to *Channa sp.* was in summer (76.66 %, 73.33 % & 70.00 %) followed by winter (65.21 %, 52.17% & 56.52%) whereas infection was low in monsoon (36.84%, 26.31% & 31.57%). Nanware et al. ¹³ reported high incidence, density and index of infection of nematode parasites were reported in Summer followed by Winter whereas infection was low in monsoon.

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