

POPULATION DYNAMICS OF CESTODE PARASITES IN *COLUMBA LIVIA* FROM BEED DISTRICT, INDIA

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ABSTRACT

The present communication deals with the population dynamics of cestode parasite in Beed. Population of the cestode parasites are divided into three genera i.e. *Cotugnia*, *Rallitina* and *Valipora*. After dissecting intestine of *Columba livia* cestode parasite found are *Cotugnia meggitti* (Yamaguti) 1935, *Cotugnia columbae* (Shinde) 1969, *Rallitina tetragona* (Mohan) 1958, *Rallitina corvine* (Shinde) 1977, *Valipora mutabilis* (Linton). The present study includes application of statistical method to understand and distribution of some cestode parasites both minimum and maximum population level for three seasons i. e. summer, rainy and winter during 2017-2018.

Columba livia are collected from different sites of Beed district. The Parasites were collected from the intestine of the host. Cestode parasites were preserved 4% formalin and stained with Harri's haematoxyline. Then parasites are washed with distilled water and dehydrated with ascending grades of alcohol and mount in D.P.X.

This study of population dynamics show the five cestode species of three genera which are *Cotugnia*, *Rallitina* and *Valipora*.

Formulae

$$\text{Incidence of Infection} = \frac{B}{A} \times 100$$

$$\text{Intensity of Infection} = \frac{C}{B}$$

$$\text{Density} = \frac{C}{A}$$

The A stands for the number of host examined, B for number of host infected and C for number of parasite collected.

Table I and II show the distribution of infection, density and index of infection.

Table showing values of *Cotugnia* species

Month	No. of host Examined (A)	No. of host infected (B)	No. of Parasites Found (C)	Incidence of infection (%)	Intensity of infection (%)	Density	Index of Infection (%)	Region
March 2017	15	05	02	33.33	0.4	0.1	0.04	Beed
April 2017	15	04	04	26.66	1	0.2	0.07	Georai
May 2017	15	02	02	13.33	1	0.1	0.01	Parali
June 2017	15	10	06	66.66	0.6	0.4	0.26	Gadhi
July 2017	15	10	06	66.66	0.6	0.4	0.26	Ghatnandor
August 2017	15	12	08	80.00	0.6	0.5	0.42	Kej
Sept. 2017	15	11	05	73.33	0.4	0.3	0.24	Kalam
October 2017	15	08	05	53.33	0.6	0.3	0.17	Majalgaon
November 2017	15	05	03	33.33	0.6	0.2	0.06	Dharur
December 2017	15	06	02	40.00	0.3	0.1	0.03	Mesajog
January 2017	15	05	02	33.33	0.4	0.1	0.04	Ambajogai
February 2017	15	04	03	26.66	0.7	0.2	0.05	Ashi

Table showing values of *Rallitina* species

Month	No. of host Examined (A)	No. of host infected (B)	No. of Parasites Found (C)	Incidence of infection (%)	Intensity of infection (%)	Density	Index of Infection (%)	Region
March 2017	15	05	02	33.33	0.4	0.001	0.04	Beed
April 2017	15	04	01	26.66	0.25	0.06	0.01	Georai
May 2017	15	02	03	13.33	1.5	0.2	0.02	Parali
June 2017	15	10	04	66.66	0.4	0.26	0.17	Gadhi
July 2017	15	10	03	66.66	0.3	0.2	0.13	Ghatmandur
August 2017	15	12	04	80.00	0.33	0.26	0.21	Kej
Sept. 2017	15	11	04	73.33	0.36	0.26	0.19	Kalam
October 2017	15	08	03	53.33	0.37	0.2	0.10	Majalgaon
November 2017	15	05	03	33.33	0.6	0.2	0.06	Dharur
December 2017	15	06	02	40.00	0.33	0.001	0.05	Massajog
January 2017	15	05	01	33.33	0.2	0.06	0.02	Ambajogai
February 2017	15	04	01	26.66	0.25	0.06	0.01	Ashti

Table showing values of *Falipora* species

Month	No. of host Examined (A)	No. of host infected (B)	No. of Parasites Found (C)	Incidence of infection (%)	Intensity of infection (%)	Density	Index of Infection (%)	Region
March 2017	15	05	00	33.33	00	00	00	Beed
April 2017	15	04	00	26.66	00	00	00	Georai
May 2017	15	02	00	13.33	00	00	00	Parali
June 2017	15	10	03	66.66	0.3	0.2	0.13	Gadhi
July 2017	15	10	03	66.66	0.3	0.2	0.13	Ghatmandur
August 2017	15	12	04	80.00	0.33	0.26	0.21	Kej
Sept. 2017	15	11	02	73.33	0.18	0.13	0.09	Kalam
October 2017	15	08	01	13.33	0.12	0.06	0.03	Majalgaon
November 2017	15	05	01	33.33	0.2	0.06	0.02	Dharur
December 2017	15	06	01	40.00	0.1	0.06	0.02	Massajog
January 2017	15	05	02	33.33	0.4	0.13	0.04	Ambajogai
February 2017	15	04	01	26.66	0.25	0.06	0.01	Ashti

RESULTS AND DISCUSSION

Genra Cotugala: In case of Cotugnia the values of incidence, density and Index of infection were maximum in rainy season and low in winter season.

Genra Rallitina: In case of Rallitina values of incidence, density and Index of infection were maximum in rainy season and restrained in winter season.

Genra Falipora: In case of Falipora values of incidence, density and Index of infection were maximum in summer season, restrained in rainy season and low in winter season.

Above data reveal that Cestode belonging from the genus *Cotugnia* are dominant. It is due to the host specificity and many other phonological factors.

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