

SEASONAL VARIATION

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The effect of climatic factors on helminthes are studied by the workers like Kennedy (1968, 1969), Lawrance (1970), Crofton (1971), Anderson (1976), Mittal (1980) and Susheela (1987) have shown the effect of seasons.

A study was carried about seasonal variation by the author on different cestode parasites of fishes and are namely *Mastacembellus armatus* (*Circumoncobothrium Shenga*), *Channa marulius* (*Circumonobothrium, Ptychobothrium*) etc. The study of cestode parasites have been undertaken to investigate the phonological and innate factors such as season, habit and habitat. On the basis of incidence of infection, the influence of annual season on the population of cestode parasites of fishes carried out.

The present work deals with the effect of seasons on cestode population from the fresh water fishes collected from various localities at Kolhapur district.

The present study include application of statistical methods to understand the distribution of cestode in two annual cycles that is June 2006 to May 2008.

Each annual cycle comprises of

1. Rainy season : June to September
2. Winter season : October to January
3. Summer season : February to May

Thus an attempt was made as per the suggestion of research guide Dr. S.V. Kharade to study the population dynamics of cestode parasites. Only statistical study of cestode infection is carried out by the author.

The data shown in the table, month and year with their different host during the period is depicted in the tabular form.

**Seasonal variation of cestode parasites
from *Mastacembellus armatus* collected
at Kolhapur district for the year 2006**

Sr No	Month & Year	No. of dissected hosts	No. of infected hosts	No. of cestode parasites collected	Genera	Locality
1	Jan 06	03	01	02	<i>Circumon-cobothrium</i>	Kolhapur
2	Feb 06	02	01	02	<i>Circumon-cobothrium</i>	Kolhapur
3	Mar 06	01	Nil	Nil	Nil	
4	Apr 06	Nil	Nil	Nil	Nil	
5	May 06	Nil	Nil	Nil	Nil	
6.	June 06	Nil	Nil	Nil	Nil	
7.	July 06	02	01	03	<i>Circumon-cobothrium</i>	Rukadi
8.	Aug 06	01	Nil	Nil	Nil	
9	Sept. 06	02	02	06	<i>Circumon-cobothrium</i>	Kolhapur
10	Oct 06	05	04	09	<i>Shenga</i>	Shirol
11	Nov 06	04	03	09	<i>Shenga</i>	Kolhapur
12	Dec 06	03	02	02	<i>Circumon-cobothrium</i>	Rukadi
	Total	23	13	30		

**Seasonal variation of cestode parasites
from *Mastacembellus armatus* collected
at Kolhapur district for the year 2007**

Sr No	Month & Year	No. of dissected hosts	No. of infected hosts	No. of cestode parasites collected	Genera	Locality
1	Jan 07	03	02	06	<i>Shenga</i>	Kolhapur
2	Feb 07	04	03	04	<i>Shenga</i>	Kolhapur
3	Mar 07	Nil	Nil	Nil	Nil	
4	Apr 07	Nil	Nil	Nil	Nil	
5	May 07	Nil	Nil	Nil	Nil	
6.	June 07	02	01	04	<i>Shenga</i>	Rukadi
7.	July 07	03	02	05	<i>Shenga</i>	Rukadi
8.	Aug 07	Nil	Nil	Nil	Nil	
9	Sept. 07	04	02	01	<i>Circumon-cobothrium</i>	Rukadi
10	Oct 07	06	04	05	<i>Circumon-cobothrium</i>	Kolhapur
11	Nov 07	03	03	05	<i>Senga</i>	Rukadi
12	Dec 07	04	03	04	<i>Circumon-cobothrium</i>	Kolhapur
	Total	29	20	34		

**Seasonal variation of cestode parasites
from *Mastacembellus armatus* collected
at Kolhapur district for the year 2008**

Sr No	Month & Year	No. of dissected hosts	No. of infected hosts	No. of cestode parasites collected	Genera	Locality
1	Jan 08	03	02	04	<i>Circumon-cobothrium</i>	Kolhapur
2	Feb 08	Nil	Nil	Nil	Nil	
3	Mar 08	Nil	Nil	Nil	Nil	
4	Apr 08	Nil	Nil	Nil	Nil	
5	May 08	02	01	02	<i>Circumon-cobothrium</i>	Rukadi
	Total	05	03	06		

**Seasonal variation of cestode parasites
from *Channa Marulius* collected
at Kolhapur district for the year 2006**

Sr No	Month & Year	No. of dissected hosts	No. of infected hosts	No. of cestode parasites collected	Genera	Locality
1	Jan 06	04	02	03	<i>Circumon-cobothrium</i>	Kolhapur
2	Feb 06	05	01	03	<i>Circumon-cobothrium</i>	Rukadi
3	Mar 06	Nil	Nil	Nil	Nil	
4	Apr 06	Nil	Nil	Nil	Nil	
5	May 06	Nil	Nil	Nil	Nil	
6.	June 06	03	02	03	<i>Circumon-cobothrium</i>	Ichal-karanji
7.	July 06	Nil	Nil	Nil		
8.	Aug 06	02	01	04	<i>Circumon-cobothrium</i>	
9	Sept. 06	03	02	03	<i>Circumon-cobothrium</i>	Ichal-karanji
10	Oct 06	06	05	02	<i>Ptychoboth-rium</i>	Kolhapur
11	Nov 06	04	03	06	<i>Circumon-cobothrium</i>	Rukadi
12	Dec 06	05	04	12	<i>Circumon-cobothrium</i>	Ichalka-ranji
	Total	32	20	36		

**Seasonal variation of cestode parasites
from *Channa Marulius* collected
at Kolhapur district for the year 2007**

Sr No	Month & Year	No. of dissected hosts	No. of infected hosts	No. of cestode parasites collected	Genera	Locality
1	Jan 07	03	01	Nil	<i>Circumon-cobothrium</i>	Kolhapur
2	Feb 07	02	01	02	Nil	
3	Mar 07	Nil	Nil	Nil	Nil	
4	Apr 07	04	Nil	Nil	Nil	
5	May 07	05	Nil	Nil	Nil	
6.	June 07	06	04	02	<i>Circumon-cobothrium</i>	Kolhapur
7.	July 07	Nil	Nil	Nil		
8.	Aug 07	Nil	Nil	Nil		
9	Sept. 07	07	05	03	<i>Circumon-cobothrium</i>	Kolhapur
10	Oct 07	05	04	09	<i>Circumon-cobothrium</i>	Kolhapur
11	Nov 07	04	02	06	<i>Circumon-cobothrium</i>	Rukadi
12	Dec 07	03	01	02	<i>Circumon-cobothrium</i>	Rukadi
	Total	39	14	24		

**Seasonal variation of cestode parasites
from *Channa Marulius* collected
at Kolhapur district for the year 2008**

Sr No	Month & Year	No. of dissected hosts	No. of infected hosts	No. of cestode parasites collected	Genera	Locality
1	Jan 08	02	02	03	<i>Circummon-cobothrium</i>	Kolhapur
2	Feb 08	03	01	04	<i>Circummon-cobothrium</i>	Kolhapur
3	Mar 08	04	Nil	Nil	Nil	
4	Apr 08	04	Nil	Nil	Nil	
5	May 08	09	02	03	<i>Circummon-cobothrium</i>	Kolhapur
	Total	22	05	10		