SEASONAL VARIATION STUDY OF SENGA (DOLLFUS, 1934) IN CHANNA GACHUA FROM AMRAVATI RESION

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Abstract
Seasonal variation study reveals the infection efficiency and pathogenicity among the animals. The study shows the infection of cestode parasite senga in Channa gaucha. This infection indicates the pathogenic symptoms on the host during the study period year 2013-2015. The privalance of gastrointestinal parasite, the genera of cestode parasite involved species and severity of infection also very considerably depending on local environmental condition such as humidity, temp, rain fall, vegetation and management practices.
Keywords: Variation, parasite, pathogenicity etc,.

Introduction:
Gastrointestinal parasitic infections are a worldwide problem which results in morbidity and mortality in tropical countries. It caused great economic losses through lowered fertility, reduced work capacity, involuntary culling, a reduction in food quality, and meat production, treatment coasts and mortality in heavily parasitized animals **Coop, R.L and Holmes, P.H (1996)**. Despite the immense progress made to control parasitosis, further more parasitosis appears to be a major factor for lowered productivity of livestock. Therefore the distribution and prevalence of the disease should be presented by geographical areas that could roughly correspond to climatic conditions.
Higher incidences of cestode parasites may be due to conductive environment for growth of the parasites. The present study indicates that the occurrence of helminthic infection depends on suitable environment which require in its development. (**Bhure, D.B., Padwal, N.D and Jadhav, B.V. 2007)**. Environmental variations were reflected in seasonal difference in the incidence of diseases. The existence and survival of parasite is greatly influenced by pollution of the environment the development of parasites need high temperature and sufficient moisture. The high prevalence occur in summer followed by winter season (**Chincholikar, Shinde, G.B, Deshmukh, R.A and Jadhav, B.V 1976)**
The structural grouping and quantitative analysis of Cestode parasites was studied during the two annual cycles i.e. July 2013 to June 2015. During annual seasons the influence of population of helminth parasites of vertebrates was worked out on the basis of incidence of infection **(Ercument Genc. 2005)**.
Each annual cycle comprises of: period year 2013-2015
1) Rainy season (June to September)
2) Winter season (October to January)
3) Summer season (February to May)

Material And Method:
The survey was carried out during the period of June 2013 to May 2015, at places of Amravati Region. The hosts examined in two years, were *Channa gachua* for cestode parasites. The Fishes were surveyed. The Fish host were dissected in the laboratory and digestive tract of *Channa gachua* collected from slaughter houses.

The digestive tract was carefully examined. Cestode was collected and a complete record about the infected host, parasites is summarized. The parasites were flattened and kept in 4% formalin, stained by Harris-haematoxylin, mounted in DPX and identified for further observations.

Observations:

Seasonal Variation of *Senga* (Dollfus, 1934) *from Channa gachua* from during the year 2013-14 from "Amravati Region"

Sr.No.	Month & Year	NO.of dissected hosts	No. of infected hosts	No. of Cestode parasites collected	Prevalence	Genera	Locality
1	Jul-13	8	5	5	62.50	*Senga*	Buldhana
2	Aug-13	9	2	2	22.22	*Senga*	Akola
3	Sep-13	9	3	4	33.33	*Senga*	Deolgaon raja
4	Oct-13	6	3	3	50.00	*Senga*	Chikhali
5	Nov-13	5	5	5	100.00	*Senga*	Amravati
6	Dec-13	7	7	8	100.00	*Senga*	Buldhana
7	Jan-14	8	6	5	75.00	*Senga*	Chikhali
8	Feb-14	6	5	4	83.33	*Senga*	Amravati
9	Mar-14	8	5	5	62.50	*Senga*	Deolgaon raja
10	Apr-14	7	4	5	57.14	*Senga*	Akola
11	May-14	6	4	4	66.67	*Senga*	Buldhana
12	Jun-14	5	3	4	60.00	*Senga*	Akola

Table:1

Seasonal Variation of *Senga sp.* (Dollfus,1934) from *Channa gachua* during the year 2014-15 from "Amravati Region"

Sr. No.	Month & Year	NO.of dissected hosts	No. of infected hosts	No. of Cestode parasites collected	Prevalence	Genera	Locality
1	Jul-14	5	3	3	60.00	*Senga*	Buldhana
2	Aug-14	6	2	2	33.33	*Senga*	Akola
3	Sep-14	4	1	2	25.00	*Senga*	Deolgaon raja
4	Oct-14	6	3	3	50.00	*Senga*	Chikhali
5	Nov-14	8	4	4	50.00	*Senga*	Amravati
6	Dec-14	5	3	4	60.00	*Senga*	Buldhana
7	Jan-15	6	4	5	66.67	*Senga*	Chikhali
8	Feb-15	7	6	8	85.71	*Senga*	Amravati
9	Mar-15	8	4	3	50.00	*Senga*	Deolgaon raja
10	Apr-15	4	2	2	50.00	*Senga*	Akola
11	May-15	8	4	3	50.00	*Senga*	Buldhana
12	Jun-15	7	3	3	42.86	*Senga*	Akola

Table:2

In the year 2013-2014, the incidence of infection was 07.80% in rainy season, 15.90% in winter and 24% in summer season. The total number of cestode parasites found in *Senga Sp.*

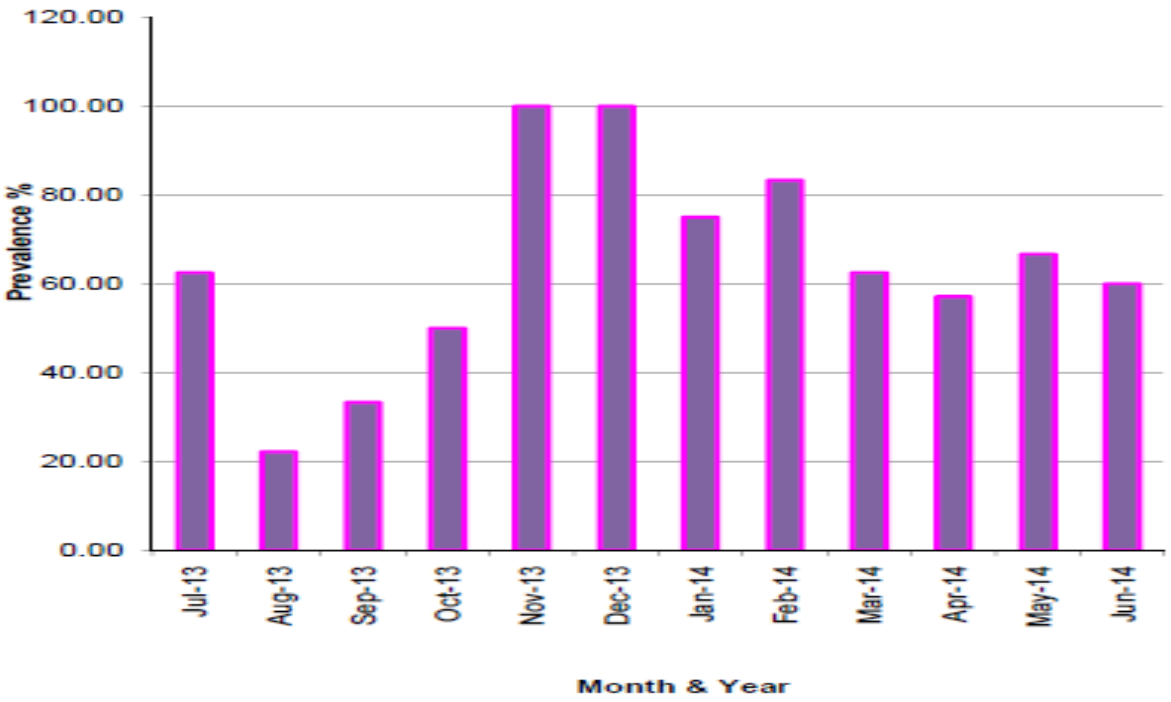
were 120,200 and 319 in rainy, winter and summer season respectively.(Table:1)

In the year 2014-2015, the incidence of infection in *Senga Sp.* Was 07.44% in rainy season, 15.82% in winter and 28.70% in rainy season, in summer season. The number of cestode parasites collected in rainy, winter and summer seasons were respectively. (Table:2)

Conclusion:

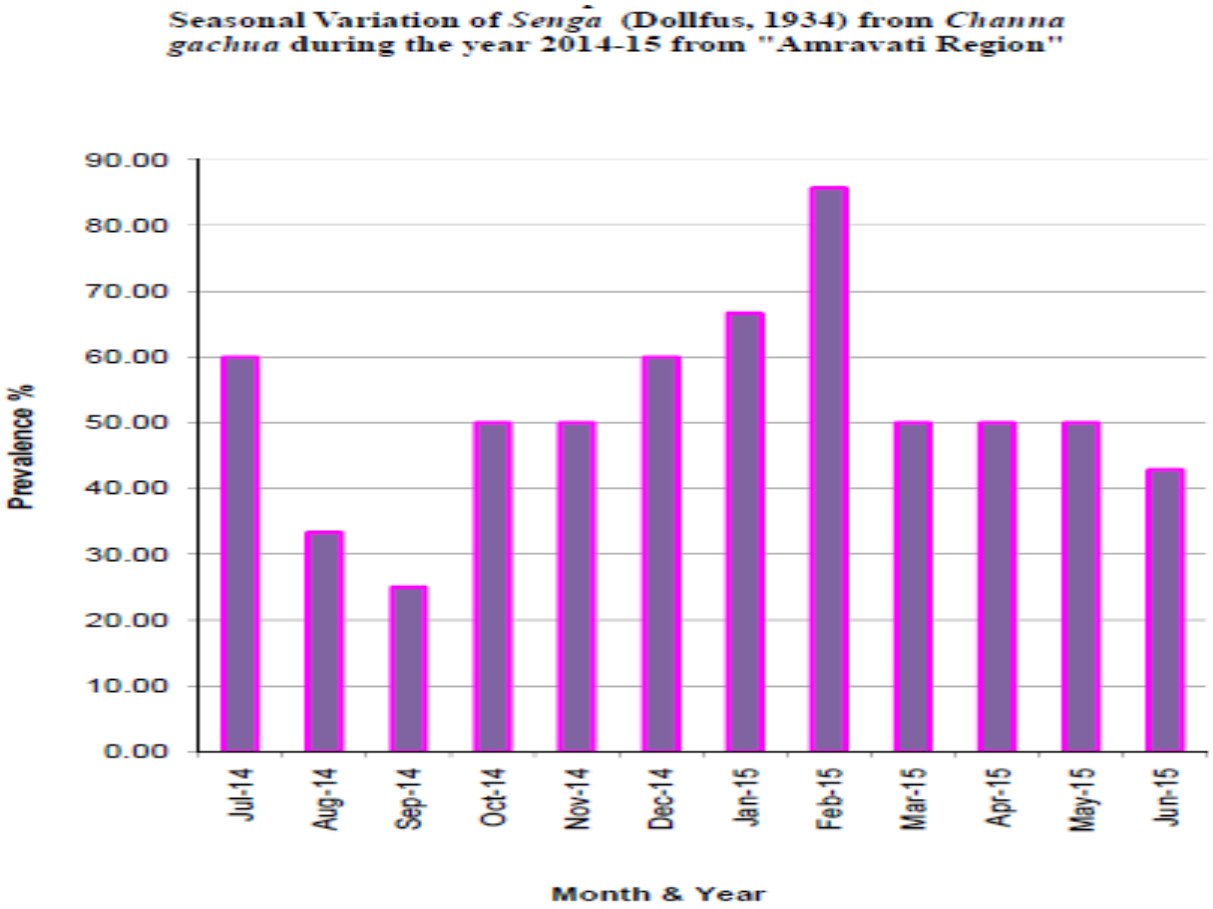
In this study, important parasites of vertebrates such as fishes was identified and those factors affecting the epidemiology of these parasite. High levels of prevalence, intensity and abundance of these parasites weregenerally observed around the rainy season with peeks occurring in May & September of each year. Thus confirmed that the weather conditions of the wet seasons were generally favourable for the development, survival and transmission of the free-living stages of cestodes as compared to the more unfavorable conditions of the dry seasons.(from graph 1 and 2).

Seasonal Variation of *Senga* (Dollfus, 1938) from *Channa gachua* during the year 2013-14 from "Amravati Region"



Graph:1

Thus rainfall and moisture status appear to be the major limiting environmental factors for the development survival of the infective stages of cestodes The present studies also demonstrated the roles of other factors such as age, sex and susceptibility of host animals, parasitic fecundity, stocking density, peri-parturient rise, hypobiosis and agro-climatic zones.



Graph:2

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