



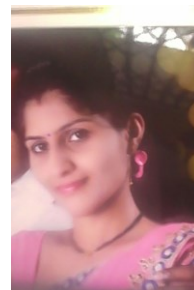
## Study of Gonado Somatic Index of Fresh Water Fish *Lepidocephalyths Guntea*

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### ABSTRACT

The gonadosomatic index of the *Lepidocephalyths Guntea* from Son River Shahdol. Studies have been carried out the scientific management for obtaining high yield of fish production eventually calls the adequate and in-depth study of breeding mechanism. In order to complete the task present study was undertaken to trace accurately spawning period of *Lepidocephalyths Guntea*. This is reported in terms of gonado somatic index which express the relative change in gonad weight to the percentage of body weight. During present study the peak value of GSI was observed only once in the month of August (8.16%) indicating only one spawning period in *Lepidocephalyths Guntea* . i.e. from September to December.



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**Key words :** *Lepidocephalyths Guntea*, Gonado Somatic Index (GSI) spawning.

## INTRODUCTION

*Lepidocephalyths Guntea* is common fresh water fish. It has economic value too. It is very much liked in tribiled areas in Shahdol dist.fish body weight and weight of gonad gives the Gonado somatic index (GSI). Due to ever increasing population and industrialization availability of agriculture land is reducing day by day Moreover in a developing country like India where 30% of population is still suffering severely by malnutrition and health hazards fish food may be useful tool to provide portentous and easily digestible food item. The scientific management for obtaining high yield of fish production eventually calls the adequate and in-depth study of breeding mechanism. In order to complete the task present study was undertaken to accurately spawning period of *Lepidocephalyths Guntea*. This is reported in terms of Gonado somatic index which express the relative change in gonad weight to the percentage of body weight.

## MATERIALS AND METHODS

The present study sample will be collected from Son River in Shahdol Dist. Matured and immature fishes were collected from August 2014 to 2015 and weighed along with the weight of gonads monthly. Later % of gonad weight in relation to the total body weight was calculated by using the following formula-

Gonado Somatic Index

$$= \frac{\text{Weight of gonads}}{\text{Weight of body}} \times 100$$

GSI of *Lepidocephalyths Guntea* was calculated. After calculating the % of GSI the period of maturity of fish was divided into following stages.

1. Pre spawning phase
2. Spawning phase
3. Post spawning phase
4. Preparatory phase

Gonad somatic index of fish increases with maturation being maximum during peak period of maturity and abruptly declines after spawning.



*Lepidocephalyths Guntea*

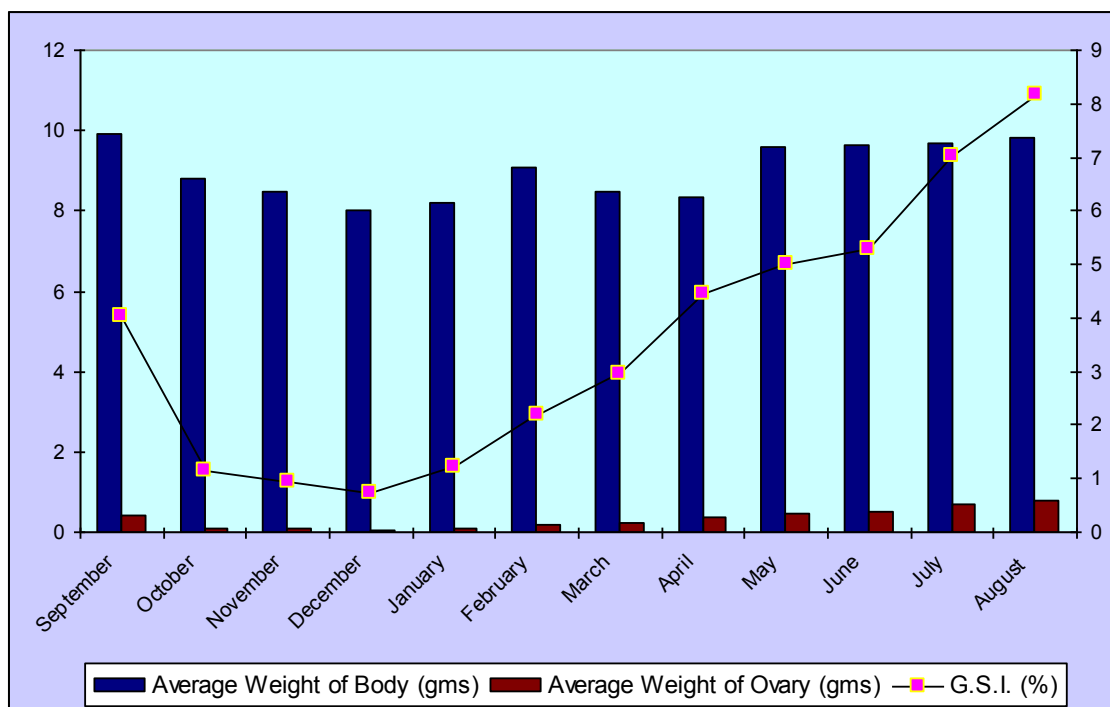
## RESULTS AND DISCUSSION

GSI of *Lepidocephalyths Guntea* was estimated monthly for females and values are expressed as percentages in table No.1. GSI values rises from 2.94% in March to 5.00% in May indicating pre spawning period. It gradually decreases from 5.28% in June to 8.16% in August indicating the spawning period. It abruptly decreases up till 4.04 % in September to 0.94 % in November indicating post spawning period. It gradually increases from 0.74% in

December to 2.19 % in February indicating preparatory period. In *Lepidocephalyths Guntea* peak value of GSI is observed only once in the month of May indicating only one spawning period from September to December. Similar observations were recorded by Nazir et al., 1978 in *Barbus luetus*; Brewer et al, 2008; Sindhe et al, 2004 in *Notopterus notopterus*; Brewer, 2008 in small reverine fishes, Mchlisin Musri Musman, 2010 in *Rasbora towarensis*.

**Table-1 : Gonadosomatic Index of *Lepidocephalyths Guntea***

Months	Average Weight of Body (gms)	Average Weight of Ovary (gms)	G.S.I. (%)
September	9.90	0.40	4.04
October	8.80	0.10	1.13
November	8.50	0.08	0.94
December	8.00	0.06	0.74
January	8.20	0.10	1.21
February	9.10	0.20	2.19
March	8.50	0.25	2.94
April	8.33	0.37	4.44
May	9.60	0.48	5.00
June	9.65	0.51	5.28
July	9.70	0.68	7.01
August	9.80	0.80	8.16



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