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Research Article

Study on spawning period of fresh water fish *Wallago attu*

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Abstract

The present study was undertaken to trace accurately spawning period of *Wallago attu* This is reported in terms of gonadosomatic index which express the relative change in gonad weight to the percentage of body weight. During present study two peak values of GSI were observed indicating that there are two peak periods of spawning in *W.attu* first from July to August and second from January to March.

INTRODUCTION

Reproduction in fishes is one of the basic biological feature enabling survival and continuation of species. For efficient fish culture and effective management practices it is essential to study reproductive biology. Determination of Gonadosomatic index is of prime importance for detecting the spawning period of any fish. The present study was undertaken to trace accurately spawning period of *W.attu*. This is reported in terms of gonadosomatic index which express the relative change in gonad weight to the percentage of body weight. Rao (1972) reported observations on spawning of *C.reba*, Gupta (1975) studied biology of *C.reba*, Admassu (1996) studied breeding season of *Oreochromis niloticus* .

MATERIALS AND METHODS

Material for the study was obtained from Godavari river dist. Nasik (Gangapur dam). Matured and immature fishes were weighed along with the weight of gonads monthly. Later Percent of gonad weight in relation to the total body weight was calculated by using the following formula.

$$Gonadosomatic\ index = \frac{weight\ of\ gonads}{weight\ of\ body}\ X\ 100$$

Gonadosomatic index of *w.attu* was calculated. After calculating the % of GSI the period of maturity of fish was divided into following stages (Quyyam and Quasim, 1961) *Ophiocephalus puntatus.*

1. Prespawning phase
2. Spawning phase
3. Postspawning phase
4. Preparatory phase

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

RESULTS AND DISCUSSION

The GSI of *W.attu* was estimated monthly for females and values are expressed as percentages in Table 1. It increases from 10% in March to 11.3 % in May indicating the pre spawning period. It decreases from 6% in June to 4.2% in July indicating the spawning period It decreases from 4% from August to 3.8% in September indicating the post spawning period. It gradually increases in G.S.I from 8.8% in November to 10.9% in February indicating the Preparatory Phase.In *Wallago attu* the peak value off G.S.I is observed only once in May indicating only one spawning period, from June to July. Similar Single Peak of G.S.I were observed in *Heteropneustes* by Talwar, P. Kand A.G. Jhingran (1991) and Nazir etal (1978) in *Barbus luteus*.

Table 1. Gonadosomatic index of *W.attu*

Month	Average Weight of body (gms)	Average weight of ovary (gms)	GSI (%)
May	1150	130	11.3
June	1000	60	6
July	700	30	4.2
August	700	28	4
September	650	25	3.8
October	450	20	4.4
November	450	40	8.8
December	650	70	10.7
January	700	75	10.7
February	730	80	10.9
March	800	80	10
April	850	90	10.5

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