## REPRODUCTIVE BIOLOGY OF *LABEO CALBASU* (HAM.) FROM RIVER GANGA AT ALLAHABAD

## P.R. SINGH, A.K.DOBRIYAL\* AND H.R. SINGH\*\*

Department of Zoology, University of Allahabad, U.P., Email: drprsingh@rediffmail.com

\* Department of Zoology, HNB Garhwal University Campus, Pauri Garhwal, U.K.

\*\*Emeritus Scientist, 3/33 Shradhapuri, Meerut, UP

Received: 02-10-2012 Revised: 28-10-2012 Accepted: 19-11-2012

## **ABSTRACT**

Based on the macro and microscopic examination of gonads, six stages of maturity were recognized. A continuous steady growth of ova, size frequency distribution of ova and a single peak in GSI values indicated that fish spawned once in a year with a limited period of spawning (July to September). The 50% level in maturity, which has been taken to represent the mean length at which maturity was obtained, were 32.0 cm and 34.0 cm for male and female *L. calbasu* respectively. The fish population showed a ratio of 1:1.038 for male and female, which was very close to natural ratio 1:1. Fecundity ranged from 1.3 to 5.07 lacs in a total length range of 30.0 to 60.0 cm. During period of the study, it was found that *Labeo Calbasu* is reproducing successfully and it has emerged most successful fish species in the riverine environment at Allahabad.

Keywords:-Labeo Calbasu, Ganga, Fisheries, Maturity, Spawning.

## REFERENCES

- Dobriyal, A. K. and Singh, H.R. (1987) The reproduction biology of a hillstream carp *Barilius* bendelisis (Ham.) From Garhwal Himalaya, India Vest cs Spolec Zool, 51:1-10.
- Khan, M. A. (1986) Reproductive biology of *Labeo calbasu* (Ham. Buch.) of Tilaiya reservoir, Hazaribagh, Bihar, *Geobios*, 13, 199-94.
- Koblitskaya, A. F. (1961) New data on the biology of *Pomatoshistus caucasicus* Kaw. Of the outer delta of the Valta, *Vopr Ikhtiol*, 1, no. 2.
- Natrajan, A. V. and A. G. Jhingran (1963) On the biology of *Catla catla* (Ham.) from the river Yamuna, *Proc. Natl. Inst. Sci. India*, 29B, 326-55.
- Natrajan, V. (1971) Biology and fishery of *L. calbasu* (Ham.) in Bhavanisagar reservoir, *Madras J. Fish.*, 6, 14-56.
- Nikolskii, G. V. (1963) *The ecology of fishes*, Academic Press, London.
- Pathak, S. C. and A. G. Jhingran (1977) Maturity and fecundity of *Labeo calbasu* (Ham.) of Loni reservoir, Madhya Pradesh, *J. Inland Fish. Soc. India*, 9, 72-83.
- Pathani, S. S. (1981) Fecundity of mahseer, *Tor putitora* (Ham.) *Proc. Indian Acad. Sci.* (Animal Sci.), 90, 253-60.
- Pathani, S. S. and S. M. Das (1978) Environmental factors affecting fishes and fisheries of the Kumaun lakes, Bhimtal and Nainital, *Symp. Environ. Biol.*, 17, (abstract).
- Rao, G. R. and L. H. Rao (1972) On the breeding biology of *Labeo calbasu* (Ham. Buch.) from the river Godavari, *J. Inland Fish. Soc. India*, 4, 74-86.

- Shreshta, T. K. (1994) Ecostatus of mahseer in the rivers of Nepal, In *Mahseer the game fish*, Ed. P. Nautiyal, Jagdamba Prakashan, Dehradun for Rachna Srinagar, Garhwal, 3-9.
- Singh, H.R., Dobriyal, A.K. and Nauriyal, B.P. (1995). Spawning patterns and environmental regulation of spawning in hillstream fishes. In: The Endocrine system and the Environment (Ed.) Follett, B.K., et.al., Japan Sci Soc Press Tokyo/Springer-Verlag, Berlin, 1-11.
- Sobhana, B. and B. Nair (1977) Observations on the maturation and spawning of *Puntius sarana subanstus* (Val.), *Indian J. Fish.*, 21, 357-68.
- Sobhana, B. and Balkrishnan Nair (1974) Observation on the maturation and spawning of *Puntius sarana subnastus* (Val.), *Indian J. Fish.*, 21, 357-68.
- Thakre, V. Y. and S. S. Bapat (1981) Maturation and spawning of *Rasbora daniconicus* (Ham. Buch.), *J. Bombay Nat. Hist. Soc.*, 78, 38-45.
- Vasudevappa, C. and P. S. B. R. James (1980) Maturity and spawning of the marine catfish *Tachysurus dessumieri* (Val.) along the South Kanara coast, *Proc. Indian. Nat. Sci. Acad.*, 45B, 90-5.
- Vinci, G. K. and V. V. Sugunan (1981) Biology of *Labeo calbasu* (Ham.) of Nagarjunsagar reservoir, A.P., India, *J. Inland Fish. Soc. India*, 13, 22-39.
- Wood, H. (1930) Scottish herring shoals, pre-spawning and spawning movements, *Swtland*. *Fish. Bd. Sci. Invest.*, 1, 1-71.