Study Of Physico-Chemical Parameters, Fish And Fisheries Of Siddhapokhari, Bhaktapur

A Dissertation paper

Submitted by
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For the partial fulfillment of
M. Sc. in zoology (Fish & Fisheries)

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2007

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This is to certify that Mr. **Shreejal Shukla** has written this dissertation entitled ***"Study Of Physico-Chemical Parameters, Fish & Fisheries Of Siddhapokhari, Bhaktapur"*** under my guidance and supervision. So, I recommend this paper for final approval and acceptance.

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ACKNOWLEDGEMENT

I acknowledge my hearty gratitude to my supervisor Associate Prof. **Dr. Surya Ratna Gubhaju** for his kind guidance, helpful and invaluable suggestions, instructions and scholarly guidance throughout the period of investigations and cheerful accepting the tedious jobs of reading through the entire manuscript, without which this dissertation work would not have been completed.

I am deeply indebted to Prof. **Dr.Vasant Kumar Thapa**, head of the department of zoology T.U. for providing all the facilities during my work. My sincere thanks go to Prof. Dr. Jeevan Shrestha, Prof. Dr. Tej Kumar Shrestha, Dr. Archana Prasad and other teachers and non-teaching staffs of central department of zoology for their valuable suggestions and criticisms.

I am also thankful to all my friends who have assisted in countless ways during my field work specially Mr. Binod Adhikari, Mr. Shailesh Rai, Mr. Bishwa Raj Pokharel, Mr. Narayan Khadka, and Mr. Bhim Dahal. My sincere thanks goes to my family members whose love, affections and co-operation make this dissertation in this shape. I am very much thanks to Mrs. Bandana Rajopadhyaya and Mr. Pranaya Shukla for their valuable contribution in computer typing and taking photographs.

I would like to express my sincere gratitude to Mr. Balram Duwal and all the persons who directly and indirectly assist me during field work.

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SUMMARY

The present study entitled "**Study of physico-chemical parameters, fish and fisheries of Siddhapokhari, Bhaktapur**" was conducted from April 2007 to September 2007 for six months of period. The present work gives some facts about the different physico-chemical parameters, fish and fisheries status of the pond. The study area was divided into station 'A', 'B' and 'C'. The water samples from each station were collected throughout the study period. The physical parameters such as depth, transparency, water color, nature of the day were observed on the field itself. The analysis of chemical parameters such as pH, DO, free CO_2 total alkalinity and total hardness were examined on the very day. The status of the pond and fish in the pond were studied by the informal discussion and interview with local people, security warden, and salesman and tax officer of Bhaktapur municipality.

In the present study there are six main chapters except summary. The 1st chapter deals with the general background of the present investigation mainly emphasizing the historical and with review of literature, that includes who, when and where the limnological investigations started and importance of limnology for various purposes in different water bodies. The study site, materials and methodology equipment necessary for investigation explained in the 3rd chapter.

Similarly, in 4th chapter, there are results of the different physico-chemical parameters and fish status of pond is explained. Discussion of observed result, reasons of variable results, some results when and who observed is discussed thoroughly in chapter five. In Chapter six, I conclude the investigation and recommended some suggestions.

After completing the whole investigation I found that seasons play major role in fluctuation of physico-chemical parameters of the any water body. Thus colour of water, colourless in winter season changed into greenish in summer as the planktonic population growth in this season. In the same way, the variation of temperature may be due to seasonal changes and meteorological condition. The transparency of water is low during rainy season i.e. in August/September

The dissolved oxygen of pond water ranged from 5.0 ppm to 8.5ppm. The free Co_2 fluctuated from 2.5ppm to7.9ppm. The total alkalinity was found between 28.0ppm. to 55.0ppm. The total hardness of the water fluctuated between 240.0ppm to 280.0ppm. The average value of pH was 8.07 which may be considered suitable for the maintenance of aquatic life.

The pond is dominated by exotic cultivable carps like common carp, big head carp, grass carp and silver carp. In my investigation, it is beneficial to culture the fish in the pond. In 2007 largest amount of fish was produced and collected largest revenue i.e. Rs. 467,850by selling the fish in local market @ Rs.75 per Kg. The present investigation suggested that the pond is quite suitable for successful fish culture practices

Lastly, I am trying to add few words about importance of limnological study in various ponds of Nepal which is mainly concerned with utilization of various temples, ponds, historical and holy ponds as well as other many small ponds of Nepal by culturing fish as these ponds remained as unutilized polluted body.

Most of the ponds in the city are being wasted polluted bodies and some of them were already changed into ground or garden due to lack of proper management. So, such ponds can play vital role in improving the economic and sociological status of the country if we properly managed these ponds and practices of fish culture.

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