

**STATUS AND CONSERVATION OF CROCODILES IN THE KOSHI TAPPU
WILDLIFE RESERVE, EAST NEPAL**

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE DEGREE OF MASTER OF SCIENCE IN ZOOLOGY – ECOLOGY PROGRAM

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TO

CENTRAL DEPARTMENT OF ZOOLOGY
INSTITUTE OF SCIENCE AND TECHNOLOGY
TRIBHUVAN UNIVERSITY, KIRTIPUR
KATHMANDU, NEPAL

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ABSTRACT

I studied “Status and Conservation of Crocodiles in the Koshi Tappu Wildlife Reserve, East Nepal” in two seasons- winter and spring 2008 using direct observation and questionnaire besides literature reviews. The research was carried out in the Koshi river and its branches and the marshes lies between the eastern branch of the river and the eastern embankment from Prakashpur to Shripur to estimate the population and distribution of crocodiles. Observations was done during the day time by binoculars and photo shot and sites were visited by boat, bicycle and also on foot.

Though both gharial (*Gavialis gangeticus*) and mugger (*Crocodylus palustris*) were previously found in the reserve, only mugger crocodile was found in this study. The numbers of mugger were higher in the winter season (21) than the spring (5). Number of adult and sub adult muggers in winter and spring were significantly different ($\chi^2 = 2.751$; $df=1$; $p=0.09$). Muggers were mainly observed during the basking, gaping, running, seeking and submerged positions in the reserve and these activities were significantly different ($\chi^2 = 26$; $df=4$; $p<0.001$). Similarly, a chi-square goodness of fit test indicated crocodiles were not randomly distributed between the habitat types ($\chi^2 = 8.928$; $df=3$; $p<0.05$). The destruction and degradation of crocodile in the reserve was caused by many human activities, as well as by some natural processes.

Success of conservation programs depends upon the extent of support and positive attitude of local people. During this study, most of the respondents from the local community as well as reserve staffs were sensitive that the conservation of mugger is necessary in the reserve. Developing and implementing ecotourism in the reserve can attract visitors and generate income for sustainable conservation of crocodile in the reserve and also create employment opportunities among the local community. Continuous release and trans-boundary conservation effort should be initiated for the protection of gharial. Besides this, crocodile survey on remaining wetlands around the reserve is recommended to have actual estimation of population of mugger and the presence of gharial.

TABLE OF CONTENTS

DECLARATION	
RECOMMENDATION	
LETTER OF APPROVAL	
APPROVAL	
ABSTRACT.....	I
ACKNOWLEDGEMENTS.....	II
1. INTRODUCTION.....	1
1.1 Background.....	1
1.2 Species.....	2
1.3 Importance of crocodile.....	3
1.4 Distribution and range.....	4
1.4.1 Gharial (<i>Gavialis gangeticus</i>).....	5
1.4.2 Mugger (<i>Crocodylus palustris</i>).....	6
1.5 General habitat of crocodiles.....	7
1.6 Crocodile conservation history.....	7
1.7 Justification of the study.....	9
1.8 Objective.....	9
2. LITERATURE REVIEW.....	10
3. STUDY AREA.....	13
3.1 Description of study area.....	13
3.2 Climate.....	14
3.2 Hydrology.....	14
3.4 Floral diversity.....	14
3.5 Faunal diversity.....	15
3.6 Socioeconomic context.....	16
4. METHODS.....	17
4.1 Preliminary survey.....	17
4.2 Direct field observation.....	17
4.2.1 Crocodile survey.....	17
4.2.2 Habitat preference of crocodile.....	19
4.2.3 Natural and anthropogenic disturbances threatening crocodiles.....	20

4.3 Secondary information about status and distribution.....	20
4.4 Conservation issues.....	20
4.4.1 Group discussion.....	20
4.4.2 Questionnaire survey.....	20
5. RESULTS.....	21
5.1 Population of crocodile in the reserve.....	21
5.2 Field characteristics of the mugger crocodile.....	24
5.3 The habitat preference of mugger.....	29
5.4 Natural and anthropogenic disturbances threatening mugger.....	30
5.4.1 Habitat losses.....	30
5.4.2 Barrage.....	30
5.4.3 Human activities.....	31
5.5 Crocodile conservation and issues.....	33
5.6 Ways of crocodile conservation.....	33
6. DISCUSSION.....	34
7. CONCLUSION AND RECOMMENDATIONS.....	38
8. REFERENCES.....	39
Annex 1. Summary of results of crocodile survey.....	44
Annex 2. Number of crocodiles released in different river systems of Nepal.....	44
Annex 3. Questionnaire about crocodile conservation.....	45
Annex 4. Habitat utilization of crocodile.....	46

Lists of Figures

Figure 1. Distribution of Gharial in Indian Subcontinent.....	4
Figure 2. Distribution of Mugger in Indian Subcontinent.....	4
Figure 3. Past and present distribution of Gharial in Nepal.....	5
Figure 4. Past and present distribution of Mugger in Nepal.....	6
Figure 5. Rainfall (mm) for Phatepur 2007.....	14
Figure 6. Maximum and Minimum Temperature (°C) of Phatepur 2007.....	14
Figure 7. Map showing study area in Koshi Tappu Wildlife Reserve.....	18
Figure 8. Comparison of counts of mugger crocodile in winter and spring season (2008).....	21
Figure 9. Map showing the distribution and number of mugger in winter and spring in Koshi Tappu Wildlife Reserve.....	23
Figure 10. Habitat preference of mugger in winter.....	29
Figure 11. Habitat preference of mugger in spring.....	29
Figure 12. Comparison of habitat distribution of mugger crocodile in winter and spring.....	30
Figure 13. Responses about constrains for crocodile conservation.....	33
Figure 14. Conservation of crocodile according to community perception.....	33

List of Tables

Table 1. The result of survey in winter 2008.....22
Table 2. The result of survey in spring 2008.....22

Lists of color plates

Plate 1.....25

- A. An adult mugger basking on the sand grass bank
- B. An adult mugger basking on the sand bank
- C. An adult mugger basking on the submerged position
- D. A sub adult mugger basking on the sand bank
- E. A mugger seek shade lying near the basking area
- F. An adult mugger gaping on the submerged position

Plate 2.....26

- G and H. The mugger using the same basking platform
- I. An adult mugger crawling on the sand bank
- J. A mark due to its crawl
- K and L. “U” shaped marks due to its crawl

Plate 3.....27

- M- P. The locomotion (diving) of the mugger
- Q. Movement of the livestock along the shoreline
- R. People came to collect the firewood

Plate 4.....28

- S. Human activities along the bank of the edge of the river
- T. Low level of water in the Tetriganchi tal in summer
- U and V. Marks due to the movement of mugger from bank to the edge of the river