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STATUS OF THE MAGAR (*Crocodilus palustris* Lesson)
IN THE CHAMBAL RIVER.

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ABSTRACT

The magar co-habits the ~~Ghawal~~ Chambal River with the Ghawal (*Gavialis gangeticus* Gmelin). ~~though~~ but is of less importance ^{than ghawal} in terms of past and present distribution. The magar, ^{which} at present occurs in very small numbers in the rivers will receive protection ~~both~~ by virtue of ~~the Wildlife Pro.~~ The implementation of the Chambal National Ghawal Sanctuary Project.

Restocking ^{of captive reared magar} is not conceivable in the sanctuary created ~~to~~ primarily for conservation of the ghawal and small numbers may be tolerated strictly from the point of view of studying competition and differential ~~habitat~~ ecological requirements ~~of the 2~~ between the 2 species of Crocodylans found in the River

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RIVER SITUATION.

1. Status.

The magar (*Crocodylus palustris* Lesson) occurs along with Gharial (*Gavialis gangeticus* Cuvélin) in the River Chambal which is an important tributary of the River Jamuna ~~and then~~ arising in the Hill Ranges of Central India.

Bustard (1972) mentions that according to Col. K.K. Singh who ^{ago} hunted ~~mag~~ crocodile in the upper Chambal, ^{downstream of Kota} in former times that out of a hundred animals shot by him approximately half were gharial. John Savidge (1978) mentions that according to people residing at Kota, the ratio of magar to gharial that occurred in the River Chambal immediately downstream of Kota in former times used to be 10:3. W.T. Hornaday ~~in his book 'Two years 1880'~~ mentioned that in the River Jamuna near Etawah, close to the confluence of this River with the Chambal where it resembles the River Chambal on a smaller scale 'that in a two hour boat ride down the ~~Etawah~~ Jamuna he could count 64 gharial where he saw only one magar.' J.M. ~~Savidge~~ Savidge (1978) mentions of 3 distinct types of habitat occurring in the Chambal River signified by a gradual disappearance of lime stone sheet rock

significance from the point of view of survival of the species as safe populations of magar are ~~not~~ reported as surviving elsewhere but is only of scientific interest in a sanctuary that has been created specially for the critically endangered gharial.

3. Research The number of magar ~~located~~ ^{seen} during ~~the~~ surveys of gharial has been presented above. 4 nests ~~have~~ of different ~~breeding~~ pairs have also been located in different years all of which have been found to be fertile. Hatchlings of the nests are being reared at the U.P. State Crocodile Rehabilitation Centre at Kukrail.

RIVER REQUIREMENTS

1. Research

Accurate surveys and census should be carried out and the population monitored strictly from the point of view of studying differential ^{ecological} ~~habitat~~ requirements and competition between it and the gharial.

2. Conservation Problems

In the Chambal these are the same as reported for gharial in this ~~Chambal river~~ river as reported by Basu and Chaudhury 1978.

The possibility of having to control magar in the Chambal Sanctuary in order to aid the

riverbank formations and mid-stream premonitories as one proceeds in a downstream stream direction along the river. If one is to ~~take any consideration~~ attach any significance to Hornaday's observation about the relative abundance of gharial and magar in the lower Jamuna the former status of magar in the Chambal can be reconstructed as common in the upper Chambal and occasional in the lower.

Swing surveys of gharial conducted during the years 1976-1978 we have observed 10 magar in the river, the one observed most downstream still some 150 kilometers above the confluence of this river with the River Jamuna. The total number of gharial, ^{in the same stretch of river} excluding ~~total length of~~ ~~one year olds (that is)~~ animals below 4 feet in length were 73 which gives a magar to gharial ratio of 7:3:1.

Status of magar ^{in the Chambal} may be summarized as critically endangered.

2. Research Conservation

Magar is protected by the Wild Life (Protection) Act of 1972 and this will be reinforced by the implementation of the Chambal River National Gharial Sanctuary Project. The nearly extinct population of the magar in the river is not of

predominance of Gharial should not be excluded.

~~the~~

THE FUTURE

Strictly limited number of Nagar may continue to remain in the Chambal River but the species is not likely to flourish and nor should this be encouraged by means such as re-stocking if thereby jeopardizing the recovery of Gharial population in this river.

Acknowledgments

Data presented have been collected ~~at~~ while on duty for the W.L.P.O. U.P. We are grateful to the ~~the~~ Chief Wildlife Warden U.P. for ~~letting~~ allowing us to use this data in the Paper.

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THE STATUS, CONSERVATION AND FUTURE OF
THE MAGAR (Crocodylus palustris, LÉSSON)
IN UTTAR PRADESH.

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ABSTRACT.

Magar formerly abundant and widespread
in ~~off~~ Uttar Pradesh survives in severely depleted
condition in the state. Wild life Protection ~~has~~
by the Wildlife Preservation ~~Act~~ Organisation
U.P., and the Crocodile Rehabilitation Project
has already created the infrastructure for
conservation of the species and ^{the} future exploitation
on a renewable resource basis. Scientific
management has to be developed to that level
of efficiency where this will be possible.

STATE SITUATION.

1. Status

There are many references that support the
view that Magar (Crocodylus palustris) occurred
widely in Uttar Pradesh in former times
both in and out of rivers. The District Gazetteers
of the United Provinces of Agra and Oudh,
published between the years 1902-1909, mention
of their occurrence in 11 districts of the Provinces,

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and their continued occurrence ~~in several districts~~ to the present day in several districts whose Gazetters do not contain references about their former occurrence, leads us to believe that magar may have been common enough to occur in all but ~~in~~ the mountainous portions of the hill districts of U.P. Little is known about the rate at which magar ~~disappeared~~ disappeared from U.P. or their present day status but from information gleaned during preliminary enquiries conducted since the inception of Crocodile Project in late 1975. Magar is believed to be a depleting species, i.e. populations are declining at a rate much faster than they are able to replenish themselves. At present small populations remain in -

- 1) Corbett and Dudwa National Parks
- 2) The terai belt, viz. Districts Pilibhit, Kheri-Lakhimpur, Bahraich, Gonda ~~and~~ and Gorakhpur
- 3) In certain reservoirs of the southern districts of Mirzapur, Benares, Allahabad, Jabalpur, Jhansi and Hamirpur

2. Conservation

Ratification of the Wild Life (Preservation) Act of 1972 by U.P., has no doubt curbed the number of poaching attempts and some additional protection has been given to magar under

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general wild-life protection provided by the Wild Life Preservation Organisation, U.P., of the State Forest Department.

While a large tract of the Babraich Forest Division which includes fairly extensive Magar habitat has been declared a ~~eco~~ sanctuary as part of the Katarina Ghat Sanctuary that was created primarily to protect Gharial (Gavialis gangeticus) of the river Gomti, Magar of the Southern Districts, which inhabit Hydel Reservoirs are being fast driven to extermination point because the reservoirs are ~~previously~~ intensively managed as fisheries where standard set-netting practices have sealed the fate of these magar.

3. Research

A breeding enclosure for ~~isolated~~ wild-caught adult magar has been built and is operational at the State Crocodile Rehabilitation Centre at Kubrail though stock is yet to be collected. The Centre is rearing at present 65 Magar ~~from~~ hatched from eggs collected in the Chambal River.

STATE REQUIREMENTS

1. RESEARCH

Infrastructure of a captive husbandry programme already exists in the state &

~~which is~~. Rearing facilities have so far been used ~~for~~ mostly for gharial because of its critically endangered condition but they can be easily expanded to house magar as well.

Detailed surveys and census followed by identification of potential magar management areas and studies into the ecological requirements of magar are the requisites for providing a scientific base to the conservation of the species and the preservation of its habitat.

Further studies into the possible beneficial role of Magar in fishery management in ~~reservoirs~~ reservoirs pointed out by Daniel and Whitaker (1978) ~~are~~ also a related field where research should be undertaken.

2. Conservation Problems

Poaching: - Marginal poaching and killing of magar in the name of live stock or human protection has continued. Animals accidentally netted in reservoirs are invariably killed for skins.

Habitat Loss: - Except for water bodies situated within Reserved Forests unimpaired by human beings magar stand very poor chances for survival.

Sanctuaries: - Every attempt should be made to gazette ~~sanctuaries~~ potential wild-life management areas which include magar.

habitat as sanctuaries most of which already lie within reserved forests. Possibility of creation of special sanctuaries ~~for magar~~ should also be explored for the rehabilitation of additional populations of magar in the state. Sanctuaries should have special staff solely for the protection of magar.

THE FUTURE

Recovery of magar populations can easily be effected with a captive husbandry and restocking programme in U.P. where an infrastructure for crocodile conservation work has been established very successfully.

Free range and Battery farming can be then taken up and an industry based on magar hide ~~is~~ re-established in the state ^{within} _{a decade}. Through the efforts of the Wild Life Preservation Organisation, U.P. of the State Forest Department. Once the economic importance of the species has been demonstrated appreciation of the importance of ~~conservation~~ its conservation will quickly follow.

ACKNOWLEDGEMENT

Information used has been gathered while on duty ~~from~~ for the W.L.P.O., U.P. I am most grateful to Sri V. B. Singh Chief Wild Life Warden W.L.P.O., U.P., for letting me use this information in the paper.

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~~J.C. Daniel & R. Whitaker~~

Timespaper Vol. ids - 1978.

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THE MUGGER CROCODILE (CROCODYLUS PALUSTRIS)

IN ORISSA

Information collected by: Lala A. K. Singh

~~Ghar~~ Mugger was once a widely occurring species in the State.

Information about its past occurrence are available from people from almost all the districts of the State. There is a report that muggers were present in large numbers in a village pond of the Dandamakundapur village of Puri district. Rivers Mahanadi (Sambalpur, Bolangir, Boudh-Khondmal, Dhenkanal, Puri and Cuttack), Brahmani (Sundargarh, Dhenkanal, Cuttack), Baitarani (Keonjhar), Subarnarekha and Salandi (Balasore), Sileru-Saberi (Koraput) and were supporting ^{good} populations of the Mugger.

Best habitats were: Satkoshia Gorge and Kendrapada area of the Mahanadi, Banei area and Talcher of Brahmani and the present Jalaput and Balimela reservoirs of Sileru. ??

Satkoshia Gorge: three muggers-(7'-10'- 2.1-3.0 m). Still residing. Located at intervals. No eggs have been collected during 1975-1978. Have the habit of making tunnels. One juvenile, about 4 ft. (1.2 m) now lives in a village pond of Chhamundia, besides the Mahanadi. Its size shows that the Muggers have bred at least during or before 1975. Apart from these four wild muggers, two muggers have entered the river after escaping from the conservation unit at Tikarpada.

Lower Mahanadi: All three species were present; most abundant were the mugger and the Saltwater crocodile. Many legends have originated from this area. Pahana Nadi, now a dead tributary of the Mahanadi ~~was~~ was a famous place for crocodiles, particularly the mugger. Now completely extinct.

Brahmani: Also extinct. The river near Katarapada village, close to Talcher, is called "Kumbhira Khai" as many crocodile, muggers and gharial, were present in this area.

Sileru: Still present; In 1977 a 4' juvenile was caught and brought dead to Nandanakanan. Needs a proper survey. *Survey done*

Name in Oriya: Gamuha Kumbhira, Matia Kumbhira, Kumbhira.

M/12/78

Dr G. T. Tonapi

Jambhundi

upper reaches of river

Karnataka / Maharashtra junction

1920-25 - 50 number of boats 50 km from
Suzer

3 km from main river.

on Bangalore & Poona Dandeli fort

Bhime near Sholapur - 5 km across dry floods

- Crocodile Conservation in Tamil Nadu -

1. Figures - TN state with
Rearing centres
egg collection
centres

2. Plates: Amaravathi complex
Hogenakel
Release photo-
Egg collection
Sathanur complex.

Table -

Intro.

Survey -

First egg collection =

Project initiation, expansion, results.

Release -

future recommendations.

Acknowledgement.

Year	M. S. P. Trust with permits - G. CPD	Childrens Park Mudras, feeding Centre	Hajimahal Feeding Centre	Amarsrat Feeding Stn	Sathemur Feeding Stn	Remarks
1974						
1975						
1976						
1977						
1978						
1979						