

CROCODILE SPECIALIST GROUP, I.U.C.N. SURVIVAL SERVICE COMMISSION

Editor's Note

At the February meeting of the Group in Madras it was suggested that I relieve Duke Campbell as editor of this newsletter. For the time being it will be sponsored by the Madras Snake Park, whose badgered trustees have had to kindly agree to this additional expenditure. But to quote Duke's profound statement, for producing a newsletter news is necessary, and we request that members and non members keep us informed of crocodile developments in their countries.

Captive Breeding Programmes

The West African dwarf crocodile (Osteolaemus t. tetraspis) has bred successfully for the second consecutive year at the Memphis Zoo and Aquarium. 13 of the 16 eggs laid on May 17 hatched on August 9. The eggs were artificially incubated with the temperature held at 84 F/. When pipping started, 3 eggs were re-buried in the mound, and the mother was later noted picking up a hatchling in her mouth and releasing it onto the nest. The young shared the enclosure with the parents. Anyone interested in procuring hatchlings or yearlings of this species should contact Charles Beck, Curator of Reptiles, Memphis Zoo and Aquarium, Memphis TN 38112, USA. (from C. Wilson).

Osteolemus tetraspis was also bred for the second consecutive year at Fort Worth Zoo where 2 clutches of 16 eggs each were laid in 1977. After 93-105 days 18 hatched.

In a recent letter to Tony Pooley in South Africa, Charles Beck suggested that either his Crocodylus cataphractus be transferred to Tony's group, or vice versa, since breeding has not been achieved in either place.

As far as we know, the Yacare caiman (Caiman crocodilus yacare) has bred in captivity for the first time at the Fort Worth Zoo, Texas. A clutch of 31 eggs was laid on June 20 '77; these were artificially incubated with temperatures fluctuating between 25-32° C. After 84 days incubation, 16 Caiman hatched. The remaining eggs were either infertile or contained dead embryos. The death probably resulted from oxygen depletion late in the incubation period. The Fort Worth Zoo has plans to ship groups of Caiman and Osteolaemus to their native countries for release in protected areas (from B. Tryon).

Ted Joanen has sent in a note about the striking news of Chinese alligator (Alligator sinensis) breeding at the Rockefeller Refuge.

"Two pair of Chinese alligators were transferred from New York Zoological Society and U.S. National Zoological Park to Rockefeller Refuge in late spring of '76. Each pair were housed in separate outside pens with primary emphasis placed on breeding these very rare crocodilians. On 25 June, 1977 one female began nest construction and on 27 June eleven eggs were laid. The female was not seen at the nest site and showed no signs of aggressive behaviour. All eggs were removed from the nest and placed in an artificial incubator. In early September, 1977, two eggs pipped but only one Chinese alligator hatched successfully. This hatchling lived for only one month".

C. acutus has been bred at the Parque Zoologico Nacional in the Dominican Republic. Of 34 eggs laid on March 4th, 1977, 14 hatchlings resulted between 24th and 28th June. Zoodom, 2:2, Dec. 1977.

Five mugger (Crocodylus palustris) nests were laid at the Madras Crocodile Bank, between February and March. At the time of writing, three of these, totalling 91 eggs, have hatched resulting in 56 hatchlings. The pair of mugger at the Madras Snake Park have bred for the third consecutive year. The female laid a nest of 10 eggs in February, and then surprised us a month later by excavating and laying a second nest of 6 eggs. She has lost interest in the first nest but actively protects the second one.

A short vocalization from John Lever, head of the crocodile management programme in Papua New Guinea, tells us that over 200 crocodiles have hatched at the Moitaka Farm. John forgot to mention the species.

Samut Prakan Crocodile Farm, Thailand

A booklet on the Samut Prakan Crocodile Farm by Mr. Utai Youngprapakorn was recently received by us. The Samut Prakan farm now has over 23,000 crocodiles mostly C. siamensis (of which there are possibly less than 100 in the wild). In 1976 the Farm produced 5,740 eggs and had a 60% hatching success.

The Nile Crocodile in Kenya

James H. Powell, Jr. made some field observations on the status of C. niloticus in January '78 while on a study in Kenya. Four crocodiles were reported, but not personally seen by him, at a pool on the Athi River in Nairobi National Park. On the Mara River, Masai-Mara Game Reserve, Powell observed 4 adult (10-12 ft) niloticus, and a juvenile on the Talek a few miles above where it joins the Mara. There are reportedly a number of crocodiles in the Mara. No crocodiles were seen either on the Migori above Lolgorien or on the Mara for a short distance into Tanzania. The Tanisanian Mara does probably contain crocodiles, forming as it does the northwestern boundary of the Serengeti National Park. Because of the imminent ban on the sale

of all wildlife souvenirs, curio shops in Nairobi are advertising these items at half price in an effort to beat the deadline. Unsold items will be confiscated by Government.

Alligators vs. Pests in Arkansas

The Arkansas Game and Fish Commission is importing alligators (Alligator mississippiensis), or as they call them, garbage grinders, from neighbouring Louisiana swamps in order to control the beaver and muskrat menace, about which farmers have been complaining. The reason for the beaver and muskrat surge is probably the absence of the alligator, which has been severely depleted in Arkansas because of previously unregulated hunting.

Eight Crocodile Species Proposed for Endangered List

To quote a press release from the U.S. Fish and Wildlife Service dated 20 April '77: "Eight crocodile species in over 40 countries around the world have been proposed for treatment as endangered species because they look like other crocodiles species that are, in fact, listed as endangered. The Endangered Species Act of 1973 allows a "similarity of appearance" treatment if law enforcement problems result from look-alike animals.....

"The eight species being proposed occur in Central and South America, China, and South and Southeast Asia. The force of American law does not, of course, extend to these foreign countries. American citizens, however, are forbidden under the law to trade or traffic in these animals, their parts or their products. None may be imported or exported to or from the United States.

"The species are: the common caiman, brown caiman, dwarf caiman, smooth-fronted caiman, American crocodile (Other than the Florida population which is already listed as endangered), Johnston's crocodile, New Guinea crocodile, and the salt water crocodile.

"This initiative is being taken by the U.S. Fish and Wildlife Service largely because of law enforcement problems caused by the inability to identify crocodile products at American ports of entry. The proposed eight species so closely resemble the eight species that are already listed that inspectors have substantial difficulty differentiating between the endangered species and the "look-alike" species, especially in the case of products made from their hides.

"The differentiating characteristics of crocodilians are minute and often depend on the size and shape of the scales, their colour, or the presence of follicle glands which are not readily apparent on processed hides. The colour of most hides imported into the United States has been changed by preservation processes and tanning. Further, many products such as wallets, belts, and handbags

have been dyed red, green, or brown, making it virtually impossible to positively identify the exact species".

Crocodile Nursery Planning in Philippines

A member of the Philippines Fisheries Research Society plans to create a crocodile nursery in a marsh at Prosperidad, Agusan del Sol, 400 miles south of Manila, the area being inhabited by the Mindanao crocodile (Crocodylus mindorensis). The projected nursery would both "lessen the danger posed to the local population by the reptiles" and provide a source of income. But the Mindanao crocodile appears on the Endangered Species Act and its products could not reach American buyers.

Crocodile Rearing and Farming Workshop

Representatives from the Crocodile Specialist Group have been invited to participate in a workshop on crocodile rearing and farming at Victoria Falls from 19-22 September 1978. The Department of National Parks and Wild Life Management, Rhodesia, states in a circular about the workshop that the aims will be to examine the conservation and utilization of wild crocodile populations and to discuss problems encountered in rearing and farming crocodiles. Further information about the workshop can be had from: The Convenor - Crocodile Workshop, c/o Department of National Parks and Wild Life Management, P.O. Box 8365, Causeway, Rhodesia.

The Latest On Mugger Pir

Duke Campbell who was in Pakistan in February this year, gives us the most up to date picture of Mugger Pir: "The population has dropped from the previous hundreds to a pitiful three adults, but Quraishy has been advising the caretaker for the past couple of years and things are now in encouraging shape. The pen has been redesigned and sandy land areas replaced the old rock. The water area deepened to 3 1/2-8', and the adults put on a reasonable diet once every four days (Worshippers now present flowers instead of food). Last year one of the females laid 13 eggs and four hatched. These were removed from the parent pool and hand raised and have now been put back in. They are about 36" long and look nice and healthy. There are two female and one male adults, two female and one young male.

Madras Crocodile Bank Trust

Since 1976 Madras Snake Park Crocodile Surveys have taken staff to Assam, Madhya Pradesh, the Andaman Islands and Sri Lanka. The Snake Park has one breeding pair of mugger and the Crocodile Bank has 6 egg-laying female mugger and two breeding males. The Crocodile Bank now has 200 juvenile and subadult mugger, 6 saltwater crocodiles, 6 gharial and a lonely female American alligator. The 10 to 15,000 visitors a month have made this educational crocodile breeding project self-supporting for its recurring expenses. The Bank is seeking funds.

FAO/UNEP/ Government of India Crocodylian Rehabilitation

Much has been happening in several States with this wild egg collection-rearing-release programme. The present situation is summarized in the below table:

PROTECTED HABITAT

<u>Area</u>	<u>Mugger</u>	<u>Saltwater</u>	<u>Gharial</u>
1. Corbett National Park, Uttar Pradesh	10	..	4
2. Dudhwa National Park, Uttar Pradesh	Few	..	..
3. Gandak Gharial Sanctuary, Bihar	..	..	6
4. Sawaimadhopur Sanctuary, Rajasthan	20	..	..
5. Rawatbhata Gharial Sanctuary, Rajasthan	..	..	Few
6. Mandla Sanctuary, Madhya Pradesh	..	..	3
7. Sunderbans Tiger Reserve, West Bengal	..	Few	..
8. Chidambaram Waterworks, Tamil Nadu	20	..	..
9. Kilikudu Crocodile Pond, Tamil Nadu	20	..	..
10. Neyyar Dam, Kerala	Few	..	..
11. Rangathitoo Sanctuary, Karnataka	7	..	..

PROPOSED SANCTUARIES

1. Tristate Gharial Sanctuary - 600 river kms. (40 wild gharial) (Rajasthan, Madhya Pradesh, Uttar Pradesh)
2. Papikonda Gharial Sanctuary, Andhra Pradesh
3. Coringa Saltwater Crocodile Sanctuary, Andhra Pradesh
4. Nagarjunasagar Mugger Sanctuary, Andhra Pradesh

REARING STATIONS

Mugger Saltwater Gharial

1. Kukrail, Uttar Pradesh	33	..	500
2. Hyderabad Zoo, Andhra Pradesh	103	..	200
3. Madras Crocodile Bank	200	6	6
4. Guindy, Tamil Nadu	150		
5. Hogenakal, Tamil Nadu	50		

SANCTUARIES AND REARING STATIONS

1. Kateraniaghat Gharial Sanctuary, Uttar Pradesh
Gharial Wild : 34
Captive:250
2. Bhitarkanika Saltwater Crocodile Sanctuary, Orissa
Saltwater crocodiles Wild :200
Captive:100
3. Satkoshia Gorge Gharial Sanctuary, Orissa
Gharial Wild :20
Captive:130
Mugger Wild : 5
Captive:12
4. Sathanur Dam Mugger Preserve, Tamil Nadu
Mugger Wild :12
Captive:150
5. Amaravathi Dam Mugger Preserve, Tamil Nadu
Mugger Wild : 25
Captive:100
6. Gir National Park, Gujarat
Mugger Wild :70
Captive:20

Note: Numbers are approximate; wild figures refer to adult and subadult animals; captive figures mainly mean hatchlings, yearlings and two year olds.

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