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AUGUST 1974

THE APPEARANCE OF AN ITEM IN THIS NEWSLETTER DOES NOT CONSTITUTE PUBLICATION

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THOUGHTS

It is the prerogative of an editor to editorialize. The following quotations from Archie Carr--one dealing specifically with crocodiles, the other with conservation in general--epitomize perfectly what this editor feels should be the attitude and policy of the Crocodile Specialist Group:

"As with all the other less-lovely beasts of the earth, however, the greatest significance of the old, gross crocodile is his role as a touchstone to test the hearts of men, to see if our kind will finally save crocodiles in some small spots here and there on the earth only because they were there before we came, and not for any other reason." (Italics the editor's.)

"But for me it is sad that the intangible aspects of wilderness are being so dangerously ignored--or not just ignored, actually deprecated. One hears on every hand, 'We can't ask Africans to save game for any starry-eyed esthetic motives. One has got to be realistic, you know.'

"And to be sure, one has to be. But one has to be foresighted, too, and foresee times when tourism will be disrupted, when new techniques of land use make game husbandry as obsolete as blacksmithing is. One must think a long way beyond the life of any material value for wilderness. In thinking that far ahead, the only worth of wild land is the wonder in it, the splendor of old Africa, the look and feel of an unspoiled bit of the original earth."

--Both from Archie Carr's, The Land and Wildlife of Africa.

UGANDA

About four months ago one of the newspapers in Kampala, Uganda, carried front page pictures of President D. Amin and a visiting Arab head of state on a hippo and crocodile shooting trip in Kabalega (= Murchison) National Park. It would seem that hunting has come in an official capacity to this well-known crocodile sanctuary.

UNITED STATES

On the night of 3 April 1974 the Philadelphia Reptile Exchange was burglarized. Among the livestock stolen were four juvenile Crocodylus siamensis and a juvenile Melanosuchus niger. A \$1000.00 reward is offered for information leading to the parties responsible for the theft.

GREAT BRITAIN

On the 10 December 1973 surplus stock price list of the Ravenenden Zoological Co., Ltd., Rushden, England, are the following crocodylians: four Caiman crocodylus varare, two Crocodylus siamensis, one C. porosus, a pair (one male, one female) Alligator mississippiensis, and one Tomistoma schlegelii. The price for the alligator pair (lengths six and seven feet) was 400 lbs. sterling.

MEXICO

From 22 June through 30 June 1974, the editor participated as a diver in the CEDAM, International expedition in Quintana Roo on the eastern, or Caribbean, coast of the Yucatan Peninsula, Mexico. Although the primary purpose of this expedition was underwater archaeology, it was nevertheless possible to make certain observations on the status of crocodiles in the area. The editor would like to thank the expedition leaders, Mr. Paul Bush and Mr. Andreas B. Rehnitzer, and his team leader, Dr. Eugenie Clark, for allowing him the time off from his regular duties to do this field work. The following is the text of a brief paper presented by the editor at the CEDAM, International Symposium, and scheduled for publication in the CEDAM International Bulletin:

Discoveries Relating to Mexican Crocodiles Made During CEDAM, International 1974 Expedition in Quintana Roo--On June 25, 1974, during the CEDAM, International expedition in Quintana Roo, Group 3, headed by Jack Guy, was to explore the inland lagoon of Chunyaxché. On learning this, I requested back to ask the Group to watch for any evidence of crocodile populations in the area. That evening Jack reported that his Group had found two crocodile carcasses at what appeared to be an abandoned chiclero camp on the shores of the lagoon, and that they had brought them back to Akumal for my inspection. One proved to be an 8-foot American crocodile (Crocodylus acutus); the other was a juvenile Morelet's crocodile (Crocodylus moreletii). The

belly skins had apparently been removed from both specimens. From the state of decomposition they could not have been killed more than a few months previous to discovery.

"C. acutus is a large species with a record length of 22 feet, though a 15-foot specimen would be considered a large adult today. It has a wide range throughout the Caribbean region. Although it has been recorded from inland, fresh-water habitats, it prefers brackish estuaries, and freely enters salt water. C. moreletii is a smaller species. Its record length is around 12 feet; an adult specimen will average about 8 feet. Its range is confined to parts of Guatemala, Belize, and Mexico, and it prefers fresh water.

"The following day, June 26, I went to Chunyaxché Lagoon, where Jack showed me the spot where the carcasses had been found. It was located in a beautiful stand of either virgin, or very old second growth, tropical rain forest. Jack, Ruth Fry, Andy Rechnitzer, and myself also explored underwater a portion of the channel connecting Chunyaxché and Boca Paila lagoons looking for crocodile dens in the banks, but without finding any.

"Chunyaxché is a fresh-water lagoon varying in depth from a few feet to at least over 40 feet. The water is extremely clear.

"The discovery of these freshly-killed crocodiles has both conservation and scientific significance. From the conservation standpoint, it means that a population of these species in all probability still exists in the Chunyaxché-Boca Paila area; and while small and decimated by hide-hunting, would probably recover if given strict--and strictly enforced--protection by the Mexican authorities. C. acutus has been drastically depleted by commercial hide-hunting throughout its range. C. moreletii is even worse off. Only officially discovered in 1923, it is considered to be on the verge of extinction. The IUCN (International Union for Conservation of Nature and Natural Resources) classifies it as 'critically endangered'. It is listed by the New York Zoological Society as a 'vanishing animal'.

"Scientifically, the C. acutus specimen confirms the existence of this species on the Caribbean coast of the Yucatán Peninsula. Prior to this, the only official record for C. acutus from the Territory of Quintana Roo was a single record from Isla Mujeres.

"The Chunyaxché-Boca Paila area constitutes a wildly beautiful and virtually unspoiled expanse of tropical forests, swamps, and waterways. Add to this the existence of a crocodile population, the possible existence of a population of manatees (another threatened species), and the unique

archaeological interest of the region, and I think there is ample reason for putting it aside either as a national park, or as some similar preserve under strict and adequate protection."

Although none of the editor's fellow-expeditionaries were crocodile specialists, the above was received with great enthusiasm. There does seem to be a widespread interest today in crocodilians and their conservation--one might note on a generally dark scene.

The editor was also much impressed with the potential of Scuba as a tool in crocodilian field studies.

Owing to their fragrance, the two very dead crocodiles were not popular at expedition headquarters, and were disposed of as soon as the editor had examined and photographed them. The only material he was able to get back with were the two maxillae and the two premaxillae from the skull of the smaller specimen (tentatively identified as C. moreleti). These are being sent to Wayne King, who, with Howard Campbell, is making a study of the morphology of C. acutus and C. moreleti.

UBA

Prof. Miguel L. Jaume of the University of Havana recently wrote Howard Campbell to the effect that Cuba plans to reintroduce all its captive crocodiles into the wild in "primitive areas"--Crocodylus acutus to be released near the sea, C. rhombifer in inland, fresh-water habitats. Hopefully, this would solve the hybridization problem. On June 4, the editor wrote to Luis Varona requesting more details. In a letter dated July 22, Mr. Varona replied that such measures were indeed being considered by the authorities, but that matters were still in the discussion stage, with nothing as yet officially decided. As soon as anything definitive develops we will communicate it to the Group.

AFRICA

Tony Pooley reports the following developments from Africa:

1) Crocodile Film,

"Last month we started on a 1-hour TV-special film on the crocodile and crocodile farming in Ndumu. This feature was commissioned by the South African Broadcasting Corporation and it is interesting that it is the only film in a series of wild life features that will run for an hour. All of the others run for between 25-29 minutes. It thus gives us time to cover many aspects of the ecology of the crocodile and to get across conservation arguments.

2) Botswana.

"A report has been produced "Nile Crocodile in the Okavango Delta" by George Taylor for Botswana Game Industries.

Five hundred Nile crocodile were collected from a 600 square mile area of the upper Okavango Delta. The concession area encompassed the various channels of the Okavango River from the Ngamiland border to the northern border of the Moremi Wildlife Reserve. The crocodiles were shot at night, using powerboats and spotlights. Skins, feet, back scales and skulls were commercially utilized.

"The animals were found to prey upon barbel (Clarias sp.), bream (Tilapia sp.), crabs, rodents, insects, snakes, otters, turtles, antelope, goats, cows, and other crocodiles.

"Field measurements were made on all crocodiles collected; the animals were sexed and an attempt was made to establish the relative length reached at sexual maturity.

"A brief nesting habitat survey was conducted and the author is of the opinion that the population appears to be making a satisfactory comeback from the heavy hunting pressure exerted upon it during the last two decades.

"Botswana Game Industries have been granted a concession to start a Commercial Crocodile Farm at Shakawe Safari Camp, but this has not yet been started due to difficulties in negotiating with local tribesmen. Dr. Wolfgang von Richter, FAO Ecologist-adviser to Botswana Wild Life Department, informs me that a full-time crocodile biologist, Goran Blomberg, has been appointed to study the crocodile meanwhile. I have already been in contact with him concerning methods of survey, trapping and marking.

3) Mozambique.

"Crocodile hunting continues quite freely. My brother-in-law who was working on a soil survey on contract to the Mozambique Government recently, reports that on both sides of the Zambezi River, local Shagane tribesmen offered freshly salted skins to their party. At Mutarara, a local Portuguese cafe owner supplied the name and address of a tannery in Portugal to whom he supplies locally bought skins. As usual, Portuguese authorities deny all knowledge of crocodile poaching--meanwhile, freshly salted hides are peddled in most of the local villages.

4) Lake St. Lucia, Zululand--Proposed Crocodile Sanctuary.

"A map of the area encompassing the section of the Mkuzi swamps where disturbance of nesting crocodiles has been observed, has been submitted, together with a full report on these activities.

"Three government departments are involved in this land and obviously

will be a slow process in persuading all concerned that the area needs protection. However, the request for a proclaimed sanctuary has been translated and progress will be reported from time to time.

Proposed Crocodile Educational Centre/Nature Park, Durban.

"There was much opposition in the local press to the news that a crocodile exhibit would be the main feature of the new park in Durban's Eff Swamps area. Irrate old ladies complained that the "crocs would escape and devour pet poodles, cats and little children. Others complained of the swarms of flies, the stench, and disease epidemics that would spread from farm to nearby residential suburbs.

"The land in question has now been handed over by the Province to the Parks Board and before any development can start, the Park has to be officially proclaimed as a Nature Reserve; and this enactment is now in the final stages.

Research at Ndumu: Parental Care Observations.

"A series of colour and black and white photographs were taken showing a 5 m. female transporting 19 hatchlings in her gular pouch, 15 m. to the river. Observations over 2 months proved that the female established a nursery, kept 8 other adults at bay, chased away a large water monitor and from the nursery area and generally acted as a good parent, even though the young were not her own. Many interesting tests were conducted to observe her reactions to pre-recorded calls of normal hatching and distress calls and in turn, her own, as well as other adult vocal responses were recorded. A preliminary report has been written for publication and will be sent out some time in July when the journal is due."

René Honegger has recently returned from field work in Botswana, with following data:

Khwai River Lodge: (Ngamiland District) E. of Okavango Delta.

"The general area of the Khwai flood plain, as well as the Moremi Game Reserve, and parts of the Chobe National Park, was flooded. Heavy rains were common every night. I was repeatedly informed that such phenomena was registered for the past 40 or so years.

"The water table and consequently the vegetation was very high and few crocodiles were seen by me.

"Within the grounds of the Khwai River Lodge, in the self-declared game reserve of the proprietors, some few small specimens are said to live. They were last seen before the "summer rains" last October/November 1973.

"Just outside the private game reserve, a single crocodile, about 50-190 cm. in length, was signaled over the radio by a professional hunter to the benefit of another hunting party in the field.

Okavango Swamps: Xugana Fishing Camp.

"During a half an hour night drive in an outboard motor launch in Panachira Lagoon, the eyes of seven crocodiles were seen. Upon approaching, four of the animals disappeared within 20-25 m. from the boat; three were approached up to a few meters. Two of them were at least 180 cm., two smaller, about 150 cm.

"During a motor launch cruise to the Gadikwe Lagoon from Xugana, about 5 km., I saw again seven crocodiles, smaller specimens, the largest about 20 cm. They all were basking on the edge of the papyrus-phragmites swamps. All of them could be approached close to touching.

Small Crocodile Camp: (The original outpost of Boby Wilmot, the man who killed about 40,000-50,000 crocodiles some ten years ago).

"Only a few small specimens were reported to be seen on few occasions. Information: by Tony Henley and Darryl Dandridge, c/o Ker, Downey and Selby Safaris, Maun.

"Both these professional hunters indicated the difficulties of judging the crocodile population in the swamp, and especially during the flood. In the vicinity of the Khwai River Lodge and in Savuti marsh (Chobe National Park) no larger specimens known. Along the Chobe River (Linyanti) only small ones to be seen. In the past heavily hunted on the Chobe River at night.

"The numbers indicated by Taylor (1973) are to be considered very carefully. Henley mentioned the possibility of the numbers being larger than indicated.

"In the Okavango Swamps, crocodiles are killed by the fishermen as troublesome animals without any use of the skin, etc.

"Both hunters have no knowledge of a scheme to collect eggs.

"They both 'have heard' of a Swedish ecologist (Blomberg) to be mentioned and working at Shakawe, e. g., in the western part of the swamps. They mentioned him being employed by the Botswana Game and Fisheries authorities.

Capture of Crocodiles.

"Besides killing the crocodiles on night patrols, the following methods are used in the swamps:

"From baited hooks which are either hung on a tree about 30-50 cm. over the water or just on land. Such hooks are also attached to small wooden floats.

Curios.

"At Maun's Bushman curio shop (owned by Botswana Game Industries, IGI) a few huge dorsal scales are being offered, mounted as key-rings. One stuffed baby crocodile was within the office at Crocodile Camp, Maun. "No carved or otherwise hand manufactured crocodile sculpture or replicas were encountered."

JAPAN

René Honegger submits the following English summary of a paper from the Journal of Japanese Association of Zoological Gardens and Aquariums (Vol. 15, No. 1) 1973:

"In the crocodile room of Oga Aquarium, ten adult spectacled caimans (Caiman crocodilus crocodilus) have been kept and exhibited by landscape method since June in 1969. In this terrarium they have copulated and laid eggs every year since 1970.

"On the 12th of May in 1972, one female laid thirty-two eggs in the water and ten of them were taken in an incubator (kept in a temperature of 32 degrees C and a humidity of 95%). On the 73rd day four of them hatched, and another three hatched on the 75th day and seven young were born in all. The rest were used for experiment. The accumulated temperature needed for the incubation was about 2,400 degrees C.

"The babies first ate living killifish on the 5th day after hatching, and they grew rapidly feeding on living fish (such as goldfish and mud fish) and fresh fish (such as gobies and pond smelts). When measured six months later, their length proved to be about two and a half times, and their weight about eighteen times, on their increase."

OCEANIA

During the CEDAM, International Quintana Roo expedition, one of the editor's diving partners was Dr. James Wiley, a surgeon from Portland, Oregon. Dr. Wiley stated that while diving recently in the ocean near Palau he had observed a small (about 4 feet) crocodile. He subsequently made local inquiry, from which he gathered that, while depleted by side-hunting, the reptiles were still numerous enough in certain parts of the islands to be systematically hunted--also, that there is a nominal legal protection, but that it is inadequate, unenforced, or both.

From this it would seem that a beleaguered population of Crocodylus porosus may exist in the Palau Islands. If so, its protection should be a

matter of priority. As part of the Trust Territory of the Pacific Islands, Palau is under United States jurisdiction. It is also legendary for the magnificence of its coral reefs. It might therefore be feasible to include a crocodile conservation project as part of a combined mangrove-coral reef habitat preserve of some sort.

Finances permitting, the editor hopes to investigate this in the field.

RECENT LITERATURE OF INTEREST

(Reviews by the editor unless otherwise noted.)

René Honegger, "Justice pour les crocodiles." Panda (Vol. 7, No. 1) March, 1974; pp. 20-31. (Note: This French article covers essentially the same material as Mr. Honegger's earlier German article, "Gefährdete Krokodile", published in the 26 January 1974 edition of Tages Anzeiger Magazin.)

This article, by one of our Group members, is an excellent and penetrating summary of the situation facing crocodile conservation today. All the key points are brought out: the ecological importance of crocodiles; their desperately threatened status, in some species verging on extinction; the role of commercial exploitation as the arch-villain, with public demand as its accomplice; the inability of crocodile farms to supply more than a small percentage of the demand in the foreseeable future; the futility of "paper laws" for protecting wild populations.

An even more chilling indictment of man's greed and woman's vanity is contained in the Gharial Survey Report of the Madras Snake Park Trust and Conservation Centre. However, as the editor assumes that all Group members have by now received and studied this report, it will not be reviewed here. One comment only: this Gharial report should prove beyond argument the fallacy of the "soft-line" approach to crocodilian conservation, and the need for vigorous, no-compromise action.

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--James Powell, editor
Plainview, Texas
12 August 1974