

Ndumu Game Reserve,
P.O. Ndumu,
Zululand.
South Africa.
December, 1972.

CROCODILE SPECIALISTS GROUP OF I.U.C.N. NEWSLETTER NO. 7.

RHODESIA.

1) Conservation Measures: Specimens of the Nile Crocodile have been captured and translocated, as in previous years. These animals invariably are ones which cause problems in areas in which they have been stock-killing, and in which they have no long term future. The drug Flaxedil has proved to be of considerable practical value in this respect. Two specimens both approximately 2.4 metres in length were recently moved 600 kilometres to a bird sanctuary.

Three public lectures on crocodile ecology and conservation have recently been delivered.

2) Scientific aspects: Liberation/re-capture experiments continue in the Chete Game Reserve in an attempt to learn about population distribution and changes, and mortality. Since May 1970, 112 animals have been either "seeded", or captured on site marked, and released again, in this area; a re-capture in October 1972, of 32 animals contained 6 marked specimens.

An aerial survey of the population of crocodiles of the River (from the Mocambique/Rhodesia boundary at Zumbo to the Kariba dam) was conducted in October. The significance of the results obtained has not yet been determined.

An in-press paper by Loveridge and Blake - a follow-up to the one by Woodford on chemical immobilisation by Flaxedil (in the East Africa Wildlife Journal Volume X, part one) indicates the drugs practical use in conservation. The paper is to be published in "Arnoldia" (National Museums of Rhodesia).

Reports of nesting behaviour including descriptions of both nest preparation and nest excavation to release young, have been received from crocodile-observing members of the public. These will be published in due course.

3) Commercial crocodile rearing (this title is used in preference to "crocodile Farming" in deference to I.U.C.N./S.S.C. Crocodile Group thinking): one of the three had over 1800 animals in stock in August, after an off-take of over 400; both belly skins and horn-backs were utilised.

Editor's note: See Arnoldia (Rhodesia) no. 40, Vol. 5 of November 27th 1972 p 1 - 14. Techniques in the Immobilisation and Handling of the Nile Crocodile, *Crocodylus niloticus*. by J.P. Loveridge and D.K. Blake.

INDIA

Letter received 7/11/1972 from Madras Snake Park and Reptile Research Center, Guindy Deer Park, Madras 600022.

Dear Mr. Pooley,

I was pleased to read an article about your crocodile raising project. India has the Marsh crocodile, the Saltwater crocodile and the Gharial and all are in dangerously low numbers. There seems to be little let up on the illegal killing and export of hides because the continued European demand keeps the price high. We are therefore going to start a croc breeding and rearing project, even if just in a small way at first.

There are many questions and I suppose a lot more once we get started. If it is not too much bother, could you briefly outline the operation and layout of your croc "farm"? Such details as depth of water, average quantities of food, common diseases or odd problems that crocs have, advice will be greatly appreciated. Do the crocs mate and lay eggs regularly in captivity or do you depend mainly on wild egg collection? Our problem is that there are too few crocs for egg collection!

Sorry for the bother, I am very keen on seeing a safe reserve for crocodiles here and if we can get government help, I am sure we can succeed.

Sincerely,

Romulus Whitaker.

Editor's note: Mr. Whitaker has been asked to draft a report for us, giving as much data as he can so that we can advise accordingly.

AUSTRALIA.

We have recently received word that Pioneer Stations Pty. Ltd., in Queensland, have seen fit to have one of their cattle stations declared a fauna sanctuary under the Fauna Act of 1952. This property has some very good water fowl areas, and plans are on hand to set aside suitable areas for other indigenous species. Setting up of an area to breed freshwater crocodiles is now at the discussion stage, in conjunction with ourselves, and it seems likely that this will be extended to cover saltwater crocodiles as well. Sir Russell Drysdale, the wellknown artist, who is a director of Pioneer Stations, is particularly interested and concerned for the future safety of the native Australian fauna. The sanctuary, called 'Jerona' is situated on the Bruce Highway, approximately fifteen miles north of Ayr, North Queensland, and comprises some 25,000 acres. The property has some very fine natural water holes, and creeks.

Salt arms also extend well into it, and in former years the area carried a big population of saltwater crocodiles. Odd small saltwater crocodiles are still seen in the area, and they have at least one 7' long specimen. The company plans to build an artificial swamp which can be control-flooded during the wet season. The area will be fenced to prevent the loss of breeding stock, and if they are successful, the young crocodiles will be released in suitable waterholes on the sanctuary or sent to other suitable areas. Incidentally, the company is not interested in the sanctuary from a commercial point of view. They wish it to be an educational centre and a place of security for native Australian fauna.

Bob Bustard.

SUDAN.

Prof. Dr. Grzimek has kindly drawn our attention to the fact that UNIDO (United Nations Industrial Development Organisation) has sent an expert in reptile leather production to the Sudan, at the request of the Government of Sudan.

There has followed a lot of correspondence to UNIDO from Prof. Grzimek and myself, because we felt that I.U.C.N. Crocodile Group should have been consulted or notified of the intention to build a Reptile Tannery. The following letter is the latest to be received:-

Dear Mr. Pooley,

Thank you for your letter of 20 October 1972. Due to my absence from Vienna on a mission I have not been able to answer your letter earlier.

Regarding the reptile leather tannery planned for Sudan, please note that UNIDO has not "the intention of building a tannery at Malakal". UNIDO's role is to assist the Government with expert advice when so requested. We have, therefore, at the Government's request, recently sent an expert in reptile leather processing to advise the Government of Sudan on this matter. This, however, also means that the establishment of a reptile leather tannery will be recommended only in case the expert is convinced that sufficient raw material is available in the Sudan, and will continue to be available in sufficient number to warrant a commercial plant to operate successfully. Also the establishment of special farms will be considered in order to assure a steady supply of raw material without endangering the species from which the skins will be obtained. It should be self-explanatory that a commercial tannery cannot be recommended in case the supply of raw material is not assured.

UNIDO will certainly consult with the I.U.C.N. Crocodile Specialist Group on future plans in this specific field of activity.

We appreciate very much your readiness to take part in any further discussions that may arise concerning any aspects of crocodile utilization. We will, therefore, revert to this matter in due time, when our preparations for the planned UNIDO expert group meeting on the development of the reptile leather industry, scheduled to take place in 1974, have reached a more advanced stage.

Yours sincerely,

M. Nestvold.
Senior Industrial Development Officer
Light Industries Section
Industrial Technology Division

FLORIDA - U.S.A.

James Powell recently (August) returned from a brief field trip to look over the status of Crocodylus acutus in southern Florida.

The crocodile population in the Everglades National Park is increasing, while the poaching problem is decreasing. Accompanied by John Ogden, the Park naturalist; a Park ranger; and Jeffrey Lang, an American naturalist currently studying alligators in the Everglades, I visited all known crocodile nesting sites within the Park. These were as follows:

Davis Creek: this site has had nesting through the '60's. Two marl nests, both presumably by the same 9 foot female. One nest was opened and found to contain 41 bad eggs. Old, collapsed den also at this site.

Mud Creek: one large marl nest. Active den further up creek.

Alligator Point: sand (actually, pulverised shell) nest, the scene of a successful hatching in late July, 1972. Clutch size 74 eggs; 12 bad, the rest believed to have successfully hatched.

Madeira Point; very large shell sand nest, 25 feet in diameter at the base.

Madeira Beach: also scene of a successful hatching this year.

Taylor River: here we discovered two previously unknown nests, and a den. One of the nests had obviously had a recent successful hatching, as at least seven baby crocodiles were counted swimming nearby.

Black Betsy Key: this is now the only known nesting site among the islands of Florida Bay, all the previously mentioned sites being on the mainland. Formerly, nesting sites were concentrated on the islands. The recent shift to the mainland is a puzzle about which there are various theories. It may be related to real estate development on Key Largo, which has destroyed most of the fresh-water habitats which some students (cf. Neill) believe necessary to juvenile C. acutus and to which hatchlings from the islands may have migrated for this phase of their development.

Davis Creek and Mud Creek have been closed to public entry in order to prevent disturbance of nesting crocodiles by fishermen. Now that nesting has been confirmed for Taylor River, it will probably be closed, too.

I also visited the Key Deer National Wildlife Refuge. Established primarily for the protection of the threatened key deer (Odocoileus virginianus clavium), it also harbours a small population of C. acutus. Jack Watson, the Refuge Manager, estimates the crocodile population of the Refuge as 12-- at the most-- 20 individuals. There are four nests on Little Pine Key. Two are definitely crocodile nests, as a female has been seen near both. The other two, approximately 100 yards away, are probably crocodile nests. However, no female has been observed near them, and there is always a remote possibility they might be alligator nests, as alligators have occasionally been observed in the Refuge. They look like crocodile nests.

On Friday night, August 18, 1972, a \approx 7 foot (estimated) crocodile was observed in the boat basin at Refuge Headquarters. Little Pine Key is the only island in the Refuge on which nesting has been confirmed. Crocodiles -- but no nests -- have also been observed on Howe, Johnson, Sugarloaf, and Big Pine Keys. Assuming all four nests on Little Pine Key to be active crocodile nests, it is very possible that the total crocodile population of the Refuge may exceed the 20 individuals estimated by Mr. Watson.

In the overall picture of crocodilian conservation, I consider the establishment of adequate sanctuaries second in importance only to abolishing the market for crocodilian products. Such sanctuaries should be adequate not only in degree of protection, but also in extent -- that is, they should embrace, in so far as possible, an ecosystem; and they should be established at as many points as possible throughout each species' range. In this connection, I discussed with John Ogden the possibility of making the Everglades National Park such a sanctuary for C. acutus. This would involve essentially building up the crocodile population of the Park to its maximum natural carrying capacity. Exactly what this capacity is is uncertain: almost certainly not less than 1000 individuals; probably not over 2000. A great deal will depend on whether the vast wilderness areas of mangrove forest in the west, or Gulf Coast, section of the Park prove to be suitable for stocking. Mr. Ogden, supported by the National Park Service, is currently conducting an in depth study of the ecology of C. acutus in Florida, using very sophisticated telemetric

techniques; and at the study's conclusion in approximately two years he expects to know exactly how many crocodiles the Park can support, and which areas are suitable habitat.

John was enthusiastic over the idea, and felt sure the Park administration would be, too, if the I.U.C.N. were to endorse the project. I strongly recommend such endorsement. Admittedly, C. acutus in southern Florida is at the geographical periphery of its range; and refuges nearer a species' heartland are theoretically more ideal. However, I believe the advantages of political stability more than compensate. Ndumu in South Africa is near the southern limit of C. niloticus' range, yet today it is one of this crocodile's most secure strongholds.

In addition to the National Park personnel, I also talked with the Regional Director of the National Audubon Society. All unanimously agreed to the urgent need for a moratorium on all commercial exploitation of crocodilians.

NO JUSTICE FOR THE ALLIGATOR.... (from AUDUBON vol. 74, no. 5
September 1972.)

What is fitting punishment for a crime against nature?

Apparently in the view of Federal Judge Alexander Lawrence of the Southern District of Georgia, a slap on the wrist.

In an astounding act of judicial charity, Judge Lawrence dealt a crippling blow to the enforcement of America's wildlife protection laws. For he let Quince Clayton Plott and his son Christopher Joes, off without fines and with only brief jail sentences in the biggest case of illegal alligator hide dealings ever brought to trial.

The evidence amassed against the Plotts by agents of the Bureau of Sport Fisheries and Wildlife was detailed in May Audubon ("The gator killers never stopped") by Field Editor George Laycock. Federal grand juries in New York and Georgia had indicted the Plotts on 66 counts of buying, selling, and shipping illegal alligator hides valued at more than \$250,000.

Two years of persistent investigation, moreover, had identified the senior Plott as a prime figure in a network of 460 poachers and dealers who, between 1968 and 1971, killed and brought to market 127,000 alligators worth an estimated \$4,000,000.

But the efforts of federal game management agents were virtually wasted. In U.S. District Court in Savannah, the Plotts unexpectedly pleaded guilty to all counts. The penalty could have been life imprisonment and fines totaling \$600,000. Judge Lawrence himself stated that the federal probation officer had recommended a 20-year prison term for Q.C. Plott.

Yet the father was given only a six-month jail term and five years on probation. The son was sentenced to just 60 days to be served after his father is freed, so the family business will not suffer.

The sentence smells like a naked, rotting alligator carcass left in the swamps by one of Plott's poachers.

.....AND NO SANCTUARY IN LOUISIANA

In late July, the State of Louisiana - which a year ago had tried to legalize the hunting of white ibis - defied public and official opinion across the country by declaring an open season on alligators. And while the 13 day hunt on 750,000 acres of Cameron Parish was not to begin until September

5th, within a week the alligator poachers were back in business in the coastal marshes, once again given a legal outlet for their bloody wares. Not surprisingly, the poachers were busiest within the borders of Sabine and Lacassine national wildlife refuges.

Although the alligator is listed by the Secretary of the Interior as an endangered species, officials of the Louisiana Wildlife and Fisheries Commission dispute this classification. Estimating a population of 250,000 alligators in their own state, they have asked Secretary Rogers Morton to remove the species from the list.

Federal law, it must be noted, does not prevent a state from allowing hunting of nonmigratory wildlife even if the species is classified as endangered. But removal of the alligator from the list would make it easier for the Louisiana officials to sell their open season - which calls for the taking of 4000 alligators of four-foot length or larger - to its own citizens.

Other Southeastern states and the Bureau of Sport Fisheries and Wildlife have decried the Louisiana move as premature. So does the National Audubon Society. The occupied range of this great North American member of the order Crocodylia remains vastly reduced throughout the Southeast, and there simply has not been enough time for replenishment of populations within the occupied habitats since protection became reasonably effective.

But the worst effect of the Louisiana alligator season will be the reopening of channels through which poachers across the South can market their stolen hides, including thousands believed to be held in storage since passage of the Endangered Species Act.

Louisiana's Dr. Leslie L. Glasgow, former Assistant Secretary of the Interior, and some other conscientious wildlife biologists have long argued that the only way in the long run to save the species is to harness the profit motive through legitimized "alligator farming". The fallacy of this argument has been pointed out by Dr. Archie Carr, whose preeminent knowledge and understanding of the ecology of the world's exploited great reptiles is undisputed. Of the concept of alligator farming, he wrote in AUDUBON in March 1972.

"Superficially it sounds good, but there is fuzzy thinking init. I have yet to see or hear of a work plan for any reptile ranch that shows in realistic detail how it expects to achieve a volume of production so great that it will do anything other than increase both demand and prices. If the enterprise is a commercial one, it will obviously do everything possible to create new markets. Just as obviously, it will not be able to satisfy these, and so will exacerbate, rather than relieve, the predicament of the natural populations."

TONY POOLEY.