

Nile Crocodile Faces Extinction in Uganda

By Hugh B. Cott

Dr Cott's report on the status of the Nile crocodile in Murchison Falls National Park, in Uganda, shows a most alarming situation, with poachers gaining the upper hand. At one place where crocodiles were once so numerous that at times it looked as if the whole beach were moving into the river there are now none at all. In the battle against the poachers it is urgent to equip the park rangers with two-way radio sets to replace the present system of signalling by fire (which also warns the poachers), and the FPS has agreed to provide these sets out of the FPS/WWF Revolving Fund (see page 319). Dr Cott's other recommendations include putting a stop to disturbance by tourist and other launches and the reduction of some predators.

IN the last 20 years the Nile crocodile has been subjected to so much indiscriminate exploitation that it is today an endangered or extinct species in many parts of Africa. The Murchison Falls National Park supports the last relatively undisturbed population in Uganda, and, with the disappearance of crocodiles elsewhere, this population assumes an increasing value on both scientific and economic grounds – as a reservoir of the species and as a magnet to tourism.

The change that has taken place on both banks of the Nile below Paraa, where formerly crocodiles abounded, is most striking. In 1952 the population density was perhaps comparable to that found today between Paraa and the Murchison Falls. At that time one of the most spectacular congregations to be found anywhere on the Victoria Nile was at the Mugungu grounds. There one could see a compact formation of reptiles so numerous that when disturbed it looked as though the whole beach was moving into the river. This congregation was still present in strength in 1957; four years later the place was deserted, and in 1967 an aerial survey over this sector of the Nile, piloted by Ian Parker, revealed only two crocodiles between Paraa and Lake Albert. The nesting population below Paraa has been virtually exterminated by skin hunters.

Now it looks as though the same operators may be at work on the river east of Paraa. Those who have known the area over a period of years cannot fail to notice the changes near Murchison Falls. In 1961 the lower 300 yards of the sand river on the north bank, in the gorge below the falls, was occupied by undisturbed breeding crocodiles; in 1967 the craters of some nine excavated nests were found near the river mouth; in 1968 the sand river had no nests at all. At one place on the south bank, in 1967, there were 13 excavations of hatched or raided nests; in 1968 only one nest was found, and this was destroyed by monitors.

Two counts carried out from a launch by a Fisheries Officer in 1967

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both revealed a population of about 420 crocodiles between Paraa Ferry and Murchison Falls. An aerial count the same year by Ian Parker put the population at not less than 700; in April 1968 an air survey by the Chief Warden gave a total of 534 crocodiles in this sector.

During the first four months of 1968 which covered the whole incubation period, a detailed survey of breeding females was made between Paraa and the falls; 181 nests were found. Allowing for a small percentage that had escaped detection, it is estimated that the total number of nesting females is now certainly below 250.

Factors contributing to the Decline

Destruction by poachers is undoubtedly the most important factor in this decline. Parties of poachers have been active both on Acholi and Bunyoro terrain, as the evidence of skinned crocodiles found on the bank shows. The park's crocodiles have been reduced to a fraction of their former numbers, and the present scale of poaching is serious; losses are believed to average about 20 skins a month (information supplied by the park warden). A population that carries not more than 250 nesting females cannot sustain such losses for long. If the drain continues unchecked a further and catastrophic decline is to be expected, and in a few years the park is likely to be without its main tourist attraction.

Recent observations and experiments have clearly shown the vital part played by maternal care in the successful rearing of young crocodiles. If the females are unable, through human disturbance, to carry out their proper functions, eggs and hatchlings perish. Crocodiles have a well-defined breeding season. In the Murchison reach of the Victoria Nile mating takes place in December, most eggs are laid by mid-January, and hatching occurs in late March and early April. During the three-month incubation period, the female remains in attendance, either lying over the eggs or watching the nest from nearby cover, actively defending it from predatory egg-eaters; her presence is necessary for the survival of the clutch. At hatching time the young croak and stimulate the mother to unearth the eggs, thus enabling them to escape from the shell. Without this aid no hatching can take place, since the eggs are buried beneath a foot or more of firmly compacted earth.

Immediately after hatching the young seek the shelter of their parent's body, and they are led or conveyed by her to a selected nursery site in slack, shallow water with protective vegetable cover. In the absence of the parent the hatchlings tend to remain near the nest where they fall an easy prey to enemies. Having reached the water, they become strongly gregarious, and school together in the nursery for at least six weeks. During this critical period of early life the female closely attends her offspring; without such aftercare they are defenceless against attacks from goliath herons, marabou storks, fish eagles, kites and other predators.

Thus, during the protracted cycle of egg-laying, incubation, exhumation, hatching and the first weeks of active life, eggs and young are entirely dependent upon maternal care. Disturbance of females on the nesting grounds causes high mortality both through hatching failure and predation; protection from interference during the successive phases of the

reproductive cycle is therefore absolutely necessary for the long-term survival of the population. But the peak tourist season coincides with the crocodile breeding season, and it is common practice for launches to run alongside the more accessible basking and breeding grounds. Crocodiles that have not already fled to the water are then driven off for the edification of the tourists. Coxwains are rarely content to leave any crocodile ashore in such circumstances, and the animals may suffer this interference a dozen times a day. The spectacle of monitors and baboons excavating crocodile eggs provides additional entertainment for visitors.

Losses due to predation on both eggs and hatchlings are very high. In the main this is a secondary effect of the human disturbance by poachers and launch-parties. In 1968, of 174 nests whose history is known, no fewer than 97 (55.7 per cent) clutches of eggs were entirely destroyed by egg-eating enemies; and 29 (16.7 per cent) clutches failed to develop as a result of damp or flooding; from the remaining 48 (27.6 per cent) nests at least some young were hatched.

Nests are ravaged both by day and night. Diurnal egg-eaters include olive baboon, marabou stork, black kite and Nile monitor; nocturnal predators include honey badger, white-tailed mongoose, serval and spotted hyaena. The relative importance of the predators is indicated by these records of destroyed nests: olive baboon, 16 nests; Nile monitor, 14; spotted hyaena, 12; white-tailed mongoose, 5; honey badger, 3; more than one species, 8. Troops of baboons, sometimes 35 or 40 strong, pay systematic visits to the grounds during the incubation period. They quickly locate and excavate unattended nests, and may be seen running off with three or four eggs at a time. During these raids nests are ravaged in quick succession. Monitors are resident on the grounds, and search persistently for eggs throughout the three-month incubation period. A single monitor has been seen to devour a dozen eggs in 75 minutes. These two species probably account for more eggs than are lost to all other predators together, but hyaenas do much damage locally.

When the hatchlings are not protected by the mother, they are destroyed wholesale, especially by birds – marabou, saddlebill stork, fish eagle, black kite, palmnut vulture, goliath heron, great white egret and ground hornbill. Marabou inflict the greatest damage; they take possession of the grounds at hatching time, use their bills as probes to locate the buried eggs, and rapidly destroy entire broods.

Recommendations

Dr Cott concludes his report with a number of recommendations. These include a third ranger post; an end to fire-signalling (which also warns the poachers) and the substitution of two-way radios; the declaration of a close season when nesting areas are out of bounds to all launches; a ban on driving crocodiles from their basking grounds, with explanation to tourists of the need for this; and some reduction in the number of baboons, monitors and maribou storks.

Plate 1 opposite: 'The most spectacular congregation to be found on the Victoria Nile . . . ' Crocodiles at Mugungu in 1952. Hugh Cott.

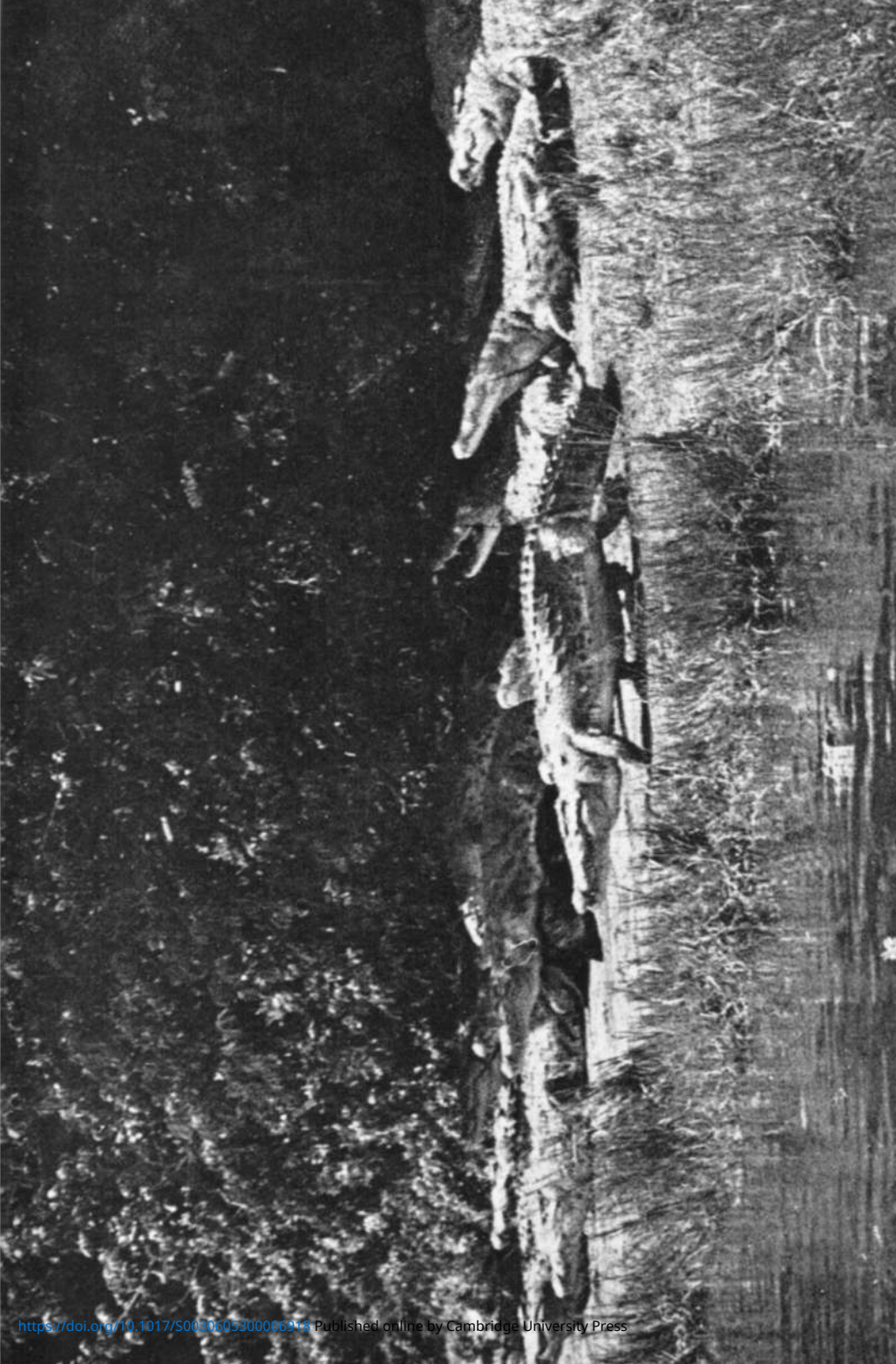






Plate 2:
ROAN
ANTELOPE
Ray Tibbs

Going to South Africa

**... sea people have far
more fun than jet people**

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