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Encountering Crocodiles while Chasing Chimpanzees

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The Nile crocodile (*Crocodylus niloticus*) is sympatric with the chimpanzee (*Pan troglodytes*) across most or all of its range (IUCN 2013). The crocodile is a top predator and even when not fully grown is big enough to prey upon a chimpanzee. Crocodiles prey on smaller-bodied monkeys (Galdikas & Yeager 1984; Galdikas 1985; Cheney & Seyfarth 2007). Njau and Blumenschine (2012) showed that crocodiles of only 1–2 m body-length preyed on *Homo habilis*, whose body-size was chimpanzee-like. However, crocodiles are rarely listed as a potential predator in studies of wild chimpanzees.

In reports of the ethology and ecology of chimpanzees, crocodiles figure, if at all, only in passing comments (McGrew *et al.* 1996, p. 318). Risk of predation by aquatic predators, including crocodiles, is not mentioned in published accounts of chimpanzees' avoidance of water (hydrophobia) (Angus 1971; McGrew 1977; Nishida 1980). There seem to be no detailed published data on interactions between the apes and these reptiles, nor any data on potential encounter rates between the two species. The aim of this short report is to present some data on chimpanzees and crocodiles in close sympatry, with the two species making use of the same watercourses at a single study site.

If we have not yet seen crocodiles and chimpanzees encounter one another, then the next best source of data may be primatologists searching for or tracking unhabituated chimpanzees. Because such researchers seek to maximise the chances of contacting wild chimpanzees in their daily activities, the humans' encounter rate may be a proxy for that of the apes.

As Mt. Assirik, in the Parc National du Niokolo-Koba, Republic of Senegal, we studied chimpanzees (*P. t. verus*) over almost four years, from February 1976–December 1979. We spent each working day walking through various types of habitat, in search of chimpanzees. We focussed on gallery forest along seasonal watercourses, which, although comprising only 3% of the surface area of the 50 km², yielded most of the chimpanzee contacts. Assirik is a hot, dry, and open habitat dominated by grassland and open, deciduous woodland (McGrew *et al.* 1981). The dry season lasts for 7 months (November–May), during which time almost all watercourses either dry up or cease flowing. Assirik has no rivers but instead tributary streams of varying size, none more than 2 m in width. Chimpanzees drink daily and prefer running water; as the dry season progresses, they must make use of water in gallery forest strips.

We encountered crocodiles nine times during the study (see Table 1). This equates to one encounter every 5.2 months (when the median number of days per spent in the field per month was 27). All but one of the encounters took place in the dry season, when the reptiles were confined to pools in watercourses. The exception (10 June 1976) was a dead individual in a shallow pool, ridden with maggots. Only half of the encounters were in closed-canopy gallery forest; the others were in more open

Nile crocodiles (Photo by M. Nakamura)

Table 1. Details of encounters with crocodiles, Mt. Assirik, Senegal.

Date	Habitat type	Place	Length (m)	Comments
28-Apr-76	??	Hidden Valley	1.2–1.5	Dead in pool; in steep-sided bat grotto; maggots
10-Jun-76	??	Stella's Valley	??	In stream
14-Feb-77	W	Lower Lion Valley	1.5	Flees from bank into pool
07-Mar-77	G	Tsetse Plains	small	Only intermittent pools but some running water
04-Jan-78	F	Elephant Rib Valley	1.5	Slides into pool
02-Nov-78	F	Elephant Rib Valley	0.9–1.2	Beginning of forest
13-Feb-79	F	Middle Lion Valley	1.2	Stream; upstream from bathing pool
14-Mar-79	G	Tsetse Plains	0.6	Pool
25-Apr-79	F	Middle Lion Valley	??	Old Camp bathing pool

Habitat type: F = forest, G = grassland, W = woodland

habitat types. All crocodiles were immature, ranging from 1–1.5 m long. All retreated upon encountering us, into whatever water was available.

Lacking permanent surface water, Assirik is probably too dry to maintain a population of crocodiles, but it seems likely that young crocodiles disperse in the rainy season up the rain-swollen tributaries of the Gambia River, bringing some of them into the main valleys of the study area. Those that did not retreat with the advancing dry season were probably trapped in diminishing pools, where they were temporarily more exposed and observable, but ultimately perished.

Are crocodiles a predatory threat to the Assirik chimpanzees? Perhaps.

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<NOTE>

Discriminating *Saba* and *Landolphia* Seeds in Chimpanzee Feces at Mahale

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INTRODUCTION

The fruits of *Saba comorensis* (local name, ilombo) and *Landolphia owariensis* (local name, mpila) are often enthusiastically eaten by chimpanzees at Mahale, and they have been classified as a "major food" and "important food," respectively, by Nishida (1991). Both of them belong to the family Apocynaceae with liana life forms, and they share some common characteristics. However, the