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East Timor

STATUS REPORT ON *CROCODYLUS POROSUS* AND HUMAN-CROCODILE INTERACTIONS IN TIMOR-LESTE. East Timor (also known as Timor-Leste) is a former Portuguese colony that gained its independence in 2002 after a UN-sponsored referendum and the withdrawal of Indonesian occupying forces. The young country is in the process of implementing a variety of wildlife management, research, and conservation policies, and accounting for the presence and the activities of the largest predator in the country is, of course, a topic of considerable interest. The dearth of information regarding the natural history and interactions of crocodilians in the country is something that must be quickly remedied for policies to be crafted effectively and to ensure public safety.

Although some recent publications (Trainor *et al.* 2007a,b) feature photographs of Saltwater crocodiles (*Crocodylus porosus*), there have been no efforts to systematically census the population, map distribution, or document human-crocodile interactions. Unconfirmed verbal accounts of the presence of *Tomistoma schlegelii* in East Timor may reflect misidentifications by people familiar with that species from western Indonesia.

In general, accounts of crocodile activity are sporadic, and invariably popular as opposed to scientific in their nature. In 2000 there was a well-publicized intervention by International Crocodile Rescue (Irwin 2000; Scientific American 2001) to relocate two captive crocodiles in Dili, the country's capital, to secure enclosures (a video of these enclosures is available on YouTube.com, search for "East Timor Crocodiles"). Further assistance was provided by: Hartley's Creek Crocodile Farm (Palm Cove, Queensland, Australia), who sent two staff to Dili to assist with capture and relocation of captive crocodiles; and, Wildlife Management International, who provided advice on crocodile husbandry and handling to Australian Army personnel stationed in the country (Manolis, pers. comm.).

In 2003, the profile of crocodiles in the country was raised again when the East Timorese army adopted *C. porosus* as its mascot (Associated Press 2003). In recognition of the danger from crocodile attack, the United Nations issued a circular to its troops (unavailable to the public according to Gowan 2008).

It is therefore certain that there is a keen awareness among the local population that crocodiles live among them, and traditions rooted in local animist beliefs hold that the island of Timor is the body of a giant crocodile (eg Sylvan 1988). The crocodile has been described as a local “totem” (Irwin 2000). Indeed the Saltwater crocodile is East Timor’s national animal (see Anon 2008).

However, beyond folklore and road signs (Fig. 1), there is very little actual knowledge of the habits of crocodiles, the dangers they pose, and how to best handle safety concerns. This misinformation even extends to the usually quite accurate Lonely Planet travel guide, which plays down the dangers of crocodile encounters in the country (see Ver Berkmoes and Skolnick 2008).



Figure 1. A. An example of widely available wooden crocodile carvings. B. Another common motif depicts the legend of the boy riding the crocodile that becomes the island of Timor. C. Crocodile warning sign along the coastal highway west of Manatuto, Manatuto District. The sign is bilingual in Portuguese (cuidado = caution) and the national language Tetum (nani iha ne’e = swim here), combined with a crocodile image. Since there is no word to express “danger” in Tetum, the Portuguese is integrated into the official language. D. Mural on an elementary school near Lospalos, Lautém District. Photographs: A, C, D - Paul Freed; B - Mark O’Shea.

Reports of crocodile attacks are relatively infrequent and may not reach the authorities for reasons of logistics or culture, but those that do surface inevitably report fatalities. In early 2007, a 16-year-old boy was attacked and killed by a crocodile at a beach near Com, a coastal city in the country’s eastern Lautém District. Nearly at the opposite end of the country, a 10-year-old boy was killed in 2009 in the Nurur River estuary near Betano, a coastal city in Manufahi District. Near that same location, a crocodile attacked and killed a horse. Medical personnel stationed in East Timor in the early to mid-2000s reported “a few crocodile attacks each year” (see CSG 2006).

During a herpetological survey in July 2009, we sighted crocodiles several times while driving along the northern

coast road. These sightings were of crocodiles in waterways and lagoons close to the coast. One particular sighting was of an adult (estimated total length around 4 m) under a bridge crossing the Malailada River just west of Lautém, Lautém District. We photographed the crocodile, which slowly moved upstream and showed no recognizable avoidance behavior. When one of us simulated the splashing of potential prey at the river’s edge by slapping the water with the palm of a hand, the crocodile immediately and rapidly changed direction to approach the splashing. The boldness of the crocodile in its approach is unlike crocodile behaviors some of us have observed in Papua New Guinea and Australia, and caused us to stop our luring activity immediately. It appears that the general reverence in which crocodiles are held in East Timor does not cause them to fear humans, as is the case in many other countries where crocodiles hunted for food (eg Papua New Guinea, Indonesia). As a consequence, the potential danger to humans from crocodile interactions is magnified.

We encountered two captive crocodiles in the town of Aileu, Aileu District. One of these had been captured in the coastal area of Samé Subdistrict, Manufahi District, to the south. This crocodile looked healthy, and its enclosure was of a size not uncommonly seen in western zoos. It was explained to us that a person of high social standing had transported the crocodile to this enclosure from the coast in what we surmise is a sign of elevated social status (similar to displaying captive monkeys or deer in the front of the homes of important citizens). The second, smaller individual was relegated to an old gasoline barrel (Fig. 2) - the treatment of this animal is inconsistent with the Timorese belief system of *C. porosus* as a totem.

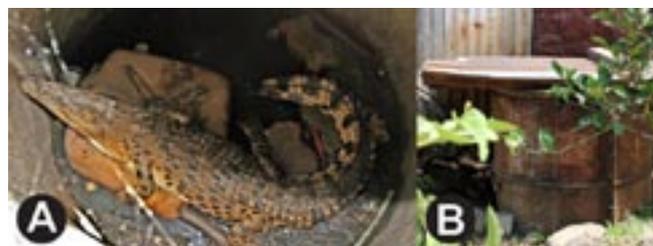


Figure 2. Captive, juvenile *C. porosus* (A) held a gasoline barrel (B). Photographs: Paul Freed.

We believe that our encounters with crocodiles in East Timor are a typical display of high-risk human behavior in a situation where the supernatural and reality converge. One indication of this is the use of the animal as a status symbol, akin to the use of animal teeth and furs in royal regalia. However, given that there is a lot of subsistence fishing in East Timor and that significant distances often have to be covered on foot, especially by school-age children and those helping their parents with fishing or washing, there is a serious and persistent danger, primarily to children, from crocodile attack. The imagery of the friendly crocodile (eg Fig. 1B) can be considered misleading, and may be a symptom of handling crocodiles too cavalierly.

We feel that a detailed population and habitat survey for *C. porosus* in East Timor is an essential first step in better

understanding the needs of both the animal and the human population and their interactions in order to provide a common basis for their coexistence.

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