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AN UNUSUAL RECORD OF NON-FATAL CROCODILE ATTACK ON THE COAST OF OAXACA, MEXICO. Crocodile attacks in Mexico most commonly occur when there is human activity in the crocodiles' territories (Conover 2002; Treves *et al.* 2006). In these situations, the most common activities involved in fatal and non-fatal attacks are fishing, playing at the water's edge, and fishing - diving and with cast nets in shallow water, all of which occur mainly during the day (García-Grajales and Buenrostro-Silva 2019).

In recent years, the state of Oaxaca has had the highest number of crocodile attacks in seven hotspot areas, of which the Pinotepa Nacional region represents the highest risk area (García-Grajales and Buenrostro-Silva 2019). Herein, we provide a record of an unusual non-fatal crocodile attack in the region of second highest risk in Oaxaca; the implications of the aforementioned activities under the "Protocolo de atención a contingencias humano-cocodrilo", and our perspective on this.

On 7 November 2019, at 0230 h, in the Río Colotepec estuary on the central coast of Oaxaca (Fig. 1), a man (around 65 y) experienced a negative interaction with a crocodile while sleeping at the water's edge. The situation was unusual in that the person had "problems" with his mental faculties, and therefore was not aware of the risk in his decision to sleep near the water's edge. Although the person was accompanied by his brother when the event occurred, his brother was fishing and didn't realize the dangerous situation. As a result, the victim received injuries to the head, arm and right leg (Fig. 2), and was attended to in "30 Camas Hospital" in Puerto Escondido, Oaxaca.

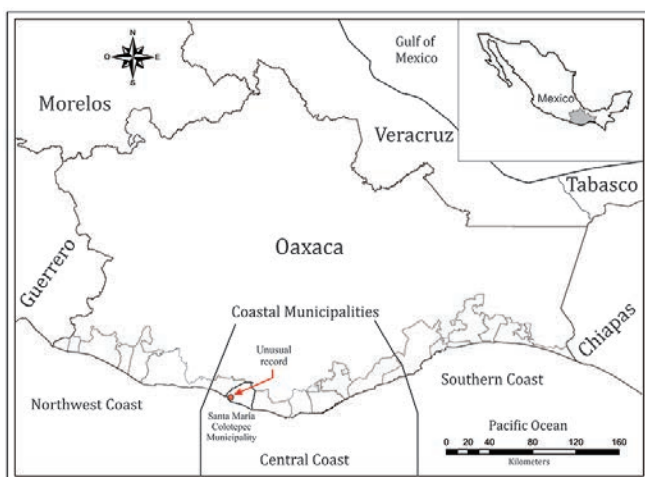


Figure 1. Location of non-fatal attack on the central coast of Oaxaca, Mexico.

Three days later on 10 November 2019, through the coordination of biologist Gabriel Cruz, the Sociedad Cooperativa de Servicios Ecoturístico La Ventanilla caught a



Figure 2. Injuries to head and arm as a result of non-fatal attack on central coast of Oaxaca, Mexico. Source: World Wide Web.

crocodile of 3.30 m TL in the region of attack. The decision to capture this individual was probably to reduce the social pressure created by the attack. However, there was no thorough analysis of the characteristics of the attack and the animal involved in the incident. The specimen was released in Palmasola estuary, a few hundred metres from where the attack occurred.

Based on photographic evidence of the injuries to the victim's head, the distance between the teeth marks corresponds with a specimen of probably less than 1.80 m TL, which indicates a sub-adult. In Palmasola Lagoon, close to the attack, sub-adults represent a high proportion of the crocodile population, followed by juveniles and to a lesser extent adults (García-Grajales and Buenrostro Silva 2014; Barragán 2019). On the other hand, Fukuda *et al.* (2015) explains that the probability of survival in a crocodile attack is related to the differences in body mass between crocodile and victim. The authors point out that the size of the crocodile has a much greater influence than that of the victim because crocodile body mass increases exponentially with the length. Based on this, we believe that there was no relationship between the captured specimen and the one involved in the attack.

According to "Protocolo de atención a contingencias humano-cocodrilo" (SEMARNAT 2018), this record was classified as Level 4 (non-fatal interaction without provocation). In addition, the criteria for relocating (capturing and releasing) a crocodile are as follows: 1) the crocodile exhibits too much confidence and shows intentions of interacting with humans; 2) the crocodile has interacted at Level 3 on more than one occasion; and 3) the crocodile has interacted at Levels 4 or 5. None of these criteria were met in the incident described here. Therefore, all the errors indicated are results of the non-implementation of the aforementioned protocol by the Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT) and the Procuraduría Federal de Protección al Ambiente (PROFEPA), who are the governmental entities responsible for coordinating the protocol's actions.

Finally, as mentioned previously (García-Grajales and Buenrostro-Silva 2018), it is necessary that local authorities establish a public safety program with the goal of raising awareness of the risk of crocodile attacks. Additionally, the established crocodile conflict network must resume its activity and be more proactive in implementing this initiative.

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Brazil

PROJETO JACARÉ HIGHLIGHTED AT 30TH “VASCONCELOS SOBRINHO AWARD 2019”. The project “Ecology and Conservation of Crocodylians in Pernambuco’s Atlantic Forest”, developed in the Federal Rural University of Pernambuco (UFRPE), was awarded first place in the Environmental Research category at the 30th Vasconcelos Sobrinho Award. “Projeto Jacaré”, as it is popularly known, was presented with the award at Cais do Sertão Auditorium, Recife City, Pernambuco, on 16 December 2019.

Created in 1990 by the State Environmental Agency (CPRH), the Award aims to disseminate good practices in environmental segments, and bears the name of João Vasconcelos Sobrinho (1908-1989, born in Pernambuco), former teacher and Dean of UFRPE and one of the pioneers in environmental studies in Brazil. By promoting this contest, CPRH aims to give visibility to the efforts of those who are acting to improve the environmental conditions and the life quality of the population.

Started in 2013, “Projeto Jacaré” is one of the actions carried out by UFRPE’s Interdisciplinary Amphibian and Reptile Laboratory (LIAR), coordinated by Professors Jozelia Correia and Ednilza Maranhão, both researchers linked to the Department of Biology. In this laboratory, teaching, research and extension activities are priorities. The “Projeto Jacaré” initiative seeks to draw attention to the importance of natural environments in crocodylians conservation (*Caiman latirostris* and *Paleosuchus palpebrosus*), investigating ecological aspects of populations in Pernambuco, aiming its monitoring and generating subsidies to obtain a real diagnosis of these populations in the region.



Figure 1. Professor Jozélia Correia, Projeto Jacaré’s Coordinator, receives award in the Environmental Research category.

“It was with great joy and emotion that we received the news of the award, Projeto Jacaré team is a committed, fearless, professional, ethical and above all passionate group for