

# First predation of a Nile Monitor *Varanus niloticus* (Linnaeus, 1758) by a Central African Rock Python *Python sebae* (Gmelin, 1789) in Cameroon, with emphasis on local abandoned fishing nets and their potential threats

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Predation by snakes on monitor lizards has been observed a number of times in the past century in various countries (Kurniawan et al., 2018; Zdunek and Finlay, 2023). The Nile Monitor, *Varanus niloticus* (Linnaeus, 1758) is a semi-aquatic lizard, one of the most widely distributed varanid species in Africa (Spawls et al., 2018; Auliya and Koch, 2020), and is listed as “Least Concern” according to the IUCN Red List (Wilms et al., 2021). *Varanus niloticus* is the largest lizard in Cameroon, reaching approximately 240 cm in total length (Haacke and Groves, 1995; Bennett, 1998). A snakes’ body size dictates the size of their prey: smaller individuals feed primarily on small animals and large ones on larger prey (Shine et al., 1998; Karunarathna et al., 2017; Zdunek and Finlay, 2023).

The Central African Rock Python, *Python sebae* (Gmelin, 1789) is Africa’s largest, and heaviest snake, reaching a maximum size of approximately 750 cm (Starin and Burghardt, 1992). This usually nocturnal, opportunistic species will also hunt during the day, and similarly to the Nile Monitor, it is semi-aquatic (Spawls et al., 2018). *Python sebae* predaes on a wide range of prey, from small mammals, birds, and frogs, to medium-sized antelope, crocodiles, lizards, and even domestic animals (Spawls et al., 2018; Antwi et al., 2019). Certain species of Pythonidae are also known to feed on monitor lizards (Bruton, 2013; Natusch and

Lyons, 2017; Zdunek and Finlay, 2023). Luiselli et al. (2001) reported the predation of *P. sebae* (over 250 cm) on a *V. niloticus* in Nigeria, without providing additional details. To the best of our knowledge, we present here the first observation of predation by *P. sebae* on *V. niloticus* in Cameroon.

On 18 February 2018, at 17:25 h, a *P. sebae* of approximately 120 cm in total length was found entangled in an abandoned fishing net, several hundred meters away from the village of Nachtigal, along a forest path with a tropical forest area on the bank of the Sanga River (Fig. 1), Ntui, Mbam-et-Kim, Centre, Cameroon (4.34866°N 11.63042°E; elevation 436 m). At the time of the observation, the weather was partly sunny, with an ambient temperature of between 24-28 °C, no rain, and 78% humidity. The snake was captured and moved to an area where suitable tools could be used to free the animal from the fishing net (Fig. 2). After the net was removed, the snake was transported to where it had been originally caught and released. Likely due to the stress of the capture and handling, the snake regurgitated its last meal, a juvenile *V. niloticus* approximately 75 cm in total length (Fig. 3). The entire event lasted about 20 minutes from capturing the snake until its release.

Observations such as these, even as single events, broaden the scope of information about the natural history and ecology of monitor lizards and their ophidian predators. Another aspect that should be noted from this observation highlights the problem of abandoned fishing nets, which is a prevalent issue in many marine ecosystems. In addition to the threat related to individual entanglement, abandoned fishing nets can lead to substantial damage to the benthic habitats (Brown and Macfadyen, 2007; Do et al., 2023). This phenomenon has been extensively studied and documented in numerous marine species, including mammals, reptiles, elasmobranchs, as well as commercially important fish and crustaceans (Stelfox et al., 2016; Lebreton et al.,

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**Figure 1.** Examples of habitat and vegetation where the observation was made: (A) Path in a tropical forest, (B) Dense tropical vegetation, and the Sanga River (C). Photographs by Monika Kłodawska.

2018; Patel et al., 2022; Do et al., 2023). In comparison to marine habitats, scientific studies on ‘ghost nets’ in freshwater ecosystems are scarce and becoming more incipient. Nonetheless, despite the limited research, ghost nets can potentially pose a significant threat to reptiles, including species like the Caspian Whipsnake, *Dolichophis caspius* (Gmelin, 1789) that typically avoid such ecosystems (Oskyrko and Jablonski, 2020; Christopoulos and Zevgolis, 2023). Fishing is a common practice in rivers, reservoirs, and other inland aquatic ecosystems, leading to frequent and improper disposal of fishing nets (Azevedo-Santo et al., 2021). Patel et al. (2023) documented six different snake species entangled in the net (including *Python molurus* Linnaeus,

1758). Freshwater fishing in Cameroon accounts for approximately 75,000 tons yearly, representing 31% of the total fish catch in 2015 (FAO, 2023). This is a common occurrence in the area where the observation took place, and in Cameroon in general, where fishing is an important source of both sustenance and income.

The unintentional entrapment of reptiles does not apply solely to fishing nets. These have also been documented in fishing traps (Crane et al., 2016), olive-harvesting nets (Zevgolis and Christopoulos, 2023), or other similar human-discarded items (Miranda et al., 2013; Udyawer et al., 2013; Blettler and Mitchell, 2021; Zdunek and Kolenda, 2022). Furthermore, due to weathering, abrasion, and biofouling, abandoned fishing





**Figure 2.** Fishing net entangled around the snake's body (A), and net successfully removed (B) by Dmytro Omelchenko and Nik Lupše. Photographs by Monika Kłodawska.

nets and other man-made plastic objects deteriorate over time, releasing smaller fragments into the environment, which potentially may increase the risk of ingestion and the release of microplastics (Gajanur and Jaarar, 2023). Based on the findings presented in this report, we urge conservationists to give serious attention to this issue. We recommend the systematic removal of abandoned fishing nets upon their finding in natural habitats.

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**Figure 3.** (A–C) *Python sebae* regurgitating its meal. (D) A juvenile *Varanus niloticus* with a typical colouration of this species. Photographs by Monika Kłodawska.

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