

First report of twinning in the loggerhead sea turtle (*Caretta caretta*) from Ponta do Ouro, southern Mozambique

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Although widely reported, twinning in reptiles, and indeed in sea turtles is a rare event (Dodd, 1988; Hartdegen & Bayless, 1999; Tucker & Janzen, 1997). Twinning in *Caretta caretta* has previously been reported in the United States, Japan and Australia (reviewed by Dodd, 1988), and Cyprus and Turkey (Kaska *et al.*, 2000).

In this note, we describe what it is believed to be the first reported case in the Western Indian Ocean (WIO) region and possibly in Africa, of twinning in the loggerhead sea turtle (*Caretta caretta*). As part of a collaborative and concerted effort of various partners in southern Mozambique, more

specifically between Ponta do Ouro and Cabo de Santa Maria (Figure 1), a nesting monitoring programme was implemented during the 2007/08 nesting season (Videira *et al.*, 2008).

On 8 February 2008, an unhatched egg with twin fully developed embryos was discovered at Ponta do Ouro (26°50.9S & 32°53.6E). A total of 9 unhatched eggs were also found, along with 1 dead hatchling, 1 pipped egg (dead) and 2 live hatchlings were also observed. A total of 72 eggs hatched successfully. The twin embryos were initially frozen and after measurements preserved in 96% ethanol.

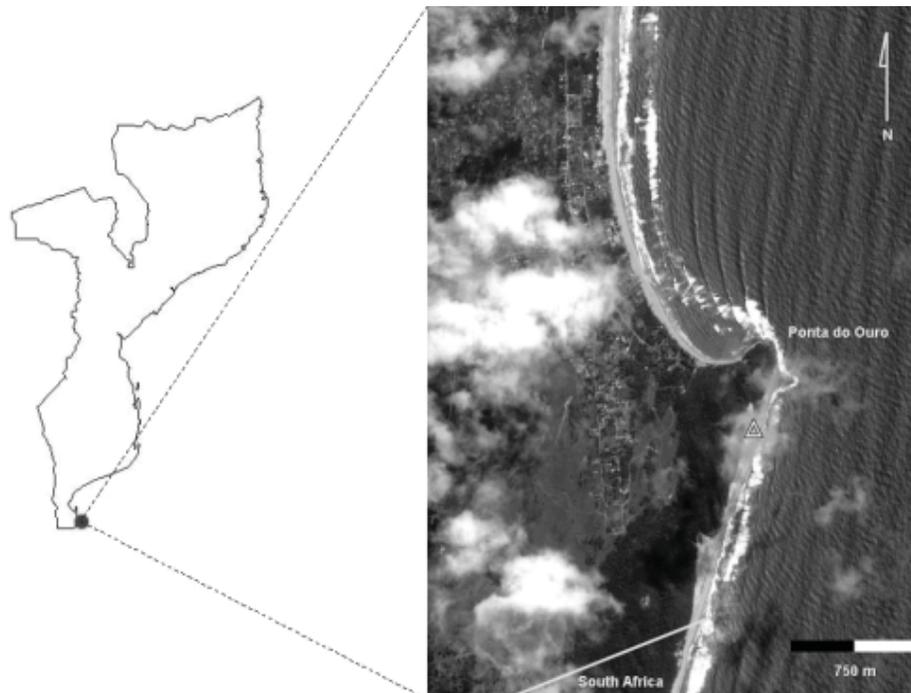


Figure 1: Schematic map of southern Mozambique, showing location of the nest where the twin loggerhead embryos were found (Δ).

Source: Satellite image adapted from GoogleEarth.



Figure 2: Photographs showing the larger embryo (A) with five pairs of lateral and five central scutes and the smaller embryo (B) with four central scutes and six pairs of lateral scutes.
Photos: Marcos A.M. Pereira.

The embryos shared a common yolk sac. They differed substantially in size with the larger one measuring 41 mm curved carapace length and 37 mm curved carapace width. The smaller embryo measured 34 mm curved carapace length and 31 mm curved carapace width. The embryos also differed in the number of scutes. The smaller embryo had 6 pairs of lateral scutes and 4 central scutes (Figure 2A), while the larger had 5 pairs of lateral scutes and 5 central scutes (Figure 2B).

The causes of twinning in marine turtles are not yet well understood. Low temperatures have been suggested, but other environmental or genetic factors could also be involved (reviewed

by Dodd, 1988). While twinning in loggerhead turtles seems to be more frequent than it is reported, we urge other researchers, especially in the WIO region, to pay more attention and report it in the literature. This could lead to possible comparisons between regions and research on the causes of this intriguing phenomenon.

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