REPTILES & AMPHIBIANS

First Winter Reproductive Record of the Imbituba Lizard, *Tropidurus imbituba* Kunz and Borges-Martins 2013, a Critically Endangered Microendemic from Brazil

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The Imbituba Lizard (*Tropidurus imbituba*), a microendemic known only from the Morro do Farol in southern Brazil (Kunz and Borges-Martins 2013), is listed as critically endangered (CR) on the IUCN Red List (Silveira et al. 2021) and the Lista Oficial da Fauna Brasileira Ameaçada de Extinção (= Official List of Brazilian Fauna Threatened by Extinction) (Ministério do Meio Ambiente 2022). Herein we present two records of three hatchlings observed during the winter season.

At 1510 h on 26 August 2023, we observed and photographed two hatchling *T. imbituba* apparently thermoregulating, on a termite mound on a trail in shrub/arboreal restinga vegetation (-28.13992, -48.38868; elev. 123 m asl) (Fig. 1). We were unable to approach the animals to obtain more precise data. The hatchlings were similar in size and one had a broken tail.

At 1604 h on 26 August 2023, we observed and photographed a hatchling *T. imbituba* perched on a rock (-28.14310, -48.39180; elev. 0 m asl) (Fig. 1). The lizard remained still and performed displays for about two minutes. We observed an adult male and female in the same area, ~1.5 m above the hatchling on the same rock formation. However, when approached, they moved into crevices. This rock formation was the same site where Kunz and Martins (2013) conducted their study, which led to the description of the species.

We have observed reproduction in winter but these are the first records of offspring during that season. We suggest that these observations of hatchlings in winter might have been in anticipation of the reproductive period and possibly linked to the influence of El Niño, a climatic event that often modifies typical environmental conditions, often leading to increases in local temperatures, humidity, and rainfall.

Most oviparous reptiles lay water-permeable eggs and provide no parental care, thus seasonal variations in hydric conditions (and perhaps thermal regimes) likely are the most important constraints on the seasonal timing of egg deposition in the tropics (Brown and Shine 2006). If the flexibility in ecological traits of tropidurid lizards (Mesquita et al. 2007) extends to reproduction, we would expect different populations of the same species to have different reproductive cycles,

Figure 1. Imbituba Lizard (*Tropidurus imbituba*) hatchlings thermoregulating on a termite mound (left) and perched on a rock (right). Photographs by Diego dos Anjos Souza.

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depending on local factors (Van Sluys et al. 2010). Therefore, monitoring reproduction, its seasonality, and the occurrence of various climatic events is important. Only then will we be able to identify typical reproductive patterns of this and other species and recognize deviations attributable to unpredictable climatic effects.

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