



First Record of Forelimb Amely in the Genus *Plestiodon* (Squamata: Scincidae) in Mexico

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The absence of limbs in lizards is almost always attributed to either predation or congenital malformation, which can be distinguished by the presence of scar tissue, indicative of a predation event, or by the absence of scarring and the presence of healthy tissue, suggesting a congenital condition (Vervust et al. 2009; Kolenda et al. 2017; da Silva Cavalcante and Passos 2024). Although the implications of such abnormalities for locomotor performance and individual survival remain poorly understood, several studies (e.g., Mora 2020; Koizumi and Yato 2022) have documented potential impacts across various regions and families, including the Scincidae.

Plestiodon copei (Taylor 1933), commonly known as Cope’s Skink, is a Mexican endemic with a distribution restricted to temperate pine-oak forests in the central part of the country (García-Vázquez and Fera-Ortíz 2006). These lizards are characterized by snakelike movements and a tendency to seek refuge under logs and rocks (Taylor 1935). Although limb and tail abnormalities have been reported in several species in the family Scincidae, most cases involved malformations in digits or tails (e.g., Skinner 2012; Rodríguez 2020). We herein document the first recorded instance of a completely missing forelimb in the genus *Plestiodon* in Mexico.

At 1123 h on 1 September 2022, we collected an adult male *Plestiodon copei* (Museo de Zoología de la Facultad de Ciencias, MZFC 37350) (snout-vent length = 70 mm, tail length = 45 mm, weight = 7 g; Fig. 1) (SEMARNAT collecting permit 09/K5-1240/10/24), among high-mountain Longhair Needlegrass (*Muhlenbergia macroura*) in pine-oak forest in Tlalpan, Mexico City, Mexico (19.21948, -99.26218). We immediately noted the absence of a forelimb, although this did not appear to hinder the lizard’s locomotion, as its movement over pine needles on the ground was indistinguishable from that of conspecifics we encountered.

In herpetological osteopathology, the total or partial absence of one or more limbs is classified as ectomely, and the complete absence of a limb is amely (Rothschild et al. 2012). The lack of scarring and the presence of normal scales in the individual described herein (Fig. 1B) suggest that limb loss resulted from a developmental anomaly during embryogenesis (Kolenda et al. 2017) rather than a post-embryonic injury (da Silva Cavalcante and Passos 2024), which indicates that this individual developed and survived with this condition. This aligns with the known biology of skinks, which often possess small, reduced, and functionally limited limbs that are not critical for mobility (Taylor 1935; Camaiti et al. 2021). The apparent resilience observed in this individual could suggest a higher survival probability for skinks when compared with other lizard taxa in similar circumstances.

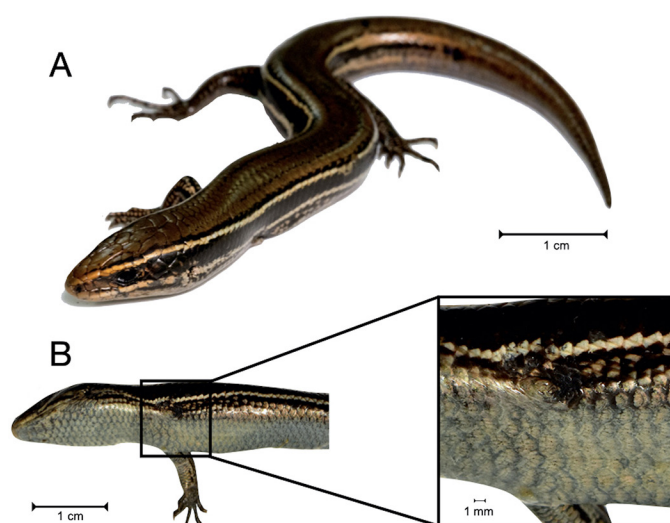


Figure 1. An adult male Cope’s Skink (*Plestiodon copei*) (MZFC 37350) exhibiting forelimb amely (A) and a ventral view of the missing limb (B). Photographs by Luis Fernando Hidalgo-Licona.

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