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## Notes on the prevalence of *Amphisbaena bassleri* L. 1758 (Squamata, Amphisbaenidae) in a study of road ecology in the western Amazon, near Tena (Ecuador)

Yntze van der Hoek<sup>1,\*</sup> and Pablo Jarrín-V<sup>1</sup>

The family Amphisbaenidae includes some of the least studied and understood species of Squamata, mainly due to their fossorial behaviour. In turn, this implies that we have limited knowledge of the conservation status of these species, and we cannot predict the responses of these elusive animals to increasingly more common and severe human-induced disturbances and habitat changes (Vitt et al. 1998; Díaz et al. 2000, Kuhnz et al. 2005; Huey et al. 2009; Hamer and McDonnell 2010).

*Amphisbaena bassleri* Linnaeus, 1758 is distributed across most of tropical South America (Vanzolini 2002; Lemos and Facure 2007; Nogueira-Costa et al. 2013) and is largely an under-studied species. There are notes on its habitat preferences (e.g., Vanzolini 2002; Ribeiro et al. 2012), descriptions of its fossorial behaviour (Vanzolini 2002; Lemos and Facure 2007), and discussions of its taxonomy—with Vanzolini (2002) recognizing five subspecies and Gans (2005) considering these as separate species. Following Gans 2005, we will use the name *A. bassleri*, recognizing that the synonym *A. fuliginosa* might be in use for the same species in other regions of South America (Vanzolini 2002).

Like most amphisbaenids, *A. bassleri* lives a predominantly fossorial life, surfacing only occasionally (Vanzolini 1951, 2002; Lemos and Facure, 2007). Lemos and Facure (2007) hypothesized that fossoriality might allow this species to occur in anthropogenic habitats, as they would not be hindered by changes in above-ground natural vegetation. We herein provide data on the observations of 13 specimens of *A. bassleri* in an anthropogenic habitat in Ecuador. Our observations

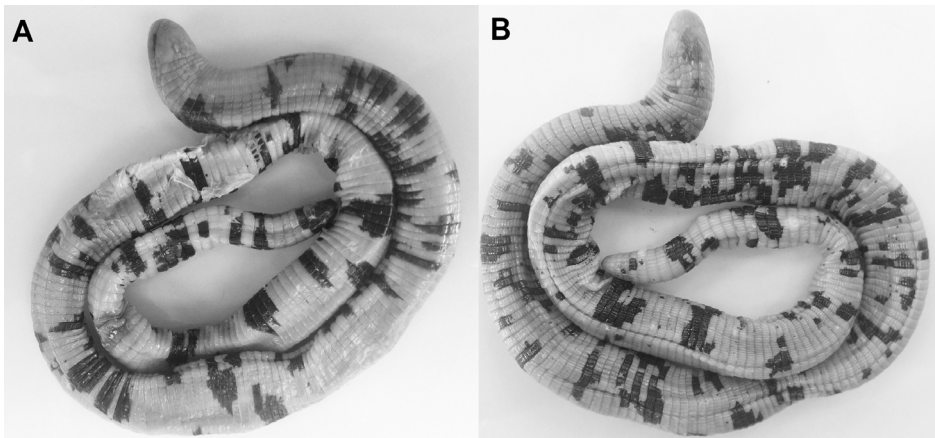
suggest that this species might be rather abundant, as previously noted by Vanzolini (1951).

Our observations stem from two different localities. First, from November 2014 until January 2017, we registered 10 dead specimens of *A. bassleri* (Fig.1, Table 1) on circa 750 m of road between -0.9572°S - 77.8606°W and -0.9506°S - 77.8620°W, 585 m.a.s.l., near Universidad Regional Amazónica IKIAM in the Amazon region (Napo Province) of Ecuador (three of which were included in collection of the Gustavo Orcés Museum of Natural History at the Escuela Politécnica Nacional (MEPN) with vouchers MEPN-18845-18847). We found these dead specimens in the months of December and June-August, two of the driest periods of the year in the area (averaging 200-300 mm precipitation / month; unpublished data for 2015-2016 from Universidad Regional Amazónica IKIAM's meteorological station). Second, the day following a major flooding (~2 m above ground at its peak level for nearly 30 hours) on March 13, 2016, in an urban zone of Tena, we found three dead *A. bassleri*, all within 2 m from each other in a ~200 m<sup>2</sup> private garden (-0.9911°S - 77.8101°W, 510 m a.s.l.). March usually is one of the wettest months of the year in this region (>400 mm of precipitation), but these extreme floods occur very infrequently in the area (the last record dates back to April of 2010). Although *Amphisbaena* sp. are usually described as capable swimmers (e.g., Maschio et al. 2009), the three *A. bassleri* found in Tena seemed to have drowned due to the flooding.

*A. bassleri* is not usually considered a rare or range-restricted species (Carvajal-Campos and Rodríguez-Guerra 2003), and we show that this species might be even present in heterogeneous, human-altered, landscapes. Mostly unnoticed due to their fossorial habits, these animals might surface as a result of floods (see similar observations by Teixeira Jr. et al. 2014). These notes on the ecology and behaviour of *A.*

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**Figure 1.** Ventral (A) and dorsal (B) view of a ca. 31 cm long specimen of *Amphisbaena bassleri* L. 1758 (Squamata, Amphisbaenidae) found dead on a road near Tena (Ecuador).

*bassleri* contribute to our understanding of the potential impacts of road infrastructure expansion, and increased frequency of flooding events, in the eastern Amazon region of Ecuador.

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