Amphisbaena alba (White Worm Lizard)

Family: Amphisbaenidae (Worm Lizards)
Order: Squamata (Lizards and Snakes)
Class: Reptilia (Reptiles)

Fig. 1. White worm lizard, *Amphisbaena alba.*

[https://www.flickr.com/photos/nclarkii/5621212197/player/5ed756e123, downloaded 30 April 2016]

TRAITS. The white worm lizard, *Amphisbaena alba*, is a large worm-like reptile with a very short tail, giving the appearance of two heads (Fig. 1). Limbs are absent and the internal limb girdles are vestigial (greatly reduced). The scales are arranged in rings which encircle the body in an annulated fashion. The eyes are small but functional and the ears are covered over. The tongue is forked and able to collect scent molecules to obtain chemical cues. The teeth are few but large, and the skull and jaw bones are heavy and fused together for strength (Fig. 2). These lizards can give a powerful bite, but they are not poisonous. They can move backwards or forwards using muscular waves passing along the body, similar to peristalsis (Webb et al., 1978). There is no sexual dimorphism due to the functional constraints of burrowing (Colli and Zamboni, 1999). They are tan to ivory in colour, with length up to 80cm and diameter up to 3cm (Murphy, 1997).

DISTRIBUTION. *Amphisbaena alba* is native to Trinidad but not Tobago (Fig. 3) (Murphy, 1997). It is also widely distributed in South America (Fig. 4) (Colli and Zamboni, 1999).

HABITAT AND ACTIVITY. *Amphisbaena alba* usually inhabits lowland areas with forests, low hills with pastures or savanna (Murphy, 1997). They can also be found in altered cultivated or secondary forest areas (IUCN, 2016). Their time of activity differs according to where they inhabit. In the Amazon and Atlantic forests of Brazil the high humidity results in the white worm lizard being diurnal, while in the Cerrado they are nocturnal (Paulo, 2013).

FOOD AND FEEDING. The diet consist of small vertebrates such as mice, and insects including leaf-cutter ants, beetles, crickets, grasshoppers, and termites (Pianka and Vitt, 2003). Feeding usually occurs underground through the use of chemoreceptors and analyzing vibrations. Their strong jaws allow for effective crushing of the prey (Murphy, 1997). Water is obtained from their diet but is lost mainly through respiration as their skin facilitates reduced water loss (Pianka and Vitt, 2003).

POPULATION ECOLOGY. *Amphisbaena alba* is a solitary animal found in abundance in areas such as the Cerrado of central Brazil. It is hidden in burrows most of the time which makes observing their populations difficult. However, is was observed that they would occasionally be seen with a female only at times of mating.

REPRODUCTION. Mating in this species is as a result of chemical cues. They produce small clutches of 8-16 eggs, deposited in the nests of ants or termites which they prey on. This usually occurs in the dry season. Epidermal glands can be found in the cloacal region (vent) and a secretion is emitted as the animal slides through its burrows, leaving a trail used for reproduction and marking territory. Hatchlings have an egg tooth in their upper jaw, exhibit positive geotropism (dig down into the substrate), and display defensive behaviours similarly to the adult (Ruscaia et al., 1999).

BEHAVIOUR. In the face of a predator the *Amphisbaena alba* raises both its head and tail giving the appearance of having two heads (Fig. 5). If attacked at the tail the predator can be bitten or if attacked at the head the tail can whip the attacker giving the illusion of being bitten. Either method distracts the predator giving sufficient time for escape (Pianka and Vitt, 2003). They are usually not harmful unless attacked, but can give a powerful bite.

APPLIED ECOLOGY. *Amphisbaena alba* is listed by the IUCN as of Least Concern (IUCN, 2016). There are currently no conservation threats or action in place as the organism is secretive, inconspicuous in its burrows and thus able to grow and reproduce safely. They are currently not hunted for any human purposes. However, because of their choice of prey (ants, termites) they do aid in pest control.

REFERENCES

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Posted online: 2016

Fig. 2. Skull and jaws of *Amphisbaena alba*.

[http://www.thetexanherper.com/2011/08/reptilian-discussion-reptiles-are-first.html, downloaded 30 April 2016]

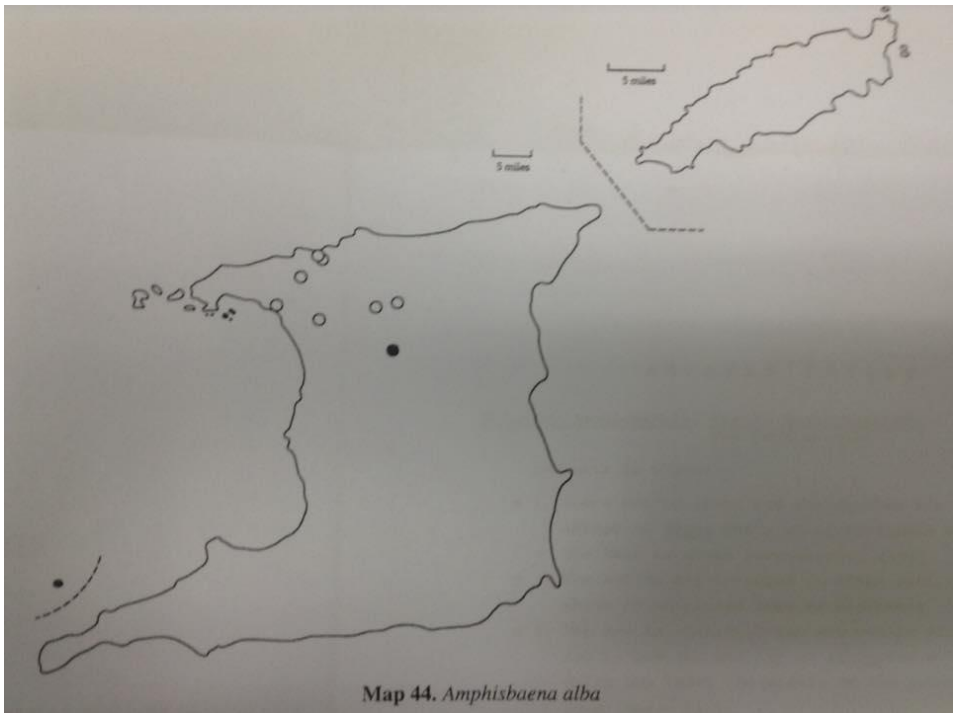

Fig. 3. Showing the areas in which *Amphisbaena alba* is found locally.

[From Murphy (1997)]

Fig. 4. Geographic distribution of *Amphisbaena alba*.

[https://en.wikipedia.org/wiki/Amphisbaena_alba, downloaded 30 April 2016]

Fig. 5. The two-headed appearance of *Amphisbaena alba* to escape predators.

[http://www.thetexanherper.com/2011/08/reptilian-discussion-reptiles-are-first.html, downloaded 30 April 2016]

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