

The peculiar case of an insectivorous iguanid lizard that detects chemical cues from prey

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Ecological and phylogenetic factors determine which sensory modalities organisms use in their day-to-day activities. Among lizards, empirical studies indicate a tight association between foraging strategies and the ability to detect chemical cues from prey. Consequently, ambush insectivores do not detect food chemicals and these differences have a phylogenetic basis, as ambush lizards mainly belong to the Iguania clade. These data contrast, however, with the widespread uses of chemoreception in the Iguania genus *Liolaemus*, which are mostly insectivorous ambush predators. Moreover, observations from different *Liolaemus* species suggest a capability to find prey through chemoreception. In order to clarify the abilities of *Liolaemus* to detect chemical cues from prey, the chemoreceptive behavior of the insectivorous ambush predator, *L. lemniscatus*, was studied. Lizards were given the choice between areas with and without chemical cues from a food item (mealworms). Results show that test ani