Chemical recognition in a snake?lizard predator?prey system

Labra, Antonieta

Hoare, Misque

In a predator?prey interaction, the fitnesses of the predator and the prey depend on their abilities to recognize each other, a process that may involve different sensory modalities. Squamate reptiles are highly dependent on chemical senses for such recognition, and here we explored the ability of a generalist saurophagous snake, Philodryas chamissonis, to discriminate scents of two congeneric and sympatric lizard prey species, Liolaemus nitidus and L. chiliensis. A generalist saurophagous snake might just be sensitive to lizard scents in general, and if so, no discrimination between prey species is expected. However, these lizards use different substrates; L. nitidus basks on rocks, whereas L. chiliensis mainly basks on bushes and rarely on ground. The snake P. chamissonis basks on ground and rocks, and rarely on bushes. Therefore, if the rate of encounter affects the ability to recognize prey, we predict that P. chamissonis would sho