Chemical stimuli and species recognition in Liolaemus lizards

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Species-specific recognition systems are fundamental to maintaining the cohesion of species, particularly when heterospecific matings are possible. Here, I examined whether species recognition may facilitate species isolation of Liolaemus lizards, for which up to seven closely related species with similar morphology and ecology may live in sympatry. I also tested whether coexistence with closely related species modulates species recognition. In three Liolaemus species that differ in their current need for species recognition, I investigated their abilities to discriminate chemical stimuli from conspecifics and closely related congeners. For two of these focal species, tests included sympatric and allopatric congeners. The third species, which lives without congeners, was only tested with an allopatric congener. All three species chemo-discriminated between conspecifics and congeners, responding more vigorously to scents produced by their own species. Thus, chemical stimuli may help to