

Lizards 'Shout' Against a Noisy Background

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Postdoctoral researcher Terry Ord says anole lizards, such as this one, create a strategy to get their message across to rivals. Credit: UC Davis

Lizards that signal to rivals with a visual display "shout" to get their point across, UC Davis researchers have found.

Male anole lizards signal ownership of their territory by sitting up on a tree trunk, bobbing their heads up and down and extending a colorful throat pouch. They can spot a rival lizard up to 25 meters away, said Terry Ord, a postdoctoral researcher at UC Davis who is working with Judy Stamps, professor of evolution and ecology.

The lizards' signals need to be strong enough for a rival to see, but not

vivid enough to say "eat me" to a passing predator. But their forest home can be a visually noisy environment, with branches and leaves waving in the breeze and casting patterns of light and shade.

"They have to have a strategy to get their message across," Ord said.

Ord videotaped two species of anole lizards, *Anolis cristatellus* and *Anolis gundlachi*, in the Caribbean National Forest in Puerto Rico. He found that the more "visual noise" in the background, the faster and more exaggerated the movements of the lizards.

Anole lizards are interesting to evolutionary biologists because different species are found on different islands all over the Caribbean. The lizards are not particularly closely related -- they are separated by 30 million years of evolution -- but they live in similar environments with the same obstacles to communication. So Ord is using them as a model to investigate the evolution of such signals.

The other authors on the paper, which is published online in *Proceedings of the Royal Society part B*, are Richard A. Peters, Australian National University, Canberra; and Barbara Clucas, a graduate student in animal behavior at UC Davis.

Source: UC Davis

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