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HOW MANY ANOLES DOES FLORIDA HAVE ?

by Whit Gibbons

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When I was growing up in Alabama and Louisiana , we called the little green lizards that could turn brown "chameleons." Today herpetologists refer to them as "anoles," saving the other term for the Old World chameleons that change their body color to match their background. Another difference between now and then is that the United States once had only one anole. Today we have at least eight species, and most of the invaders live in Florida . In the book " Anoles: Those Florida Yard Lizards" (2006 Commahawk Publishing LLC, Orlando), Steven B. Isham does a great job of making readers more aware of their presence and importance .

The style of the book is different from a basic field guide that identifies animals or plants or an ecology book that discusses the general biology of species. Instead, according to the author it is a "fascinating fantasy based almost entirely on fact. Ann and Noel are lizards that communicate with a human." Who could resist a backyard reality show in which a human communicates with two lizards?

Florida is the land of invasive exotic species. As many as 40 species of introduced reptiles and amphibians are established residents in the state. That is, they have breeding populations that will continue to persist, often to the detriment of native species. Most of the alien reptiles are lizards, including species from Asia, Africa, India , and tropical America . One of these, arguably the most successful introduced lizard in America , is the Cuban brown anole.

The book is the story of the author's discussions and question-answer sessions with two anoles--one, Noel, is the introduced brown anole and the other, Ann, is the native U.S. species, the green anole. Early in the book, Ann instructs Noel to stop speaking in Spanish, despite the origin of his ancestors. Although the formula of having two lizards engage in conversations with someone sitting in an outdoor lounge chair has plenty of opportunity to appear outlandish, the approach works. The reading is enjoyable and the information provided is factual and interesting.

The author's intent is to teach the reader about the origins, life history, and ecology of anoles, including where they live, how they defend their territories, what they eat and what eats them. He also explains, as well as is known by herpetologists, how they change color, climb up smooth surfaces, and reproduce. Although presented in a storytelling fashion, the facts about anoles and other lizards are informative. Lizards are known from the fossil record as long ago as the Jurassic, and anoles have been an identifiable group for around six million years. More than 250 species are found today in tropical America .

Green anoles are found in at least part of all southeastern states, whereas brown anoles are native to Cuba . Green anoles can change color, whereas the other species is always brown. As Ann explains to the author, "green anoles like me are green in color when we are active, perky, healthy, and not under severe stress." Green anoles do not change color to blend in to their background the way true chameleons can. Noel explains further that "the reasons why we change color" are emotions, light, and temperature. Clearly the factors influencing color change in anoles involve complex interactions, but background color is not the cause.

A key point in the book is that "brown anole populations are expanding rapidly and the

green's are declining." Brown anoles are primarily ground dwellers, and green anoles are mostly climbers, but they eat many of the same prey, which may result in competitive interactions. Also, brown anoles are known to eat young green anoles. A primary dispersal mechanism of brown anoles has been as hitchhikers on potted plants from nurseries. Their population explosion has moved through peninsular Florida toward the northern part of the state and Georgia . Brown anoles also have been introduced in Texas .

One point Isham makes about why he wanted to write the book was that he saw many anoles around his home and community, yet few people knew much about them. As he says, "I thought it kind of disrespectful that we had this unrecognized wildlife." I like that message.

If you have an environmental question or comment, email ecoviews@srel.edu.