

- (4) Two persons should be employed to monitor the area where *C. ricordii* is present. These persons should be from the local community and should have an excellent knowledge of the terrain and the target species. They should control the persecution of iguanas and stop illegal habitat destruction by surveying the area, advising people regarding harmful practices, and reporting to the appropriate authorities, as necessary.
- (5) The socioeconomic aspect of iguana hunting and consumption in Pedernales should be investigated.
- (6) Educational programs must be developed that not only address the general public, but will serve to open a dialogue with the target group of persons in Pedernales involved in iguana persecution.

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SPECIES PROFILE

The Ground Lizards (*Ameiva*) of the Lower Barahona Peninsula

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Photographs by Robert Powell.

The Lower Barahona Peninsula is that portion of the peninsula south of the Sierra de Baoruco. Because the region lies in the rainshadow of the mountain range, the lower elevations get little rain and are characterized by dry tropical forest. Until recently, four species of *Ameiva* were thought to occur in the region: *Ameiva chrysoleama*, *A. leberi*, *A. lineolata*, and *A. taeniura*.

Of the four, *A. lineolata* is the smallest (maximum known snout-vent length = 59 mm) and the most xerophilic (tolerant of harsh, dry conditions). This species, featuring a bright blue tail and feet, has a disjunct range in similar habitats across the island of Hispaniola. *Ameiva taeniura* is intermediate in size (SVL to 103 mm), the least drought tolerant, and is restricted largely to the relatively few and scattered moist microhabitats. Although, at some sites, one can stand in one place and see individuals of different species, closer observation reveals that *A. taeniura* only rarely leaves the cooler, shaded areas where canopy cover is relatively dense.

In the same study that revealed the habitat association of *A. taeniura*, the authors found no significant differences in microhabitat use by *A. chrysoleama* and *A. leberi*, which are comparable in size (SVL to 160 mm in some populations). The former species is widely distributed across Hispaniola, whereas the latter is known only from the peninsula. They are distinguished in that the back and sides of *A. chrysoleama ficta*, the subspecies found in the area, is distinctly patterned, whereas *A. leberi* is unicolored. Because other populations of *A. chrysoleama* are known to have unicolored pattern variants and because no ecological differences were evident, the authors suggested that *A. chrysoleama* and *A. leberi* were, in fact, pattern variations of a single species. More recent genetic studies have verified that contention.

One of those studies also determined that *A. chrysoleama* from the peninsula was distinctive relative to populations elsewhere on Hispaniola. This is not surprising, because the island actually is a composite of two paleois-



Ameiva lineolata, with its distinct stripes and electric blue tail and feet, is the most drought-tolerant species.



Ameiva taeniura is least drought tolerant and is restricted to relatively moist microhabitats on the peninsula.



Peninsular *Ameiva chrysolema* come in two pattern phases; this phase is characterized by distinct spots and bars.



The unicolorous phase of *Ameiva chrysolema* was until recently thought to be a distinct species, *A. leberi*.

lands that have become joined only recently, at least by geological standards. The Barahona Peninsula is part of the South Island, whereas most of Hispaniola is derived from the North Island. This, however, raises the additional questions of where *A. chrysolema* originated and how the ancestors of today's lizards colonized the other paleoisland.

Only tentative answers are possible because genetic data from Haitian populations are missing and currently unavailable (due to the difficulties and dangers of conducting fieldwork in Haiti) and data from the Dominican Republic are inconclusive. Presumably, *A. chrysolema* stock originally became established in the north. Descendants expanded their range into the lowlands to the south and east, and some of those migrating to the south apparently reached the South Island during one of the periods when sea levels were low and the intervening channel was exposed. Subsequently isolated by rising sea levels, the South Island population became distinct from its relatives to the north.

So, should *A. chrysolema ficta* be considered a species separate from its North Island counterparts? Probably; but a definitive answer must await the analysis of Haitian material. In the interim, however, *A. chrysolema*, as currently defined, probably is best and most accurately referred to as

a "species complex," a group of closely related species in which the species boundaries often are poorly defined.

Since both *A. lineolata* and *A. taeniura* are found on both paleoislands, one has to wonder if further research will show a pattern similar to that which seems to best explain the situation in the *A. chrysolema* complex.

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