

Guana Island Racers

Two species of snakes are known to occur on Guana Island. The larger and most common of the two is in the genus *Alsophis*. Eleven species of these snakes, often called "Racers," occur on about 100 islands in the West Indies, ranging from the Bahamas southward to Dominica in the Lesser Antilles. Only Hispaniola harbors two species of *Alsophis*; all other islands support a single species.

The species that occurs on Guana is *Alsophis portoricensis*; it is found on about 40 islands on the Puerto Rico Bank (= Puerto Rico, the U.S. Virgin Islands, and the British Virgin Islands), more islands than any other *Alsophis*. Considering the number of species, and how geographically widespread these snakes are in the West Indies, we know surprisingly little about their natural history.



On those West Indian islands (e.g., Antigua, St. Martin) where mongooses were introduced in the 19th century (usually in order to control rats that were damaging sugarcane crops), Racer populations have been eliminated or severely reduced. Today, some species of *Alsophis* are considered to be among the world's most endangered snakes. Fortunately, the mongoose is not present on Guana, and the Racer population appears to be very healthy.

On Guana, Racers occur just about everywhere, including walkways around the resort buildings, the dining area, and the beach. Activity may start as early as 0700 h, and it usually tapers off before dusk. Occasionally, however, these diurnal snakes are observed active after dark as they hunt diurnal lizards that are attracted to the insects that are, in turn, attracted to the ground-level lights along the paved walkways. Guana is the first place where documentation of a secondary predator (the snake) successfully exploiting the so-called "night-light niche" has occurred.

These slender, fast-moving, largely ground-dwelling snakes feed on a wide range of vertebrate prey, mostly Whistling Frogs (*Eleutherodactylus*) and lizards. Dwarf

Geckos (*Sphaerodactylus*), Anoles (*Anolis*), and Ground Lizards (*Ameiva*) are consumed most frequently, but large Racers also may eat an occasional baby Iguana (*Cyclura*). Largely active foragers, the snakes move slowly and silently through Sea Grape (*Coccoloba uvifera*) litter near the beach or leaf litter along the Iguana Trail, around rocks and boulders in Quail Dove Ghut, or among decorative plants around the resort. When a lizard is captured, the snake usually works it quickly to the back of its mouth where enlarged teeth in the upper jaws puncture the lizard's skin and allow a weak venom to enter the victim's blood. Once subdued, the prey is swallowed whole (snakes are unable to bite off and chew small pieces) and usually head first.

Guana's Racers are essentially harmless to humans. They generally flee when encountered and bite only when handled. However, some individuals may act ferocious and spread their "hoods" like a cobra when threatened.

During October 2003, we explored the potential for conducting long-term research on the ecology of Racers on Guana. We were pleased to find the snakes ecologically widespread and common on the island, where we averaged about eight snake encounters per day. We sexed, weighed, and measured 38 snakes before placing a microchip (about the size of a long grain of rice) under the skin and releasing them at the exact site of capture. The microchips provide a means of identifying individual snakes, and, based on recaptures, we will accumulate information on growth, movements, habitat use, longevity in the wild, and survivorship. Perhaps we will even learn why, of the 38 snakes we captured, 31 (81.6%) had incomplete tails. Are the hermit crabs pinching them off? Several snakes had mere stubs of tails, and a few had healed scars resulting from what appeared to be quite severe injuries on their bodies.

During the very short period we spent on Guana, we encountered only a few of our marked snakes. Most had moved only very small distances during that short time period, but one moved well over 300 m in just a few days.

Visitors to Guana should take time to admire and enjoy the subtle beauty of the island's Racers, and appreciate the grace and speed with which these limbless creatures flow, seemingly without effort, across the ground, over a rock wall, or up a tree. Respect the healthy snake populations on Guana and do whatever is necessary to keep them that way.



Robert W. Henderson, Milwaukee Public Museum, and **Robert Powell**, Avila University (Kansas City, Missouri) examining Racers (*Alsophis portoricensis*) on Guana.