

# SPECIES PROFILE

## The Tortuga Island Rattlesnake (*Crotalus tortugensis*)

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Islands in the Gulf of California support a variety of endemic species that have differentiated from their mainland ancestors after various periods of isolation. Some have become distinct as a consequence of adapting to local conditions on their new island homes, whereas others differ from their continental relatives as a consequence of the “founder’s effect.” This is basically a random process that can cause populations that have descended from a tiny number of founding individuals to vary considerably from the stem population solely because the small sample of founders represents but a tiny fraction of the diverse gene pool present in the larger aggregate of individuals from which they have become separated. When that tiny fraction of the gene pool is atypical of the populational “norms,” the descendant populations may begin their isolated existence already quite different in appearance or behavior than their ancestors — and, if they remain separated for a sufficient number of generations, they are quite capable of achieving full-species status.

The Tortuga Island Rattlesnake (*Crotalus tortugensis*) is endemic to Isla Tortuga in the Gulf of California. It is a medium-sized rattlesnake, smaller than its nearest relative, the widely distributed Western Diamondback Rattlesnake (*C. atrox*), with large males reaching only about one meter in total length. The head size is relatively small when compared to *C. atrox*, a characteristic that may indicate dwarfing. Although insular forms sometimes become giants, larger species and especially predatory forms often become smaller when isolated on small, resource-deficient islands.

*Crotalus tortugensis* is not well differentiated from *C. atrox*, although our current understanding of their relationships is “tenuous.” Differences in the dorsal blotches (diamonds) are the most noticeable divergence, with those of *C. tortugensis* less pronounced and less distinctly bordered than those of *C. atrox*. In addition, nearly all specimens of *C. tortugensis* lack an upper (second) loreal scale between the nostrils and eyes and most have at least one intergenital scale on both sides of their jaws. Also, the squamosal bone of *C. tortugensis* is relatively shorter than that of *C. atrox*.

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*Crotalus tortugensis* from Isla Tortuga, Baja California Sur, México. Photograph by L. Lee Grismer.