

Reptiles

2007 IUCN Red List of Threatened Species™



Red Corn Snake (*Elaphe guttata guttata*). Photo by Larry Meister.

Key facts

- The study covers 721 species of lizards and snakes found in Mexico, the United States, and Canada. (Other reptiles, including the turtles, alligators, and crocodiles, had been previously assessed.)
- Researchers found that about 12% of lizards and snakes (84 species) are threatened with extinction (i.e., with IUCN Red List rankings of Critically Endangered, Endangered, or Vulnerable).
- 121 species are Data Deficient, while 493 (about two-thirds of the total) are at present relatively secure.
- In comparison with other groups of animals, lizards and snakes are faring well. One in three amphibians, one in four mammals, one in eight birds, and 70% of the world's assessed plants on the 2007 IUCN Red List are in jeopardy.
- The assessment confirmed Mexico's status as a world center of reptile diversity, ranking second behind Australia among all nations for number of species. Of 633 Mexican species assessed, 12% (73 species) were classified as threatened (CR, EN, or VU).
- Four species, all from Mexico, were assessed as Critically Endangered, the highest threat level: the Santa Catalina Island Rattlesnake (*Crotalus catalinensis*), the Todos Santos Island Kingsnake (*Lampropeltis herrerae*), the Clarion Island Whipsnake (*Masticophis anthonyi*), and the lizard *Sceloporus exsul*.
- No significant taxonomic pattern is seen among threatened Mexican species, with one exception: a high

percentage of the forest-dwelling, arboreal alligator lizards are threatened. These members of the genus *Abronia* have naturally small distributions and their rainforest habitat in southern Mexico is rapidly disappearing.

- Of 237 U.S. snakes and lizards assessed, just 5% (12 species) were classified as threatened, and none as Critically Endangered. (Note that many species range across the southwestern U.S. and Mexico, so totals for the two countries do not add

to the total for the assessment.) In contrast, prior assessments showed a comparable rate for U.S. turtles of 33%, and for U.S. amphibians of 21%.

- Publication of the conservation status assessments for North American reptiles is a major step towards completion of the first-ever Global Reptile Assessment, an ongoing effort by the Red List Consortium to assess the status of all reptiles worldwide—about 8,000 currently known species.

About Reptiles

- Reptiles include lizards, worm lizards, snakes, turtles, and crocodylians. Because birds appear to be more closely related to crocodylians than crocodylians are to other reptiles, some scientists consider birds to be reptiles.
- Some lizards, such as the *Ophisaurus* glass lizards of the eastern United States and the *Anniella* legless lizards of California and Baja California, have no legs and superficially resemble snakes. These snakelike lizards can be recognized by their movable eyelids or external ear openings, which snakes never have.
- With a few exceptions, reptiles derive their body heat from their surroundings. They maintain suitable temperatures by moving among different microhabitats (sun, shade, warm rocks, underground burrows) and by adjusting their time of activity to avoid extreme conditions. Most reptiles cannot endure extremely high temperatures, but the Desert Iguana (*Dipsosaurus dorsalis*) of the Southwest sometimes is active at body temperatures as high as 117°F.
- The gender of many turtles, crocodylians, and some lizards is determined by the temperature of the nest during incubation. Nests may produce all males, all females,

or a mixture, depending on where the female deposits the eggs or the location of a particular egg within the nest.

- Some lizard species, such as certain *Aspidoscelis* whiptail lizards of the Southwest, consist only of females. Each female produces her daughters without having her eggs fertilized.
- The world's only venomous lizards are the Gila Monster and the Mexican Beaded Lizard of the southwestern United States and western and southern Mexico. The venom flows into the prey along grooved teeth in the lizard's lower jaw.
- The southwestern United States and Mexico harbor the world's highest diversity of rattlesnakes (*Crotalus*, *Sistrurus*), which occur only in the New World. These unique serpents have highly sensitive infrared receptors near their eyes, inject their prey with venom through hollow hypodermic needlelike fangs, and have at the tip of the tail a noise-making rattle composed of a series of interlocking segments of keratin (the material that covers the outside of reptile scales). The rattle is used in a defensive context, such as when the snake is confronted by a potential predator.

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