



Department of Planning and Natural Resources
Division of Fish and Wildlife
U.S.V.I. Animal Fact Sheet #10
Red Footed Tortoise
Geochelone carbonaria



Taxonomy

| | | |
|-----------|---|---------------------|
| Kingdom | - | -Anamalia |
| Pylum- | - | -Chordata |
| Subphylum | - | -Vertebrata |
| Class | - | -Reptilia |
| Order | - | -Testudines |
| Family | - | -Testudinidae |
| Genus | - | - <i>Geochelone</i> |
| species- | - | - <i>carbonaria</i> |

About 14 inches long

Red, orange or yellow coloration on legs

The South American red-footed tortoise (*Geochelone carbonaria*) is no newcomer to our islands. The first tortoises probably arrived in the Caribbean hundreds of years ago with Pre-Columbian Indians. It is assumed that these Indians carried the tortoise along as a food source while exploring the islands. Indeed, the red-footed tortoise is still highly prized for its meat and harvested in some areas of the Caribbean to this day. These long-lived tortoises occur on St. Croix, St. Thomas and St. John.

Red-footed tortoises are protected under Appendix II of The Convention on International Trade in Endangered Species (CITES), meaning that this species may not be exported from its home country without a permit. Appendix II animals are not classified as threatened with extinction, but are considered sensitive to this danger if international trade is left unregulated. Although protection under CITES has some positive effects on the survival of this species, CITES regulations cannot protect the red-footed tortoise where it is most in danger, within the boundaries of its home countries.

The carapace of the red-footed tortoise usually grows to about 14 inches long, although a maximum length of 17.75 inches has been

recorded. Adult males, at an average of 13.25 inches (30.4 cm) long, are somewhat larger than the females, which average 11.25 inches (28.9 cm) in length. They are sexually mature at a smaller size than the females. Males have a concave plastron (bottom shell) and have a lower, flatter, and a more pronounced hourglass shape to their carapaces than do females. Males also have longer, thicker tails than the females.

The species name for this tortoise, *carbonaria*, refers to the carbon-like color of its dark brown or black carapace. The dark scutes, or carapace sections, have lighter patches of yellow in the centers and around the outside edges of the shell. Although there is a lot of variation between individuals, the legs and head are often colored with patches of red, orange or yellow

They are generally found in drier forest areas, grasslands, and the savanna, however they have been observed in a variety of habitat types, including scrub brush, rain forest and even developed areas and roadsides. They generally roam during the early morning and evening, when it is cooler and during rainy periods. They generally seek shade during the middle of the day to escape from the midday heat.

Red-footed tortoises are primarily herbivorous, scavengers, eating a variety of vegetable and animal matter. Coprophagy (feeding on its own or another species feces) is not uncommon. In its natural habitat, Red footed tortoise may go for long periods without a direct water source, deriving all necessary moisture from plants. These tortoises are quite fond of hibiscus (flowers and leaves), papaya, bouganvillea, cactus, aloe vera and many other naturally occurring Caribbean plants.

Breeding is synchronized with the onset of the rainy season. The mating ritual of red-footed tortoises involves some very distinctive head movements on the part of the male. He begins by standing side-by-side with another tortoise and moving his head suddenly to one side, then returning it to the middle, in a series of sideways jerking motions.

If the second tortoise is a female, she will not move her head in response. The male will move around to sniff at her tail, to confirm what he already suspects, before mating begins. Experiments have shown that in order for mating to proceed, not only do the movements of the head have to be precise, but also the coloration of the head has to be correct. Perhaps the most usual thing about their breeding behavior is that the male makes a clucking sound during courtship and mating. The clucks sound amazingly like a hen; however, they rise and fall in pitch according to a set pattern.

When the female tortoise is ready to lay, the nest-digging process begins. Nests are preferentially excavated near a wall or some other protective barrier. The tortoise excretes a liquid to moisten the soil as the nest is dug. The nest is dug down to the maximum reach of the hind feet. A female will quite often dig as many as 3 "false" or unused nests before actually laying her eggs.

Once laying commences, additional liquid is excreted. The round or oval, golf ball-sized eggs may then be deposited rapidly or several minutes apart, singly or two at a time. Clutch sizes vary from 2 to 8 eggs, with clutches of 3 to 5 eggs most common. Larger eggs and clutches are generally produced by larger and older females. After laying is completed, the

female shovels soil over the nest with her hind legs. Nest excavation, egg laying and covering the nest may take as long as 3 to 4 hours. During the entire egg-laying period the female remains in a what might be described as trance-like state.

The incubation period is generally 105 to 202 days (mean 150) but may be as long as one year. Once hatching commences, it may take 2 days or more to complete, interspersed with frequent rest periods by the hatchlings. After hatching, shell fragments may adhere to the hatchlings' carapace but will eventually fall off. Hatchlings are 1 to 1-1/2 inches long. Although they may appear somewhat mis-happen upon emergence from the shell, the carapace will straighten within the first few days. They do not have any of the toothlike projections on the edges of the carapace, like those found in the yellow-footed tortoises. A pinkish or yellowish sack attached to the hatchling's plastron contains all the nutrients it requires for the first week, during which the hatchling will appear to sleep, or "hibernate," in some protected corner.

What you can do to help

Reduce the number of chemicals and pesticides you use.

Remember it is illegal to take, catch, possess, injure harass or kill any indigenous species. The only exceptions are for people holding valid permits from the Division of Fish and Wildlife.

For more information on this and other animals in the Virgin Islands please visit our website at: www.vifishandwildlife.com

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