

Puerto Rican Boa *Epicrates inornatus*



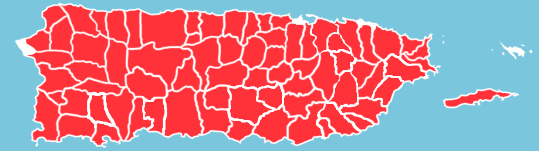
Family: Boidae
Order: Squamata

Description

The Puerto Rican boa is the largest snake found in Puerto Rico. An endemic species, it can grow up to seven feet (approx. 2 meters) in length, although some people claim to have seen even larger specimens.

Their coloring varies; it can be light or dark brown, gray, or even black. They also have a blackish, spotted or barred pattern along their dorsal areas, and their ventral area is blackish.

The boa is not venomous, and does not attack human beings. This boa is actually timid and, upon detecting human presence nearby, its first and natural reaction is to escape. Although it is generally docile, some adults might try to bite. This conduct, however, only occurs when bothered, or when it feels threatened.



Distribution 

Biological Information

Reproduction

Most of the snakes in the Boidae family have two structures called spurs, one at each side of the cloacal opening. These spurs are actually the vestigial remnants of hind limbs. The snake's sexual organs are found in this cloacal region. The male vibrates his spurs along the female's body to encourage her to adopt a posture appropriate for copulation. Sometimes, they will form a reproductive aggregation consisting of several males and one female. With these snakes, it is very difficult to distinguish the sexes. Although in general terms the male is smaller than the female, the best way to identify the sex of the snake is to verify the existence of the hemipenis. This is the name given to the male reproductive organ found in snake and lizard species. Since the hemipenis is not noticeable at first glance, reptile and amphibian specialists (herpetologists) have to manipulate the snake in order to detect the hemipenis and thus detect the sex of the animal.

Courtship can last several hours, and the boas might copulate for several hours or even a full day. Courtship and copulation tends to occur between February and May. Contrary to the majority of reptiles, this boa does not lay and incubate eggs; but rather, it is ovoviviparous. This means that it gives birth to fully developed young. The gestation period lasts between 152 to 193 days. The snakes produce an average of 18 live young, and these can measure 16 inches (approx. 41 cm) on average.

Habitat

Nearly half of Puerto Rico, 46.3%, is considered potential habitat for the Puerto Rican boa. Of all this

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potential habitat, only 9% is protected. Although this species has been reported throughout every ecosystem in Puerto Rico, it is most commonly sighted in the karst areas in northern Puerto Rico. They can also be found in the mountainous areas of Puerto Rico, and, less frequently, in the dry areas of the south.

Diet

Young boas feed on lizards, amphibians, insects, and other small vertebrates. Adult snakes feed primarily on rats, but can also consume small birds, lizards, and bats. To hunt bats, boas have been known to hang in wait near cave entrances. Boas use constriction as their preferred method of trapping prey. This means that boas coil their bodies around their prey and constrict, or squeeze, until the prey is killed by asphyxiation. The boa consumes its prey whole, usually starting by the head. Because their jaws can temporarily dislocate, boas can swallow prey much larger than the width of their bodies. They are considered a beneficial species, since they help control undesirable animal populations by hunting mice and rats. On occasion, they might consume small domestic animals, such as poultry and small rabbits.

Distribution

There is a high probability of finding this species throughout all of Puerto Rico's municipalities. However, its presence has not yet been documented in all municipalities.

Threats

The Puerto Rican boa faces several threats. Some are natural, but many others are human-related. Here, we provide a short list of the threats this species faces:

- The biggest threat to this species is the destruction and modification of their habitat for touristic, agricultural and residential purposes. This involves, as a direct consequence, the following actions:
 - Soil removal – The machines used to extract and move soil also crush, cut and kill Puerto Rican boas.
 - Habitat fragmentation – Their habitat becomes split in patches. The interaction between individuals and their survival is affected because of this. They become more vulnerable. Habitat fragmentation due to

road construction can also prove fatal to boas attempting to cross the roads.

- Natural predators such as the red-tailed hawk (*Buteo jamaicensis*), the broad-winged hawk (*Buteo platypterus brunneus*), the pearly-eyed thrasher (*Margarops fuscatus*), the red-legged thrush (*Turdus plumbeus*), and the Puerto Rican lizard cuckoo (*Coccyzus vieilloti*).
- Potential exotic predators such as: feral and domestic cats (*Felis catus*), and the small Asian mongoose (*Herpestes javanicus*).
- Potential parasites such as fleas (*Amblyoma* spp., *Boophilus* spp.) and mites (*Ornithodoros portorricensis*). These mostly affect individuals inhabiting livestock pasture areas.
- Persecution, harassing and death caused by humans
- Competition with exotic introduced species (i.e., red-tailed boa [*Boa constrictor*])

Conservation Measures

The Puerto Rican boa was included in the federal endangered species list in 1970, and the recovery plan for this species was written in 1986. Recently, there have been various investigations that show new information regarding the biology and distribution of the Puerto Rican boa. The proper knowledge about the species' distribution and abundance helps in the formulation of strategies made to protect them.

In 2011, the need to study this species was identified. There are currently many investigations underway, meant to evaluate the species' distribution, estimate their relative population, and refine the protocols used for relocating individuals. Recent studies highlight the importance of preserving the cavern systems that the species inhabits, and the ecosystems related to these same systems, since protecting them will have the added benefit of protecting a great portion of genetic diversity this species represents to Puerto Rican populations.

The Endangered Species Act of 1973, as amended, prohibits the killing, harassing, trapping, purchasing or selling any species, as well as parts and products derived from the species.

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Recommendations

People should adopt a positive and sensible posture towards this species, one of our own native creatures. As with all Puerto Rican snakes, the boa has an unjustified reputation of being dangerous, which is not true. Many people react impulsively upon finding one of these boas, killing them when they are harmless and pose no threat to humans.

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Additional Information

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