

**Observations on *Iguana delicatissima***  
**and**  
**Conservation Status on Dominica**

**Whitney J. Priesmeyer**

**Texas A&M University**

**Dominica Study Abroad 2006**



### **Introduction:**

The Lesser Antillean Iguana was once widespread across the Caribbean but it is now present on only several islands. Today, the iguana that was once endemic to many of the islands is either seriously threatened, extremely vulnerable, and in some places completely extinct. A combination of factors continually threatens this species including hunting, the threat of feral animals, traffic, and inter breeding with the closely related *Iguana iguana*. *Iguana delicatissima* is an animal with great resilience to the encroachment of humans into the forests; however, this species can only tolerate so much disturbance. During my stay in Dominica, my goal was to observe the behavior and habits of the Lesser Antillean Iguana in its natural habitat.

The Distinguishing features of the Lesser Antillean Iguana are largely their coloration. The Dominican iguanas I observed tend to be mainly dark green and grey with larger cream colored scales on the face and neck. There is a swelling of the skin where the jaw line meets the neck and the males have a taller crest of spikes along the top of the head and down the spine. Their toes are long and multi-jointed with sharp claws on each one to facilitate arboreal life. Like most lizards, the iguana has a large flap of skin under the jaw called the dewlap which is used in displays of dominance. The males

and females look alike except males are larger than the females. The body of a full grown male is about 16 inches long with a 32 inch tail, while the female is about two thirds this size.

To get my information, I spent approximately six hours at the Hummingbird Inn and a significant amount of time observing the iguanas at a number of beach villages. One of which was Champagne on the south west end of the island. There I saw a juvenile iguana that fell from the cliff. The iguana was about six inches long and bright green. The adult iguanas I observed at the Hummingbird Inn were strongly sexual dimorphic in their characters. The males used their large dorsal spikes and enlarged dewlap to show dominance and display during breeding season. Their heads were moved in an up-and-down bobbing motion when reacting in territorial disputes and when threatened. The males appeared to be highly territorial during the breeding season. Mating begins in time with the end of the dry season in April and May to allow the hatchlings enough nutrients in the beginning of the wet season. At this time the males I observed had a reddening in the jowls to signify reproductive ability (Day Et. Al).

Females were commonly seen throughout the island migrating to the coast to lay eggs and have been reported to travel at least one kilometer to achieve this goal. Ideal nest sites appear to be in sandy, coastal soil with abundant sunlight yet adequate protection from predators such as the ground lizard (*Ameiva fuscata*) which will eat the iguana eggs (James, Arlington, Personal Communication). Hatchlings and juveniles I saw were all a bright green color and had no white on the face except for small lines along the jaw. There are also white bars on the flanks to form disruptive coloration which darkens in response to stress and improves their camouflage (Day Et. Al). As they

age, head coloration lightens to a cream until they are mostly brown with white heads. While young, the juveniles were seen living amongst the debris on the ground and will climb higher into the trees as they age.

The population of the Lesser Antillean Iguana in Dominica is surprisingly stable and does well with moderate habitat alteration. Because the island contains primarily more mesic habitats, the iguanas are almost completely arboreal, living in trees 30-40 feet off the ground, and moving by jumping from branch to branch. They will occasionally leave the trees by leaping from branches to the ground to escape from predators. The Iguana is typically found in the coastal regions of Dominica such as Cabrits, Cane Field, Batale Beach, Champagne, and in Goodwill. According to Arlington James of the Dominica Forestry and Wildlife Department, Iguanas have been reportedly seen in unusual areas such as the extremities of the rainforest in Syndicate, Bourot Valley, Morne Espaniel, Morne Daniel, Morne Lazar, the Sahorn Lake in the Layou Valley, Laudat, Trafalgar, Coulibistrie, Woodford Hill, the Botanic Gardens, and the Soufriere Valley. The iguana can thrive in dry scrub, dry woodland, mangrove, dry forest, and rainforest. On Dominica, *Iguana delicatissima* is widely dispersed and sometimes difficult to find. I observed the Lesser Antillean Iguana of Dominica feeding mostly in the morning, but will also occasionally feed throughout the afternoon. Their diet includes leaves, flowers, fruits, and seeds from many different plants. Based on my observations these include the Hibiscus flower, The Iguana Tree (*Capparis flexuosa*), Capi Vine (*Ipomea repanda*), and the Noni plant (*Morinda citrifolia*). *Eugenia*, *Hippomane*, *Ipomea*, *Opuntia*, *Solanum*, and *Tabebuia* are also known to be food plants (Day Et. Al). The iguanas feed selectively and seem to prefer fresh leaves and flowers and they will also travel for these. Seed

dispersal by iguanas, such as *Hippomane*, may be significant on plants that are normally toxic to birds and mammals but not to iguanas.

Natural predators of the young Lesser Antillean Iguana include snakes (*Boa constrictor*), birds (*Falco sparverius*), and possibly opossums (*Didelphis marsupialis*) ((Day Et. Al). Fortunately that these are not the problem. As tourism exceeds agriculture in importance on Dominica, the threat to degradation of coastal habitats increases.

Introduced predators such as feral house cats and dogs also threaten juvenile iguanas.

The introduction of the common *Iguana iguana* has not been an issue in Dominica as of yet, however, the threat is still there especially since these animals are able to travel great distances on driftwood after hurricanes. After speaking with the Chief Technician at the Forestry and Wildlife Division of the Ministry of Agriculture, Arlington James, I was told that if this problem were to arise in Dominica that the Ministry would do its best to eradicate the introduced species. The biggest problems in Dominica, however, are hunting and traffic. Female iguanas are hit by cars when they cross roads in order to get to the beaches to lay their eggs and again when hatchlings leave the nest sites. In the area of Woodford Hill Iguanas are still considered a delicacy and are hunted and eaten often (Arlington James Personal Communication). Even though iguanas are not a game species, certain populations have experienced rapid unsustainable exploitation (Day Et. Al).

Iguanas on Dominica are currently considered vulnerable on the Red Data List by the World Conservation Union, meaning that the risk of extinction is high in the future. Also, since 1977, the species has been listed under Appendix II of The Convention of International Trade in Endangered Species of Wild Fauna and Flora which affords it

protection against unregulated international trade (Durrell Wildlife, 2001). Unfortunately the risk to iguanas from feral animals is hard to control, as are hunting regulations. Hopefully someday a better captive breeding program will be developed, but more husbandry expertise is needed first. According to the Durrell Wildlife Report in 2001, a pair of Iguanas were sent to the Memphis Zoo in 1992 and the staff was successful in getting them to reproduce in 1997. However, the paper reports that the female was not a successful egg layer and would drop the eggs from high trees. It was just luck that a staff member had been able to catch some of the eggs and only one survived. After a gynecological operation, the female laid and buried eight eggs in July 2000, and after 95 days, all hatchlings emerged healthy. This was a breakthrough in captive breeding and Durrell Wildlife's success led to a better understanding of the iguana's behavior in the wild.

In conclusion, *Iguana delicatissima* is a very unique and important species to the Lesser Antilles. Although the populations on Dominica are currently stable, this is always subject to change, and often will very quickly. The risks that these iguanas face should not be taken lightly and because of their vulnerable status, a close watch should be kept on their numbers throughout the island. The hunting of the iguanas and development of coastal villages should be put on hold for a large period of time to allow them to stabilize, but unfortunately these regulations are unrealistic and hard to enforce. Luckily there are people who are working together to research this species and are learning how to better manage their habitats.

## **Acknowledgements:**

I would first like to thank Mr. Arlington James of the Forestry and Wildlife Division in the Ministry of Agriculture of Dominica for meeting with me to discuss the conservation status and abundance of *Iguana delicatissima* on the Island. I would also like to thank Mrs. Jean Finucane for providing me access to optimal viewing of the iguanas in trees at the Hummingbird Inn. I would like to also thank Dr. Steve Reichling for sending me information on the captive breeding of the Lesser Antillean Iguana in the Memphis Zoo. Finally I would like to thank Dr. Jim Wooley and Dr. Tom Lacher for providing me with transportation and consultation on this project.

## **References**

Day, M., Breuil, M., Reichling, S. Lesser Antillean iguana *Iguana delicatissima*. The World Conservation Union- IUCN- Iguana Specialist Group.  
[Http://www.iucn-isg.org](http://www.iucn-isg.org).

James, Arlington. Chief Technician Officer, Forestry and Wildlife Division, Ministry of Agriculture and the Environment, Commonwealth of Dominica, Botanic Gardens, Roseau.

Lesser Antillean Iguana. March 2001. [www.durrellwildlife.org](http://www.durrellwildlife.org)