

Iguana iguana (Green Iguana)

Family: Iguanidae (Iguanas)

Order: Squamata (Lizards and Snakes)

Class: Reptilia (Reptiles)



Fig. 1. Green iguana, *Iguana iguana*.

[<http://animals.nationalgeographic.com/animals/reptiles/green-iguana/>, downloaded 8 November 2011]

TRAITS. The larger of the two species of iguanas belonging to the genus *Iguana* found in the Caribbean, the other being *Iguana delicatissima* also known as the Lesser Antillean iguana. The green iguana (*Iguana iguana*) can be easily distinguished by their overall larger bodies with

circular plates visible below their ears, enlarged scales forming crests on neck and back, dewlaps and their distinctly banded tails (Fig 1). Males generally have larger heads, larger femoral pores as well as longer spines located on the dorsal crest. Male and female green iguanas can also be distinguished by their differences in colour with females and smaller males varying in colour from bright to dull or dark green. The large males however, are dull gray, gold or tan (Burghardt and Rand, 1982). Male lengths including head and body can reach up to 550 mm long. Older individuals however, tend to be greyish green in colour with grey bands on their tails. The dewlap on the other hand, which is their primary means of communication, remains green with spots of black from infancy to adulthood (Hodge, Censky and Powell, 2003).

ECOLOGY. Found in a range of habitats from thickets to mangrove edges, as well as rocky ground such as cliff faces and rocky crevices. Adults tend to feed on the ground while juveniles generally feed in safely high bushes and on palms. Although basking is done on flat open ground juveniles may also be found basking on coastal debris. Sleeping at night and active during the day, most particularly during mid morning to mid afternoon, juveniles tend to be found sleeping in low trees and bushes while adults in large trees, rocky areas and burrows. These lizards are primarily vegetarian however, juveniles can be insectivorous. Their habitat can range from forest tree tops to backyard fruit trees to even more populated areas such as parks and savannahs hence they tend to share their habitat with several other species of animals (Henderson and Powell, 2009).

SOCIAL ORGANIZATION. Solitary, polygynous, diurnal, territorial. Adult, male green iguanas tend to be quite territorial claiming ownership to territories in which they may allow several smaller males, females and juveniles to reside within. A typical home range size may include 8 females, 9 small and medium sized males as well as 10 larger males with smaller groupings within a territory consisting of 1 large male, approximately 1 to 6 medium and small males and as many as 6 females. This therefore means that there would be territory overlap in some areas of the home range with more than 1 large male occurring in the same tree at the same time however these occurrences did not last more than a day and were non- antagonistic when they occurred outside of mating season (Burghardt and Rand, 1982).

Medium sized males rarely encountered large males showing obvious signs of evasion when spotting a larger male with the larger males also having the better perches to display for females (Fig 2). Larger males were always found near 1 or more female all through the year with smaller chances of medium sized males having interactions with females. Females however tend to be quite nomadic moving in large groups to good nesting sites where they make their burrows. Burrows can be as deep as 25 to 50 cm and as wide as 1 to 2 meters (Burghardt and Rand, 1982).

Long range movement, usually the result of predation or local food shortage results in a congregation of green iguanas in abundant food sources. These congregations are most commonly seen in the latter part of dry season with dispersal occurring at the beginning of the rainy season (Burghardt and Rand, 1982).

ACTIVITY. Diurnal and sedentary, green iguanas spend most of their day lying in the cool. Since all the short term survival requirements of the green iguana can be met within a well foliated tree (food, sleeping perches and thermoregulation sites), green iguanas tend to remain in the same location for several days, some even as long as weeks with the exception of the occasional descent from a tree for basking and tree to tree movements (Burghardt and Rand,

1982). Most of their activity can be seen about three hours after dawn (Henderson and Powell, 2009).

FORAGING BEHAVIOUR. Relying on a diet consisting of mainly plant material, vegetation washed up on the shores of beaches and sometimes bird eggs, the green iguana can be called an “opportunistic vegetarian”, consuming plant parts such as leaves, flowers and fruits. They are primarily arboreal however they do feed on the ground as well as in trees. When found in unnatural habitats, especially those of high human population however, they have also been known to feed on cultivated plants, human garbage, poultry faeces, baby chicks and non native plants (Henderson and Powell, 2009).

Their diet is constrained mainly by the availability and type of food available and can encourage congregational feeding especially during the dry season when food is scarce. They are such opportunistic feeders that there have been some cases in which they have been observed eating vines due to scarcity of food (Burghardt and Rand, 1982).

COMMUNICATION. Vocal communication: hissing and coughing. Expiration of air during respiration after long periods of uninterrupted inspiration during displays of combat may result in the production of a loud hissing sound alternately large, sudden bursts of expiration can result in a coughing sound being produced by the animal. These sounds tend to aid in a ferocious appearance, especially when displayed in the presence of a human threat (Burghardt and Rand, 1982).

Visual communication: Body colour of the green iguana changes depending on its mood and is a good form of visual communication. Highly aroused green iguanas usually lighten their typical brownish green hue, within five minutes of arousal. Males who have been ousted from their territory during mating season also display a visual form of defeat in the form of a colour change from the reddish orange colour displayed during mating season to a dull brown. This colour change can take place in a matter of hours and the iguana remains this way until it regains control of its territory. The lowering of one eyelid till one eye is closed is often done as a sign of dominance by larger males (Fig. 3). Snapping and Neck biting, in which the back of the neck is grabbed, are also well used forms of communication when in combat against rival males (Fig. 4). Copulatory neck grabbing however, is another form of communication used when males mount females and is usually done by grasping the neck of the female at the side of her neck with its jaws (Burghardt and Rand, 1982).

SEXUAL BEHAVIOUR. Mating season for the green iguana occurs just before the start of the rainy season in the tropics. Males usually experience intensification of colour at the start of the mating season with larger males changing colour to bright red or golden hues of orange along with this change in colour was an increase in the number of displays occurred with males becoming well spaced apart and conspicuous. This reduced the number of incidences of males meeting each other and reduced the occurrence of antagonistic encounters (Burghardt and Rand, 1982).

In most recorded encounters sexually active males generally approach receptive females and perform “vibratory head- nodding” actions before mounting the female. Copulatory neck grabbing (described in communication) then follows. Successful copulation however only occurs if the female lifts her own tail base allowing the male to position himself correctly onto hers’ and

tuck his tail underneath that of the female to allow for ejaculation and pelvis scraping (signs of successful copulation) (Burghardt and Rand, 1982).

Mate rejection however is signalled by head swinging and backward striking (Fig. 5) before mounting takes place and can go as far as scratching if mounting occurs (Burghardt and Rand, 1982).

JUVENILE BEHAVIOUR. Other than the fact that young are born in burrows, young hatchlings emerge as groups quite alert. They move slowly pausing constantly to survey the environment around them. Most of their time is spent flicking their tongue against objects around them in an attempt to familiarise themselves with their environment. They usually remain in small groups of twelve or less however some wander off on their own. They remain in their groupings continuing to explore their surroundings and on the islet of Slothia, where over 150 female green iguanas lay their eggs each year, grouped hatchlings have been observed to move in a South Easterly direction after birth indicating an established communication system as well as the presence of a directional instinct within the juvenile groupings (Burghardt and Rand, 1982).

ANTIPREDATOR BEHAVIOUR. Even though green iguanas are prevalent in highly human populated areas, they are still quite wary of their surroundings. When disturbed some green iguanas wandering sea shores have said to immediately dive into the sea swim away using their signature head bobbing and dewlap shaking swimming style. They are able to swim quite quickly and are easily able to evade predators. Those iguanas found more inland however are better known for their ability to evade predators by disappearing to the top of trees and escaping. When escape however does not seem feasible; they may engage in colour darkening, hissing behaviour and gasping behaviour (described in communication above). Tail whipping is also utilized within their evasion technique and is quite effective at deterring their most common predator in the Caribbean, humans (Henderson and Powell, 2009).

REFERENCES

- Burghardt, G. M. & Rand, S. A. (1982). Eds. *Iguanas of the World, Their Behaviour, Ecology and Conservation*. Park Ridge, New Jersey: Noyes Publications.
- Hodge, K.V.D, Censky. E. J. & Powell, R.(2003). *Green Iguana. The Reptiles and Amphibians of Anguilla, British West Indies. The Valley, Anguilla.*
- Henderson, R.W. & Powell,R. (2009). *Iguana Iguana. Natural History of West Indian Reptiles and Amphibians.* Univeristy press: Florida.

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Fig. 2. Green iguana displaying on a perch.

[http://en.wikipedia.org/wiki/Green_Iguana downloaded on 8 October, 2011]

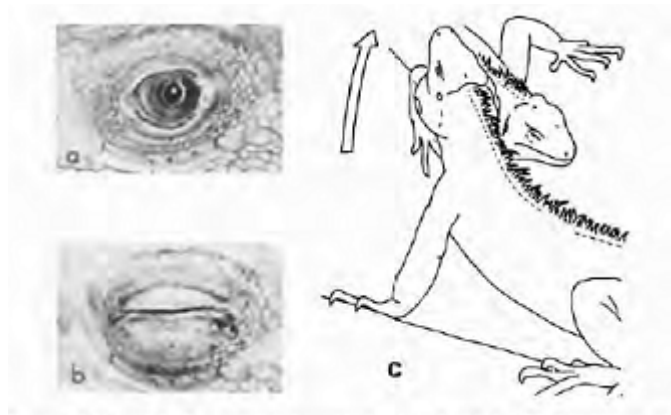


Fig. 3. (a) Left eye with pupil dilated. (b) Eye closing. (c) Eye closing in recognition of a larger male.

[Fig. 14.2 of Burghardt and Rand (1982)]

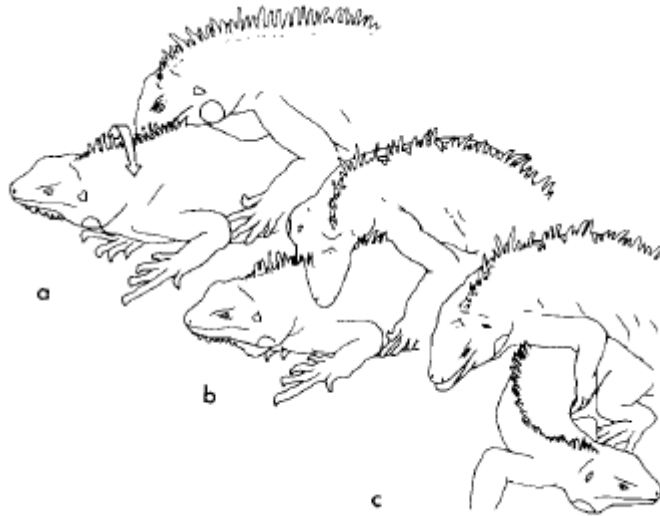


Fig. 4. Mounting and Neck biting during combat.(a) Movements which occur before neck biting.
(b) Neck biting. (c) Flight of the bitten iguana.

[Fig. 14.10 of Burghardt and Rand (1982)]



Fig. 5. Back Striking mechanism displayed.

[Fig. 14.6 of Burghardt and Rand (1982)]