

UPDATE

It Takes Two to Tango on Booby Cay

John Bendon

Introduction

This was to be my third visit to Mayaguana and Booby Cay to see my iguana friends, the *Bartschis*. Under a special permit from the Ministry of Agriculture in Nassau, my colleague Joe Wasilewski, the new President of the International Iguana Society, and I, would endeavor to catch a few iguanas for data analysis. Our goal was to take blood samples for DNA analysis, obtain body measurements, conduct a census, and erect a sign paid for by the I.I.S. (see photos below). This would be the fifth iguana information sign erected on a Bahamian island by the I.I.S. to inform the public of the presence of these rare iguanas.

Our other job, if time permitted, was to clean up the flotsam and jetsam strewn about the cay.

Back to Booby Cay

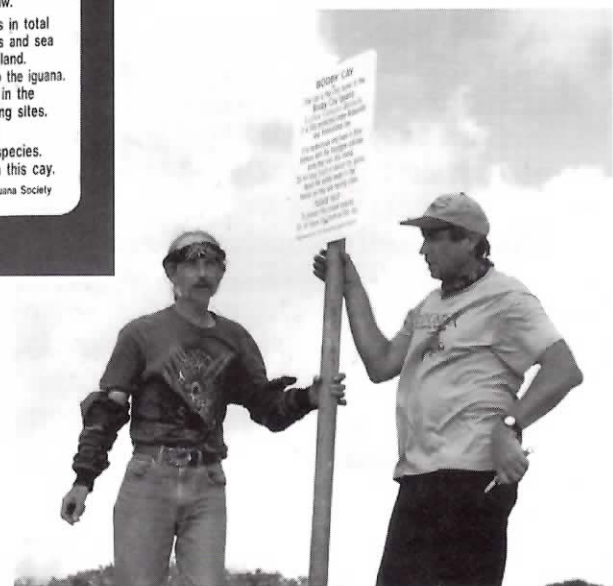
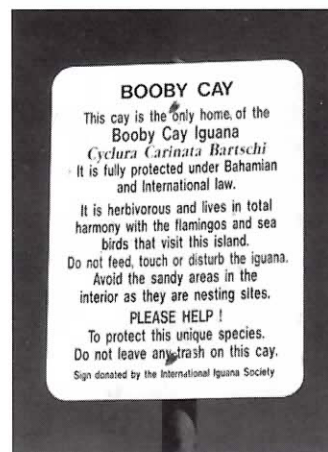
We arose at 5:30 in the morning, 20 October 1998, to a cup of tea. The wind had died out for the moment, as it usually does before dawn in these parts. Our host, Cap Brown, probably the most well-known person on Mayaguana, called us out to the truck to go down to the dock. This particular dock is perhaps 150 ft. long and is composed of what may be as much as 100 years of conch shell waste covered over with concrete.

Cap Brown, cigarette in mouth said, "Lookie here—don' fall out da boat! See you tomorrow!"

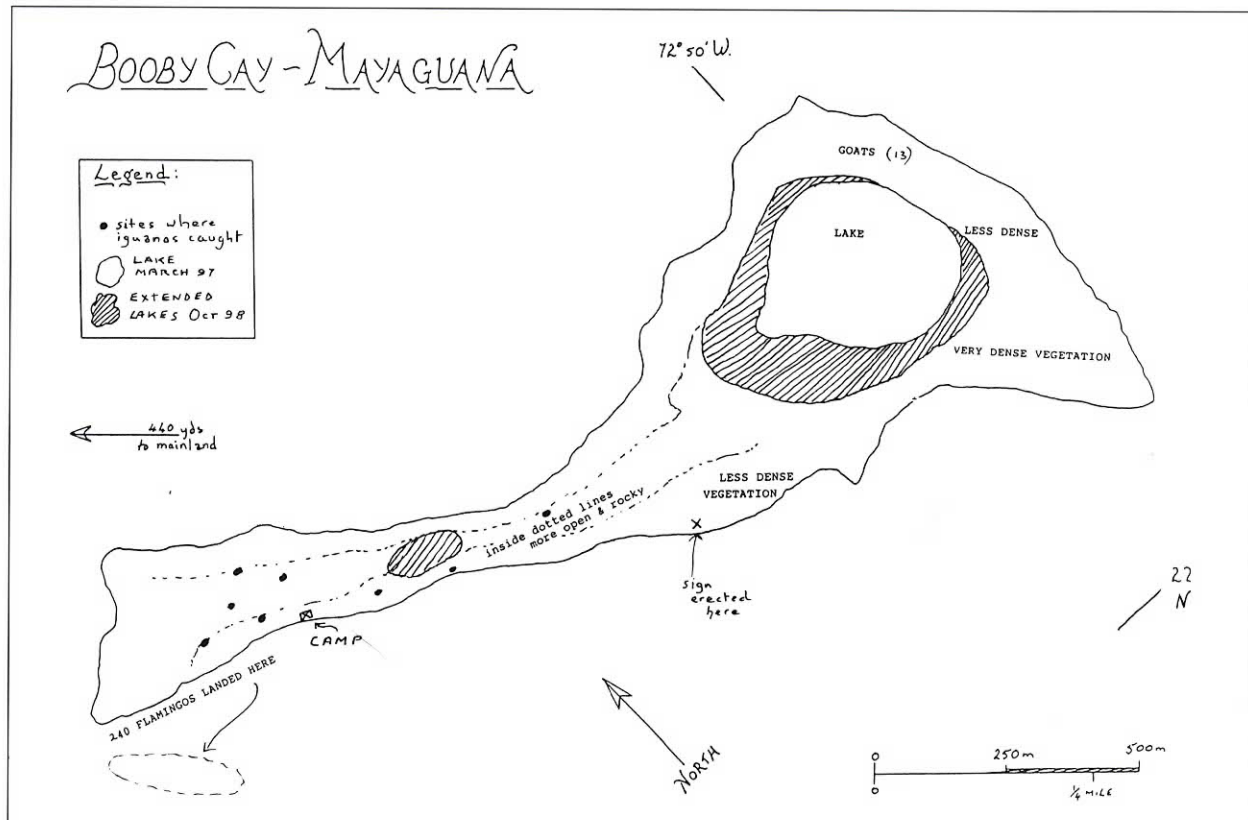
We set out for Booby Cay, skimming and bumping over the waves. Flying fish (*Cypselurus heterurus*) would pop out of the water next to the boat and fly for a few hundred feet before dropping back into the sea. Then they would get up more speed in readiness to propel themselves upwards into the air once more. The average distance for a flying fish to remain above the water is about 300 ft. They are uncanny. To any pursuing predators it must be quite disconcerting, as they

would just vanish from view into the air above. Their 'wings' are greatly enlarged pectoral fins, and in the case of the Atlantic flying fish that we saw, enlarged pelvic fins as well. (Source: Richard Dawkins)

The journey took about one and a half hours. We saw the sun come up and I lost my cap in the wind. Two very tall trees, the invasive Australian pines (*Casuarina*) that have settled all over the Caribbean and in South Florida, appeared on the horizon, denoting Booby Cay. A surprise awaited us. On my first visit I reported the landing of 40 flamingos (*Iguana Times*, Vol. 6, #1). This time there were over 200 of them. It was thought that they came to eat and rest there on their way to Inagua. I only spent a few hours on the cay each time during that first visit. This time we were there for two days and it would seem that these birds are permanent residents, going to and from different sandbars and the cay. They were there all day, occasionally flying around together in a big loop, and were still there at sunset and at first light the next day. This is a nice bonus for the islet of Booby



Inset: The sign on Booby Cay. Above: John Bendon and Joe Wasilewski erecting the sign. Photographs: John Bendon



Cay, which turns out to be quite a paradise for birds.

It has been suggested that an application be submitted to the authorities to have the cay become a national park. Although the 700 Bahamian islands are rife with wildlife, there are only 12 national parks. Unspoiled land such as this, together with its plant life and creatures (except the goats and rats) should be recognized for what it is. The next trip to the cay will find us cataloging all the plant and animal life.

We alighted on the cay and bid good-bye to Cap, who promised to return the next day (barring wind or storms). We only had enough food and water for two days, so the weather had to hold out.

All was quiet on Booby Cay. We dropped our equipment on the beach—Joe went off to photograph the flamingos, and I made a bee-line for where I knew there were burrows. We had arrived before the iguanas awoke and I sat on the ground ready to photograph a head peering out from a hole in the ground. As it happens, I never managed to get a single shot in this way. They would exit their burrows when I wasn't looking. I looked east—one would pop up to the west. I looked west—one would come out to the east—as

if they knew. Once outside their homes they would drag themselves slowly along for a few feet and come to rest, to bask, and get warm enough to eat and to defecate. The same routine occurs every day. Even in October the sun is hot at eight o'clock in the morning. After eating they would sit in the speckled shade of sea-grape bushes which gave them heat and shelter at the same time.

Amongst the things they eat are buttonwood fruit, sea grape fruit, sessuvium, agave (sisal or 'century plant'), opuntia (they have not been observed eating this, but it is a known food of *Conolophus*, the Galapagos Land Iguana, who actually rolls the spiked fruit on the ground to flatten the spines before eating), seven year apple (in season), and others. These are all the same foods eaten by most iguanas in the Caribbean. There is plenty of food on this cay.

Here is an interesting note concerning the iguanas on Booby Cay, the square-acreage of the cay, and their chances at life. On U-Cay in the Exumas, lives *Cyclura cyclura inornata*. This animal is very large, sometimes reaching a weight of twenty pounds, or nine kilograms. The cay itself is about 10½ acres and supports approximately 400 *cyclura*. Booby Cay is approximately 152 acres, not

counting the lakes and any other unusable space. Assuming a similar population density, Booby Cay should be able to support 6,080 *cyclura*.

Looking at Booby Cay, it's hard to imagine that over 6,000 iguanas could live there. On this trip, we counted about 100 iguanas, then using our methods of extrapolation, produced an estimate of about 200-300 total on Booby Cay. A more efficient method, known as distance sampling will be used on the next trip. This method was used by Glenn Gerber of the University of Tennessee, Knoxville in his survey of *Cyclura carinata carinata* of the Turks and Caicos Islands.

How is it that a cay with plenty of room and food, and the perfect climate for reproduction, is so sparsely populated with a species (laying possibly 800 eggs per year) that is the only endemic vertebrate present?

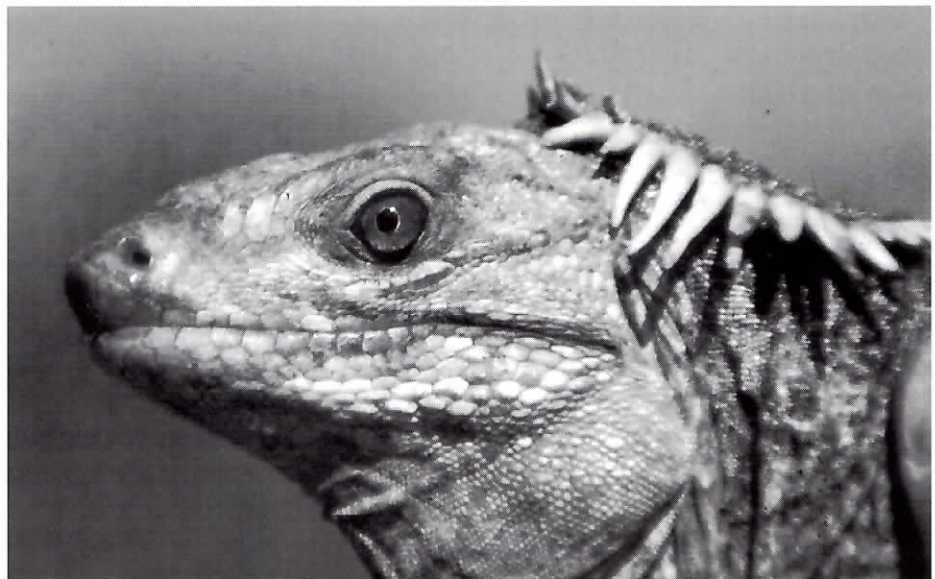
Unfortunately, we know why—there are actually two other, non-native, vertebrates present. First, there are the goats. Although arrangements have been made to remove all of the goats, this has not yet happened. We saw 13 of them while we were there, which is more than I thought existed. They *will* be removed, as the Ministry of Agriculture is most concerned, as are we. They present a great danger to the survival and proliferation of the iguanas, by eating their food, and occupying their natural territory. Their droppings are a source of potential pollution, as there is the danger of iguanas contracting goat-transmitted pathogens. We saw large numbers of goat skulls around the cay, suggesting that several generations have lived and died there. One possible solution is that they will all be shot and eaten. A communication to the Ministry of Agriculture has mentioned the urgency of this matter.

Secondly, and sadly, this time we saw rats. They were seen in the daytime, which implies that there may be many of them, as rats typically operate at night.

I also found their droppings, something I missed the last time.

There was a recent project to remove rats from White Cay, the home of *Cyclura rileyi cristata*, which involved the use of a rodenticide supplied by Zeneca of England, and overseen by Mark Day of Flora and Fauna International. At the meeting of the West Indian Iguana Specialist Group in Florida in October 1998, it was reported that so far this project has been a success. Test bait was put out after the project and no rats were known to have taken it. What is now needed is the same project, albeit on a larger scale, to be carried out on Booby Cay. It is assumed that these goats and rats are the cause of such a small population of lizards. Communications have started concerning this and an update will appear in a future *Iguana Times*. The I.I.S. would be pleased to receive any charitable contributions toward this project. It has so far received over \$1,000, including a large donation from Jerry Cole of B.J. Herpetological Supplies of the U.K., through his charitable company, which has greatly increased the speed at which we are proceeding with the project.

As Joe and I walked around we observed that even at 8:30 a.m. there were fresh tail drags all over the island, including the beach. Iguanas would come out of the brush onto the beach to bask, but would rush off, directionless, when they saw us even from fifty feet away. As such, we



Young male *Cyclura carinata bartschi* displaying a floppy crest and a bulging eye.
Photograph: John Bendon.

thought that they would be difficult to catch, but it wasn't too bad after all. Some smaller iguanas were observed in low branches of trees.

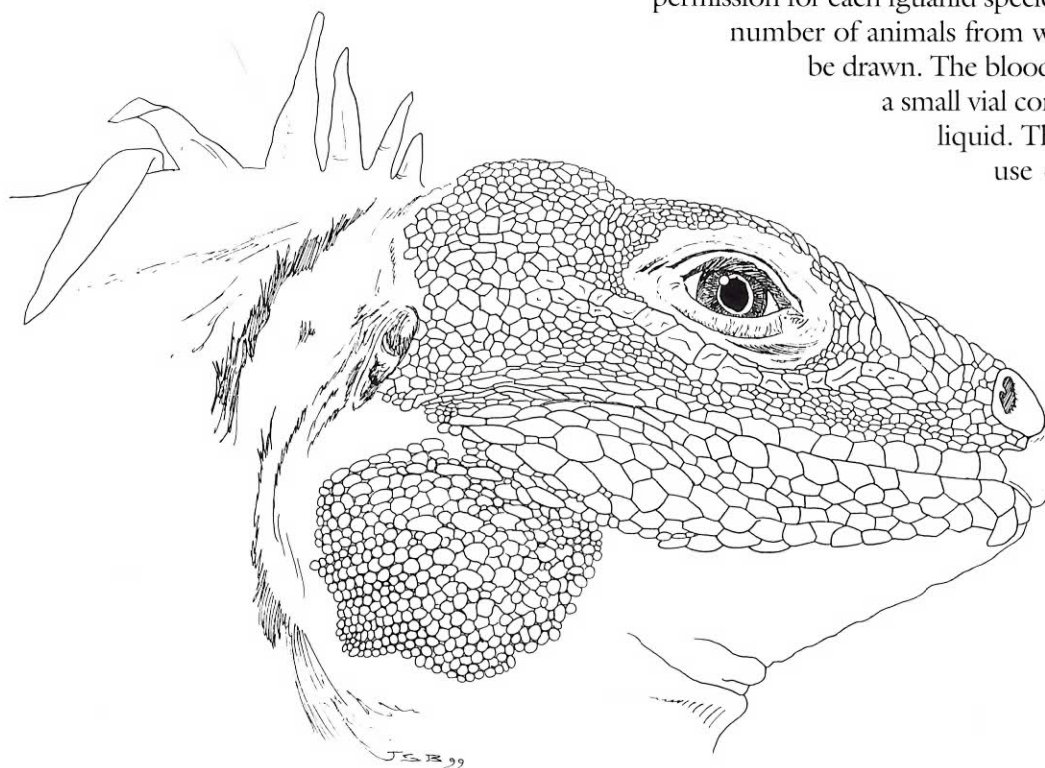
After a small breakfast of fruit, we set out with our nooses and other equipment. A few words about the method used to catch iguanas here: some people think that using a noose to catch wriggling iguanas is detrimental to their health and may injure the animals. As long as it is not done to gravid females—who could abort their eggs—then the method is quick and painless when there are two people and done quickly.

The noose is made from a device used to pick up golf balls out of bushes without getting scratched. It consists of a pole with a cup on the end of it. The cup is cut off and a noose, made out of fishing line ("Berkeley Steelon," 20 lb. weight), is attached. It is a very slippery material and does not stick to itself once the noose is tight. An iguana is then located and stalked. One person waits, completely still, near a bush (if the iguana is inside a bush), or behind a bush (if the iguana is out in the open). The stick is gradually brought nearer and nearer, above the head, the noose being invisible. It is then quickly lowered down over the

iguana's head. The animal immediately takes flight, but can go nowhere, spinning around on its own axis. The second person rushes in and grabs the animal to release the tension on the noose. This all takes about five to ten seconds and at no time is the animal's airway cut off. The fishing line, being slippery and not metallic, does not cut into the neck. The iguanas seem a bit flustered at first but after a few seconds are quite all right.

Next, we sit down and place the animal on its back, taking the shoulders and back in one hand and legs and tail in the other. All body parts are measured, missing digits, etc. are noted, blood is taken, microchips are inserted, and finally, the animal is put into a pillowcase to be hung up and weighed. Then we let it go and it runs off to join its friends, a bit ruffled, but unhurt. This is all done as quickly as possible to avoid stress.

The microchip is inserted just under the skin, in the tail or thigh, with a wide hypodermic, with a 2 mm wide needle. It can then be read with a type of barcode scanner, whose screen displays an I.D.# consisting of about eight numbers. Two ml of blood are drawn from the caudal vein underneath the tail, below the vent. This is the maximum allowed by the CITES permit, which gives specific permission for each iguanid species, and limits the number of animals from whom blood can be drawn. The blood is then put into a small vial containing an inert liquid. This precludes the use of refrigeration, impossible to get on a



Scalation rendering of male *Cyclura carinata bartschi*. Illustration: John Bendon

deserted island, and will keep the blood fixed and fresh for months in any temperature.

We walked around counting lizards and looking for a place to put up a sign. We had a good idea where to put the sign—a part of the beach about 300 yards long where most of the boats land. There's a mountain of conch shells there, years and years of them, left there by fishermen who catch and clean them before returning to Mayaguana. The shells represent 85% of the animals' weight, and a whole boatload of conch in shells could be put, shell-less, into a large bucket. We had to find a place where we could dig, above the shoreline, between the sandy beach and solid rock. We found our place and marked it for later.

We also wanted to investigate the possibility of walking through the shallow water to the mainland, only about 400 yards away, but the tide had to be low and the time had to be found. Joe spotted sharks and wasn't quite sure exactly what kind they were, so we put it off.

There was so much to photograph and do, so many notes to take. At one point I put my glasses down, while I bent down to photograph a lizard in the bushes, then got up and walked off without them. It was not until a half an hour later that I realized what had happened, so I followed my footsteps back to that bush to collect them, only to find nothing but fresh tail-tracks.

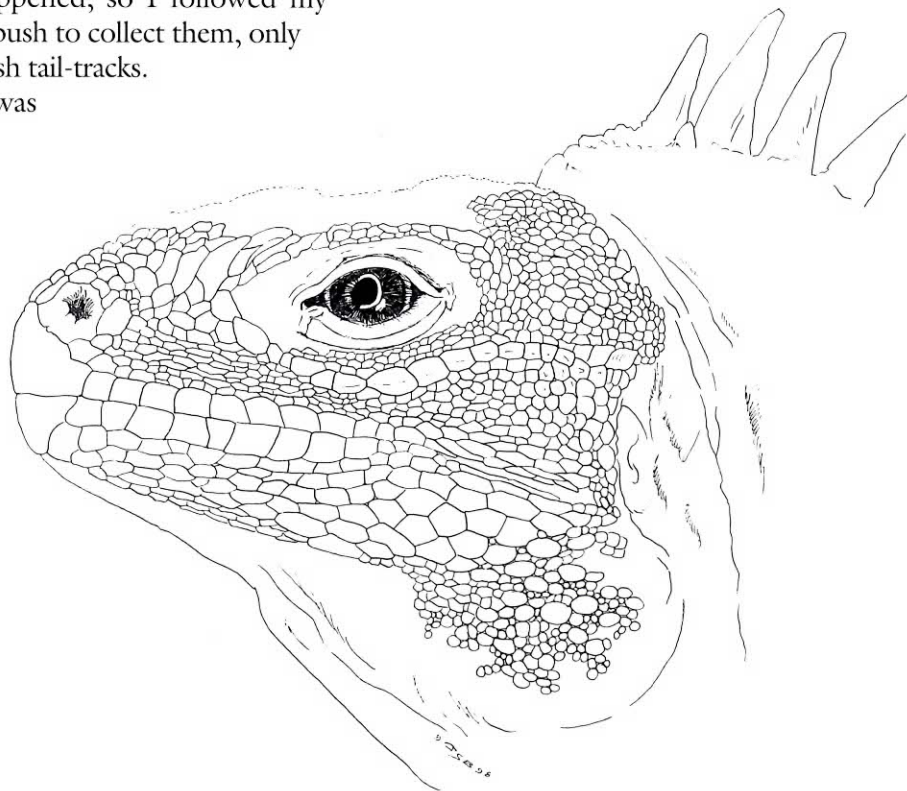
From then on I was
unable to read or
successfully
operate

my manual camera.

I never found my glasses, but kept returning to that same spot in the hope they would appear. (Moral: always carry a spare pair of glasses!)

Pieces of an aircraft, two sea-mines, a bicycle wheel, a plastic gun, and what looked like the nose cone of a rocket were all found on Booby Cay—debris from the Western world, cast there by the sea—left for the birds and the lizards to play with... along with my reading glasses. I had tried on our first day to pick up some of the many light bulbs from the beach, but after half an hour I realized that there were probably in the region of 2,000 or more scattered about the cay. I had to give up and hope they would bury themselves in the sand and not be a hazard to the iguanas.

The rest of the day was spent catching iguanas, mapping, and taking notes. The time went quickly. An hour before dark we carried the sign to the marked spot and erected it, putting it into a hole filled with a mixture of conch shells and concrete. If it didn't work, we'd know the next day. We arrived at our camp about fifteen minutes before night fell.



Scalation rendering of male *Cyclura carinata carinata*. Illustration: John Bendon

We ate a cold meal and sat talking under the stars, then retired to our tent for the night.

The next day was more of the same routine—more photos, more notes, more blood drawn. There are now about 10 iguanas running around with microchips inside them, so that the next time we come and catch more, we will know which ones we have already measured. A CITES permit only allows for one hundred animals from the same species in any one year to have blood drawn. To have two hundred of them logged in our data books would mean we could return in three years and then five years to work out the survival and growth rates, etc.

We went back to check that the sign had set hard in the concrete and it had. After we left we could still see it from 600 yards away.

The Siege of Camp Booby

This is an interesting little aside, so I thought, and deserves a mention. On day one, we saw no evidence of iguanas at our camp. On day two there were four separate tracks, and four iguanas had taken up residence in the immediate bushes and under one tree. I suppose we had disturbed them, but I'm not sure. One was caught with its head in our garbage. It was as if they were taking us for granted. Certainly they were calm enough when we caught them. They are so harmless, it's no wonder they don't survive with people and animals around. So it seems that while we were out catching iguanas, others were at our place enjoying themselves. Good luck to 'em!

Epilogue

A lot of work was accomplished during this trip—many observations made, and we are one more step closer to knowing just how closely these iguanas are related to their namesake, *Cyclura carinata carinata*, on the Turks and Caicos Islands, some 40 miles to the south of Booby Cay.

Several small samples of different kinds of plants and cacti were taken for the Botanical Gardens in Nassau to study and grow. All the blood samples were sent to Nassau to await export permits. CITES permits are always needed for all parts of any endangered listed creature, even blood or feathers. This permit allows the parts to be imported into the United States and allows the samples to leave the country.




Drawing a blood sample. Photograph: John Bendon

A wonderful night was spent under the stars, no moon over Mayaguana this time, just inky blackness pierced with a myriad of pin pricks, glowing white, and a hazy ribbon of the Milky Way strung directly overhead—so many stars they become a ghostly cloud in the heavens.

Bartsch's Rock Iguana is unique. Here, on a very small islet, all this time without visitations from humans is this beautiful iguana sunning itself in the day as its ancestors have been doing here for many thousands of years—unhelped and undisturbed. Will I come here many years hence to see my friends again? I should think so. The way they danced in front of me—I will never forget it.

The time came for us to leave. We saw the boat speeding toward the cay, so we looked around us again at this marvelous little island then packed up the tent and the rest of our belongings, stepped onto the beach to wade out to the waiting boat, looked back once more, and left.

All in all, we had a good two days work. These iguanas are so fascinating, not least because I know that we are the only two people in the world to be dealing with them. After the trip, while relaxing, I would close my eyes and replay our visit with Bartsch's rock iguana, enjoying itself in the bright Caribbean sun and having absolutely no idea that there are so many humans concerned that it should have an undisturbed life and a secure future. See you again soon, my favorite friends. 

October, 1998/Booby Cay, Mayaguana.
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