

Ascension Conservation Quarterly

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Illegal fishing

This edition highlights the illegal fishing that has been occurring in the waters around Ascension. The picture above shows a team of volunteers who went out to pull in miles of long line – see inside for a detailed article.

We now have 'a guide to the birds of St. Helena and Ascension' for sale, there will be a Book Launch on Ascension on 31st March, if you would like to buy a copy of this book, let us know and we will send one to you.

Again we have had a series of visitors and volunteers to the island, with the limited resources that we have on island, these visitors greatly enhance the amount of information we discover about the wildlife here, thank you everyone for your contributions.

I trust that you will enjoy this issue.

Tara

2004

Steve Alton from Kew Gardens visits Ascension.

Whale and Dolphin monitoring project continues

70th Seabird returns to the mainland

Seabird Monitoring continues

Seabird restoration Project moves to a new phase

Gillian Cambers carries out Environmental Impact Assessment for the removal of sand commissioned by Ascension island Government

Neil McCulloch's book - A guide to the birds of St. Helena and Ascension now for sale.

Illegal fishing vessels within 2 miles of Ascension's shore.

Army Ornithological Society carries out seasonal population census of Sooty Terns

Conservation Department and St. Helena Marine Scientific Officer train in bird ringing.

Temperature Data loggers installed in Green Turtle nests.

Four more Hawksbill turtles tagged.

PRESS RELEASE: Friday 6th February 2004 (Origin: Ascension Island, UK, USA)

**ASCENSION ISLANDERS REPEL PIRATES
STEALING FISHERIES RESOURCES:**

REDUCING IMPACTS ON NESTING MARINE TURTLES

Fishermen and other community members on the tiny Ascension Island, one of the most important marine turtle nesting sites in the Atlantic, have this week been fighting back in a brave attempt to repel pirate high-seas fishermen, protecting both their fisheries and the giant green turtles, which swim 2,000 km from Brazil to lay their eggs.

At least two vessels, as yet unidentified, have moved into the coastal waters of Ascension Island (a UK Overseas Territory) illegally deploying mile upon mile of long-lines with baited hooks aimed at a lucrative tuna catch. They have been deploying gear as close as one hundred meters from the shoreline. It is illegal to carry out such fishing within 200 nautical miles of the land unless licensed. Licensed fishing is only allowed between the 12 and 200 nautical mile limit; these pirates are clearly operating illegally.

It is now the peak of the marine turtle nesting season with thousands of adult green turtles having converged on the island to mate and lay their eggs. Already at least 8 turtles have been released from entanglement in the hooks, lines and associated flotation buoys



Green turtle caught in long line approx 150m from shore

Additionally, turtles are now coming up the beach to nest with hooks embedded in their flesh and local volunteers are patrolling the beaches to locate and assist affected animals.

Direct Action

Upon realizing the situation, despite having no coastguard or marine protection force, local fishermen, conservationists and other community members took to the sea to remove the illegal gear closest to shore.



Team of volunteers who removed long line from the coast of Ascension

Tara George (Left of the photo), Conservation Officer for Ascension Island Government said:

“We could not believe it when we were informed by local fishermen that these vessels were actually fishing within a mile of the shore. A brief inspection of one of the lines confirmed our worst fears. In just one hundred meter stretch of the line there were three turtles entangled; one of them appeared on the brink of exhaustion. We knew we had to take direct action.”

Under the supervision of local Police and with the backup of a radio-linked network of lookouts from the Royal Air Force posted around the island, 5 small vessels manned by local fishermen and other community members took to the sea removing more than 5 miles of line and released turtles some of which had become severely entangled in long portions of lines and buoys. These ghostly ships have maintained radio silence and have evaded confirmed identification as yet. Although they have not deployed any more gear very close to land, they are still in the area.

MONITORING THE EFFECTS OF TEMPERATURE ON HATCHLING TURTLES

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Paul Davis of the South Atlantic Section, Overseas Territories Department, Foreign and Commonwealth Office said:

“Tara George (Ascension Island Conservation Officer) telephoned me about this illegal fishing activity. Once we have details of the ship's name, port of registry and photograph, we shall pursue the matter with the flag nation. We recognise that illegal fishing is a growing problem in the South Atlantic and are in discussion with other government departments and non-governmental organizations about how to tackle it.”

Potential Impacts on Turtles and Sustainable Tourism

Marine turtle biologist, Dr. Annette Broderick, of the Marine Turtle Research Group (Centre for Ecology and Conservation, University of Exeter in Cornwall), who is funded by the UK Government to undertake conservation research on Ascension said:

“It is now approaching the peak of the nesting season on Ascension Island, with around a hundred turtles nesting per night. Between nests, female turtles spend periods of about two weeks resting on the sea bottom in water around 20m in depth, simply surfacing every hour to breathe. The hooks and lines removed were running right through this interesting habitat and it is not surprising that a number of turtles have become entangled. Turtles could drown or break free with hooks embedded and line cutting into their flesh.”

The future?

Ascension Island has a burgeoning economy in which sport fishing and ecotourism are two areas which are being grown. Johnny Hobson, a member of Ascension Island Council, said:

“We are striving for a brighter, sustainable future on this beautiful island. Environmentally sensitive tourism is growing. We simply cannot stand around idly and allow these outside forces to come in and steal our resources. As evidenced by the events of the last week, the people of Ascension are prepared to act but we need the support of UK Government to deal with these pirates. We may be able to deal with them when they are up close but once they are more than just a few miles offshore they are able to act with impunity.”

Marine turtles are a group of animals whose sex is not determined genetically. Instead, the temperature during egg incubation determines whether the hatchling becomes male or female.



Green Turtle hatchling emerging from nest

In order to hatch successfully, eggs must be incubated at temperatures between 25-35°C. Eggs incubated at 29°C produce 50% female. Temperatures above 29°C, produce a greater proportion of females and below 29°C a greater number of males. The reason why these systems have evolved is not understood. The most likely reason for this method of temperature sex determination (TSD) is that it in some way increases the chances of survival of the individual.

Over the past few weeks, the team on Ascension Island have placed 70 temperature dataloggers into green turtle clutches incubating on Long Beach (one of the coolest beaches, owing to its pale

reflective sand types) and North East Bay (one of the hottest beaches on the island – try walking over it in bare feet at 4pm!).



Marking nest that has temperature data logger installed

These dataloggers measure the temperature every hour throughout incubation. When these clutches hatch out we will measure the size a selection of hatchlings and excavate the nest remains to assess the success of the clutch (i.e. how many eggs hatched). From these data we will be able to more fully understand the relationship between temperature and hatchling production.

It is very important to understand this relationship particularly when we consider the implications of climate change on this population, one of the largest nesting rookeries of the green turtle in the Atlantic Ocean. Our previous studies estimate that 75% of green turtle hatchlings produced at Ascension Island are female. An increase in incubation temperature of as little as 2°C, as a result of global warming, would not only increase the number of female marine turtle hatchlings produced at Ascension Island, but may even make it too hot for successful development of embryos.

So what might happen to marine turtle populations as a result of global warming? They could shift their nesting site, provided suitable habitat is available. But there is no nearby alternative for females nesting at Ascension. There is also the

possibility that marine turtles may shift their nesting season, laying earlier in the cooler months of the year, however current mean monthly air temperatures at Ascension range from 26-32°C, leaving little scope for seasonal shift. Relatively minor changes in temperature as a result of global warming could have a devastating effect upon this population, reducing hatchling production and yielding male deficient sex ratios in the future. Continual monitoring at this site is crucial.

For more information on this work please visit our web site <http://www.seaturtle.org/mtrg/> where the majority of our publications are available to download.

***Acknowledgements:** This work is sponsored by the Ascension Island Government, the Foreign and Commonwealth Environment Fund for the Overseas Territories and the Royal Society. Many thanks to the Ascension Island Turtle Group, Ascension Island Conservation Officers and all volunteers for their valuable support and assistance with this research.*

Hawksbill Turtle Tagging Project update

A recent Dive Expedition to the island, led by Kevin O'Neil (pictured below holding Tegen) caught four Hawksbill turtles for tagging.



Volunteering with Ascension Conservation

Contributed by Jolene Sim

During my short stay on Ascension Island I spent my time with the conservation team, who gave me the amazing opportunity to work with them whilst they were doing projects with the turtles and sea birds.

An average day would begin with a walk downhill over the volcanic ash and rocks to the wide-awake fairs. The walk itself is interesting, providing amazing outward views of the barren moon-like land and South Atlantic Ocean. When you gaze back onto land you can watch the clouds lift from the centre of the island, here a contrasting sight of the lush Green Mountain would appear. Upon this mountain grows a jungle of many beautiful plants, some of which are endemic to the island.

As we approached the dense colonies of birds where up to approx 20,000 Sooty Terns (known locally as 'wide-awakes' from the sound of their calls) can be seen, we would stop to view the birds from a distance so as not to disturb them. Here we would sit whilst another member would go amongst the Wide-awakes to collect some birds and bring them back to us for ringing (banding). To hold and see these birds up close is an amazing feeling in itself. To just sit and watch the birds nesting, spreading their wings to shade their eggs is interesting, both father and mother takes turns in guiding their nest.

At times frigate birds would hover above the nesting grounds waiting for the birds to desert their nests so they can swoop down to eat the eggs. These frigate birds are endemic to the island and are a spectacular site to view, their flying seem so effortless, graceful and peaceful for such large birds.

Some days the bird ringers would go out in a small boat driven by a local fisherman to small islands or stacks around ascension.

We would climb ashore the stacks where the bird ringers would ring the booby birds. At times when out in the boat we would see turtles mating mainly off Long Beach. The conservation team scan the beach daily to count the turtle tracks (tracks can be up to a metre wide) on the sand to see how many females per night had come ashore to nest. Up to as many as 90 were counted on many days.



Jolene Sim with Green turtle on Long Beach

Late at night members of the conservation team and also local volunteers would meet at Long Beach where a Green Turtle temperature logging project was being carried out. This was an amazing experience for me, one which I thoroughly enjoyed. We would go out onto the beach in pairs looking for nesting turtles between 2200 and 0200hrs. The beach is often lit by moonlight and stars so the turtles are easy to see. Use of torches is limited so as not to disturb the turtles and we would sit and wait until the turtles were underway with their process laying of eggs before approaching them quietly. Using minimal torchlight we would watch the eggs been laid and during this process we would insert the temperature loggers into the centre of the nest and leave it there. Once she had finished burying her eggs we would mark the nest with wooden posts

whilst the turtle would return back to sea. The purpose of the temperature loggers is to record the temp when the turtles hatched to study how the temperature has an effect on the sex of the turtles. The incubation for these eggs can be up to 60 days before the turtles start hatching. As many as 120 eggs can be layed in one nest and it is said that up to one in a thousand turtles will survive and one day will return to Long Beach to continue the breeding cycle. Hatching period is normally March to June, but I was fortunate to have the excellent opportunity to see some turtle hatchlings during the night making their way over the sand to the ocean. My time on Ascension Island working with the conservation team was a experience in which I found enjoyment, peace and a feeling of fulfilment and happiness. The memories of wildlife I have gathered here are ones that will stay with me always.

SOOTY TERNS

Contributed by Andrew Bray (Army Ornithological Society)

Sooty Terns are found around the world in tropical areas and are a good barometer to what is happening to sea birds in general that live in the tropics. The Army Ornithological Society has been surveying the Sooty Terns on Ascension Island since 1986 and has built up a wealth of data to assist scientists and conservationists. They recently completed their ninth survey on the Island.



Army Ornithological Team relaxing at the end of their expedition

Sooty Terns breed every 9.6 months in conjunction with the lunar cycle. On fledging they spend up to 5 years flying on the wing at sea before returning to land to breed.

They are not able to land on the water as their wings will become waterlogged which results in the Terns drowning. They do dip into the sea to drink, cool their breasts and catch their food which consists of small fish and squid. They have no discernible nest on land and lay their eggs on the volcanic rock and sand. They are very gregarious and nest in large groups known as “fairs”.

There are two fairs on Ascension, both of which are on the coast. The smallest is at Mars Bay whilst the largest fair is under the flight path of the airport and is known as Waterside.



Sooty terns in flight at the Wideawake fairs, Ascension Island

It was noticeable this year that the fair at Waterside was more spread out than in previous years in that there were lots of smaller groups rather than just one large fair. The demise of the threat from cats could well be the explanation but this will not be confirmed until more surveys are completed. Cats preyed on the Terns as they were easy to catch on the nests and before the eradication the survey team in a 10 day period would pick up several hundred cat kills off the fair.

The cats were not the only predator. Myna birds also cause damage pecking at unattended eggs. They tend to work in groups pecking at eggs, tasting them until the right egg is found which they then eat. This action early on in the breeding cycle can cause birds to become unsettled and desert their nest and move to a new site to lay another egg. On the fairs it is not uncommon to see large areas of abandoned eggs. Occasionally a few birds remain to incubate the eggs but the chances of the chicks survival is small as the Ascension Frigate birds will pick them off. A new chick is a tasty treat but by a week old it is too big to be eaten.

The Sooty Terns nest on the volcanic rocks as they provide lots of hiding places for the chicks which are well camouflaged to their surroundings. Frigate Birds soar over the fairs looking for a chick to reveal itself before swooping down to pick up its meal. These birds have worked in packs with one attacking the parent to distract it whilst another takes the unguarded chick. They have been known to pick up the parent by its wing and throw it into the air to reveal the chick. There is safety in numbers and not too many frigate birds patrol the fairs. Breeding in dense numbers of roughly 25 – 35 per 10 square metres also creates other hazards for the chicks. The parents guard their nest with zeal and if a chick gets too close will get pecked, sometimes with fatal results.

Despite the hazards of early life within a few weeks the chicks congregate in large groups leaving both parents to search for food. The adults share the duty of incubation and provision of food. An adult will stay on the nest for about 3 days whilst the other flies off to find food. Not that the adult does not take a break. During the day and night it leaves the nest to take a drink or cool itself down. It does this by skimming the sea and brushing its breast feathers against the surface. Back on the nest it will often stand over the egg

to provide shade and shape its wings to maximise the cooling benefit from the breeze blowing off the sea. After 4 weeks of incubation and 6 weeks of rearing the family group takes to the wing to fly over the Atlantic. They will return to mate and rear a new generation on the Island.

Currently results indicate that they return to the same site however there are exceptions and the team has re-trapped a bird ringed in the USA and another ringed in Brazil. Though they return to the same site, the area colonized does not normally include the previous nesting area. It will be sometime before they re-visit that ground again. We think this prevents them being prone to parasite infestation which happens in other parts of the world where the birds return to the same nesting ground every breeding cycle. Where as we now have a good insight to the Terns during breeding, what they do in between time is still a mystery.

CONSERVATION OFFICE STAFF QUALIFY AS BIRD RINGERS

Contributed by Colin Wearn



Colin Wearn training Tara George to ring Sooty Terns

Conservation officers Tara George and Stedson Stroud have both successfully qualified as bird ringers after undertaking a period of formal training given by two visiting ringing trainers – Colin Wearn and Pete Carr - who were both part of the Army Ornithological Society (AOS) team..



Stedson Stroud ringling a Sooty Tern

Emma Bennett from the St Helena Fisheries Department also carried out the training and qualified at the same time



Pete Carr training Emma Bennett to ring Sooty Terns

Have you ever wondered how so much is known about bird movements, migration and longevity? One of the answers is by fitting metal rings to the legs of birds. Each ring has a unique number and an address to send the ring if found.

Before a wild bird can be caught the law requires the person catching and handling the birds to hold a special licence. People who hold these licences for ringing birds are generally known as “ringers”.

At present the birds on Ascension are studied by visiting ornithologists, some of who are qualified ringers holding the required licence. To allow Tara and Stedson to continue further studies involving ringing after their trainers have left the Island it was necessary for them to carry out formal training to qualify as “ringers”.

The AOS recently paid another visit to Ascension to carry out counts on the land birds and to continue with their population study on the Sooty Tern. Part of the study on the Terns entails ringing and to date 5000 terns have been fitted with metal rings. Some have also been fitted with a plastic yellow or red ring too to indicate that they had been ringed at different locations.

As well as being trained to ring Terns, Tara, Stedson and Emma also received training on fitting rings to Boobies and Tropicbirds. These new ringers are now playing their part in the gathering of scientific data, something that is to the advantage of ornithology as a whole.

Millenium Seed Bank

Steve Alton from Millenium Seed Bank visited to collect seed from the endemic *Euphorbia organoides* and *Sporobolus caespitosus*. There will be a detailed article about this in the next edition



Steve Alton collecting Euphorbia seed on South Gannet Hill

