

green pages

newsletter of the Department of Environment & Coastal Resources

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This manatee appeared in Grand Turk in late April, stayed about three weeks and then re-appeared in South Caicos in late May. Here, he munches on algae on the concrete walls at South Dock.



An Unexpected Visitor

A manatee shows up in Grand Turk and travels to the Caicos Banks.

Story & Photos by Brian Riggs, Curator, National Environmental Centre

When Lisa Wandres, who lives in Grand Turk, took her dog Scooter down to South Creek for a walk on Saturday morning, April 23, she expected to see the usual things you can see there: birds, bonefish, crabs and mosquitoes. It's a quiet spot, the South Creek, and quite a few Grand Turk folks regularly make the short trip there to walk the small beach, watch the herons and egrets that live there and generally just get away from the hustle and bustle of the nation's capitol.

What Lisa saw in the water, though, was defi-

nately not a bonefish. There, in a shallow ditch left over from an abandoned dredging project, was a big, gray lump of a creature that she had to look at a few times to recognize as a manatee. After watching him for awhile, she realized that he was actually trapped in the ditch, for the tide was out and the little body of water was completely surrounded by exposed sand. The big marine mammal didn't have much room to move around and the water in the pond was getting very warm.





Soon Lisa was joined by a few more Grand Turk residents out for a walk, Roger and Michelle Bellers (and their dog Spot), who were also quite surprised at the sight of the rare creature. After some phone calls they were joined by Captain Everette Freitas and “Bockum” Simmons from the Oasis Dive Shop, Caleb (“Grumps”) Simmons and Joanna Perez from SeaEye Diving, Fernando Perez of the DECR, and Kel Talbot and Sage Dalton from the new Bohio Dive Resort on Guanahani Beach.

After watching the manatee in the shallows for a while, they determined that with a little effort, they could free the 500 to 600 pound animal from the little ditch and lift him over the sandy bank into South Creek itself. They recovered a section of abandoned cargo net from Governor’s Beach and managed to lift the weighty Sirenian. In just a few minutes, they had carried him into the deeper South Creek Channel and from there, the manatee swam into the Sound, the large, mangrove-bordered pond that is the terminus of the channel.

The next day, several of the crew visited the Sound in kayaks to see the manatee closer, but after several hours of searching, he was not to be found. A few days later, though, he was spotted by several visitors and Grand Turk folks slowly making his way from the new South Dock dredging area all the way up the western coast to the area of the Oasis Dive Shop on Duke Street. Over the next

director’s message

It is a pleasure, in my capacity of Director (atg), Department of Environment & Coastal Resources (DECR), to launch this first edition of the DECR’s *Green Pages*.



Our primary objective is to be able to collate and publish conservation articles from the Department, the TCI National Trust, and other

conservation agencies in an effort to increase awareness, encourage legitimate use and enhance knowledge on the environment of the Turks & Caicos Islands. These *Green Pages*, therefore, will contribute to a better understanding of the unique natural, historical and cultural landscapes and biodiversity of these Islands.

In the financial year 2004/2005, the DECR made significant achievements in protection, conservation and management of the natural resources of this country—we have highlighted a few in this issue. We realize that as a Department, we need to increase our public awareness and outreach by encouraging the formation of more civic conservation groups and the development of more public/private partnerships in conservation, such as this venture with *Times of the Islands*.

The DECR’s web site has been one of the successful mediums by which the Department currently channels information to the public. The site offers a wide array of topics on Protected Areas, Fisheries and Conservation. We expect in the not-too-distant future to have a functioning Visitor’s Interpretative Centre, which will act as the focal point for environmental education, at the National Environment Centre.

In closing, I would like to express my sincere thanks to my staff for the invaluable contributions they have offered in making this a reality. Additionally, I would like to thank the Minister, and Ministry of Natural Resources & Social Development for their commitment and support during the last year. I trust that you, the general public, welcome this initiative.

Michelle Fulford-Gardiner
Director (atg),
Department of Environment & Coastal Resources





The manatee was originally trapped in a shallow ditch at South Creek in Grand Turk. (Below) A group of concerned residents managed to move the mammal to deeper water.



The Department of Environment & Coastal Resources is currently in touch with several manatee research facilities in South Florida concerning manatee well-being. The Department also requests that any further sightings be reported to our offices in Grand Turk or Providenciales or through our website at www.environment.tc .

For more information on manatees, visit <http://www.sirenian.org/westindian.html> and the site of the US Geological Survey's Sirenia Project at <http://cars.er.usgs.gov/Manatees/manatees.html> .

few days the manatee was spotted in a number of locations: North Creek entrance channel, South Point and back at the South Dock. For several days in a row, Andrew Marshall, who was working on the barge at the cruise ship terminal project, was able to monitor the manatee as he lazed near South Dock munching on the green algae that grows on the concrete walls there. Andrew was able to get several very good photos, which he shared with other folks on Grand Turk.

But then, after a stay of almost three weeks, the manatee was gone. For several days, everybody scanned the shorelines and the shallow waters around Grand Turk, but the slow-moving creature was not seen again.

This was not the first time that Grand Turk had been visited by manatees. About ten years ago, two were seen over a three-day period at Governor's Beach and inside the North Creek. But nobody took any pictures and no official notification was made to the Department of Environment or any of the international marine mammal organizations.

Manatees are creatures of calm, shallow waters. They live in tidal estuaries and sheltered bays that usually don't have much of a current or wave action. Though there are reports of manatees being spotted near reefs occasionally, they generally don't go into water that's more than about 20 feet deep. Their main food sources



— manatee grass and turtle grass — don't grow in water any deeper than that. In their sheltered lagoons they have also been seen to reach out of the water and nibble the leaves from low hanging mangroves. Manatees eat between 6 and 9% of their body weight every day, so the Grand Turk manatee would probably have needed about 30 to 40 pounds of fodder daily. Turtle grass is abundant on the Turks Bank, though, and the areas where he had been seen abounded in it, so we weren't too worried about food.

But it is thought that manatees also need access to fresh water. In river mouths in Florida and the Greater Antilles they can drink from the river's outflow or run-off from the land during rainfall. None of our Islands have any freshwater rivers or streams, and that was kind of worrying. There was concern that our manatee might be suffering from the lack of water. But after three weeks, he seemed to be doing well. It's possible that he was able to find the thin flow of fresh water that seeps out of the beach at the tide line after a heavy rain, and there had been a few strong showers.

Most of us have seen manatees on the Discovery Channel or at Sea World in Florida and we also know that manatees don't normally live in the Turks & Caicos Islands. But historical records and archeological work indicate that manatees (and the likely extinct Caribbean Monk Seals) were resident throughout the Bahamian archipelago 500 to 1,000 years ago. Unfortunately, these slow-moving sea mammals were hunted almost to the point of extinction by the earliest colonial settlers. Today, there are still small, remnant populations of Antillean manatees in Puerto Rico, the Dominican Republic, Cuba and Belize. All manatees are listed as endangered species and protected in their home countries, but habitat loss, boat collisions and entanglements with fishing gear take a heavy toll every year.

Grand Turk's manatee appeared after several days of strong southerly winds, and it's quite possible that he was originally part of the Dominican group. The Antillean manatees are a distinct subspecies of the better known Florida manatees. They are typically a little smaller and a little slimmer than their North American cousins. And where there are somewhere between 3,000 and 3,500 Florida manatees left in the wild, where Antillean manatees are found their local populations are smaller. A 1994 aerial survey in Puerto Rico could only



For several weeks after his rescue, the manatee was spotted in a number of locations around Grand Turk.

find 86, though their total population could be twice that. It's not likely that numbers for Hispaniola are much more than that. Belize, with its extensive mangrove habitats, probably has the largest population, though no definitive census has been made.

After the Grand Turk manatee's disappearance, there was a lot of speculation about what had happened to him. Many thought that he might have tried to swim home, but in truth, manatees are not particularly fast swimmers. They average about 3 to 5 miles per hour, walking speed. Chances of getting back to Hispaniola against both wind and current would have been pretty slim. And then, as we have seen, manatees are not particularly fond of deep water. Imagining our slow-moving, gentle visitor drifting out into the deep Turks Island Passage (where all the big tooth critters are) was not a very appealing thought.



Following his initial rescue, the manatee swam into the Sound, a large mangrove-bordered pond that is the terminus of South Creek channel.

But then, just when Grand Turk folks were resigned to not seeing the big critter again, he turned up in South Caicos, 22 miles away across the Turks Island Passage, and of all times, on Regatta Day the 28th of May. Scores of folks saw him hanging around one of the East Harbour docks. But apparently, with all the excitement of the boat races and the partying, nobody took any pictures.

We were happy to hear that our manatee had made it to the shelter of the Caicos Bank, for from South Caicos he had easy access to the hundreds of square miles of mangrove creeks and shallow lagoons that make up the North, Middle and East Caicos Nature Reserve, our international Ramsar site.* In those protected waters he would be as safe as he could possibly be. The only drawback was that he might be the only manatee on the Caicos Bank, though there was always the outside chance that another manatee or two might

also have made the long trip from the south.

So keep your eyes peeled on that short flight from Providenciales to South Caicos or Grand Turk. If the pilot flies close enough to the coastal shallows or tidal creeks that make up the vast Ramsar site on the south side of the Caicos Islands, you just may spot a big grey hulk with white spots (those are the barnacles that cover his back) lolling in the calm, warm waters. ☪

Many thanks to James Reid and his colleagues from the Sirenia Project/USGS for their invaluable advice and help.

*Named after the city in Iran where the treaty document was signed, Ramsar sites are considered “wetland sites of international importance” and 146 countries have agreed to protect and conserve designated sites. For more information on wetlands around the world, see www.ramsar.org.



DECR announces the birth of 101 baby loggerhead turtles

Story & Photos by Marsha Pardee

On May 24, 2005, a turtle nesting site was found on one of Providenciales' beaches. Although turtles were once known to nest in the area, it has been many years since a nesting site has been recorded in the more human populated regions of the island.

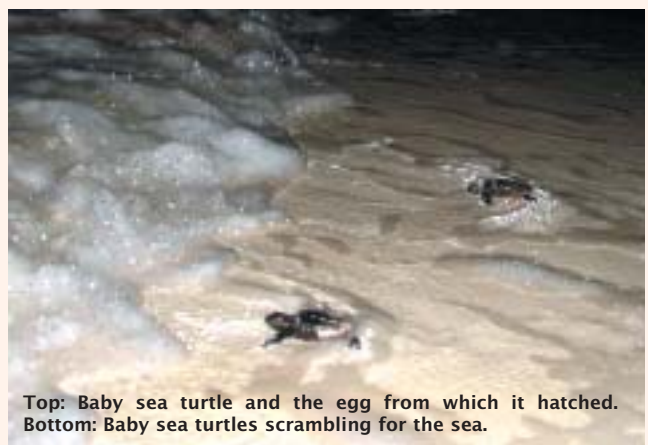
In this instance, it appeared the mother turtle had tried to make her way up further beyond the waterline into the dunes, but was unable to do so and returned to lay her eggs closer to shoreline. From her alternate tracks, she was thought to be either a hawksbill or loggerhead turtle. When discovered in the early hours of May 24, a decision was made to relocate the nest to higher ground, as it was feared that the nest would soon wash away during the normal summer erosion cycle.

The nest was relocated not far from the original site, with all attempts made to recreate the original nesting chamber depth and size. A total of 129 eggs were carefully removed and brought to the new nesting chamber where they were buried as before. The original and duplicate nests were 27 inches deep, with the actual egg chamber being 9 inches deep.

A total of 53 days passed as the eggs took their time to incubate and develop. Then on the night of July 15, the babies began to emerge and make their way to the sea. A number of tracks were noted the next morning coming from the nest, but it didn't appear as if all the turtles could have emerged. (In most cases, based on the type of turtle, all that were living would have emerged in a single night.)

So a vigil was set up the next night to see what would happen. Around early dusk, one small turtle came scrambling out the sand; an hour later, another. Finally, the decision was made to excavate the nest to see how many eggs had actually developed and hatched. As the nest was carefully unearthed, a total of 32 more babies were found making their way to the top.

Once all the babies were safely chaperoned to the sea, a final count was made of all the hatched eggshells and those eggs or turtles that did not survive their incubation or hatching ordeal. It was found that a total of



Top: Baby sea turtle and the egg from which it hatched.
Bottom: Baby sea turtles scrambling for the sea.

101 babies emerged from the 129 eggs originally laid. With the exception of two that were kept for scientific study and later release, it appears that 102 actually made their way to begin their life at sea. The turtles turned out to be loggerheads, a rare site in TCI waters.

Only 1 in 1,000 baby turtles ever make it to reproduce again. Most don't survive through the early days of the battle to open sea. Where they go as tiny young is part of their mystery. They are believed to take refuge in floating weed lines and flotsam, feeding on the other small inhabitants that occupy this ecosystem adrift. If they get the chance to outgrow this most vulnerable life stage, 10 or so years later they may make it back inshore to feed in the shallows and eventually nest on our shores again.

Happy Birthday, TCI Turtles and for our sake as well as yours, we wish you many happy returns! 🐢



Brown noddies perch on a wrecked sloop at French Cay, faces pointing into the wind like troops of soldiers.



The Meaning of Sanctuary: It's for the Birds

French Cay invites this author to share space with nature for a day.

Story & Photos By Kathleen McNary Wood

Sanctuary (Sank´ choo er ē) — A place of refuge and protection.

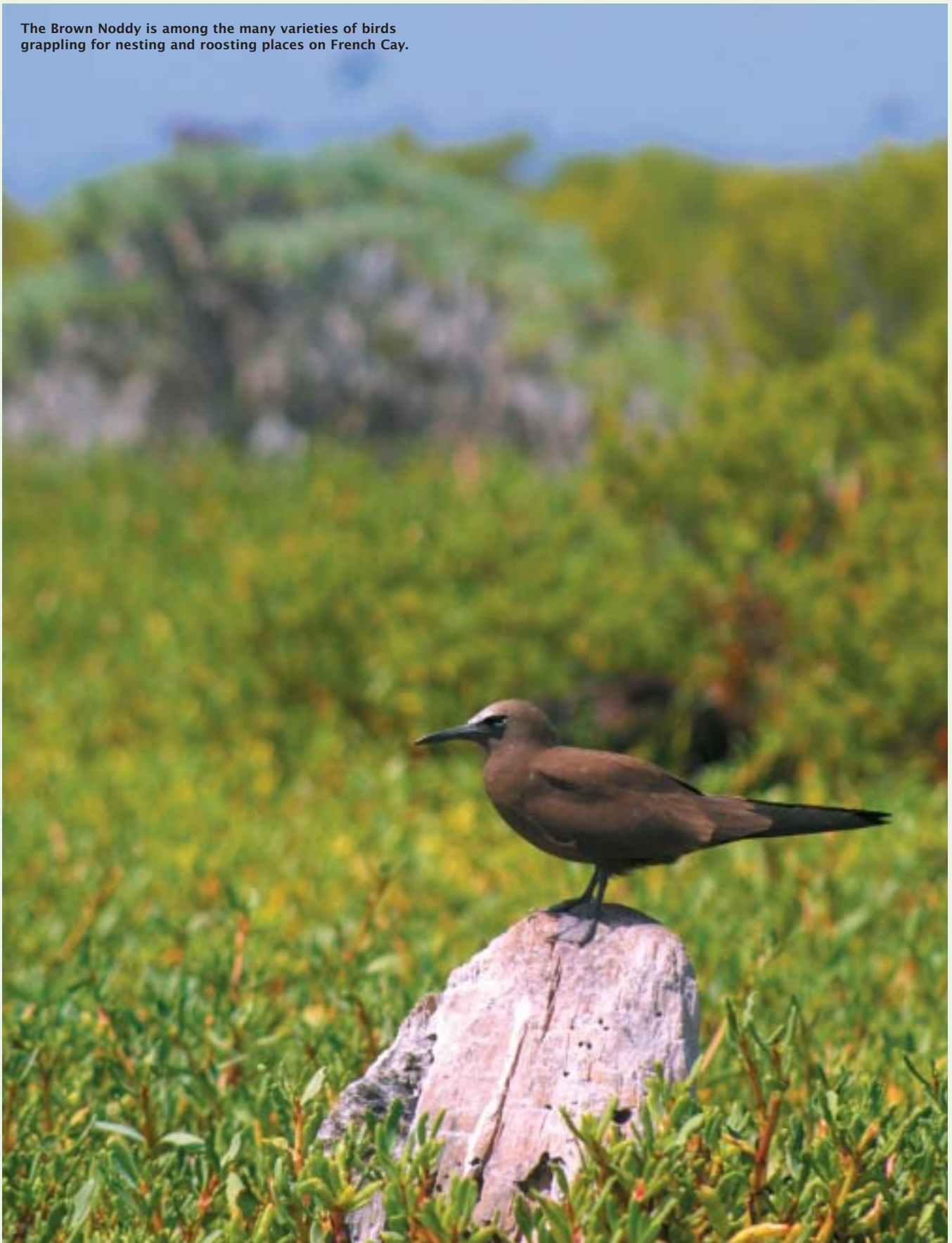
There are no places left on earth that are not altered by man and his activities. As time ebbs and flows, a tide of change has swept across the planet. Gone are the days when man battled against nature only to maintain a fragile foothold on existence. We are no longer separated from a truly savage natural world only by the campfires burning

protectively at the edges of our settlements. It is now the savage beasts that are threatened by us, and while most people (including this author) would rather not return to prehistoric days, it would be unbearable to think of a world in which the most majestic of the creatures of the land, air and sea no longer existed.





The Brown Noddy is among the many varieties of birds grappling for nesting and roosting places on French Cay.





Every summer, nurse sharks come to the shallow water off French Cay to mate and spawn.



Fortunately, the Turks & Caicos Islands are a nation among the enlightened that understand the importance of protecting and preserving nature in all of its magnificence. Under the National Parks Order of 1992, four Sanctuaries were created. Under this law, these four areas are awarded the highest order of environmental protection. They are places where nature can find a refuge above and beyond the selfish desires of mankind. Nature rules in a Sanctuary, and humans are only allowed to visit with a specially-issued permit.

Having managed to procure a permit to enter the French Cay Sanctuary, I set out early one July morning poised for adventure. My appointed task for the day is to survey the island's flora and fauna.

Poised on the very precipice of the Caicos Banks, boating out to this cay is no small task. Heading due south from Providenciales, it takes about an hour to get there by motor boat. Fortunately, the elements were accommodating on this particular day and the usual chop on the Banks was at a minimum. But it has not always been this way.

The waters surrounding the island of French Cay have a dubious past. French Cay is named for a French pirate that once lived there. Rumor has it that Jean David Nau, a.k.a. L'Ollonais, took refuge on the tiny island and ransacked unsuspecting ships as they neared the treacherous fringing reefs of the Caicos Banks. To add insult to injury, folklore states that the famed pirate practiced cannibalism on his victims. By perfecting a skilled technique, he was able to rip out a victim's heart and eat it while the condemned watched. In an ironic twist of fate (or an extreme case of what goes around, comes around), L'Ollonais' life was cut short by a tribe of Carib Indians who reportedly ate him.

Fortunately, there is no threat of a pirate attack now. As Providenciales disappears over the horizon, the tiny cay to the south comes gradually into view. At first, there is only the promise of dry land, as the seabirds who rule this domain send out scouts to check out intruders. As the cay grows closer, a raucous cacophony sounds in the distance. It is this sound that foreshadows the unimaginable swelling of avian life that inhabits this miniscule speck of land only barely reclaimed from the sea.



As I step onto the shoreline from my craft, I already feel like an intruder. This feeling is made all the more palpable by a flock of 30+ laughing gulls that feel it is their duty to inform all other life forms on the island of my presence. They scream out their laughing “kaa kaa kaa” followed abruptly by an angry barking-like vocalization. Around the back side of the island, the reason for their distress becomes apparent. There are numerous juveniles wandering aimlessly along the shoreline. They are too old to sit quietly in a nest and still too young to fly. I move quickly to avoid them, hoping my intrusion has not overly stressed them.

Once I've moved out of what is clearly laughing gull territory, I come across an area where several wrecked Haitian sloops are grounded along the coastline. While these relics of humanity are, in a purist sense, trash upon what should otherwise be an unspoiled shoreline, they are in reality serving a significant ecological function. Upon every square inch of the ruined masts and rotting bows sits a brown noddy. To these sea birds, man's trash is their treasure in the form of valuable roosting space.

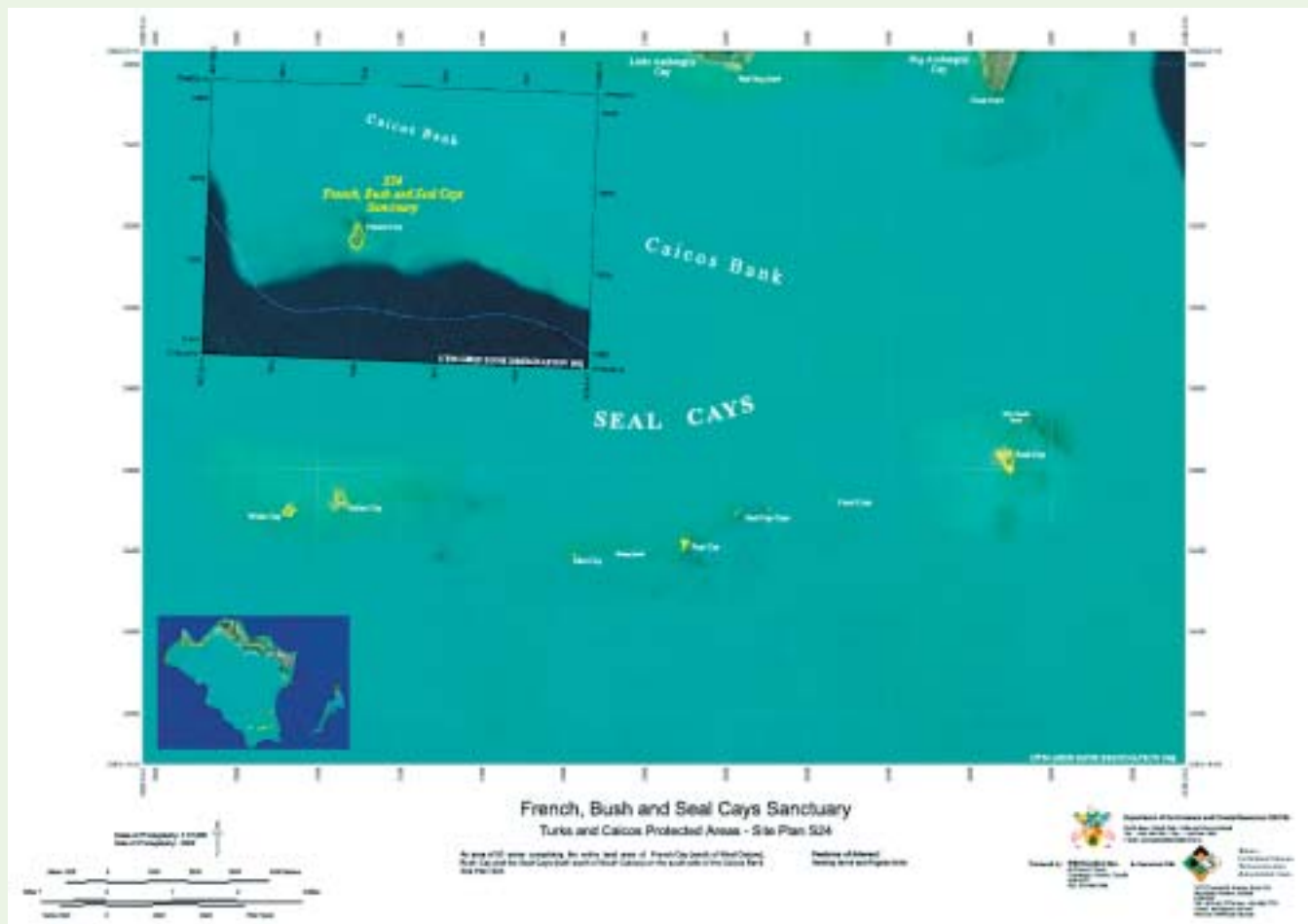
For sea birds that spend a majority of their lives at sea, these flotsam and jetsam perches are a welcome resting place. Unlike the laughing gulls, the brown noddies are practically oblivious to my presence. They too have numerous nearly-fledged juveniles among their numbers, but perhaps as birds that rarely encounter humans, they don't recognize the potential threat I pose. Rather, they stand all in a line with their faces pointing to the wind like troops of soldiers. They number easily in the hundreds. I suspect they ignore my presence rather than losing their prime roosting spot to another by flying away.

Space is certainly a consideration. In addition to the noddies and gulls, there are others here as well. Perhaps as many as 100 sooty terns are also grappling for nesting and roosting places. A group of brown pelicans crowd the bowsprit of one boat carcass, and an osprey sits proudly at the highest possible perch on the same craft. A small group of ruddy turnstones scatter along the beach trying to make a decent living while avoiding the crowds everywhere else. For a tiny cay of only a few acres, it is really quite a spectacle.

Birds aren't the only creatures that find sanctuary here. Every summer, nurse sharks make their way to the

A group of brown pelicans take over one boat carcass on French Cay. To seabirds, man's trash offers valuable perching space.



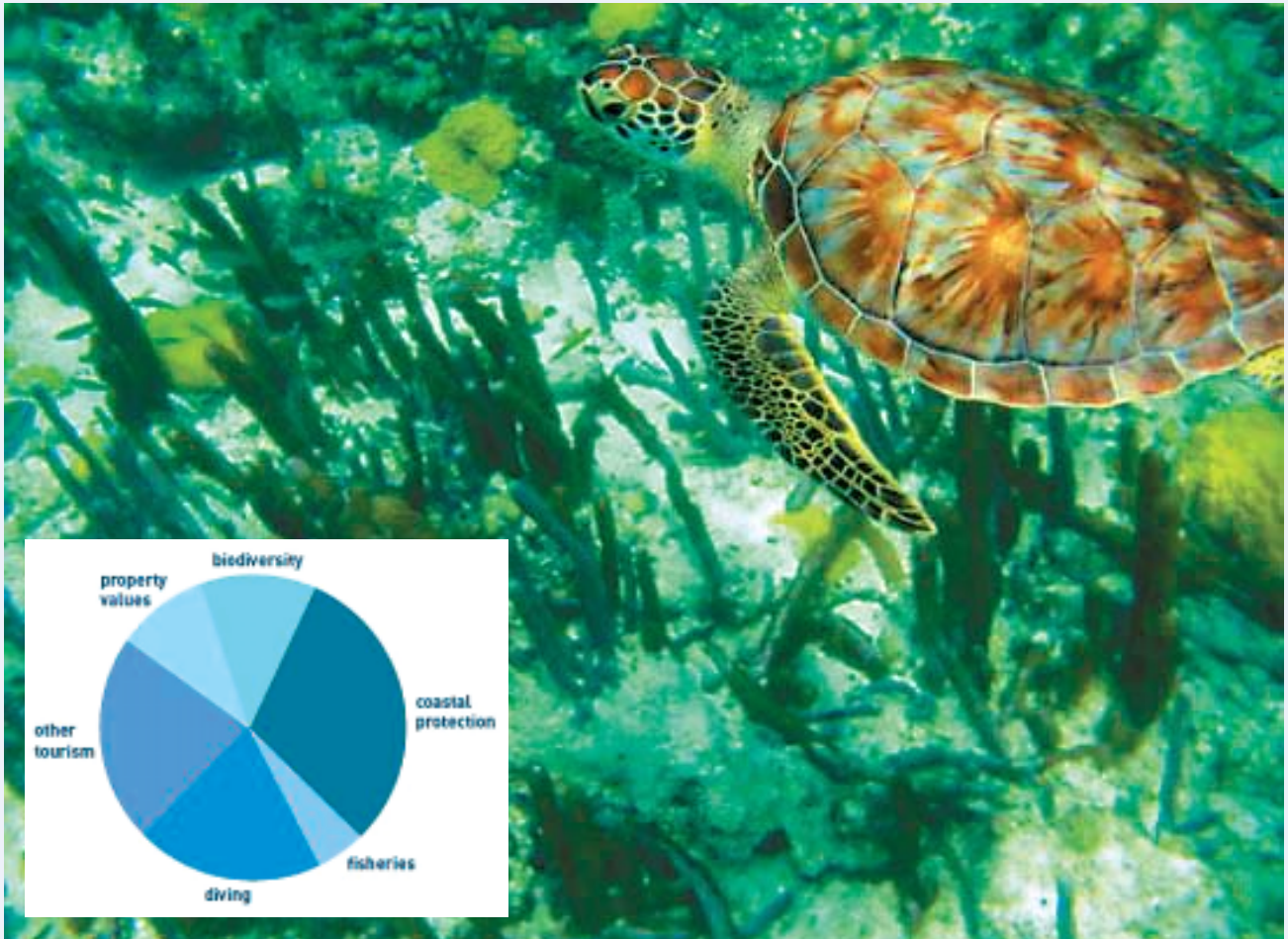


shallow water off the cay to mate and spawn. During this period of time, the nearshore waters are a frenzy of activity. I am lucky on this visit to catch a glimpse of the first wave of activity in early July. Approximately 20 nurse sharks swirl around in couples engaged in what seems like a passionate although frightening embrace (if one can imagine shark copulation as passionate). They too seem oblivious to my presence, which is not surprising, given they have more interesting things to attend to. Over the course of the summer, hundreds of sharks will come to these waters and engage in this ancient ritual that has probably taken place since long before man ever set foot or eyes upon this shoreline.

With all of this activity, it's hard to believe that the vast majority of French Cay was, until recently, not extensively used by wildlife. Shark and bird activities take place for the most part in the coastal areas, leaving the inland areas largely fauna-free. But this scenario is now changing. For the past few years, Dr. Glenn Gerber

and his team of scientists from the San Diego Zoo have been working to establish a viable rock iguana population here. Removed from other islands slated for development, these Critically Endangered reptiles have been successfully relocated to this sanctuary, where by all reports, they are thriving. Come wintertime, the sharks will return to their haunts along the reef and in the uncharted depths of the deep blue beyond, the majority of the seabirds will be back out at sea, and the iguanas will have the island largely to themselves, save the odd ghost crab.

I, too, shall leave this place to the iguanas, crabs, sharks and birds, and this is as it should be. In a world that is increasingly bowing to humanity's will, it is a real privilege to be a guest of nature for the day. It is heartening to know that there are still some places on earth where people are allowed to enter only with a special permit. Even if we never see these places ourselves, it is enough to know that they exist. This is the true meaning of sanctuary. ☪



Coral Reefs: valuable assets for all of us

Our reefs make a valuable contribution to the economy of the Turks & Caicos Islands—estimated at \$47.3 million a year.

Coral reefs contribute to the economic success of our country — we need to look after them. We don't expect them to disappear, but we can easily underestimate just how sensitive they are to pollution and over-use. Did you know that they are estimated to contribute directly at least \$17.7 million to the Turks & Caicos Islands economy each year? In addition, in terms of "quality of life," they represent a further value of *at least* another \$29.6 million per year.

Many of us regard the existence of coral reefs as being important simply because they form a part of the landscape, are beautiful and diverse, or more directly, because we benefit from their existence. But such a general statement of importance holds little sway in arguments about the economic, financial and employment benefits of development proposals.

Visit www.environment.tc, the website of the Department of Environment & Coastal Resources, to read three important new reports:

- * "The Value of our Reefs"
- * "Natural Resources — An Important Part of our Economy"
- * "Finding the Right Balance — Developing Resources Sensitively"