

DIVING TRIP TO GRENADA 2016

George Mitchell

In October 2016 several club members and friends took a trip to Grenada, dubbed "The Spice Isle" partly because this beautiful hilly island is home to many nutmeg plantations. The capital St George's sits along the south west side and overlooks Grand Anse Bay, the name reflecting the influence of the French in this island's history. I stayed in Grand Anse Bay but Alan and friends were in a far posher place! Eating out in the evenings was a bit pricy but generally the food was very good.



Picture 1 Grande Anse Bay & Dive Boat

Picture 1 shows Grand Anse Bay and the dive boat. You could not have asked for a better boat for diving in this area. Loads of deck space, post dive drinks and snacks all propelled along by two massive 4 stroke outboards. Bottles were kept off the deck in racks so with plenty of space for kit and lots of help if you needed it diving off this boat was a very pleasant experience. The guides were good and only on one occasion making an error of direction and being over ambitious about how far we could fin. I think they were somewhat bullish about the state of the reefs – but more on that later.

The diving organisation, Eco Dive, was run by Christie Finney a marine biologist and diver who is passionate about improve the state of the reefs. Eco Dive staff were helpful and friendly and the dive shop had reasonably good facilities for storage, changing and drying kit which meant we didn't have to carry too much back forth from our lodgings each day. Diving on air all week was the gaseous disappointment, giving us short bottom times particularly on the deeper dives. Given that an O₂ extraction system was, according to Christie, going to cost at least \$45,000 it was something they were keen to get but only if they could justify it. Most of their visitors are PADI holiday divers not particularly interested in Nitrox, so in their eyes at least we were a slightly unusual lot, wanting lots of wreck diving, Nitrox and twin sets!

On the surface it looks as if underwater it should be idyllic, but venture beneath that lovely blue and the evidence for reef damage is stark and widespread. **Picture 2** (left hand image) shows a healthy acropora coral of the same species that was once healthy and abundant in Grenada whilst on the right we can see that almost 100% damage that has occurred in a patch in Grand Anse Bay. This devastation has several causes. In 2004 hurricane Ivan did a lot of physical damage particularly to

these more fragile acropora species. It is pertinent to recall that when I first dived on the Great Barrier Reef (1976) similar damage had been seen after the passage of cyclone Althea. Yet acropora are relatively fast growing and within two years we saw an excellent recovery and by 1980 the reef was stunningly beautiful again. Not so in Grenada, there has been almost no recovery from the hurricane damage. Other major impacts on the coral are local pollution and high water temperatures. Note the strong green cast in the image of Grenadian corals. I usually manage to understand the light underwater within a day but this green had me stumped for a while. It is the result of a lot of nutrients running off from the city drainage system and feeding algae in the sea. The colour comes from chlorophyll.



Picture 2 Acropora Coral (left healthy – right Grande Anse Bay)

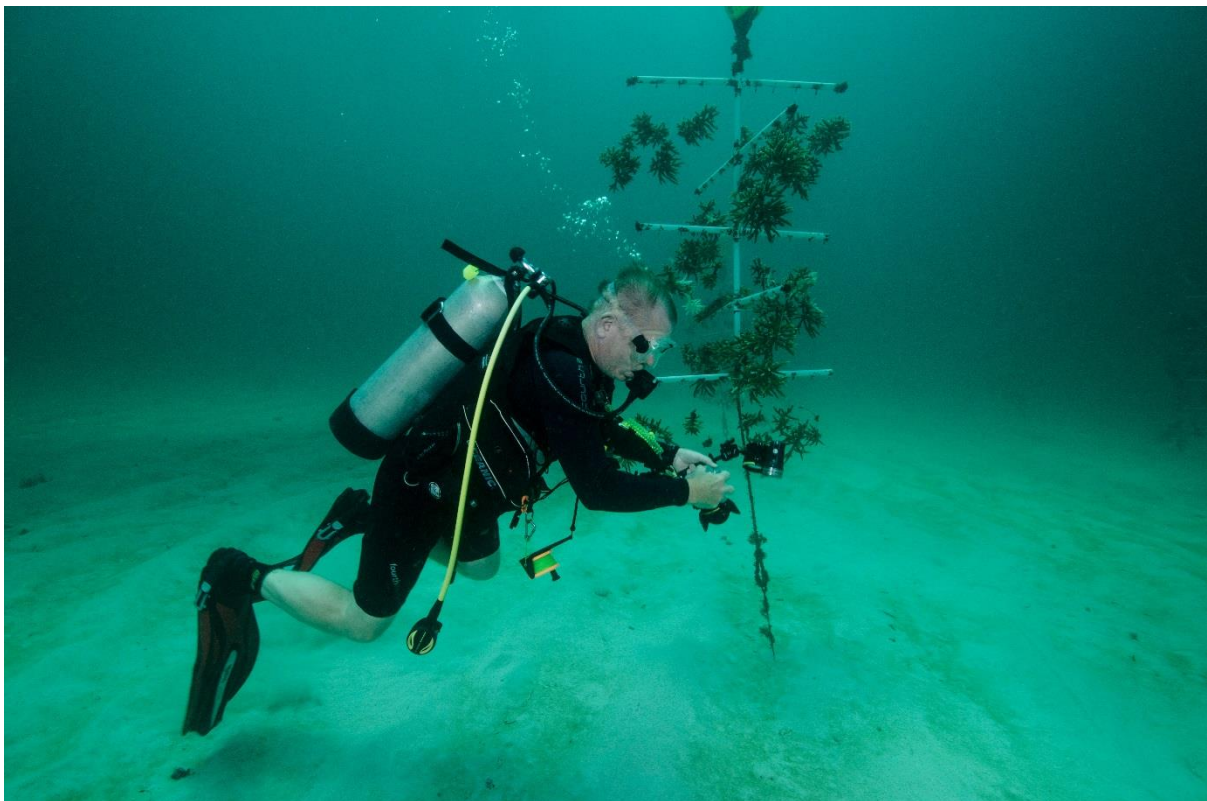
The cities drainage system is primitive. In well developed countries storm water is treated before it flows into rivers or the sea. In Grenada much of the city runoff flows directly into the sea. I could get technical here but suffice to say that the water in Grand Anse Bay is polluted from the point of view of coral. We noticed that further away from this location the health of the coral improved, a little.



Picture 3 Inhabitants of the drains in St George's and an open drain

Picture 3 shows one of thousands of crabs who made burrows in the sides of the many open drains by the side of roads. The right hand image is of one such drain. The water lies almost stagnant, brewing a huge oxygen demand, until it rains when it then drains to the sea along with all its pollution. One cannot fail to mention that there were mosquitoes by the thousand around these drains in all likelihood carrying the zika virus. Every Thursday a vehicle would come round at dusk and spray insecticide, during which time we were advised to stay indoors with windows closed.

The third insult to the coral and indeed the rest of the marine ecosystems is thermal. This we know is widespread in tropical regions and in particular those who went to the Maldives in 2014 will not forget the first few dives on what was essentially bare rock and what was called a “coral garden”. A median temperature for coral to coexist with its symbiotic zooxanthallae is 28°C. The thermal impact on coral is not just a function of temperature but also the duration of the high temperature period. If it is extended (a matter of weeks for a temperature excess of only 1°C or 2°C) then the coral will expel the algae, turn white and eventually die altogether. I measured temperatures of between 28°C and 30°C in the upper 5m. Given the great sensitivity of coral to thermal impact this small excess is enough to cause a deterioration in the health of the reefs and indeed this is what we saw. When the corals are unhealthy there is a lot of collateral damage to other species and a change in the species distribution.



Picture 4 *Frame with new coral growths*

Christie is making heroic efforts to restore the reef by growing new coral on frames and replanting. The frames are in areas which are less affected by the pollution but still they appeared affected by the warmth of the water. One of the frames is shown with Mike Wells in **Picture 4**.

A fourth impact, also anthropomorphic, is worth mentioning and illustrates the dangers of being causal about alien species. **Picture 5** shows one of the guides inserting a speared lionfish into a collection tube. On this dive he speared 12 which seemed a large number. However, we were later told that at some less dived sites they would work without visitors and collected up to 300 per day! The reef is infested and we saw these creatures on the wrecks as well. They arrived in the Caribbean due to someone emptying an aquarium into the sea. Idiot! The lionfish are eaten – preparation is done with care!



Picture 5 A spread lionfish being collected

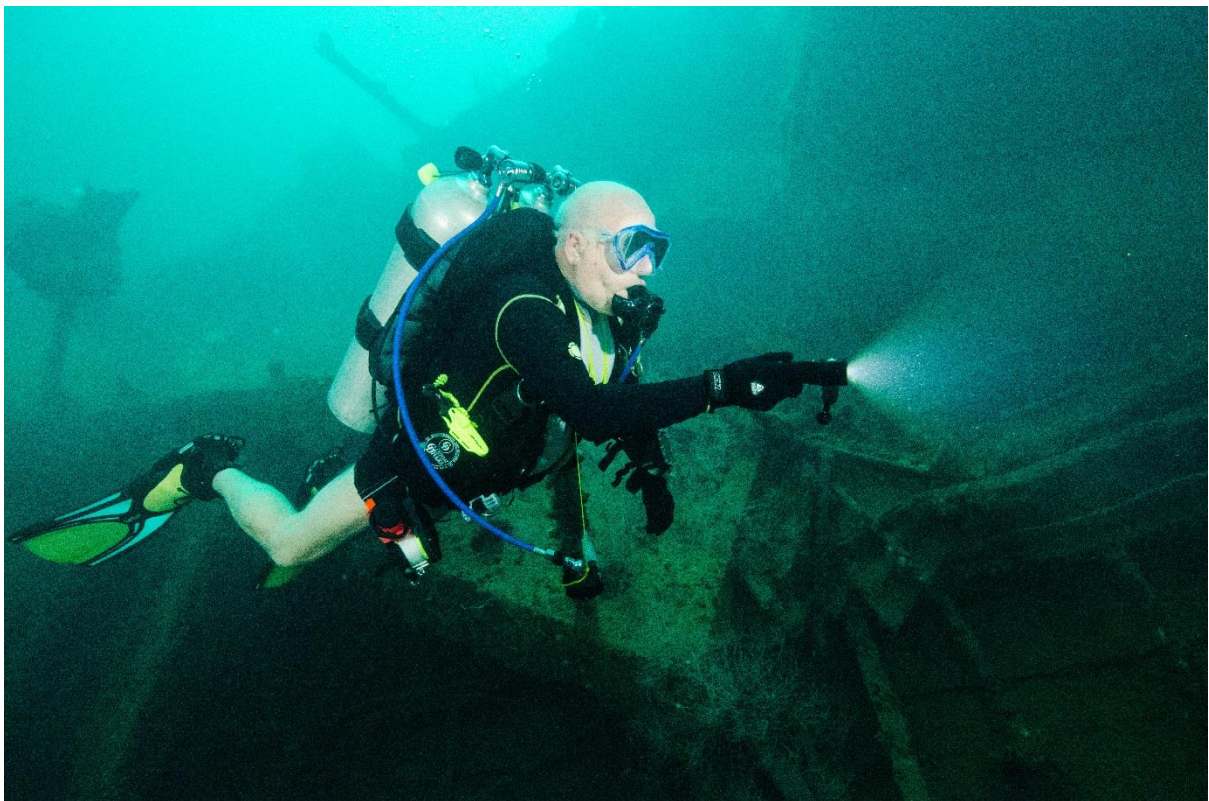
The guides are doing all they can to eliminate the lionfish, although they inhabit other tropical reefs they are bad in the Caribbean context as they are carnivorous and are depleting numbers of small reef fish that indigenous carnivorous fish rely on for food. Little can be done locally about global warming except to continue with the implementation of low carbon energy sources. The local pollution is a problem that could be solved in a few years with the installation of better drainage and water treatment. There are long term projects under way to tackle these problems throughout the Caribbean but they are slow moving.

I have spent a good deal of this report on these issues but they are having a huge impact on the success of tourism and therefore the local economy, our enjoyment (perhaps the least important!) and the long term survival of ecosystems.

Turning to the diving there is no denying it was good to get away to some warm lazy dives peppered with a few wrecks dives, including one rather odd dive on a car dump. It sounds bizarre but actually it was interesting and by no means lifeless even down at about 34m at a site called Happy Valley. There are numerous wrecks around Grenada, resulting from poorly maintained vessel from Trinidad variously catching fire, suffering engine failure in storms and so on. One such was the Shaker carrying a cargo of cement bags, which of course emitted a good deal of heat when the wreck sank in 30m (**Picture 6**).



Picture 6 Cement bags on the Shakem at 30m



Picture 7 On the Bianca at 40m – Norman.

The largest wreck there is the Bianca (known also at one point as the Titanic of the Caribbean...hm I wonder why!) sits in 50m. About 200m long this wreck is described as one of the top 10 wreck sites

of the world. That may have been the case some years ago but it no longer falls into that class in my view. Norman and I cobbled twin sets together (odd regs and no frame....) and did enjoy a longish dive on this now much collapsed wreck reaching 43m at the collapsed deck. Diving on air and with my Perdix set to something rather more conservative than needed I ended up with 30 minutes decompression! Sorry Norman – entirely my fault – should have been closer to 15 minutes. See Norman in **Picture 7**.



Picture 8 Sculptures in Moliniere Bay

Looking at **Picture 8** you might be forgiven for thinking this is a group of people from Pirates of the Caribbean, but no, they are part of the *“Circle of life size figures cast from local children linked by holding hands. Their transformation by nature, as they become remodelled by the environment and coral growth reflects the changes of growing up thorough a lifetime.”* They are certainly transforming as coral grows on them and I found them rather spooky but it’s a nice idea. There are many other sculptures including a man sitting at a desk which is rather oxymoronic I felt, given that being underwater should make one forget any hint of work!

We did have some decent wreck dives though frustratingly short as our gas was air. The scenery on the Hema was pretty as in **Picture 9** and on this wreck we did see a group of 5 nurse sharks. They were utterly disinterested in us though and wandered off before I could get a decent picture. Mike Wells though managed to stroke one, though it didn’t respond – perhaps a good thing! In terms of charismatic mega fauna that was it. I wouldn’t like to leave the impression that all the reef diving was on badly damaged reefs. **Picture 10** shows a colourful pipefish amongst the brain coral, gorgonians and sponges. On the last night I was there Mike Wells kindly hosted a fabulous dinner at his apartment – thanks Mike! I had to leave for London but the others stayed on for a few more days. I think the trip was a stark reminder (do we really need any?) of the rapid decline in reef health that we are seeing now. Yet in the waters off this island it is not just climate change that is to blame and it may be that if the drainage were dealt with to reduce pollution the ecosystems would partially recover.



Picture 10 *Life on Quarantine Reef*

I won't rush back to Grenada though it was an interesting week overall and good fun. Perhaps the saddest thing is that the youngest guides though the reefs were beautiful which they were not compared to what some of us saw decades ago. Perhaps the best gone for ever.