



Tigers & Turtles

Billy Sinclair, once of Ayr Divers, is enjoying the diving environment around his new home in Queensland. In this article he chronicles a recent trip to the Great Barrier Reef ...

HAVING SPENT the last three years living in Queensland, I am lucky enough to have easy access to a subtropical climate and the wealth of aquatic life on the Great Barrier Reef (a bit different to that of the Clyde, though both are interesting). Working at Central Queensland University (where I lead a research group studying reef fish genetics, movements of fish larvae and *Nautilus* genetics) I collect fish and larvae samples from the southern section of the Great Barrier Reef, but every once and a while the chance to do something very unusual comes along!

So, in December 2005 I headed off on a unique research and dive trip to

Raine Island. This trip is a bit different from the normal live-aboard on the Great Barrier Reef; the research vessel *Undersea Explorer* (a research/ecotourism dive boat based in Port Douglas, about 90 minutes drive north of Cairns (www.undersea.com.au)) frequents what is at this time of year one of the most isolated reefs in the GBR.

An ongoing aspect of their research is focused on projects contributing to our understanding of reef ecology, biodiversity, conservation and minimising human impacts on marine resources. The projects of most relevance on this trip were trapping *Nautilus* to continue my work on their

genetics and biogeography and the satellite tagging of tiger sharks to monitor their movements – tiger sharks are known to be around Raine Island at this time of year due to the large number of nesting turtles

We departed Cairns heading north to Lockhart River (800km by road, about an hour by plane!) passing low over the rugged coastline where the rainforest meets the reef, travelling along the coastline until we reached our destination at Lockhart River, on the Cape York peninsula (the pointy bit at the top right hand side of Australia). A short truck ride later and we meet our luggage on the beach to transfer over to the dive boat on the



tender (note: 6-7 people plus gear plus food on a dinghy tender gets very wet when it is even the slightest bit lumpy!).

After an initial check of certification and dive insurance, we stowed our gear and then settled down for a coffee and an introductory brief from John the operator and Mick the skipper about the general operation of the boat, the possible dive sites and what we can generally expect from the trip (as usual, this was fairly wide open!).

An over-riding feature of travelling with this operator is that you are not treated just as another number, the staff and crew are friendly and approachable and make you feel part of whatever is going on. That evening, the boat headed off towards the outer reefs. Evenings onboard consist of a variable mixture of research project talks and presentations on subjects as diverse as Nautilus genetics, shark tracking, fish identification, nudibranchs and flatworms.

7.30 next day brought the first of many subsequent calls for a dive brief – on our first day's diving, we started off with a nice easy dive on the northern side of Mantis Reef, doing the usual buoyancy controls and diver check-outs, before progressing on to live drop drifts (boat steams towards drop point, swings round with dive deck to reef, we jump in and descend immediately and the boat motors off to the pick-up point) at Silver City, Black Rock.

This was meant to be a nice introduction to what lay ahead, but on one dive we saw four large silvertip sharks (*Carcharhinus albimarginatus*) up

close and personal – excellent! These are large, sleek fish with tapered bodies and bright silver flashes on the ends of their pectoral fins and the trailing edge of their tails, they look like sharks should! As we drifted along the reef wall, we also saw a group of about 20 devil fish (*Mobulla*) ghosting towards us in the current – sadly they were gliding past all too quickly and soon were gone – enveloped in the blue haze.

Subsequent dives at Great Detached Reef on the way to Raine Island were equally as interesting with a marlin, tawny nurse sharks, grey reef whalers, more silvertips, dogtooth tuna and massive schools of chevron barracuda to be seen. The hard and soft corals were abundant and diverse in shape and colour.

On our last dive there we came across a large shoal of lined bristletooth surgeonfish (*Ctenochaetus striatus*) buzzing around the top of the coral gardens. Moving closer we could see they were milling around apparently at random then some would make frantic dashes towards the surface. These were the females, hotly pursued by crowds of males trying to mate with them. Clouds of spawn were released and then they shot back into the shoal.

We watched this organised chaos for a while – amazed by the coordination, the timing and the fact that even though red bass and other large fish were trolling through the shoals to feed on the spawn, that these events were still successful – undoubtedly the highlight of the day, having only ever seen this on TV before!

The third day saw us arrive at Raine Island, which is the largest green sea turtle (*Cheleonia mydas*) nesting area in the world, with many thousands of turtles nesting on the coral sand cay each night during the breeding season. Raine Island lies within the northern section of the Great Barrier Reef World Heritage Area and is a vegetated coral cay comprised of a rock core surrounded by sand and extensive fringing reef.

Basically, it is a detached section of the edge of Queensland's continental shelf. The main structure on the island is a stone tower, constructed by convict labour in 1844, using the island rock, and salvaged timber. One of the most protected sites in the world, conservation authorities prohibit human access to the island except for specific, authorised research activities. It is considered to be the most significant tropical seabird breeding site on the GBR, so, unsurprisingly, we were not allowed to land.

Our first dives saw us swimming amongst the green turtles and being scouted by grey reef whalers, tawny nurse sharks and silvertips. We photographed leopard sharks but avoided the titan trigger fish that were nesting in the sand bars amongst the coral heads! The quantity of sealife here exceeded anything we had seen so far on the trip – the number of different species was huge and they didn't seem to mind us being there.

However, the night dive brought what we had been waiting for. We passed a couple of turtles in the blue, but they didn't really come close enough to photograph in the fading



light. However as we scanned around up to the reef flats I spotted a large turtle cruising past us at about 4m, nicely silhouetted against the island.

Dramatically swimming past it was a

large tiger shark (*Galeocerdo cuvier*).

The shark wasn't dragging its fins as it swam past the turtle and it banked steeply to come tearing down the reef face and off into the blue darkness! Must admit to having a wee celebratory drink back on board that night!

Our first dive next morning topped even that. We had just dropped into the water and descended down to around 40m to drift along the wall in the blue and there, just over the drop-off a large shark came cruising towards us – another big 4m plus tiger shark!



a marked effect on our air consumption. The remainder of the days dives, while excellent, were pale by comparison.

Since our arrival at Raine Island, while we were diving, the research team involved in the Tiger tracking project (www.sharkresearch.com) had spent the

morning trying to entice one of these amazing fish to 'take the bait' and tail rope it. Once the tail rope is on, the shark goes into a trance-like state called tonic immobility and hangs gently in the water without struggling or stress.

Once the shark had been brought back to the boat, the team secured the animal by looping a rope around the body behind the pectoral fins and proceeded to take a range of size measurements. Then they placed a template onto the dorsal fin and drilled holes with which to secure the satellite transmitter.

The animal was photographed and released whereupon it slowly swam off into the depths behind the boat.

To have seen these animals in the water and up-close on the surface was a unique experience. The movements of the shark, named Adam, were downloaded and can be viewed by

following the links on the undersea website.

The dives on the trip back down to Port Douglas (Great Detached reef, Tijou reef and the Ribbon reefs) were excellent, with massive amounts of life - sharks galore (over 8 different species), sweetlip, trout, turtles, sea snakes, triggerfish, anemonefish, pipefish, nudibranchs and

giant clams in wondrous colours. We were even snorkelling with dolphins!

Our minds however, were constantly comparing these superb sites to the dives at Raine. Our last two dives of the trip, were in dayboat territory (Agincourt reef) and all too soon we were back on the boat, showered, our gear cleaned and stowed away with us heading back to Port Douglas and dry land.

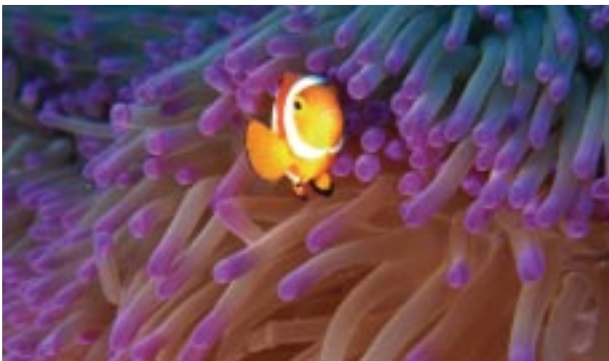


Raine Island is unique in its environment. The sheer numbers of animals (both large and small) and the diverse number of species takes your breath away. The diving is excellent and the remote locations afford total immersion(!) without other distractions.

Dive sites like Jetsream and the intriguing 'Captain Blood's Wall of Death' are very special. Due to its isolated location, only those vessels which offer extended dive charters, can include Raine Island on their itineraries. My memories of the trip are many – the superb service onboard *Undersea Explorer*, the first sight of the grey tower at Raine surrounded by a cloud of Boobies, the sheer number of turtles and the marlin. But best of all

was being up close and personal with a big Tiger Shark down deep!

Hope this makes all the guys at Ayr Club a little jealous. But, hey, you know where I live ...



It's at times like that you remember the weirdest things: how many teeth they have, how they can travel ten times their body length in under a second etc. It banked towards us, giving us a superb view of the flank markings before heading straight for us! We got a tremendous view of its belly and mouth and its huge square head as it swam directly to us for a look, before turning and heading off into the blue again at speed.

For all that we only saw it for 10 seconds, it is an image that will live with us for a long time – absolutely stunning! Decided to ascend a fair bit, as the adrenalin surge seemed to have



Tigers and Turtles photographic credits: all images courtesy Billy Sinclair unless otherwise stated.

Page 24 main image: courtesy John Rumney (Undersea Explorer);

This page top right (Booby): courtesy Paul Barnes, Queensland Parks and Wildlife; and this page bottom right (turtle): courtesy Nik Cuff, Queensland Herbarium