

CURIOUS COMPANIONS



Sleek whales gather in warm Great Barrier Reef waters each Australian winter. They offer the chance of a unique snorkelling experience, says **JUSTIN GILLIGAN**, but leave their human companions wondering: who's watching who?

IT'S THE LAST WEEK of June on Australia's Great Barrier Reef (GBR). The trade wind from the south-east causes waves to crest and break unevenly on the outer reef.

It seems like just another day from the upper deck of the *Elizabeth III*, steaming between Argincourt and the Ribbon Reefs, 75 miles north-east of our departure point, Port Douglas.

The gentle rocking of the boat, lapping of waves off the bow, and warm equatorial sunshine has lulled us far from busy lives back on the mainland.

"Minkes, off the starboard bow!" comes the cry. The glistening backs of three dwarf minke whales have broken the surface next to the boat. Sleek and torpedo shaped, the minkes are around 7m long and dark-coloured, except

for a swirl of white and grey above their disproportionately small flippers.

Although they lack the bulk of other baleen whales to which they are closely related – such as the mighty blue and humpback – the minkes are energetic, and keep pace as we motor between reefs at 20 knots.

The whales disappear as suddenly as they arrived. Such a brief encounter would normally go unnoticed, were it not for Dr Alastair Birtles, a senior lecturer in environmental management and eco-tourism at James Cook University. Alastair is on constant watch throughout the minke whale season on the Great Barrier Reef, which means June and July.

In fact you would be hard-pressed to prise his eyes off the horizon, as he tries to get a glimpse into the lives of his

Pictured: They may be dwarf minke whales but they can still reach a considerable size.



beloved research subjects. He scribbles notes about our recent encounter, documenting number and size, number of breaths taken, position and time the whales were spotted, direction of travel, and any distinguishing markings. Nothing goes to waste.

It's Alastair's 16th year as research leader of an enthusiastic group of post-graduate students and research volunteers known as the Minke Whale Project. His spray-jacket acts as a mobile stationery cupboard, fully stocked with notepads, pens, pencils and sunscreen.

Dark RayBans shelter his eyes from the equatorial glare, and a smear of sunscreen is permanently visible across his cheeks and nose above his bushy beard, and below his wide-brim hat.

"There is just so much about dwarf minke whales that we still don't know," says Alastair, scanning the horizon. "This unique opportunity for researchers to team up with local tour operators has provided a fantastic opportunity to further our knowledge, and it benefits everyone involved."

WE'VE JUST HAD OUR FIRST minke meeting of a seven-day adventure organised by John and Linda Rumney of Eye to Eye Marine Encounters. It's an expedition with an exciting educational twist. By donating three of the spots aboard the vessel to research, Eye to Eye

not only guarantees continuation of the Minke Whale Project's work, but provides an enjoyable learning experience for passengers. "This is more than eco-tourism, its innovative marine-research tourism," says John. "The researchers contribute to a value-added experience, one that will last forever in the memories of our guests, and in the research papers published by the Minke Whale Project."

Eye to Eye produces a flexible itinerary in a bid to ensure the best minke encounters at the most favourable locations, based on the weather. "The one sure thing is that there is no sure thing regarding the plan for this trip," says John.

The greatest reward for him, he says, is the excitement he provides for his guests, many of whom he considers long-lasting friends.

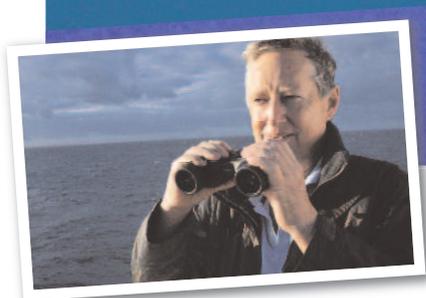
"I didn't set up this business model to make millions," he says. "It's an opportunity to pass on our passion for the reef."

A COMMERCIAL FISHERMAN in these waters from 1978, John found his true calling as a tour operator and conservationist during the mid 1980s.

"I often assisted government researchers and scientists hoping to study the reef, and they told me about the serious shortage of research funding," he says. "That was how the idea of collaborative projects between tourists and scientists was born."

John approached Alastair and Dr Peter Arnold, senior curator of tropical natural history at the Museum of Tropical Queensland. Their minke whale work became the first project of *Undersea Explorer*, a vessel that offered the most exciting GBR tours in the 1980s and '90s.

Their task was to develop protocols for divers and snorkellers to



minimise negative impacts on dwarf minke whales while maximising the experience for the human participants.

Their code of practice continues to guide human interactions with dwarf minkes today.

Later that evening, Alastair provides the first of a series of presentations on minke whale project research on the GBR. "There is nowhere else on the planet where encounters such as this take place on the whales' terms," he says.

"You don't need to be an academic to make observations of the minkes, and that's why everyone can get involved. Once we have a decent encounter over the coming days, the experience should be long-lasting, and stay with you well into your dreams."

ROB PRETTEJOHN is a passenger who has booked his place to celebrate the 30th anniversary of his first in-water encounter with a dwarf minke whale – and also the first ever recorded.

Before this they had been sighted only by fishing vessels, and no one had taken the time to identify the species. Hoping for a better view, a friend had dropped Rob into the water beyond Argincourt Reef and, over time, the curious whales drew closer with each pass.

The consequent drawing that Rob sent to Dr Arnold formed the blueprint used to identify the species as a dwarf minke (*Balaenoptera acutorostrata*). It was described as a separate species to the Antarctic minke whale (*Balaenoptera bonaerensis*) by Dr Peter Best in 1985.

"It's difficult to know how many

whales were swimming around me, but I think there must have been around eight," says Rob. "It was among the most remarkable experiences of my life."

Why minkes visit the warm waters of the GBR seasonally remains one of their greatest mysteries. A few calves have been glimpsed over the years, suggesting that these waters are likely to be mating and possibly calving grounds.

In many countries it is illegal to swim with whales, and heavy penalties apply.

In the GBR nine operators are now permitted to conduct such activities, but under the stringent rules outlined in marine-park permits and the code of practice. "We can't manage the whales, so the researchers are learning to manage the people during an encounter," says Alastair.

The Minke Whale Project wants to determine the effect of this growing industry on the whales.

Student Matt Curnock submitted his PhD thesis at the end of the 2010 minke season, including encounter rates for more than 40 reef dive sites. With continued monitoring of these sites, it will be possible to identify any change in encounter rates, and therefore in the minke whale population.

THE NEXT MORNING we awake with a group of minkes closing in on our location – an isolated pinnacle in open water on the Ribbon Reefs known as Lighthouse Bommie. Although the whales have initiated this encounter, they are wary at first, making large circuits around the *Elizabeth III*.

Shortly after gliding past, they disappear in one direction, and then reappear, surprisingly, on our opposite side. The giveaway that they are still

Above and below: Minke whales interact readily with humans willing to follow the code of practice.

Left: Rob Prettejohn was the first person to record an in-water encounter with a dwarf minke whale.

around is when their pointed rostrums break the surface, followed by backs and small sickle-shaped dorsal fins.

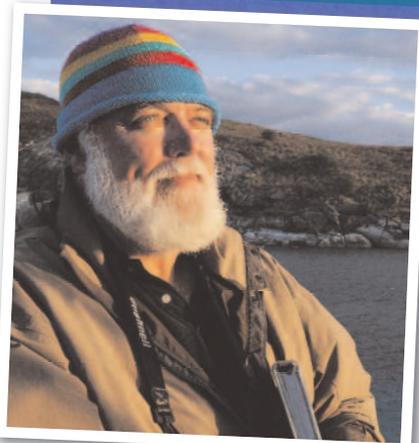
Several minutes pass before John and Alastair suggest that this may be our first opportunity to snorkel with the whales.

They suit up, as the crew release 30m of floating rope, tied with equidistantly spaced rings of bicycle-tyre inner tube from the stern.

John slowly swims out along the rope, keeping a keen eye out for the whales. "Time to get in the water, four minkes under the boat," he yells.

We suit up excitedly, and slide in off the shallow duckboard, moving along the rope in single file to position ourselves at one of the inner tubes. Some of us hold the tube with our hands, 





while others use their feet or waists to keep hands free for video or still photography work.

At the rear of the line is Alastair, already frantically taking notes on an underwater clipboard, and snapping the occasional picture from a camera fastened to his wrist.

As if on cue, the distinct shape of a minke materialises out of the blue, cruising just below the surface.

It barely seems to propel itself, but subtle movements of its tail flukes and narrow elongated flippers allow it to change direction slightly and glide past a mere 10m away.

A curious eye complete with a furrowed brow scans the scene. It seems remarkably similar to a human eye.

Two more minkes covered in intricate patterning follow on a similar bearing. Dwarf minkes are considered the most patterned of the baleen whales.

Minke Whale Project PhD student Susan Soltzick took advantage of this trait, by using their subtle variations of pigment like a human fingerprint to identify individual whales and examine their social structure.

She achieved this by breaking down

the colour characteristics into specific classifications, such as the nape streak, spinal field, shoulder blaze and thorax blaze, and combining these with other distinguishing scars caused by cookie-cutter sharks, other whales or hunting activities.

By painstakingly collating and analysing hours of video footage and thousands of underwater photos donated by crew and the passengers of the licensed charter vessels, she developed a database of individual GBR dwarf minkes.

Susan's results showed that the interacting whales represented an open population, subject to regular immigration and emigration over a season.

Her research also provided the first indication that the interacting population consists of several hundred whales each year. Of the 130-172 whales identified each season from 2006-08, she estimates that a third were re-sighted from previous encounters.

BACK IN THE WATER, the whales gain confidence and grow more curious with each pass, slowly cruising to within several metres of us before drifting off into the blue. As their numbers grow, so do their energy levels, and they propel themselves with greater beats of their tail flukes and communicate through audible grunts, almost as if they are trying to outdo each other for our attention.

Alastair is working overtime as he documents each of the whales that pass him time and time again. One individual approaches him on the end of the line to within 2m, lifts its head out of the water, and stays there motionless before sinking slowly back into the water.

Above: A third of minke whales recorded by the project are reckoned to be returnees from previous years.

Left: Dr Alastair Birtles – determined not to miss any chance of a minke sighting.

Another repeatedly raises its head above the surface and swims the length of the rope – this behaviour is aptly termed motorboating.

A third Minke Whale Project PhD candidate, Arnold Mangott, found that the frequency of social and inquisitive behaviours exhibited by the whales was significantly influenced by the number present during an encounter, and the presence of whales that had been encountered previously.

Re-sighted whales were shown to approach swimmers more closely, suggesting that they became desensitised to interactions with humans.

Arnold also found that while the occurrence of potential disturbance behaviours was rare, the longer-term risks associated with this behaviour change have yet to be determined.

He developed a risk-assessment matrix of a range of observed whale behaviours, and found that there was a low overall risk to the safety of both whales and humans during in-water interactions.

Eight hours have passed since the first minke whale was observed at Lighthouse Bommie, and they have stayed with us for most of the day.

Alastair, alone on the end of the rope, has just documented the last breath taken by the last whale to depart.

By the end of the trip, we will have spent more than 20 hours in the water with more than 60 individual whales.

Although we have formed long-lasting friendships, and experienced the most exciting dive and snorkel locations of the Great Barrier Reef, it is memories of our curious companions that will now stay with us – well into our dreams. ▣

★ *For more on taking part in the Minke Whale Project with Eye to Eye Marine Encounters, Port Douglas, visit www.marineencounters.com.au*