Research mission Broome

PLAYING TAG: Prehistoric creature meets modern technology as Lucy is measured and soon to be fitted with a transmitter; and setting up camp at Jack's Creek (below).

A touch of shell shock

A once-in-a-lifetime trip to Eco Beach to help scientists tag rare turtles. This is what 'voluntourism' is about, writes **Vanessa Croll**

WE'RE on a secluded stretch of beach in northern Western Australia and this is finally the moment we started training for three days ago.

For the past two nights my group of three eco-tourists has patrolled Eco Beach – about 130km south of Broome – with scientists working on the flatback turtle nesting project. So far, we have only sighted turtle tracks.

This expedition is an Australian first for the wildlife research conservation group Biosphere Expeditions, who recruit holidaymakers to assist in serving the environment.

We're an unlikely bunch – a retired NASA employee, a nomadic maths teacher, Singaporean finance and business advisers, a US marine, an inherent conservationist and a couple of journalists – but we each bring value.

We've joined the project as paying volunteers to assist Conservation Volunteers Australia's national marine species manager, Glenn McFarlane, and research assistant, Tony Dingwall, in collecting vital flatback data.

Very little is known about this species because the flatback is only known to lay eggs in northern Australia.

Our mission is to patrol three survey areas of 4km of beach each night to tag as many turtles as possible. We're trying to identify which turtles are returning to nest at this location and which are coming for the first time.

On tonight's patrol, my group has left our base camp at the Eco Beach Resort to set up tents for a night at the remote Jack's Creek survey area.

Our group chatter has been all about finding a turtle so when we spot tracks leading to intermittent sand sprays in the dunes, we squeal with excitement. Only one of the other two groups had processed turtles on previous patrols and those were done in darkness, so it's special to come across one with daylight remaining.

The huge turtle is already excavating a body pit, which they do before digging an egg chamber. To our disappointment she decides the location isn't suitable and slowly goes to another spot.

"She could be going at this for some time so we'd better get our tents set up before it gets too dark," Dingwall says.

We set up our supplied tents in a wind-sheltered area behind some sand dunes and equip ourselves with our "turtle packs". Ready to go are data recording sheets attached to clipboards, measuring tapes, GPS devices, tagging equipment and vials for DNA samples. We each have a head torch that can only be used on its red setting – the least distressing colour for the turtles – when recording data.

We eagerly head down the beach and see the same turtle attempting her third body pit about 200m from our camp. The sun has set and with nightfall a barrage of mosquitoes has materialised. We watch in wonder and awkward bliss while silently trying to shoo the mossies away so as not to disturb her nesting attempt. She reaches wet sand and starts digging a chamber. Her back flippers are surprisingly precise as she slowly digs.

The procedure must be exhausting as she huffs and sighs every few strokes. Only by feel, one back flipper scrapes away a ball of sand while the other catches and sweeps away the sand cascading into the hole.

What we're witnessing is an ancient, instinctual ritual that this beautiful creature has fought against all odds to perform.

Statistically, it's a miracle she's made it here. As a baby, this 1m-long turtle had a one in 10 chance of making it over the 100m shuffle from her nest to the water. She then became that one in 1000 to reach sexual maturity after 30 years.

Just when we think she's about to start laying, she gives up on this location and starts filling the chamber in. This girl isn't laying tonight. She turns to make her way back to the sea.

This is where our work begins.

One of us has to wrangle the turtle, one measures while the other records the notes.

We see many more turtles and even get to see one lay eggs. We mark on a GPS the area where more than 40 of the perfectly spherical eggs were laid so scientists can remain to monitor them until they hatch.

During our expedition we took part in fastening a $7000 tracking device to one of the turtles that will transmit information on her foraging and mating grounds over the next nine to 12 months. The lucky turtle was named Lucy and can be monitored at www.seaturtle.org.

The author travelled as a guest of Biosphere Expeditions, Eco Beach and Australia's North West Tourism.

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Getting there

Qantas flies from Melbourne to Perth, then to Broome. It also has direct flights from Brisbane to Broome. **www.qantas.com.au**

Staying there

Eco Beach Resort operates from March to January. Accommodation ranges from tents to a beach house. **See www.ecobeach.com.au**

Be a volunteer tourist
Biosphere Expeditions runs the flatback turtle nesting monitoring project from Eco Beach in November. A seven-night expedition costs about $2190. **See www.biosphere-expeditions.org**

More: www.australiasnorthwest.com

How to wrangle a turtle

Step 1: Cover her face with "wrangling towel", keeping hands away from those powerful jaws.

Step 2: Firmly push your palms against her shoulders while holding the towel over her eyes and avoiding getting bitten.

Step 3: Do whatever is possible to stop the 100-and-something-kilogram prehistoric beast from getting past you on the beach and making her way to the ocean before your team has collected all the necessary data.

Step 4: To turtle-wrangle? Or to turtle-whisper? Judge the situation and decide to use either force or cooing, calming noises.

Step 5: Take a deep breath and enjoy the experience, knowing you're helping collect information that may assist the survival of one of the most data-deficient sea turtles in the world.