

Redcliffe Environmental Forum: A Turtle Story

Bob Crudginton 22nd Nov 2021



Image: Volunteers from REF's Turtles of Moreton Bay recently attending the stranding of a Green Turtle at Scarborough.

Since 2019, several of our volunteers have supported the "Turtles of Moreton Bay" team. They work with the Moreton Bay Rangers from the Department of Environment and Science (DES) to monitor strandings of marine mammals and reptiles. Basically, if there is a reported stranding in the Redcliffe/Deception Bay area our volunteers turn up at the site to review and then rescue and/or collect data for the DES StrandNet database, which is used to monitor all marine strandings along the Queensland Coast.

Incredibly, since the inception of the local team, our volunteers have attended a practical workshop, completed an online training course and nearly 40 callouts for turtle strandings. A significant number of strandings have been associated with the Redcliffe Peninsula coastline from Woody Point, Margate, Redcliffe, Scarborough to Newport. There are 6 species of turtle that utilise Moreton Bay with the most common being the Green Turtle (Scientific name *Chelonia mydas*). Our team has encountered 3 species including the Hawksbill, the Loggerhead as well as the Green.

Although there has been a great deal of research on all the turtle species little has been known about our local Green Turtles. That was until researcher and turtle expert, Col Limpus provided some in-depth data around one individual Green Turtle T40221, including nesting and foraging data. Thanks to GPS tracking and monitoring efforts from Col and his volunteers we can now give you an outline of T40221's nesting and foraging activities over a period of last 30 years.

Nesting data

"T40221", a female Green Turtle, was first tagged at Mon Repos as a nesting turtle in 1989. Her carapace (shell) length was 103 cm and during that season she came ashore and laid a clutch of eggs on 6 occasions. She returned to the site on many occasions right up until this breeding season, 2020/2021. In this case T40221, demonstrated the capacity to lay many clutches over a breeding season. Researchers were able to identify and discovered the following:

- In 2001/2002 she visited the Mon Repos site on 8 occasions over a period of 77 days and produced 8 clutches with a total of 1024 eggs
- In 2013/2014 she visited the Mon Repos site over a period 112 and produced 9 clutches with more than 1200 eggs

Since she was first tagged in 1989, T40221 has returned to Mon Repos for a total of 8 breeding seasons and successfully nested on 50 occasions with a total of 53 clutches. It was also noted that she returned to Mon Repos on an average 4 year cycle (also known as a remigration level).

GPS tracking data

Nesting season

On the 30th November 2017, T40221 had a GPS satellite tag attached and researchers were able to monitor her movements during the breeding season at Mon Repos. Upon release she moved around the local area (Inter-nesting habitat) and over a period of 25 days she traversed 12 km of coastal area and up to 10 km out to sea. She came ashore again on the 17th December and researchers were able to download the GPS data before she again headed out to the inter-nesting habitat. Over a period of 49 days T40221 transversed 15 km of coast associated with the nesting site and up to 10 km out to sea.



Image: Downloading the data from a satellite tag of Green Turtle T40221. (Courtesy of DES)

Post-nesting season

At the completion of her breeding season, she then migrated down the coast eventually settling in Moreton Bay. GPS tracing data revealed she remained close to the coastline for the entire 400 km journey. She moved through the Burrum Coastline down to Fraser Island via the Great Sandy Strait and then Cooloola, the Sunshine Coast and then Pumicestone Passage (Bribie Island) before turning up in Deception Bay. T40221 then spent her time foraging across the eastern shores of the Redcliffe Peninsula as well as the bay area adjacent to Sandgate and Brighton.

What a journey. Hopefully our team will never meet T40221 in person and she continues to make her way around the coast including Moreton Bay and her nesting area and birthplace in Mon Repos close to Bundaberg. Having successfully nested and provided clutches of eggs on 50 occasions, let's hope she continues her journeys for another 30 years.



Image: Satellite tracking data showing "T40221" foraging movements in Moreton Bay. (Courtesy of DES)