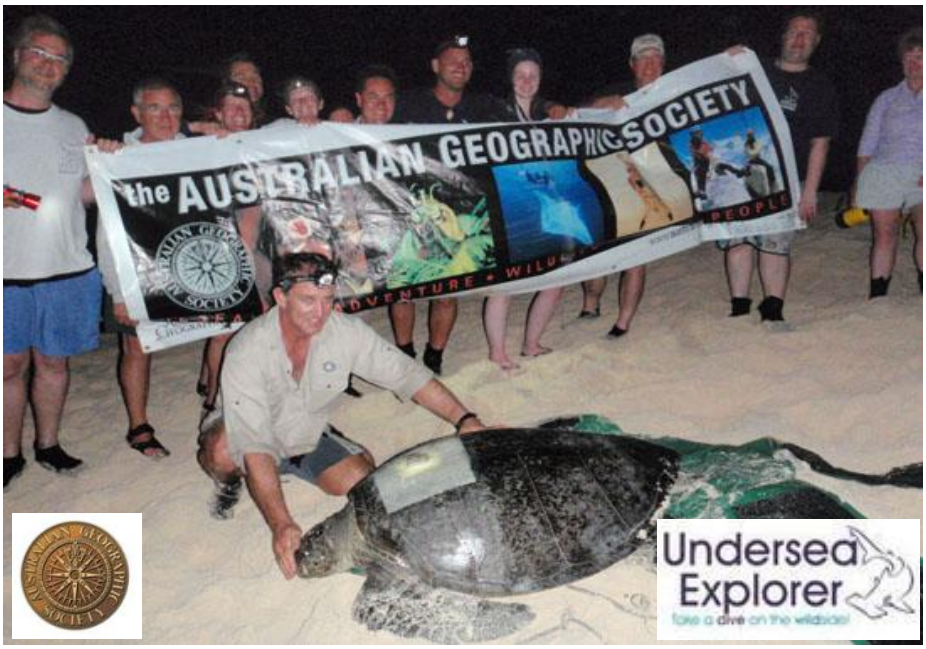
Sea Turtle FOUNDATION



Ian Bell and green turtle with satellite transmitter at Raine Island, northern Great Barrier Reef. Funding for the transmitters was provided by a generous donation from the Australian Geographic Society. Photo courtesy of: Ian Bell

Turtle Tracking Underway

By Andrea Phillott

The Australian Geographic Turtle Race started on the 14th November when Ian Bell (Queensland Environmental Protection Agency) attached satellite transmitters to the shells of 4 green turtles nesting at Raine Island in the northern Great Barrier Reef. The turtles were named by local Townsville schools: BG Ranger (Belgian Gardens State School), Jong Jong (Currajong State School), Kelso (Kelso State School), and Squirtle (Willows State School). Every day, satellites record the position of the turtles so we can follow their movements. This gives us valuable information about how far the turtles move between nesting events and the type of habitat they prefer.

Currently, the turtles are still at Raine Island as they continue nesting; each turtle can lay between 5 and 7 clutches about a fortnight apart before they start their migration home. Once they begin the long journey, we will be able to watch the paths they take from the nesting beach (Raine Island) to their feeding ground, which may be up to 1500km away. You can keep track of the turtles movements on www,seaturtle.org/tracking/index/shtml?project_id=336 and read more about the project at www.seaturtlefoundation.org/stf-current-projects/research/green-turtles.

Sea Turtle Foundation is grateful to Australian Geographic for the funds to buy the satellite transmitters. Undersea Explorer sponsored travel to Raine Island, crew to help with the turtles and inflatable boats for transport.

Summer 2008

Volume 1, Issue 3

Inside this issue:

Please send questions, comments, and ideas for the newsletter to our editor Kristen Weiss at:

newsletter@seaturtle foundation.org

For all other enquiries, please email us at info@ seaturtlefoundation.org.

2008 Sea Turtle Nest Monitoring A success!

By Kristen Weiss

Many Sea Turtle Foundation nest monitoring volunteers received a special treat at AIMS beach this year, as it has been the most successful monitoring season since the program commenced in 2001.

Whether under starry moonlit skies, clouded darkness, or amidst looming rainstorms, dedicated volunteers appeared each night between 24 Nov. and 5 Dec. to look for nesting sea turtles. They were rewarded with a total of 7 flatbacks (3 previously tagged, 4 untagged), and 2 green turtles (both untagged). In addition, 20 turtle tracks have been reported by AIMS before monitoring started, so these nests are due to hatch within the next few weeks!

Nesting Flatback. Photo courtesy of Andrea Phillott

Volunteers tagged new turtles and recorded data about each including length, body condition, and location of the nest. Students from Willows State School accompanied volunteers for two of the nights and were lucky enough to witness both a green and a flatback laying eggs.

All nests were protected with plastic mesh to keep pigs, wild dogs and foxes from digging them up and eating the eggs and hatchlings. This is the first time

(Continued on page 8)

Brand New Sea Turtle Foundation T-Shirts for Sale

The new Sea Turtle Foundation T-Shirt design is in! We've updated the look to navy blue cotton with white trimming, and the Sea Turtle Foundation Logo on the front and larger on the back—the bonus is it's got great SPF protection! The shirts are available for $20 direct from our office, or for $28 you can have the shirt shipped anywhere within Australia. For more info contact us at info@seaturtlefoundation.org.

New T-Shirts are here! Women's and Men's sizes S-XL available.

Marine Debris Campaign Beach Clean-Up

September 20th was a beautiful, breezy, sunny day. A perfect day for boating, hiking....or collecting 160 kg of rubbish from Townsville's Ross Creek boat ramp and Pallarenda Beach! About 2 dozen Sea Turtle Foundation and Burdekin Dry Tropics volunteers did just that in support of 'Clean Up the World Day'.

Volunteers spent several hours picking up everything from discarded fishing line and beverage containers to broken remote controls and balloons.

Just some of the many trash items—from beer cans to fish netting—found discarded at Pallarenda Beach and Ross Creek during the Beach clean-up.

The most abundant rubbish items were cigarette butts (243 were counted, but there were hundreds more), followed by plastic bags (237). Volunteers were rewarded afterwards with a BBQ lunch sponsored by Burdekin Dry Tropics.

The large amount of rubbish that was collected signals the need for more effective marine debris control programs. Volunteers prevented a massive amount of waste from entering our ocean, but it will require a much greater community awareness to reduce the amount that is discarded on our beaches and in our waterways, which ultimately washes out into the habitat of sea turtles and other vulnerable marine creatures.

A Personal Perspective on the Recent Townsville Beach Clean-up

By Richard L Duffy

Another Saturday spent on the beach, but this time my trip had a purpose beyond cooling in the water and lying in the warm sand. This weekend I was going to join a small group of volunteers led by Gitte Kragh (project manager of the Sea Turtle Foundation) in cleaning up the rubbish around Ross Creek.

Why? Because if there is anything I can do to keep Australia beautiful I would do it, and this time it was as simple as strolling along the sand collecting pieces of rubbish, along with the odd shell. Incidentally, the other week I was walking along the beach at South Townsville and found a magnificent nautilus shell strewn upon the shore after recent storms. Cleaning the beach is not only good for the environment but good fun too. It's quite a relaxing and satisfying way to spend an hour or two.

Today during the clean-up I chatted with Gitte about her marine debris campaign and learned that more and more rubbish keeps washing out to sea. We should really be more aware of the origins of this debris so we can stop them entering the ocean accidentally. Much of the rubbish found on local beaches is plastic including an alarming amount of little pieces of hard plastic. Plastic bags and rubber balloons are also common and all three are too often found in the stomachs of dead turtles. At Ross Creek boat ramp, half of the rubbish we collected comprised of cigarette butts and plastic bottles. Again, there were also many little pieces of plastic, plastic bags and a few rubber balloons amongst a long list of others.

A handful of plastic oddities that have been discarded on Townsville's beaches. Photo courtesy of: Richard Duffy

For me, the purpose of picking up rubbish from the beach is to remove debris that would otherwise wash back out to sea where they can be eaten, clogging the bodies of turtles and other animals like shorebirds, whales and dolphins. I've learnt that this will often lead to the death of the animal. These animals are not dim-witted for eating rubbish, but rather mistake it for the often similar looking food they naturally feed on. A floating plastic bag may look like a jellyfish to a hungry turtle, and a rubber balloon might look like a squid from an albatross high above.

Recently, as a reward for volunteering, I was lucky enough to walk the beach at night with Gitte to search for turtles laying their eggs on the very same beach I helped clean earlier that day. It was a truly remarkable experience to see them tirelessly build their nests and lay dozens of eggs inside. Just lucky I had time to tidy the beach before our friends arrived!

Sea Turtle Foundation volunteers (far left: Project Manager Gitte Kragh; third from right: author of this article, Richard Duffy) pose after a morning spent collecting rubbish from Ross Creek and Pallarenda Beach, Townsville. Photo courtesy of: Gitte Kragh.

Researcher Spotlight: George Balazs

By Kristen Weiss

In a time when little was known about green turtle ecology and there was little protection for sea turtles, a young man stepped up to champion the cause of sea turtle conservation. It was 1972, and George Balazs bravely testified before the Hawaii Animal Species Advisory Commission that turtle fishing in the state of Hawaii was increasing dramatically and required immediate management.

Since those "early" days, he has overseen research on many aspects of sea turtle ecology and biology, and supports education programs that raise awareness for species protection. Today, George works at the U.S. National Oceanic and Atmospheric Association (NOAA), heading the Marine Turtle Research Program, and is recognized as one of the world's foremost sea turtle experts. In particular, George has played a critical role in understanding fibropapillomatosis (FP) disease (see story opposite page).

Sea Turtle Foundation recently asked George a few questions about his career working with turtles.

Q: *Who or what inspired you to work with sea turtles originally?*
A: First and foremost the sea turtles themselves- green turtles (honu) here in the Hawaiian Islands. In the late 1960's/early 1970's they needed conservation help and more science information to ensure their survival and proper resource management. Their physical appearance—their appealing eyes—had a favorable impact on me, As did my wife Linda- her eyes shedding tears seeing live

Balazs tagging nesting green turtle at French Frigate Shoals in 1974 . Photo courtesy of www.mississaugawatch.ca

turtles being captured and taken off to market, which in those days were restaurants serving turtle steak to Hawaii's growing visitor industry. And third, I was inspired by a lady named Hilde Cherry, a Honolulu resident and acquaintance that lectured me on several occasions in forceful terms that "if I didn't do something" about the dismal state of Hawaiian turtles, no one else would and the population would disappear.

Q: *What is it about sea turtles that fascinates you most?*
A: I'm most definitely drawn to green turtles, and first and foremost to Hawaiian green turtles, a genetically discrete stock that I can distinguish (as individuals) visually from other green turtles of the world. I believe I feel this attraction because of the strong cultural link of the turtles to the Hawaiian people of the past and present. In addition, sea turtles have been the guiding and connecting factor in weaving an array of friendships and research partnerships I been fortunate to make with people from all walks of life, all over the world. The turtles did this for me—truly an amazing blessing as I look back over the past four decades.

Q: *What is your favourite turtle moment during your time with them?*
A: Swimming in their ocean-world underwater, for capturing research, at the very moment of being successful in grasping one by hand- knowing it's not going to escape, that I'm the "Victor of the Hunt", but that I'll let it go in a short time, after data has been collected, and the turtle will carry identification tags (double pit tags these days, flipper tags before that) for the rest of it's life. The two of us then will have a bond between us—that is, the tag.

Q: *What do you think is the greatest threat that turtles face today?*
A: Not Climate Change. Sea turtles in one form or another have survived for millions of years and I'm confident they will continue to do so in spite of climate change, maybe far more successfully than many vertebrate species, including humans. The greatest activity threat to certain stocks of sea turtles is the directed take of hunting. The Hawaiian experience demonstrates that, if you effectively stop the hunting of turtles for 20-30 years, the population will nicely start to restore itself on a road to recovery. For this I am grateful to the People of Hawaii- that is, Hawaiian people, and people of all ancestries that make up our diverse Community of Aloha, for their accomplishment of allowing the honu time to replenish herself.

Balazs holding Hawaiian juvenile green with children before the turtle's release . Photo courtesy of www.turtles.org

Fibropapillomatosis—a Global Sea Turtle Epidemic

By Andrea Phillott

Fibropapillomatosis (also known as FP) is a disease that results in tumours on the eyes and soft skin (e.g. the neck, flippers, and tail) of marine turtles. It was first described in green turtles from Florida more than 60 years ago, but has since been found in all species of sea turtle. Scientists have discovered that it is an infectious disease, but the microbe that causes it and the method of transmission is still unknown.

In severe cases of FP, tumours prevent the infected turtle from being able to see, feed or swim. They can also grow on internal body organs, making the animal ill enough to strand or die. Sick animals bask in the sun to raise their body temperature, probably to help their immune system fight the infection. Some turtles seem to recover from the disease, but many are never seen again and we presume they have died unnoticed. Vets and turtle hospitals are pioneering new surgical techniques to remove the tumours.

Green turtle with several tumours—A sure sign of FP. Photo courtesy of: www.turtletrax.org

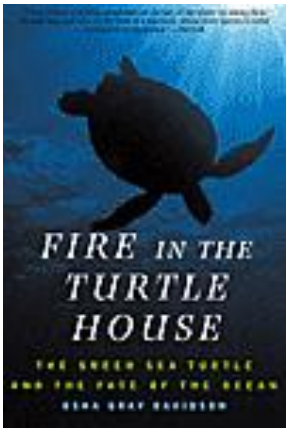
The hotspots for FP include parts of Hawaii, Florida, Barbados and Queensland. Turtles with FP are often found in areas of poor water quality. High human populations, habitat destruction and pollution in coastal areas where sea turtles live are thought to weaken the immune system or expose turtles to chemicals that promote tumour growth.

Marine turtles are thus becoming an indicator of our detrimental effect on the oceanic environment in which many other animals live and from where we catch much of our food. It is a disease we should be concerned about, for the health of the turtles as well as for ourselves.

For more information on FP, visit:

http://www.turtles.org/tumour.htm

Book Review: Fire in the Turtle House



By Andrea Phillott

Our turtles are dying. Increasing numbers are being found with large tumours from the disease "green turtle fibropapillomatosis". What causes the disease and epidemics in unrelated areas has puzzled scientists for decades. *Fire in the Turtle House* unravels the known facts behind this disease and presents a fascinating, scientific detective story. Speaking with marine biologists, turtle enthusiasts and vets, Davidson describes what is happening to sea turtles and the way in which science is racing to solve the problem. Diseases of other marine animals, such as monk seals and corals, are used to highlight the devastation we have caused in the world's oceans and the far reaching effects that are only now becoming obvious.

This book is based on science but written for all who love turtles. It describes human relationships with these animals, our history of harvesting them to near extinction in some areas, and changing their habitat so it is a health hazard they cannot escape. While it is a scientific problem there is little science talk, which makes it equally readable for young adults and non-scientists. However, turtle scientists ("turtleheads") will appreciate Davidson's meticulous attention to detail and description. To better understand one of the greatest disasters believed to threaten the worlds' turtles, I highly recommend *Fire in the Turtle House* as a riveting story. It is beautifully written and will keep you up far into the night.

"Gives readers a startling perspective on the fate of the planet by taking them through time and tides on the back of a sea turtle, whose every species is today endangered or threatened."
~Natural Resources Defense Council's OnEarth

New Turtle Rescue Stretchers On the Way

By Andrea Phillott

Sea Turtle Foundation was recently awarded a grant from the Gambling Community Benefit Fund for the production of 10 turtle rescue stretchers. These will be available for use by other conservation groups who also work with injured turtles. The stretcher is specially designed and custom made so it can be adjusted for turtles of different sizes. They are waterproof and can be easily disinfected to make sure infections are not transferred from sick animals, and collapsible for easy transport. The turtle is held securely in place by large Velcro straps so can't struggle and possibly injure itself, or the human volunteers trying to help it!

Sea Turtle Foundation turtle rescue stretcher in action. Photo courtesy of: Ian Bell

Our thanks to the Gambling Community Benefit Fund for their kind support of our work, and enabling us to help organisations who specifically deal with turtle rescue and rehabilitation. The stretchers will be available for use in early 2009.

Gambling Community Benefit Fund Queensland Government

New Lighting Brochure Distributed to Townsville Communities

By Andrea Phillott

Sea Turtle Foundation distributed nearly 16,000 information brochures about the effects of beach front lighting on female sea turtles and hatchlings to coastal regions of Queensland where nesting occurs. Artificial lights disorientate females when they finish nesting or hatchlings as they emerge from the nest, making it difficult for both to locate the water. The effect of lighting was demonstrated by a flatback turtle who nested on The Strand in Townsville on November 17 2008. She laid successfully but then became confused by the bright lights and headed towards the water park instead of the ocean. Townsville City Council have moved quickly to prevent this from happening again, and have shielded some of the lights along The Strand paths. Sea Turtle Foundation is impressed by the quick response of the council, and hopes they will consider both replacing bright lights with those less disruptive to turtles, and shielding all lights before the 2009/2010 sea turtle nesting season.

Flatback turtle disoriented by lights on The Strand, Townsville. Photo courtesy of: Gitte Kragh

If you have not seen our information brochure on beachfront lighting, you can download it from our website at http://www.seaturtlefoundation.org/wp-content/uploads/2008/05/turtles-lights-web.pdf.

Community Engagement:
JCU Researchers working with Torres Strait Islanders to monitor sea turtles

Turtle track on Dauar Island, Torres Strait. In the distance is Mer (Murray) Island. All photos this page courtesy of Mark Hamann

By Kristen Weiss

It's not every day that you are awoken in the middle of the night by a group of sea turtles trying to climb into your bed! I consider myself lucky, then, to have had just that experience on a recent camping trip to Dauar Island, just off Murray Island in the eastern Torres Strait. I accompanied three sea turtle researchers during this week long adventure to collect data on nesting green turtles: Mariana Fuentes, a PhD student from James Cook University and Sea Turtle Foundation member, Dr. Mark Hamann, a James Cook Uni research fellow, and Dr. Nancy FitzSimmons from Canberra University.

Mariana Fuentes and Nancy FitzSimmons tagging nesting turtles with Indigenous Project Officers.

Our main goals were to tag as many turtles as possible, record sand temperature and beach morphology data, and to teach Indigenous Dugong and Turtle Project Officers these techniques. Each night, several hundred green turtles diligently climbed up onto the steep beaches of Dauar, some who succeeded in laying a clutch of eggs, many others who failed to find a suitable spot amongst the crowd and turned back until another night. We tagged about 50-100 turtles each night, with help from Project Officers and local community members who were keen to join in. Indeed, their help and enthusiasm greatly enhanced the week's success.

While visiting, Mariana explained the significance of her research to the local Project Officers, describing how changes in sand temperature can influence the ratio of male to female hatchlings, and that sea level rise may have negative impact on nesting beaches in the Torres Strait. The results of her study will help island communities prepare for effects of climate change and manage their sea turtles accordingly.

Nancy also took the opportunity to explain her work on turtle genetics in the Torres Strait, sparking a discussion about the location of possible foraging grounds and migratory routes of turtles that nest in the Torres Strait.

Another highlight of our stay was meeting many of the local school children on Murray Island, where Mark and Project Officer Moses Wailu explained how and why we tag turtles. Two female greens were brought to the beach so children could watch a tagging demonstration. The kids eagerly named each turtle and waved goodbye as they were released back into the ocean. Spending time engaging with children and adults on Murray allowed us to share knowledge, beliefs, stories, and laughter, an experience I found truly enriching. The crystal blue waters, coral reefs, and volcanic peaks surrounding Murray and Dauar Islands set a dramatic backdrop against which I experienced first hand the cooperation between researchers and Indigenous community members to protect a creature they both cherish—the sea turtle.

After a week of rugged camping I admit I was glad to see my own bed again; but I have to say that fending off nesting turtles all night who were determined to find a pathway through my tent to a nesting spot was likely the most rewarding reason I've ever lost so much sleep.

Moses Wailu and Mark Hamann teach Murray Island school children about why we tag turtles.

2008 Nest monitoring at AIMS Beach

(Continued from page 2)

nest protectors of this design have been trialled anywhere in the world. Donations from students at Willows State School and Belgian Gardens State School bought materials to make the nest protectors. To help with the problem of nest depredation, the Environmental Protection Agency lays baits on the beach in the areas most used by the predators. We will revisit the nests in late January to measure the success of the nest protectors. Sea Turtle Foundation would also like to thank the Australian Institute of Marine Science (AIMS) for allowing us access to their beach and the opportunity for so many of our local volunteers to see a nesting turtle.

Tracks have also been reported at Pallarenda and The Strand in Townsville, Magnetic Island, and Bowen. A big THANKS to all of our helpful volunteers!

Give the Gift of Sea Turtle Conservation this Christmas

Looking for the perfect gift for that someone who seems to have everything? How about a Sea Turtle Foundation gift membership! Spread cheer along with supporting sea turtle conservation, research, and education efforts. Email **andrea.phillott@seaturtlefoundation.org** for last minute details and membership forms.

Indigenous hunting of marine turtles in Australia: conservation challenge or opportunity?

By Andrea Phillott

The first of a series of public talks presented by the 29th International Symposium on Sea Turtle Biology and Conservation and sponsored by Sea Turtle Foundation, opened up the topic of indigenous harvesting of sea turtles as a conservation opportunity. Guest speaker Professor Helene Marsh of James Cook University is recognised internationally for her knowledge of the ecology of marine animals such as sea turtles and dugong, and the application of this information to management of the animals as an indigenous resource. Helene gave an insightful overview of the importance of marine animals as a symbol of cultural identity and a food source to many traditional owners in northern Australia. She believes in the value of involving indigenous groups in managing their sea country and the potential for both environmental and social benefits to such communities. While acknowledging the declining numbers of turtles worldwide, Prof. Marsh presented a compelling argument for involving indigenous communities in turtle management to ensure populations persist in healthy enough numbers to allow sustainable take of the animals.

Prof. Helene Marsh speaks before a Townsville audience about Australian Indigenous management of sea turtles. Photo courtesy of: Sara Bell

Scientific and public perception of traditional hunting is slowly changing as made apparent by the 2008 Banksia Award to the North Australian Indigenous Land and Sea Management Alliance (NAILSMA) Marine Turtle and Dugong Project. The Banksia Environmental Foundation recognises environmental excellence and sustainability. Combining Traditional Knowledge with scientific research, the NAILSMA project promotes the involvement of Indigenous Rangers and their Aboriginal and Torres Strait Islander communities in monitoring and managing turtle and dugong populations across northern Australia.

NAILSMA members accepting 2008 Banksia Award. Photo courtesy of www.banksiafdn.com

Upcoming Events:

- 12 January—1st volunteer meeting of the new year; Sea Turtle Foundation Office at 16/356 Flinders Mall (Citilink Building), Townsville
- 7/8 February—AIMS Beach, Townsville, turtle nest excavation; see website for more info
- 17-19 February—International Sea Turtle Symposium in Brisbane
- 1 March—Clean Up Australia Day at Ross Creek, Townsville

For more details and updates about these and other events, visit the calendar on our website:
www.seaturtlefoundation.org/news-room/events

Free Public Seminar Series

6:30 pm Wednesday, 17 December 2008

Museum and Art Galleries of the Northern Territory, Darwin

The Biology and Conservation of Sea Turtles in the NT

Presented by: Dr. Scott Whiting of

Biomarine International, NT

Dr. Scott Whiting

15 February, 2009 (Time TBA)

Museum of Queensland, Brisbane

Conservation of leatherback turtles across a changing planet

Presented by: Dr. Peter Dutton of

Southwest Fisheries Science Center, La Jolla, CA, USA

Dr. Peter Dutton

Presented as part of the lead up to the:

29th Symposium on Sea Turtle Biology and Conservation

www.turtlesbrisbane2009.org

Get ready—the 2009 Sea Turtle Symposium is almost here!

The 29th International Symposium on Sea Turtle Biology and Conservation invites all turtle enthusiasts to attend!

The scientific program runs from the 17-19th February 2009; registration details are available at www.turtlesbrisbane2009.org. However, some events are also open to the public for free.

The official opening and welcome event will be held at the South Bank Parklands on Monday 16th February, and a sea turtle film night on Tuesday 17th February 2009 at the Brisbane Convention and Entertainment Centre.

Check the symposium website closer to the date for more details. Please email us at info@seaturtlefoundation.org if you are going to attend any of the events and would like to meet other members of Sea Turtle Foundation.

Sea Turtle Foundation

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E-mail: info@seaturtlefoundation.org

Sea Turtle FOUNDATION

Visit our new website!
www.seaturtlefoundation.org

Sea Turtle Foundation, previously known as the Indo-Pacific Sea Turtle Conservation Group, was formed to help protect sea turtles, and to address the many threats they face. You can read more about sea turtles and the threats on our website.

We achieve our aim through education, monitoring, research support and advocacy. You can help us help the sea turtles by becoming a member, volunteering and donating funds or equipment. Sea Turtle Foundation is dependent on donations for our projects and campaigns to succeed. You can support Sea Turtle Foundation in a variety of ways. Please visit our website to learn more.

Sea Turtle Foundation is based in Townsville, Queensland, Australia.

Happy Holidays from all of us at Sea Turtle Foundation!