

Turtle Trails

Bands of volunteers and staffers work together to monitor, protect and treat the east's sea turtle population

story & photos by Megan Dohm

It is just after midnight on our warm, quiet beach. Waves break the quiet of a coastline that is asleep, sweeping the activities of the day out with the tide. A being emerges out of the water, moving cautiously up the beach. She is many things: a skilled navigator, a huntress, a creature of some mystery and soon, a mother. The loggerhead sea turtle is looking for a safe place to create a nest and lay her eggs. Scooting her way up the sand, she selects a spot near the low dunes and digs in the width of her flippers, then scoops out a special chamber for the eggs with her back flipper. With all of the preparation finished, she lays between 100-120 eggs, which will be covered and remain buried beneath the sand for the next 50 to 60 days. Her work completed, the mother returns to the ocean. This ritual will be repeated several times within nesting season, which in North Carolina runs from May through September. After the turtle embryos have reached maturity, they become hatchlings, breaking out of their eggs with a tooth grown specifically to help them make their first journey. The hatchlings fight their way up and out of the sand, and, if all goes well, scramble out to the ocean. Once they hit the water, their instincts kick in and they soar through the ocean in the first surge to safety off the coast.

North Carolina has 330 miles of ocean-facing sandy beaches which serve as turtle nesting grounds. Out of only seven species of sea turtle, we see four here in our state. Loggerheads are the most common, followed by green turtles, with a rare sighting of Kemp's ridleys and leatherbacks. All seven species of turtles are internationally listed as vulnerable for extinction due to the challenges that face them at every age. As hatchlings, sea turtles are in danger from predators. On land, there are plenty of birds and crabs who would love to use them as a food source, while predators also roam the ocean. This is a difficulty sea turtles have faced for thousands of years, and the sheer numbers of offspring (300-500 per female in one nesting season) show that they have adapted to cope with their place in the food chain.

When a hatchling emerges he will find the brightest horizon and start working his way toward it. While this was a foolproof tactic in the days before electricity, now it has proven to be problematic. With lights blazing out from homes and businesses that sit directly on the beach, it is easy for the turtle to go up over the dunes toward predators such as foxes, raccoons and fire ants. If the hatchling is fortunate enough to head out in

the right direction, he is at risk of getting tangled in trash or equipment left on the beach. Risk of dehydration is high; if he does not make it to the ocean by about nine o'clock in the morning, the prognosis is not hopeful. Those lucky turtles that make it out to sea tend to feed at the surface of the water, where plastic (which can look like a tantalizing meal) floats. Even if a turtle isn't immediately impacted by consuming plastic, it can cause secondary effects and make them more susceptible to dangers like cold stun, a reaction to long periods in cold water. With mild cases of cold stun, a turtle can snap back simply by moving to warmer water for the day. In severe cases they are motionless, at the mercy of the currents and passing predators.

Along the Crystal Coast, the crew called in for any turtle incident is most likely going to be the Emerald Isle Sea Turtle Patrol. A nesting mother, wandering hatchling, stranded adult, or even a dead turtle – you name it, they can deal with it. As the program coordinator Dale Baquer told us, the group's chief responsibility is nesting mothers and their hatchlings, but they know who to call for just about any other situation.

For sick or injured turtles of all ages, there are several options for rehabilitation: CMAST in Morehead City, the Karen Beasley Sea Turtle Rescue Center in Surf City and the N.C. Aquarium at Pine Knoll Shores. The turtles that are transported to the aquarium are under the careful eye of Michele Lamping, who heads up the turtle care with the assistance of a team of aquarists. Once turtles are back to fighting fit, the rehabilitation center coordinates with the N.C. Wildlife Resources Commission (NCWRC) and the Coast Guard for release back into the wild. Although the state only started monitoring turtle behavior in the 1970s, the network has grown to over 1,000 people in the intervening decades of observation, training and care. For the Bogue Banks area, the first liaison is the Emerald Isle Sea Turtle Patrol.

The Sea Turtle Patrol is made up of around 250 volunteers, all working in specific capacities to help ensure turtle safety. They cover 13 miles of beach, split into 1-mile zones. During nesting season, walkers in each zone are out at dawn to look for tracks left by nesting mothers. When a nest is discovered, other members come out to stake it off. If it is in a precarious location, volunteers will move the nest, but only if it is absolutely necessary. The goal is always to keep things as natural as possible. Once a nest is close to hatching – known as a boil



NC Aquarium photo

– nest sitters keep a vigil through the night to ensure that the hatchlings make it out to the water.

During the summer, the sitters often have plenty of company; visitors pull up their beach chairs and settle in to watch the nest and ask questions, this draws in more people, and before you know it, it's a turtle party. The fall boils tend to be more quiet, intimate affairs with just the sitters and hatchlings. A few days after a boil, the patrol excavates the nest and takes an inventory, which gets turned over to the NCWRC.

Coordinator Dale Baquer and co-coordinator Ruthie Gomez-Stuart handle the logistics of keeping 250 volunteers organized and up-to-date on regulations set forth by the Wildlife Commission. Along with direct interactions with the turtles, the next goal of the Turtle Patrol is to expand public outreach and awareness. Baquer and Gomez-Stuart have begun reaching out to homeowners associations

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to talk about making light more turtle friendly, and are working on a website to make information easily accessible to the public. Despite the necessary administrative work, both Baquer and Gomez-Stuart cite direct turtle interaction as the reason they got involved. There is a certain magic to sea turtles that just draws people in.

Such was the case for Michele Lamping, turtle care coordinator at the aquarium. While interning with dolphins at Mote Marine in Florida, Lamping found herself slipping into the lab before work to spend time with the injured sea turtles. She accepted a job at the Fort Fisher aquarium before making the move to Pine Knoll Shores to help with the expansion and turtle program, and has been there ever since. Onlookers can see the years of experience as she goes about the day's routines: cleaning the holdings where recovering turtles live, checking water, chopping and weighing out each turtle's food down to the gram and navigating the maze of holding tanks behind the exhibits in the aquarium. A matter-of-fact scientist, her voice softens when she talks towards her flippered charges. Despite the patterns of the everyday – clean, chop, feed, observe – the job is not boring; Lamping knows each turtle under her care, and is keeping a careful eye on their widely varied needs.

Turtles who have been brought in for cold stun have to be thawed out, raising the temperature of the water slowly

and keeping levels deep enough to prevent the turtles from dehydrating, but not so deep they drown. These turtles need different treatment than, say, a turtle with a broken fin or a lethargic hatchling.

Lamping has to be ready for whatever the Wildlife Commission wants to send her way – in the height of nesting season, that can be anywhere from 10 to 100 in one day.

The challenge of designing and building all of the life support systems is one that Lamping enjoys. All of the systems have to meet certain requirements for the health of the turtles, but they also have to be sturdy, waterproof and completely adjustable for individual turtle's needs. When the aquarium is at maximum turtle capacity, the holdings are anywhere and everywhere, filling the cement and fluorescent jungle, tucked behind exhibits and in front of offices. A turtle holding in the rehabilitation section is kept intentionally minimal. Since turtles are skittish, new things unsettle them – so they are kept in small, separate areas to encourage rest and sleep, in clean surroundings with one semicircle to shelter under, rest on or rub against. Every two weeks the patients receive a visit from the vet who either designates them ready for release, or gives an updated list of requirements to Lamping. The turtles who are returned to the wild have their instincts kick back in



immediately - even the ones who required a year or two with the aquarium to get them to full health.

What human activity is harmful to turtles, and what are some easy-to-implement changes people can put into place to give turtles a better chance? For starters, you can practice basic beach etiquette: once your day in the sun and sand is done, make sure you take home any equipment you brought and dispose of any trash. In addition to deterring nesting sea turtles, deep holes in the sand can be troublesome to emergency vehicles and to hatchlings struggling to get to the ocean. Coastal residents can also turn off any lights that can be seen down on the beach. Extraneous lights can spook nesting mama turtles, and confuse hatchlings.

Garbage – particularly plastic – that looks like food is a big problem for turtles. If you can trim back your plastic usage at home, that reduces the risk of your waste making it to the sea. Another easy step is to stop using plastic straws. Americans use 500 million straws each day. Straws are among the top 10 items found during beach cleanup, in a place where 60%-80% of marine debris is made up of plastic, according to the EPA. There are two simple remedies for this: either stop using straws altogether, or find a paper replacement.

If you have a flexible schedule and are interested in getting involved, the Emerald Isle Turtle Patrol is a great place to start. All volunteers begin as walkers, scouring the beach starting at six every morning.

If you see a turtle struggling while you are out on the beach, the best thing you can do for it is to stand back and call in the people who have been trained to handle him. Touching a turtle can cause an exchange of bacteria which is at best unhelpful and at worst fatal, and interaction can exacerbate the problem that caused him to strand in the first place. Instead, call in the people who are passionate and trained for turtle care. Along Bogue Banks, call Dale Baquer of the E.I. Turtle Patrol – 252-646-8292. 

