

Temperatures play a vital role in the lives of Sea Turtles

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Sea Turtles have lived for millions of years. Many events come together to make their survival endangered or threatened, depending on the species. These events that create failures include human interference (net catches, poaching for eggs and/or carapaces for use in ornamentation), boat strikes and captures, pollution and natural predators. In recent years, humans have intervened to try and correct some of the damage they have caused to sea turtles. These efforts, plus nature, come together to assist in the survival of sea turtles. There seems to be a very fine line between success or failure for these mystical creatures.

Temperatures play so many vital roles in the existence of sea turtles. Any changes in the temperature can cause issues for sea turtles. Female sea turtles spend the winter traveling to warmer waters, sometimes hundreds of miles away. As the temperatures rise, and the water temperatures increase, the females begin the journey back to the area of their own hatching. When the water temperatures reach a certain level, they will begin coming towards the shore in order to mate and begin producing eggs. Surprisingly, the temperature of the water will even effect how often the female sea turtle will lay her clutches of eggs. warmer water temps tending to shorten the duration between nests.

Once the nests are laid, and the females have lumbered back into the ocean, the waiting begins. Even as the eggs are incubating, temperature is already playing a role in these tiny embryos. Technically, it will be years before their gender can be determined while alive, but in the nest, temperature is already determining if a turtle will develop as a female or male. Eggs that are lower in the nest are in cooler sand. Cooler sand (temps below 85 degrees) tend to produce more male sea turtles. Those eggs higher up in the inverted light bulb shaped nest, are in warmer sand (85 degrees and higher), which mostly produces female turtles.

People often ask us "how long until the hatchlings come out"? Temperature even influences that! Hotter, dryer summers often result in shorter duration between the date the nest is laid and the date the first hatchling(s) emerge. As the season progresses into cooler weather, the duration between those 2 events tends to become longer.

Speaking of cooler weather, even that can be a problem for these beloved creatures. Sea turtles that hang around too long instead of heading towards warmer waters can put themselves in harm's way. Weather can be fickle and change quickly. When a cold front moves in early in the season, turtles become stunned, and will need to be rescued. Helping stunned turtles requires more than just warming their body temperatures as I believed when I first heard about "cold stunned" turtles. Often times their organs begin to shut down and can be damaged, requiring long rehabilitation. Thankfully, Michelle Lamping and the N.C. Aquarium at Pine Knoll Shores and the Karen Beasley Sea Turtle Rescue and Rehabilitation Center are nearby to help in these cases!

In recent years water temperatures have increased as have the air temperatures each summer. These increases are a cause for concern for those of us who love sea turtles. Although we can't control the temperature, throughout the summer we will be offering suggestions for helping make some changes. Gary Hardee, a volunteer with the EI Sea Turtle Patrol, said it best: "if we care about turtles, we have to care about their environment"!

For more information about Sea turtles, please visit our website at: www.eiseaturtlepatrol.org Always

remember: Don't leave anything behind on the beach but your footprints!