



Texas Shores

Winter/Spring 2018-2019

Texas Sea Grant College Program

Vol. 44, No. 1

CONSERVATION EFFORT

in Texas
pays off



Hundreds of Kemp's ridley hatchlings head to the water off a Mexican nesting beach.

Record-breaking cold-stun season sends conservationists to the drawing board



Cold-stunned sea turtles kept in National Park Service offices during the January 2018 event.

NATIONAL PARK SERVICE PHOTO

The winter of 2017–2018 saw record-breaking numbers of seemingly lifeless, unresponsive turtles in near-shore waters and inlets of Texas — the largest cold-stun event recorded in the state and the second largest in the country.

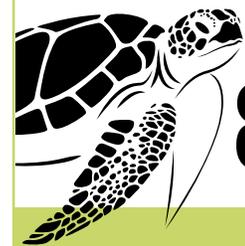
From November 2017 through the first week of March 2018, rehabilitation facilities admitted 3,668 hypothermic — or cold-stunned — green sea turtles that were rendered unable to swim or defend themselves by water temperatures below 50 degrees. These reptiles are ectothermic, meaning their body temperature depends in part on the environment. Without swift action after a cold stun, their bodies would shut down permanently.

In a bit of a twist, the increase in cold-stunned turtles may reflect a recent rise in green sea turtle numbers—in other words, a conservation success. While a cause for celebration, that increase in the population comes with a downside: more turtles needing rescue.

In addition to the sheer numbers, cold stuns present another challenge: requiring significant resources in a short amount of time. Falling temperatures quickly stun large numbers of sea turtles, and a rehab facility’s ability to take them in depends on an abundance of resources available at a moment’s notice.

“We have the situation where we’ve got a lot of work now that we didn’t have, say, nine years ago,” says Donna Shaver, Texas coordinator of the Sea Turtle Stranding and Salvage Network. “And we’re increasing capacity, learning how to search these areas more efficiently.”

Rescuers at the Texas State Aquarium in Corpus Christi received their first wave of the 2017–2018 cold stuns in mid-December, and a second wave during the New Year’s holiday.



84%

of the cold-stunned turtles were found alive last winter, up from the 2009–2010 cold-stun season, when rescuers were less prepared. That winter, only 36 percent of the 466 cold-stun turtles found were alive.

“I’ve done a lot in my career, and that was probably the most exhausting thing I’ve ever done. It was 20-hour days,” says Jesse Gilbert, vice president and chief operating officer of the aquarium. “We would go until 2 or 3 some mornings and turn around and the next load would be in the rescue center at 7.”

After two days and a couple of loads of a hundred or so turtles, the aquarium transitioned from using five dedicated staff for the operation to rotating in 40 to 45 support staff. The Aquarium held about 1,100 turtles at the peak of the cold-stun season, taking them from the Amos Rehabilitation Keep (ARK) in Port Aransas, which had yet to recover from Hurricane Harvey before the first cold-stun event hit. Sea Turtle Inc. on South Padre Island turned its new education facility into an overflow rescue center, taking in nearly 300 cold-stunned green sea turtles.



NATIONAL PARK SERVICE PHOTO

Cold-stunned green sea turtle found on the Texas coast in January 2018.

From November 2017 through the first week of March 2018, rehabilitation facilities admitted 3,668 hypothermic — or cold-stunned — green sea turtles.



NATIONAL PARK SERVICE PHOTO



NATIONAL PARK SERVICE PHOTO

Cameron “Mac” Purvin (left) and Donna Shaver (above) with the National Park Service’s Division of Sea Turtle Science and Recovery release sea turtles that had been cold stunned in winter 2018.

STRANDED SEA TURTLES

8

1980

230

2009

The stranding network has recorded cold-stun data since 1980, when only eight green sea turtles were found stranded in Texas. The number hit 230 in 2009, and “then it really took off,” says Donna Shaver, Texas coordinator of the Sea Turtle Stranding and Salvage Network.

“It’s a relatively recent phenomenon,” Shaver says. The stranding network has recorded cold-stun data since 1980, when only eight green sea turtles were found stranded in Texas. The number hit 230 in 2009, and “then it really took off,” says Shaver.

While other species of sea turtles forage in deeper water off the Texas Gulf coast during winter, the vegetarian greens stay in shallow bays to feed on lush sea grasses. They must navigate limited outlets between barrier islands to the open Gulf of Mexico. As Shaver puts it, “They take a risk.”

“When you have all of these turtles washing up and in peril, and you’ve already lifted 200 turtles, 10 pounds now feels like 150 pounds,” says Alicia Walker, program coordinator of the ARK. Knowing that each life saved is critical for an already threatened turtle population inspires rescue workers to keep going, she says. “If I

don’t wake up, if I don’t go, if I don’t try my best, these turtles are going to die.”

Cold-stunned turtles are completely vulnerable. Their only defense is to bite or swat their flippers, says Nina Nahvi, veterinarian technician at Sea Turtle Inc., and once cold-stunned, the turtles can’t move their flippers.

The quicker the public reports a cold-stunned turtle and rescuers get to it, the better the outcome. For rescued turtles with no other injuries, the prognosis is usually good. Eighty-four percent of the cold-stunned turtles were found alive last winter, up from the 2009–2010 cold-stun season, when rescuers were less prepared. That winter, only 36 percent of the 466 cold-stun turtles found were alive.

When predictions call for temperatures below 50 degrees, an alert goes out to local rescue networks. Dispatchers head for areas where turtles are likely to be affected. Once at a rehab center, sea turtles are given fluids and glucose to restore their energy as they begin to warm up to room temperature. They also are weighed, measured, tagged and numbered. Rescuers move sea turtles to water tanks once they become responsive, and release them back into the wild when outside temperatures rise.

“Releasing animals back into the wild is one of the greatest feelings in the world,” says Walker of the ARK. “They swim away, and you know that you’ve won. They’re back in the wild where they belong.”

Unlike sea turtles hit by boats, entangled in fishing line or nets, or that have ingested plastic bags, more than 90 percent of cold-stunned sea turtles in Texas are released after about a week.

After several particularly busy cold-stun years in a row, Texas sea turtle rescuers and rehabbers stepped up efforts to be prepared.

Sea Turtle Inc.’s new permanent resident and educational facility will continue to serve as overflow space during a cold-stun event. It offers the capability to perform x-rays and major surgeries on site. In addition, Sea Turtle Inc. offered a series of cold-stun turtle rescue trainings for the public before last winter’s cold-stun season.

The aquarium in Corpus Christi shifted the focus of its Wildlife Rescue Center to accommodate 40 long-term patients and can provide temporary refuge for up to 1,000 cold-stun turtles. It has isolation tanks, cutting-edge surgical instruments, and different teams that specialize in veterinary record keeping and other rehab services.

The ARK, while still recovering from Hurricane Harvey, added a few tanks, including some for water birds that could be used for turtles in a pinch. The facility now can comfortably hold 400 short-term animal patients and about 75 long-term patients.

All the Texas turtle rescue facilities worked together to streamline the intake process and to focus rehabilitation on rapid recovery and release. That coordination helps ensure that facilities don’t hit capacity and lowers the risk of possible disease transmission among turtles from overcrowding.

With these new measures, Texas conservationists hope to be ready for future cold-stunning events and to keep them from spelling disaster for the sea turtles. ✓

Cold-stunned turtles are completely vulnerable. Their only defense is to bite or swat their flippers, says Nina Nahvi, veterinarian technician at Sea Turtle Inc., and once cold-stunned, the turtles can’t move their flippers.