

## S1E7: Saving Sea Turtles and Birds on the Texas Coast

The Gulf Podcast

Written, Produced, and Narrated by Maxwell McClure

**[Maxwell McClure, host]:** Hi everyone, this is Max McClure. You're tuned in to The Gulf Podcast, which is made possible by the Harte Research Institute for Gulf of Mexico Studies at Texas A&M University-Corpus Christi.

If you live in the Lone Star State, or simply tuned into the news back in February, you probably know all too well about the winter storm that struck Texas and surrounding states with brutal, sudden temperature drops. When that cold front came in, millions of homes and businesses lost power in the state, leaving some in the dark for days, often without clean water, if any at all.<sup>1</sup> My wife and I personally lost power for almost five days and our indoor temperature dropped to forty-five degrees. We couldn't even boil our water because our stove is electric, but luckily, we had a supply of water stashed in case of an emergency. Many had it much worse. The state reported over a hundred deaths due to the storm.<sup>2</sup> That's almost twice as many people killed by Hurricane Harvey in 2017.<sup>3</sup> Most people probably haven't had time to process the total impact of the storm, including its impact on wildlife. I'm here to bring an angle to this storm that you might not be aware of. When the temperature of water drops below fifty degrees, something harmful happens to sea turtles. As cold-blooded reptiles, their body temperature drops so much that they essentially become paralyzed, leaving them in a vulnerable state where they can go into shock, catch pneumonia, or become frostbitten. It's called hypothermic stunning, or cold-stunning, and during the recent winter storm, Texas experienced the largest cold-stunning event ever recorded in the United States.<sup>4</sup> 12,155 cold-stunned turtles were rescued during the winter storm, which was three times the amount of the previous record in Florida.<sup>5</sup> After the storm, I reached out to the Amos Rehabilitation Keep, also known as the ARK, to learn about their role in rescuing and treating cold-stunned turtles in the Corpus Christi and Port Aransas area. This is the Wildlife Rehabilitation Manager of the ARK, Andrew Orgill.

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<sup>1</sup> Brian K. Sullivan, and Naureen S. Malik, "5 Million Americans Have Lost Power From Texas to North Dakota After Devastating Winter Storm," *Time*, February 15, 2021, <https://time.com/5939633/texas-power-outage-blackouts/>.

<sup>2</sup> Edgar Sandoval, Rick Rojas, and Allyson Waller, "Death Toll from Texas' Winter Storm Rises Sharply to 111." *New York Times*, March 25, 2021. <https://www.nytimes.com/2021/03/25/us/texas-winter-storm-death-toll.html>.

<sup>3</sup> Sandoval et al., "Death Toll from Texas' Winter Storm."

<sup>4</sup> John Burnett, "Texas 'Cold-Stun' Of 2021 Was Largest Sea Turtle Rescue In History, Scientists Say," *National Public Radio*, March 13, 2021. <https://www.npr.org/2021/03/13/976105783/texas-cold-stun-of-2021-was-largest-sea-turtle-rescue-in-history-scientists-say>.

<sup>5</sup> Burnett, "Texas 'Cold-Stun' of 2021."

<<winter storm breeze and waves blowing in>><sup>6</sup>

**[Andrew Orgill]:** This past winter, well...last month...the water temperature dropped significantly...It took an effect on the fish. It took an effect on the birds, and it took a huge effect on the sea turtles as well...They were on the boat ramps, and the channels, and the canals, pretty much everywhere where there was shallow water here, we were finding turtles that were washing up...So, previously, during cold-stunning, I mean, we've had events where we've had maybe two to three hundred turtles, but we've never had something where we are in the magnitude of twelve hundred turtles.

**[MM]:** Andrew is an easy-going, friendly, and well-knowledged guy. He's surprisingly young to be in such an important position, somewhere in his mid to late twenties, so I found that to be quite inspiring. After interviewing him over a phone call, I toured the ARK facility, which is in the complex of the University of Texas Marine Science Institute.

**[AO]:** It was started by Tony Amos, who worked as an oceanographer and a researcher for the University of Texas, the Marine Science Institute out here in Port Aransas...and he, during one of the first original oil spills that he encountered out here, found a couple turtles and a couple birds on the beach that were oiled.

**[MM]:** Let me take you back to December 10, 1978.

<<industrial ambience>><sup>7</sup>

**[MM]:** On this day, workers began drilling oil in an offshore platform called the Ixtoc I Exploratory Well in the Gulf of Mexico.<sup>8</sup> Then, on June 3, 1979, something went terribly wrong.

<<industrial alarm, followed by explosion and flames>><sup>9</sup>

**[MM]:** Oil and gas began to pour into the Gulf of Mexico after the explosion, mixing with the water and polluting everything it touched.<sup>10</sup> It took almost a year to cap the well, leading to one

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<sup>6</sup> Adapted from Kodack, "Howling Wind," last modified December 6, 2014, <https://freesound.org/people/Kodack/sounds/256862/>; adapted from felix.blume, "Waves crashing on the rocks in Veracruz," last modified November 21, 2017, <https://freesound.org/people/felix.blume/sounds/411509/>.

<sup>7</sup> Adapted from reznik\_Krkovicka, "Industrial\_machine\_hydraulic," last modified April 21, 2015, [https://freesound.org/people/reznik\\_Krkovicka/sounds/271328/](https://freesound.org/people/reznik_Krkovicka/sounds/271328/).

<sup>8</sup> Arne Jernelöv and Olof Lindén, "Ixtoc I: A Case Study of the World's Largest Oil Spill," *Ambio* 10, no. 6 (1981): 299.

<sup>9</sup> Adapted from jirzin, "Alarm\_sequence.wav," last modified June 27, 2015, <https://freesound.org/people/jirzin/sounds/348551/>; adapted from tommccann, "Explosion\_01.wav," last modified May 4, 2014, <https://freesound.org/people/tommccann/sounds/235968/>; adapted from BonnyOrbit, "Fireplace crackling wood little flame.wav," last modified September 11, 2019, <https://freesound.org/people/BonnyOrbit/sounds/484338/>.

<sup>10</sup> Jernelöv et al., "Ixtoc I," 299.

hundred twenty-five million gallons of oil leaking into the Gulf.<sup>11</sup> This was the same oil leak that affected the birds and turtles Tony Amos found washed up on the shore. This led him to founding the ARK.

**[AO]:** It started off as a small building with, I think it had two tanks in it. Small-scale rehabilitation, I mean, a couple of birds, and maybe two to three turtles a year. And from there, we were on the property of the University of Texas, so through their help, we were able to get more space on their property here, and that grew into having a bigger bird rehabilitation facility and a bigger sea turtle rehabilitation facility as well. The big turtle facility that we have here was through a donation from the McAlister family out in Port Aransas. So, they funded the original turtle building for us and then that was able to get us from having two tanks to...ten tanks up there. And then from there, we were eligible to get more tank space outside...So over the years, the ARK grew, and then...during Hurricane Harvey, we lost a huge portion of our facility. We lost most of our outside caging. Our big educational pelican yard had all of the netting destroyed. Some of our outside structures got taken down. We had some cracks in our big tank outside. Thankfully, we were able to get several grants through a bunch of awesome organizations and assistance locally as well and through the university and kind of rebuilding and restarting. We were able to get structures that were better and more up to code than they were before. We'd kind of gone from repairs to being able to start over. So, we were able to kind of take that opportunity to get everything up to standards...we have some awesome facilities now.

**[MM]:** Over the years, the ARK has collaborated with many local rescue and rehabilitation centers such as Padre Island National Seashore, Texas State Aquarium, and Texas SeaLife Center. These partnerships are crucial when massive cold-stunning events occur and help to mitigate the stress of coordinating thousands of turtles into one location.

**[AO]:** We had on-site more turtles during that time than we usually have in an entire year. So, I mean, that's one fun part of the job with rehab is that, I mean, you never know what's going to happen. I mean, one day you could come in and just have routine feeding and cleaning, and the next day you could be responding to...a thousand turtles, or, I mean, you never know what's going to happen, so that's what keeps it fun...The first day primarily took turtles that were found in the Mustang Island area. So, we recovered about one hundred and fifty turtles just in that first morning from the Port Aransas area...We all stayed out in Port Aransas, so, I mean, we didn't have to risk crossing the bridge or not being able to get here...we were here all day pretty much from sunrise to sunset every day...just a whole team effort of everyone being here. And as far as doing the rescues....we'd go out to pick up two and we'd come back with twenty.

**[MM]:** Maintaining the turtles is taxing work. Andrew told me that upon arrival, each turtle was put through triage to assess who had a low blood glucose and needed fluids, who looked thinner and weaker, and who had wounds that needed attention. Sometimes, turtles have been

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<sup>11</sup> Jemelöv et al., "IxtocI," 299.

injured so badly that they have to become permanent residents at the ARK. I got to see some of them when I visited.

**[AO]:** And then these guys who think they're going to get fed are our resident green sea turtles. When we have the cold-stunning events and they're all floating up at the surface, they're real susceptible to being hit by boat propellers. So, they were all hit if you look at the top of their shells. They all have wounds across their carapace right across their spine. So, it caused a deformity there and then also paralyzed their back flippers. And then also you got some air trapped in their shells. So they're not able to dive as well as they have to be able to be released and then they also have that air trapped in there as well that causes them to be buoyant, and then their back flippers aren't moving, so they're not really able to swim properly, and kind of maintain an equal level on the water as far as their orientation when they're swimming.

**[MM]:** As for other maintenance while the turtles were at the ARK, the staff regularly applied Vaseline to prevent the turtles' shells from peeling, which is common when they're out of water for long periods of time. I spoke to Riley, who was responsible for the direct care of the massive inflow of patients.

**[Riley]:** So I originally started over here in the bird building with the first batches, the hundred turtles we got on the first day, and then by the second day, I was over in the auditorium dealing with three hundred turtles at a time. I personally worked up eight hundred and forty-six turtles over in the auditorium, just measurements, weights... looking at them and corresponding with the vet, making sure that they're okay to go back out into the wild and taking the ones that weren't okay to go back out into the wild and giving them more critical care and a lot more attention. So, it kind of was a big shock at first, but once we had a rhythm, we were just kind of like, "Okay, this is what we're going to (laughs) do now."

**[MM]:** I also spoke to Jasmine, who was on her way to save a pelican when I ran into her.

**[Jasmine]:** ...at first, we were just hoping it wasn't going to be too bad...I think we definitely were expecting a little bit of a busy couple of days, then it turned into a very busy nine days...I think the first day, I got a call from Andrew and basically he said, "Hey, we're about to be trapped on the wrong side of the city. So, do you want to head out here last minute?" And I was like, "Alrighty!" So (laughs)...we trapped all trapped ourselves over here just so that way we'd have access to the ARK and the facility as well as to be available for the animals in this side of the bridge from Corpus Christi because all of us do live there...we definitely had lots of fun trying to problem-solve when the lights went out...when we had no access to freshwater...so, I remember, I think, the first night or two we were all in here with a bunch of turtles and pelicans like floor to ceiling, all over the floor, nothing was not covered by an animal...I hope we never have another big cold-stun event like that...but I think it was definitely great to participate in that and to really put as much effort as we could to save as many turtle lives and...pelican lives, too...because we did get lots of cold "stunned" (laughs) in a sorts pelicans as well.

**[MM]:** The ARK rescued about fifteen to twenty pelicans during the storm. I got to take a look at some of them in the ARK's flight chamber. It was a wide, open-aired enclosure filled with an assortment of birds. There was even a pelican outside the cage, sitting on the top as if it was a part of the group. Andrew told me that it actually was a former patient that was rehabilitated, but still returns every night to roost among its comrades. The on-staff vet of the ARK, Dr. Shayna Whitaker, described their recently brought-in pelicans as suffering from frostbite on their throat pouches. She told me that their sea turtles came in with unique challenges as well.

**[Dr. Shayna Whitaker]:** (sound of running water)...for the sea turtles that were cold-stunned that were left over, we've been doing surgeries to remove the big fibropapillomas...That's what we're working right now and then we have several others that were just left over that weren't quite strong enough yet to be released.

**[MM]:** That term she used, fibropapilloma, is known as the "FP" virus, which is a herpes-like virus that's unique to sea turtles. I encountered a few of their patients while touring one of the turtle facilities with Andrew, most of which were from the recent cold-stunning event. He told me that the ARK has seen an exponential growth in FP virus patients over the past few years. Andrew also told me something significant about the cold-stunning events themselves.

**[AO]:** ...I think, I mean, our cold-stunning has definitely increased every year. I mean, we didn't used to have large cold-stunning events like this...I mean, there's also more green sea turtles around as well...there's different factors of it as well. It depends on how cold it is, how long it's cold for, what kind of recruitment there is of juvenile green sea turtles into the bay systems for the year, which kind of correlates...onto their nesting for the year...so when everything kind of lines up and it gets to a point where...I mean, there's lots of turtles here. It gets extremely cold extremely quickly and then it's cold for a long period of time. Those factors together make for the massive cold-stunning events.

**[MM]:** This isn't unique to just the ARK. The National Oceanic and Atmospheric Administration, or NOAA, believes that climate change may have a role behind these more frequent and more intense cold-stunning events.<sup>12</sup> Because the waters across the globe are heating up, turtles may be staying in these warmer areas longer than unusual.<sup>13</sup> So, when the temperature suddenly drops, the turtles may find themselves trapped, resulting in a higher quantity of cold-stunned turtles in an area.<sup>14</sup> When that's combined with the climate-induced changes in weather patterns, these events can prove disastrous for wildlife across the globe.<sup>15</sup> This means that animal rehabilitation facilities like the ARK are going to need to adapt to these changes both now and in the coming years, so they are always in need of help, whether that be financially or through volunteering. Unfortunately, they aren't accepting any volunteers right now due to

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<sup>12</sup> "Rescuing Thousands of Sea Turtles in Texas," *NOAA Fisheries*, February 26, 2021, <https://www.fisheries.noaa.gov/feature-story/rescuing-thousands-sea-turtles-texas>.

<sup>13</sup> "Rescuing Thousands of Sea Turtles."

<sup>14</sup> "Rescuing Thousands of Sea Turtles."

<sup>15</sup> "Rescuing Thousands of Sea Turtles."

COVID-19 restrictions, but keep an eye out on their social media pages for updates. If you are still interested in doing the kind of work that the ARK does, here's what Andrew has to say about how to get your foot in the door.

**[AO]:** So, definitely volunteering is the perfect way to do that, getting into a facility, getting the experience, specifically if you want to branch off and get your own license or permit or center later, getting as much experience as you can with the species that you're most interested in as well as the other species if you wanted a more general permit...So, I mean, kind of learning each of those things about each of species that you work with is definitely the first step you'll want to take before you go down the path of obtaining a license to do it on your own...The International Wildlife Rehabilitation Council and the National Wildlife Rehabilitation Association both do symposiums...and they have some online trainings and workshops as well. So, I mean, kind of getting official training through them...and then getting the practical training...and...I mean, learning as much as possible about the species and their natural habits is...the ideal way to get started.

<<transitional music>><sup>16</sup>

**[MM]:** As a student that's interested in environmental history, it's fascinating to know that such an influential organization exists right across the bay from my university. They continue to provide valuable service to the Coastal Bend and beyond, and I wish them all the best. If you're interested in learning more about the late founder of the ARK, Tony Amos, The Gulf Podcast's Dr. Jen Brown did an oral history with him in 2017, which can be found on our website. Special thanks to Andrew for the interview and the tour. The Gulf Podcast is made possible by the Harte Research Institute for Gulf of Mexico Studies at Texas A&M University-Corpus Christi. Thank you all for listening and thanks to BonnyOrbit, Alittlebitdrunkguy, felix.blume, jirzin, reznik\_Krkovicka, and tommccann for the music and sound effects. Until next time, this is Max McClure.

<<outro music>><sup>17</sup>

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<sup>16</sup> Adapted from Alittlebitdrunkguy, "Simple lofi hip hop track n.6," last modified November 9, 2018, <https://freesound.org/people/Alittlebitdrunkguy/sounds/447515/>.

<sup>17</sup> "Simple lofi hip hop track n.6."

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