# Kemp's Ridley Sea Turtle

# Symposium

## GULF STATES MARINE FISHERIES COMMISSION

**69th ANNUAL MEETING**

**OCTOBER 17, 2018**

**ISLA GRAND BEACH RESORT**

**SOUTH PADRE ISLAND, TEXAS**

Kemp's Ridley Sea Turtles
Gulf States Marine Fisheries Commission 69th Annual Meeting
South Padre Island, Texas
October 17, 2018 8:00 a.m. – 12:00 p.m.

8:00 Welcome and Program Overview – Mr. David Donaldson and Mr. Jeff Rester

8:10 The Kemp's Ridley Sea Turtle: A 71 Year History of Conservation – Jaime Pena

8:35 Arribada Behavior and Nesting Biology of the Kemp's Ridley – Dr. Thane Wibbels

9:00 Spatial and Temporal Variation in Kemp's Ridley Abundance: Patterns, Mechanisms, and Implications – Dr. Nathan Putman

9:25 Inter-nesting, Migration, and Foraging Distribution of Adult Female Kemp's Ridley Turtles – Dr. Donna Shaver

9:50 Break

10:05 Pre-2010 Evidence of Declining Gulf of Mexico Carrying Capacity for Kemp's Ridley Sea Turtles (*Lepidochelys kempii*) – Dr. Charles Caillouet

10:30 Summary of Deepwater Horizon Oil Spill Effects on Kemp's Ridleys– Dr. Bryan Wallace

10:55 Some Thoughts Regarding the Status of the Kemp's Ridley Sea Turtle Stock: A Call for an Assessment Workshop – Dr. Benny Gallaway

11:20 General Q&A on the Status of Kemp's Ridley Sea Turtles - All

12:00 Adjourn

The Kemp's ridley sea turtle symposium started with a presentation by Jaime Pena from the Gladys Porter Zoo discussing the history of the collaborative, binational program between Mexico and the United States that was developed to try and restore the Kemp's ridley population to a self-sustainable level. Mr. Pena discussed how the Kemp's ridley went from only 702 nests registered in 1985 to over 24,000 nests in 2017, the highest number of registered nests in a season. He also discussed how the Kemp's Ridley Sea Turtle Restoration and Enhancement Program not only protected the nesting beaches, but provided outreach and education along with providing funding for scientific study of the Kemp's ridley.

Dr. Thane Wibbels from the University of Alabama at Birmingham discussed the biology of the Kemp's ridley sea turtle as well as the history of trying to find where Kemp's ridleys nested. Dr. Wibbels talked about his work to reassess the 1947 Herrara film that documented an arribada. While previously researchers thought the film depicted 40,000 turtles nesting on a single day, the reassessment estimated that approximately 28,000 turtles actually nested.

Dr. Nathan Putman from LGL Ecological Research Associates discussed spatial and temporal variation in Kemp's ridley abundances. He talked about linkages between life stages, mechanisms driving spatial variation in abundance, mechanisms driving temporal variation in abundance, and whether strandings could be used as a possible recruitment index and provide an indication of future nesting output.

Dr. Donna Shaver from the National Park Service discussed habitat utilization of Kemp's ridley sea turtles. She presented data that researchers had collected from satellite tags that showed foraging areas, migratory corridors and nesting habitat. She also discussed how Kemp's ridleys were potentially impacted by the Deepwater Horizon oil spill in 2010 based upon satellite data collected during the oil spill.

Dr. Charles Caillouet discussed the Gulf of Mexico carrying capacity for Kemp's ridley sea turtles and how the carrying capacity may be changing. The Kemp's ridley recovery plan predicted that the population would grow exponentially after 2009. Instead, the nester-abundance-index, and the hatchling count on the nester-abundance-index beach, both dropped 35% in 2010. Possible contributors to declining Kemp's ridley carrying capacity in the Gulf of Mexico were long-term degradation of the Gulf of Mexico ecosystem, decline in per capita availability of food, and competition for food between juveniles and adults.

Dr. Bryan Wallace discussed the effects of the Deepwater Horizon oil spill on sea turtles with empahsis on Kemp's ridley sea turtles. He stated that sea turtles were exposed to oil throughout the Gulf of Mexico. Dr. Wallace stated that most of the strandings during the Deepwater Horizon oil spill and in subsequent years were neritic juvenile Kemp's ridley sea turtles. Approximately 96% of the stranded sea turtles had no evidence of oil or dispersant exposure. These strandings

occurred as seasonal pulses in the spring and summer months. Most of the stranded sea turtles were in good nutritional condition with a lack of injuries or evidence of significant disease.

Dr. Benny Gallaway from LGL Ecological Research Associates discussed ongoing questions related to the current population estimates of the Kemp's ridley sea turtle stock. After initial recovery of a species, density-dependent effects will eventually become a management concern. The relative density of Kemp's ridley sea turtles is likely to be much higher than for other turtles. Dr. Gallaway stated that nest counts by themselves tell you surprisingly little about how a population of sea turtles is recovering. Researchers know that something has changed, but they do not know whether it is because of increased mortality (e.g., more adult females have died), reduced fecundity (they are laying fewer nests), or some combination of the two. Dr. Gallaway stated that another stock assessment workshop needs to be conducted to look at the status of the Kemp's ridley population.

A video of the presentations and the question and answer session can be watched at https://youtu.be/kp_K0xfpyP4.

| Attendees | Affliation |
|---|---|
| Jerry Mambretti | Texas Parks and Wildlife Department |
| Luis Hurtado | Texas A&M University |
| Frank Hernandez | University of Southern Mississippi, Gulf Coast Research Lab |
| Carey Gelfi | Texas Parks and Wildlife Department |
| John Fallon | Audubon Nature Institute |
| Laura Picariello | Texas Sea Grant |
| Laura Deighan | Audubon Nature Institute |
| Chris Blankenship | Alabama Department of Conservation and Natural Resources |
| Roy Crabtree | National Marine Fisheries Service, Southeast Regional Office |
| Lindsay Fullenkamp | National Marine Fisheries Service |
| Gregg Bray | Gulf States Marine Fisheries Commission |
| James Ballard | Gulf States Marine Fisheries Commission |
| Julie Falgout | Louisiana Sea Grant |
| Jesus Enriquez | Conservación y Desarrollo de Espacios Naturales |
| Jaime Ortiz | Conservación y Desarrollo de Espacios Naturales |
| Daniel Atta Romo | Gladys Porter Zoo |
| Eric Hoffmayer | National Marine Fisheries Service |
| Rick Burris | Mississippi Department of Marine Resources |
| Angie Rabideau | Gulf States Marine Fisheries Commission |
| Trevor Moncrief | Mississippi Department of Marine Resources |
| Traci Floyd | Mississippi Department of Marine Resources |
| Toni Torres | Gladys Porter Zoo |
| Ashley Ortega | Gladys Porter Zoo |
| Patricia Scanlan | Gladys Porter Zoo |
| Nicole Lundberg | Louisiana Sea Grant |
| Andrea Hance | Texas Shrimp Association |
| Thane Wibbels | University of Alabama Birmingham |
| Nathan Putman | LGL Ecological Research Associates |
| Donna Shaver | Padre Island National Seashore |
| Benny Gallaway | LGL Ecological Research Associates |
| Jaime Pena | Gladys Porter Zoo |
| Dave Donaldson | Gulf States Marine Fisheries Commission |
| Jeff Rester | Gulf States Marine Fisheries Commission |