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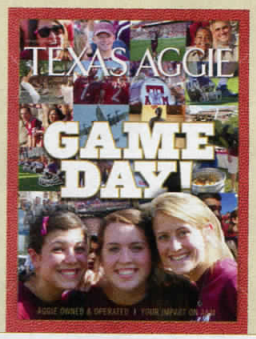


TIME FOR TURTLES

DONNA SHAVER '00 DEDICATES HER CAREER TO SAVING THE KEMP'S RIDLEY

By Janice Arenofsky

Despite what may be the eco-disaster of the new millennium—British Petroleum's 2010 record-breaking oil spill in the Gulf of Mexico—it is business as usual for Donna Shaver '00, chief sea turtle biologist at the Padre Island National Seashore in Corpus Christi.

Shaver, who earned her doctorate in zoology from Texas A&M, does not dodge controversy, whether it is the bureaucratic chess moves of competing federal agencies, intra-agency squabbles over turtle excluder devices or the death of more than 400 sea turtles in the BP spill zone.

"We're hoping for the best, but the impact may set us back a whole generation—10 to 15 years," says Shaver, referring to the Kemp's ridley, the most endangered species of sea turtle.

Although oil never reached Texas beaches, it lingered 400 miles away along the northern coastal Gulf route routinely traveled by Kemp's ridleys. Shaver has not staged any active interventions, owing to the National Park Service's hands-off policy on capturing and holding sea turtles unless they are in imminent danger. Instead, she developed ways to evaluate the oil's impact. "We weighed the danger of hatchlings remaining in captivity versus (their encountering) the oil," says Shaver. "Captivity screws up their navigational and foraging skills."


Donna Shaver '00

So, during the regular April-to-August nesting season on the 60-mile stretch of South Texas beach—comprising North Padre Island, South Padre Island and Boca Chica— Shaver carried out her normal duties: coordinating the volunteer patrols that protect the egg-laying female Kemp's ridleys, collecting the eggs for incubation at the Padre Island National Seashore, and, after around 50 days, releasing the silver-dollar-sized hatchlings back into the Gulf.

"We scheduled 23 public releases this year," Shaver says of a conservation program that has of late transformed itself into a tourist attraction. "Many of the 5,000 people who come each year from all over the country plan their vacations around a five-day (release) window. They pay guides or come in their own vehicles." According to Shaver, this "managed ecotourism" is expected to grow with the turtle population. "Members of an Indian tribe in Oklahoma drove all night to come. And that's just one story!"

Shaver's passion for the Kemp's ridley first emerged the summer of 1980, when as a wildlife biology junior from Cornell University, she accepted a Student Conservation Association internship. "I had never seen the ocean before," says the Syracuse, N.Y., native. "I fell in love with the turtles, and when I heard of their plight—a population in steep decline, possibly becoming extinct—I pledged to save the species." (In 1970, only 1,000 nesting

SHAVER HAS BEEN WORKING TO SAVE THE KEMP'S RIDLEY SINCE 1980. "WHEN I HEARD OF THEIR PLIGHT—A POPULATION IN STEEP DECLINE, POSSIBLY BECOMING EXTINCT—I PLEDGED TO SAVE THE SPECIES."

Donna Shaver on the beach with a volunteer. Shaver coordinates the volunteer patrols that protect the egg-laying female Kemp's ridleys.

Kemp's ridleys appeared at the main Rancho Nuevo, Mexico, site, though a 1947 home movie showed a high of 40,000. The cause of the remarkable downward spiral? Natural predators, high tides and poachers who sold the eggs as aphrodisiacs.)

The historical facts served only to galvanize Shaver, who accepted a fellowship, after her college graduation, at the Kleberg Hall of Natural History in Kingsville, going on to work summers as a technician for the Padre Island National Seashore while pursuing a master's degree in biology at the Kingsville campus. "It provided an educational background to draw from and an opportunity to interact with intelligent, inspirational people."

In particular she recalls how biology professor David W. Owens (at Texas A&M's College Station campus) and she contributed to an experimental Kemp's ridley program called Head Start (1978 to 1988), helping to transport South Padre hatchlings to the National Marine Fisheries Service Lab in Galveston. There, the hatchlings were nurtured for a year, then tagged and released back into the Gulf. Says Shaver, "The goal was to establish a second nesting colony in Texas in the event of a political, economic or environmental catastrophe in Mexico."

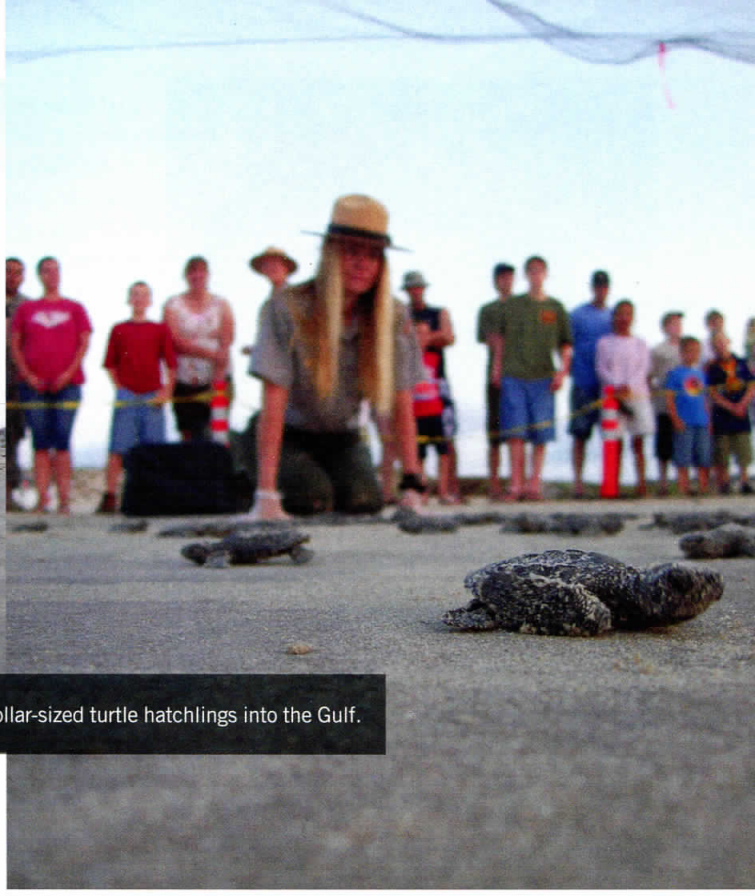
In 1988 at the eighth annual Workshop on Sea Turtle Conservation and Biology in Fort Fisher, N.C., Owens and Shaver (who by then was promoted to park supervisory natural resources management specialist) presented a paper on incubation and sex ratios of Kemp's ridleys. Later, Owens (currently at the University of Charleston, S.C.) advised Shaver on her doctoral dissertation on the distribution and seasonal movements of the green sea turtle. "The sample sizes of the green turtles were larger (than those of Kemp's ridleys), and I needed a more far-reaching population," she says.

After 1993 and advancing to the position of station leader and research biologist in Corpus Christi, Shaver concentrated almost exclusively on the Kemp's ridley. "There's so much information (about them), you're always learning," says Shaver. Earlier she studied foraging and explored ridley "guts" to assess their eating habits. "It's pretty smelly work," she says, "but it's important information." Shaver also learned to skew the temperature of incubating ridley eggs to produce females, since population restoration largely depended on the viability of female ridleys. "This mirrors the natural sex ratio," Shaver says. "The female predominates."

Many people were skeptical that the Head Start program would succeed, but in 1996, when a beach patroller spotted a nesting Kemp's ridley with a tag on its shell, Shaver knew the program had legs. Says Shaver, "It's exciting and gratifying that not only are Head Start turtles returning, but a wild stock also is repopulating and boosting numbers."

Due to the slow maturation of females, Shaver is still documenting the results of Head Start as well as investigating the National Fisheries Services translocation program, which ran from 1989 to 2000. At that time, Rancho Nuevo turtle hatchlings were briefly imprinted by exposure to the Mexican surf, then kept in Galveston and later released as yearlings off the Texas coast. "Most of the turtles are coming back to Texas where they were reared," Shaver says, emphasizing the biological contradiction of these results. "Obviously, imprinting is more complicated than we thought, and human actions interfere with their (the turtles') homing ability."

Currently Shaver and her volunteers incubate a season's worth of ridley eggs in Styrofoam boxes at the National Seashore facility or within screened "corrals" on local beaches. They are assisted by Shaver's dog, a Cairn terrier named



Donna Shaver '00 releases silver-dollar-sized turtle hatchlings into the Gulf.

Ridley who was trained as a puppy to locate and protect baby ridleys. Since adults weigh in at a relatively low 100 pounds, winds easily cover up their beach tracks, increasing the difficulty of finding nests and eggs. "We started training Ridley by hiding treats around the house," Shaver says. "Then he graduated to smelling nest cavities and eggs without harming them. Finally we covered the eggs with sand, and he would go right back to the nest." Ridley also can verify a turtle's non-production of eggs despite her movements onto the beach. And he chases away predatory sea gulls. "When the birds see people," says Shaver, "they think they're getting food handouts. So they swoop down and take hatchlings, then drop them on parking lots or grass. After all our work incubating them (eggs), we don't want to lose them."

And speaking of turtle losses, the shrimping industry, whose nets frequently used to lead to turtle drownings, still threatens turtles. "Turtle excluder devices largely solved things," Shaver says, "but there are issues of compliance." Using satellite tracking data and GPSs attached to turtles, Shaver assisted the state wildlife department in developing regulations. Says Shaver, "By identifying the turtles' marine environment, we could predict areas of higher utilization and work out a compromise. Since 2001, (shrimp) boats must remain five miles off the Texas coast during nesting and mating times (seven months) of the year."

As the country's foremost Kemp's ridley authority, Shaver has authored more than 90 papers, and her contributions have earned her countless awards and honors, most recently the National Park Service Star Award, the Houston Zoo's Conservation Hero of the Month, the Sierra Club's Herman Rudenberg Award and, in 2005, ABC World News Tonight's Person of the Week. She also has lectured before diverse audiences, including Texas A&M University System students at the Corpus Christi and Kingsville campuses, the Ocean Drive Garden Club in Corpus Christi, the Padre Island Kiwanis Club, the University of Texas Marine Science Institute and the Society for Ecological Restoration International.

"I get so many invitations I could speak every day of the week," Shaver says "I wouldn't have guessed way back in college that I'd become such a communicator, but being a teacher's assistant in the marine biology lab helped me prepare, and I also gave presentations as a student."

Shaver regularly trades information with scientists at home and abroad. "I collaborated with Andre Landry '71 (a marine biology professor at A&M's Galveston campus)," says Shaver, "and enjoyed having his students work with me. It's exciting to start a program, like when I was a student." In 2002 Shaver shared her ridley restoration experience with her counterparts in the Canary Islands. "They had historical information that loggerhead turtles used to come there (to the Islands)," Shaver says. "They were interested in using my project as a model."

But Shaver concedes that until all the facts on ridley repopulation are in, any conclusions are tentative. Same goes for the long-term impact of the BP oil spill. Shaver recently signed a work plan to check for signs of oil exposure during the next two nesting seasons—samples of blood, tissue and carapace will be tested. "We've lost individual turtles," says Shaver, "but we're still on track, though it remains to be seen."

While hedging her bets, Shaver still remains optimistic about the establishment of a self-sustaining population of Kemp's ridleys in South Texas. She has an abiding faith in positive change. "My father, who used to regard a scientific career for women as a foreign idea, now takes pride in me," Shaver says. "He even moved to South Texas and became a beach volunteer."