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Kemp's Ridley (*Lepidochelys kempi*) Shell Damage

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A total of 37 Kemp's ridley turtles was examined at Rancho Nuevo, Tamaulipas, Mexico from May 16-29, 2006. Thirteen of these turtles (35.1%) had healed carapace damage, usually adjacent to the third through fifth coastal scutes. These injuries ranged from large gashes to small notches in the edge of the carapace (Figure 1A and Figure 1B, respectively). The well-healed nature of all injuries strongly suggests that they were immature when injured and had years to completely heal their wounds. Three ridleys (8.1%) had rear flipper damage: two had damage to a single flipper and the third turtle had both flippers damaged. The damage was different on each flipper and consisted of removal of all or part of the flipper extremities but leaving the femur, tibia and fibula uninjured. All these wounds were also well healed.

The immediate conclusion usually reached by beach workers encountering a turtle with such injuries is 'shark bite'. Sharks undoubtedly take their share of sea turtles (Witzell 1987), and it is possible that some turtles nesting at Rancho Nuevo are survivors of shark attacks in coastal developmental habitats. Damaged rear

flippers may support this supposition. Shaver (1998) stated that 2.3% of the stranded ridleys from Texas had shark damage reported on the stranding forms for 1994; however similar damage was not reported by Cannon (1998) for stranded ridleys from the upper Texas/Louisiana coast. Large coastal sharks such as bull, tiger, and hammerhead are the most likely culprits that would have little problem consuming these small turtles whole [37 cm SCL (Shaver 1998)]. An attack by a large shark would probably result death and consumption of such small turtles, and survivors would be uncommon.

Damaged turtles nesting at Rancho Nuevo could also be survivors of vessel collisions occurring years earlier while foraging in developmental coastal habitats. Many ridleys stranding on Texas beaches may be the unfortunate specimens that do not survive these collisions, given the relatively large percent of these turtles exhibiting obvious propeller cuts (4.5% -12.3%) according to Shaver (1998) and Cannon (1998), respectively. Shaver (1998) recognized the severity of the problem and concluded that collision with boat

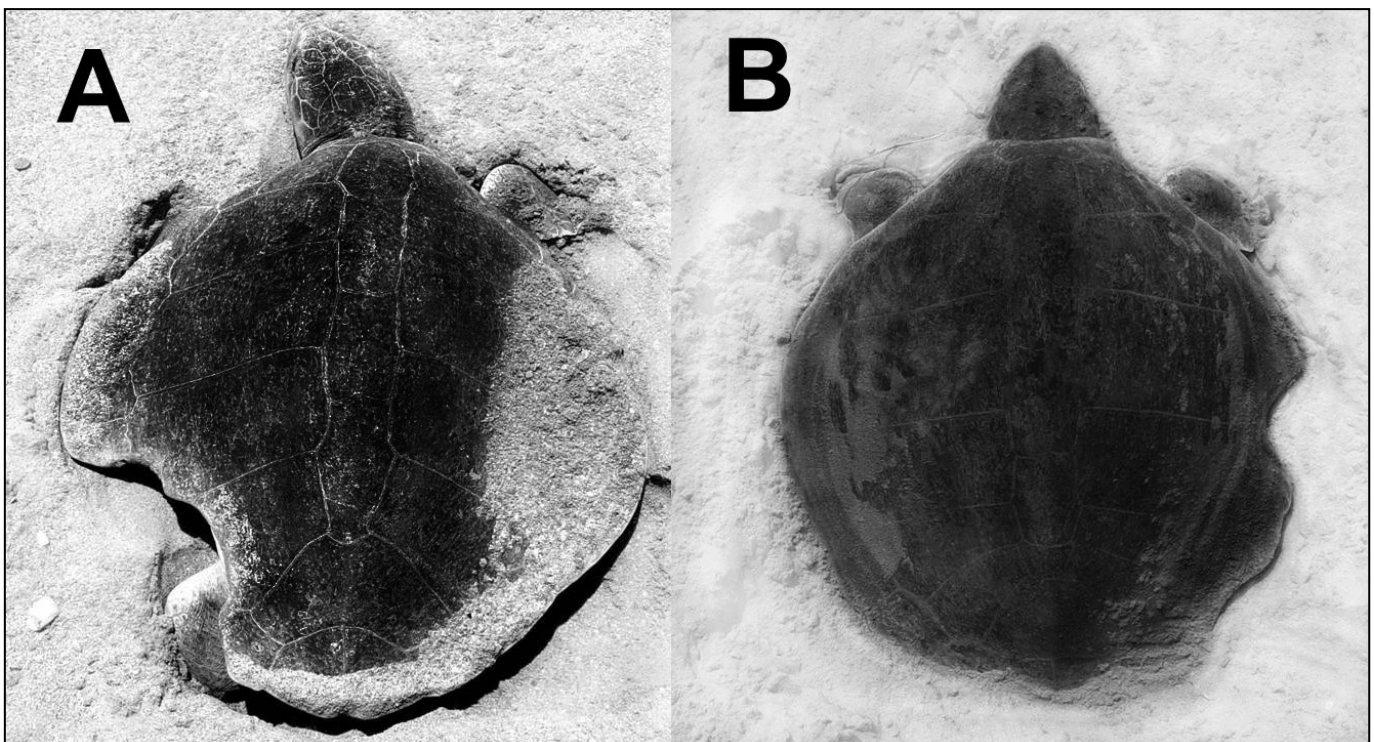


Figure 1. Shell damage in nesting female Kemp's ridleys

propellers was a significant threat to turtles in Texas coastal waters. It is probable that many stranded ridleys in the western Gulf die from collisions by fast moving vessels, probably recreational vessels. The fact that they are usually damaged in the posterior suggests that the turtles were either fleeing at the time of impact, or the turtles with posterior damage were more likely to survive the impact than if struck anteriorly. Collisions with the propulsion shafts of outboard motors could leave notches in the carapace while the turtle may or may not be impacted by the boat's propeller. Young turtles are very alert and are less likely to be hit by the slower moving commercial fishing or oil platform supply vessels (pers. obs.). Their small size, reduced mass and pliable carapace will likely prevent them from being cracked by anything but fast vessels, and simply brushed aside by large slow moving vessels. The trauma of a vessel impact must be extensive in order to kill these small turtles because they have a remarkable ability to survive severe damage from fast boats (Witzell & Schmid 2004). Unfortunately it is very difficult for stranding personnel to distinguish trauma from shark bites, boat collisions, and propeller cuts when determining causes of death. Additionally, seriously injured or dead turtles may be struck multiple times by vessels or scavenged by sharks before they drift ashore.

Important ridley developmental habitats extend beyond Texas and occur elsewhere in the Gulf of Mexico (Witzell & Schmid 2004), and some may even argue along the U.S. Atlantic coast. However, the western Gulf of Mexico is where significant numbers of immature ridleys coexist with an extensive recreational fleet, and where there are significant numbers of boat-related strandings. There are obviously significant interactions between immature Kemp's ridley sea turtles and either sharks and/or recreational boats in the

Gulf of Mexico. Although little can be done to reduce predation on immature Kemp's ridley turtles, increased protection from man-related injury and possible death mandates a better understanding of their interactions with recreational vessels in coastal habitats. It is suggested that comprehensive data be collected on shell injuries to stranded ridleys and an analysis performed to determine the temporal and spatial nature of these injuries and the size class(es) of the turtles impacted. Boat collisions are a real threat to this species and will only increase with growth in recreational vessel use within immature ridley developmental habitats. Registrations of recreational vessels 4.9-12.2m (16-40 ft) feet long have grown from 160,494 in 1975 to 375,302 vessels in 2005, an increase of 234% (unpublished data, Texas Parks and Wildlife Coastal Fisheries Division). The Kemp's Ridley Recovery Team needs to address this important issue during the formulation of the new Recovery Plan.

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Live Loggerhead Observed in Newfoundland, Canada in Late Autumn

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A loggerhead turtle *Caretta caretta*, curved carapace length 76 cm, was reported to the Whale Release and Strandings Group alive on November 15, 2006, inside a barasway in Sandyville (47° 32' N, 55° 55' 57" W) in Connaigra Bay on the south Coast of Newfoundland, Canada. The loggerhead was in a resting position and made no attempt to leave the area for deeper waters. The shell of the animal was covered with silt and seaweed. The turtle had a growth of scar tissue above and obscuring its left eye. The mean air temperatures on 15 November were 10°C. Seawater temperatures in the area were 8°C. The animal was moved by the Harbour Breton Department of Fisheries and Oceans garage and released the night of 15 November from the beach in the community. The animal swam about, dove and was not seen again. Copies of photos of the turtle are available upon request.