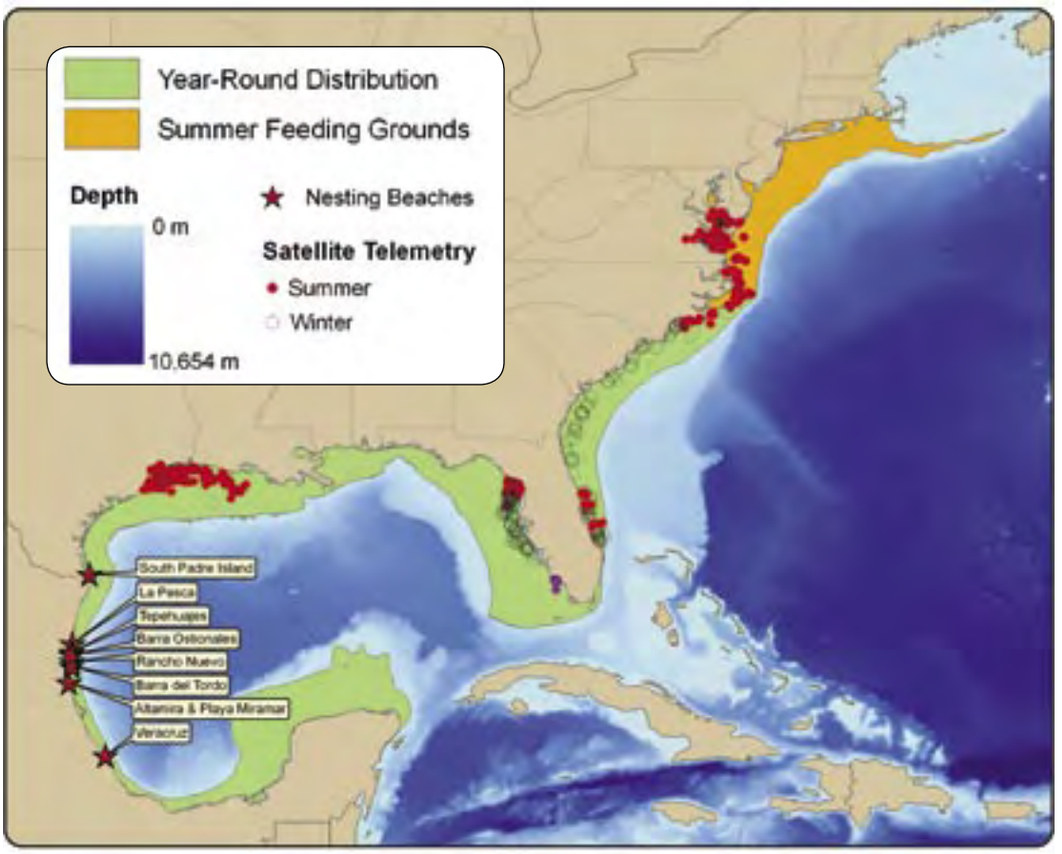
Plotting Kemp's Ridleys, Plotting the Future of Sea Turtle Conservation

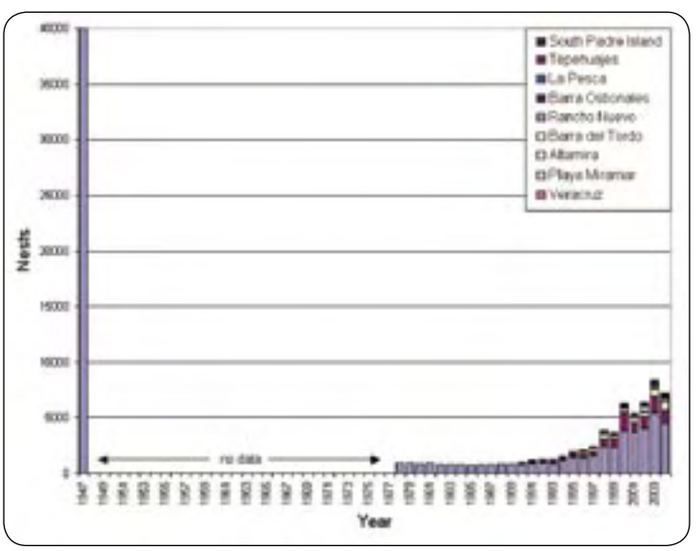
In 1947, Andres Herrera documented an estimated 40,000 Kemp's Ridley females nesting simultaneously in a *single day* at Rancho Nuevo, Mexico, in a now famous home movie of the turtles' *arribada*, their mass synchronized nesting spectacular. Fourteen years later, American biologist Henry Hildebrand showed the video at a scientific conference, and scientists were shocked to witness this spectacular phenomenon. But by then, the Kemp's Ridleys had already ceased to come ashore by the tens of thousands; their numbers were reduced to approximately 6,000 animals in an entire year.



The Mexican government began protecting this species in 1966, and over time these efforts have expanded incrementally, redoubling with the establishment of the rigorous bi-national research and conservation program between the U.S. and Mexican governments in 1978 that continues today (see "Return of the Kemp's Ridley", pp. 6–7).

Created using GIS software and data from satellite tracking devices, radio telemetry, and the Internet, the map above combines 28 years of information that portray the present understanding of the species' reproductive and migratory habits. From 1978 to 1990, the nesting population at Rancho Nuevo was in a state of continual decline. During this period, there was a peak of 954 nests in 1979 and a lull as low as 702 nests in 1985. It wasn't until the late 1980s that the population began to stabilize and then grow, as reflected in nest counts. From the early 1990s through today, the numbers have been on the rise, reaching a peak of 10,099 nests in 2005.

This map is much more than a chart of sea turtle data. It is a union of past and present and, simultaneously, an emblem of the future—a chronicle of the recent history of a very unique and Critically Endangered species. As we collaborate to pursue our common goals in sea turtle research and conservation, we can replicate this result for all species. Today, the type of collaboration that has begun to bring back the Kemp's Ridley from the brink of extinction is extraordinary, but tomorrow it will be the norm.



A Kemp's Ridley sea turtle on a nesting beach. © THANE WIBBELS

__Jaime Peña__ is a conservation biologist for the Gladys Porter Zoo in Brownsville, Texas, U.S.A. He began his work with the Kemp's Ridley sea turtle in 1994.

Map created by __Michael S. Coyne__ (Duke University), with satellite and radio telemetry data provided by Jeffrey R. Schmid and Wayne N. Witzell (NOAA's National Marine Fisheries Service Southeast Fisheries Science Center, and Conservancy of Southwest Florida); Erin E. Seney and Andre M. Landry, Jr. (Texas A&M University at Galveston); and Kate L. Mansfield and John A. Musick (Virginia Institute of Marine Science, The College of William and Mary); and nesting data provided by Jaime Peña (Gladys Porter Zoo) and Donna Shaver (U.S. National Park Service).