

**STUDY TITLE:** Marine Birds, Mammals, Turtles and Endangered Manatee - South Atlantic and Gulf of Mexico Pilot Study

**REPORT TITLE:** Pilot Study of the Marine Mammals, Birds and Turtles in OCS Areas of the Gulf of Mexico

**CONTRACT NUMBERS:** BLM: MU9-18; MMS: 14-12-0001-29089

**SPONSORING OCS REGION:** Gulf of Mexico

**APPLICABLE PLANNING AREAS:** South Atlantic; Straits of Florida; Eastern Gulf of Mexico; Central Gulf of Mexico; Western Gulf of Mexico

**FISCAL YEARS OF PROJECT FUNDING:** 1979; 1980

**COMPLETION DATE OF REPORT:** September 1981

**COSTS:** FY 1979: \$144,287; FY 1980: \$101,386

**CUMULATIVE PROJECT COST:** \$245,673

**PROJECT MANAGERS:** C. Keller, D. Smith

**AFFILIATION:** U.S. Fish and Wildlife Service

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**KEY WORDS:** South Atlantic; Straits of Florida; Eastern Gulf; Central Gulf; Western Gulf; Texas; Florida; endangered species; birds; marine mammals; turtles; manatee; survey; abundance; aerial observations; sperm whale; bottlenose dolphin; dolphins; distribution; sightings; range; loggerhead turtle; Kemp's ridley turtle; seasonality

**BACKGROUND:** To make effective management decisions relative to oil and gas exploration and production on the Outer Continental Shelf (OCS), information is required on the distribution and abundance of organisms that are potentially affected by or vulnerable to activities in these regions. Important resources include 32 species of marine mammals (6 endangered), several endangered coastal and key pelagic bird species, and 5 marine turtle species (4 endangered). Once baseline data on species composition, abundance, and habitats for these organisms are known, more precise studies to define major data gaps, potential problems with OCS activities, and management procedures necessary to minimize environmental impacts can be initiated.

**OBJECTIVES:** (1) To develop and test methods for simultaneously surveying marine mammals, birds, and turtles from aircraft; (2) to develop and test, with real and simulated data, the computer software necessary for analysis and storage of survey data; and (3) to collect preliminary data on the distribution and abundance of marine mammals, birds, and turtles in the study area.

**DESCRIPTION:** Aerial surveys were conducted in four subunits off Florida and Texas from August to December 1979. Surveys were conducted at 91 and 228 m. Waters within 111 km of shore were sampled at a 3:1 ratio as compared to waters 111 to 222 km offshore. Texas subunits extended beyond the continental shelf but Florida subunits did not. Observations were made on 12 mammal, 35 bird, and 5 turtle taxa.

**SIGNIFICANT CONCLUSIONS:** A greater number of mammal species, including several whales, were found off Texas than Florida. Sightings of the endangered sperm whale off Texas were the first confirmed reports of this species in the western Gulf in several decades. In comparison, more turtle species and greater numbers were observed off Florida than Texas. Seasonal movements of birds and dolphins were also evident from the studies.

**STUDY RESULTS:** The bottlenose dolphin was the only marine mammal observed in all survey subunits. Dolphins of the genus *Stenella* were common off Florida and Texas. These included spotted, striped, and spinner dolphins off Texas but only striped dolphins off Florida. Sperm whales, a group of beaked whales, and short-finned pilot whales were observed off Texas. Only one unidentified large whale was seen off Florida. Three manatees were seen approximately 100 m from shore in Florida. The number of mammal sightings in all areas was greater during August than November. This was also true for the mean group size of the species observed. The higher number of marine mammal sightings off Texas was attributed to the narrower continental shelf in this area.

Observed avifauna were categorized as migrating land birds, summer migrant pelagics, summer residents, wintering marine species, and permanent residents. Bird sightings tended to be greater in November than in August in all areas except the North Texas subunit. Total sightings were greater in Florida than in Texas. Royal terns and other species extended their range farther offshore in November as compared to August.

Of all turtle sightings, 97.3% were in Florida. Loggerhead turtles were conspicuous in Florida but infrequent in Texas. This was the most frequently observed species during the surveys, accounting for 57 to 89% of the sightings. The endangered Kemp's ridley was seen only in Texas. Overall, greater numbers of turtles were observed in August (182) than in November (80). In the North Florida subunit, approximately 95% of all turtle sightings were in waters less than 100 m deep. Approximately 80% of the sightings in the South Florida subunit were in waters less than 50 m deep.

**STUDY PRODUCT:** Fritts, T. H. and R. P. Reynolds. 1981. Pilot Study of the Marine Mammals, Birds and Turtles in OCS Areas of the Gulf of Mexico. A final report by the U.S. Fish and Wildlife Service for the U.S. Department of the Interior, Bureau of Land Management Gulf of Mexico OCS Office, New Orleans, LA. NTIS No. PB82-116914. FWS/OBS-81/36. Contract No. 14-12-0001-29089. 150 pp.

\*P.I.'s affiliation may be different than that listed for Project Managers.