

Bottlenose Dolphins in Texas Coastal Waters

David W. Weller, Ph.D.
Marine Mammal Research Program
Texas A&M University
E-mail: dweller@sgilj.ucsd.edu

Between 1984 and 1998 David Weller has conducted studies on: bottlenose dolphins in Hawaii, California, and along the Texas coastline; humpback whales off the Hawaiian Islands; sperm whales in the Gulf of Mexico; and western gray whales in the Sea of Okhotsk off Sakhalin Island, Russia. His current research interests include evaluating how habitat characteristics and prey dynamics influence the behavior and morphology of dolphins, and in developing biological assessments for the conservation of endangered whale populations. Dave currently holds a joint appointment as a Post Doctoral Researcher at Texas A&M University and a Visiting Research Scientist at the National Marine Fisheries Service - Southwest Fisheries Science Center, California.

EDUCATION

Ph.D. - Texas A&M University, Wildlife and Fisheries Sciences, 1998.
M.A. - San Diego State University, 1991
B.A. - University of Hawaii, 1986

SELECTED PUBLICATIONS

- Weller, D.W. 1998. Global and regional variation in the biology and behavior of bottlenose dolphins. Ph.D. dissertation. Texas A&M University, College Station, TX. 142 pp.
- Weller, D. W., V. Cockcroft, B. Würsig, S. Lynn and D. Fertl. 1997. Behavioral responses of bottlenose dolphins to remote biopsy sampling and observations of surgical biopsy wound healing. *Aquatic Mammals* 23:49-58.
- Weller, D. W., B. Würsig, H. Whitehead, J. Norris, S. Lynn, R. Davis, N. Clauss and P. Brown. 1996. Observations of an interaction between sperm whales and short-finned pilot whales in the Gulf of Mexico. *Marine Mammal Science* 12:588-594.
- Weller, D. W. 1991. The social ecology of Pacific coast bottlenose dolphins. M.A. thesis. San Diego State University, San Diego, CA. 93 pp.

A REVIEW OF THE BEHAVIORAL ECOLOGY OF BOTTLENOSE DOLPHINS IN TEXAS COASTAL WATERS

David W. Weller

Bernd Würsig

Marine Mammal Research Program

Texas A&M University, Galveston, TX

Bottlenose dolphins are the most prevalent cetacean species inhabiting the near-shore waters of the northern Gulf of Mexico. Four coastal management stocks, for which aerial census-based minimum population estimates are available, are currently recognized. Along the Texas shoreline, bottlenose dolphins are common from Brownsville to Sabine Pass, and are sighted year-round in coastal waters, channels, passes, and embayments.

Early observations on the occurrence and dietary habits of Texas bottlenose dolphins were first reported in the early 1940's. Systematic studies of bottlenose dolphins in Texas coastal waters began between 1976-1982 in the Aransas Pass region of Corpus Christi, the Pass Cavallo area of Matagorda Bay, and in the Galveston Bay Estuary. Beginning in 1990, Texas A&M University researchers have conducted nearly continuous investigations on bottlenose dolphins in Galveston Bay, Matagorda Bay, Aransas Pass, and South Laguna Madre. A synthesis of findings from these studies suggests that bottlenose dolphins along our coast belong to a large and open population, composed primarily of infrequently sighted transient dolphins, but also characterized by a small number of more regularly sighted semi-residential individuals. In addition, it is proposed that a seasonal migration may take place along the Texas coastline, resulting in lower fall-winter dolphin densities in Galveston Bay with corresponding higher densities in central and southern Texas waters. These long-term studies have provided significant insight into how the behavior of this upper-level predator may be influenced by seasonal changes in prey distribution, habitat characteristics, and human activities.