

2003 – Award Summaries

A total of \$907,239.77 will be distributed for the 2003 Protect Wild Dolphin competition. Eleven (11) awards were made; 20 proposals were received.

Principal Investigators and Co-PI's: Dr. David Mann, (dmann@marine.usf.edu)
University of South Florida, St. Petersburg, Florida

Consultant: Mote Marine Laboratory

Award No. 2003-02 (\$99,930, August 4, 2003-August 3, 2005) to University of South Florida

Title: Measurements of hearing sensitivity of wild bottlenose dolphins in Sarasota Bay.

Summary: Dolphins use echolocation to navigate and to feed. Any high frequency hearing loss could affect their ability to survive. This project will investigate the hearing abilities of wild bottlenose dolphins in Sarasota Bay, Florida where these marine mammals are exposed to significant levels of man-made noise. Hearing sensitivities at frequencies (5-20 kHz) needed for acoustic communication and at frequencies (20-100 kHz) used for echolocation will be examined.

Principal Investigators and Co-PI's: Dr. Charles Manire, (cmanire@mote.edu)
Mote Marine Laboratory, Sarasota, Florida

Award No: 2003-05(\$100,000, August 4, 2003–August 3, 2004) to Mote Marine Laboratory

Title: Expansion of the Dolphin and Whale Hospital Facility to Increase State Rehabilitation.

Summary: Construction of a new critical care tank for the Dolphin and Whale Hospital at the Mote Marine laboratory will be supported by this award. This expansion of existing facilities will allow veterinary staff to treat a larger number of injured or sick dolphin.

Principal Investigators and Co PI's: D. Ann Pabst (pabsta@uncw.edu), University of North Carolina, Wilmington (UNCW), William A. McLellan (mcllellan@uncw.edu) UNCW, Randall Wells (rwells@mote.org) Mote Marine Laboratory (MML), Andrew J. Westgate (westgate@duke.edu), (DU), Erin M. Meagher (emm3005@uncw.edu) UNCW.

Award No. 2003–07 (\$74,287, August 4, 2003-August 4, 2004) to Mote Marine Laboratory

Title: Investigating seasonal patterns in thermoregulatory function in bottlenose dolphins from Sarasota Bay, Florida

Summary: Seasonal variation in the thermal responses of bottlenose dolphins will be investigated in Sarasota Bay Florida. This project builds on research currently supported by another PWD grant. Skin temperatures and blubber thickness will be recorded from several locations on the dolphin body to quantify heat flux values, both during temporary restraint and while free swimming. A dorsal fin Trac-Pac will be deployed on a subset of the dolphin to record swimming velocity and the duration diving below the surface. In addition, the thermal conductivity of blubber from dolphins that have stranded in Florida will be measured to investigate changes in the insulation quality of blubber may vary across seasons.

Principal Investigators and Co PI's: Deborah Fauquier (dfauquier@mote.org) Mote Marine Laboratory, Sarasota, Florida, Nelio Barros (nbarros@mote.org) MML; Murray Daily (daileym@tmmc.org), MML; Frances Gulland (gullandf@tmmc.org), The Marine Mammal Center, Sausalito, California

Award No. 2003-08 (\$100,000 August 4, 2003-August 3, 2005) to Mote Marine Laboratory

Title: Prevalence and pathology of lungworm (*Halocerus* sp.) infection in bottlenose dolphins in SW Florida

Summary: The Mote Marine Laboratory, Clearwater Marine Aquarium, the Marine Mammal Pathobiology Laboratory, The Florida Marine Research Institute in St. Petersburg, Florida, and the Marine Mammal Center (Sausalito, California) will collaborate to investigate the prevalence and intensity of lungworm infection in stranded bottlenose dolphins in Southwest Florida. A tissue archive will be maintained to evaluate any future changes in lungworm infection.

Principal Investigators and Co-PI's: Robert B. Griffin (bgriffin@mote.org) Mote Marine Laboratory, Sarasota, Florida, Robin W. Baird (rwbaird@dal.ca) Dalhousie University, Halifax, Nova Scotia, Canada

Consultants, Subcontracts, and Others: Dr. Chuanmin Hu, USF, St. Petersburg, Florida

Award No. 2003-09 (\$83,794.77, August 4, 2003-August 3, 2004) to Mote Marine Laboratory

Title: Movement patterns and diving behavior of Atlantic spotted dolphins (*Stenella frenellis*): a study using remotely deployed suction cup attached tags.

Summary: Two species of dolphin are common in Florida's shelf waters yet virtually all research efforts over the last 30 years have been focused on only one of these species, the bottlenose dolphin. In order to effectively conserve, manage and protect Atlantic spotted dolphins in Florida waters, information on daily behavior, group cohesion, ranging patterns, swimming speed, dive depth and dive duration are needed. Do spotted dolphins forage near oceanographic thermal fronts, or other regions of high productivity, or is foraging random with respect to oceanographic characteristics? How do they utilize the water column and are there differences in behavior during day and night periods?

Principal Investigators and Co PI's: Steve Shippee (shipee2@csi.com), Trac Pac Inc, Ft Walton Beach, Florida; Forrest Townsend (bayvet@bha.gccoxmail.com), Trac Pac Inc; Frank Deckert (bayvet@bha.gccoxmail.com), Trac Pac Inc

Award No. 2003-11 (\$31,570, August 4, 2003-August 3, 2004) to Trac Pac Inc.

Title: Monitoring forestomach temperature changes on instrumented, free-swimming dolphins to determine foraging effort and success.

Summary: Foraging effort, feeding location, and foraging success rates will be investigated in targeted wild dolphin populations. Radio tags and time-depth recorders (TDR's) will be attached to free-swimming dolphins to provide basic information for Level A Health Examination projects in the coastal waters of Florida. This technology may also document short term feeding success of dolphin that are rehabilitated and released.

Principal Investigators and Co PI's: Graham A.J. Worthy (gworthy@hswri.org)
Hubbs-Sea World Research Institute, Orlando, Florida

Award No. 2003-16 (\$99,562, August 4, 2003-August 3, 2005) to Hubbs-Sea World Research Institute

Title: Assessing the feasibility of applying fatty acid signature analysis to understanding the feeding habits of bottlenose dolphins (*Tursiops truncatus*)

Summary: Preliminary analysis of fishes and dolphin blubber samples collected during 2002-2003 indicated significant differences in the fatty acid signatures of important prey species, as well as the presence of specific feeding strategies among resident dolphins. This project will continue the use of stable isotope and fatty acid signature analysis of free ranging dolphins to assess seasonal variability in their feeding habits within the Indian River Lagoon (IRL).

Principal Investigators and Co PI's: Carlos Romero DVM (romeroc@mail.vetmed.ufl.edu) University of Florida, Gainesville, Florida; Ruth Y. Ewing DVM, (ruth.ewing@noaa.gov) NOAA Marine Mammal Division, NMFS Miami, Florida; Charles Manire DVM, (cmanire@mote.org) Mote Marine Laboratory Sarasota, Florida

Award No. 2003-17 (\$99,910, August 4, 2003-August 3, 2005) to University of South Florida

Title: Isolation and molecular identification of viruses infecting cetaceans stranded along Florida's coasts

Summary: The central hypothesis of this research project is that unidentified and/or poorly characterized pathogenic viruses are the cause of disease and death of wild dolphins and that some of these viruses are also responsible for their stranding along Florida's coasts. The search for herpes viruses (HV), influenza viruses (IV) and morbilliviruses (MV) in the cerebrum will continue.

Principal Investigators and Co PI's: Amy Samuels (asamuels@whoi.edu), Woods Hole Oceanographic Institution, Woods Hole, Massachusetts; Laura Engleby (laura.ingleby@noaa.gov) NOAA Fisheries, Southeast Fisheries Center, St. Petersburg, Florida

Consultants, Subcontracts and Others: Dolphin Ecology Project and Chicago Zoological Society

Award No: 2003-18 (\$88,186, August 4, 2003–August 3, 2005) to Chicago Zoological Park

Title: Evaluating the impacts of tourism on free ranging bottlenose dolphins near Key West, FL

Summary: The impacts of tourism on free ranging bottlenose dolphins near Key West, Florida, with an emphasis on the most controversial form, swim-with-tourism, will be evaluated. Results are likely to provide resource managers with quantitative data that will be useful for the development of management plans. The information will constitute a baseline for assessing long-term consequences of tourism on dolphin behavior.

Principal Investigators and Co PI's: Nelio Barros (nbarros@mote.org), Mote Marine Laboratory, Sarasota, FL

Award No. 2003-19 (\$100,000, August 4, 2003-August 3, 2005) to Mote Marine Laboratory

Title: Development of a service laboratory for analyses of dolphin stomach contents at Mote Marine Laboratory

Summary: A service laboratory for analysis of dolphin feeding habits will be established. Prey will be identified to the lowest possible taxonomic level. There are no facilities in Florida or elsewhere on the U.S. Atlantic Coast that currently provide these services.

Principal Investigators and Co PI's: Cris Hadjez (chadjez@iwon.com) Marine Animal Rescue Society, North Miami, Florida; Julia Zaias DVM (jzaias@med.miami.edu) Miami, Florida

Award No. 2003-20 (\$30,000 August 4, 2003 –August 3, 2004) to Marine Animal Rescue Society

Title: Development of a multi-faceted educational outreach program.

Summary: This project will establish a marine mammal rescue protocol. Training sessions for new recruits and experienced volunteers will be conducted to develop a larger core group people who can assist in obtaining tissue and bone samples from stranded dolphin.