

THE EPIZOIC GENUS *TURSIOCOLA* ON SEA TURTLES AND CETACEANS

Thomas A. Frankovich¹, Matt P. Ashworth², Roksana Majewska³, Michael J. Sullivan⁴, Mike Arendt⁵, Charles Manire⁶, Craig Pelton⁷, Justin Perrault⁶, Chris Sasso⁸, Jeff Schwenter⁵, Nicole Stacy⁷, Randy Wells⁹, and Larry Wood¹⁰.

1 Institute for Water and the Environment, Florida International University, Miami, Florida 33199 USA

2 Department of Molecular Biosciences, University of Texas, Austin, Texas 78712 USA

3 South African Institute for Aquatic Biodiversity, North-West University, Grahamstown, South Africa

4 130 Martinique Drive, Madison, Mississippi 39110 USA

5 South Carolina Department of Natural Resources, Charleston, South Carolina 29412 USA

6 Loggerhead Marinelife Center, Juno Beach, Florida 33408 USA

7 College of Veterinary Medicine, University of Florida, Gainesville, Florida 32641 USA

8 National Marine Fisheries Service, National Oceanographic and Atmospheric Administration, Miami, Florida 33149 USA

9 Chicago Zoological Society at Mote Marine Laboratory, Sarasota, Florida 34236 USA

10 National Save the Sea Turtle Foundation, Fort Lauderdale, Florida 33308 USA

The epizoic diatom genus *Tursiocola* is rarely studied and for nearly two decades since its establishment in 1993 was known to consist of only 3 species, all exclusively occurring on cetaceans and therefore became referred to as members of the unique group of “whale diatoms” by diatomists. Since 2012, new species have been discovered and described from a freshwater turtle, manatees, and sea turtles, expanding the genus to 13 species. In order to better understand the distribution of these diatoms and evaluate the host-specificity of *Tursiocola* species, epizoic diatoms were sampled from the skin and carapace of six sea turtle species (loggerhead, green, leatherback, Kemp’s ridley, olive ridley, and hawksbill), the skin of live bottlenose dolphins and from a stranded false killer whale. Detailed SEM observations and preliminary phylogenetic analyses indicate host specificity between larger vertebrate host animal groups (i.e., cetaceans, sea turtles, and manatees) and a shared distribution of *Tursiocola* species on various sea turtle hosts.