

the presence of tooth rakes on the body or dorsal fin. The objective of this study was to compare rake mark occurrence as a measurement of aggression between begging (n=13) and non begging (n=13) dolphins. Images from surveys conducted between 16 April 2009 and 4 August 2009 were assessed for rake marks. The number of begging dolphins with rake marks (12/13) was not significantly greater than non begging dolphins with rake marks (11/13;  $\chi^2=.377$ ;  $p=.885$ ) Also, the number of dolphins, both beggars and non beggars, that had more than half of the dorsal fin covered in rake marks was the same (7.8%). While rake marks and scars can be used as a sign of aggression, the sample size used here was too small to detect any significant difference in aggression based on rake marks between begging and non begging dolphins. With further confirmation of additional beggars and non beggars, this method may become a more practical measure.

### **Protected Species Monitoring in the Proposed Undersea Warfare Training Range Offshore of Jacksonville, FL: January – December 2010**

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A multi-institutional, marine protected species monitoring program, involving aerial, vessel and acoustic surveillance techniques, has been implemented at the proposed Undersea Warfare Training Range (USWTR) offshore of Jacksonville, Florida. This abstract reports on the second year of aerial and vessel visual line-transect and acoustic surveys used to investigate cetacean and sea turtle occurrence, distribution and abundance. During aerial surveys, a total of 269 track-lines (22,695 km) were completed, the majority of which were flown in low Beaufort Sea State (BSS) conditions (94% in BSS 3 or lower). A total of 3,285 cetaceans were recorded in 286 sightings. *Tursiops truncatus* and *Stenella frontalis* were the most frequently encountered, followed by *Grampus griseus*, *Globicephala macrorhynchus*, *Balaenoptera acutorostrata*, *Steno bredanensis*, *Eubalaena glacialis*, *Megaptera novaeangliae*, and *Physeter macrocephalus*. On March 20, an *E. glacialis* birth was observed, an event which has only been witnessed once before. Cetaceans were encountered 46 times during the 18.5 days of vessel surveys. Sightings consisted of *S. frontalis*, *T. truncatus*, *G. macrorhynchus*, and *G. griseus*. The towed passive acoustic array was deployed during 12 vessel surveys, generating a total of 13.75 hrs of recordings including all four sighted species. Two autonomous high frequency acoustic recording packages (HARPs) were deployed in the study region between March 1-December 31 for long-term passive acoustic monitoring. HARP recordings have been recovered from the seafloor and are being analyzed for diel, seasonal, and interannual trends in cetacean occurrence. Surveys are scheduled to continue through 2012 to provide long-term habitat usage patterns in the USWTR.

### **Quantifying the Rate of Fission-Fusion in Bottlenose Dolphins (*Tursiops sp.*)**

K. Hovis, M. Stanton and J. Mann

Shark Bay Dolphin Research Project, Georgetown University

One of the most notable and relatively rare features of bottlenose dolphin sociality is its high degree of fission-fusion in which individuals change group membership frequently. This temporal-spatial fluidity is presumed to confer reproductive or survival benefits, allowing individuals to exploit their environment and decrease intraspecific competition. Similar to society at large, mothers and calves separate and reunite often, possibly helping calves negotiate their social networks in a range of contexts. This study on mother-calf pairs in Shark Bay, Australia, is one of the first to quantify the fission-fusion rate (changes

# SEAMAMMS 2011 – Conference and Presentation Schedule

## Friday, April 1

4:30-6:00      **Registration:** Wall Building Board Room (room 216)

6:00-9:00      **Reception:** Wall Building Board Room (room 216)

## Saturday, April 2

8:00      **Registration:** Wall Building Auditorium (room 116)

8:30      **Welcome:** Rob Young, Marine Science Department, Coastal Carolina University

### **Session 1** (\* indicates student presentation)

8:45      \*A Characterization of Bottlenose Dolphin (*Tursiops truncatus*) Interactions with the Commercial Shrimp Trawl Fishery of South Carolina  
J. Greenman, W. Mcfee, T. Burkett, L. DeLancey, P. Webster

9:00      \*Spatial distribution of begging behavior by common bottlenose dolphins (*Tursiops truncatus*) in the waterways of Savannah, Georgia  
R. Perrtree and T. Cox

9:15      \*Interactions between bottlenose dolphins (*Tursiops truncatus*) and shrimp trawlers in Savannah, Georgia  
C. Kovacs, R. Perrtree and T. Cox

9:30      There's an app for that: smartphone software for estimating total length of bottlenose dolphins  
J. W. B. Powell and M. T. LeGrand

9:45      \*Composition of bacterial communities from the spleen of stranded bottlenose dolphins (*Tursiops truncatus*) from the Atlantic Coast of the United States  
K. L. Edwards, T. M. Cox, M. E. Frischer

10:00      \*Identification and distribution of anisakid parasites of pygmy sperm whales (*Kogia breviceps*)  
R. Rein, T. Greig, W. McFee, I. de Buron, S. Arnott

10:15      **Break**

10:45      **Panel Discussion:** Lessons learned from the Deepwater Horizon Oil Spill and Response/Research Planning for the Southeast and Mid-Atlantic Coast

11:45-1:15      **Lunch** at University Commons

**Session 2** (\* indicates student presentation)

- 1:15 \*Phase change properties of the blubber lipids of two species of odontocete cetaceans, *Globicephala macrorhynchus* and *Kogia breviceps*  
L. E. Bagge, A. Pokorny, H. N. Koopman, W.A. McLellan, D. A. Pabst
- 1:30 \*The characterization of fatty acids in blubber and pleural appendages of pygmy and dwarf sperm whales (*Kogia breviceps* and *Kogia sima*) with and without cardiomyopathy  
A. M. Goodson, M. H. Broadwater, G. T. Seaborn, J. L. Wade, and W. E. McFee
- 1:45 \*The Gross Morphology of the Melon in a Neonate Right Whale (*Eubalaena glacialis*)  
C. Harper, W. McLellan, S. Barco and A. Pabst
- 2:00 \*Locomotor muscle of cetaceans: A comparison of deep vs. shallow divers  
C. E. Kielhorn, W. A. McLellan, S. T. Kinsey, R. M. Dillaman, D. A. Pabst
- 2:15 \*The Lipid and Fatty Acid Composition of Cetacean Blow  
E. M. Patterson, B. Teter, E. Krzyszczyk, S. Hunter, A. Ginsburg and J. Mann
- 2:30 \*Short-chain fatty acid profiles of feces from the Florida manatee (*Trichechus manatus latirostris*)  
L. T. Harshaw, K. C. Scott, I. V. Larkin and R. C. Hill
- 2:45-5:15 **Poster Session**
- 6:30 - 9:30 **Banquet** – Center for Marine and Wetland Studies Warehouse

**Sunday, April 3**

- 8:40 **Welcome and morning announcements**

**Session 3** (\* indicates student presentation)

- 8:45 \*Fecal progesterone concentrations through the reproductive cycle of a female Florida manatee (*Trichechus manatus latirostris*) and comparisons with behavior  
J. D. Sheldon, J. A. Ferrante, M. L. Bills, I. V. Larkin
- 9:00 \*Behavioral and hormonal assessment of reproduction in two wild female Florida manatees, *Trichechus manatus latirostris*  
M. L. Bills, J. D. Sheldon, J. Ferrante, I. V. Larkin
- 9:15 \*Seasonal abundance, site-fidelity, habitat use, and ranging patterns of bottlenose dolphins (*Tursiops truncatus*) along the southern coast of Georgia, U.S.A.  
B. C. Balmer, L. H. Schwacke, R. S. Wells, J. Adams, R. C. George, S. M. Lane, W. A. McLellan, P. E. Rosel, K. Sparks, T. Speakman, E. S. Zolman, and D. A. Pabst
- 9:30 \*Foraging behaviors of bottlenose dolphins *Tursiops truncatus* near Savannah, Georgia  
S. R. Bowen and T. M. Cox

- 9:45 \*Snapshot or movie: How sampling methods bias dolphin social network metrics  
M. A. Stanton, J. Mann, Q. A. Gibson, B. L. Sargeant, L. Bejder and L. Singh
- 10:00 Home Range Analysis of Hawaiian Monk Seals (*Monachus schauinslandi*) Based on  
Colony, Age and Gender  
C. Curtice, R. S. Schick, D. C. Dunn and P. N. Halpin
- 10:15 **Break**
- 10:45 Awards and Business Meeting
- 11:30 Personnel from the NMFS Permitting Office are available for questions and discussion