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For management purposes, NOAA Fisheries currently defines 32 stocks of bottlenose dolphins (*Tursiops truncatus*) within bays, sounds, and estuaries of the Gulf of Mexico; however, for the majority of stocks little data are available. Bottlenose dolphins utilizing Choctawhatchee Bay in the Florida panhandle are of particular concern due to potential impacts of recent Unusual Mortality Events. NOAA Fisheries estimated abundance of Choctawhatchee Bay dolphins (179 residents; 232 residents plus transients) from surveys conducted in summer 2007. Our objective was to use data from those surveys to describe bottlenose dolphin social structure within Choctawhatchee Bay. Photo-identification surveys conducted on 33 days resulted in 141 groups sighted and 227 individuals sighted 1- 12 times. Group size (GS) ranged from 1 to 45 (median = 7). No neonates were sighted, but young-of-the-year (YOY) were present in 30% of groups. Groups containing YOY (median GS = 15) were significantly larger than groups without YOY (median GS = 5) ($P < 0.001$). SOCPROG2.4 was used to calculate half-weight association indices, test for differences in gregariousness and for preferred/avoided associations, and examine lagged association rates. The estimate of social differentiation indicated a well-differentiated society. Tests for differences in sociality or gregariousness indicated some individuals were found in consistently large or small groups. Permutation tests revealed non-random associations and the presence of preferred/avoided companions. Standardized lagged association rates were significantly higher than by chance alone, indicating animals preferentially associated over time. Though limited to summer, these findings contribute to our understanding of social structure of bottlenose dolphins in Choctawhatchee Bay. Using these data, we are not only able to quantify how many animals are debilitated to the point of stranding and death during natural and anthropogenic disturbances, but also understand the overall effect on group dynamics and social structure for those remaining within the population.

Live Here - Die Here! Life History Inference from Carcass Recovery in Bottlenose Dolphins (*Tursiops truncatus*)

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In studies of cetacean populations, mortality of known individuals is often assumed but rarely confirmed. Stranded carcasses of bottlenose dolphins (*Tursiops truncatus*) in the Indian River Lagoon (IRL), Florida have been systematically recovered for several decades. Dolphins in the IRL exhibit year-round site fidelity within at least three separate communities. The goals of this study were to use the recovery of marked/known photo-identified individuals to: 1) determine if individuals died within their home range; and 2) use a sighting interval based on resight histories to predict death and estimate carcass recovery. A total of 194 dolphins were recovered dead in the IRL from 2002-2007, with 105 (54%) suitable for matching (decomposition/scavenging accounted for most unrecognizable fins). Fifty percent (53/105) of these dolphins were

marked/known, 45% (47/105) were unmarked, and 5% (5/105) were marked/unknown. The majority of dolphins with >3 sightings (82%) died between the most extreme points of their home range. Dolphins in the southern community have not been observed in the Atlantic Ocean and no evidence exists of dispersal to the northern or Mosquito Lagoon communities. Of 182 resident dolphins in this community encountered 2,734 times, sighting intervals were not normally distributed with most dolphins resighted in < 100 days. Based on the 99% resighting frequency interval (390 d), we predicted 35 adult/juveniles to have died within the study area and period. Fourteen of the predicted dolphins were recovered dead and 12 carcasses too decomposed to identify were also recovered. After applying the marked/unmarked ratio (62:38) for live non-calf dolphins to the decomposed carcasses, we predicted seven dolphins were potentially marked, thus the remaining 14 of the predicted 35 dolphins (or 40%) were presumed unrecovered. Further investigation comparing mark/recapture analyses will help to refine an annual correction factor for unrecovered carcasses as a minimum estimate of mortality.

Rare Sightings of Bryde's Whales (*Balaenoptera brydei/edeni*) in the Southern California Bight

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Bryde's whales (*Balaenoptera brydei/edeni*) have been considered an anomalous occurrence in the Southern California Bight (SCB). Thus, they typically have been excluded from species lists associated with SCB management documents. In the last 40 years only two visual sightings of Bryde's whales were documented in California waters, the last one in 1991 (Carretta et al. 2008). This is despite extensive systematic vessel and aerial surveys and presumed recent recordings of Bryde's whale vocalizations in the SCB. Bryde's whales are notoriously difficult to differentiate in the field, both from each other and also from fin (*B. physalus*) and sei whales (*B. borealis*), given the subtle differences in physical characteristics. Between August 2006 and September 2010, we photo-documented five sightings of five single Bryde's whales in the SCB. Two of the five sightings occurred in October 2008 and September 2010 during 33,880 km of aerial surveys. The remaining three sightings occurred during small-vessel surveys that included offshore waters: two in June 2006 and one in September 2010. These sightings combined with other reports of presumed vocalizations suggest that Bryde's whale numbers may be increasing in the SCB. This may be related to global warming, large-scale oceanographic events (e.g., El Niño and La Niña) and resulting changes in prey availability. Recent sightings reported herein indicate that the Bryde's whale should be considered as a species present in the SCB and photo-documentation is critical to ascertain species.

Cetacean species diversity observed during four years of survey effort in Onslow Bay, NC, USA

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