87 THE CALIFORNIA DOLPHIN ONLINE CATALOG: COLLABORATION, COLLABORATION, COLLABORATION!

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The bottlenose dolphin (*Tursiops truncatus*) is the most common cetacean in the coastal waters off California. Within their over 1,000 km-long distribution, these dolphins exhibit extensive back-and-forth coastal movements and demonstrate little site fidelity to any one area. The California Dolphin Online Catalog (CDOC), initiated in 2011, is an internet-based 30 yr. archive of dolphin dorsal fin photo-identification and sighting data collected from individuals within this population. Accessibility to the CDOC facilitates collaborations among researchers at differing locations along the California and Baja coastline. The value, and often the necessity, of such collaborations is illustrated by two case studies which draw on data collected by a number of research laboratories in 1981-1989 and in 1996-2001. In both cases, photo-identification catalogs from study areas in Ensenada (Baja California), San Diego, Orange County, Santa Monica Bay, Santa Barbara, Monterey Bay and San Francisco Bay exhibited a high proportion of inter-area photographic matches, which established the range and movement patterns of dolphins in this population. Further, these collaborations confirmed the continued northern range extension of this population from southern California (Los Angeles) to San Francisco Bay.

88 FOOD FOR THOUGHT: INFLUENCE OF THE "PREY-SCAPE" ON GRAY WHALES OF CLAYOQUOT SOUND, BRITISH COLUMBIA

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Since 1983 the University of Victoria (UVIC) Whale Research Lab has been studying gray whales in Clayoquot Sound, British Columbia. A project that began by studying the affects of the increasingly popular Tofino whale-watching industry on the whales, the focus soon switched to the importance of the relationship between the whales and their habitat and the dynamics of the predator prey relationships. Here, unlike other "primary" feeding areas for gray whales, the food source is a swarming species of tiny shrimp called mysids. Here, the link between the prey, mysids, and the predator, gray whales is intricately tied. The importance of both the bottom-up and top-down predator-prey relationship is key, with mysids in the middle influenced by both. Here, the ecosystem-approach to understanding the whales is essential, as you cannot begin to understand the biology, ecology, or behavior of the whales without a first understanding their relationship to their tiny food, source. This presentation will cover two decades of research on gray whales done by the UVic WhaleLab, and some of the more outstanding results that have come from that work.

89* BEHAVIORS OF SOUTHERN CALIFORNIA CETACEANS: OBSERVATIONS FROM A SMALL AIRCRAFT 2008-2013

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Small aircraft enable a "bird's eye" view of marine mammal behavior at/near the water surface. During 2008-2013, we flew 87,734 km of line transect and "focal follow" aerial survey effort in the Southern California Bight to systematically collect data on 2,707 sightings of ~222,457 individual cetaceans representing 19 species, funded by the U.S. Navy Pacific Fleet. Focal follows involved circling a cetacean group for 5-60+ minutes and taking high-definition (HD) video and photos to document behavior primarily of blue, fin, gray, humpback, sperm, minke and killer whales; and Risso's, common bottlenose, short-beaked and long-beaked common, and northern right whale dolphins. HD media allow photo-identification of individuals and species confirmation from altitudes of 1,000-1,500 feet. The "bird's eye"

perspective facilitates descriptive and quantitative analyses of behavior previously little described for typically offshore species: whale calf nursing/back-riding, group cohesion, social affinity/composition, group shape and dimension "envelope", cues leading to group behavior changes, mixed species interactions, individual whale respiration/dive rates, etc. Behavior differs significantly by species, calf presence, time of day, time of year, subregion, water depth, slope, distance from shore, and presence of other species. For example, Risso's dolphins were 13 times more likely to rest than common dolphins, and dolphin group size increased significantly with calf presence. As species body size decreases, group size increases and individuals decrease distance between neighbors. We hypothesize that inter-specific differences of spacing and behavior are related to predation pressure, food resources, and communication capabilities/needs that lead to occupation of different niches within the same ecosystem.

90* RESOURCE SELECTION FUNCTION ANALYSES: ASSESSING HABITAT USE RELATIVE TO BEHAVIOR AND RESOURCE CHARACTERISTICS/AVAILABILITY FOR FIVE COMMON MARINE MAMMAL SPECIES IN THE SOUTHERN CALIFORNIA BIGHT

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In 2008-2012, fifteen aerial surveys of systematic line-transects were conducted off Southern California to obtain baseline data on occurrence, distribution, density, abundance and behavior of marine mammals (MM). Site characteristics at MM locations were analyzed by estimating Resource Selection Functions (RSF) to quantify and describe baseline habitat use as a precursor to assessing potential changes in these patterns relative to anthropogenic activities, including U.S. Navy training exercises. For RSF analyses, habitat characteristics at MM locations were contrasted to characteristics at 35,167 randomly selected "available" locations in the study area. RSFs were estimated via the use-availability approach and predicted probability of species occurrence at all locations in the study area as a function of seven covariate habitat variables. Models (n = 60 fin and 40 gray whale groups, 135 Risso's and 31 bottlenose dolphin groups, 157 California sea lion groups) were fit for three behavior states (mill, rest/slow travel, medium/fast travel) and combined to document behavior/habitat associations. Species differed significantly in habitat use and corresponding habitat associations based on behavior. Medium-fast traveling fin whales were associated with deep water over flat basins/plateaus ($p=0.0017$). Fin whales also preferred the San Nicolas Basin ($p=0.0517$). Risso's dolphins rested/slow traveled more in deep vs. shallow water ($p=0.0803$). Overall, resulting habitat-use patterns demonstrate fast movement across basins and rest/slow travel over ridges where upwelling is most likely to occur. The RSF approach quantitatively demonstrates the importance of considering behavior and social context in habitat selection and use.

91 A HITCHHIKER'S GUIDE TO THE SOUTHERN CALIFORNIA BIGHT; ARE SIGHTINGS OF XENOBALANUS GLOBICIPITIS ON THE RISE?

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The pseudostalked barnacle *Xenobalanus globicipitis* is a cosmopolitan species and an obligate phoretic commensal that attaches itself to cetacean hosts. The species' distribution includes all of the world's oceans with a latitudinal range from polar regions to the tropics and 34 documented host species range in size from the blue whale (*Balaenoptera musculus*) to the vaquita (*Phocoena sinus*). An increase in colonization by *X. globicipitis* could be an important indicator of population health as susceptibility has been linked to immune system impairment. Anecdotal observations indicate a dramatic increase in sightings of *X. globicipitis* on several cetacean species in the Southern California Bight. Sets of photos of long- beaked common dolphins (*Delphinus capensis*) obtained opportunistically in the Santa Barbara

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