

Bryde's Whale (*Balaenoptera brydei/edeni*) sightings 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.

Bryde's whale seasonal range expansion in the eastern North Pacific

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Climate impact models predict the range expansion of warm water species towards the poles in response to ocean warming. Bryde's whales (*Balaenoptera edeni*) are commonly found in tropical and subtropical regions of the Pacific Ocean, but few studies have explored the presence of Bryde's whale at the boundaries of their distribution ranges. Like other baleen whales, Bryde's whales produce distinct low frequency (< 60 Hz) calls, which can be used for long-term acoustic monitoring of whale presence in an area. Autonomous passive acoustic recorders deployed at five sites in the Southern California Bight (SCB) were used to investigate the presence of Bryde's whales in temperate waters between 2000 and 2010. Calling Bryde's whales were observed in the SCB seasonally, from summer to early winter, but no significant correlation was found between Bryde's whale presence and local sea surface temperature. There was a significant increase in the presence of calling Bryde's whales in the SCB between 2000 and 2010. Bryde's whale occurrence is likely driven by prey availability within the California Current ecosystem, which is affected by seasonal and inter-annual changes in climate and oceanographic conditions. Continued monitoring of Bryde's whales and their prey in the eastern North Pacific is needed to determine the full effect of climate variability and ocean warming on the distributions of these species.

Coastal Dolphin Survey Project of Orange Coast College focus on the population dynamics and behavior of the coastal bottlenose dolphin (*Tursiops truncatus*) along Crystal Cove, CA and use of Newport Harbor, CA.

Lindsay S. King (Student Director CDSP) and Dennis L. Kelly, Professor & Founder/Project Director

A land based study of the behavior and ongoing use of Newport Harbor and Crystal Cove, CA by Coastal Bottlenose Dolphins (*Tursiops truncatus*) was conducted between the months of March to December 2011. During this time a behavior budget was developed for activity observed in Crystal Cove while sightings of dolphins by the public in Newport Harbor were catalogued. Data was collected through onsite observations by 2 or more observers at a time. A Dorsal fin ID method was also used to determine individual dolphins that may be using the area more frequently than others. A total of 38 dolphins were observed from the Research cottage at Crystal Cove where the majority of activity consisted of unidirectional travel. Only 1 sighting in Newport Harbor was received and was logged in the data that has been collected since 2007. All of the findings suggest that both Crystal Cove and Newport Harbor are greatly used by coastal bottlenose dolphin and suggests more research be done to determine the importance of these areas.

What to do with a 20m stranded fin whale?

Eddie Kisfaludy, Oceans Aloft LLC

Decomposing whales have recently become of significant interest as unique and rich underwater ecosystems. The largest whale-fall known to science was created using a 20 m adult fin whale (*Balaenoptera physalus*) that stranded on the shoreline of Pt. Loma, San Diego on November 19, 2011. San Diego City Lifeguards towed the whale 13 km from Point Loma to Fiesta Island, Mission Bay where a team of scientists from NOAA's Southwest Fisheries Science Center, Sea World Parks and Entertainment and the San Diego State University/SD Museum of Natural History conducted a necropsy. Fractures along its 4 m vertebral column and significant muscle hemorrhage surrounding this area indicated ante-mortem ship strike as the cause of death. It was also determined that the whale was a pregnant female from observations of an expelled fetus. The private organization Virgin Oceanic in partnership with Scripps Institution of Oceanography (UCSD) towed and sank the whale 22 km offshore from San Diego in 850 m deep waters using 6,400 kg of steel, with the purpose of documenting the decomposition of the carcass with time.

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