

influence of the objectives of the study. These assumptions were examined using data from tagged harbour seals (*Phoca vitulina*). Two behavioural metrics were investigated for short-term aberrations. Firstly percentage time hauled out (HO%) as it is a measure of activity budgeting and secondly the 90th percentile of dive duration (DD₉₀) as it is a proxy of physiological dive capability. The magnitude and duration of initial post capture deviations from subsequent normal levels were examined by a resampling procedure. No seals exhibited a significant short-term response in DD₉₀. Seals did, however, exhibit significant changes in HO%. Significant responses lasted less than one week with a maximum magnitude of a 42% increase in HO%. These results suggest that, in this study, some aspects of behaviour in the first few days post capture should be regarded as aberrant. We do not extrapolate this to other studies. Rather we recommend that this technique is used routinely to detect any aberrant post-capture behaviour in telemetry studies.

Patterns of cetacean species occurrence, distribution and density at three sites along the continental shelf break of the U.S. Atlantic coast

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As part of the U.S. Navy's Atlantic Fleet Testing and Training program, we are monitoring the occurrence, distribution and density of cetaceans at three offshore sites along the U.S. Atlantic coast. We are using an identical suite of survey methods (line transect surveys, photo-identification, biopsy sampling and passive acoustic monitoring) at each 500nm² reference site. Surveys began in Onslow Bay, NC in 2007, Jacksonville, FL in 2009 and Cape Hatteras, NC in 2011. To date we have conducted 48674km, 60687km, and 14213km of aerial surveys with 6883km, 3403km and 2443km of vessel surveys and 1201 days, 1264 days and 28 days of High-frequency Acoustic Recording Package (HARP) recordings at Onslow, Jacksonville and Cape Hatteras, respectively. In both Onslow and Jacksonville, the cetacean fauna is dominated by *Tursiops truncatus*, with densities of 0.034/km² and 0.025/km² respectively and *Stenella frontalis*, with densities of 0.027/km² and 0.045/km² respectively. *S. frontalis* was encountered exclusively over the continental shelf. *Grampus griseus* and *Globicephala macrorhynchus* were the most commonly encountered pelagic odontocetes at these two sites. Species richness is much greater at Cape Hatteras than at the two southern sites (with 18 species sighted at Cape Hatteras, 10 at Jacksonville and 9 at Onslow), with the inclusion of several boreal species during colder months and the common occurrence of several deep-diving odontocetes, including *Physeter macrocephalus*, *Ziphius cavirostris* and *Mesoplodon* spp. Mysticetes, including *Balaenoptera acutorostrata*, *B. physalus*, *Eubalaena glacialis*, and *Megaptera novaeangliae*, were encountered only during winter at all three sites. In addition, we have detected the calls of two species on bottom-mounted HARPS that were not observed during visual surveys, including *B. musculus* and likely *B. borealis*. We highlight the particularly high diversity of cetaceans at the Cape Hatteras shelf break and suggest that this is a hotspot of species richness in the North Atlantic.

Cetacean occurrence and activity in the Papahānaumokuākea Marine National Monument

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The Northwestern Hawaiian Islands (NWHI) make up the Papahānaumokuākea Marine National Monument (PMNM), one of the largest marine protected areas in the world. Cetacean occurrence and habitat use in the NWHI remain poorly documented because the archipelago is remote and largely inaccessible during the winter months from November to April. As a result, it is presently unclear what cetacean species are common in the NWHI, how they occur spatially in the archipelago, and what temporal patterns, if any, are present. To investigate the year-round occurrence of both mysticetes and odontocetes in the NWHI, four bottom-moored Ecological Acoustic Recorders (EARs) were deployed at Nihoa, French Frigate Shoals, Lisianski island and Kure atoll. The EARs recorded on a duty cycle and were placed at depths ranging between 123m and 405m for a period of 12 months from May 2010 to June 2011. Manual analysis and automated detectors were used to identify periods of cetacean acoustic activity. Odontocete presence was variable between the four locations, with the highest occurrence observed at French Frigate Shoals and the lowest at Nihoa. Acoustic activity had a diel pattern, suggesting nocturnal foraging behavior on mesopelagic boundary community prey. The mysticete species detected included humpback whales (*Megaptera novaeangliae*), blue whales (*Balaenoptera musculus*), fin whales (*Balaenoptera physalus*), minke whales (*Balaenoptera acutorostrata*), and sei whales (*Balaenoptera borealis*). Of these, only humpback whales were previously known to occur regularly in Monument waters. In addition, the presence of most mysticetes was seasonal, indicating that the NWHI are a wintering habitat for these species. These findings underscore the ecological value of PMNM and the need for an adaptive management strategy to account for newly documented species in the Monument.

Occurrence, distribution and behaviour of common dolphins (*Delphinus* sp.) in the Bay of Plenty, New Zealand

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Eight commercial marine mammal tourism operators are permitted to view and swim with common dolphin (*Delphinus* sp.) in the Bay of Plenty, New Zealand. This is despite a lack of baseline data on occurrence, habitat use or behavioural responses of dolphins to vessels. Between November 2010 and January 2013, 352 boat-based surveys were conducted from Tauranga, Bay of Plenty. A total of 16,995km of track effort was conducted, comprising 7,157 and 9,838km from research and tourism vessels, respectively. Fifty two focal follows were completed from the research platform while a) in the absence of any other boats (*i.e.* control sequences: 47.1%, n=33) and b) in the presence of other commercial or recreational vessels (*i.e.* interaction sequences: 52.9%, n=37). Common dolphins were the most frequently encountered species (59.6%, n=235), occurring closer inshore in summer and spring (median=7.6km, SE=0.3, n=185) compared to autumn and winter (median=9.1km, SE=0.5, n=64). An initial activity budget indicates dolphins spend more time travelling (53.1%, n=60), followed by foraging (23.9%, n=27), milling (16.8%, n=19),