conducted on 43 dugongs within Moreton Bay by University of Queensland veterinarians and 202 Florida manatees within Tampa Bay by Florida Fish and Wildlife Conservation Commission staff.Causes of mortality were categorized as: human related (boat strike, entanglement or human interference), natural (cold stress, brevetoxicosis, infectious diseases, degenerative syndromes, parasitism or stillborn), and undetermined (advanced decomposition or unidentified agent).For Moreton Bay, causes of mortality were human related 25.6% [*n = 11*, 95% CI 13.5-41.2], natural 44.2% [*19*, 29.1-60.1], and undetermined 30.2% [*13*, 17.2-46.1]. For Tampa Bay, causes of mortality were human related 37.1% [*75*, 30.5-44.2], natural 32.2% [*65*, 25.8-39.1], and undetermined 30.7% [*62*, 24.4-37.6].Higher human-related deaths in Tampa Bay may be a result of injured transient manatees coming from outside the bay to seek shelter, as 42% (27/65) were chronic cases. Higher natural-related deaths in Moreton Bay may be perennial microbiological and parasitic infections (58%; 11/19), whereas Tampa Bay had seasonal cold stress (25%; 16/65). The large number of undiagnosed sirenia may influence findings; however, given the similarities in causes of death categories, conservation managers from these regions should collaborate to refine strategies to reduce mortalities.

Occurrence and distribution of marine mammals in a proposed Undersea Warfare Training Range off Jacksonville, FL

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The U.S. Navy has proposed establishing an Undersea Warfare Training Range (USWTR) in an area between 60 and 150 km off the coast of Jacksonville, Florida. To establish baseline information on the occurrence and distribution of marine mammals in this area we conducted aerial and shipboard line-transect surveys and a passive acoustic monitoring program. Here we report the results of aerial and shipboard line-transect surveys conducted between January 2009 and April 2011. During this period, we flew 42,895 km of aerial tracklines and recorded 477 sightings of ten cetacean species (n=5,736 individuals). *Tursiops truncatus* was encountered most commonly (202 sightings, n=1,699), followed by *Stenella frontalis* (184 sightings, n=3,213). Other species observed during aerial surveys include *Grampus griseus* (n=350), *Globicephala macrorhynchus* (n=174), *Steno bredanensis* (n=118),*Balaenoptera acutorostrata* (n=13), *Eubalaena glacialis* (n=3), *Physeter macrocephalus* (n=2), *Kogia* spp. (n=1), and *Megaptera novaeangliae* (n=1). In 35 vessel surveys totaling 2,486 km we encountered three cetacean species in 77 sightings (n=576). *S. frontalis* and *T. truncatus* were observed most often, followed by *G. griseus* (n=351, 160, and 43, respectively). *T. truncatus* was observed throughout the entire survey area, but *S. frontalis* and *S. bredanensis* were seen exclusively on the continental shelf. All *E. glacialis* sightings, including a rare observation of an offshore birth, occurred on the western edge of the survey area. All other species were detected only in pelagic waters. *Stenella frontalis, T. truncatus,* and *G. griseus* were observed throughout the year (12, 11, and 9 calendar months, respectively); *G. macrorhynchus* and *S. bredanensis* were detected from April to October, and all mysticete species were seen only between December and March. This monitoring program, combining a variety of survey modalities, is providing a rich picture of the cetacean fauna in these poorly studied offshore waters.

Does hot iron branding affect Steller sea lion *(Eumetopias jubatus)* pup behavior?

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Hot iron branding (HIB) is a widely-used method of permanently marking Steller sea lions (SSL) for demographic studies. . We investigated the behavior of eight pups two days prior to and five days following HIB on June 30, 2010 at Medny Is, Russia. As a control group we monitored another five pups which went through the same procedures as branded pups (handling, measuring, anesthetizing), but were bleached for marking and not branded. Six types of behavior (sleeping, suckling, play, active, locomotion, grooming) were recorded. Play behavior significantly decreased on the 1st (F=9.9, p=0.007) and 2nd (F=9.2, p=0.009) days after branding. Grooming behavior was significantly lower on the 5th day after branding (Z=2.6, p=0.01). Sleeping was longer on the 3d (F=19.19, p=0.001) and 5th (F=4.9, p=0.04) days. Other behavior types weren't statistically different among the branded pups before and after branding. Comparing branded and bleached pups behavior we found significant difference only in suckling activity; bleached pups suckled milk longer during the 1-st day after branding (Z=-2.9, p=0.003). Bleached pups were smaller and lighter on average than branded pups (p=0.0001), so this increase may be due to their younger age. Only duration of play behavior changed significantly during the initial days after branding but resumed to pre-branding level on the 3-rd day after branding. We did not record any mortality or health and condition problems among the handled pups during the 5 days of continuous monitoring and continuing until mid-September. Overall, we concluded that during our study the HIB procedure had only a short-term affect on the behavior of SSL pups.

Habitat-based models of cetacean density in the central North Pacific

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The central North Pacific includes diverse habitats spanning temperate and tropical waters. Few systematic surveys have been conducted in this region to assess the abundance and distribution of cetaceans, and efforts have often been hampered by poor weather. In this study, we present the first habitat-based density models for 10 cetacean species within a large region of the central North Pacific between the equator and 40ºN and from 175ºE to 120ºW. We developed generalized additive models using data collected during 1997-2006 line-transect surveys within several subareas of the central North Pacific (i.e., temperate eastern Pacific, eastern tropical Pacific west of 120ºW, and around Hawaii and other Pacific Islands). For model development, we divided survey transects into 10-km segments