



WOODS HOLE OCEANOGRAPHIC INSTITUTION

WHOI MARINE MAMMAL CENTER: PROGRESS AND PROSPECTS - 12/ 2011

Founded in May 2008 with a generous donation from Peter and Ginny Nicholas. The mission of the WHOI Marine Mammal Center (MMC) is to develop strength in basic marine mammal research and technology, concentrating on conservation applications through strategic partnerships and interdisciplinary approaches.

We have pursued these goals by funding: research projects; exchange of graduate students between WHOI and the Duke Nicholas School of the Environment; workshops on critical aspects of marine mammal science and conservation; and diagnostic infrastructure.

Funded projects have focused on mitigation of large whale entanglement in fishing gear, development of acoustic techniques to better quantify prey species, and novel studies of marine mammal microbial communities in the context of host health. More projects will be funded in early 2012, with a diverse array of quality proposals currently under review.

Graduate student projects in the WHOI/ Duke exchange have enhanced the above projects, and also pursued new avenues. The visiting students have universally appreciated the opportunity to explore the diverse resources these visits afford.

Workshops have included a major focus on marine mammal diving physiology, which remains a critical focus of US Naval research priorities. A workshop held in April 2010 has significantly informed current naval research directions, some of which has been undertaken at WHOI: in the field with sound exposure response studies of tagged whales; in the lab with a novel hyperbaric imaging study; and in computer modeling of dive kinetics. Two other workshops have focused on the interface between humans and seals in New England. Seal populations are burgeoning on Cape Cod with inevitable growing pains felt by the fishing industry. WHOI is taking a central role in informing critical management issues as this situation develops.

60 years of marine mammal research at WHOI have accumulated vast data resources. The MMC is working to curate and serve those products to the science community and the public.

Looking forward, the MMC seeks to couple cutting edge basic research on marine mammals with the critical conservation and environmental issues facing the world today: many of the broader issues such as climate change and ocean resource depletion are exemplified in the status and trends of marine mammals. Specific projects could include right and bowhead whales, biotoxins, microbiomes, energetics of entanglement, stranding, behavior, and passive acoustic monitoring.

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