



# INTRODUCTION

The Marine Mammal Center at Woods Hole Oceanographic Institution

- conducts basic research using cutting edge technology to solve major scientific and conservation problems
- integrates diverse approaches and methods to understanding marine mammals and the different ways humans may influence the health of marine mammals, their populations, and their ecosystems
- includes a diverse group of scientists and engineers, and acts as a clearinghouse and incubator for interdisciplinary teams.

### CONSERVATION

As fewer marine mammals are hunted intentionally by humans, conservation focus has switched to the animals killed by accident (for example, in fishing gear) and to degradation of their habitats. These threats are global; they caused the extinction of the Chinese River dolphin in 2007 and continue to threaten right whales in New England. If our children are to inherit a planet with healthy marine populations, the best science and technology must be applied to understand the threats and to develop effective conservation solutions.

The Center's focus on basic research and technology builds on WHOI's capabilities, and promotes the development of new interdisciplinary teams and opportunities. The Joint PhD Program with MIT and the WHOI postdoctoral program provide excellent training for researchers. The Center will enhance opportunities for conservation-related education.

### RESEARCH

Through collaborations with Duke University, National Marine Life Center, International Fund for Animal Welfare (Marine Mammal Rescue and Research) and the New England Aquarium, and the use of novel technology such as gliders, non-invasive animal tags, open access databases, acoustic propagation models, and advanced data visualization, the Center is pursuing new research on:

- Marine animal health and survival
- Disease transmission between humans and marine animals
- Decreased threat of ship collision and fishing gear entanglement
- Reduced impacts on mammals from sonar, shipping, and industrial activities at sea
- Impacts of climate change on marine populations
- Effects of behavioral and physiological disturbances on populations
- Whale prey mapping methods
- Deep diving physiology
- Non-invasive neurobiological measurements in marine mammals

# **INFRASTRUCTURE**

This research is enabled and enhanced through access to world-class facilities. The coastal research vessel *Tioga* provides quick, affordable and effective operations throughout the region. The new, marine research facility houses laboratories for necropsies, CT scanning, instrument testing and development, student study and archives.

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