



Humpback Whale (*Megaptera novaeangliae*)
Photo: nationalgeographic.com

Impact of Marine Debris on Whales and Dolphins in Hawai'i

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Short-Finned Pilot Whale (*Globicephala macrorhynchus*)
Robin W. Baird, Cascadia Research Collective

Problem

- **Marine Debris:** Solid, man-made or processed material (e.g., **plastic, fishing gear**) accidentally or purposely discarded into the ocean
- **Most Common Type: Plastic**
- **Marine Debris is a Problem for Whales and Dolphins**, who can become entangled or ingest marine debris that might fill their stomachs or **injure their digestive tracts**. Whales can feel full but **starve** from not getting enough food and nutrition.
- **Other Marine Animals**, such as **sea turtles and seabirds**, also ingest marine debris



False Killer Whale (*Pseudorca crassidens*)

Objective

- **Protect Hawaiian Whales and Other Marine Animals From Marine Debris**
- **What Can We Do?**
Think Global, Act Local
Prevention Starts at Home
- **Remember the "4 R's":**
 - **Reduce:** Create less trash
 - **Reuse:** Use again or re-purpose
 - **Recycle:** Use a recycling bin or recycler
 - **Refuse:** Say no to single-use plastics



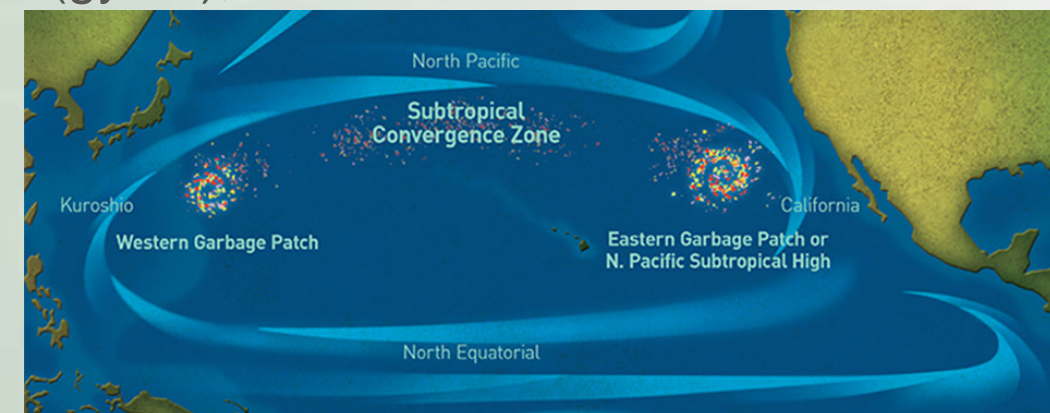
Background

- **Whales and Dolphins (Cetaceans) are Marine Mammals** who live in the sea, **breath air** at the surface, **nurse their young**, and are **warm-blooded**



Spinner Dolphins (*Stenella longirostris*), Alan Airey, whales.org

- **"Garbage Patches"** are areas where **marine debris** collects in ocean currents (gyres), such as between **CA and HI**



NOAA National Ocean Service

Entanglement

- **Entanglement:** Derelict (abandoned) **fishing gear (like nets, long-lines, and traps)** and other marine debris can entangle or catch marine life, such as whales, dolphins, Hawaiian monk seals, sea turtles, seabirds, and fish, like sharks



Photo: Pixabay



Photo: ipetitions.com

- **Entangled dolphins have been found in Hawai'i**

Stomach Debris

- **Three Pilot Whales (*Globicephala macrorhynchus*), Each with ~15 lb. of Marine Debris in Their Stomach**, stranded ("beached") on Lāna'i, O'ahu, and Kaua'i



Photo: Health & Stranding Lab

- **Stomach Debris Examples Found in These and Other Hawaiian Whales:**

- ~5 × 10-inch plastic funnel-shaped "eel catcher"
- ~2-inch plastic lid or detergent bottle cap and smaller bottle caps
- Plastic and nylon fishing gear (netting, rope, and long-line pieces)
- Plastic bags, other plastic pieces
- Metal fishing hooks



Photo: Health & Stranding Lab

- **The Health & Stranding Lab of UH and their partners study stomach debris to better understand and protect whales**

Conclusions

- **Marine Mammals Matter**
Charismatic marine mammals, e.g., whales and dolphins, are important to the food web and marine ecosystems, and can indicate environmental problems

Hope!

- **Research**
University of Hawai'i Health & Stranding Lab
Kane'ohe, Hawai'i



Sperm Whale (*Physeter macrocephalus*)
Daniel Webster, Cascadia Research Collective

- **National Marine Sanctuaries**
Marine protected areas for threatened or endangered whales and other marine life, e.g., **Hawaiian Islands Humpback Whale National Marine Sanctuary**
- **Regulations**
Marine Mammal Protection Act, Endangered Species Act, and other laws
- **National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program:** Since 2006, leading marine debris **research, prevention, and reduction**; partners with state and local agencies, tribes, non-governmental organizations, schools, and industry
- **Department of Land and Natural Resources (DLNR):** "Marine debris is everybody's problem." Call and email photos to DLNR to report large amounts
- **Additional Acknowledgements, Credits, and References:**
Cascadia Research Collective, www.cascadiaresearch.org
DLNR Marine Debris, <http://dlnr.hawaii.gov/marine-debris>
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