Leatherbacks Help to Map the Pacific

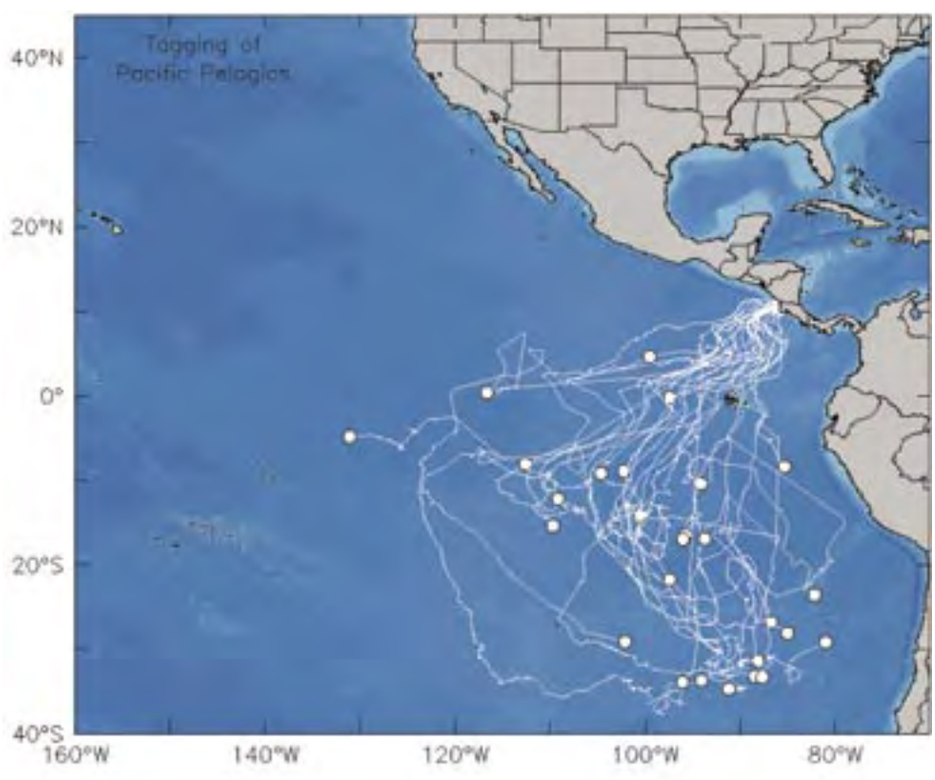
Hoping to gain an organism's-eye view of the aquatic world, scientists from various institutions have joined together under the Tagging of Pacific Pelagics (TOPP) research project to tag more than 1,800 specimens of 21 large marine species, including tunas, seabirds, sharks, whales, sea lions, and sea turtles. As these animals move about the Pacific, the high-tech tags they carry gather information that is instantly transmitted to onshore labs. Those data become part of a global-scale project called the Census of Marine Life, an international endeavor to determine what lives, has lived, and will live in the world's oceans.

A baby leatherback is tracked using a small radio-tracking device. © 2004 GENE BEDNAREK / WWW.SOUTHLIGHT.COM

Given that leatherbacks spend nearly all of their long lives at sea, understanding their feeding and migration routes is critical to our ability to mitigate the human-induced threats that endanger them. Since 2001, TOPP researchers have been attaching satellite transmitting backpacks to leatherbacks with unique tags that not only track the turtles' movements as they feed and migrate but also record the depths of their dives and collect oceanographic information such as temperature at varying depths and locations—data that are otherwise very costly to obtain. Since 2004, more than 50 leatherbacks have been tagged at their nesting beaches by different research groups at Playa Grande, Costa Rica, and from foraging grounds in California's Monterey Bay.

Pioneers in the fascinating new field of satellite tracking, TOPP scientists and their collaborators are gaining an understanding of how the open-ocean ecosystems work. By learning where animals travel and what factors control these migrations, they will provide information that is critical to shaping responsible ocean policies.

*The **Tagging of Pacific Pelagics** (TOPP) program is an international, multidisciplinary research project that utilizes electronic tags to study migration patterns of large open-ocean animals and to understand the factors that control these movements. Jointly run by Stanford University, University of California Santa Cruz, U.S. National Oceanic and Atmospheric Administration's Pacific Fisheries Ecosystems Lab, and the Monterey Bay Aquarium, the TOPP program is part of the global Census of Marine Life, a ten-year initiative to assess and explain the diversity, distribution, and abundance of marine life in the oceans—past, present, and future.* www.toppcensus.org.



By use of satellite transmitters, researchers have tracked 50 leatherbacks' movements around the Pacific Ocean.
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