



14 November 2005

Dear Friends of The Ocean Foundation,

I have just returned from a great visit to Maine with one of our grantees, the Ocean Alliance (which you may recall from our previous newsletters). The Ocean Alliance just completed "The Voyage of the Odyssey," a five-year research trip aboard the Ocean Alliance's ninety-three foot motor-sail, research vessel, the Odyssey.

The day-long meeting was definitely worth it, even though the data from the expedition was all bad news for whales, the ocean and others at the high end of the food chain (such as we humans). The scientists (whale specialist Roger Payne, marine toxicologist John Wise, expedition chief scientist Celine Godard-Codding, David Evers, Cristina Fossi) really feel that the data collected during the voyage can change the world. Their idealism and optimism are contagious.

The gist of the meeting presentations was as follows:

1. The goals of the Voyage of the Odyssey, as set in 1995, have all been met. All promised work is completed and all voyage funding exhausted, with some funding still needed. The 5-year voyage is declared over. Marisla Foundation, Pacific Life Foundation, The Ocean Foundation and anyone else who invested in this research voyage definitely got our money's worth.
2. The original plan to look at Persistent Organic Pollutants (POPs) and Endocrine Disruptive Chemicals (EDCs) was augmented to include heavy metals (chromium, mercury) and other chemicals. Recent advances have enabled scientists to determine how specific levels of toxins affect whales using whale cells grown in laboratories. Thus the individual Odyssey samples can be analyzed as to whether the toxins are at levels that will disrupt DNA, kill cells, or otherwise harm the whales.
3. POPs and EDCs accumulated in whale tissue are elevated, but are not at alarmingly excessive levels (which is good news). However, given whales are long lived, they remain a serious concern because accumulation will continue.
4. Mercury and Chromium contamination, however, are off the charts the wrong way. They are found at levels in the Sea of Cortez and Kiribati (Gilbert Islands, Western Pacific) that are shown to kill cells in the lab, and at levels to cause chromosome damage in all the world's oceans.
5. The state of the art marine toxicology facility is located at the University of Southern Maine, presided over by renowned toxicologists John and Sandy Wise (recruited from Yale), thanks to the Maine congressional delegation— and the samples collected on the Voyage of the Odyssey

1990 M Street, NW, Washington, DC 20036
Telephone 202.887.8992
E-mail mspalding@oceanfdn.org
Internet <http://www.oceanfdn.org>

have and will continue to be analyzed in this gleaming new 4-story lab.

6. With characteristic generosity and vision, Roger Payne and his colleagues at Ocean Alliance have designed a website that will provide the data free to researchers around the world— a site sophisticated enough to provide detailed information about the location, conditions, and other facts about each sample collected.

7. But the outcome of the toxicology tests conducted on hundreds of whales across the world's oceans, including some of the most remote locations, presents a daunting picture. In short, better living through chemistry isn't. Gravity works 24/7, and our seas are down hill from everywhere. If you want healthy grandchildren, do not let your children eat seafood -- particularly any carnivores high on the food chain (salmon, tuna, swordfish, etc.). There is real reason to worry that this critical world protein source is rapidly becoming too polluted to be eaten safely.

8. Regardless, the data from the samples raise more questions than they answer. The samples from this trip and related data are going to fuel years of study. For example, the very real potential apparently exists that a study of fire retardants in whale tissue will bring further bad news about the toxins that are moved around the globe by ocean currents.

For now, however, it's hats off to the dedicated folks at Ocean Alliance for meeting their goals over an arduous five year journey and to those who provided all the support that helped make it a success. The database that Ocean Alliance is making available to the world is incredible and practical. Thus, though it may not happen over night, the data from this modern Voyage of the Odyssey may indeed change the world.

For the oceans,

Mark J. Spalding, President