

Navy Role in Whale Deaths?

The recent increase in beached Gray whales along their spring migratory route may actually be a good thing. Death accompanies life – and with the estimated 26,000 whales now traveling the west coast of the continent – up from just a few thousand in 1946 – it would follow that more whales are also not surviving the journey. Illness, collision with cargo ships and starvation due to limited food supply always take a toll. However, what is remarkable about this year's attrition – over 30 in the San Francisco bay area alone as of late March – is that few of these individuals show signs of typical death; most have good body fat, few have the regular pattern of propeller inflicted contusions, and most appear by all other terms to be healthy. This inconsistency has raised speculation about the cause, and suspicion is high that somehow we humans may have some unnatural role in the deaths.

A coincidental event that may point to a human role in the deaths is that in October 1999, the U.S. National Marine Fisheries Services approved an Environmental Impact Statement (EIS) permitting the U.S. Navy to indiscriminately deploy an underwater communication system called Surveillance Towed Array Sonar System (SURTASS) utilizing Low Frequency Active Sonar (LFAS.) This system uses extremely loud noises to communicate with – and purportedly to locate – submarines across thousands of miles of open ocean throughout the world. In order for the system work the Navy needs to generate noise with 100,000 to 1 million times the acoustic energy of the loudest whales.

The EIS generated by Navy scientists explains in glowing terms how the whales and dolphins are not bothered by this noise, though much evidence to the contrary was excluded from the report. Reports of high numbers of unusual cetacean strandings coincident with Navy tests were brushed off as “anecdotal” by the Navy. Included in

these anecdotal events are the twelve Cuvier beaked whales and 200 dolphins stranded on the shores of the Mediterranean near Greece during a 1996 NATO test; the more than 150 Gray whales found dead due to starvation along their California migratory route where testing took place in 1998; the October 1999 stranding of three pilot whales in the U.S. Virgin Islands shortly after Navy tests; and most recently this year, the March 13 – 17 stranding of 17 beaked whales in the Bahamas during tests.

Many of these individual animal showed signs of unusual tissue damage including hemorrhaged eyes, imploded lungs and other organ damage hard to explain by typical catastrophic natural events or illness. The circumstantial evidence indicates that as the Navy's use of SURTASS – LFAS and associated technologies increases, so too do the incidents of unusual and unexplained cetacean deaths, strandings and disorientations.

What is SURTASS-LFAS and why does the Navy need it? If the Navy is to be believed, SURTASS is a long range sonar system that enables them to locate and track hostile submarines throughout the Seven Seas using extremely loud, low frequency, long wavelength noise that can be heard thousands of miles from its source. These long wavelengths of 500' or greater are supposed to bounce off relatively miniscule objects – 200' submarines – in thousands of cubic miles of ocean to give the Navy concise information about the vessel's identity and location. In scale and application this would be akin to using a telescope to locate amoebas in a swimming pool.

It is more likely that SURTASS –LFAS is a communication system enabling the Navy to communicate on a moment by moment basis with their Nuclear Fleet. Until the development of this underwater communication system, nuclear submarines – which otherwise can remain submerged and hidden for months – relied on long wavelength radio transmission for communication. Radio waves do not effectively penetrate water, requiring the subs to drag a long antennae – one to two miles long – along the surface of the ocean. In the last ten years orbital satellite metal detection instruments have become much more sensitive; a satellite orbiting at 150 miles can now easily detect a two mile cable on the ocean surface. Therefore, with the current state of the art in satellite

surveillance, these long antennae seriously compromise the surreptitious benefits of the subs. With this situation, the Navy has needed to develop a less obvious method to communicate, and an obvious choice was to keep all communication underwater.

In an earlier benchmark program called Acoustic Thermography of Ocean Climates (ATOC) the Navy proved it could send and receive coherent sound between Monterrey, California and Kauai, Hawai'i – a distance of over 3000 miles. ATOC dates back as far as 1987, uses stationary transmitters broadcasting on a regular and predictable schedule. Unlike ATOC, SURTASS is transportable, and since the system approval by the National Marine Fisheries Service it can be used at the Navy's discretion. And while the SURTASS system cannot be heard above water, nor be precisely located underwater, it can definitely be heard underwater. This feature is creating a serious liability to whales, dolphins, fish and other deep water animals. Because the ocean is not a visual place – visibility in the best of circumstances is 100' – ocean animals rely on acoustical, chemical and thermal cues to determine where they are, where their kin is and where food is. Polluting their environment with excessive unwanted noise will only have a deleterious affect on their ability to survive.

If there is some good fortune in the most recent strandings of beaked whales in the Bahamas and the dramatic increase in unusual strandings in California, it is that public suspicion has been aroused. The Bahamas incident occurred during the Navy Littoral Warfare Advanced Development Sea Test (LWAD 00-1), also concurrent with the gray whale spring migration strandings. Outcry has reached a pitch, and scrutiny of the Navy methods has become more acute. The Natural Resources Defense Council and Humane Society of the United States – among other organizations – have driven strong opposition to the project. Increased pressure on the National Marine Fisheries Service, and unresolved questions of the NMFS staff have directed them to reevaluate the Navy EIS in light of the omitted information. As of May 25, the Navy's scheduled test LWAD 00-2 off the east coast of the United States has been temporarily postponed, indicating at least a small victory for the oceanic environment.

While this minor reprieve is hopeful, it is a relatively small step against the tide of a program that has expanded over the last decade. To date \$350 million has been spent on the SURTASS-LFAS system alone. With this much momentum, and the critical “need” for the program, it is unlikely that the Navy will just “grab their toys and go home.”

The U.S. Navy is obligated to respond to review and inquiry by U.S. governmental organizations such as the NMFS, the Supreme Court, and ultimately the voting public. Unfortunately with globalization being the catchword for today’s “planetary management,” it will take a global effort to halt this devastating technology. And if the Navy has temporarily halted a test off U.S. coastal waters, they are none-the-less proceeding with LFAS test in the Mediterranean Sea titled “Dynamic Mix” with our NATO allies. This test began in late May and will run into June in the Kyparissiakos Gulf off the coast of Greece.

About the Author:

Michael Stocker is an acoustician, naturalist and technologist. He is currently writing “Hear Where We Are: Reawakening the Sensuality of Sound Perception,” a book exploring how sound affects our sense of placement and how we humans and other animals use sound to connect with our surroundings.