

Dear OCR Community and Friends ,

The attached article was sent to us by OCR board member Jim Cummings of Acoustic Ecology ([www.acousticecology.org](http://www.acousticecology.org)) about a Navy publicity junket that took the press and some scientists out on a destroyer to give them a taste of their new framing on active sonar and their impacts on marine life. The "collateral" is enough to make me feel nice and warm about the issue, unfortunately the Navy is discrediting themselves with their new multi-pronged publicity mitigation campaign, particularly on two accounts: the nature of the mid-frequency sonar, and how they are representing the impacts of the sonar.

On the first account they are only presenting short "pings" of ranging sonar as representative of the sonar in question, and not the longer - and likely much more damaging mid-frequency communication and signal jamming sonars . (These are not properly SOUNd NAVigation and Ranging, they are underwater communication systems.)

On the second account, their downplaying all sonar related stranding events to six, or five (or in the case of this article 37) known mortalities, and comparing these to the other human related marine mammal mortalities is disingenuous, as Nina Young points out in the article. This statistical analysis is akin to taking all human deaths by cancer (or civilian mortalities in Iraq) and comparing these to the homicides in New York City to produce the argument that the NYPD homicide detail is statistically unnecessary.

Hopefully the Navy campaign will not erode our efforts to derive a solution to the problem, through mitigation procedures, or finding more benign ways of accomplishing the Navy mission.

The Ocean Conservation Website has a number of actual and one simulated navy sonar samples that will clarify the first argument. <http://ocr.org/sounds/humans/sonar/>

The second argument is just a goofy numbers game which is costing the US Taxpayers a lot of money to sustain (can I go on a boat ride?).

Regards,

Michael Stocker  
Director  
Ocean Conservation Research  
[www.OCR.org](http://www.OCR.org)

The last quarter of the article includes some clear skeptical statements from scientists who were present...

## **Navy, scientists search for common ground on sonar use**

<http://hamptonroads.com/2008/06/navy-scientists-search-common-ground-sonar-use>

By Kate Wiltout  
The Virginian-Pilot  
© June 16, 2008

After more than 70 years of depending on sonar to protect ships and hunt enemy submarines, the Navy is fighting to convince the public that sonar isn't a major threat to whales and dolphins.

Two West Coast lawsuits filed by environmentalists have interrupted training exercises, and forced the Navy to adopt stricter preventive measures and alter the way it readies Pacific-based ships for deployment. Closer to home, Navy plans for an East Coast sonar-training range are under scrutiny.

Already bruised after a four-year battle over the placement of a jet practice landing field, officials want to minimize controversy over sonar. In both cases, they're up against advocacy groups who accuse the service of flouting environmental laws.

One recent spring day, about three dozen scientists, journalists and researchers stood on the deck of the destroyer Mitscher as it headed to sea.

The outing featured a demonstration of Navy sonar use, as well as a chance for scientists and Navy officials to discuss, out of the glare of the spotlight, its potential effect on marine mammals.

The highest-ranking admirals couldn't have ordered a more perfect scene for this field trip aboard a billion-dollar boat: blue skies, bright sun, calm seas - and nary a dolphin or whale in sight.

In the belly of the ship, two sonar technicians sat in a cramped, darkened compartment. They wore big, old-fashioned headphones and stared at old-fashioned black screens covered in green squiggles.

It doesn't look like much, but this sonar shack is the heart of one the most advanced anti-submarine warfare systems in the world.

Here, sailors process acoustic intelligence gathered by the Mitscher's active and passive sonar.

Passive sonar, which submarines rely on, picks up sound covertly, without giving away a vessel's position.

Active sonar sends a blast of sound into the water and waits for acoustic "echoes" to return, allowing operators to discern objects in the vicinity. More accurate than passive sonar, active sonar has a big drawback: It reveals the ship's location.

Senior Chief Petty Officer Robert Ball explained that the green squiggles represent the past 17 minutes of passive sound. One line shows noise the ship itself produces. Others indicate passing merchant ships. Sonar can "hear" loud and quiet: underwater drilling, the clanking of a chain on a channel marker, or the popping sound of shrimp.

Once the Mitscher passed the 100-fathom curve, the water became deep enough to use active sonar.

"I only want one ping," Ball told his men.

The ship emitted a blast of active sonar. It lasted one second.

The black screen changed slightly, but in a way that isn't meaningful to visitors such as Andrew Wright, a scientist who has worked for the Marine Mammal Commission and NOAA.

Ball gestured to the screen: "There are several things that could be a contact."

He is the senior sonar tech on board, with 21 years of experience. A man whose entire career revolves around listening, Ball speaks reticently.

"This is it, right here," he said matter-of-factly. "This is the way to find a diesel sub."

One deck above the sonar shack, Cmdr. Dan Uhls stood in the Mitscher's combat information center.

Destroyers serve as bodyguards for an aircraft carrier, which can dispatch jets to drop bombs but can't defend itself from attacks. They bristle with military muscle: The Mitscher carries torpedoes, surface-to-surface and surface-to-air missiles, and anti-submarine rockets.

The room was cool and quiet, with dozens of computer monitors and two large screens displaying information gathered by AEGIS, the ship's air and surface sensors.

One screen, updated regularly, tracked every airplane in flight on the East Coast. The other showed each

surface vessel in the vicinity.

There's no large version of the black sonar screen.

Enemy submarines are much harder to track than planes or ships - the reason destroyers must hone their sub-hunting skills before deployments.

"We have mastered the atmosphere," said Uhls, the commanding officer. "We have not mastered the ocean."

Uhls said the dissolution of the Soviet Union convinced some officials that submarine hunting was no longer a priority.

"We sold our soul sometime in the 1990s," Uhls said. "The Soviets went home."

Now the Navy worries more about Iranian, Chinese and North Korean subs. Unlike the Soviets' nuclear boats, the newer subs are diesel and go virtually silent when running on batteries, which makes them difficult to track.

"We're trying to relearn how to do things," Uhls said. "We're playing catch-up now. They gained on us for 10 years."

Jene Nissen, environmental acoustics manager for the Navy's fleet forces command, is no stranger to the china coffee cups and leather chairs of a destroyer's wardroom. Nissen spent 21 years as surface warfare officer in the Navy.

His 36-page brief for the visitors is a condensed version of the Navy's sonar playbook.

It begins by asserting that the world's oceans are the highways of the global economy, and the Navy must keep them safe.

A section on training emphasized that sonar operators must keep their skills current and noted that the Navy spends longer periods training a sonar tech than it does a SEAL. (Three years, versus two.)

As the scent of fresh-baked chocolate chip cookies wafted through the wardroom, Nissen talked about diesel submarines lurking in coastal waters.

The problems with sonar, however, came at the end.

Nissen said it's hard to assess sonar's effect on mammals because scientists have limited knowledge of dolphin and whale behavior.

Susan Barco was one of many researchers around the table who nodded her head. A senior scientist and stranding response coordinator at the Virginia Aquarium & Marine Science Center, Barco is all too familiar with the mysteries of whale and dolphin behavior.

Nissen then showed a slide asserting that worldwide, between 1996 and 2006, commercial fishing fleets unintentionally killed or seriously injured an estimated 2,921,155 dolphins and whales, a phenomenon known as "by-catch."

The figure sat inside a circle about the size of a CD.

Elsewhere on the page, represented by a circle about the size of a lentil, was the 12,500 figure denoting whales harvested by Japan, Norway and Iceland.

Next to a speck smaller than a comma was the number of deaths attributable to mid frequency active sonar: 37.

Even that figure, which includes U.S. Navy and NATO sonar use, came with caveats noted in small print:

Only five stranding events have been "linked scientifically" with sonar since its inception in 1939.

No strandings have been "linked scientifically" to the U.S. Navy since 2000.

And, finally, "No scientific evidence exists proving mid-frequency active sonar has ever killed any marine mammals as a direct and sole cause of death."

The scientists shifted in their chairs.

Nina Young said later that she found the slide disingenuous.

Young is deputy director for policy at the Consortium for Ocean Leadership, a non profit organization that represents public and private ocean research institutions and aquariums.

"A large amount of federal tax dollars in the U.S. go to reducing by-catch in commercial fisheries," Young said. "Some fishing industries have been severely affected by by-catch reduction, and the Navy glosses over that, as if nothing is being done."

Others pointed out that the Navy knows about only 37 strandings but can't possibly count whales or dolphins that die and don't wash up on shore.

Nissen continued with a statement that sparked almost immediate debate.

"There are NO documented cases of whale or marine mammal deaths due to sonar off the East Coast or Gulf of Mexico," he said.

Hands shot up in the air.

What about the incident in 2005, when three dozen pilot whales washed up on beaches along North Carolina's Outer Banks?

Nissen said those animals showed no signs of acoustic trauma - and he added that media reports never mentioned that severe weather might have disoriented the whales.

The brief does not refer to other events co incident with naval sonar use: dolphin strandings after a destroyer used sonar in Washington's Haro Strait in 2003, or the stranding of 150 melon headed whales in Hawaii's Hanalei Bay in 2004, minutes after an anti-submarine warfare exercise commenced nearby. (All but one of the whales returned to the open ocean.)

In both cases, the National Marine Fisheries Service was unable to determine what made the animals react as they did.

To some of the guests on board, not knowing the answer doesn't let the Navy off the hook.

Young said the Navy uses uncertain cause of death rulings to downplay possible links between sonar and mammals.

"It's unfortunate that the threshold for the Navy seems so absolute, and the burden of proof so high, that it undermines efforts to engage in a productive discussion, she said.

Andrew Wright, a marine mammal scientist who has worked for the Marine Mammal Commission and NOAA, said definitive proof of sonar's effect on whales didn't exist until recently.

"We've only really known about the problem since 2000, 2002. We don't have long-term information, even on humans," Wright said later. "There's so much uncertainty around this, and it all depends on where you place the burden of proof."

Wright was referring to what Rear Adm. Larry Rice, director of the Navy's environmental readiness division, referred to as "a seminal event" for the service.

In March 2000, a group of ships on a tactical exercise in the Bahamas used mid-frequency sonar every 24 seconds for 16 hours. A dolphin and 16 whales stranded; seven of them died. Some of the whales were found to have hemorrhaged in the brain and around their ears.

Sonar was not found to be the sole cause of the deaths. Rice emphasized that contributing factors included the use of multiple sonar units, a constricted channel that prevented the animals from swimming away, and underwater conditions that magnified the sonar pings.

Barco, with the Virginia Aquarium, said she appreciated the honesty of Rice and other Navy officials about needing better methods to detect whales and dolphins before sonar exercises commence.

"They don't know what to do anymore than we know what to do," she said. "Short of saying, 'We don't think you should do this,' we're all in a quandary about how to do it and not affect *marine mammals*. *I think the jury is still out on that.*"

*Kate Wiltrout, 446-2629, [kate.wiltrout@pilotonline.com](mailto:kate.wiltrout@pilotonline.com)*