Marine Science in Alaska

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The annual Marine Science in Alaska Symposium traces its roots to the devastating *Exxon Valdez* oil spill. The first meeting, held in a church building in 1994, was a small workshop hosted by the *Exxon Valdez* Trustee Council. But a new format and healthy attendance in downtown Anchorage this year left no question that the conference has grown to fulfill a broader role.

Each full day of the 2006 symposium, held 22–25 January, was devoted to a different oceanographic region: the Gulf of Alaska on Monday, the Bering Sea and Aleutian Islands on Tuesday, and the Arctic Ocean on Wednesday. The change was made to give equal coverage to all regions, and to reflect the event's current status as the state's premier interdisciplinary marine science meeting, said steering committee cochair Molly McCammon, executive director for the Alaska Ocean Observing System.

The organizational change, designed to better represent research throughout the state, reflects the symposium's current role as a collaboration of 16 sponsors and "a focal point of Alaska marine science research," McCammon said. "We thought as the program matured, we would try it and see how it worked"—the idea being to give more of a forum to regions that were often underrepresented, such as the Arctic.

Today, the United States funds more Arctic research than ever before, noted keynote speaker Lawson Brigham, deputy director and Alaska office director of the US Arctic Research Commission, who spoke on changing marine access in the Arctic Ocean due to reductions in Arctic sea ice. September 2005 marked a new record minimum for the extent of summer Arctic sea ice.

This year's symposium attendance topped 400, although the Gulf of Alaska sessions still garnered the most widespread attention. That evening's panel on the *Exxon Valdez* restoration process happened to take place days before Exxon's 27 January appearance before the US Ninth Circuit Court of Appeals, seeking to reduce $5 billion in punitive damages previously awarded in the 17-year-old incident.

Research presented at the meeting indicates lasting effects from the spill, including pockets of oil that continue to present harm. Panelist and NOAA (National Oceanic and Atmospheric Administration) researcher Jeff Short said, "This stuff isn't changing at all. It's just the same kind of goo that got deposited there in 1989."

Another popular panel was a Tuesday evening session, "The Meeting Point between Science and Policy," with panelists who summarized how science is used to inform natural resources management in their organizations.

Longtime gray whale researcher Doug DeMaster, of NOAA's National Marine Fisheries Service and past scientific committee chair for the International Whaling Commission, discussed a computer simulation tool he and the commission have used for setting aboriginal whaling quotas. Using the simulation, a researcher can model the outcomes of various management strategies and "forecast their robustness to uncertainty," said DeMaster. Similar approaches are used in fisheries management.

Keynote speakers included Charles Wohlforth, author of *The Whale and the Supercomputer*, who spoke about climate change in the north, and Monica Riedel, of the Alaska Native Harbor Seal Commission, on partnerships between the Alaska Native and science communities.

Another keynote speaker, John Piatt of the USGS Alaska Science Center, opened the sessions on the Bering Sea and Aleutian Islands with an introduction to his unpublished work on marine ecoregions of Alaska. He suggested that Alaska's four marine ecosystems—the Gulf of Alaska, Eastern Bering Sea, Chukchi Sea, and Beaufort Sea—would be better understood if they were divided into subregions defined by similarities in oceanography and biology, such as the presence of murres, kittiwakes, and other seabirds. Piatt has identified at least 25 marine ecoregions in Alaska. "These are biogeographic regions that make sense," he says. "They have boundaries and borders that have meaning. They're not just geographical."

Researcher Stephen Murphy reported on an ongoing collaborative project, with the Alaska Native community of Nuiqsut, which is studying whether oil and gas exploration are having an impact on the local Arctic cisco fishery. The study, funded by the Department of the Interior's Minerals Management Service, included a panel of 10 paid local experts selected by community vote, who will write their own report at the end of the process. "It's interactive. It's not just us presenting our views to them," said Murphy, who urged more collaborative use of traditional ecological knowledge.

Organizers were pleased with the meeting's high profile. "Everyone seems to have this on their calendar as the time to get together," said McCammon. "People putting proposals together use this as an opportunity to develop their proposals. It really has become kind of a focal point for marine science research in Alaska."

"This is the showcase in Alaska in terms of interdisciplinary science," agreed DeMaster. "It's my favorite scientific symposium."

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