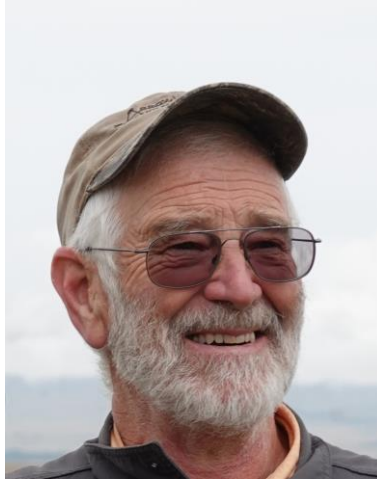


## Lloyd Lowry 1950-2018



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Lloyd Lowry, one of Alaska's best-known marine mammal biologists, died peacefully in Kailua-Kona, Hawaii on 25 November 2018, holding the hand of his wife and lifetime colleague Kathy Frost after a sudden, brief illness over Thanksgiving. His contributions to Alaska marine mammal research, management, and conservation are legendary, and he was an active and influential member of the marine science community until the day he fell ill to pancreatic cancer. Besides his stellar career in science, Lloyd was widely respected for his dedicated work, totally ethical behavior, modesty, generosity, sense of humor, honesty, and simply for his great company.

Lloyd was born on 16 January 1950 in New Bedford, Massachusetts, USA and grew up within a few miles of where he was born. He received his Bachelor's degree in Biology from Southeastern Massachusetts University in 1971, then attended a summer course taught by John Pearse at Hopkins Marine Station in Pacific Grove, CA. After a summer in California, Lloyd made up his mind that he was not going back to live on the East Coast. He moved to the University of California, Santa Cruz (UCSC), where he received his Masters of Science in 1975. There he was a Sea Grant Trainee in the Division of Natural Science from 1972 to 1974, organizing and conducting research projects on the ecology of nearshore kelp forests. He was proud that his first academic paper in 1973 about abalones and sea urchins in an area inhabited by sea otters was still being read and cited 45 years later in 2018. From 1974 to 1975 Lloyd worked as a Marine Technician in UCSC's Coastal Marine Laboratory, operating and maintaining an oceanographic research vessel and assisting in biological and oceanographic studies. Also, while in Santa Cruz, he met his fellow student and life-long partner of 45 years, Kathy Frost, whom he married in 1979.

In 1975, after writing a "Dear Sir in Alaska, I'd like to move to Alaska and work on marine mammals" letter, Lloyd received a phone call from John Burns with the Alaska Department of Fish and Game (ADFG) asking if he'd like a job studying the trophic interactions of ice seals as part of the Alaska Outer Continental Shelf Environmental Assessment Program. After adding something like "there are two of us" (which Burns didn't fully appreciate at the time!) Lloyd

accepted the offer and he and Kathy moved to Fairbanks a month later to join ADFG as Marine Mammals Biologists. For the next 25 years Lloyd and Kathy conducted ground-breaking research on various aspects of the diet and trophic interactions, interactions with commercial fisheries, distribution and movements, and abundance and trends of marine mammals in Alaska, particularly of bowhead and beluga whales, ice-associated seals, and walrus. They studied the winter ecology of ringed seals and conducted the first radio tagging of belugas and satellite tagging of seals in Alaska. Many of the studies were concerned with the potential impacts from oil and gas activities on marine mammals. Lloyd helped design and execute the damage and restoration studies on harbor seals after the 1989 Exxon Valdez oil spill.

Lloyd finished his ADFG career as the Marine Mammals Coordinator during which he designed, coordinated, and conducted conservation and research programs for marine mammals throughout the state. He retired in 2000. Together with Kathy, Lloyd was among the scientific pioneers to study the ecology of Alaska marine mammals in the field, following in the foot-steps of two men he admired, Bud Fay and John Burns. Together, Lloyd and Kathy worked closely with Alaska Native hunters to collect blood and tissue samples to learn more about seal and beluga ecology.

Back when Lloyd and Kathy began their research in Alaska, it was still necessary to develop identification keys for prey, pull nets to determine prey availability, and investigate the food habits of prey species before putting marine mammal diets into a trophic context. Research on marine mammals in the Alaskan Arctic in the 1970s and 1980s required not only the development of reliable and repeatable research techniques, but also the survival skills to operate without navigational aids (no GPS or Loran!) and limited phone or email contact. Much of their research was conducted from a 20-foot Boston Whaler in the sea ice. Many of their survival and field skills were learned from Alaska Native subsistence hunter Ed Muktoyuk from King Island.

Lloyd was scientifically rigorous, but also passionate in his quest to understand the role marine mammals play as both predators and prey in the marine ecosystem. He was always mindful and respectful of the importance of Alaska Native subsistence hunters, their dependence on the animals for food and cultural sustenance and the vast knowledge held by Alaska Natives. In that regard, he helped lead the effort in Alaska and elsewhere to integrate that knowledge with western science in order to promote the successful co-management of marine mammals. By example, Lloyd demonstrated how collaborative research in Alaska could be carried out. He insisted that human activities, including subsistence hunting, should be sustainable and, because of that, the stewardship of marine mammals in waters off Alaska benefited enormously from his decades of dedicated work.

In 1987, Lloyd and Kathy helped create and were charter members of the Alaska Beluga Whale Committee (ABWC) where they have continued to play a pivotal role in the Committee's successes of co-managing beluga whales in western and northern Alaska. Their involvement in the ABWC dramatically influenced a new way of doing business by having hunters, scientists and managers jointly make decisions about the most important information needed, and then use the results to outline the actions necessary for conservation and sustainable harvests of beluga whales. As a result, the ABWC has been able to provide regular updates on population estimates, knowledge about stock structure, and subsistence harvest levels for belugas in Alaska.

Lloyd applied his scientific rigor and attention to detail to his avocations as well. He and Kathy fielded a world championship sled dog team in Alaska for 20 years, with Lloyd carefully managing training schedules, blood work, and veterinary care (not to mention adequate "lap

time” for the lead dogs). He used his experience commercial fishing for halibut to better understand the interactions between long-line fisheries and marine mammals, particularly killer whales.

After retiring from ADFG, Lloyd and Kathy moved to Kailua-Kona, Hawaii where they grew subsistence coffee, native Hawaiian plants, and fruit trees. They bought a boat, fished, and traveled the world. From his academic base as an Affiliate Associate Professor at the School of Fisheries and Ocean Sciences, University of Alaska Fairbanks, Lloyd continued to carry out marine mammal research, particularly with beluga whales, and to work with various groups on marine mammal conservation and science projects. He served on a number of advisory groups, and chaired several with a quiet and empathetic leadership style. These included the National Marine Fisheries Service’s Alaska Regional Scientific Review Group (Chairman 1994-2000, 2012-2016), the North Pacific Research Board’s Science Panel, and the Endangered Species Act Recovery Teams for Steller sea lions (Chairman 1990-2001), Western Alaska sea otters (Chairman 2006-2011), and Hawaiian monk seals (Chairman 2007-2013, 2014-2018). He also served on several panels for the National Research Council (Committee on the Bering Sea Ecosystem, 1994-1996, and Committee on Cumulative Impacts of Oil and Gas Activities on Alaska’s North Slope, 2000-2003).

The Marine Mammal Commission appointed Lloyd to its Committee of Scientific Advisors (CSA) in 1989, while he was working in Fairbanks with ADFG. He remained on the CSA until 2008, and was one its longest tenured chairs, serving in that role from 1995-2008. The Commission relied upon Lloyd for sound advice on a wide variety of marine mammal issues, particularly those related to Alaska and Hawaii. His plainspoken, forthright manner and intellectual honesty meant that his comments and opinions always met with respect. Lloyd worked tirelessly on the CSA and elsewhere to promote Hawaiian monk seal conservation, and was among the first to call the Commission’s attention to problems associated with large-scale tourism focused on spinner dolphins in Hawaii. With his intimate knowledge of Alaska marine mammals, Lloyd was central to formulating Commission recommendations directed at understanding and addressing the impacts of Alaskan pollock fisheries on Steller sea lions and dealing with sensitive issues surrounding the endangered status and lack of recovery of Cook Inlet belugas. Even after he left the Marine Mammal Commission, he continued to be a dependable, generous source of advice and assistance, and weeks before his death he was helping plan the Commission’s next annual meeting. In the words of David Laist “Throughout his tenure, for virtually all the issues on which I worked, Lloyd was one of the most, if not the most, well-informed, thoughtful, and reliable Committee member I had the honor to work with.”

Despite all of his achievements and accolades, Lloyd remained down-to-earth and intellectually curious. Retired and living in Hawaii and Alaska, he paid particular attention to the marine mammals around him. His interest and commitment to the conservation of the ecosystems where he lived and worked are reflected in his service on the North Pacific Research Board Advisory Panel (2013-2018) and the Northwest Hawaiian Islands Coral Reef Ecosystem Reserve Advisory Council (2001-2008). In Hawaii, he identified the site for construction of a hospital for monk seals, now a strong private-public partnership rehabilitating and bolstering the population of these endangered seals. His hands-on attitude was manifested in his planting of native shade trees on the site, serving as the “unofficial caretaker,” and driving his truck to transport seals whenever needed.

More recently, Lloyd extended his efforts to the conservation of marine mammals world-wide. He was a member of the IUCN Species Survival Commission's Pinniped Specialist Group and Red List Authority since 1988 and the Cetacean Specialist Group since 2016. He prepared or reviewed dozens of Red List assessments of both pinnipeds and cetaceans, and was the Red List Coordinator for Pinnipeds from 2012 until he died. In 2011 he served on an IUCN Independent Scientific Review Panel to assess the sustainability of live-captures of beluga whales in Russia. He also served on the Society for Marine Mammalogy's Conservation Committee beginning in 2010 and the Working Group on Marine Mammal Unusual Mortality Events from 2011. As a member of these committees, panels, and other groups, he worked conscientiously, critically, and with a consistently independent mind. Although he often weighed in on theories and concepts, he was admiring of practical efforts. He was delighted, for example, by the hard work of conservation activists in Finland who, year after year, pile snow drifts to provide lairs for critically endangered Saimaa seals that are threatened by a warming climate in their only available habitat.

Lloyd was active until his last days, having recently served on the IUCN Western Gray Whale Advisory Panel as an expert on feeding ecology and fishery interactions. In collaboration with Russian, Canadian, and American co-authors, Lloyd published a paper in October 2018 documenting the entanglement threat to gray whales and other marine mammals, particularly in the Russian Far East.

Lloyd was a mentor and example to many marine biologists, hunters and stake holders. During his work in Alaska he advised and supported young scientists and encouraged Alaska native hunters to become involved in resource management. He and Kathy opened their home to many scientists and friends from around the globe, listening thoughtfully to our concerns and discussing weighty and not-so-weighty issues as the sun sank over the ocean, providing practical insight and warm friendship often accompanied by one of his famous mai tais. Recently, he and Kathy spread their influence even farther as they began to train and encourage young wildlife biologists in east Africa, work that Kathy will continue.

Lloyd's sudden passing has left many of us with a large empty spot. His contributions to science and management will remain with us for many years to come, but his "big picture" insights, thoughtful listening, direct and valuable recommendations, and skill leading diverse groups of people will be missed tremendously. And, finally, anyone fortunate enough to have known and worked with Lloyd in any capacity, will simply miss their good friend who was so quick to be welcoming, was generous in his laughter, and always willing to share his wisdom for the benefit of all.