

For the 11 June 2023 Celebration

The Many Contributions of Vera Alexander

to the Census of Marine Life

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As an expert on primary productivity and Arctic marine ecosystems, Vera joined the International Scientific Steering Committee of the Census of Marine Life at its commencement in 1999. Vera's first strong influence on the program occurred at its September 1999 meeting near Victoria, British Columbia. Canadian engineer and scientist David Welch had fresh ideas about setting up acoustic curtains like tollbooths transversing continental shelves to record the passage of tagged fish, salmon in particular. Vera, along with acoustician David Farmer, strongly supported the initiative, arguing that the concept could grow into continental-scale monitoring systems. By the conclusion of the CoML in 2010, the "Ocean Tracking Network" covered large intervals of North American coast, and the idea had spread to distant regions as well, including Australia. Vera had the gift of wide and deep vision that makes people at home in Alaska.

Vera made another major contribution to the Census of Marine Life by recruiting its "Arctic Ocean Biodiversity" (ArcOD) team led by Rolf Gradinger, Bodil Bluhm, and Russ Hopcroft. The ArcOD team made extraordinary contributions, most famously through its "Hidden Ocean" Arctic cruise during June-July 2005 on the U.S. Coast Guard icebreaker *Healy*. The team examined hidden worlds of life in extreme conditions with the aid of divers, photographic platforms, a remotely operated vehicle specially designed to operate under ice and at great depth, as well as ice coring, plankton nets, and bottom trawls. The voyage produced scores of scientific papers and iconic images of the CoML, including a deep red medusa (*Crossota*), photographed by Kevin Raskoff.



Vera made a key diplomatic contribution to the CoML by linking us effectively to PICES, the North Pacific Marine Science Organization. Her leadership experience with PICES led to engagement of outstanding Japanese, Korean, and Russian scientists. We learned that we needed to refer to the waters between Japan and Korea as both the East Sea and the Japan Sea.

During the lifetime of the CoML Vera contributed to meetings in Paris and Penang, Antarctica and the Galapagos, Kyoto and Cape Town, Cape Tribulation and La Jolla, Monaco and Manhattan, Auckland and Aberdeen. The Aberdeen meeting, hosted by Alasdair McIntyre, included a crossing of the Scottish Highlands to Oban, peppered with pauses at distilleries. Vera was a Scotch connoisseur, and approved of Alasdair's favorite, Aberlour a'bunadh single Speyside malt.

In June 2001, Vera hosted the Scientific Steering Committee in Fairbanks at her beloved University of Alaska. She elevated the meeting with Copper River salmon served in her home and music at her grand piano. Vera had a musician's feel for science, its beauty, surprise, and

drama. She understood that valid science like music came in many forms and was comfortable with the variety of the CoML's 13 field projects, which one might say spanned Scarlatti and Bach to Chopin, Rachmaninoff, and Bartok. Precise but embracing risk, Vera embodied and fostered the spirit of discovery that made the Census of Marine Life successful, melodic and rhythmic as a musician might say, big but subtle, like a favorite whiskey.



Banner of the Arctic Ocean Biodiversity project, created by Judith Wagstrom