

## William G. Percy: Renaissance oceanographer

In this age of ever-increasing specialization, where researchers spend a lifetime studying the minutia of one particular organism or process, it is rare to find a scientist who has studied the full spectrum of oceanography from physics all the way up to whales. The recipient of the 2003 Wooster Award, Dr. William G. Percy, is such a unique individual. His accomplishments and substantial contributions to the field of fisheries oceanography go well beyond what most scientists can only hope to attain.

Bill Percy had an unlikely origin for someone destined to become a major contributor to the field of marine science. He was born and raised in a suburb of Chicago, thousands of kilometers away from the nearest ocean. He had a love for nature at an early age, fishing for bass and trout as a boy, and gained much experience working with animals as a zookeeper at the Brookfield Zoo in Chicago. He received his B.S. and M.S. degrees at Iowa State University. His Master's thesis was on the limnology (*i.e.*, freshwater oceanography) of Clear Lake, Iowa. His initiation into the marine environment came as he continued his graduate studies for one year at the University of Hawaii. With the onset of the Korean War, Bill enlisted in the Naval Air Force, became an Air Intelligence Officer and was stationed at Virginia Beach on the Atlantic Ocean. Two cruises on aircraft carriers in the Mediterranean piqued his curiosity about the ocean and the life contained within it.

Following his military service and cruising the Bahamas in a sailboat, Bill applied to Yale University for his doctoral studies and worked on the estuarine ecology of winter

flounder under the supervision of Drs. Sarah Richards and Gordon Riley. His first publication was in the prestigious journal *Science* and described seasonal changes in the osmotic pressure of flounder sera. Upon graduation from Yale in 1960, Bill was contacted by Dr. Wayne Burt, the Chairman of a fledgling Oceanography Department at Oregon State University (OSU), about joining their faculty. Bill was the fifth faculty member hired and only the second biological oceanographer. At the time, the ocean off Oregon was almost completely unknown with only a few studies available dating back to the original *Albatross* expedition in the late 19<sup>th</sup> century. Bill made his mark getting involved with a group of collaborating scientists studying the distribution and potential impacts of radionuclides on animals from the near-shore to oceanic waters off Oregon and the Columbia River. This led to several significant studies and several publications in the journal *Nature* on the distribution of radionuclides measured in marine animals.

In the late 1960s and 1970s, Bill's research, along with his graduate students, branched out substantially, but his main interests focused on the distribution and ecology of mesopelagic fishes, squids and crustaceans that were seldom sampled and poorly known at the time. This work, funded mainly by the U.S. Navy and National Science Foundation, led to many papers on the distribution, abundance, and acoustic properties, and some of our earliest notions about the ecology of oceanic mid-water species. As an expert on net sampling of these organisms, Bill was named as the Chairman of a SCOR Micronekton



*Bill at age 17 (on right) fishing for walleye pike with his brother Don on Leech Lake, Minnesota.*



*In the Navy (Virginia Beach) around 1952.*



*At the helm of a 37-foot ketch cruising around the Bahamas in 1956.*

Sampling Working Group that led to net sampling and acoustical assessment of euphausiids during the winter in Norwegian fjords and a major volume on micronekton sampling. It is interesting to note that PICES is following in these footsteps, with its current Working Group on micronekton sampling.



*Aboard the Norwegian Research Vessel Johan Ruud during a sabbatical in Tromso, Norway, in 1980 doing net and acoustical assessment of euphausiids as part of a SCOR Micronekton Sampling Working Group.*

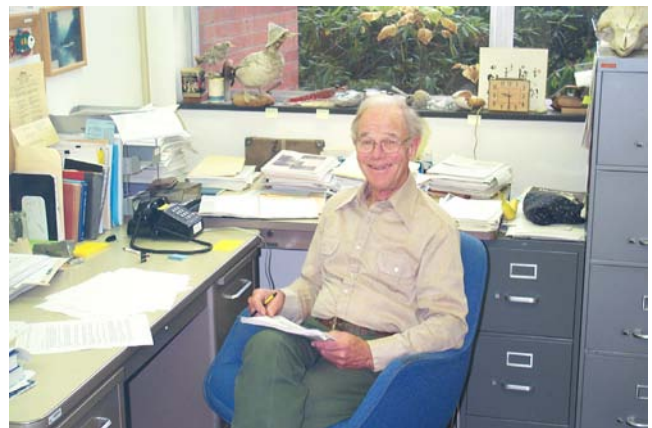
At the same time, Bill was involved in Sea Grant-funded studies on larval and juvenile fish recruitment. Along with Sally Richardson, he organized some of the first surveys of larval fish north of the CalCOFI region. In addition, he led research on juvenile flatfishes in both estuarine and near-shore waters off Oregon and collaborated in studies of deep-sea fishes and cephalopods.



*Bill on the back deck of the Canadian Research Vessel Ricker monitoring the retrieval of an Isaacs-Kidd mid-water trawl in September 1999, on one of his last cruises.*

A sabbatical at the Ocean Research Institute (ORI) in Tokyo during 1978 led to a Japan-U.S. exchange of scientists and culminated in a major symposium in Honolulu on the Subarctic Pacific, which Bill co-organized with the late Dr. Takahisa Nemoto, a colleague and director of ORI. In the early 1980s, Bill collaborated with scientists from Hokkaido University and went on several cruises on their famed research vessel, *Oshoro Maru*, where he conducted extensive studies of the feeding habits of salmonids and the distribution of oceanic nekton in collaboration with his students. These cruises helped stimulate the next phase of his research career, studying the ocean life of salmon from the time they enter the estuary to the time they come back to spawn.

As an avid fisherman and student of salmonids in their freshwater environments, Bill had been aware of the paucity of studies examining the “black box” of salmon’s life history in the ocean, and decided that it was time to start opening that box. Using his knowledge of the physics and biology of the North Pacific and putting together several sources of funding, he was able to conduct systematic surveys of juvenile salmon to examine their ecology during this critical early period in their marine life. Those of us who participated in those early cruises were treated to the energy Bill brought to his work and stimulated to follow his example. He convened the first scientific meeting on salmon ocean ecology in November of 1983 in Newport, Oregon. His research and knowledge was extremely broad in scope and culminated in the writing of his classic book “Ocean Ecology of North Pacific Salmonids” in 1992. This book was assembled from a series of invited (by Warren Wooster) lectures presented at the University of Washington. Another meeting convened in 1996, also in Newport, updated these works and stimulated an annual salmon ocean ecology meeting of west coast scientists that is entering its sixth year. Bill continued to produce major works on salmon and other species until his retirement in 1998.



*Bill in his office at Oregon State University in September 2003.*



*Giving the keynote lecture at PICES VII in 1997.*

Over the course of his career, Bill has contributed substantially to our understanding of the marine environment, extending from the estuaries to the open ocean and the surface to the abyssal depths. His interest in the total ecosystem was documented within his more than 150 scientific papers on both commercially important species (whiting, rockfish, tuna, and salmon) as well as ecologically important taxa not widely known or understood (meso-pelagic and deep-sea nekton), and especially in analyzing food web linkages. He has even described some species of squid and has had other taxa named after him. He was involved with some of the first

research submersible dives ever made off the Pacific Northwest coast. Bill's impact on science is demonstrated in how other scientists cite his papers. A paper published in *Ecology* (1962) has been cited 84 times, with 20 citations since 1996. Another published in *Biological Oceanography* (1982) has been cited 77 times, 30 since 1996. This clearly shows that the value of even his early publications has endured.

Bill's contributions extend well beyond his research. He has taught many courses over the years, most notably a very comprehensive course on marine nekton unlike that taught anywhere in the world. He has served as a major advisor for over 30 graduate students during his career-long tenure at OSU, and has served on committees and mentored countless more. Bill had a way of stimulating scientific curiosity among his students, and convincing many of them to work just a little harder on their projects -- many of these students have gone on to achieve international recognition on their own. He has served on numerous university, national and international committees and panels, contributing a substantial amount of his own time advocating worthy causes. He was named the first Director of the Cooperative Institute for Marine Resources Studies in 1983, and moved temporarily to OSU's marine laboratory in Newport to take the position. He was involved early on in PICES, serving on committees and working groups. He also delivered the keynote lecture on *Carrying capacity of the North Pacific Ocean* at the PICES Seventh Annual Meeting in Fairbanks, in 1997. Among the previous peer recognitions he has received are the American Fisheries Society Outstanding Marine Fishery Biologist Award (1996) and the American Institute of Fishery Research Biologists Outstanding Achievement Award (1998).



*Left: Bill with his catch of a Deschutes River summer steelhead trout in Eastern Oregon from the 1986 FOCOFF (Florida-Oregon-California Order of Fly Fishermen) rendezvous (photo by Jeffrey Dambacher).*

*Right: Bill enjoying his retirement at home on the farm pruning the fruit trees with Harry the cat.*



*Fishing with his wife Amy near Steens Mountain and the Malheur Wildlife Refuge in Eastern Oregon in 1995, and showing the size of the one that got away!*

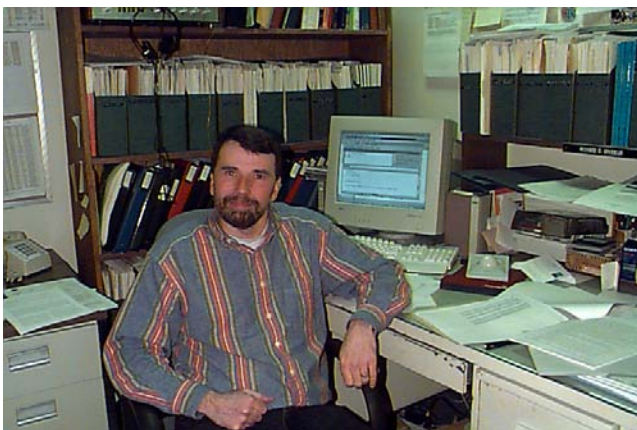
Bill maintains his commitment to his profession and his colleagues. Since his retirement, he has served on many national committees and panels and is presently Co-Chairman of the Independent Multidisciplinary Science

Team for the Oregon Plan for Salmon and Watersheds to help restore natural salmon runs in Oregon. He maintains emeritus status at Oregon State University, and is often sighted in his office on campus working on reports or reviewing papers.

Despite his many accomplishments, Bill is as modest an individual as you will find anywhere and is willing to give his time and advice to the youngest student. He avoids the limelight whenever possible. He has always dedicated time to his family (helped raise three now grown children) and outside pursuits. Bill is truly a proponent of the “Work hard, play hard” philosophy. He has maintained a long-standing (>40 years) relationship with a group of hunting and fishing buddies and has always dedicated some of his vacation time to birding or canoeing trips in eastern Oregon. He is an active member of the local Audubon Society and is involved with many other community groups and his local watershed council. Bill loves to travel with his wife Amy to exotic places around the world where he pursues his fascination for nature. Among the things he treasures most are his family and friends, and sharing a passion for gardening, beekeeping, wine making, and sheep husbandry with Amy at his picturesque 60 acre farm in Western Oregon – in fact he missed receiving the Wooster Award at PICES XII in Seoul because of a conflict with critical timing for the grape harvest. It is uncertain at the time of this writing when or if Bill will ever slow down – it just doesn’t seem to be in his nature. As a model and inspiration for all of us who follow, Bill Percy is truly a renaissance oceanographer.

---

*This article is published in appreciation and recognition of Dr. William G. Percy’s outstanding service to the marine ecosystem science and Pacific Rim scientific community over many years. The essay was written by Dr. Richard D. Brodeur, who was Dr. Percy’s M.S. student and has considerable collaborative experience with Bill. Author would like to acknowledge George Boehlert for his valuable comments to this article and Amy Schoener and Jeff Dambacher for providing photos.*



Dr. Richard Brodeur is a research fisheries oceanographer working in the Fish Ecology Division of the Northwest Fisheries Science Center, NOAA Fisheries, and is based in

Newport (Oregon). Ric received his B.S. in Fishery Science from the University of Massachusetts, his M.S. in Oceanography from Oregon State University, and his Ph.D. in Fisheries from the University of Washington. Following a year-long postdoctoral position at the Pacific Biological Station in Nanaimo (British Columbia, Canada), he began his career working on early life history and recruitment dynamics of walleye pollock in the Gulf of Alaska and Bering Sea for the Alaska Fisheries Science Center based in Seattle. He returned to Oregon to work again on habitat preferences and trophic ecology of juvenile salmon. Over the years, Ric has been heavily involved with PICES, serving on several committees and working groups and organizing a number of special sessions. His scientific interests include zoogeography, ecology and behavior of fish and invertebrates, but much of his research has focused on juvenile salmon.