

Mark B. Bain 1955–2012

A Commemoration by His Students and Colleague

Dr. Mark Bain passed away at his home in Lansing, New York, on 8 February 2012 from complications resulting from amyotrophic lateral sclerosis (ALS, Lou Gehrig's disease). He spent most of his career in the Department of Natural Resources (DNR) at Cornell University studying fish and invertebrate communities in lakes, streams, and estuaries in the wildest and most settled places, from the bays of Lake Ontario to the urban banks of Manhattan. He was recognized worldwide as a leading voice on aquatic systems ecology.



Born in Gary, Indiana, Mark gained his knowledge of ecology through a B.S. in wildlife resources from West Virginia University, a M.S. in fisheries science from Virginia Polytechnic Institute and State University, and a Ph.D. in fisheries biology from the University of Massachusetts-Amherst, where he worked with Dr. John Finn and Dr. Henry Booke. His doctoral research, published in *Ecology*, on streamflow regulation and fish community structure, is one of the most cited papers on the subject.

Mark began his career in the Department of Biology at Ball State University, leaving after one year to become an ecologist at Argonne National Lab. In 1986, he became the assistant leader of the Alabama Cooperative Fish and Wildlife Research Unit (CFWRU) at Auburn University, where he pioneered a new approach to measure cover in fish habitat surveys and studied habitat use and population characteristics of several southeastern fish species. In 1991, Mark moved to Cornell University as the assistant leader for fisheries in the New York CFWRU within the DNR. He became a tenured professor of systems ecology and was appointed director of the Cornell University Center for the Environment, a position in which he served from 2003 to 2007. In 2007 he returned full-time to the department faculty.

Mark's boundless curiosity and wide-ranging professional interests defined his career. His work integrated fisheries science, aquatic ecology, hydrology, and systems theory. Among his diverse pursuits, Mark developed approaches for habitat evaluation and cumulative impact assessment, conducted studies on complex systems theory in bays and lagoons, described impacts to and recovery of fish species in the Hudson River, and planned ecosystem restoration and conservation projects. His expertise led to

collaborations around the world, and during these travels, he enjoyed many adventures and made lasting friendships.

Even during his battle with ALS, Mark's commitment to his work never waned. He continued analyzing data, advising students, collaborating on research projects, and serving the broader scientific community. At the time of his death, he was working on a book about the science and practice of environmental management, and he remained active on the editorial boards of *Acta Ecologica Sinica*, *Environmental Management*, and *Folia Zoologica*.

Mark was recognized by his peers for distinction as a scientist, teacher, mentor, and leader. He published over 100 scientific articles, and was the lead author on a respected AFS text on aquatic habitat assessment. He served as an advisor for many regional, national, and international organizations and initiatives. Mark received numerous awards, including the Special Achievement Award from the U.S. Fish and Wildlife Service, Pacesetter Award from Argonne National Laboratory, Star Award from the U.S. Geological Survey, and President's Outstanding Educator Award from Cornell University. He was recognized as one of the top 15 professors by the Cornell University Student Organization. He was a member of the American Fisheries Society, Ecological Society of America, and American Association for the Advancement of Science.

Mark's passion for research and its application was matched by his enthusiasm for engaging students in aquatic ecology and fisheries science. He co-taught Cornell's stream ecology course, ranked by students as among the top 15 courses at the university. Mark was a mentor and role model for undergraduates, graduate students, and postdoctoral fellows. Many of his students credit him with providing unique opportunities and responsibilities. He let them make mistakes, with a hearty laugh and assurance that everything would work out in the end. His trust in their abilities gave them the confidence and knowledge to pursue successful careers in the aquatic sciences.

Mark enjoyed fishing and backpacking with his family, cooking gourmet meals, engaging conversation, travel, and woodworking. He is survived by his wife, Jane Barden Bain, also educated in aquatic ecology and currently working for the Ecological Society of America; children, Gary and Paul; parents, Sam and Rose; and siblings, Keith, Jeff, Terese, and Sam. He is mourned by countless friends, relatives, and colleagues. Donations in his memory may be made to the ALS Association (www.alsa.org).

Photo credit: Jane Bain. Mark at The North Sea, The Netherlands

Contributed by: Marcia S. Meixler, Kristin Arend, Katherine Mills, and Barbara Knuth

Kristin Arend, Assistant Professor, Lake Superior State University

Marcia S. Meixler, Assistant Professor, Rutgers University

Katherine Mills, Postdoctoral Research Associate, University of Maine and Gulf of Maine Research Institute

Barbara A. Knuth, Vice Provost and Dean, Cornell University