

## IN MEMORIAM

### James R. Sedell

(July 5, 1944 – August 18, 2012)



Aquatic science lost one of its most creative thinkers and astute administrators when Jim Sedell died on August 18, 2012. His scientific and management legacies were matched by the contagious enthusiasm he brought to the resolution of natural resource problems. To those who knew him, Jim was a whirlwind of energy, pulling in anything and everything in his path and sending it all skyward in a fountain of creativity.

Jim graduated from Willamette University and attended graduate school at the University of Pittsburgh, receiving a doctorate in biology and ecology. From 1971 to 1977 he held a research faculty position at Oregon State University, studying stream ecosystems in the H.J. Andrews Experimental Forest. Many of the insights gained from that work appeared in a co-authored 1980 paper—*The River Continuum Concept*—which crystallized a new paradigm of how energy and materials are recycled along gradients from small streams to large rivers. Jim also taught the importance of incorporating the history of an ecosystem in studying and managing it. The early work he and his students did on the Willamette and Coquille Rivers remains a key component of their management and rehabilitation. Knowing the fire, beaver, and splash dam history of PNW forests has led to changes in forest management, and that sense of history is also a large part of the reference condition concept used in the EU and by the USEPA and state water quality agencies for making ecological assessments, and in developing expected conditions for water bodies.

From 1977 to 1980 he managed an aquatic research team at the Weyerhaeuser Company. He immersed himself in applied science and pressed hard for changes in riparian protection on private industrial forests, loudly proclaiming the importance of large wood. Jim was instrumental in reversing the policy of removing trees from channels for fish passage to recruiting wood for fish habitat. So persuasive were his arguments that by the mid-1980s many management organizations formally recognized the importance of living and dead trees for fish habitat in their riparian prescriptions.

In 1980 Jim returned to Corvallis, Oregon, to lead an aquatic science team for the U.S. Forest Service Pacific Northwest Research Station. A few months later Mount St. Helens erupted. There was no way you could keep him from capitalizing on this unprecedented opportunity to examine ecosystem reassembly after a major disturbance. Jim was one of the first scientists to sample Spirit Lake and many of the new lakes formed by the largest recent volcanic landslide in North America. His studies at Mount St. Helens helped lay the groundwork for what has become one of the world's most comprehensive collections of research on volcanic landscapes.

By the late 1980s it became clear that timber policies in the Pacific Northwest were not sustainable and confrontations grew between pro-development and conservation interests over federal timber sales. In 1989 a federal judge issued an injunction against 139 timber sales that brought the issue to a head. Congress appointed a panel of distinguished scientists—the “Gang of Four”—to develop a long-term management strategy that would protect essential functions of forest ecosystems while allowing for commodity production. The four panelists requested that Jim Sedell and Gordon Reeves join them because there was mounting evidence that anadromous salmonid populations were at risk. Together, they produced *Alternatives for Management of Late-Successional Forests of the Pacific Northwest: A Report to the Agriculture Committee and the Merchant Marine and Fisheries Committee of the U.S. House of Representatives*, a paper that remains one of the most important blueprints for managing forested watersheds in recent decades. The strategy for protecting anadromous fish habitat that eventually emerged from the effort was to become the conceptual backbone of many subsequent aquatic habitat conservation plans.

Although the report made quite a splash in the forestry community, Congress was unable to resolve the problem of reconciling timber production and ecosystem management. In 1993, following up on a campaign promise, President Clinton convened a Forest Summit in Portland, Oregon. Jim was selected to be the scientific expert for fish and water quality on the president's panel and subsequently became coleader of the aquatic component of the Forest Ecosystem Management and Assessment Team. The new Northwest Forest Plan outlined an aquatic conservation strategy that was eventually implemented on Forest Service and Bureau of Land Management districts throughout the Pacific coastal ecoregion and has since been widely emulated.

After leading a similar effort to develop a broad aquatic conservation strategy for federal lands in the Interior Columbia River Basin, Jim accepted the position of Forest Service Water Coordinator in Washington, D.C. Soon thereafter he became Director of Wildlife, Fish, Water, and Air Research, a position that gave him an opportunity to provide scientific insights to policy makers at the national level. In 2004, Jim was appointed Director of the Pacific Southwest Research Station in Albany, California, where one of his favorite accomplishments was creating the Institute of Pacific Islands Forestry in Hilo, Hawaii, a

center of research for management, preservation, and restoration of natural ecosystems throughout the Indo-Pacific.

Jim retired from the Forest Service in 2008 and took a position with the National Fish and Wildlife Foundation in Portland, Oregon. As Fish Conservation Director he was responsible for awarding and overseeing grants for protecting a variety of aquatic resources. It had always been Jim's view that fish were part of larger aquatic communities and that effective conservation meant understanding how various parts interacted. Nevertheless, he understood the importance of fish to society and was proactive in supporting investigations of water flows and climate change on fish habitat, as well as research on species about which information was critically needed, such as Apache trout and the native fishes of the upper Klamath River basin.

Jim was able to share fresh ideas and insights from his work in the Pacific Northwest with foreign scientists. He spent a year at Environnement-Ville-Société du CNRS in Lyon, France, working with leading aquatic ecologists in Europe on dynamic processes in river systems. His international collaborations spanned a wide range of topics, from large-scale modeling of major floodplain rivers in Western Europe to the effects of introduced North American beaver on streams in Patagonia.

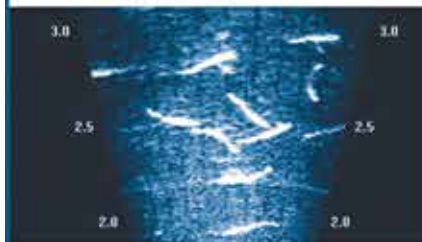
Although Jim left a rich and varied scientific legacy, he will be equally remembered for his ability to get people excited about science. He had an enthusiasm that, though at times exhausting for those around him, was always infectious. His sense of humor was legendary and as a cheerleader he was unequalled. Though he will be greatly missed by his colleagues, we can take comfort in knowing that our watersheds and the plants and animals they contain are better off for his having been here.

*Pete Bisson, USDA Forest Service, PNW Research Station, Olympia, Washington;*

*Gordie Reeves, USDA Forest Service, PNW Research Station, Corvallis, Oregon;*

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