A Celebration of the Life of M. Gordon “Reds” Wolman

1924 – 2010

The Johns Hopkins University

April 11, 2010
When a man makes a pilgrimage to the fields and woods of his boyhood, he does not expect to find the hills and mountains dissolved, or the valleys moved. If other men have not torn up the land to build factories and towns, he expects his children to see the hills and swales as his forefathers saw them. And he is almost right. Probably neither he nor the children will ever notice that in fifty years the surface of the ground has been lowered perhaps a fraction of an inch. Why should they? But they might not be surprised to find that the old mill pond behind the dam is now more mud than water.

—Reds Wolman

Celebrating the Life of M. Gordon “Reds” Wolman — 1924-2010

Welcome

Nicholas P. Jones
Benjamin T. Rome Dean, Whiting School of Engineering

Reflections on the Life of Reds Wolman

Ronald J. Daniels
President, Johns Hopkins University

Edward J. Bouwer
Abel Wolman Professor in Environmental Engineering and Chair, Department of Geography and Environmental Engineering, Whiting School of Engineering

Stephen D. Parker
Director, National Academies Water Science and Technology Board, Division on Earth and Life Studies, National Research Council

Robert Fri
Past President, Resources for the Future and International Institute for Applied Systems Analysis

Peter Wilcock
Professor of Geography and Environmental Engineering, Whiting School of Engineering

The Great Meanderer: A Film Tribute
Further Reflections…

David Harvey
Distinguished Professor, City University of New York
Director, The Center for Place, Culture and Politics

Robert M. Hirsch ’76
Former Chief Hydrologist, U.S. Geological Survey

Robert M. Summers ’76, ’82
Deputy Secretary, State of Maryland Department of the Environment

John E. Costa ’73
Scientist Emeritus, U.S. Geological Survey

Patricia L. Rosenfield ’75
Program Director, Carnegie Foundation of New York

Abel G. Wolman ’85, ’87, ’93
Son of Reds Wolman
Visiting Scholar, Department of Geography and Environmental Engineering, Whiting School of Engineering

Jared Cohon
President, Carnegie Mellon University

Reception to follow
M. Gordon “Reds” Wolman

M. Gordon “Reds” Wolman was an eminent geomorphologist and renowned expert in river science, water resources management and environmental education whose work laid the fundamental structure for modern water quality management and public policy. His legacy lives not only through his work but through generations of students he taught and mentored over more than a half century at Johns Hopkins University.

He was a beloved member of the Johns Hopkins community, as well known on the Homewood campus for his scholarship as for his warmth, signature bow ties and the hair that gave him his nickname. At the time of his death, he was the B. Howell Griswold Jr. Professor of Geography and International Affairs in the Department of Geography and Environmental Engineering at the Whiting School of Engineering.

Reds studied at Johns Hopkins University—earning a bachelor’s degree in geology in 1949, as well as All-America honors with the national championship lacrosse teams in 1947 and 1949—and then at Harvard University, where he completed his doctoral degree two years after beginning his career as a hydrologist with the U.S. Geological Survey. He returned to Homewood in 1958 as an associate professor and the chair of what was then the Isaiah Bowman Department of Geography.

Reds had been a Johns Hopkins man practically since birth. He was the son of Abel Wolman, an equally legendary figure in the fields of water research and sanitary engineering who spent his career at Johns Hopkins and continued to work alongside his son as a professor emeritus until his death in 1989. “There’s no question that my father’s influence helped stimulate my interest in the sciences and engineering,” Reds once said. “We began a conversation in those fields when I was 4 that continued until Pop died.”

Named a full professor in 1962, Reds eventually played a key role in combining the geography department with the Department of Sanitary Engineering and Water Resources to create the Department of Geography and Environmental Engineering. He chaired the new department from 1970 through 1990 and was named the Griswold Professor in 1975. He twice served as the university’s interim provost. He taught his last course, Water Resource Development: History and Principles, during the fall 2009 semester and was working on campus in the days before his death.

Outside the campus, Reds conducted important field research with students and colleagues, tramping along waterways making careful measurements regarding flow and depth, stones and soil, and compiling data to help make predictions about future changes in river systems. As a scientist at the U.S. Geological Survey from 1951 to 1958, he and colleague Luna Bergere...
Leopold published pioneering studies on how and why rivers change. With their emphasis on measuring rivers’ characteristics, including depths and velocities and the size of river-bottom pebbles, they transformed geomorphology—the study of landforms’ evolution—from a descriptive to a quantitative discipline, making it possible to predict how natural and human-caused perturbations might affect river channels. Their 1964 textbook, *Fluvial Processes in Geomorphology*, co-written with John Miller, is considered among the most insightful and scholarly contributions to the field and remains a landmark in modern geoscience development. Reds is also well-known for developing a field procedure called the “Wolman Pebble Count” that allows researchers to document a quantitative description of riverbed material.

When he was elected to the National Academy of Sciences in 1988, Reds was lauded with this citation: “An innovator in hydrology, geomorphology and geography, Wolman changed thinking about natural landscapes, their human modification and their interactions with societies in several ways. In relating catastrophic with moderate natural events, his ‘magnitude-frequency’ theory is widely accepted among scientists and engineers dealing with rivers, floods and erosion.” In 2002, he was elected to the National Academy of Engineering and cited for “outstanding contributions to fluvial processes, water resources management and environmental education.”

Generations of Johns Hopkins colleagues and students will remember Reds for his wit, charm, modesty and the passion with which he shared his knowledge. Edward Bouwer, the Abel Wolman Professor in Environmental Engineering and chair of the Department of Geography and Environmental Engineering, said, “There are few parts of the university that have not experienced his blend of wisdom, humor and warmth. Reds was not only one of the university’s most renowned intellectual leaders but a favorite and cherished member of the community. His cheerful service, combined with his good-natured wisdom, has influenced decisions and decision-makers around the world.”

Born on August 16, 1924, to Abel Wolman ’13, ’15 and Anna Gordon Wolman, Reds was raised in Baltimore near Druid Hill Park, a few miles from the Homewood campus. A graduate of Park School, Reds attended Haverford College before being drafted into the U.S. Navy during World War II. After the war, he returned to Baltimore and began his studies at Johns Hopkins University.

He is survived by his wife, the former Elaine Mielke; children Elsa Katana, Abel Gordon Wolman, Abby McElroy and Ricka Wolman; sons-in-law Tom Katana and Peter McElroy; daughter-in-law Deborah Wolman; and grandchildren Abel and Leo McElroy.
1949 — Earned a bachelor’s degree in geology from Johns Hopkins University; awarded the Sidney C. Erlanger Award as the top senior on the Blue Jays men’s lacrosse team, which he captained and led to a third consecutive national championship

1951 — Began work as a hydrologist for the U.S. Geological Survey

1953 — Awarded a doctorate from Harvard University

1958 — Joined the Johns Hopkins University faculty as associate professor and chair of the Isaiah Bowman Department of Geography

1962 — Named full professor

1964 — Published the textbook *Fluvial Processes in Geomorphology*, co-written with Luna Bergere Leopold and John Miller

1970 — Named chair of the newly created Department of Geography and Environmental Engineering

1975 — Named the B. Howell Griswold Jr. Professor of Geography and International Affairs

1988 — Elected to the National Academy of Sciences

1992 — Received the Penrose Medal, the highest award of the Geological Society of America

1997 — Presented with the Ian Campbell Medal, the most prestigious award given by the American Geological Institute

2000 — Received the American Geophysical Union’s Robert Horton Award, which recognizes outstanding contributions to the geophysical aspects of hydrology

2002 — Elected to the National Academy of Engineering

2004 — Honored with the Lifetime Achievement Award from the National Council for Science and the Environment

2005 — Awarded the Milton S. Eisenhower Medal in recognition of his “extraordinary devotion to Johns Hopkins”

2006 — Received the Benjamin Franklin Medal in Earth and Environmental Science
Memorial Installation: “The Meander”

A permanent memorial tribute will be installed outside the classrooms in Ames Hall where Reds Wolman taught for more than a half century. Stones provided by students, colleagues and friends from around the world will be constructed into a path in a shape that mirrors a meandering river. Please deliver your stone contribution at the reception or mail them to the department.

Wolman Pebble Count
Johns Hopkins University
Department of Geography and Environmental Engineering
Ames Hall 313
3400 North Charles Street
Baltimore, MD 21218

Riverbank Remembrances

Guests of today’s service will be invited to take with them specially engraved pebbles that are to be tossed into a river to scatter their memories and wishes in honor of Reds.

Academic Family Tree

Generations of students, many of whom have gone on to make notable contributions in their fields, were taught by and touched by Reds Wolman at Johns Hopkins University. He was touched by them as well, keeping an academic “family tree” in his office to record the names of students who passed through his classrooms and labs. A rendering, in the likeness of a river, has been created to be updated today. Please visit the exhibit in the tent and add your name.
The M. Gordon Wolman Fellowship

Reds Wolman was committed to the idea that environmental leadership requires knowledge both deep and broad. He saw that environmental problems were inherently interdisciplinary and that their solutions required the combined efforts of scientists, engineers and social scientists. He played a leading role—by personal example, by academic leadership at Johns Hopkins University and through his influence on generations of students and colleagues—in defining the nature and scope of innovative and rigorous interdisciplinary environmental education and research.

The M. Gordon Wolman Fellowship will honor Reds Wolman by carrying forward his vision of interdisciplinary environmental research and education. The fellowship will be awarded to an outstanding incoming PhD student eager to pursue challenges in the environment and society in an integrated and interdisciplinary context. The goal is to establish a fellowship that will be awarded annually and will provide two years of support. Its recipients, both current and emeritus fellows, will form the nucleus of a community of young scholars.

Please contact the Office of Development and Alumni Relations at 410-516-8723 or engineering@jhu.edu for more information.