



## In Memoriam

## Stephen C. Porter, 1934–2015

Professor Stephen C. Porter, the long-term former editor of *Quaternary Research* and a leader in the development of interdisciplinary Quaternary science, died in Santa Barbara, California, on February 19, 2015, at the age of 80.

Porter became a widely respected and influential Quaternary scientist through geographically diverse research, international scientific leadership, and a long career at the University of Washington, starting in 1962. He was born and raised in Santa Barbara, and from an early age developed an interest in geology as he explored the mountains of California. He studied geology at Yale University, receiving a Bachelor's degree in 1955, and served as an officer in the Pacific Fleet of the U.S. Navy from 1955 to 1957 before returning to Yale for graduate studies with Richard Foster Flint. His solid grounding in Quaternary geology with Flint became the cornerstone of his long career.



Porter crossing a river in the Brooks Range of Alaska, 1959. Photo by Ken Perry.

Porter advanced Quaternary science through consistent, detailed, innovative, and meaningful research that led to more than 100 articles. His contributions to Quaternary research spanned five decades and all continents except Africa. His research record was consistent, with multiple articles published nearly every year from the 1960s into the late 2000s. The quality of Porter's publications was always high. His work was meticulous, well grounded, and insightful. Neither he nor his work was showy, yet his body of work advanced the field significantly.

Porter's contributions to the understanding of glaciers and loess are particularly noteworthy, although he also published in volcanology,

rock-slope stability, and permafrost processes. He published numerous papers describing glacial chronologies and processes, focusing on mountain glacier systems on many continents. Porter was quick to recognize the promise of cosmogenic radionuclide exposure dating for glacial sequences, and one of his last publications describes a detailed  $^{36}\text{Cl}$  chronology in the Washington Cascades. He conducted significant work throughout his career concerning the relationship of equilibrium line altitudes (ELAs) and glaciation to mountain topography, focusing on western Washington but always with an emphasis on broadly applicable relationships. His 2001 article on tropical ELAs won the 2004 Geological Society of America's Kirk Bryan Award for the best paper in Quaternary geology and geomorphology.

Porter made landmark contributions to the rapid development of Quaternary geology and global change studies in China. He began his collaboration with Chinese scientists in the 1980s and visited China more than 30 times, fostering academic exchanges and cooperative channels between Chinese young scientists and their international peers. He conducted field research in the Chinese Loess Plateau, Tibetan Plateau and Gobi desert, and presented lecture series in Xi'an and Beijing. He was among the first to connect monsoon-influenced loess-paleosol sequences in China with paleoclimatic records in the high latitudes. In 1995, Porter and Zhisheng An reported their discovery of Heinrich events recorded in the Chinese loess, and correlated these events with the North Atlantic regions. The insight into teleconnections between climates of the East Asia monsoon region and the North Atlantic region guided loess research in China into a new stage of integrated study, emphasizing the links between the regional and global dynamics. He contributed to the establishment of the Xi'an Loess and Quaternary Geology Research Laboratory and the Institute of Earth Environment through the Chinese Academy of Sciences.

Porter's leadership in the Quaternary community was exemplary. Major contributions were his 25 yr as director of the UW Quaternary Research Center and as editor of *Quaternary Research* (1976–2001), his leadership of the International Quaternary Union (president, 1995–1999) and the American Quaternary Association (president, 1992–1994), his work with the US National INQUA Committee, and his participation in bilateral working groups in paleoclimatology.

Porter completed a long and influential teaching career at the University of Washington, inspiring many students to pursue geology and Quaternary science. He was known for offering well-organized courses that drew from his encyclopedic knowledge of Quaternary science. He co-authored a series of geology textbooks that were in print for many years. Porter's mentoring of graduate students was extensive. He graduated nearly two dozen Ph.D. students and three dozen M.S. students, many of whom have pursued successful careers of their own in Quaternary science. His impact on our science will be felt for years yet to come on this basis alone.

In recognition of his long and influential career, Porter received the AMQUA Distinguished Career Award (2004), the Geological Society of



Stephen C. Porter, 1934–2015.

American Quaternary Geology and Geomorphology Division's Distinguished Career Award (2005), an Einstein Professorship Award in 2007 from the Chinese Academy of Sciences, and INQUA's Liu Tungsheng Medal for service to the Quaternary community (2011).

Beyond scientific contributions and leadership, Professor Porter was known as a kind and thoughtful man of integrity and commitment, who valued collegiality and friendship in his professional life. On his retirement from a long and productive career at the University of Washington, he talked at length about his relationships and shared

experiences with each of his gathered colleagues, rather than about his own career or accomplishments. Finally, Porter's commitment to Quaternary science was demonstrated, among much other evidence, by his old Volkswagen van, license plate "Ice Age," painted deep blue with a white roof to represent "an iceberg floating in the tropical ocean." Steve Porter is survived by his wife Anne and children Susannah, John, and Maria.

#### Selected bibliography of Stephen C. Porter

- Porter, S.C., 1964a. Late Pleistocene glacial chronology of north-central Brooks Range, Alaska. *American Journal of Science* 262, 446–460.
- Porter, S.C., 1964b. Composite Pleistocene snowline of Olympic Mountains and Cascade Range, Washington. *Geological Society of America Bulletin* 75, 477–482.
- Porter, S.C., Denton, G.H., 1967. Chronology of Neoglaciation in the North American Cordillera. *American Journal of Science* 265, 177–210.
- Porter, S.C., 1971. Holocene eruptions of Mauna Kea volcano, Hawaii. *Science* 172, 375–377.
- Porter, S.C., 1975. Equilibrium-line altitudes of late Quaternary glaciers in the Southern Alps, New Zealand. *Quaternary Research* 5, 27–47.
- Porter, S.C., 1977. Present and past glaciation threshold in the Cascade Range, Washington, U.S.A.: topographic and climatic controls, and paleoclimatic implications. *Journal of Glaciology* 18, 101–116.
- Porter, S.C., 1979. Hawaiian glacial ages. *Quaternary Research* 12, 161–187.
- Porter, S.C., 1981a. Recent glacier variations and volcanic activity. *Nature* 291, 139–142.
- Porter, S.C., 1981b. Pleistocene glaciation in the southern Lake District of Chile. *Quaternary Research* 16, 263–292.
- Porter, S.C. (Ed.), 1983. Late Quaternary Environments of the United States. Volume 1, the Late Pleistocene. University of Minnesota Press, Minneapolis (407 pp.).
- Porter, S.C., 1989. Some geological implications of average Quaternary glacial conditions. *Quaternary Research* 32, 245–261.
- Porter, S.C., An, Z.-S., 1995. Correlation between climate events in the North Atlantic and China during the last glaciation. *Nature* 375, 305–308.
- Porter, S.C., Swanson, T.W., 1998. Radiocarbon age constraints on rates of advance and retreat of the Puget Lobe of the Cordilleran Ice Sheet during the last glaciation. *Quaternary Research* 50, 205–213.
- Porter, S.C., 2001a. Chinese loess record of monsoon climate during the last glacial–interglacial cycle. *Earth-Science Reviews* 54, 115–128.
- Porter, S.C., 2001b. Snowline depression in the tropics during the last glaciation. *Quaternary Science Reviews* 20, 1067–1091.
- Porter, S.C., Swanson, T.W., 2008.  $^{36}\text{Cl}$  dating of the classic Pleistocene glacial record in the northeastern Cascade Range, Washington. *American Journal of Science* 308, 130–166.

Glenn D. Thackray\*  
 Idaho State University, USA  
 Department of Geosciences, Idaho State University, Pocatello, Idaho  
 83209, USA.  
 E-mail address: thackgl@isu.edu.

Zhisheng An  
 Institute of Earth Environment, Chinese Academy of Sciences, China