

BARRY VOIGHT RETIRES

In June 2005, Barry Voight rounded-out over four decades of teaching, research and service at Penn State. He joined the then Department of Geology in 1964 immediately after completing his Ph.D. at Columbia. Interspersed with enriching professorships at TU Delft, at the University of Toronto, at MacQuarrie University, and at UCSB, he has thrived here ever-since.

His initial interests were in structural geology, engineering geology, and rock mechanics, but with a burgeoning interest in the science of rockslides and avalanches. His edited two-volume (1970) set under the same moniker is a classic text, firmly established him as a doyenne of mass movement, and led to a series of early appointments on topical National Research Council committees.

Two focal threads of scientific curiosity – an avowed interest in rockslides, and a focus on stress measurement consummated at divergent plate boundaries (Iceland) – ultimately converged to result in an early career-realignment; that to wholesale volcanology. The particular flavor of this interest was one that married an improved scientific understanding of volcanic processes with a then desperate need for improved hazard management.

This career realignment was spurred in part by the exploits of an uncle who had island-hopped in a B-17 in the Pacific theater – providing a visceral connection with Mayon and Galunggung, Lamington and Rabaul – names which would otherwise remain as mere locations on the map.

This growing interest was given further momentum by the cataclysmic eruption at Mt St Helens, in

May 1980 – for many, Barry's name is synonymously linked with this event – and a number of classic publications resulted. The most significant of these ultimately garnered the George Stephenson Research Medal from the Institution of Civil Engineers (London), and was the ground work for elected fellowship to GSA and his receipt of the GSA's Jahns Distinguished lecture-ship for 1992. This notoriety is the subject of a cameo in Dick Thompson's book *Volcano Cowboys*, depicting Barry's brusque, but scientifically on-the-mark, introduction to the pre-eruptive monitoring efforts of the fully-primed Mt. St Helens.

His activities surrounding the destructive lateral blast of Mt St Helens propelled a realigned interest in the physics of geologic materials, now applied to quantifying the hazards of volcanoes. Attached to the USGS Volcano Hazards Response Team for the last 25 years, he has provided service in science and hazard assessments at a broad list of volcanoes and related crises. These include Mt St Helens both pre- and post-May 18 1980, at other Cascade volcanoes, at Mts. Sanford and Redoubt (Alaska), at Nevado del Ruiz, Galeras, and Nevado del Huila (Colombia), at Cotopaxi (Ecuador), at Merapi (Indonesia), Pinatubo (Philippines), Popocateptl (Mexico), and most recently, a long-term engagement with Montserrat, WI. Other activities have included Bezymianny and Sheveluch in Kamchatka, Semeru and Merapi in Indonesia, and Etna and Stromboli in Italy. And for these services he has received the gratitude of many, and in some cases, as in the instance of Legaspi (a Philippines city

threatened by a volcano) he has received the "keys to the city."

These assignments provided intellectual foci which ultimately resulted in an important empirical method of generalizing rate-to-failure effects in materials and geo-materials in general, and to eruption forecasting in particular. These contributions provided a practical method to fit observational data to a time-to-failure – as a method for improved early warning and evacuation. For this achievement he was a recipient of the *EMS Wilson Research Award (1990)* and the *PSU Faculty Scholar Medal for Outstanding Achievement in Research and Engineering (1992)*, with a second award from the *US National Research Council (1990)* to keep his *1984 NRC Award company*.

These scientific activities were interspersed with practical management of both potential and actual disasters. The eruption of Nevado del Ruiz in Colombia in 1986, and the resulting snowmelt-triggered lahar which engulfed the town of Armero with catastrophic consequences, resulted in an important retrospection of the vagaries of hazard management. The resulting publication of "*Countdown to Catastrophe*" is a classic work which draws parallels with Albert Camus' allegorical *La Peste*, also highlighting the breadth of his eclectic literary interests.

In the mid-1990's, the resurgence of volcanic activity at the Soufrière Hills volcano on the Caribbean island of Montserrat provided a renewed focus – this time closer to home. This early human crisis, and the long-term ramification of the contributing science has been his secondary mistress of the past decade – MaryAnne is the enduring-first.

Here he has made important contributions in observational volcanology, especially through the hazardous installation of precision geodetic instruments close-in to the volcano summit. These instruments have yielded important data on the cyclic processes – in timeframes of hours to months – which had heretofore remained unobserved. Interpretations of these geodetic data, and the underlying processes they expose remain at the forefront of contemporary advances in physical volcanology.

These studies have resulted in multiple contributions to *Science* and *Nature*, and to an edited special volume of *Geophysical Research Letters* (1998) on the science behind the crisis, and in multiple contributions to the Geological Society (London) *Memoir* on the same.

His most recent immersion in this has been the CALIPSO project, for which he is the director and *force majeure*. This network of four precision strainmeter, tiltmeter, seismic and continuous GPS stations, installed around Soufrière Hills volcano, has captured important process-defining data – and continues to do so. The array serves as the first prototype of NSF's evolving Plate Boundary Observatory being installed in the western United States.

Few faculty can surpass the salubrious distinctions accorded Barry – whether it is having a student in a sleeping bag dragged-off by a grizzly bear in field camp (urban myth or urban truth?), turning up with a soused John Ramsay ready to perform in front of a temperate administration, or as the originator of the children's show – *Where in the World is Our Esteemed Professor* (recast by the producers as*Carmen Sandiego*).



Barry Voight and Discovery Channel film crew, the devastated city of Plymouth, Montserrat, WI, May 2002

This refrain has echoed the halls from countless generations of students – vainly seeking their instructor. In this he embodies the phenotype of the absent-minded professor – but this is merely an aberration, as the underlying distraction is an abject devotion to curiosity-driven science – a preoccupation which has permeated his scientific life.

Apart from his science, his humanity is best evidenced in the importance of family, friends, and associates, in his life. Working in an innately dangerous field, this has included the untimely death of colleagues such as Harry Glicken who died on Unzen – and for whom Barry championed and produced a memorial volume of *JVGR*. At home, he and MaryAnne have been consummate bon-vivants, and countless students and colleagues, visitors and friends, have benefited from the warm embrace of their home.

A consummate reader, he is well read, has a particular interest in biographies of Churchill, and a penchant for corresponding with colleagues in idiomatically-perfect French. His keen sense of history is epitomized by the survival of Rob Scholten's line drawings on the chalkboard in his office, throughout his multi-decade occupancy. The mess of his office is legendary. Students have been rumored to have been lost, without trace, in the morass of papers, book, and rock samples which populate the space. Surprisingly, such a filing system works well for him - he is able to quickly and precisely recall the locations of items filed many years previously.

So, as you consider the many accolades afforded him over his continuing career, raise a Carib in one hand, and a tea punch in the other, and join me in toasting Barry's current triumphs, and in anticipating his many future successes.

Contributed by Derek Elsworth