

A Eulogy for Aykut A. Barka

1 February 2002

Aykut was an internationally honored scientist for so many reasons—the quality and depth of his work; his plain talk to the Turkish public; his tireless efforts to convince the government to confront the potential for an earthquake disaster; his unstinting integrity; and his humor, openness, and selflessness. He embodied the highest calling of science in service to the public.

Aykut felt that the public deserved the truth—both what we know and what we don't know. He worried that the press was unable or unwilling to distinguish authoritative scientific council from the pronouncements of those who seek only to soothe or scare the public. He worked to educate the press to demand to see publications in refereed journals on the topics for which they claimed expertise. He was relentless in his efforts to encourage the government to take action now to reduce the losses in future earthquakes, and he was rarely satisfied with the response. He felt that as a citizen of Turkey and an inhabitant of his beloved Istanbul, he could not face himself if he had not adequately warned the public of the risks they confront.

Aykut never saw himself as an intellectual. This despite a magnificent career working at some of the world's greatest intellectual centers, such as Massachusetts Institute of Technology and the Université de Paris, a long string of honors, and numerous landmark publications. He would have nothing of it, because he felt that this would distance him from people. Rather, he believed that his understanding was made valuable by sharing it—with colleagues, students, civic groups, the government, and the population at large.

He neither sought nor enjoyed the limelight of public or media attention, and it came with a heavy price. The envy among some colleagues was palpable, and the time away from his work and family came at a huge cost. But he considered speaking to the press a sacred duty, enabling every person to make an informed

decision about his safety. I know of few other scientists who sacrificed so much of his precious research time to make such a public gift.

Aykut was passionate about his work. He gained deep insight from close study of the earth's landscape. He learned how to read the past history of earthquakes from the creases and wrinkles of meadows and ridges. When he realized that many of the villagers who had experienced the great 1939-1944 earthquakes along the North Anatolian fault would soon be gone, he went from village to village along 700 kilometers of the fault, having tea with the elders and letting them lead him to sites where evidence of the earthquakes were uniquely preserved. His published slip distribution for the 12 great earthquakes increased the number of observations by an order of magnitude, enabling stress transfer calculations in which he also participated. In a prescient 17 September 1999 article in *Science*, Aykut argued that two faults were made more vulnerable by the 17 August 1999 Izmit shock: the Yalova fault to the west, and the Düzce fault to the east. Two months later, the 12 November 1999 M=7.1 Düzce earthquake struck. This accurate and timely warning is simply without peer elsewhere in the world.

A daily stream of renowned scientists from all over the world traipsed through Aykut's cramped office and modest field camps to share in the research with him. Everyone wanted to work with Aykut; everyone wanted to learn from him. Scientific collaboration can often be prickly, with struggles for lead authorship sapping the pleasure of working together. With Aykut these issues never arose. His generosity, humbleness and humor made collaboration both a joy and an adventure. But Aykut's scientific prestige and the originality of his vision sometimes made him a target for rather pointed and public attacks at international meetings and workshops. Although this deeply upset him, he argued cogently for his views, never lost his temper, and he never took it personally. His students adored him, took care of him, and flourished because of him. They are a precious resource for their nation, and will carry his torch far into this century.

Aykut lived modestly, but he was generous to everyone around him. He ran about 2 hours late for every appointment. He slept for just several hours a night. His phones rang every 30 seconds. He rarely answered emails—there were too many. So, one never knew where and when he would show up next, every encounter coming as a surprise. There were always several graduate students, television news crews, and university administrators lined up outside his door. His travel schedule was simply impossible, and constantly in flux. He lovingly maintained his 1972 Peugeot, doing valve jobs at the parking lot at Istanbul Technical University before racing to the airport to fly down the fault, or walking for hours in the middle of the night carrying his radiator, in search of a welder. He loved fresh seafood simply prepared, Turkish carpets, and sailing down the Bosphorous. Most of all, he loved to laugh with friends and family.

All of us who knew and worked with Aykut will miss him terribly. But the message of his life's work is clear: Strive to understand the mystery and hazards of the earth on which we live, and communicate that insight—both the joy of discovery and the risk of disaster—to those most affected.

Ross S. Stein
U.S. Geological Survey
Menlo Park, California