

Presentation of the Distinguished Public Service Medal for 1996 to Robert I. Tilling

L.J. PATRICK MUFFLER

U.S. Geological Survey, MS 910, Menlo Park, California 94025-3591, U.S.A.

Mr. President, members, and guests:

I am delighted to be here today to introduce Dr. Robert I. Tilling, the recipient of the 1996 Distinguished Public Service Medal of the Mineralogical Society of America.

Bob and I have been colleagues and friends since we were freshmen at Pomona College, unbelievably some 42 years ago! At Pomona, we were fortunate to fall under the geological spell of Donald McIntyre, Gerhard Oertel, and John Christie, who inspired us to go on to graduate school in petrology and mineralogy. Bob's graduate education was at Yale, where he did his dissertation on skarn deposits in Chile. Bob then joined the U.S. Geological Survey (USGS) in Washington, D.C., working initially with Monty Klepper on the Boulder batholith. Like many USGS scientists, however, a tour of duty at the Hawaiian Volcano Observatory won Bob over to a career studying active volcanism. After more than two decades with the USGS in Washington and Reston, Bob and his wife Susan (also a Pomona graduate) migrated in 1987 back to their home state, California. Bob currently is the Chief Scientist of the USGS Volcano Hazards Team, with responsibility for the Survey's four volcano observatories in Hawaii, the Cascades, Alaska, and Long Valley (California), as well as a broad spectrum of volcanic and geothermal research in Menlo Park.

Bob Tilling's service directly to the public is most conspicuous in his preparation of popular-interest publications explaining and illustrating volcanic activity and the hazards to people and facilities. Prominent in these publications are the eloquent and informative USGS booklets describing the volcanic activity in Hawaii and at Mount St. Helens. Bob's skills in planning the booklets, developing the financial support, designing the graphics, expediting the preparation, and translating the esoteric vocabulary of the professional volcanologist to lucid prose has produced jargon-free booklets that have had a major impact on the public's understanding and awareness of volcanic activity. These booklets set the standard for modern popular-interest publications in earth science, aimed at the public rather than just a small set of professional volcanologists.

Bob Tilling's public service, however, is not limited to these direct communications with the public. In addition, he is a world leader in designing and implementing programs of volcano-hazard mitigation. In the aftermath of the Mount St. Helens eruption of 1980, he directed the tenfold expansion of the USGS Volcano Hazards Program from its nucleus at the Hawaiian Volcano Observatory to its present status as the pre-eminent

volcano hazards effort in the world. Subsequently, he has played a key role in designing and implementing programs of international assistance in volcano monitoring and hazard assessment (for example, in Indonesia). He also contributed his organizational skills to USGS responses to volcanic emergencies (for example, Volcan Nevado del Ruiz in Colombia and Lake Nyos in the Cameroon). He has been a major interface between the USGS and other Federal agencies (in particular the Office of Foreign Disaster Assistance of the State Department), international entities (for example, the World Organization of Volcano Observatories), and the media. Bob's ability to communicate volcanic information at briefings or media interviews, particularly television, is second to none in the volcanic community.

Bob Tilling has also been of public service in his managerial roles, in his leadership of major scientific efforts, and in his personal scientific productivity. He was USGS liaison to NASA from 1971 to 1972 for the Lunar Sampling Program, Scientist-in-Charge at the Hawaiian Volcano Observatory from 1975 to 1976, and Chief of the USGS Office of Geochemistry and Geophysics from 1977 to 1981. This latter role involved leadership of most of the USGS efforts in mineralogy, field petrology, isotope geology, analytical chemistry, and potential-field geophysics. Subsequently, Bob led the scientific study of the 1982 El Chichón, Mexico, eruption. In 1987 and 1988 he was editor of a major, three-volume Special Section of the *Journal of Geophysical Research* entitled "How Volcanoes Work." He also has been a leader in volcanic education and program design in the International Association of Volcanology and Chemistry of the Earth's Interior, and in 1989 he authored an influential statement on volcano hazards and their mitigation that was published in *Reviews of Geophysics*. And despite all his attention to public service, he has maintained an impressive scientific publication record on the Boulder batholith, radiogenic heat production, and Kilauea volcano.

Robert Tilling's career has been marked by exemplary dedication to public service. The combination of his outstanding scientific, managerial, writing, verbal, and interpersonal skills have had a major impact in making the public aware of volcano hazards and in designing effective programs to mitigate these hazards, both in the United States and throughout the world.

President Brown, it is with great pleasure that I present Robert I. Tilling as the recipient of the 1996 Distinguished Public Service Medal of the Mineralogical Society of America.