

Obituary

Haroun Tazieff (1914–98)

Volcanologist, and authority on natural hazards

At a time when science is becoming increasingly arcane and remote from human experience, we feel a growing need for those few people like Haroun Tazieff who can still convey to the general public an appreciation of the marvels of the natural world. Tazieff died at home in Paris on 2 February, aged 83.

Born in Warsaw of a Russian father who perished in the early days of the First World War, Tazieff and his mother moved first to Saint Petersburg and then, with the outbreak of the revolution, to Belgium, where he grew up in very modest circumstances. After serving in the Belgian army and resistance during the Second World War, he completed his studies in geology and agronomy and went to the Belgian Congo to work as a geologist and mining engineer. While there, he wrote several scientific papers on the alkaline igneous rocks of the African volcanoes, but after experiencing the 1948 eruption of Kituro he became completely devoted to studies of active volcanism. His first book, *Cratères en feu*, published in 1951 (and in English the following year as *Craters of Fire*), was an immediate popular success thanks to the sense of adventure and grandeur of natural forces his writing conveyed. In the following years he produced a total of 23 books and six films of extraordinary artistry and popular appeal.

After returning to Belgium, Tazieff taught at the University of Brussels and later at the Universities of Paris and Orsay. In 1957 he set up the Centre de Volcanologie in Belgium and in 1961 organized the International Institute of Volcanology at Catania, Sicily. He was director of the volcanological laboratory at the Institut de Physique du Globe in Paris and later established a laboratory under the French national research agency CNRS at Gif-sur-Yvette. His ability to sample erupting lavas close to their source resulted in some of the best gas analyses and temperature measurements ever obtained. Some of the instruments he and his team designed for this work are now widely used in science and industry. But although his interests mainly centred on understanding eruptive mechanisms, he always maintained a primary concern for the human aspects of natural hazards.

Tazieff served as an expert on volcanic hazards around the world, and was an adviser on natural hazards for several



regions in France. In 1976 he was called to the island of Guadeloupe to assess the potential hazards of an eruption from the Soufrière volcano. When the international team recommended evacuating all inhabitants from the slopes of the volcano, Tazieff said that this was a costly over-reaction and that the volcano posed no immediate danger. In the end, 73,600 people were evacuated at great expense, and the eruption ended quite peacefully. In a brief article (*Nature* 269, 96–97; 1977), Tazieff summarized his views and proposed a code of professional conduct for volcanologists charged with assessing the risks posed by eruptions in populated regions.

At that time, I was editor of the *Journal of Volcanology and Geothermal Research*. Convinced that the professional questions Tazieff raised deserved the serious attention of volcanologists, I wrote a short note summarizing his main points (*J. Volcanol. Geotherm. Res.* 4, 1; 1978). So as not to portray Tazieff's views as those of the journal, I used the nom de plume 'Derek Bostok'. The note brought an immediate response, mostly negative. The main argument was that the evacuation was justified, because volcanologists could not foresee all possible courses that the eruption could take. The consequences of a major eruption would have been too great to justify taking any risk, no matter how small it might seem. Despite the heated nature of the arguments, the 'Bostok Affair', as it came to be known, provided a healthy appraisal of the role of geologists in dealing with natural hazards.

In the ensuing years, Tazieff continued to contribute provocative ideas which can be summarized in terms of three principles.

First, the responsibility for interpreting hazards must be left to specialists. The complexities of volcanism and the difficulty of anticipating the behaviour of individual volcanoes are not generally

appreciated by the geologist who has not had the opportunity to deal with a wide range of volcanic phenomena.

Second, the primary task is not to predict volcanic eruptions but rather to foresee catastrophic events. Few eruptions pose serious threats, but one must always consider the possibility of unexpected events. Even the most experienced observer cannot anticipate every possible development in a large mature volcano, especially if it has no historical record of activity.

Third, and possibly most important, the role of the professional volcanologist is that of adviser to public officials who must decide on an appropriate response to his advice. Self-appointed experts who voice poorly informed opinions through the press have caused needless panic and costly over-reaction. Even the best experts may have conflicting opinions — if these are voiced publicly, responsible officials lose confidence and resort to the most conservative measures, even when these entail great expense and hardship.

Tazieff increasingly concerned himself with all types of natural hazards and environmental problems. Between 1984 and 1986 he held the post of Secretary of State for Prevention of Natural and Technological Disasters under Laurent Fabius, then Prime Minister of France. He continued to serve as adviser at various governmental levels until only a few years before his death.

It never seemed to bother Tazieff that he was never accepted as a member of the 'club'; he clearly preferred the role of iconoclast and with time became increasingly outspoken. His last published work, *J'accuse une dernière fois* (*Préventive* No. 37, 4–15; 1998), was a broadside against 'opportunists' of all kinds, especially politicians. He also expressed contempt for scientists who solicit funds for research with the ostensible aim of alleviating natural hazards but who in fact use them to pursue esoteric research.

It is not surprising that combative remarks such as these raised strong reactions on the part of 'serious' scientists. In the end, however, Tazieff achieved the two primary goals of his long, eventful career — he made scientists more conscious of their responsibilities to society, and he inspired a generation of ordinary citizens with an appreciation of the magnificent manifestations of nature.

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