

## Rudolf Trümpy (1921–2009)

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Rudolf Trümpy, Professor emeritus of Geology at the Swiss Federal Institute of Technology and the University of Zurich, passed away on the 30th of January 2009 in Küsnacht, Switzerland. A leading figure in Alpine Geology, Rudolf Trümpy was also a professional historian of science, a brilliant writer and speaker, a great mediator between different scientific cultures and generations, and a man with a profound knowledge of the ways of science. The Geologische Vereinigung honoured his achievements with the bestowal of the Gustav Steinmann Medal in 1998; indeed, Rudolf Trümpy stood in the best tradition of our learned society.

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A complete bibliography of Rudolf Trümpy's papers will be published in the Swiss Journal of Geosciences.

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Rudolf Trümpy was born into a family of geologists. His father and three uncles were geologists; all of them served in the petroleum industry, and only one of them turned to academia later in his life. Although his father did not encourage his leanings towards geology, he began to study it at the Swiss Federal Institute of Technology in Zurich. After obtaining his Master's degree, he spent a summer in Lausanne, embracing the Latin culture of the *Romandie*, to which he was attached during his entire life. Back in Zurich he began work on his doctoral thesis on the Lower Jurassic sediments of the Helvetic nappes in eastern Switzerland. At that time, Alpine geology was in a state of lull, the great syntheses had been written and the heroes of the early century, if still alive, were tired. It seemed that the great problems of Alpine geology had been solved, and the younger generation was concerned with mere details. Trümpy later recalled "that he had (under these circumstances) been extremely lucky in the choice of his thesis subject" (Trümpy 1995); indeed, it turned out to be the first step in turning back to the earlier views of Argand [in his *Tectonique de l'Asie* (Argand 1924)] and of Bailey (1936) that the 'geosyncline' had been an extensional feature, a view that had fallen into oblivion. Indeed, Trümpy could convincingly demonstrate that the early evolution of the Alpine 'geosyncline' was dominated by extensional, normal faulting rather than by compression and thrusting (Trümpy 1949). This conclusion and its underlying observations would later, after the advent of plate tectonics, perfectly fit into the reconstructions of former continental margins preserved in the Alps. The study of the relationships between palaeogeographic evolution and tectonic structure remained at the centre of Trümpy's research during the 1950s (Trümpy 1955a), culminating in his masterly 1960 synthesis of the 'Paleotectonic Evolution of the Central and Western Alps (Trümpy 1960)', a publication that established his international reputation. The paper

summarized the state of the art in Alpine geology for a wide international readership, discussing the relevant information available at that time on pre-orogenic tectonics, ophiolites, flysch and molasse, emphasizing “the short-lived and migratory nature of palaeogeographical features”.

After completing his doctorate in 1947, Trümpy had the intention of joining the oil industry, like his father and his uncles. However, the next 5 years saw him at the University of Lausanne, whereto he was called as a ‘*Chef de travaux*’. Also in Lausanne he met and married Marianne Landry who remained his companion and best friend through all the years to come. After the early death of Elie Gagnebin, the professor in Lausanne, he had, “at the tender age of 29, to run the small institute single-handed” (Trümpy 1995). In spite of the heavy teaching load, those years were very prolific and laid the foundations for many years to come. The joint paper with Bernard Gèze and L. U. de Sitter on the structure of the Montagne Noire, which also dates back to this period, is a marvellous example of scientific argumentation detailing the pros and cons of different scientific hypotheses (Gèze et al. 1952).

In 1953, Rudolf Trümpy became the successor of his former professor Alphonse Jeannet and returned to ETH where he pursued his research on the origin of the sedimentary décollement nappes of western and central Switzerland. He could show that the Valais zone formed an independent deep trough and that the ‘Nappe des Préalpes Médiannes’ was derived from the middle Penninic basement nappes in the Valais region and not from the Austroalpine realm as maintained by most Swiss geologists at that time (Trümpy 1955b, 1957). With this view he implicitly rehabilitated Steinmann’s old nappe correlation between western Switzerland and Grisons (Steinmann 1905), and it was only logical that, after his return to Zurich, he extended his research to Grisons. The move to Zurich also attracted a large number of students working on Master and Ph.D. theses in the traditional areas of ETH in eastern Switzerland, in the Helvetic nappes around his hometown, Glarus, and in the Austroalpine nappes in Grisons. Trümpy was now largely occupied with teaching and supervision of graduate students, but during this period he completed a very fine kinematic analysis and palinspastic restoration of the Glarus nappes, a kind of balanced cross-section *avant la lettre*, in a paper that he considered to be one of his best (Trümpy 1969).

From very young, Trümpy had been an admirer of Alfred Wegener and his ideas, and even tried, during the International Geological Congress in London in 1948, to convert John Tuzo Wilson to continental drift, vainly, as he recalled (Trümpy 2001, 2004). However, although he had established, together with Marcel Lemoine and a few others, some of the foundations for a plate-tectonic interpretation of the Alps, he was at first rather reluctant to see Alpine geology in the light of the New Global Tectonics.

He was cautiously weighing the arguments in favour and against plate tectonics in the Alps, always seeking new relevant evidence, declaring “that a bad fossil is more valuable than a good working hypothesis” (Trümpy 1971). One of the main problems with plate tectonics, he thought, was the absence of a major plate boundary across the Arc of Gibraltar (Trümpy 1983). This was one of the reasons why he started a mapping campaign in the Rif Mountains and in the Betic Cordillera in the early 1970s. Another problem was the apparent existence of discrete phases [eo-, meso- and neo-Alpine in his terminology (Trümpy 1973)] in the Alpine orogeny, which seemed to be in conflict with continuous movements along plate boundaries. However, with time, still being a “moderate Stillean” (Trümpy 1973), Trümpy became “fully converted to the basic tenets of plate tectonics”, “shamefully” admitting later “that he was not among the first Alpine geologists to grasp the promise of the new tectonics” (Trümpy 2001). His later papers on the Pennine–Austroalpine ocean–continent transition (Trümpy 1975) and the beautiful late monograph on the Iberg Klippen (Trümpy 2006) combined careful field observations with far-reaching conclusions in the context of modern geology. Truly original is also his postulate of large-scale transcurrent displacements in the evolution of the Alpine Tethys (Trümpy 1988) and during the Alpine orogeny (Trümpy 1977).

Trümpy was a true *homme de lettre*. His style of writing was elegant, and his lectures and talks, always strewn with grains of salt, were both scientifically excellent and entertaining. He was a gifted teacher, emphasizing also the importance of the history of our science. His interest in the evolution of geological thinking led him to Hutton (Trümpy 1996), Goethe (Trümpy 1968), and to the controversies arising around Marcel Bertrand’s far-travelled thrust sheets and Albert Heim’s ‘*Glarner Doppelfalte*’, a topic he has elucidated in several papers (Trümpy 1991; Trümpy and Lemoine 1998; Trümpy and Westermann 2008).

Last but not least, Trümpy was a responsible *citoyen*. He applied his expert knowledge and judgement for the good of society by serving on national committees involved in the geological aspects of the storage of radioactive waste and in the evaluation of scientific institutions. He was active internationally, first as Treasurer and later as President of the International Union of Geological Sciences (IUGS). He received many honours, including the Penrose Medal of the Geological Society of America and the Wollaston Medal of the Geological Society of London, not only for his scientific achievements but also for his many services to the geological community. In a world of post-modern science, a figure like Trümpy represents a species that is becoming increasingly rare: He lived true scholarship and intellectual honesty, investing his knowledge for the benefit of our science and his fellow scientists. We shall

miss his kindness, his generosity, his wit and his gentle, ironic sense of humour; we shall remember him as *un grand Monsieur, un vero Scienziato*.

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