

SCIENTIFIC FRAUD AND MISINFORMATION IN GEOLOGY

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Scientific fraud and misinformation become nowadays frequent phenomena in Science. Geological sciences are also vulnerable to fraudulent procedures due to some specific features.

Objects and processes studied by geological sciences are very complex. Our knowledge on the processes in the Earth is based mostly upon indirect evidence. Incompleteness of the fossil record and effects of multiple superimposed tectonic and metamorphic events may be listed amongst major handicaps for objective research.

Scientific fraud in geology may be defined as deception by use of fabricated geological (both field and/or laboratory) evidence. Scientific misinformation consists of presentation (by publication or otherwise) of one-sided evidence confirming a given idea, with purposeful omission or distortion of opposing evidence. Both practices are favoured by the will to conform to ruling or fashionable theoretical considerations imposed by scientists with dominant positions in education, research, editorial boards and financing institutions. Typical examples of scientific fraud concern transplantation on paper of fossils from their real occurrences to formations that need biostratigraphic confirmation.

Papers based upon dubious or fabricated evidence are harmful for the evolution of scientific ideas and the formation of young geologists. They build for geology the reputation of a science based rather on theoretization against the facts instead on real facts systematized by sound and adequate interpretations.