

Pseudoimpactites in anthropocenically overprinted quaternary sediments

Robert Huber (1), Robert Darga (2), and Hans Lauterbach ()

(1) MARUM, Universität Bremen, Germany, (2) Naturkunde- und Mammut-Museum Siegsdorf, Germany

Whereas typical anthropogenic materials such as plastics can easily be identified in the anthropocene record, other materials such as building materials or industrial waste often closely resemble natural rocks or minerals. Especially transported and weathered anthropogenic matter is hard to distinguish from natural rocks. Whereas most rock samples may easily be distinguished by visual inspection, definite identification of exotic and small sized matter is not always an easy exercise which has been shown during the controversial discussion on the cosmic origin of carbon spherules found in Younger Dryas sediments.

Similarly, a variety of exotic materials and lithological phenomena reported from quaternary sediments in Upper Bavaria have been associated to a cosmic impact in the area. Findings of carbonatic regmaglypts, glass coated and fragmented rocks, glassy carbon or pumice like carbon have been proposed to represent impact related rocks, an hypothesis which has further been supported by findings of iron silicides and the postulated detection of nanodiamonds and Carbine.

Many of these findings have been strongly doubted within the geoscientific community, however a systematic, independent investigation of these phenomena has not yet been conducted. We present the results of our examinations which have been carried out to critically test the impact related origin of the mentioned strange materials and rocks. We could identify some key sites and independently collected samples of several of the materials and analysed these thoroughly. We found that the majority of these impact related materials is of anthropogenic or biogenic origin, thus they are pseudoimpactites partly originating from old fireplaces and waste pits. The claimed cosmic origin of this matter is an illusion caused by the anthropocene overprint of the original sedimentary record.