Geophysical Research Abstracts
Vol. 21, EGU2019-2361, 2019
EGU General Assembly 2019

Geomorphological features: Behind the tracks of Roman gold mining in NW Spain

Rosa M. Carrasco (1), Javier Fernández-Lozano (2), Javier Pedraza (3), Jacinta García-Talegón (4), and Gabriel Gutiérrez-Alonso (4)

(1) Department of Geological Engineering and Mining, University of Castilla-La Mancha, Toledo, Spain (rosa.carrasco@uclm.es), (2) Department of Earth Sciences and Physics of the Condensed Matter, University of Cantabria, Santander, Spain (j.fernandezlozano@unican.es), (3) Department of Geodynamics, Stratigraphy and Paleontology, Complutense University, Madrid, Spain (javierp@ucm.es), (4) Department of Geology, University of Salamanca, Salamanca, Spain (talegon@usal.es, gabi@usal.es)

This contribution explores the information provided by the landscape transformation occurred during the intense period of Roman gold mining activity in northwest Spain. The Teleno Mountains and its surroundings are characterised by the presence of Quaternary glacial deposits and Paleogene-Neogene alluvial sediments intensely exploited by the Romans. However, mining debris often obscures the identification and description of natural deposits, representing its study a challenging task. The aim of this study is to determine the existence of specific geomorphological features that can improve the identification of anthropic elements related to the mining activity. Among the most outstanding remains, fluvial captures and widening drainage systems are the most astonishing structures, due to the extent and complexity of the works. However, other mining elements such as anthropic alluvial fans and rock ridges stands out in the landscape. In many cases, this mining remains are linked to the hydraulic infrastructure displayed in the area, which mainly comprises an extensive system of canals and water reservoirs. Difficulties arise in those areas where no such structures are found. Thus, the use of geomorphic elements and patterns can help to distinguish among natural or anthropic deposits. The proposed approach represents the first systematic study carried out to provide a detailed analysis of the morphological expression of Roman gold mining activity on the landscape, and it can contribute to assemble the puzzle of Roman occupation in northwest Spain.