



A stratigraphy fieldtrip for people with visual impairment

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This communication presents how a stratigraphy fieldtrip adapted to people with visual impairment was prepared and carried out. This fieldtrip aimed to promote scientific knowledge on Earth sciences to people with visual impairment and to inspire Earth scientists to take into account the needs of people with disabilities when designing public engagement activities. To do this, the theme chosen for the fieldtrip was the importance of sedimentary rocks shaping the Earth and what information can one extract from observing sedimentary structures. The Triassic outcrops of Riba de Santiuste (Guadalajara, Spain) were observed during this fieldtrip. The expected learning outcomes were: a) understanding what are sedimentary rocks, how they are formed and how they fold and crop out, b) knowing what is a sedimentary structure and recognising some of them and c) be able to make inferences of the sedimentary environment from certain sedimentary structures. The fieldtrip was prepared, through the NGO “Science without Barriers” together with the Madrid delegation of the National Association for Spanish Blind People (ONCE-Madrid). ONCE-Madrid was responsible of advertising this activity as a part of their yearly cultural program to its affiliate. A preparatory fieldtrip was carried out to test the teaching methodology and to make an appropriate risk assessment. This was made together with the responsible of the Culture Area of ONCE-Madrid and two blind people. The involvement of end-users in the preparation of activities is in the core of the European Disability Forum motto: “Nothing about us without us”.

A crucial aspect of the site was accessibility. In terms of perambulatory accessibility of outcrops the site is excellent and suitable to some extent for end-users regardless of their physical fitness. The fieldtrip itself took place on October 15th 2016 and 30 people with and without visual disability attended. In addition to overall observations and explanations of strata and stratification, five types of sedimentary structures were observed in detail: Grain size differences and its meaning in terms of energy of the sedimentary environment, plant roots bioturbation traces, flute casts, ripples and convolute stratification. An introduction to the fieldtrip was available in Braille, as well as maps and figures in relief. A 3D plaster model representing the whole outcrop was used to give an overall view of the area as it was noted during the preparatory fieldtrip that totally blind people with no geological background had problems “zooming out”, i.e. imagining the whole geological structure from detailed manipulation of strata.

The feedback of the majority of the attendants to the fieldtrip was very enthusiastic. They highlighted the suitability of the activities and materials, perceived the fieldtrip as an enjoyable learning experience and met to some extent the expected learning outcomes. It is noteworthy that the fieldtrip was positively perceived positively by attendants with and without visual disability.

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