



The  
Geological  
Society

# Ecological uniformitarianism - key or lock?



**3 March 2022**  
**16.30 - 19.30 GMT**  
**Discussion meeting**

Are ecological niches stable? Exploring patterns in different taxa, habitats and time scales

Some evidence from fossils shows niche stability over hundreds of thousands of years (e.g. over multiple glacial-interglacial cycles) whereas modern invasive species (50% of which show niche change) demonstrate substantial lability. Are these different indications a reflection of the groups concerned, their habitats, the timescale of study, or some other factor? These issues are important because they bear on our use of information from modern representatives of species to interpret the environment of fossil counterparts, and on our use of palaeoecological data to predict the responses of organisms to current environmental change. The intention of this short 'roundtable' meeting is to bring together scientists with different perspectives for a discussion, with a view to stimulating further research and presentation of the results at a full conference in 2024.

## Speakers and Titles

- Ecophysiological responses to changing environmental conditions in marine invertebrates: molecular keys to adaptation  
Ana Riesgo (National Museum of Natural Sciences, Madrid)
- Niche shift or not for some major European tree species over the Holocene  
Rachid Cheddadi (University of Montpellier, France)
- Niche stability and conservation paleobiology: Clams, condors and cottonwoods  
Karl W. Flessa, (University of Arizona)
- How warm were Pleistocene interglacials? Reconstructing past temperatures using terrestrial fossil assemblages  
Tom S. White (Natural History Museum, London)
- Late Neogene - early Quaternary seasonality changes recorded in North Atlantic dinoflagellate cyst assemblages  
Jan A.I. Hennissen (British Geological Survey)
- Ecological uniformitarianism: A deep time perspective  
Marci M. Robinson and Harry J. Dowsett (US Geological Survey)

## Conveners

Andrew L.A. Johnson (University of Derby)  
Elizabeth M. Harper (University of Cambridge)  
Richard J. Twitchett (Natural History Museum, London)  
Jean-François Cudennec (University of Derby)

## Contact

[Conference@geolsoc.org.uk](mailto:Conference@geolsoc.org.uk)  
[www.geolsoc.org.uk/3-GSL-Ecological-uniformitarianism-key-or-lock](http://www.geolsoc.org.uk/3-GSL-Ecological-uniformitarianism-key-or-lock)