

Scientists map geographic patterns of soil microbe communities in Hexi Corridor deserts

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A research group led by Li Yuqiang from the Northwest Institute of Eco-Environment and Resources (NIEER) of the Chinese Academy of

Sciences recently mapped biogeographic patterns of soil microbe communities in the Hexi Corridor deserts of northern China.

Based on field survey and [next-generation sequencing](#), the researchers mapped [soil](#) microbial geographic [diversity](#) patterns in the Hexi Corridor deserts to further determine the main driving factors responsible for shaping the soil microbial community.

Related results were published in *CATENA*.

The researchers found that bacteria and eukaryotic diversity increased linearly with increasing longitude and altitude, but decreased with increasing latitude in the Hexi Corridor deserts, whereas archaeal diversity showed little change along these geographic gradients.

The research results showed that soil microbial community composition in the Hexi Corridor was shaped by geographic distance and environmental variables, among which geographic distance was slightly more important than the environmental variables.

Besides, this study also suggested that the archaea were the core groups for building this region's soil microbial co-occurrence network.

This study deepens our understanding of the roles of biogeochemical processes in shaping microbial diversity. It also provides clues for developing better management strategies in response to accelerating climate change.

More information: Yulong Duan et al, Biogeographic patterns of soil microbe communities in the deserts of the Hexi Corridor, northern China, *CATENA* (2022). [DOI: 10.1016/j.catena.2022.106026](https://doi.org/10.1016/j.catena.2022.106026)

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