

L07a_BIS

Microbial Ecology

- Study of the **interactions** of microorganisms with their **environment (including organic matter)**, **each other**, and plant and animal species (**other organisms**)
—> symbioses, biogeochemical cycles, climate change
- **Earth Microbiome Project**

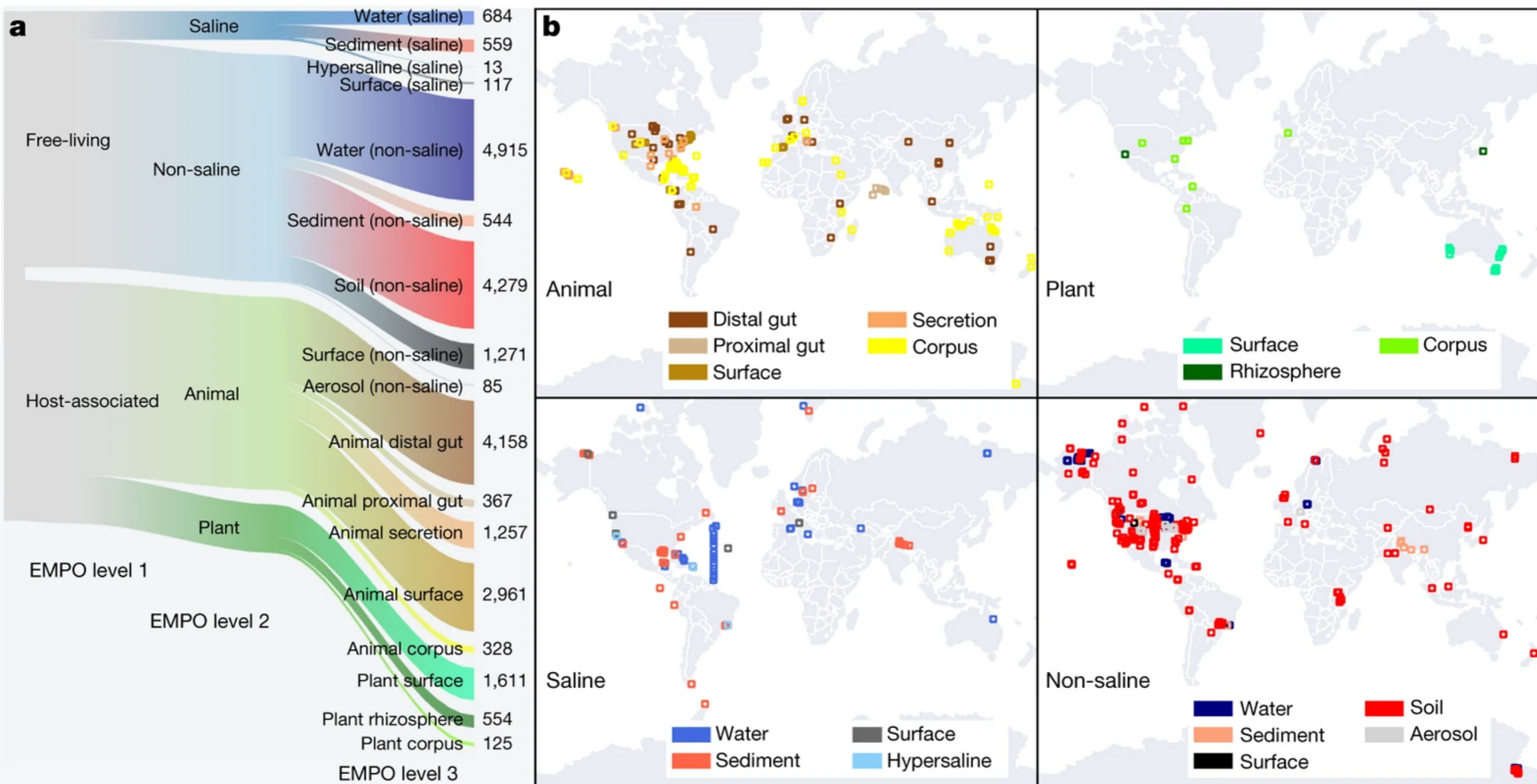


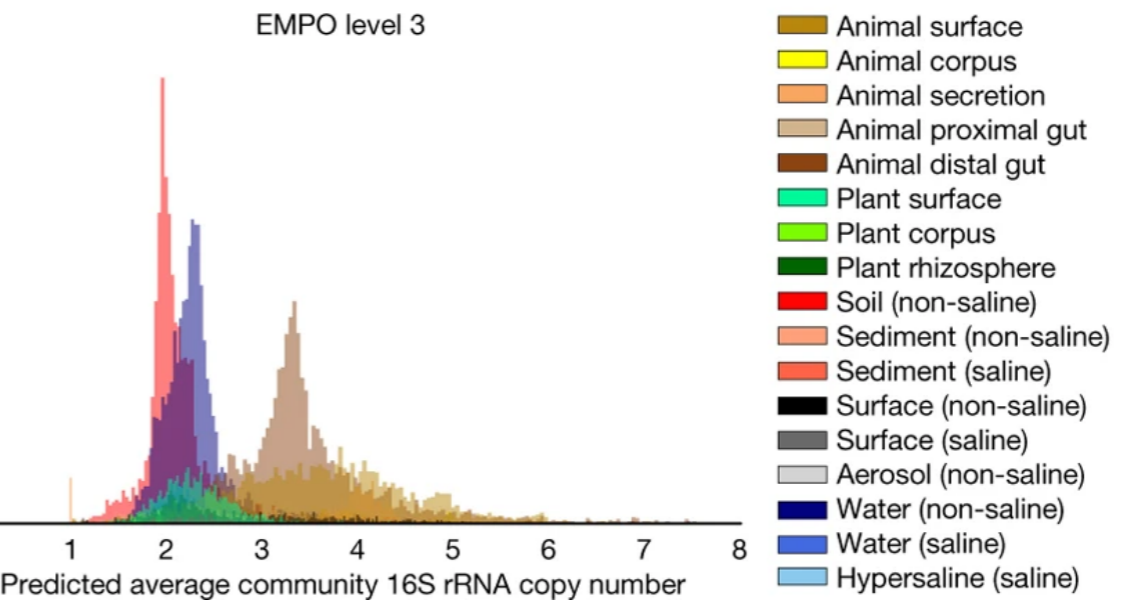
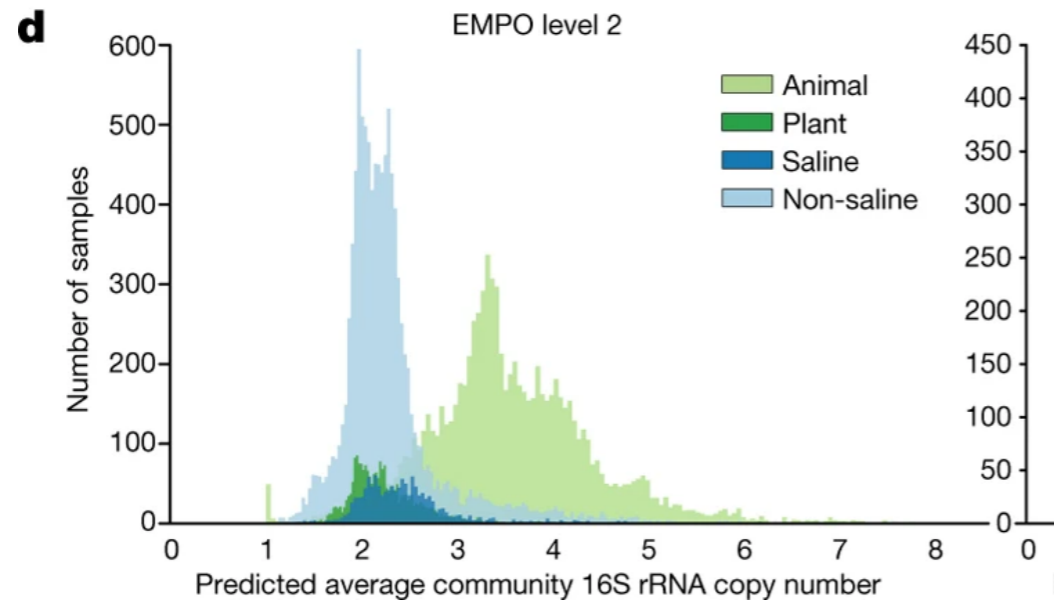
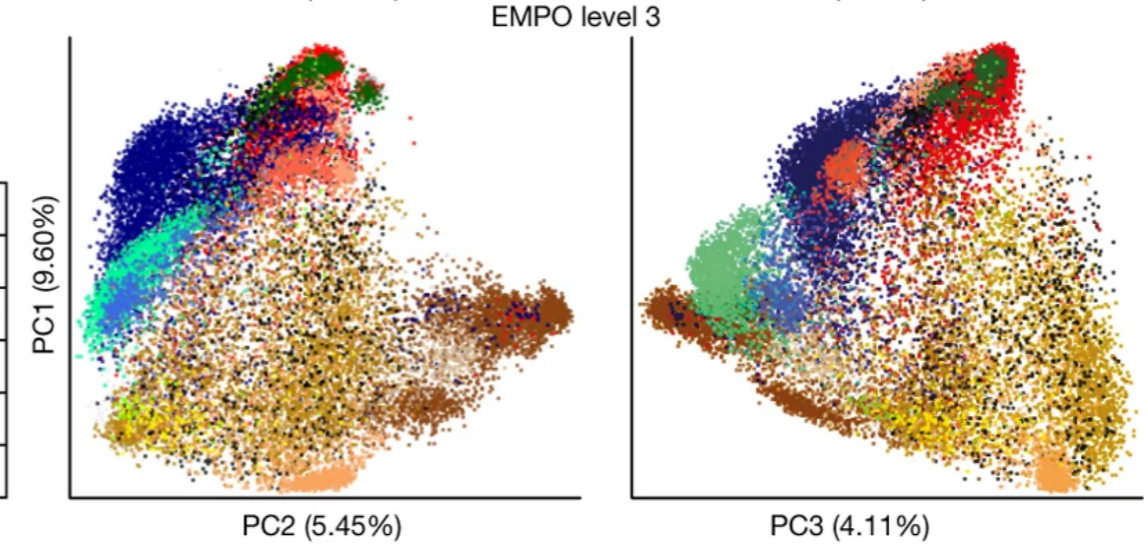
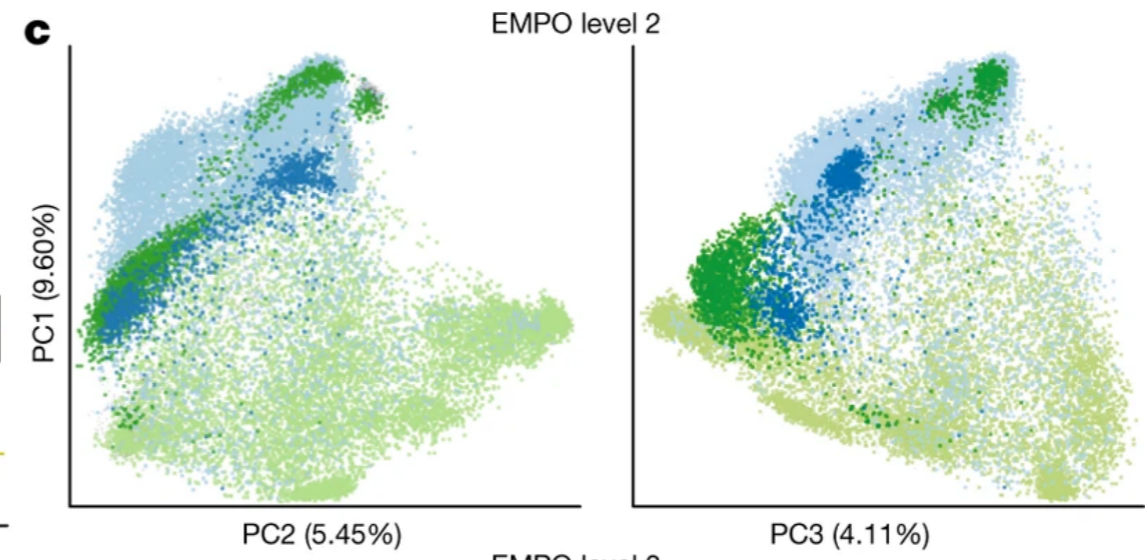
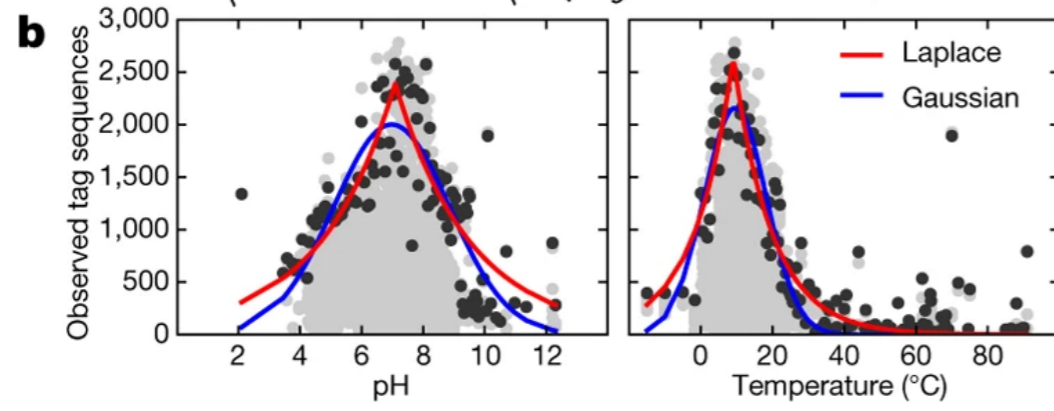
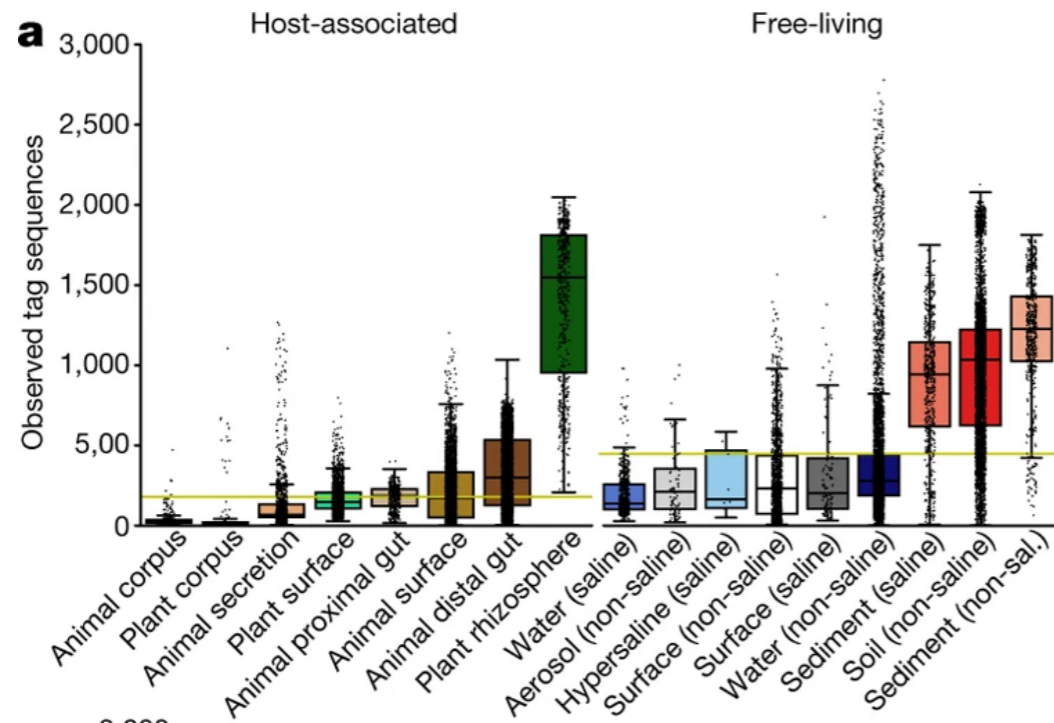
Earth Microbiome Project

The Earth Microbiome Project (EMP, <http://www.earthmicrobiome.org>) was founded in 2010 to sample the Earth's microbial communities at an unprecedented scale in order to advance our understanding of the organizing biogeographic principles that govern microbial community structure.

We recognized that open and collaborative science, including scientific crowdsourcing and standardized methods⁸, would help to reduce technical variation among individual studies, which can overwhelm biological variation and make general trends difficult to detect

Environment type and provenance of samples





- Animal surface
- Animal corpus
- Animal secretion
- Animal proximal gut
- Animal distal gut
- Plant surface
- Plant corpus
- Plant rhizosphere
- Soil (non-saline)
- Sediment (non-saline)
- Sediment (saline)
- Surface (non-saline)
- Surface (saline)
- Aerosol (non-saline)
- Water (non-saline)
- Water (saline)
- Hypersaline (saline)

Shaffer, J.P.*, L.-F. Nothias*, L.R. Thompson* (2022). Standardized multi-omics of Earth's microbiomes reveals microbial and metabolite diversity. [Nature Microbiology 7:2128-2150](#).
*These authors contributed equally. doi: 10.1038/s41564-022-01266-x.

Thompson, L., Sanders, J., McDonald, D. *et al.* A communal catalogue reveals Earth's multiscale microbial diversity. *Nature* **551**, 457–463 (2017)

<https://fondationtaraocean.org/en/home/>