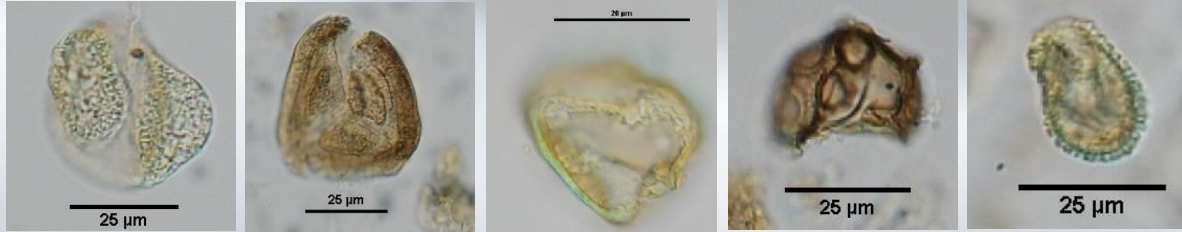


Pollen from marine sediments unravel past land vegetation cover and climate



Pollen and spores from the Andes (montane forest and Páramo)

Pollen is produced by land plants in vast quantities and transported to the ocean by wind and rivers. The grains sink to the ocean floor and are preserved in the sediments for millions of years thanks to their super-resistant surface structures. These so-called exines often have species- or genus-specific patterns like spines, verrucae, or ridges, which palynologists use for identification. The identified pollen assemblages denote different vegetation types (e.g. savannahs, dry forests, rain forests). Furthermore, as many plant taxa can be assigned to specific environmental niches and have different optima concerning climate, nutrients, insolation etc., these environmental factors can be reconstructed as well. In this way, past changes of vegetation cover and climate can be studied.

In my research, I investigate sediments from the eastern equatorial Pacific to reconstruct Pliocene vegetation and climate change in western equatorial South America.

