

Updating the count of seamounts and guyots on the Nazca Plate, Pacific SE

Luis E. Lara

SERNAGEOMIN, Santiago, Chile (luis.lara@sernageomin.cl)

Seamounts and guyots are common features of the seafloor worldwide, although the lack of high resolution bathymetry precludes a precise counting of them. The latter is especially true for seamounts smaller than 1 km. Here we present an update of the count for the Nazca Plate integrating multibeam bathymetry from cruises to the global satellite bathymetry. Our finding is a discrepancy at 20% level, which is higher at depths >3000 m. Corrected guyot depths confirm the sinking curves predicted by thermal models but also show anomalies in regions with high buoyancy related to active sub-lithospheric plumes. In addition, recent cruises have imaged the presence of knolls in the outer-rise region, which extend beyond the aseismic ridges and could play a role in the subduction system. Fondecyt 1141303 and AUB150007 projects are acknowledged.