

Mars-like environments on Earth are used as a model to guide research related to the possible habitability in the Red Planet. This work aims to evaluate the geology, geomorphology and soil petrology of the Pampas de La Joya Desert in southern Peru, and describe the current research in the area. Using a multidisciplinary approach, we analyze the different Mars-like soils that compose the floor of the desert emphasizing some Mars-like features with respect to its acting geologic processes, the habitability potential under extreme aridity, and its suitability to sustain microorganisms or their remains. Finally, we briefly describe the current projects which use these Mars-like soils in Pampas de La Joya and their impact in Astrobiology, such as Potatoes on Mars, MARS-PJ, and KillaLab mission.

Keywords

Pampas de La Joya Desert, hyperaridity, Mars-like environments, Potatoes on Mars, KillaLab