

Unique clusters of Archaea in Salar de Huasco, an athalassohaline evaporitic basin of the Chilean Altiplano

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Analyses of clone libraries from water and sediments of different sites from Salar de Huasco, a high-altitude athalassohaline wetland in the Chilean Altiplano, revealed the presence of five unique clusters of uncultured Archaea that have not been previously reported or specifically assigned. These sequences were distantly related (83-96% sequence identity) to a limited number of other clone sequences and revealed no identity to cultured Archaea. The abundance of Archaea and Bacteria was estimated using qPCR and community composition was examined through the construction of clone libraries of archaeal 16S rRNA gene. Archaea were found to be dominant over Bacteria in sediments from two saline sites (sites H4: 6.31×10^4 and site H6: 1.37×10^4 ?S cm⁻¹) and in one of the water samples (freshwater from site H0: 607 ?S cm⁻¹). Euryarchaeotal sequences were more abundant than crenarchaeotal sequences. Many of the clone sequences (52%) were similar to uncultured archaeal groups found in marin