

Genetic and phenotypic diversity in 2000 years old maize (*Zea mays* L.) samples from the Tarapacá region, Atacama Desert, Chile

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The evolution of maize (*Zea mays* L.) is highly controversial given the discrepancies related to the phenotypic and genetic changes suffered by the species, the incidence of human groups and the times in which these changes occurred. Also, morphological and genetic traits of crops are difficult to evaluate in the absence of fossils macro-botanical remains. In contrast in the Tarapacá region (18°21' S), Atacama Desert of Chile, prehispanic settlements (ca. 2500-400 yr BP) displayed extensive maize agriculture. The presence of archaeological macro-botanical remains of maize provided a unique opportunity to study the evolution of this crop, covering a temporal sequence of at least 2000 years. Thus, in this study, we ask how the morph