PAIRED RADIOCARBON DATING ON HUMAN SAMPLES AND CAMELID FIBERS AND TEXTILES FROM NORTHERN CHILE: THE CASE OF PICA 8 (TARAPACA)

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Resumen

Pica 8 is a Late Intermediate Period (AD 900-1450) cemetery located in the Atacama Desert. Burials at the site present unexpectedly high variability in delta C-13 (-8 parts per thousand to -16 parts per thousand) and delta N-15 (10 parts per thousand to 24 parts per thousand) values in their skeletal tissues, implying highly diverse diets. There are two possible explanations for this variability: the first is diachronic change in diet while the second involves synchronic sociocultural distinctions. To distinguish between them a radiocarbon (C-14) dating program (n=23) was initiated. The presumed importance of marine foods adds the complication of a marine reservoir effect. To address this problem, paired C-14 dates were obtained on human bone and camelid textiles from nine graves. The results fall into two groups, one showing an average offset of 117 +/- 9 C-14 yr, and the other no statistically significant offsets. We conclude that the contribution of marine foods to bone collagen at Pica 8 was less than previously supposed. Other factors must be invoked to account for the unusually high human N-15 values at the site. Manuring crops with sea-bird guano emerges as a probable explanation. No relationship with chronology is seen implying the presence of considerable diversity in diets and hence lifeways within the Pica 8 community.

Palabras clave

Palabras clave de autor: Atacama Desert; marine reservoir effect; stable carbon and nitrogen isotopes
KeyWords Plus:NITROGEN ISOTOPIC COMPOSITION; RESERVOIR AGE; ATACAMA DESERT; MARINE; COAST; HOLOCENE; REGION; CARBON; PERU; BC

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