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Variability in stable isotopes (^{13}C, ^{15}N) of camelid bone collagen: Implication for Holocene Human Paleoecology

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Camelids, mostly guanacos (*Lama guanicoe*) are the more prominent big sized herbivorous in South America and one of the most significant resource in human diet during the pre industrial period. From an archaeological perspective, human diet reconstruction using stable isotopes on bone collagen are based mostly using average values of camelids stable isotopes. The present paper confirms the high variation in camelid bone collagen stable isotopes (C and N). Holocene North Patagonia camelids bone collagen data shows variation between -20‰ to -14‰ in $\delta^{13}C$ and between 3‰ and 12‰ in $\delta^{15}N$ (n= 75). Ecological difference between Monte and Patagonia deserts explain part of these variation. This mean that the macro regional average value on camelids ^{13}C and ^{15}N, including different eco-regions, could generate an inaccurate human isotopic diet reconstruction. A smaller spatial scale taking into account phitogeographic units is preferable in this kind of studies

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