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## Prehistoric sheep/goats husbandry in Xinjiang, China—Evidence from bone stable carbon and nitrogen isotopes

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Sheep and goats have been introduced into northwest China as important livestock for some four thousand years. The frequency of sheep/goats' bones in prehistoric archeological sites in Xinjiang can be a proof of their importance in people's life. This study focuses on food reconstruction of prehistoric sheep/goats across Xinjiang to illustrate whether there is a difference on sheep/goats husbandry. Bone samples from 11 sites were isotopically analyzed together with 4 sets of published data, 220 pairs of sheep/goats bone stable carbon and nitrogen isotopes in total from 15 sites across Xinjiang with time span of ca, 4000 cal BP to ca. 2000 cal BP were produced. 9 sites each with sample number no less than 10 were further studied. It revealed that generally sheep/goats from 4 oasis sedimentary farming societies have both higher  $^{13}\text{C}$  values and higher  $^{15}\text{N}$  values, although highly fluctuated. It is highly likely that  $\text{C}_4$  plants such as foxtail millet or common millet must have not been a stranger around their environment. As for their remarkably high  $^{15}\text{N}$  values, drought stress in arid environment may have been one reason, fertilized soil after long time relatively intensive human activity may have also contributed to this. In the meanwhile, sheep/goats from 5 pastoralism or transhumance societies have homogenous and more negative  $^{13}\text{C}$  values, most of which are lower than  $-18\text{‰}$ , meaning that there was barely no  $\text{C}_4$  plants in their diet. In contrast,  $^{15}\text{N}$  values of them are lower than that of farming societies as a whole but more scattered, seasonally different pastures with diversified  $^{15}\text{N}$  background could be the reason.