

## SENSING QUELCCAYA: PALEO-GLACIOLOGY AND PASTORALISM IN A RETREATING ANDEAN GLACIER

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### ABSTRACT

During most of the year, the grasslands that feed the herds of alpacas of nearly 100 families in Phinaya, a semi-nomadic pastoralist community in the Southern Andes of Perú, can only be irrigated by rivers that originate in the Quelccaya ice cap. As the largest tropical glacier in the world, and due to its location in a region climatologically sensitive to both the Pacific and Atlantic oceans, Quelccaya has also become a privileged site for climate science research. Ice cores obtained from Quelccaya are considered to be “the longest and highest resolution tropical ice core record to date” and, therefore, one of the most important pieces of evidence for scientific understanding of the last 2000 years of global climate history (Thompson et al. 2013). This paper presents an ethnographic exploration of the ways in which both Andean herders and one of the most influential paleo-glaciology research teams in the world -led by Lonnie Thompson from the Byrd Polar and Climate Research Center of the Ohio State University-, engage with the Quelccaya. By drawing on almost 15 months of accumulated fieldwork with herders in Phinaya, accompanying them on their interaction with alpacas (*vicugna paco*) and vicuñas (*vicugna vicugna*), and on my participation as a field assistant in three of Thompson’s most recent scientific expeditions to Quelccaya, this paper seeks to contribute to anthropological knowledge about the Anthropocene by providing new insights into the worlds that are emerging in an Andean community where climate change is materially present. After showing how pastoral activities not only play a central role in the organization, constitution and understanding of social life and the physical environment, but also in the way that the seasonal and cyclical irregularities that we know as climate are experienced in Phinaya, and discussing interesting ways in which the scientific study of ice cores obtained from the Quelccaya complicate the notion of *scale*, my results question the apparent universality of the notion of climate, scientifically understood as the ‘average’ weather, which is not easily compatible with a subjective, spatially bounded, normative, or total experience of the seasonal cycles, as it happens in Phinaya.

**Keywords:** Quelccaya, Tropical Glaciers, Pastoralism, Local Perceptions, Glacier Retreat