**Holocene Reconstruction of the North American Monsoon Using Pollen Data**

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Previous paleoclimate reconstructions of the North American Monsoon have primarily relied on upwelling and sea surface temperature proxy records, and the role of pollen data has been limited. This is in part due to a lack of sites with characteristics that result in well-preserved pollen grains, and in part due to the limits of pollen analysis imposed by its taxonomic resolution. With this study, we aim to reconstruct a hypothesized shift in the extent of the North American Monsoon during the mid-Holocene Epoch, using pollen data from sediment cores. A second objective of this study to demonstrate the usefulness of this paleoecological data as a proxy for seasonal precipitation patterns over time. We first identified a site in the Sierra San Pedro Mártir in northern Baja California, and obtained a sediment core (named “Palo Atravesado 2019”) which was subsampled and dated. Following processing, pollen grains of key taxa were counted in each subsample in order to create a “summer moisture index” to assess differences in summer and winter precipitation at the site. While much of the core has yet to be counted, preliminary results show taxa reflecting winter-dominant precipitation in the most recent depths of the core. If the core does record a shift in the North American Monsoon, we would expect a decrease in summer moisture dependent taxa around 6,000 years before present. If this pollen data reflects a decrease in summer moisture in northern Baja California during the mid-Holocene, it could support previous work that suggests the North American Monsoon transitioned from being driven by moisture from the tropical Pacific during the early Holocene to being driven by moisture from the Gulf of California in the mid-Holocene, which would have been accompanied by a narrowing in the Monsoon’s longitudinal extent. A strong seasonal precipitation signal from our pollen data would also indicate the potential usefulness of pollen analysis in reconstructing seasonal precipitation patterns in semi-arid regions.