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PRELIMINARY PALYNOLOGICAL ANALYSIS OF A CORE FROM THE LIA INTERVAL IN EASTERN ARGENTINA

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New palynological investigations of a core from the El Palmar National Park in the Pampas region of Argentina has revealed a highly variable climatic record from the Medieval Warm Period through the Little Ice Age, as well as significant anthropogenic influence in recent sediments. The El Palmar National Park, established in 1965, is part of the El Palmar River basin, Entre Ríos province, eastern Argentina. It contains the southernmost community of the *Syagrus yatay* palm grassland. The 80-cm soil and argillaceous fine sand core was palynologically studied with the aim of elucidating floristic changes in the last 400 years. Modern analogs and the nearest-living-relative method were utilized to interpret differences among the samples in terms of climatic changes. The basal core sample shows a higher diversity in angiosperm pollen, as well as spores from the epiphytic fern *Microgramma mortoniana* and pollen of *Syagrus yatay*, which together reflect the same composition of the modern palm area. Other samples, which contain abundant Poaceae, and the fern *Adiantopsis chlorophylla*, reflects herbaceous grassland areas. The non-pollen palynomorphs (NPPs) recorded in the three samples are bryophyte spores as well as 39 distinct fungal taxa, which allow the core to be sub-divided into three main assemblages. Lower in the core, the presence of fungal palynomorphs typical of degraded wood and abundant leaf-litter also indicate more humid conditions. Both pollen and fungal assemblages show a trend of increasingly dry habitats (grasses/shrub) upward, exemplified by the surficial sample. Rangefinder AMS dates indicate that the main more humid to the Little Ice Age (LIA), and supports the regional interpretation of the presence of humid-subtropical conditions from the end of the S. XVI up to the beginning of the S. XVIII. American colonization (after 1492 yr. cal. CE) is indicated by the occurrence of *Pinus* sp. in very low frequencies which increase substantially in the upper samples, recording the increased presence of timber plantations. We expect that detailed quantitative analysis of the whole core will reveal additional information about the minor but rapid climatic changes that occurred in the last 400 years.