

PALEOINDIAN SURVEY, From Page 1

more temperature grass- and shrub-land than today, with mixed deciduous forests bordering streams. This landscape would have provided diverse plants and animals for hunting and gathering by early people in an ever-changing environment. Unlike South Carolina, this landscape had more in common with the Plains Region of North America than the open boreal forests of our Atlantic Coast during the Ice Age. Similar to South Carolina, however, little is known about the coastal adaptations of these earliest cultures as the paleo-shoreline and coastal zone is now submerged over 60 miles (100 kilometers) east of the modern Atlantic coastline (Fig. 3). Including the mouth of the La Plata Basin, the subsequent land loss for Uruguay is over 25-percent of that available to early hunter-gatherers at 11,000 radiocarbon years before present (11,000 C-14 years B.P.: approximately -246 feet or -75 meters below mean sea level; Gillam et al. 2006).

A collections survey to further document site location and cultural component information throughout the region is currently underway. In the first week of survey, Rafael recorded 12 new sites and 21 Paleoindian artifacts, including 13 Fishtail/Fell's Cave points, five Pay Paso points, one bifacial tool, and two unifacial tools! These data will supplement 15 sites and five quarry sites previously on record and yield new data on the distribution and context of these early sites (Fig. 3). The data gathered in the survey are being integrated into a GIS database for analysis and modeling. The Geographic

Information Systems (GIS) includes environmental data from the Shuttle Radar Topography Mission (SRTM) 90-meter DEM, the GLOBE, HYDRO1K, and GTOPO30 1-kilometer resolution DEM datasets, the ETOPO2 4-kilometer resolution DEM data (ETOPO2 also includes sea floor bathymetry), and VMAP. Numerous derivative datasets (e.g. slope, solar potential, and hydrologic



Fig. 2: Pay Paso point recently recorded in Uruguay (ca. 9,500 C-14 years B.P.). (Photo by Rafael Suarez)

models) have been developed from the SRTM 90-m DEM to enable GIS analyses of site location.

Statistical analysis and cartographic modeling techniques are being used to further examine the settlement systems and ecological niches of early hunter-gatherers and to explore potential interaction and exchange networks throughout the region. For example, least-cost paths

analyses are being used to examine potential trail networks within and between drainages and to and from key resources, such as stone quarries (e.g. Anderson and Gillam 2000; Gillam and Tabarev 2004, 2006). Likewise, results of the current collections survey will provide a statistically valid sample of sites that will be used for predictive modeling of site location and the identification of ecological niches exploited by early hunter-gatherers (e.g. Banks et al. 2006). This research is yielding new insights into early hunter-gatherer adaptations of the region and will be used to direct future field research in Uruguay and neighboring regions of South America.

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