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On the cover: A shell midden in the coastal zone—Figure 2 from the article "New Approaches to the Study of Hunter-Gatherers of the North Coast of Santa Cruz (Argentina): The Use of Rockshelters."

HUMAN OCCUPATION OF THE NORTH PATAGONIAN COAST (SAN MATÍAS GULF)

CURRENT PERSPECTIVES

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The North Atlantic Patagonian Coast (San Matías Gulf [SMG], Río Negro, Argentina) is known for its archaeological richness covering some 380 km of the littoral (Figure 1). This region shows evidence of early human adaptation to marine resource exploitation. This was the focus of early studies undertaken by Dr. Bórmida in 1961 and 1966, within the framework of the Vienna Culture-Historical School. These studies described mainly surface lithic material; these were then employed in defining “industries” and subsequently used to characterize the prehistoric groups in the area across successive phases over a period of some 6,000 years.

Nevertheless, these pioneering archaeological studies along the Río Negro coast were discontinued in the following four decades. This then created an information vacuum concerning the archaeology of this region that lasted until 2004. In that year, we undertook new studies into the area, focusing on several research strands: distributional and lithic studies, paleoenvironmental, isotope, and zooarchaeological analyses, and the creation of a firm chronological framework. We summarize these results and advances below, which changed the traditional prehistoric view of the guanaco hunter-gatherer in continental Patagonia, providing sufficient evidence to support the presence of land-shellfisher-gatherer groups in this coastal sector at least during the end of the middle Holocene.

Present-Day Archaeological Research in the San Matías Gulf

The first stage of this new research sought to characterize the coastal space in the region, thereby creating a hierarchy of littoral habitats. This study revealed that there were geo-

logical and structural differences between the northern and western coasts of the SMG. These differences conditioned resource distribution and the regional structure of the archaeological record (Favier and Borella 2011). The use of a distributional method made possible a first regional-scale approximation of the archaeological database. This permitted us to evaluate the density and distribution of archaeological material. On this basis, we selected sites for excavations, thereby obtaining cultural information and datable material.

These distributional models demonstrated that the archaeological signal was unequal across the length of the littoral, with the northern coast being archaeologically denser than the western one. We believe that this varied archaeological signal is related to the presence and accessibility of exploitable resources in the past, a presence and accessibility underscored by the topographical and geological differences between these coasts. Additionally, isotope analysis on human remains detected changes in paleodiets through time. These paleodiets served to indicate the different forms of consumption of available resources. For instance, an initial temporal block (Middle to early Late Holocene; 4800–2200 years B.P.) of intensive marine resource use could be detected in the archaeofaunal (primarily fish, otariid, mollusk, and marine bird remains) and isotopic (predominantly marine diets) databases (Borella and Cruz 2012; Favier et al. 2009; Favier and Scartascini 2012). Additional evidence suggests fishing activities on the basis of the association between otoliths and lithic weights found on ancient marine terraces dating from 6000 B.P. (Favier and Scartascini 2012). In regard to the Late Holocene, the second temporal block, analysis of faunal remains recovered from shell middens points to the joint exploitation of marine vertebrates such as fish, otariids (*Arctocephalus australis* and *Otaria flavescens*),



Figure 1. Study area.

and marine birds, also including the exploitation of small terrestrial vertebrates (tinamids, rodents, and dasypodidae), guanaco (*Lama guanicoe*), and ñandú (*Pterocnemia pennata*) remains (Borella et al. 2011). These data posit a process of diversification in the exploited fauna that is also reflected in the human paleodiets, seen in the emergence of mixed or continental diets during the Late Holocene up to 400 B.P. (Favier et al. 2009).

Regional lithic technology on both coasts is dominated by a low-energy investment in the manufacture of artifacts. During the early period there is a preponderance of fishing technologies (fishing lines and net weights), as well as other more generalized or poorly specialized tools. An analysis of the lithic assemblages suggests that there are temporal differences in the make-up of toolkits linked to changes in the use of space, mobility, and diet (Figure 2). There is a predominant use of local raw material (fine-grained silica and volcanic rock) (Cardillo and Scartascini 2011). Along the western coast, obsidian was also frequently present from sources up to 500 km inland. The presence of obsidian was perhaps related to patterns of mobility or strategies of indirect sourcing. In relation to this, it is interesting to note that previous studies did not detect economic strategies in the use of local-

ly abundant raw material (Cardillo and Scartascini 2011; Favier et al. 2009).

Currently our research centers on three archaeological areas along the western coast of the SMG (Figure 3), including a site with the only rock art (petroglyphs) recorded to date from the Patagonian coastal area (Figure 4). These petroglyphs are in close association with shell middens dated to ca. 3000 B.P.

The Archaeology of North Patagonia from a Regional Perspective

In Chubut, the region immediately to the south of North Patagonia, there are data on the use of marine resources from the Middle Holocene onward at different coastal sites. These sites showed evidence of mollusks, sea-lions, and marine birds, with little to no remains of fish. Meanwhile, the isotope evidence points to the predominance of a mixed diet (Gómez 2007). This consumption of high-trophic-level marine resources links well with archaeofaunal data showing a higher intensity consumption of pinnipeds during the last phase of the Late Holocene (1000 to 400 B.P.) (Gómez 2007:158).



Figure 2. Shell tool (above) and projectile points (below).

The differences with the North Patagonian coast (SMG, Río Negro) gravitate around two topics, the first of which is the existence of temporal tendencies in this area. This includes, based on isotope and archaeofaunal evidence, an early period of intensive use (Favier et al. 2009). Secondly, fishing appears to have been very important along the North Patagonian coast. The evidence for this lies in the copious presence of fish remains in the shell middens sampled and the discovery of hundreds of otoliths on the surface of certain areas from 6000 B.P. onward (Favier and Scartascini 2012). This situation is very different from that of the rest of the Atlantic coast of continental Patagonia.

In this sense, our research will not only supply data on the number of exploited species and their means of capture in an area for which little information exists, but will also provide valuable insights into the early peopling of the Patagonian littoral and coastal adaptations. The 7400 B.P. date from

Arroyo Verde Site 1 (studied by Gómez)—where there is evidence for marine resource use in this early site of the Middle Holocene—invites us to explore the potential for an early human occupation of this portion of the Patagonian coast. Similarly, the results from our current research will permit us to discuss whether this early presence of the exploitation of marine resources in this sector can be considered as having emerged prior to the development of early fishing technologies and the intensive use of marine resources along the northern coast of the SMG.

Our research into the SMG coast constitutes a unique case regarding the intensive use of marine resources along the Atlantic coast of continental Patagonia, a conclusion that is supported by isotope, artifact, and archaeofaunal evidence. The importance of our studies lies in the contribution it makes toward understanding the early human occupation of an understudied coastal sector and the role that marine



Figure 3. Western coast sites of SMG.

resources played from the Middle Holocene onward, allowing us to discuss in greater detail the changes in littoral adaptations and the exploitation of marine resources in North Patagonia through time.

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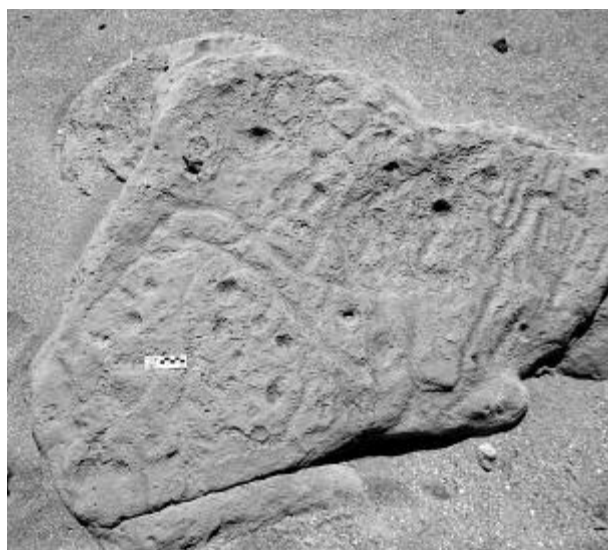


Figure 4. Petroglyphs, west coast of SMG (Punta Odriozola).