

THE FIRST AMERICANS, like the dinosaurs, the origin of life, and human evolution, is a subject that fascinates both scientists and the general public.

The peopling of the Americas is extraordinarily rich in areas of interest—humans coping with changes in their environment at the end of the Ice Age; the remarkable courage and perseverance of human colonizers undaunted by unfamiliar terrain and wildlife; the enviable versatility and ingenuity of toolmakers, who learned to make implements of stone for every purpose, from everyday chores to killing game the size of giant ground sloths, mammoths, and mastodons.

As we enlarge our knowledge, our fascination with the First Americans grows ever more intense. That is why the editors are pleased to present this special issue of *Current Research in the Pleistocene*, which illuminates the earliest existence of humans on the continent of South America. Here 98 Latin American scientists, from México to Argentina, apply their scholarship in Quaternary science, archaeology, and anthropology to answer—at least in part—such seminal questions about this complex feat of colonizing as, Who were the first inhabitants of the southern continent? When did they arrive? Which routes did they follow from their places of origin? How long did it take to complete this task?

After a century of research, our fascination is more acute than ever. We are encouraged to pursue our search for knowledge by this thought of Florentino Ameghino, the scientist whose discovery of fossils on the Argentine Pampas at the turn of the century rivals the accomplishments of his North American coevals:

“Por nuestra parte, no vamos a hacer más que descorrer una punta del tupido velo que encubre la pasada existencia del hombre Americano. Descorrerlo por completo está reservado al esfuerzo de muchos.”

[From our side, we will not do more than pull back an extreme of the veil that covers the history of American man's existence. Uncovered it is reserved entirely to the efforts of many of us.]



 **SPECIAL EDITION**
Current Research in the Pleistocene

SOUTHBOUND
Late Pleistocene Peopling
of Latin America

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general are highly fragmented, measure more than 3 cm, and are poorly preserved. Remains from level V are fragile and bear manganese stains. Those from level Va are slightly better preserved and show less presence of manganese, even though they are clearly less well preserved than those belonging to levels 1, 2, and the upper part of 3.

The number of identified specimens (NISP) calculated for 32 mammals (excepting teeth, dermal bones, and antlers) in Table 2 shows that the most common species are *Hippocamelus* (huemul, 34.37%) and indeterminate deer (larger than huemul, 21.87%), followed by cf. *Canis* (extinct canid, 15.62%), *Lama* (guanaco, 12.5%), *Lycalopex* (red fox, 6.25%) and *Lagidium* (vizcachita, 6.25%), and *Chaetophractus* (armadillo, 3.12%). The skeletal units belonging to Cervidae (antler fragments, vertebrae, metapodials, and autopodials), *Hippocamelus* (autopodial and metapodial), *Canis* (metapodial, autopodial and mandible), *Lycalopex* (forelimb), and *Lagidium* (forelimb) belong to the same individual in each case, as proved by reassembling fragments and refitting bones. These results suggest a sample reduced in time and space, perhaps collected over just a few periods of settlement. Mylodontinae are present mainly as dermal bones, with some fragmented bones and teeth. The rest of the faunal assemblage is highly fragmented and consists of a wide range of taxonomic categories and size; the predominant group corresponds in size to *Lama*-*Hippocamelus*-Cervidae (the three taxa with the highest minimum number of individuals (MNI)). Bird, fish, and freshwater mollusk (*Diplodon*) remains are also present, although poorly preserved.

The bones belonging to the majority of the species bear cutmarks and anthropic fractures; we also noted, in the case of Mylodontidae dermal bones, a particular pattern of burning that suggests human origin. We infer from the remains that the human occupants enjoyed an ample diet derived from different types of resources as well as different strategies to obtain them, including hunting, fishing, and gathering (plants included).

El Trebol rockshelter bears witness to the early settlement of an Andean forest-lake environment in northern Patagonia during the Pleistocene-Holocene transition, perhaps by small groups and for short periods of time. They exploited a wide variety of mammals, both extinct and extant today, including megafauna, fish, birds and mollusks. Stone tools were manufactured on local and non-local materials. The latter imply long-distance travel or trade contacts.

Graciela Montero helped us with the English translation.

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Formal Variability in Fishtail Points of the Amigo Oeste Archaeological Site, Somuncurá Plateau (Río Negro, Argentina)

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►Keywords: Fishtail points, Pleistocene/Holocene, north Patagonia

Because Fishtail points (FTP) are often associated with chronologies ca. 9000–11,500 RCYBP, these artifacts are good indicators of human populations during the Pleistocene-Holocene transition in South America. Furthermore, FTPs have a wide geographical distribution and are found in distant and very different contexts, from Magallanes basin (southernmost America) to southern Mexico (García Bárcena 1980; Miotti 1995; Nami 2010; Politis 1991).

The state of research in the Southern Cone shows that these artifacts are usually distributed as isolated artifacts or in assemblages consisting of few individuals, are found in a wide variety of environments (arid, tropical, temperate, etc.) and different landforms such as paleolakes, rockshelters, riversides, coastlines, and mountains.

In Patagonia, archaeological sites with associated FTPs are located in the Deseado Massif, the Magellan basin, and Nueva Esperanza areas, while in the Argentine Pampas they are located in the Interserrana area and Tandilia range. Until the beginning of research in the Somuncurá Plateau (Río Negro Province) a short time ago (Miotti et al. 2004, 2010), the intermediate region between these two areas posed a gap in FTP records.

This contribution is part of a study about the technologies of the first Americans, which interprets technology as social processes that combine knowledge, learning, decisions, actions, and meanings (Lemonnier 1992). In this article we present the techno-morphological

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characterization of the FTP assemblage from Amigo Oeste archaeological site, based on the description of formal attributes and other technological aspects of such artifacts.

Los Dos Amigos Archaeological Locality

The artifacts discussed here were found in the Los Dos Amigos archaeological locality (LDA), which is located around the homonymous landform formed by two bedrock hills, located at the base of the Arroyo Talagapa–Laguna de Las Vacas basin on the Somuncurá Plateau (Figure 1). In fieldwork carried out we have documented 116 FTP, 112 of them from the Amigo Oeste archaeological site (AW), the western hill at LDA. This topographical feature dominates the lower Arroyo Talagapa basin and surrounding watershed. The assemblage was collected from the AW hilltop ($n=88$), slopes ($n=22$), and basaltic walls ($n=2$) leading up to the hilltop, while the rest come from other nearby sites LDA-5 ($n=2$), LDA-AB ($n=1$), and Tapera de Isidoro ($n=1$).

Amigo Oeste is characterized by an abundance of surficial lithic material. There we have

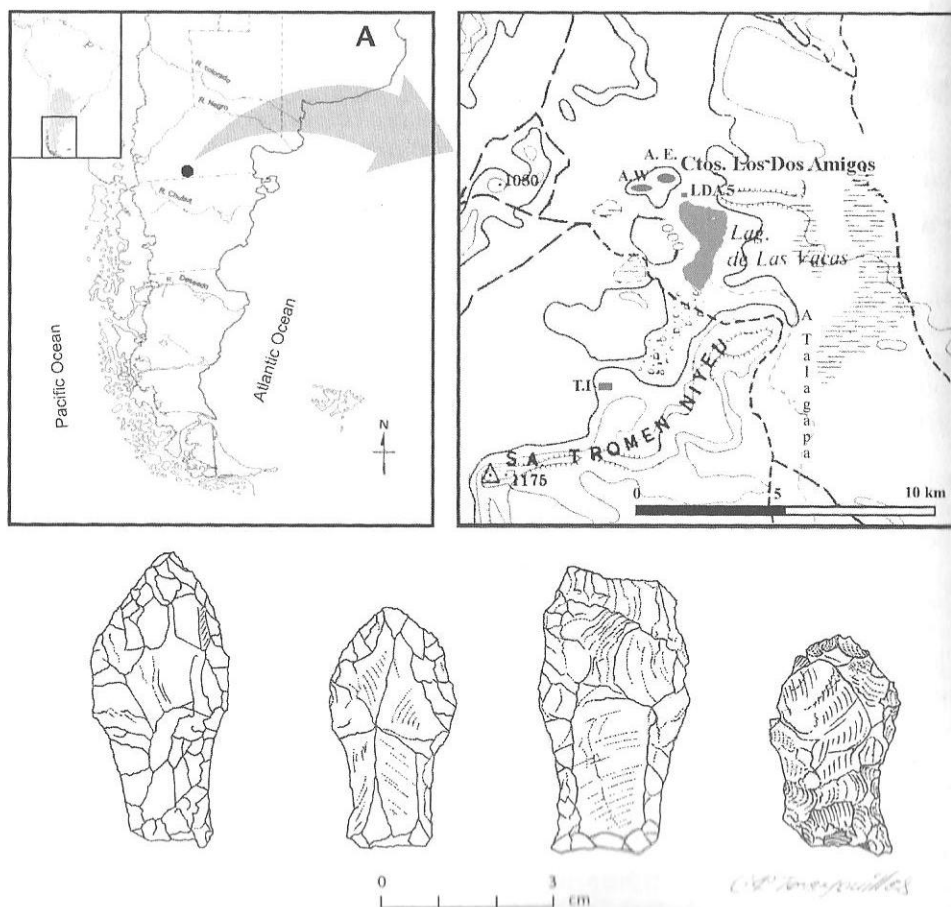


Figure 1. A, B, research area referred to in text; C, Fishtail points from Amigo Oeste.

recorded about 2250 artifacts (cores, debitage, and tools), including FTPs, which constitute 30% of the retouched artifacts. In this respect, AW is the largest and most varied FTP context in Patagonia.

The Amigo Oeste Assemblage

Most of the AW assemblage of FTPs is fractured (87.1%); only 15 items are complete (12.9%). Stems are the more represented portion (62.9%).

Raw materials on which FTPs were made are chalcedony (73.3%), followed by colored chert (15.5%), obsidian (6.9%), and quartz (4.3%). The source of chalcedony could be the Aneken site, a quarry-workshop located 15 km west of AW. At Aneken, brown chert has been found in outcrops, veins, and pebbles in little streams of the upper basin of Arroyo Talagapa. Moreover, obsidian geochemical studies suggest the possible existence of regional sources for this raw material (Miotti et al., this volume).

Local sources of the remaining varieties of raw materials such as pink and red chert types and quartz have not been identified. These raw materials have been recorded at other archaeological sites of the plateau but in much lower quantities than at AW.

The formal analysis of the Amigo Oeste FTP assemblage yielded ranges of variation and medians in size shown in Figure 2. Noteworthy is the range of variation in stem length, which is greater than the variation in other variables. This may reflect the high incidence of this part of the point in the total assemblage, or it may signify great variability in the morphology of the stems.

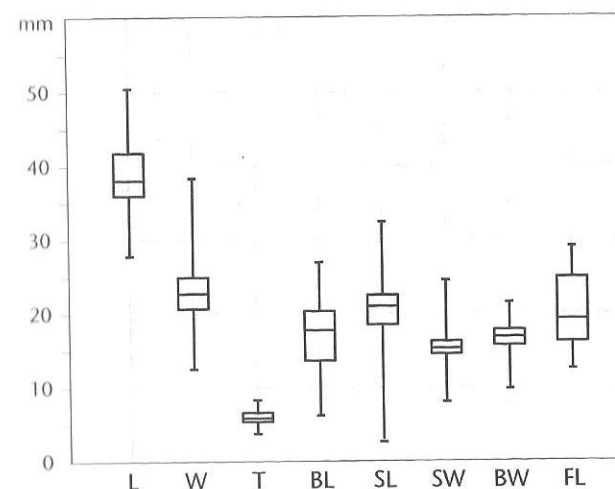


Figure 2. Dimensions in box plots for L, length; W, width; T, thickness; BL, blade length; SL, stem length; SW, stem width; BW, basal width; and FL, fluting length.

Among stem forms, straight bases (42.72%) and attenuated concave bases (41.75%) are most common. Correlation between the basal width and stem length shows low intensity but high significance ($r = 0.2918$; $p = 0.0225$). The intensity of the correlation is higher between stem width and base width, with a very high significance ($r = 0.4906$; $p = 0.00002$).

Fluting appears in high proportions (60%) on either one (36.28%) or both faces (23.89%). Fluting presence is neither directly related to any other variable, nor with the degree of completion of pieces. This suggests that fluting was an optional means to solve

hafting. Another feature observed is that the final shaping of bases was made through fine retouching (see Nami 2010 for similar remarks related to other FTP assemblages).

Conclusions

The FTP data set from Amigo Oeste yields the following conclusions.

1. Raw materials are predominantly from local or regional sources, and all are of very good quality. It is noteworthy that raw materials with a long trajectory, such as red chert and quartz crystal, are frequently present at early sites and have been interpreted as socially important or symbolic goods (Nami 2009).
2. Dimensions of the analyzed specimens show highly significant, moderately positive correlations between different parts of the stems, reflecting a degree of uniformity associated with the FTP hafting process.
3. The AW sample exhibits a high incidence of fluting, which seems to be an optional technical step related to basal thinning.
4. Retouch is the most common technique used to shape the concave base, regardless of the presence or degree of fluting.
5. The high incidence of stems recovered supports the idea that the site could have functioned as a workplace for replacing points. Based on the assemblage of flakes from AW, we propose that points were made and edges reactivated.

These observations become relevant when they recur in other FTP assemblages such as Fell (Bird 1988), La China, El Sombrero (Flegenheimer 2004), and El Inga (Mayer-Oakes 1986). This pervasiveness betokens a technological conception, constellation of knowledge, techniques, and tools shared by human groups on a hemicontinental scale.

Finally, this work was based on a specific assemblage of tools. Future efforts should be made to study techniques and sequences of manufacturing FTPs as well as other artifacts found in early contexts. They should focus especially on comparing FTP assemblages from different regions to enlarge our knowledge of which aspects of technology were shared and which were confined to local communities.

We thank the support of Rocío Blanco, Natalia Carden, Sebastián Carreño, Lucía Magnin, Laura Marchionni, and Bruno Mosquera. We also acknowledge the Agencia Cultura Río Negro, CODEMA and Atilio Namuncurá. This research is financially supported by ANPCyT-PICT 1552, PI N550-UNLP.

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