Chapter 21

Rethinking Early Objects and Landscapes in the Southern Cone: Fishtail-Point Concentrations in the Pampas and Northern Patagonia

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ABSTRACT

According to our analysis Cerro El Sombrero and Cerro Amigo Oeste exhibit similar features regarding objects and landscapes. Both hilltops were chosen for their panoramic view and as spaces to maintain hunting equipment; at both, broken fishtail projectile points as well as other artifacts, including discoidal stones and small spheres, were discarded. Based on the assumption that past selections of objects and landscape, were socially significant, we propose that people living in Patagonia and the Pampas during the Pleistocene-Holocene transition shared cultural meanings and had more in common than technical knowledge and design.

KEYWORDS: Southern Cone, Fishtail projectile points, Social landscape

"The nomadic perspective is a perspective of coexistence, never of distance."

–John Berger 2004, *El tamaño de una bolsa*, translated by the authors.

Introduction

The Southern Cone exhibits a variety of early contexts with unique features, including such isolated sites as Monte Verde and groups of related sites such as those found in the Puna region. Yet the single feature with most widespread geographical distribution is the Fishtail or Fell 1 projectile point (FPP). It is found in a variety of contexts and environments throughout South America, especially in the Southern Cone—the biogeographical region south of 18° south latitude that comprises territory belonging to Argentina, Chile, Uruguay, and southern Brazil and Bolivia (de la Sota 1973) (Figure 21.1). The morphology and technical features of FPPs, such as fluting, are common to different regions and appear in studies of exchange, social identity, and migration routes. This presentation updates information and focuses on two localities with concentrations of FPPs, one in the Pampas and the other in Patagonia (Argentina).

Sites Cerro El Sombrero and Cerro Amigo Oeste are similar in two respects, the choice of a hilltop location and the kinds of objects discarded by occupants. At both sites broken FPPs were discarded as well as other artifacts, including discoidal stones and small spheres. According to several authors, the

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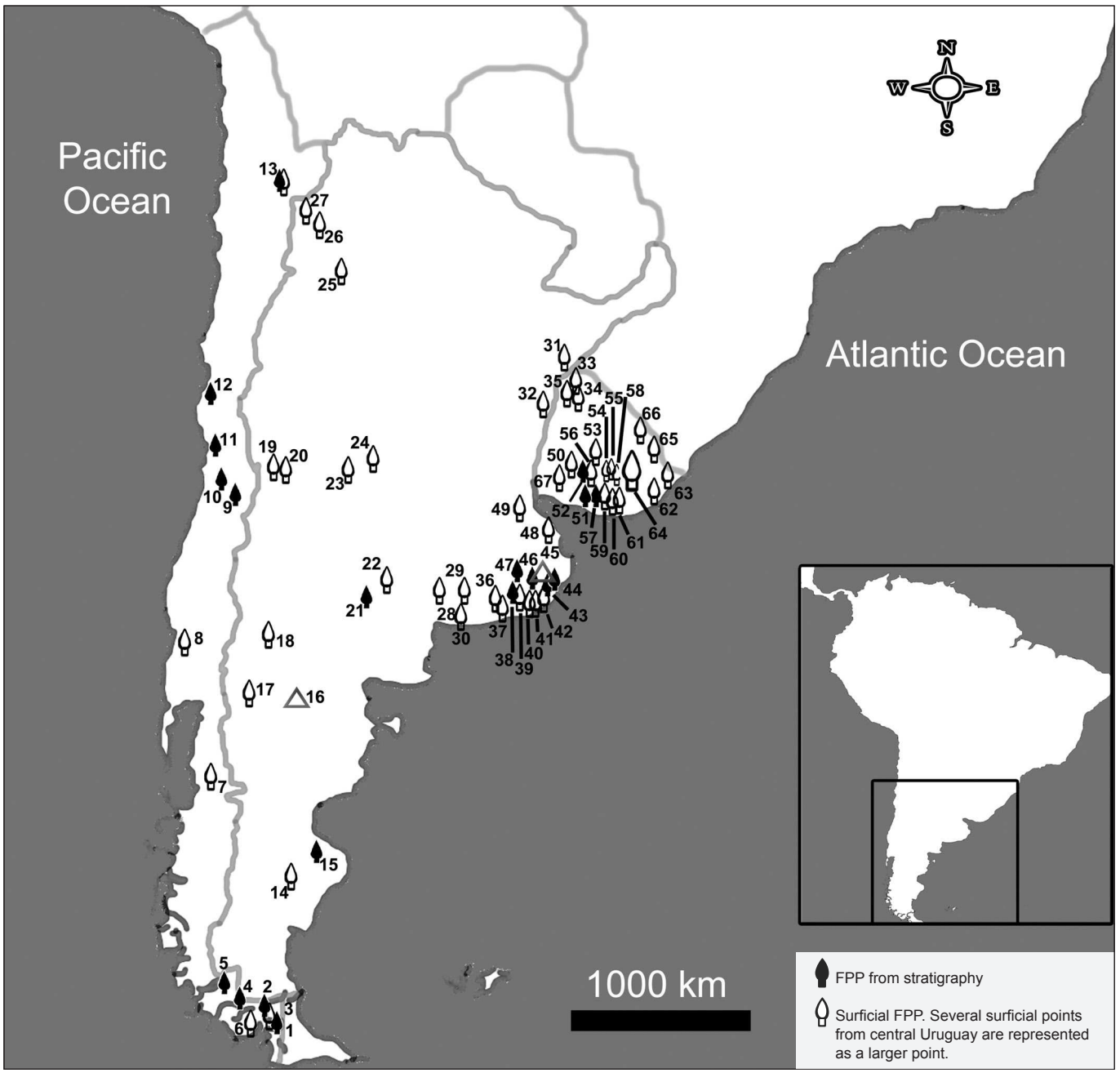

Figure 21.1 Map of Southern Cone, showing Cerro El Sombrero (45), Cerro Amigo Oeste (16), and sites with fishtail projectile points. See Table 12.1 for site names.

kinds of lithic objects artisans fashioned and the environmental setting chosen for occupations appear to have served social functions and to have played a significant role in communicating among people (Boivin and Owoc 2004; Soffer and Praslov 1993). We therefore propose that people living in both regions in the Southern Cone during the Pleistocene-Holocene transition shared common social values and therefore had more in common than just technological knowledge and design.

In this paper we deal with an area that extends from the Pacific to the Atlantic coasts and includes extraordinary diverse environments in Chile, Argentina and Uruguay. In this vast region several sites with early dates have been recognized and a growing number of diagnostic artifacts have been found as surface remains. A few of these sites are distinguished by unique archaeological records, but most exhibit recurring features that imply a common lifestyle and subsistence strategy.

Among the unique records, Monte Verde is the most exhaustively studied and published early site in the region (Dillehay 1997). Among the sites with shared traits, those with FPPs are the most conspicuous. Although these are found throughout most of the Southern Cone, other areas, such as the Puna, have other archaeological traditions dating to early times. In terms of early faunal assemblages, most sites exhibit evidence

of similar specimens of autochthonous megamamals assigned to the Lujanense fauna (ground sloths, armadillos, native ungulates such as *Macrauchenia patachonica* and *Toxodon* sp.), with a few migrant mammals (mastodonts, horses, and camelids) (Alberdi et al. 1995). Faunal evidence of human exploitation reflects important regional variations (Borrero 2008; Martínez and Gutiérrez 2004; Miotti and Salemme 1999).

In this paper we will refer to current knowledge about people who made FPPs and their landscape. The widespread distribution of FPPs and its implications regarding the people who produced them have been subjects of interest since the 1970s (Bird 1969). Politis and Gnecco (2004) noted that models linking presumably similar sites separated by thousands of kilometers have brought more confusion than clarity; moreover, speculations based on alleged morphological similarities of isolated traits have not been supported by contextual information. In this report we compare two sites separated by a great distance, in the Argentinian Patagonia and Pampas, based on contextual information obtained during previous studies carried out with a micro-regional perspective. Previous studies on long-distance relationships between early occupations have been based on toolstone studies and debitage analysis (Flegenheimer et al. 2003; Flegenheimer and Cattáneo 2013). Here our analysis extrapolates from a small scale to a larger one, which is relevant to the early peopling of the continent.

Regional Setting

The early archaeology of the Southern Cone is mostly known from the sites located in the Patagonian and Pampean environments where hunter-gatherer societies lived until the Spanish Conquest. Yet the region also comprises the northern portions inhabited in later times by peoples with Andean or tropical ways of life. The Pampa and Patagonia are major, distinct, natural physiographic regions (Cabrera 1976; Ringuelet 1961). The Pampas plains of Argentina, Uruguay, and southern Brazil, located in the eastern part of the Southern Cone, nowadays are extensive grasslands with rich soils, low elevations, and a temperate climate with regional variations. These variations distinguish the *Campos* of Uruguay and Brazil from the Pampas of Argentina (Politis 2008). Patagonia includes an extensive territory located in the southern portion of South America with a narrow band of forest near the Andean range and an extended dry steppe to the east (Borrero 2008; Salemme and Miotti 2008). The latter is a high semi-arid plateau, where cold winds blow constantly, soils are shallow and infertile, and trees are scarce or absent (Miotti and Salemme 1999). These territories have appeared as a whole or in part in several syntheses during the last decade (Borrero 2008; Dillehay 2008; Miotti 2003; Politis 2008; Suárez 2010; Borrero and Miotti 2007; Miotti and Salemme 2003; Politis and Gnecco 2004; Salemme and Miotti 2008; Goebel et al. 2008; Jackson et al. 2004; Prates et al. 2010).

Research History

Although the Southern Cone was seminal to the first discussions about the early peopling of the Americas (Podgorny 2012), its prominence in current mainstream archaeology results from the excavation of such stratified sites as Fell's Cave (Bird 1988), Los Toldos (Cardich et al. 1973), and Tagua Tagua (Montané 1968; Núñez et al. 1994). As stated elsewhere (Borrero and Miotti 2007), studies on the subject have flourished since the 1980s as part of the great interest in hunter-gatherer research in the area. One of the sites excavated, Monte Verde, became the focus of intense debate because it challenged well-established ideas about the timing, settlement pattern, and management of resources during the early peopling of the Americas (Dillehay 1997). Currently an important number of researchers with different backgrounds and perspectives are working on sites with early dates and on more theoretical issues related to the peopling of the continent. Recent syntheses mention around 70 sites with dates older than 9000 ^{14}C yr BP in the Southern Cone (Borrero and Miotti 2007; Prates et al. 2010). These sites are located in most of the territory covered in this report except in the eastern tropical forests, where their absence probably corresponds to the scarcity of research in the area. Many of the known sites are clustered in certain areas, for example, southern Chile, the Patagonian plateau, or the eastern Pampas. Uruguay, known for its large collection of surface FPPs, for a long time has enjoyed a special distinction in the Southern Cone (Nami 2007; Schobinger 1973) (Table 21.1).

Current Research

The following paragraphs discuss issues currently being investigated in Southern-Cone archaeology, to serve as a context for our case studies. We cite a few examples in each case; a complete synthesis is beyond the scope of this paper.

The antiquity of occupations is intensely debated. The results from paleomagnetic, oxidizable carbon ratio, and radiocarbon-dating analyses on organic-rich sediment samples (Nami 2008; Messineo and Politis 2009; Johnson et al. 2012) have, in some cases, been disputed both at a site-specific scale and on a broader scale as they relate to the peopling process (for example, Borrero 2008; Politis 2008; Steele and Politis 2009). In general, a pattern emerges with few pre-11,000 ^{14}C yr BP sites and higher concentration of sites with more recent dates. Now this pattern is being studied statistically and calibrations for dates are being re-created (Prates et al. 2010). Moreover, the earliest dates have sparked significant debate and some are still not widely accepted (Borrero 2008).

Migration routes along the Pacific Rim of the Andean cordillera and Atlantic coast have been discussed, and inland movements along the rivers have been proposed (Dillehay 2009; Miotti 2006; Núñez et al. 2005). Recently, theoretical models, some of them applying GIS, have been published (Lanata 2011; Miotti and Magnin 2012).

The peopling process is an integral part of a model that proposes an exploration phase and a colonizing phase, based on the intensity of land use and expected material culture (Borrero 1994–95). This proposal is being widely tested, and a number of specific assemblages have been assessed and

Table 21.1 Comparative information from Cerro El Sombrero Cima and Cerro Amigo Oeste.

Site (see Figure 12.1)	No. FPPs	Date	Reference
Chile			
1 Tres Arroyos	2	11,880 ± 250–10,130±21 (10 dates)	Massone 2003
2 Pali Aike	1	8639 ± 450	Bird 1988
3 Laguna Iturbe, Pali Aike	1	Surficial	Jackson et al.2004
4 Fell's Cave	14	10,080 ± 160–11,170 ± 170 (3 dates)	Bird 1988
5 Cueva del Medio	2	11,120 ± 130–9595 ± 115 (17 dates +1 outlier)	Nami and Nakamura 1995
6 Magallania, Ancud Museum	1	Surficial	Bahamondes and Jackson 2006
7 Aysen; Cerro Galera	1	Surficial	Bate 1982
8 Temuco	1	Surficial	Politis 1991
9 Santa Inés	1	No date	Jackson et al. 2004
10 Tagua Tagua 2	3	10,120 ± 130–9710 ± 90 (3 dates)	Núñez et al. 1994
11 Valiente; Q. Naranjo	2	No date	Méndez et al. 2010
12 Santa Julia		11,060 ± 80–11,090 ± 80	Méndez et al. 2007
13 Salar de Punta Negra	1	(Point is surficial) 9450 ± 50–10,470 ± 50 (7 dates)	Nuñez et al. 2005
Argentina			
14 Los Toldos Cave 2	2?	No date	Bird 1970; Aguerre 1979.
14 Los Toldos Cave 3	1?	ca. 11,000– 8750 ± 480	Cardich 1977; Aguerre 1979
15 AEP-1, Piedra Museo	2	12,890 ± 90–9230 ± 105 (8 dates)	Miotti and Salemme 2005
16 Amigo Oeste	112	Surficial	Miotti and Terranova 2010, 2011; Miotti et al 2011
17 Ao. Corral 2	1	ca. 10,020 ± 96	Arias et al. 2010
18 Piedra del Águila, Limay	1	Surficial	Schobinger 1973
19 Ranquil Norte	1	Surficial	Rivero and Berberián 2008
20 La Crucesita	1	Surficial	Schobinger 1973
21 Tapera Moreira	1	No associated date	Berón 2004
22 Bajo del Carmel	1	Surficial	Berón and Carrera Aizpitarte 2012
23 Estancia La Suiza 1	2	Surficial	Laguens et al 2007
24 Villa del Dique, Río Tercero	2	Surficial	Schobinger 1973
25 El Bolsón, Catamarca	1	Surficial	Kulemeyer et al. 2012
26 Cobres	1	Surficial	Patané Araoz 2012
27 Antofalla	1	Surficial	Grosjean et al 2005
28 Río Sauce Chico	1	Surficial	Flegenheimer 1980
29 Ibarra	1	Surficial	Flegenheimer and Bayón 1996
30 Monte Hermoso	1	Surficial	Flegenheimer and Bayón 1996
31 Santa Lucía, Monte Caseros	3	Surficial	Mujica 1995, Nami 2007,Rivero and Berberián 2008
32 Federación, Uruguay Medio	1	Surficial	Capeletti 2011
36 San Cayetano	1	Surficial	Politis 1991
37 Los Ángeles	2	Surficial	Flegenheimer and Bayón 1996
38 Paso Otero 5	2	10,440 ± 100–9560 ± 50 (3 dates)	Martínez and Gutiérrez 2011
39 La Querencia	1	Surficial	Flegenheimer and Bayón 1996
40 Ao. Carolina y Bellamar 3	1	Surficial	Flegenheimer and Bayón 1996; Bonomo 2005
41 Ao. Ballenera	1	Surficial	Flegenheimer and Bayón 1996
42 Miramar	1	Surficial	Flegenheimer and Bayón 1996

contrasted with the expectations (Borrero and Franco 1997; Civalero and Franco 2003; Martínez and Gutiérrez 2011; Cortegoso et al. 2012). Other proposals consider peopling, not as a process, but rather as a diaspora that created social times and places (Laguens 2009). The tempo of human dispersal is likewise a subject of contention, with some authors favoring a slow mode of human advance (Miotti 2006; Politis 2008; Borrero and Martin 2012; Miotti and Salemme 2004) and others a relatively fast one (Lanata 2011).

Interdisciplinary research is abundant in early sites in the Southern Cone. Teams integrate geologists, palynologists, and paleontologists with archaeologists and often

Table 21.1 Cont'd.

Site (see Figure 12.1)	No. FPPs	Date	Reference
43 La Amalia 2	1	10,425 ± 75	Mazzanti 2003
44 Alero Los Pinos	1	10,415 ± 70–9570 ± 150 (4 dates + 1 outlier)	Mazzanti 2003
45 Co. El Sombrero A1	2	10,270 ± 85–10,725 ± 90 (4 dates +1 outlier)	Flegenheimer 2004
45 Co El Sombrero Cima Col. Área Ay A	90	Surficial and no date	
Col. G.P. Noseda Museum	32	Surficial	
Col. D. Arce Museum	6	Surficial	
46 La China 1	1	10,525 ± 75–10,804 ± 75 (5 dates)	Flegenheimer 2004
46 La China 2	2	11,150 ± 135–10,560 ± 75	Flegenheimer 2004
47 El Picadero, La Numancia	1	No associated date	Colombo and Flegenheimer 2011
48 Ao. Giménez	1	Surficial	Ameghino 1915
49 Plaza Don Torcuato	1	Surficial	Nami 2007
Uruguay			
33 Salto Grande	1	Surficial	Bosch et al. 1980
34 Ao. Juan Santos, Paysandú	1	Surficial	Bosch et al. 1980
35 Los Molles	1	Surficial	Nami 2007
50 Baigorria	1	Surficial	Bosch et al. 1980
51 Ao. Pintos, Flores	1	No date	Bosch et al. 1980
52 Minas de Callorda	2	1 surficial Level dated at 10,000–11,000	Nami 2007
53 Collares, Rincón de Bonete	1	Surface	Nami 2009
54 Ao. Cacique, Rincón de Bonete	3	Surficial	Nami 2007
55 Lago de Rincón del Bonete	1	Surficial	Bosch et al. 1980
56 Cañada La Pinta	1	Surficial	Bosch et al. 1980
57 Urupez	2	10,690 ± 80–11,690 ± 60	Meneghin 2011
58 Paso de la Cruz; Durazno	1	Surficial	Bosch et al. 1980
59 Cerro de los Burros	1	Surficial	Meneghin 2011
60 Paraje Tapia	1	Surficial	Bosch et al. 1980
61 Laguna Blanca	1	Surficial	Bosch et al. 1980
62 Valizas	3	Surficial	Bosch et al. 1980
63 Santa Teresa	3	Surficial	Bosch et al. 1980
64 Tacuarembó	1	Surficial	Bosch et al. 1980
64 Los Pinos	2	Surficial	Suárez and López 2003
64 Ao. Boicuá	1	Surficial	Suárez and López 2003
64 Solís Grande	1	Surficial	Suárez and López 2003
64 Middle Río Negro	5	Surficial	Bosch et al. 1980[1]
64 Paso Ramírez, Río Negro	1	Surficial	Bosch et al. 1980
64 Paso Talavera, Río Negro	1	Surficial	Bosch et al. 1980
64 Paso del Puerto, Río Negro	1	Surficial	Bosch et al. 1980
64 Laguna Las Veras, Tacuarembó	3	Surficial	Bosch et al. 1980
64 Río Tacuarembó	1	Surficial	Bosch et al. 1980
65 Laguna Merín	1	Surficial	Bosch et al. 1980
66 Cañada de Aceguá	1	Surficial	Bosch et al. 1980
67 Real de San Carlos, Colonia	1	Surficial	Bosch et al. 1980

[1]Jorge Femenías registered data for at least 82 Fishtail points (mentioned in Flegenheimer et al. 2003); his manuscript is still unpublished owing to his premature death. This information has partly been included in Castiñeira et al. 2011 and probably in Suárez and Gillam 2008, Also, Suárez 2010 mentions 100 points.

publish jointly or participate in meetings and fieldwork. This multidisciplinary composition is necessary to reconstruct the paleoenvironmental and paleoclimatic contexts of the peopling of the Southern Cone (among others, Borrero and Martin 2012; Fernández and Salemme 2012; Gutiérrez et al. 2011; Johnson et al. 2012; Núñez et al. 2005; Mancini et al. 2012). Paleoenvironmental studies have also dealt with adaptation (Borrero 2008; Borrero and Martin 2012; Salemme and Miotti 2008) and more recently landscape archaeology (Carden 2008; Mazzia 2010–11; Mazzia and Flegenheimer 2012; Miotti et al. 2011).

Intersite variability is a concept often applied when com-

paring sites and establishing settlement patterns. It has been interwoven into many of the explanations about past activities, mobility, social organization, and micro-regional studies in general. Both campsites and special-activity sites have been identified, with much of the available information coming from caves (Borrero 2008; Flegenheimer 2003; Mazzanti 2003; Miotti 2010). It is noteworthy that far fewer kill sites have been identified than in North America. The variability in lithic assemblages is underscored by the fact that occupants of sites that yielded unifacial tools without points elsewhere produced assemblages with points (Miotti 2003; Nami 2007). For example, several Pampean sites with unifacial tools were undoubtedly occupied by people using fishtail points (Flegenheimer 1991, 2004; Mazzia and Flegenheimer 2012; Mazzanti et al. 2012).

The earliest human remains reported are a skeleton originally studied by Ameghino (Politis et al. 2010). Other early burials have later dates corresponding to 8000–9000 ^{14}C yr BP. (Martínez 2012; Flegenheimer et al. 2010; Mena et al. 2003; Reyes et al. 2012). Bioanthropologists have proposed migration models based on craniofacial morphology and tooth analysis from archaeological sites and genetic information from aboriginal populations (Delgado-Burbano 2012; Barrientos et al. 2003; Ramallo et al. 2012).

The faunal record is central to the discussion of several issues. On one hand, the nature of the relationship between man and megafauna is under discussion, including the part human hunters may have played in megafauna extinction (e.g., Borrero and Martin 2012; Miotti and Salemme 1999, 2005; Martínez et al. 2012; Politis et al. 1995) and the survival of a few species into the Holocene (Politis 2008). Taphonomy has been assessed at several sites (Dillehay 1997; Borrero and Martin 2012; Gutiérrez 2004). Anthropic intervention in the form of bone fractures, cutmarks, bone tools, and bones used as fuel is studied in detail (Marchionni and Vázquez 2012; Martínez and Gutiérrez 2011). Early diet is central when describing the nature of the peopling. Although generally modern fauna, guanaco, smaller mammals (such as *Lagidium* sp.), and even reptiles were the main game in the Southern Cone, selected species of megafauna were exploited (Borrero 2008; Mazzanti 2003; Miotti and Salemme 2004). In some regions, such as the Puna, the presence of megafauna in the diet has only been infrequently documented (Elkin 1996; Núñez et al. 2002, 2005). Explanations for the presence of different strategies include seasonal variations (Aschero 2000; Politis 2008) and the coexistence of several lifeways (Jackson et al. 2004). Evidence for the use of marine resources is also unusual (Dillehay 1997; Mazzia 2010–11; Jackson et al. 2004). Information about the use of plant resources use comes from site contexts with exceptional preservation, such as the Monte Verde site and sites in the Puna area (Aschero 2000; Dillehay 1997; Yacobaccio et al. 2008).

The typology of early lithic assemblages has constituted a rich area of research. Studies of the Southern Cone commonly present general descriptions of artifacts, including tools and sometimes debitage. The intent of such descriptions is to assign cultural affiliation or functional identity to occupations and discuss lithic strategies (Cattáneo 2005; Skarbun 2012; Cardich et al. 1973; Gradin et al. 1979). The research in some sites has been augmented with other analytical methods, such as microscopic use-wear and fatty-acid analysis (for example, Leipus 2004; Mazzia 2012; Cattáneo and Aguerre 2009; Cardich et al. 1981–82; Lynch et al. 2012). Recently, attention has been paid to fracture analysis (Weitzel 2012). In general, assemblages in the Southern Cone are dominated by unifacial tools, with bifacial flaking evident on points and a small number of bifaces and scrapers. Frequently wide flakes were selected for manufacture, and blade technology is reported only in later occupations (for an exception see Suárez 2010).

Several aspects of projectile points have been studied, including their production and their relationship to early points from North America (Nami 2003), numerical morphological analysis (Politis 1991), and, more recently, morphometrical studies and projectile-point use-life histories (Castiñeira et al. 2011; Hocsman et al. 2012). Some investigators have examined the relationship of points to hunting techniques, animal ethology, the landscape, and subsistence strategies (Aschero and Martínez 2001). Experimental hunting studies have been attempted (Flegenheimer et al. 2010), and the social significance of points has been assessed (Miotti 1995; Politis 1998; Bayón and Flegenheimer 2003). Besides widely distributed fishtail points, types of points found in early sites include lanceolate points at Monte Verde (Dillehay 1997), medium-sized triangular points from early-Holocene contexts in Patagonia (Aguerre 1979; Cardich et al. 1973), and smaller triangular points in the Argentinian and Chilean Puna, in some cases referred to as Tuina points (Hoguin and Restifo 2012; Hocsman et al. 2012; Núñez et al. 2005), Salar de Punta Negra points (Núñez et al. 2005), Pay Paso and K87 points in Uruguay (Suárez 2010), and Paiján in Atacama of northern Chile (Núñez et al. 2005). Some of these points were possibly contemporaneous in a region.

Toolstone selection has also been studied; in most cases it reveals choices different from those of later periods. The interest of early peoples in translucent and colorful tool stone has been recorded (Flegenheimer and Bayón 1999; Nami 2009; Méndez et al. 2010; Miotti et al. 2011). Studies of raw materials reveal artifact transport among distant regions, which has assumed significance in the framework of social-interaction networks (Flegenheimer et al. 2003).

Manifestations of art are also relevant to the studies of early humans in the Southern Cone. Evidence of early rock art is abundant in central Patagonia and has been infrequently identified in other regions. As a medium for communicating visually, it played an important role in hunter-gatherer social interaction during the peopling of Southern Cone (Aschero 1999; 2007; Carden 2008; Gradin et al. 1979; Miotti et al. 2012; Paunero et al. 2005; Yacobaccio et al. 2008). Although rarer than rock art, portable art and decorated objects have been interpreted as particular modalities of symbolic expression (Flegenheimer et al. 2012; Núñez et al. 1994; Yacobaccio et al. 2008).

Many of these ideas contributed to the framework for this paper. Building on previous research, our current work concentrates on the concepts of materiality (Dobres 1999; Meskell 2005; Pels et al. 2002) and the social landscape (Ingold 2000; Taçon 1994;Thomas 2001;Tilley 1994; Tuan [1977] 2008), thus emphasizing the social aspects of the network of people, objects, and places (Flegenheimer and Mazzia 2012; Miotti et al. 2011). From this perspective, we first consider people and their daily interactions on a small scale. Based on case-specific evidence, we then build interpretations on a larger scale. Data derived from the following case studies are used to infer explanations about social relations and to identify objects and spaces of consequence for early societies.

Case Studies

As mentioned, FPPs are the most widespread projectile points in the early Southern Cone. They are found from Central America to Tierra del Fuego and are dated between 9500 and 11,000 ^{14}C yr BP. In the Southern Cone they are the principal but not exclusive early point type (Dillehay 2008). Their distribution, seen in Figure 21.1 and Table 21.1, which includes information about surface finds, emphasizes two important facts: Isolated points cover a much greater area than suggested by excavated sites, and their known distribution is very heterogeneous. FPPs have traditionally been considered diagnostic of an early colonizing process (Bird 1969; Schobinger 1973). Some authors relate them to Clovis (Fiedel 2002; Morrow and Morrow 1999), and others consider them an independent technological development (Bryan and Gruhn 2003; Mayer Oakes 1986; Nami 1997; Politis 1991; Castiñeira et al. 2011).

Several issues related to FPP technology have received special attention, such as their manufacturing sequence (Nami 1997, 2003; Suárez 2010), resharpening and recycling (Nami 2007; Suárez 2010), fluting (Gnecco 1994), manufacture from flake blank and bifacial thinning (Bird 1969; Flegenheimer 2001; Nami 2003; Suárez and López 2003), and their fracture mechanics (Bird 1969; Weitzel 2010). Their function has been linked to hunting megafauna or other prey such as guanaco (Bird 1969; Massone 2003; Borrero and Martin 2012; Miotti and Salemme 2005; Miotti et al. 1999), atlatls or spears (Flegenheimer et al. 2010), children's activities (Politis 1998; Suárez 2009), and their use as knives (Suárez 2010). Their importance as objects in establishing group identity and nonverbal communication has also been discussed (Miotti 1995; Bayón and Flegenheimer 2003).

In general, these objects exhibit a remarkable diversity in terms of size, manufacturing sequence, method of preparing the stem base, and the uses they were intended for (Nami 2007; Suárez 2006; Bayón and Flegenheimer 2003). Thus they manifest great variation in technology, morphology, and function within a very characteristic shape. The term fishtail projectile points, as it is here applied, therefore designates objects with a common design but with different uses and life histories.

These objects usually are found in low proportions in the assemblages in the Southern Cone. Exceptional cases include Fell's Cave, Cerro El Sombrero Cima (CoSC), and Cerro Amigo Oeste (CoAW) (Table 21.1). The latter two assemblages, separated by a linear distance of 907 km, are the basis for comparisons in this paper.

The Pampean Case

The Pampean region comprises a cluster of early sites dating to the Pleistocene-Holocene transition. To date 21 sites have been radiocarbon dated to earlier than 9000 ^{14}C yr BP (Politis 2008; Mazzia and Flegenheimer 2012; Mazzanti et al. 2012). A long-term research program has been carried out in the east-central portion of Tandilia, one of two mountain range systems that traverse the plains. The Tandilia range is characterized by low discontinuous mesa hills emerging from the surrounding Pampean plains and covered by Quaternary-age loess sediments. These hills include rockshelters and small caves scattered along their upper sections. Water can be found mainly in streams and springs and to a lesser extent in seasonal lagoons. The vegetation includes several species of grass and ferns along with moss and lichens and autochthonous bushes of limited distribution. The plains are currently cultivated and today constitute a strongly modified environment. The study area is a micro-region of 150 km^2 where seven different places, located not more than 15 km apart and occupied by early hunter-gatherers, have been studied (Figure 21.1). Four of these places are rockshelters (Cerro La China 1, CoS Abrigo 1, Cueva Zoro, Los Helechos), and three are open-air sites (Cerro La China 2, 3 and CoSC) (Mazzia and Flegenheimer 2012).

Radiocarbon dates for the early occupations at 6 of these sites are 15 ages ranging from 9640 to 11,150 ^{14}C yr BP (Mazzia and Flegenheimer 2012). All have been assigned to the same occupation interval in this area. Studies undertaken eastward along the same mountain ranges have yielded similar assemblages with slightly more recent dates (Mazzanti et al. 2012).

Although a distinctive characteristic of the seven sites in the Tandilian-range micro-region is great intersite variability, some traits found among the assemblages and their shared stratigraphic contexts (Zárate and Flegenheimer 1991) provide a basis for correlating these sites. For example, all sites share a similar pattern of procuring toolstone. As we will discuss in detail below, the same nonlocal stones are present in all assemblages (Flegenheimer et al. 2003); some artifacts such as typical large scrapers are always manufactured on a greenish dacite and are found in several of these sites. Some characteristic tool types (large double-sided scrapers, small gravers, denticulates) are also common to all these sites (Flegenheimer 2004).

Cerro El Sombrero (CoSC) is the highest hill in the area. Close by is a smaller hill where the Tandilia igneous-crystalline basement outcrops (Figure 21.2A). The hilltop at Cerro El Sombrero is the most extensive and dense site in the micro-region. It has yielded both surface remains scattered on the rock outcrop and materials buried in the eolic sediments that partially cover the summit (Table 21.2). Current excavations occupy only 37 m^2, or less than 1% of the summit area.

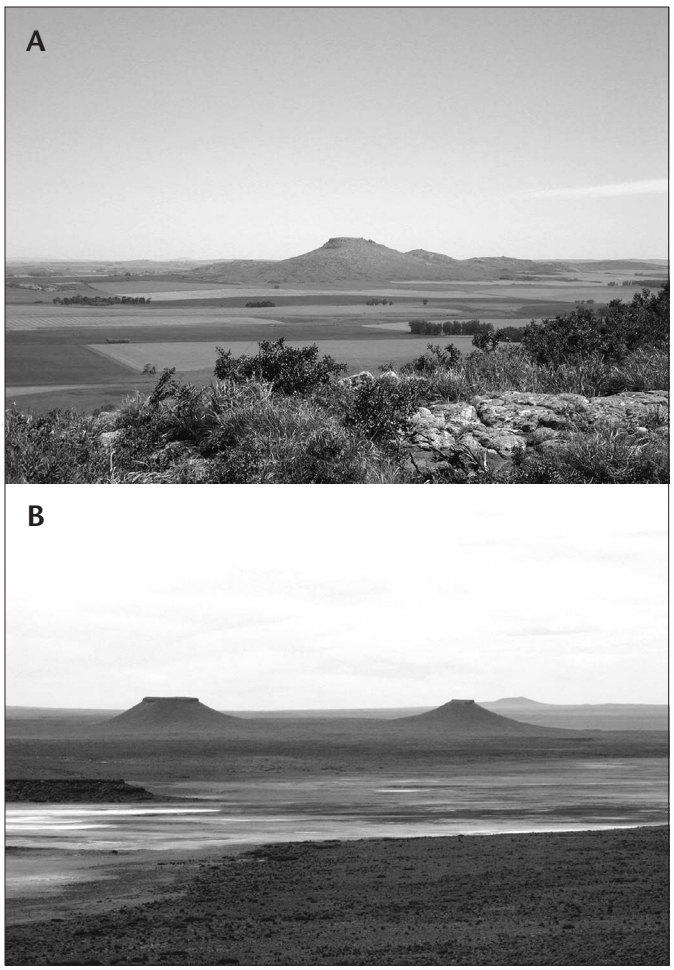

Figure 21.2 Visualization of sites: **A,** Cerro El Sombrero; **B,** Cerro Amigo Oeste.

The hilltop constitutes an open-air site; it is a limited space surrounded by an orthoquartzite outcrop. It offers no shelter to weather exposure, and wind is generally stronger there than in the plains. Only the edges of the summit are visible from the plains, and the location is best seen from other nearby hilltops (Mazzia 2010–11). Visibility from the site is unrestricted in all directions except to the southwest, giving a commanding view of the surrounding plains and hills (Figure 21.3A). This feature, one of the outstanding characteristics of this place, has been repeatedly mentioned (Flegenheimer 2003; Madrazo 1972).

The assemblage in Table 21.2 describes collections resulting from research carried out after 1986. Earlier surface collections are not included, yet they exhibit similar characteristics. Most of the tools discarded at this site are broken; the tool breakage ratio (90%) is the highest reported so far in the micro-region. Recent studies focusing on these broken tools reveal that in most cases fractures were caused by unidentified accidental processes; also found were knapping errors, impact fractures on projectile points, intentional breakage, and trampling damage (Weitzel 2012). For these reasons, most of the artifacts in this assemblage cannot be identified typologically. Among those that can be classified are scrapers, raclettes, fishtail points, bifaces, and a smaller proportion of endscrapers, knives, gravers, and notches (Figure 21.4A). When compared with other early sites in the micro-region, the assemblage shows a high ratio of bifacial tools (42%), absence of bipolar flaking, thin tools, and few cores (Flegenheimer and Mazzia 2012). Among a group of fractured groundstone artifacts are unidentified objects, spheres, and discoidal stones, one of which is decorated (Flegenheimer et al. 2012) (Figure 21.5A). A hammerstone has been found among the surface remains.

Although some complete FPPs of different sizes are present (Figure 21.6A), for the most part only stems remain. Points in different stages of their use life have also been recovered (Bayón and Flegenheimer 2003). Small points are complete and have been scarcely retouched; the original flake blank is visible on both faces of each point. They are not suitable for hunting and may have served as objects important for visual communication or learning, perhaps pertaining to symbolic or childhood realms (Politis 1998; Bayón and Flegenheimer 2003). Medium-sized points, which constitute the greatest proportion, are mostly broken. These are the most common size of FPPs from the Southern Cone. Although most of the fractured specimens have been broken during use, a few were

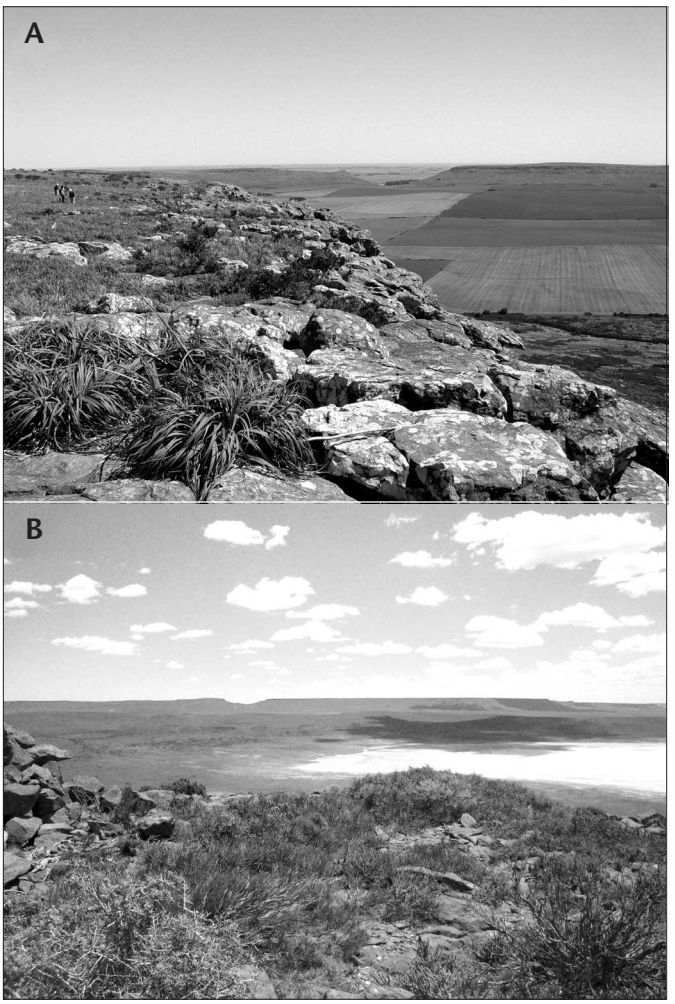

Figure 21.3 Visibility from sites: **A,** from Cerro El Sombrero; **B,** from Cerro Amigo Oeste.

Table 21.2 Comparative information from Cerro El Sombrero Cima and Cerro Amigo Oeste.

	Cerro El Sombrero Cima (CoSC)	Amigo Oeste (CoAW)[1]
Altitude (m.a.s.l.)	428	1125
Aproximate height from plain (m)	200	125
Aproximate hilltop surface area (m^2)	25000	12000
Maximum visibility (km)	40	45–60
Geomorphology	Butte	Butte
Distance to water (m)	500 to Ao. El Verano	600 to springs at Laguna de las Vacas
Distance to most frequently visited toolstone source (m)	40 to orthoquartzites at La Numancia	15 to chalcedonies at Aneken
Number of tools	1411[2]	267
Number of FPPs/preforms	90[2]	116
Fragmented FPPs (%)	85[2]	87
Number of flakes	9640[2]	Aprox 2200
Number of cores	4[2]	3
Number of small spheres	3[2]	1
Number of discoidal stones	2[2]	3
Others	6 unidentified ground fragments, 1 hammerstone, ocher, abrasives[2]	1 hammerstone

[1] Information from Hermo and Terranova 2012; Miotti and Terranova 2010; Miotti and Terranova 2012.

[2] Information from Collection at Área Arqueología y Antropologia, Municipalidad de Necochea.

broken during manufacture. In these cases, their stem edges were not yet abraded and some were fractured during fluting. This medium-sized group also includes a complete medium point, some heavily maintained points, and points recycled as drills, cutting edges, and a notch. Two larger complete points and fragments corresponding to large sizes have also been found. In general, a tendency toward more elaborate flaking, including a greater proportion of bifacial thinning and fluting, is observed in larger specimens (Flegenheimer 2001). When fluting is present, it covers either one face of the stem (20% of the points) or both faces (8% of the points).

Most debitage is small and cortical pieces are rare. Many flakes obtained by bifacial flaking with soft hammer percussion exhibit lips and prepared platforms. Small debitage and the presence of medium-sized projectile-point preforms indicate that the last stages of manufacture were carried out at this place (Flegenheimer 2003; Flegenheimer and Cattáneo 2013).

Raw materials present, in decreasing order of frequency, are Sierras Bayas Group orthoquartzite (SBGO), quartz, chert, silicified limestone, Balcarce Formation orthoquartzite, dacite, and other less frequent rocks. Outcrops of the SBGO are abundant but highly localized in the landscape; the nearest quarries lie 40 km west of the site (Colombo and Flegenheimer 2012). An important characteristic is that although white-colored orthoquartzites are more frequent in the quarries and were mostly used by later peoples, early inhabitants preferred colored varieties. Symbolic or aesthetic reasons have been proposed to explain this preference for colored stones (Flegenheimer and Bayón 1999). Immediately available rocks, such as Balcarce Formation orthoquartzites and quartz, were scarcely used. Other infrequently used nonlocal stones, from 500 km to the northeast, have also been identified (Flegenheimer et al. 2003).

Toolkit retooling and rejuvenation activities have been inferred from the great number of point stems. We conclude that activities on the hilltop were restricted; they include scouting the surroundings (inferred from the commanding field of view), retooling toolkits, refurbishing weapons, and discarding broken artifacts (Flegenheimer 2003). The high density of artifacts suggests that this site was probably repeatedly visited (Flegenheimer 2003). Given the unusually high breakage ratio coincident with a predominance of accidental fractures and the absence of refitted tools, we surmise that CoSC was possibly chosen for deliberately discarding certain objects once they were broken (Weitzel 2010). Based on these features, the exceptional assemblage recovered, and the absence of similar neighboring places, we further propose that this place was unique and highly valued during early times (Flegenheimer 2003; Mazzia 2010–11; Flegenheimer and Mazzia 2012;).

The Patagonian Case

In Patagonia two separate clusters bear witness to human occupation during the Pleistocene-Holocene transition. These include the southernmost cluster of northern Tierra del Fuego, Magallanes and the Central Plateau or Deseado Massif region, and the northern cluster covering the Atlantic-Pacific corridor between 40° and 42° south latitude. The southern cluster is the largest, comprising 21 sites with radiocarbon dates older than 9000 ^{14}C yr BP. An important amount of information obtained from the sites about early occupations has been published (see Table 21.1), (Salemme and Miotti 2008; Miotti et al. 2012). In northern Patagonia evidence is scarcer, to date numbering 7 early sites in the Andean environment (see Table 1 Salemme and Miotti 2008) and one extra-Andean site. The latter, discussed in this paper, is Cerro Amigo Oeste (CoAW), located on the Somuncurá plateau (Table 21.1, Figure 21.1). The stratified sites, which are mostly located in the Andean area 300 km from CoAW, are dated to 9000 ^{14}C yr BP or older. Only one of these sites, Arroyo Cor-

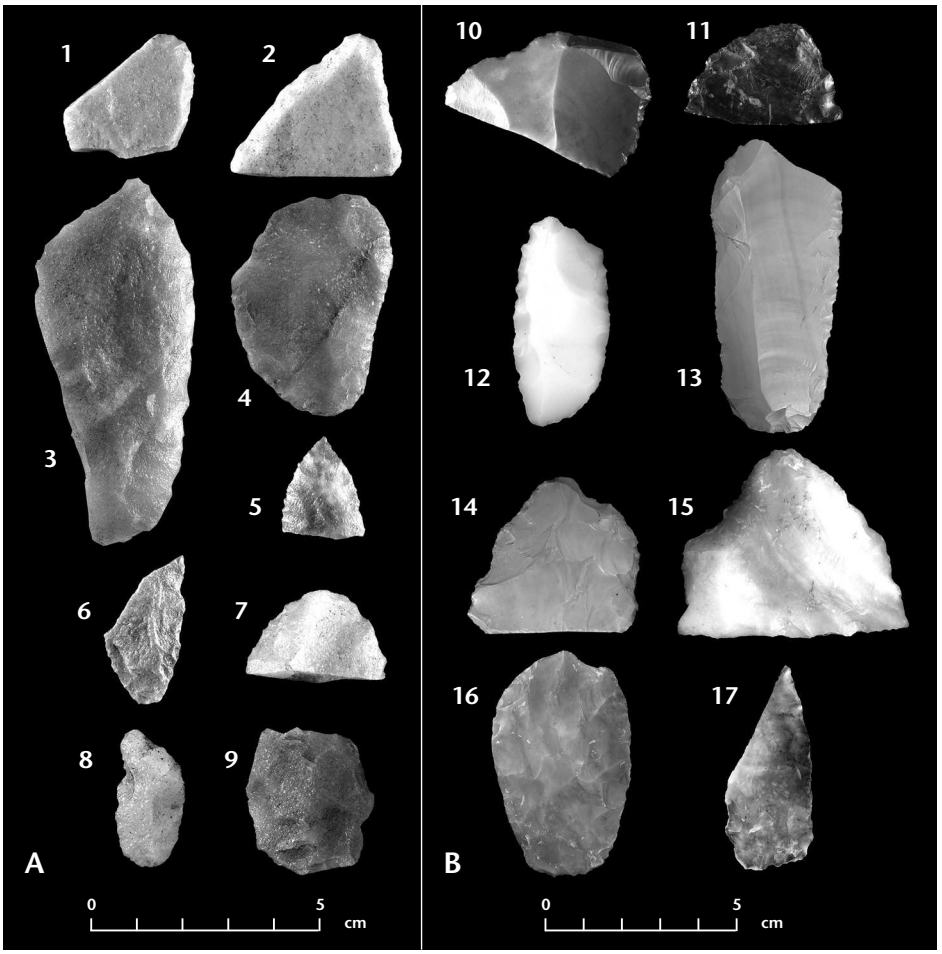

Figure 21.4 Tools, most of them fractured.
A, from CoSC:
1 S12/204/21
2 S12/103/13
3 S12/401/12
4 S12/104/5
5 S12/5/4
6 S12/4/3
7 S13/403/7
8 S12/203/39
9 CoS 600
B, from CoAW:
10 33
11 231a
12 723
13 224
14 219;
15 524
16 237
17 510.

ral II (Table 21.1), has yielded a fishtail point associated with an early date (Arias et al. 2010). Occupations at some of the other sites from the area with early dates include evidence of megafauna (Hajduk et al. 2012).

Unlike the Pampean region, the geographic distribution of early human occupations in northern Patagonia is very limited. We assume that bias in archaeological sampling accounts for this (Miotti 2003, 2010; Miotti and Salemme 2004). Historically, early occupations have been better studied in the southernmost Patagonia area. Specific research programs in northern Patagonia and Chilean Andes have only recently been developed (Mena et al. 2003; Reyes et al. 2012).

A continuous research project has been carried out on Somuncurá plateau since 2006. The original goal was to find archaeological evidence of a historically sacred hunting field known as Yamnago to Pampa and Tehuelche peoples and to discover when the place was initially inhabited (Miotti 2010; Miotti et al. 2012). With this aim, explorations in the Laguna de Las Vacas and Cerro Los Dos Amigos (LDA) were intensified. This place corresponds to a low endorheic basin of the Arroyo Talagapa, located on the plateau 1000 m above sea level. Two buttes (LDA) rise in the basin; they match descriptions in 19th-century writings of the access to the hunting field (Claraz 1988; Moreno n.d.; Muster 1964).

Archaeological evidence found on top of the western hill, called Cerro Amigo Oeste (CoAW), reveals that this place was first occupied around the Pleistocene-Holocene transition (Figure 21.2B). The butte resulted from wind erosion of a volcanic lava flow. The lagoon and wetland (mallín) found at the base (Laguna de Las Vacas) of the butte are fed by freshwater springs and the temporary flow from Talagapa stream. The base and slope of the hill are composed of a Tertiary tuff, and the top is dominated by a columnar basaltic rim approximately 2.5 m high, a relic of the lava flow. The lagoon and wetland draw plenty of avifauna, and though guanacos are currently scarce, hundreds of guanacos were seen grazing at the edge of the lagoon by the end of the 19th century (Claraz 1988; Musters 1964).

The view of the surrounding landscape from the top of the hill is panoramic, covering the four cardinal directions (Figure 21.3B). Likewise, LDA is very noticeable; it can be seen from a distance of about 45 km to the north and south and 60 km to the east. The view from the west is partially obstructed by the extensive lava plateau running from north to south.

The hilltop, an oval area of about 12,000 m^2, has few shrubs and no stratified deposits. Most of the top is covered with lithic materials that have been associated by morphology and technology with hunter-gatherer societies of the Pleistocene-Holocene transition (Hermo and Terranova 2012;

Miotti et al. 2011). Using a 2-by-2-m square-grid system, artifact and other materials have been collected from only 10 transects, 5 in an east-west direction and 5 in a north-south direction and covering in total about 25% of the total site surface.

Most of the stone tools are broken and include notches, knives, gravers, raclettes, and a rabot, as well as unclassified tools with retouched edges (Figure 21.4B). As seen in Figure 21.4B, this collection manifests a greater variety of raw materials than the Pampean case. The assemblage also includes cores and debitage. Apart from these flaked artifacts, three fragmented discoidal stones, an abraded small sphere of ocher (Figure 21.5B), and a hammerstone were recovered (Miotti and Terranova 2010; Hermo et al. 2012; Miotti et al. 2011). FPPs are an important proportion of the assemblage (Table 21.2); although most are fragments, some points show evidence of resharpening and others have been recycled (Figure 21.6B).

As in CoSC, most FPPs recovered at CoAW are broken and the portions discarded on the hilltop are mainly stems (62.9%) (Hermo and Terranova 2012). Point fractures resulted mostly from use (Figure 21.6B), which is why the site, like CoSC, has been identified as a workshop for point retooling. A formal analysis of the FPPs from this site has revealed a significant variation in size in the stems. Moreover, both straight and concave bases have been recorded. Fluting is more frequent (60% of the points) than in the Pampean assemblage and covers either one face of the stem (36.28%) or both faces (23.89%) (Hermo and Terranova 2012).

These points are made on various toolstones. Most specimens are manufactured on chalcedony (73.3%), whose source has been located at Aneken Hill 15 km to the west. Some points are made on reddish, brown, and ocher-colored chert (15.5%) that outcrops in the Sierra de Talagapa about 50 km to the west. Smaller proportions of obsidian (6.9%) and quartz crystal (4.3%) are also present in the assemblage. Obsidian comes from two sources, one located 40 km to the southwest and the other about 100 km to the southeast (Miotti et al. 2012).

Discussion

Several issues of current interest described in the first section of this paper are closely related to the discussion of CoSC and CoAW. These sites are crucial to understanding the interconnections among people with FPPs in different regions. Social networks have been previously proposed among people in the Argentinean and Uruguayan Pampas based on a detailed study of toolstone provenience (Flegenheimer et al. 2003). A relationship based on shared raw materials between the Pampas and Somuncurá Plateau, however, is weakly supported, the sole evidence consisting of a single recycled artifact found in Cueva Zoro in the Tandilia ranges that was manufactured on a toolstone possibly from Patagonia (Mazzia 2010–2011). Here we propose a correlation between these two areas based on considerations of both objects and landscape. We argue that these two locations, with similar physical features and strikingly similar archaeological contexts, merit discussion.

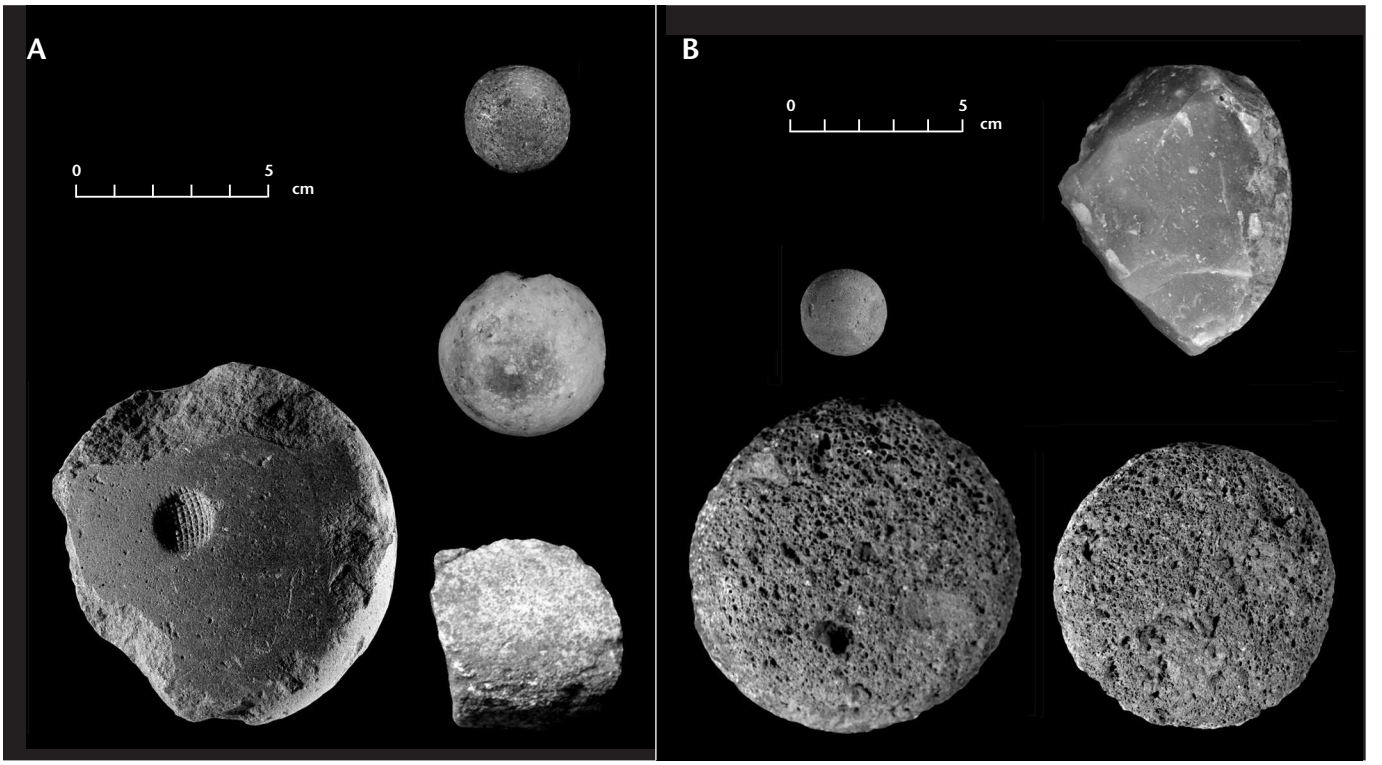

Figure 21.5 **A,** discoidal stone, fragment of discoidal stone, and two fragments of small spheres from CoSC. B, two discoidal stones, a fragment of discoidal stone, and a small ocher sphere from Co AW.

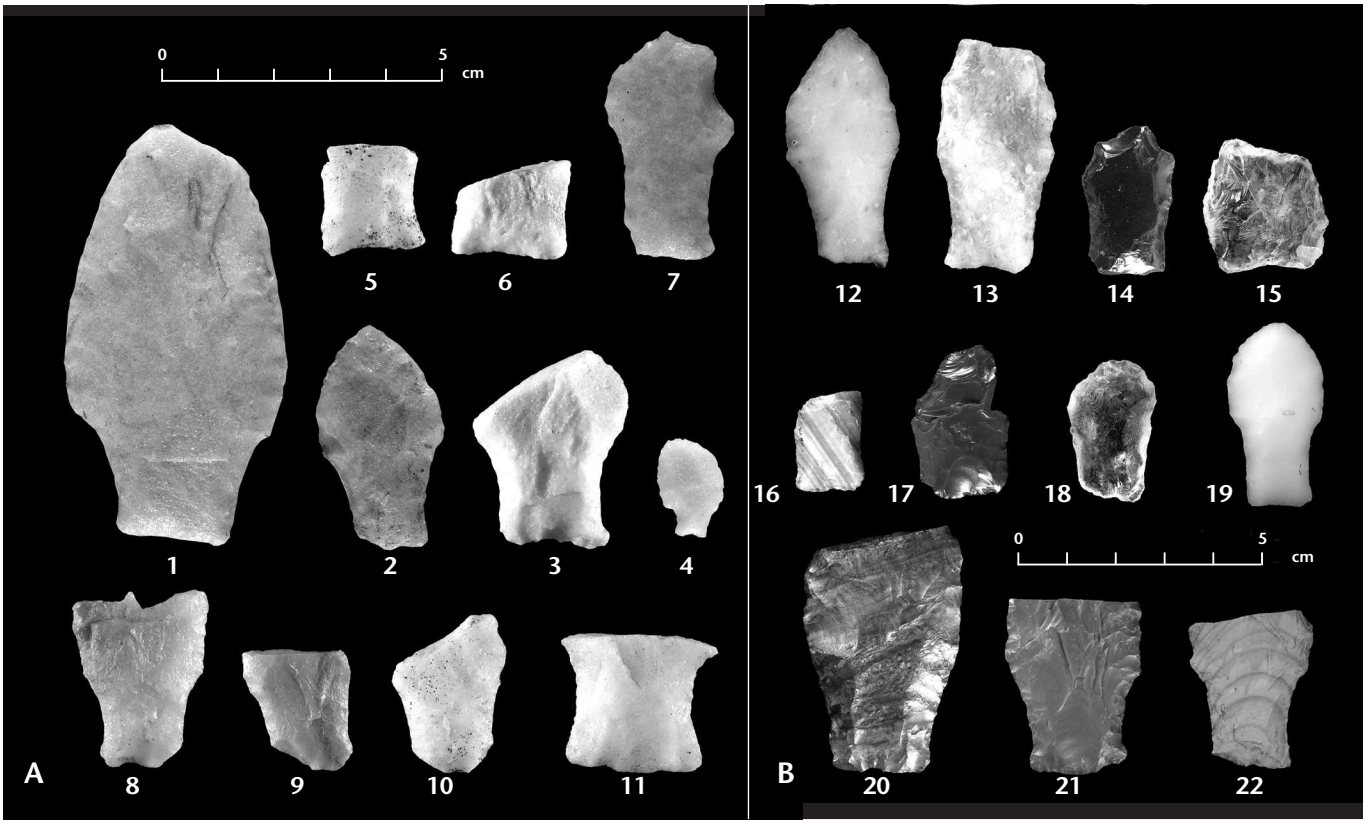

Figure 21.6 Fishtail projectile points, showing variability of sizes and use life. **A**, from CoSC: **1**, S19/101/1; **2**, CoS132; **3**, S13/905/12; **4**, CoS131; **5**, CoS105; **6**, CoS126; **7**, CoS134; **8**, S12/404/2; **9**, CoS103; **10**, CoS123; **11**, CoS125. B, from CoAW: **12**, 258; **13**, 202; **14**, 706; **15**, 156; **16**, 198; **17**, 279; **18**, 228; **19**, 244; **20**, 900; **21**, 231; **22**, 516.

Both CoSC and CoAW are buttes that stand out from the surrounding plains. Their silhouettes bear a striking resemblance. Their hilltops are similar in shape, and although CoAW is smaller, each is surrounded by a rocky outcrop. The field of view from both hilltops reaches the horizon and takes in possible hunting grounds on nearby plains and toolstone quarries farther afield. Owing to these similar characteristics, both places have been described as lookouts and vantage points useful for communicating between groups. Therefore we submit that these two distant places constitute nodes in the spatial and social network of past social landscapes (Mazzia 2010–2011; Flegenheimer and Mazzia 2012; Miotti and Terranova 2010).

Likewise, very specific assemblages were discarded on both hilltops, indicating restricted activities. At both, artifacts are quite dense and their nature is homogeneous throughout the site. This density suggests that activities must have been carried out repeatedly. Both hilltops also exhibit a concentration of FPPs and a very high ratio of fractured points and other tools. At both sites, discoidal stones and small spheres have been recovered. Infrequent artifacts found at CoSC, but not yet found at CoAW, also include objects that resemble small FPPs.

As already mentioned, at both sites the significant number of stems has been attributed to retooling and repairing hunting systems. This interpretation is reinforced by the existence of broken preforms and a high proportion of small or trimming flakes resulting from bifacial flaking. Since these artifacts are manufactured on selected toolstones that do not outcrop on these hills, toolmakers must have carried blanks or preforms of projectile points to these places, where they were finished. We further surmise that the visits must have been scheduled in advance, in view of the fact that they necessitated planning, gathering shafts with broken points to take them to the hilltops for repair, and preparing other elements necessary for assembling hunting systems, such as mastic, thongs, feathers, and equipment for preparing fire. Although the climb to either hilltop is easy and requires no special ability (Mazzia and Flegenheimer 2012), it must have been planned beforehand constituting one of the familiar pathways covered by the early peoples in both areas. The image we envision is that of a group of people, possibly hunters, carrying broken artifacts including foreshafts and a repair toolkit, scaling the hill slope and then going about their respective activities on top, while they scouted the surrounding landscape and communicated with other people in the immediate plains. Other aspects of the assemblages, such as the repeatedly used point design, purposely chosen raw materials, and the presence of discoidal stones, reinforce the idea that social non-verbal communication was important for these people.

Conclusion

An issue that merits consideration is, What accounts for

the difference between these concentrations of projectile points and broken artifacts discarded in specific spaces and other assemblages abandoned elsewhere? As we have mentioned, there exists pronounced taphonomic, locational, and functional variability among sites dating to the Pleistocene-Holocene transition. We submit, however, that this apparent variability may be only circumstantial because other evidence (see for example Flegenheimer 1991, 2004; Miotti 1995, 2004; Miotti et al. 2010) suggests that many sites that do not have FPPs may nonetheless have been occupied by the same people. The remarkably similar contextual evidence from CoSC and CoAW supports our proposal that the practice of abandoning points in a preferred place may account for the relatively meager number of FPPs found in hunting sites or occupations in the Southern Cone. Furthermore, if peoples using FPPs in other regions also indulged in the practice of discarding certain objects in selected places, this custom may have affected the overall archaeological record and therefore merits our attention.

We believe that people using FPPs in different regions were sharing much more than artifact types. We detect features common to both hill sites, which strongly implies that these places were deliberately chosen and that this selection conveyed meaning for early people. What these places and objects specifically meant in the past is difficult to assess. Yet it is becoming clear that colorful and brilliant toolstone, certain objects such as FPPs, discoidal stones, and small spheres, and certain places, as the buttes with panoramic views here described, were especially significant. Archaeological and anthropological literature abounds with examples of bonds that intertwine peoples and places and are basic to their world view (Ingold 2000; Mazzia 2010–11; Tacon 1994; Thomas 2001; Tilley 1994; Tuan [1977] 2008; Boivin and Owoc 2004; Hermo and Miotti 2011). Bearing these examples in mind, we propose that people living in the Southern Cone by 10,000–11,000 ^{14}C yr BP were sharing not only a common technology but also a perception of the world.

Finally, the shared social landscapes in the Pampean and Patagonian cases strongly support the existence of social networks between both distant regions. These networks probably had a much larger scale that still has to be understood. What role did landscape play in this network? Considering the heterogeneous distribution of sites with FPPs in the Southern Cone, the question arises, Were places such as the hills described here necessary for people to establish themselves in an area? We consider that this issue is a future avenue of research to be pursued in other regions.

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