

CHAPTER 2

HISTORICAL BACKGROUND

In this chapter, the historical background of the archaeology in the Pampas and Patagonia is discussed and summarized. It encompasses a period of about 100 years, between the 1870s when the first archaeological investigations took place in the Pampas and Patagonia (Ameghino 1880–1881; Holmberg 1884; Moreno 1874; Moseley 1892; Zeballos and Pico 1878) and the late 1970s when there was a theoretical and methodological shift in the archaeology of both regions, which gave rise to modern research. The current regional models in the Pampas and Patagonia are a product of this last period's research, first with a processual orientation and then adding other theoretical approaches (evolutionary, processual-plus/neo-processualism, post-processualism, etc.). However, some of the data and ideas generated in this first 100 years of investigation are still present in contemporary debates, as shown in the following chapters of this book.

The Pampas and Patagonia were also the stages for some methodological development propelled by the influence of processual archaeology. We are mainly referring to the developments of taphonomy, zooarchaeology, experimental archaeology, and geoarchaeology, which had their momentum in the early 1980s and have maintained a continual flow of research since then. The contributions of these developments not only helped us to better interpret the archaeological record of both regions but also impacted hunter-gatherer research worldwide.

THE EARLY YEARS

Archaeology emerged in Argentina, and in the Pampas and Patagonia, at the end of the nineteenth century, when the country was dominated by the ideas of the so-called 1880s Generation (Madrazo 1985; Politis 1992). They strongly

promoted European values (borrowed predominantly from France and England) instead of those followed by indigenous people, mestizos, and criollos. In this context, Florentino Ameghino, Samuel Lafone Quevedo, Juan B. Ambrosetti, and others, the first scholars interested in local archaeology, started their research (Fernández 1982; Podgorny 1997, 2021). The idea of “progress” at that time justified the colonization of the remaining indigenous territories and caused the extermination of many indigenous people. Actually, some pioneer researchers, such as Estanislao Zeballos, were instrumental in conquering and controlling the Indian territories.

The most important museums were created in Argentina at the end of the nineteenth century as part of a strategy to keep indigenous cultures in the past (e.g., Museo de La Plata and the nationalization of the Museo Bernardino Rivadavia in Buenos Aires). By exhibiting indigenous people’s material culture and their physical remains, the western-influenced society broke the cultural continuity and managed to freeze a past that was full of vitality in the present (Podgorny and López 2008). Among the key research questions in those times were discussions on the origin of humankind and the “American man” (see Ameghino 1880–1881 and review in Hrdlička 1912), the earth mounds of the Paraná River Delta (Lista 1878; Zeballos and Pico 1978), and the coexistence between people and Pleistocene mammals until recent times in the Cueva del Milodón (Hauthal 1899; Moreno 1899; Nordenskjöld 1996 [1900]). All of these themes were quite distant from the issues concerning indigenous communities and their situation at the time (Politis and Curtoni 2011).

The first information about the Pampas indigenous people comes from the conquerors and explorers who entered the La Plata River at the beginning of the sixteenth century. The expeditions of Sebastian Gaboto, Diego García de Moguer, Pero Lopes de Souza, and Pedro de Mendoza provided abundant descriptions of the several ethnic groups, such as Querandíes, Guaraníes, Chaná, Timbúes, and Mbeguá, who inhabited the region. However, this information referred only to the riverside and the adjacent plains. In 1581, Juan de Garay crossed the Salado River to the south and reached the southeastern extreme of Tandilia, providing the first data about the indigenous people of these areas. Later, Jesuit missionaries (e.g., Cardiel 1933 [1748]; Falkner 1974 [1774]) and castaway Isaac Morris (2004 [1743]) also produced firsthand data on the Indians living in Tandilia and the Interserrana areas in the mid-eighteenth century. Although vague, the first published archaeological references from the Pampas are from the first half of the nineteenth century, and they correspond to the isolated findings of Guaraní corrugated and polychrome pottery in the Paraná River Delta (Muñiz 1825; Sastre 2010 [1856]).

European contact in Patagonia started at the beginning of the sixteenth century when Hernando de Magallanes stopped there during his trip around the world. The interaction between him and his crew with Patagonian natives on the coast of Santa Cruz was widely known. Frequent contact with sailors

and explorers occurred during the following centuries, all of it basically restricted to the coastal zone. During these initial contacts, the natives living near the coast were identified with the giant Patagon of Spanish chivalry tales, and were considered giants by the first European explorers (Duviols 1997). This identification exacerbated the phenotypic contrast with the shorter inhabitants of the archipelagos, commonly referred to as the “canoe people,” and became a persisting simplification of a more complex reality. One of the many effects of using this dichotomy as a framework for archaeological research was the reduction of cultural variability to two recorded polar types.

With very few exceptions, such as the expedition by Antonio Viedma that probably reached the lakes near the Cordillera in the eighteenth century, or the expedition up the Santa Cruz River by Robert Fitz Roy, captain of the HMS *Beagle*, in the beginning of the nineteenth century (Fitz Roy 1839; Viedma 1980 [1783]), travels to the hinterland of Patagonia began near the end of the nineteenth century. That was also the time when archaeological research began in the region. Accordingly, the first excavations occurred not too far away from the ocean. Effectively, stratigraphic excavations took place at Elizabeth Island in the Strait of Magellan in 1876. At that time, members of the crew of HMS *Challenger*, an oceanographic expedition, were circling the globe, and they excavated, documented, and collected artifacts at an archaeological site on the island. Mr. Murray was in charge of the excavation of a shell midden that “found some stone arrow-heads and stone fishing-net sinkers” (Moseley 1892: 480), as well as marine mammal bones and mollusks. This was the first archaeological excavation in Patagonia, but it remained little known for decades, an isolated event that did not produce any impact beyond attracting other explorers to that island. Effectively, in 1882 Domenico Lovisato, a member of an Italian expedition led by Giacomo Bove, visited Elizabeth Island and also excavated. He probably tested the same site studied by Murray and others and published a description of several shell middens (Bove 1984; Lovisato 1884). The few materials recovered from the dig made by Murray were donated to the British Museum by Thomson and Moseley in 1877–1878 and were studied only at the beginning of the twenty-first century (Borrero and Franco 2001). Those artifacts, photographs, and drawings deposited at the British Museum were the basis for a recent study of the island that reexamined and dated the site around 2500 BP (Borrero et al. 2019). The already mentioned expeditions by Viedma and Fitz Roy covered uncharted terrain for Europeans. More limited entries, like that of the missionaries Titus Coan and William Arms in 1833–1834, started in Gregory Bay on the Strait of Magellan and probably reached the modern frontier between Chile and Argentina north of the Bay, not too far from the coast.

In the Pampas region, the first archaeological excavation was the pioneering work of Estanislao Zeballos and Pedro Pico (1878) at the end of the nineteenth century, who intensely excavated a site that they named “Túmulo de

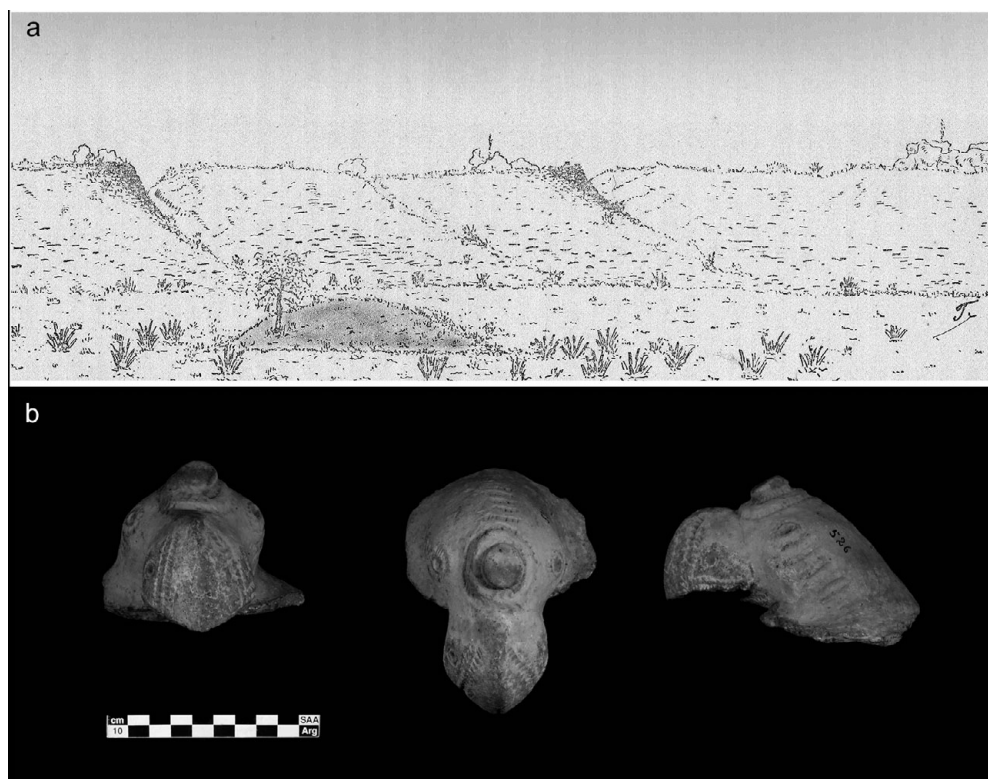


Figure 2.1 (a) Sketch of the Túmulo de Campana (shaded), after Torres (1907); (b) the famous pottery appendage representing a bird head. It was excavated by Estanislao Zeballos and Pedro Pico in 1978 in the Túmulo de Campana. Currently at the archaeology collections, the Museo de La Plata.

Campana” (“Campana tumulus”). The site was located in the alluvial plain of the Paraná River, close to the present city of Campana, and was one of the first sites to be excavated and published with some scientific criteria (Aparicio 1948: 60). Zeballos was a prestigious young student of Exact Sciences at the University of Buenos Aires who founded the Sociedad Científica Argentina in 1872 (Podgorny and Lopes 2008: 134). By the time of the Túmulo de Campana excavation, he had already carried out, along with some other scholars of the time, various archaeological and geological expeditions in the region, among which stand out a trip to the Paraná Delta and a visit to the Cañada Rocha site, which had been recently discovered by Florentino Ameghino (Politis and Bonomo 2015). The approach followed was empiricist and essentially exploratory. The methodology used was simple excavation with shovels, with the help of local workers and enthusiastic neighbors who collaborated in removing the sediment. With this amount of handwork, Zeballos and Pico were able to excavate almost the entire mound (an ellipsis of 79 m × 52 m and about 2.5 m high) in about two weeks (Figure 2.1a).

It was an artificial mount, where 28 human skeletons were recovered, as well as faunal remains, bone instruments, and pottery with zoomorphic appendages representing bird heads, mammals, and mollusks. The authors were sure that this was “the first tumulus of the prehistoric man of Buenos Aires” (Zeballos and Pico 1878: 252) and concluded that it corresponded to a “prehistoric monument of the famous Guaraní race.”

After the excavation, the Sociedad Científica created a commission to study the remains that had been found. However, due to various circumstances, these researchers never undertook the study of the materials, and the firsthand information remained only in the two short articles by Zeballos (1878) and Zeballos and Pico (1878). The site’s findings remained forgotten and were only analyzed and published by Torres (1907) almost 30 years later. Torres also had access to Zeballos and Pico’s unpublished documentation, and he incorporated the site into discussions at the time, particularly concerning the “mound builders” and the archaeology of the Pampas and Argentine Northeast regions. The figure of one of the modeled ceramics that represented a parrot’s head (“Papagayo”) coming from the site (Figure 2.1b) was reproduced by the British Museum’s researcher Thomas Joyce (1913: 261) to illustrate the findings on the Central and East of South America in one of the first syntheses of the continent’s archaeology. The same figure was also reproduced by Erland Nordenskjöld (1930: 27) to demonstrate the dispersion of the Arawak up to the La Plata River. This image stimulated hypotheses and models about the population dynamics of the South American lowland (Politis and Bonomo 2015). Based on great ethnographic, historical, and archaeological knowledge, Nordenskjöld produced a convincing model to explain the Arawak expansion in the Southern Lowlands. Except for a human skeleton, a few pottery fragments, and some bone artifacts that remain in the Museo de La Plata, the rest of the collection from the Zeballos and Pico excavation has been lost. The site is nowadays considered as the southernmost expansion of the archaeological entity known as Goya-Malabrigo (Politis and Bonomo 2012 and Chapter 6).

In the 1870s, Florentino Ameghino was starting his archaeological, paleontological, and geological investigations in the Rolling Pampa. One of the most important sites that he discovered very early in his career was Cañada Rocha on the margins of the homonymous creek (present Arroyo El Haras), a tributary of the Luján River (Ameghino 1880–1881). Almost the entirety of this site’s collection was lost, except for a part of the pottery and some faunal remains. To him, Cañada Rocha was formed in the “Mesolithic epoch,” when the great mammals of the Pleistocene were already extinct (Ameghino 1880–1881). The remaining collection has been studied with contemporary criteria by Salemme (1983, 1987) and also has been radiocarbon dated by Toledo (2011) and Buc and Loponte (2016) to be between ~ 550 and 450 BP, although the samples are heavily contaminated (see discussion in Politis et al. 2019 and Chapter 6).



Figure 2.2 (a) View of the Arroyo de Frías, approximately where Ameghino found the human skeletons; (b) possible location of Ameghino's excavation. Photo taken in 1970 by Luis A. Orquera.

Between 1870 and 1874, a very young Florentino Ameghino recovered archaeological materials at Arroyo de Frías, another affluent of the Luján River, including the skeletal remains of two individuals on the left bank of the creek (Politis et al. 2011) (Figure 2.2). The best-preserved skeleton, exhumed in 1870, was almost entirely articulated (Ameghino 1935: 865). Three years later, Ameghino unearthed more human remains, which he interpreted as belonging to the same skeleton recovered in 1870 (see discussion in Orquera 1971; Toledo 2016). However, H. Leboucq identified some of the bones as belonging to a second, taller, and more robust individual (Lehmann-

Nitsche 1907: 249–250; but see Ameghino 1935: 867). Two samples from this second individual were dated to 10,300 BP and 9520 BP (Politis et al. 2011a; see Table 2.1).

Ameghino's *La antigüedad del hombre en el Plata* was published in 1880 when he was only 26 years old and had caught up with the archaeological currents of the time. He proposed the great antiquity of the human peopling of the Pampas based on the putative association between lithic artifacts and bones of extinct mammals and the human-made marks in these bones. He placed these associations in strata assigned to the Tertiary (Miocene), comparable to the antiquity attributed to early humans by several contemporary European scholars (e.g., C. Vogt, P. Gervais, G. De Mortillet, A. de Quatrefages, etc.; see Ameghino [1880–1881]). The basic premise of his thesis on the South American origin of humankind is that humans descended not from any form of Old World monkey but from the ancient South American fossil primates, one of which – the *Homunculus patagonicus* – was named and described by him after the discovery of its bones in Tertiary deposits from South Patagonia.

Ameghino based his theory on a series of human skeletons, found by different people and in some cases in dubious circumstances (Hrdlička 1912; Lehmann-Nitsche 1907; Orquera 1971; Politis and Bonomo 2011; Politis et al. 2011a; Toledo 2009). One of them was Arroyo La Tigra's skeleton, also referred to as the "Miramar skeleton." Ameghino (1909a) attributed the latter to the Pliocene, despite an original Quaternary assignment by Santiago Roth and Robert Lehmann-Nitsche (1907: 335). Based on many allegedly primitive traits, Ameghino ascribed the remains to *Homo pampaeus*, an ancestral species of *Homo* created by him. Another human remain analyzed by him was the Arroyo Chocorí skeleton, found a few kilometers away from Arroyo La Tigra. Ameghino (1909a) included the Chocorí skeleton among the later representatives of the *Homo pampaeus*, and, against the geological position of the finding, considered it of a Late Pliocene age. Two human skeletons coming from Arroyo del Moro, also known by Malacara findings (Ameghino 1910a), were the base to define the extinct species of *Homo sinemiento* and were interpreted as two female individuals buried directly in the Early Pliocene layers. Finally, three skulls with part of the postcranial skeleton were recovered first in the proximity of Necochea, while the remains of another three individuals were found later (Ameghino 1909a, b). They were interpreted as adult female individuals with pseudocircular deformations and assigned to *Homo pampaeus* (Ameghino 1911).

All these skeletons were recovered in different circumstances and in many cases by non-qualified men, are from modern humans, and, except those from Arroyo de Frías, were dated to the Middle Holocene (Table 2.1). There is no evidence of older ages and they show how Ameghino failed in his bioanthropological interpretation as well as in his chronological estimations. His main problems when analyzing the skulls were their wrong orientation (especially

Table 2.1 List of radiocarbon dates from Pampas human skeletons discussed by Ameghino

Site and catalog number	Ameghino's taxonomy	Lab. number	Date (in yrs BP)	References
Arroyo de Frías (MLP 5582)	–	CAMS-16598	10,300 ± 60	Politis et al. 2011
Arroyo de Frías (MLP 5582)	–	OxA-8545	9520 ± 75	Politis et al. 2011
Meseta del Chocorí (MACN-Pv s/no.)	–	AA90124	7623 ± 78	Politis and Bonomo 2011
		Beta	6320 ± 40	Toledo 2009
Arroyo La Tigra o Miramar (MLP 401)	<i>Homo pampaeus</i>	CAMS-16173	7270 ± 60	Politis et al. 2011
Necochea (MACN-Pv 5004)	<i>Homo pampaeus</i>	AA90125	7162 ± 74	Politis and Bonomo 2011
		Beta	6220 ± 40	Toledo et al. 2011
Necochea (MACN-Pv 5008)	<i>Homo pampaeus</i>	AA90122	7013 ± 67	Politis and Bonomo 2011
Arroyo Chocorí (MLP 400)		CAMS-16593	7010 ± 60	Politis et al. 2011
		Beta	6830 ± 40	Toledo 2009
Arroyo del Moro (MACN-Pv 5141)	<i>Homo sinemto</i>	AA90123	6885 ± 73	Politis and Bonomo 2011
		Beta	6220 ± 40	Toledo 2009
Arroyo El Siasgo	<i>Homo caputiniclinatus</i>	UGAMS 22952	3590 ± 25	Escoteguy et al. 2017
Fontezuelas (MZUC)	–	UCIAMS- 85299	1985 ± 15	Politis and Bonomo 2011
Puerto de Buenos Aires (MACN-Pv 5003)	<i>Diprothomo platensis</i>	UCR-3590/ CAMS-44656	230 ± 40	Politis and Bonomo 2011

the angle of the frontal bone) and not having taken into account the artificial deformation of some of them. Having greatly contributed to the paleontology and the geology of the Pampas, Ameghino's shortcomings in understanding human evolution drove him to a dead end.

In the Salado River Depression, Carlos Ameghino found an incomplete human skeleton known as Arroyo El Siasgo, which his brother Florentino Ameghino (1910b) attributed to a new species, *Homo caputinclinatus*. As usual, other contemporary researchers (e.g., Hrdlička 1912; see discussion in Orquera 1971) rejected this interpretation, positing that the skeleton was modern and that the skull was artificially deformed. A recent analysis concluded that the human remains belonged to a Late Holocene juvenile (between 12 and 15 years old), buried in a primary inhumation, and that its skull showed circular artificial deformation (Escoteguy et al. 2017; see Table 2.1).

Besides these skeletons, there were two emblematic findings that Ameghino interpreted to sustain his model, although neither of them was recovered by himself. The first was the "Port of Buenos Aires Calotte" (MACN.Pc 5003), known by the name of *Diprothomo*. It refers to the remains of an incomplete human calotte found in 1896 by the workers of the dry dock of the Buenos Aires Port. Ameghino (1909a) proposed that it was a "direct precursor of humanity" and that it was found at an early stage of human evolution in the early Pliocene. The calotte was dated in the late 1990s (Politis and Bonomo 2011) and gave a very recent age (Table 2.1), which can be explained in two ways: a significant redeposit in ancient strata or a fraud performed by the people who supposedly discovered the calotte (Hrdlička 1912; Politis and Bonomo 2011).

The second emblematic finding was the Fontezuelas human skeleton found by Santiago Roth, some 2 or 3 km from the Arrecifes River (Figure 2.3). It was attributed by Ameghino (1889) to the Late Pliocene, against Lehmann-Nitsche (1910), who placed it to the Late Pleistocene (Orquera 1971: 140). The most relevant characteristic of this finding was that a fragment of *Glyptodon* armor covered it, which could not be dated despite several attempts. The human skeleton gave a Late Holocene age (Politis and Bonomo 2011; Supplementary Table 3.1) and therefore the association with the glyptodont was secondary.

While Ameghino was discussing the origin of humankind, fascinating discoveries were taking place in South Patagonia at Cueva del Milodón, a very large cave at Last Hope Sound near the Pacific Ocean (Figure 2.4). This cave was discovered in 1895 by Herman Eberhard, who found a large piece of *Mylodon* skin on the surface. Explorers from different countries, notably Otto Nordenskjöld, Francisco P. Moreno, Erland Nordenskjöld, and Rodolfo Hauthal, were among the many who visited the site at the end of the nineteenth century. The latter two separately excavated the site in 1899 (Hauthal 1899; Nordenskjöld 1996 [1900]). The published report



Figure 2.3 Original exhibition of the Fontezuelas skeleton (also named Pontimelo) at the Zoology Museum of the University of Copenhagen. The showcase is now in the storage room of the museum.



Figure 2.4 Cueva del Milodón, Ultima Esperanza, Magallanes, Chile.

of the excavation by Rodolfo Hauthal lacked stratigraphic information. The description by Roth and Lehmann-Nitsche of abundant and well-preserved animal remains was the main contribution of this excavation (Lehmann-Nitsche 1899; Roth 1899). These descriptions were detailed and accurate.

The excavation by Erland Nordenskjöld (1996 [1900]) was particularly important, given his careful stratigraphic observations. He recognized three main layers at Cueva del Milodón. His Layer A, on top of the sequence, was characterized by broken bones of extant species – mainly camelids and huemul – and some *Mytilus* valves. Layer B contained bones of the extinct American horse and camelids, while the presence of ground sloth was minimal. Finally, the faunal remains of his Layer C are dominated by ground sloth bones. In striking contrast with Lehmann-Nitsche (1902), he found no convincing evidence of an association between humans and ground sloths. He considered the possibility that humans were involved only in forming his Layer B, but the minimal human evidence found at the cave was confined to the top layer, in a deposit that was recently dated to around 2500 BP (Saxon 1979). It must also be emphasized that Nordenskjöld's work took advantage of what today we could call taphonomic insight, distinguishing bones with trampling marks or that had been abraded by sand (Martin 2013). The fact that Nordenskjöld's paper was originally published in Swedish (Nordenskjöld 1996 [1900]) conspired against its utilization by others. Only in the 1970s did an unpublished English translation begin to circulate, and finally, in 1996, a Spanish translation was available in print (Nordenskjöld 1996 [1900]). At the time, other studies of sloth remains were being published in Europe, basically with materials taken to England by Moreno (Moreno 1899; Smith-Woodward 1899, 1900). Since those materials were very well preserved, including dung, bones with soft tissues adhered, and a piece of skin of an extinct sloth, the fame of the cave attracted relic hunters who excavated to produce collections to be sold in Punta Arenas first and Europe after (Dabbene 2009; Emperaire and Laming 1954; Lehmann-Nitsche 1904; Martinic 1996; Mol et al. 2003). Some collections were sold to the Rothschild family and the British Museum (Natural History) in 1904 (Burleigh et al. 1977; Chatwin 1979: 275; A. Currant, pers. comm.), while others found their way to museums in Berlin or Zurich, among other institutions.

Given what was found on the surface of the cave at the time of its discovery, the site was on the covers of newspapers around the world. Accordingly, in contrast to the case of Elizabeth Island, these findings produced a huge impact. The remarkable discovery of well-preserved fragments of the skin of *Mylodon darwini*, a large extinct ground sloth, together with the rumor that it was still alive in Patagonia not only attracted wide attention but also prompted intense research. This situation reached a climax when the explorer Carlos Ameghino reported to his brother Florentino that perhaps there was a basis for the existence of living ground sloths (Vizcaino 2011). Apparently, the explorer Ramón Lista



Figure 2.5 Excavations at Cueva del Milodón in the zone where Hauthal defined a sloth corral. Photo courtesy Fabiana Martin.

observed an animal similar to a “pangolin” (*Manis* sp.), which was assumed to be a ground sloth. On that basis, Florentino Ameghino published a short note coining the name *Neomylodon listai* for what he considered a new species of sloth (Ameghino 1898). He also suggested that natives used the denomination *Jemisch* in Patagonia for the sloths. Of course, not all accepted that sloths were still roaming in Patagonia, and according to Lehmann-Nitsche (1902), *Jemisch* was used not for sloths as interpreted by Ameghino, but for either *Lutra felina* or *Felis onca*. At any rate, when the news about this discussion was known across Europe, several expeditions were mounted to hunt or capture sloths (Lönnberg 1899; Podgorny 1999b; Prichard 2003 [1902]; Vizcaíno 2011). Andrés Tournouër, a French explorer, even reported having seen a living sloth at a Patagonian lake (Tournouër 1901). Nevertheless, that aspect of the story was forgotten after those expeditions failed to discover any living sloths. However, the fascination with the well-preserved skin found at Cueva del Milodón persisted.

Hauthal returned to the cave for further digging in 1900 and collected materials that were studied and published by Roth (1904) and Lehmann-Nitsche (1904). Again, no stratigraphic information was presented. Hauthal’s most famous proposal was that sloths were kept within a corral by humans (Figure 2.5). In other words, some kind of domestication of sloths was

considered. It was Hauthal's way of interpreting the large accumulations of sloth dung on the surface of the cave. This corral idea was never developed and without much discussion was promptly forgotten. However, the subject of the association between humans and extinct fauna was persistently debated during the twentieth century (Borrero et al. 1991; Emperaire and Laming 1954; Saxon 1976), particularly at the time of the disappearance of the sloths.

Stratigraphic work by Earl Saxon during the 1970s supported the notion of Holocene survival of sloths (Saxon 1976). Later research clarified the stratigraphy and showed the importance of the redeposition of sediments in some sectors of the cave. As a result, there was no basis for the existence of sloths during the Holocene (Borrero et al. 1991). At any rate, the idea of sloths hunted by humans in that region was prevalent at the end of the twentieth century on the basis of both presumed cut-marks and associations of bones and tools (Borrero 1986a; Nami 1994), a situation that was going to change with the incorporation of taphonomic studies (Borrero et al. 1988; Martin 2013).

Returning to the Pampas, the final research of Florentino Ameghino in the field of archaeology refers mainly to his findings at the Atlantic seashore, in which he postulates the existence of the "split stone" and the "broken stone" industries (Ameghino 1909b, 1910c, d), and attributes some burnt sediments known as *tierras cocidas* (baked earth) to hearths made by humans (Ameghino 1907, 1909c). He believed that all these materials were evidence of the human presence in the Tertiary. He defined the "split stone industry" in Punta Canteras as characterized by a manufacturing process different from direct percussion or pressure, which were the reduction techniques known at the time. This technique, which is nowadays known as "bipolar," was used for the reduction of the coastal pebbles that were found at the Pampas seashore (Figure 2.6) and was used for the manufacturing of a distinctive instrument of this industry, the *hachette-coin*, or "wedge-shaped ax" (Ameghino 1910d: 195). Ameghino claimed that the "split stone industry" was associated with the *Homo pampaeus*.

The proposal of the existence of a "split stone industry" of Tertiary age was first questioned by Outes (1909). On the basis of his fieldwork in the same area, this author stated that the bipolar products on the pebbles were synchronous with the later unifacial artifacts knapped by direct percussion on quartzite, characteristic of the Pampean inland. This interpretation is currently understood as the most likely (see Bonomo 2005).

With the name "broken stone industry," Ameghino denominated metaquartzite and subarkose pebbles from Ventania with negative scars from flaking and irregular flakes from the famous Monte Hermoso cliff, currently known as Farola Monte Hermoso (Figure 2.7a). Although during his paleontological investigations on the Monte Hermoso cliff he had found a series of flakes and broken pebbles (Ameghino 1889: 75), it was only in 1910, when he visited this locality along with Ales Hrdlička and Bailey Willis, that he paid any



Figure 2.6 Artifacts made of seashore rounded cobble attributed to the “split stone Industry” by Ameghino (1907a).

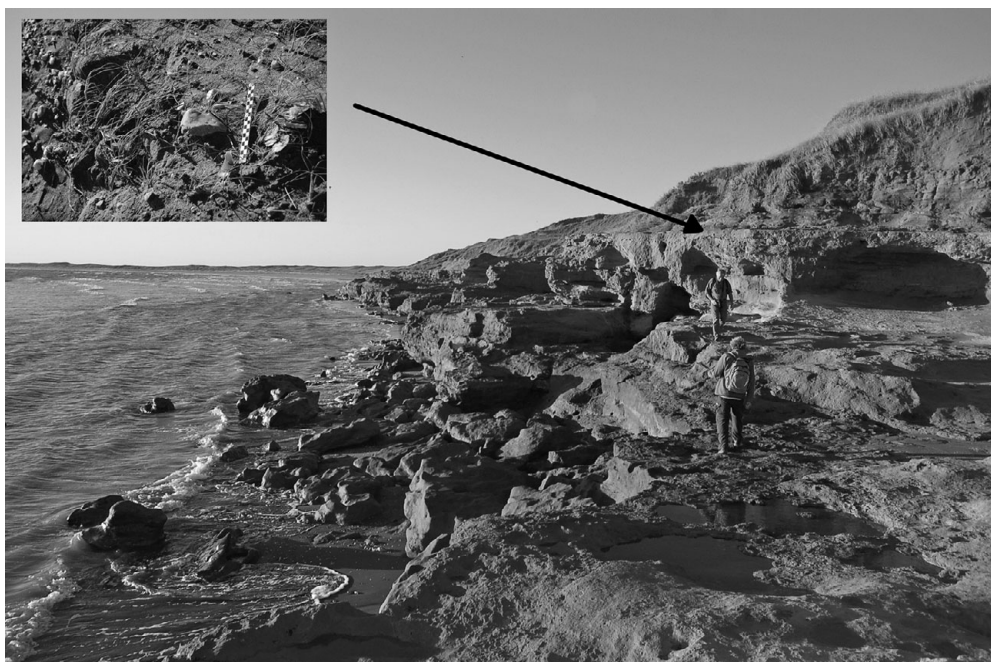


Figure 2.7 View of the Monte Hermoso cliff with the position of a metaquartzite artifact assigned by Ameghino to the “broken stone industry” in the Lower Member of the Punta Tejada Formation; (inset) detail of a “broken stone” artifact.

attention to these materials. Shortly after, he proposed the existence of the “broken stone industry,” estimating its age in the Early Miocene, because of its stratigraphic position and the crudeness of its technology (Ameghino 1910c). Recent studies at the site point out that the pebbles used as raw material are available at some places on the coast as a product of fluvial transport of paleochannels that transported rocks from Ventania (Bayón and Zabala 1997). These lithic pieces can be found in situ in the early member of the Punta Tejada formation (Figure 2.7b), which has been estimated to have an Early and Middle Holocene antiquity (Bayón and Zavala 1997).

The third of Ameghino’s archaeological pillars was the “baked earth,” a material that resembled bricks, pieces found in the tertiary strata in the seashore banks (Ameghino 1907, 1909c, 1910e). For him, it was a human product made for burning grasses and maintaining the fire: this was how the human ancestor *Tetraprothomo* was able to keep hearths active in the Miocene. Currently, these geological features are interpreted as Miocene impacts by extraterrestrial materials (Schultz et al. 2006).

In short, Ameghino developed his own theory about the American origin of humanity, proposing human precursors from the Pampean region from times as old as the Early Pliocene. The interpretations of the findings attributing marks and anthropic fractures on bones of extinct fauna and his interpretations of human skeletons were the object of strong controversies throughout Ameghino’s scientific life (e.g., Burmeister 1891; Lehmann-Nitsche 1907; Outes 1909; Outes et al. 1908). In no way can his ideas be considered to have been widely accepted by the country’s scientific community at the time, although it must be recognized that he generated a debate that remained active for decades.

The most complete and detailed revision of the findings and Ameghino’s interpretations of the human remains is Orquera’s Grade Thesis (1971), which, sadly, remains unpublished. The geoarchaeological aspects have been recently discussed by Toledo (2009, 2016), while the political dimension and the historical context of production have been treated in detail by Podgorny (2009, 2021). Above all, she has revealed how the Socialist Party used Ameghino as a tool of political propaganda and how, in a way, his archaeological and paleontological enterprise was a “family business” (Podgorny 2021).

Darwin’s ideas concerning the evolution of species did not play a significant role in interpreting initial archaeological observations. Darwin himself published short references to archaeological remains on the coasts of Patagonia (Darwin 1906 [1839]), but in the main, his Fuegian ethnographic descriptions – not to mention his key paleontological discoveries – were more detailed and significant. He also published pioneer taphonomic observations on guanaco remains made on the banks of the Santa Cruz River during the expedition directed by Fitz Roy in 1832 (Darwin 1906 [1839]). He observed significant accumulations of bones near the bushes and explained that, compared with

other concentrations of scattered bones, they did not appear to be the result of carnivore activities. Recent taphonomic work confirmed those observations and attributed the bone accumulations to winter stress (Borrero 2009a). People such as the naturalist William Henry Hudson, a defender of Darwin's evolutionary theory, collected archaeological materials in North Patagonia without considering its implications. Their importance is mentioned in Hudson's *Idle Days in Patagonia* (1917 [1893]), but they produced no impact. These materials were analyzed in England by Augustus Lane Fox Pitt-Rivers, one of the founders of archaeological methodology (Lane Pitt-Rivers and Rudler 1875). Certainly, Pitt-Rivers used an evolutionary framework, but one more akin to Herbert Spencer's ideas than Darwin's (Franco 2019). The Ameghino brothers and many others were staunch supporters of Darwin's ideas, but they were focused on paleontology and paleoanthropology, while people like Carlos Burmeister were against those ideas. Burmeister was not a minor figure, since he was the director of what is now the Museo Argentino de Ciencias Naturales "Bernardino Rivadavia," in Buenos Aires, and the author of *Geschichte der Schöpfung* (History of Creation) (Burmeister 1843), which was a classic reference at the end of the nineteenth century in Europe. Nevertheless, his influence on Patagonian and Pampean research was not that important since people who worked with him at the museum, such as Luis Jorge Fontana (1976 [1886]), were more important as explorers, and most of his fieldwork was related to geological and naturalistic observations, rarely accompanied by information about the existence of rock paintings or stone tools (Burmeister 1891, 1892).

The turn of the twentieth century was a time when the completion of the geographical exploration of Patagonia was taking place under the impetus of people such as Francisco P. Moreno, Carlos Ameghino, Ramón Lista, Clemente Onelli, Jorge Claraz, and Carlos Moyano. These explorers described archaeological sites or collected archaeological materials, especially Moreno (1874), who promised a detailed description of sites and human remains that was never produced. Henry de la Vaulx (1901), who was influenced by Moreno's work, explored North Patagonia collecting human skeletons and archaeological artifacts today deposited at the Musée de l'Homme and Musée du Quai Branly, respectively (Vezub 2009). However, these observations were rarely followed by in-depth analysis. Paintings on rock walls were discovered and described (Bruch 1904; Burmeister 1891, 1892; Moreno 1879) and were sometimes interpreted as texts or attributed to "extinct races" (Fiore and Hernández Llosas 2008). Bruch also found human remains and pottery on the surface of one small cave with paintings (Bruch 1901). Major discoveries, like the naturally mummified human skeleton at Punta Gualicho in Lago Argentino (Echeverría Baleta 1995; Moreno 1879; Vignati 1934), acquired important museum value but were not readily incorporated into the initial archaeological discussions.

THE FIRST SHIFT: TOWARD A MORE
SCIENTIFIC ARCHAEOLOGY

In the early twentieth century, when the main wave of European migration had already arrived, the profile of Argentinean society was changing quickly as anarchist and socialist ideas permeated the country. Hence, the ruling elites promoted criollo and Spanish Catholic values and traditions. At the same time, archaeologists started to look for the indigenous roots of Argentinean identity. The exegesis of historical documents was one of the primary sources of information. Other scholars were still discussing the origin of humankind in Argentina, which was Ameghino's legacy.

During this period, Felix Outes (1904) published the results of his research at the Hucal site, in the Transversal Valleys area, the first site discovered in the western Pampa, and recognized two "well-delimited industries" (Outes 1904). However, he only analyzed the lithics but did not collect them since they were given to him by an amateur who picked them up on the surface in the surroundings of the local train station (Berón 2013). Until the 1950s, this was the only archaeological site studied in some way in the western Pampa.

Among the first exhaustive and systematic archaeological reports produced in Patagonia were descriptions of large sets of artifacts from different areas, most of them without any context, also made by Outes (1905). Some trips with archaeological goals were also carried out (Aparicio 1937a,b). Descriptions of ethnographic objects were also published, but they produced no impact on archaeological research (Gusinde 1982 [1937], 1921; Lothrop 2002 [1928]; Outes 1906).

At this time, Torres (1911) excavated various isolated earth mounds in the Lower Delta of the Paraná River, and, just as Lista (1878) had, he considered that they had been raised by the indigenous people to avoid the recurring floods in the area and to be used as cemeteries. Torres attributed the differences observed in the pottery decoration to different ethnic groups from historical times and linked the zoomorphic appendages to the southern Arawak, known as Guanás.

In 1910 Ales Hrdlička and Bailey Willis arrived in Argentina to explore where human remains had been found and were used by Ameghino to propose his autochthonism theory. They also collected lithic material at surface level in some coastal sites, which William Holmes later studied. One by one, Hrdlička carefully analyzed the human remains studied by Ameghino and compiled the other published interpretations. Hrdlička's travel diary shows his initial skepticism despite the Ameghino brothers' enthusiastic welcome (Podgorny and Politis 2000). He strongly criticized Ameghino's ideas, with resounding success, using the same method he had used to reject the Pleistocene antiquity of humans in North America: he demanded well-documented findings, clear associations, and unquestionable stratigraphic

identification (Hrdlička 1912: 19). By applying these criteria with regard to the “Early Man” in South America, Hrdlička (1912: 386) concluded that there was no evidence of geologically ancient human remains, nor of any precursor of humanity, which was concordant with his model of post-glacial peopling of America. As for the so-called split stone and broken stone industries, Hrdlička, Holmes, and Willis determined their antiquity to be very recent (a few centuries before the present time), noting that the coastal sites were in a superficial position and contained associations of artifacts of black basalt pebbles (“black stone industry”) and white quartzite (“white stone industry”) (Hrdlička 1912: 121). In addition, they were linked to the modern coastline, therefore corresponding to very late periods. For them, the coastal sites would have functioned as workshops and, because of that, would have been made up mainly by cores or waste produced during the knapping of the abundant pebbles available in the littoral (Holmes 1912; Hrdlička 1912). The further research of Aparicio (1932), as well as Bonomo’s (2005) recent investigations in the seashore of the Interserrana area, supports this interpretation (see Chapter 6).

The causes of the quick deterioration of Ameghino’s model and the acceptance of the interpretation of Hrdlička, Holmes, and Willis were multiple and complex. In the first place, success was a consequence of the dubious nature of many key findings and Ameghino’s exaggerated chronological interpretations. The weaknesses of the Ameghinian model had already been pointed out, less successfully, by his local contemporaries. However, other factors played a part as well. In 1912 *Early Man in South America* (Hrdlička 1912) was published a year after the death of Ameghino; none of his followers had the energy or the capacity he had had to defend his ideas.

Nevertheless, one of the main causes was that both Hrdlička and Holmes anticipated a notable change in the interpretation standards and archaeological verification. The criteria applied to reject Ameghino’s model were universally accepted in the later period: the Historical-Classificatory period, of which both authors were precursors (Willey and Sabloff 1980). The end of Ameghino’s production coincided with the beginning of a period of substantial theoretic-methodological renovation. In the nascent field of professional anthropology, the crisis and eventual abandonment of the evolutionist paradigm was happening (Palerm 1977). The origins of the evolutionist crisis of the beginning of the century had multiple sources: Mendelian genetics, non-Darwinian biological evolutionism, the increasing fieldwork by anthropologists and archaeologists, and so on (Palerm 1977). In consequence, besides the negative empirical testing of the very ancient peopling model, Ameghino’s work also suffered the impact of anti-evolutionism and this paradigm’s world crisis.

Hrdlička’s, Holmes’, and Willis’ work circulated rapidly through the world, successfully bringing evidence of human modernity to the Pampean region. However, in Argentina, and especially in the Atlantic seashore, investigations



Figure 2.8 View of the Túmulo de Malacara excavated by Carlos Ameghino and Luis Maria Torres in 1913. Photo Archivo del Museo de La Plata.

continued with significant energy (Daino 1979). The topic became a domestic discussion, and many local researchers participated in it (e.g., Carlos Ameghino, Santiago Roth, Joaquin Frenguelli, Felix Outes) in favor of the high antiquity against it or adopted intermediate positions (Orquera 1971; Podgorny 2009).

During this period, the Túmulo de Malacara was discovered by Luis M. Torres and Carlos Ameghino in the course of an intensive exploration of the Pampas seashore (Torres and Ameghino 1913) (Figure 2.8). The description of the findings, which remained unpublished for almost 50 years, was made by Vignati (1960: 104–110). The site was in the seashore dunes, close to the confluence of the Nutria Mansa and Del Pescado creeks, and the excavators interpreted it as an anthropic construction. Inside, they found a minimum of 13 individuals interred in both primary and secondary burials. Based on several features, Torres and Ameghino (1913) concluded that the tumulus was relatively recent. A sample from these remains gave a date of 2710 BP, confirming the initial assumption (Politis et al. 2011a).

The discussion regarding the “split stone” and “broken stone” industries continued through the following decades. Frenguelli (1931) and Vignati (1948) questioned Ameghino’s interpretations in regard to the “broken stone industry”; in their opinion, this material was much more recent. To Imbelloni

(1928), this “industry” was not as ancient as Ameghino proposed, nor as recent as Hrdlička and Holmes claimed. Fundamental was the research of Aparicio (1932) about the archaeological sites in a superficial position of the Pampean seashore. He agreed with Outes (1909) and Hrdlička (1912), claiming that the “split stone” and “broken stone” groups were recent and differentiated only by the raw material and the reduction technique used. The crude appearance of the coastal artifacts was a consequence of the low quality of the rounded cobbles available on the seashore, the low frequency of finished instruments, and the scarcity of pottery (Aparicio 1932).

In comparison, archaeological discussions in Patagonia were less vibrant at the turn of the century. The rejection of Ameghino’s ideas about the origin of humans at the Pampas (Hrdlička 1912) affected the development of Patagonian archaeology, basically by negating the possibility of a great antiquity for the process of peopling. Indeed, due to the discussions about the Pampean sites, few were inclined to think about Pleistocene human occupations in Patagonia until late in the twentieth century. Influential authors such as José Imbelloni (1955) maintained a very short chronology for the peopling of the Americas. Claims of a Late Pleistocene antiquity for human remains found at Mata-Molle in North Patagonia can be counted among the few exceptions (Vignati 1957–1959). However, those remains have recently been dated to ca. 4500 BP (Fernandez 1983). The human remains recovered by Bird in association with extinct fauna at Cerro Sota Cave were for decades considered to be very old and were even described as “Paleoindians” (Turner 1992). However, they were dated to approximately 3700 BP (Hedges et al. 1992). Nevertheless, the acceptance of deep time in Patagonia occurred when evidence for human occupations associated with Late Pleistocene fauna was confirmed (Bird 1938), but it was not widely acknowledged (Figure 2.9).

John M. Cooper published a detailed compilation of Fuegian historical written sources in 1917, where he resumed, studied and commented on the results and observations made by hundreds of sailors and explorers who visited Tierra del Fuego and the adjacent territory. Regretting the paucity of archaeological information, he wrote that investigations were “urgently needed” (Cooper 1917: 218). Despite this limited panorama, he ventured some ideas concerning the order of arrival of the different ethnic groups to Tierra del Fuego. He accepted a considerable age for the creators of the shell middens and inferred that “the Magellanic archipelagos have been inhabited for a very long period” (Cooper 1917: 219). It is challenging to calibrate what was a “considerable age” at that time, but it clearly sustains the suggestion that people occupied the archipelagos well before the arrival of European sailors.

On the other hand, the results of an expedition by Charles Wellington Furlong to Tierra del Fuego in 1907–1908 included maps with the distribution of ethnographic camps. He also presented information about the distribution of shell middens – particularly at Wulaia, on the Murray Channel – as well as



Figure 2.9 Fell Cave. A first solid case of Late Pleistocene fauna associated with human foragers in Patagonia. Photo courtesy Fabiana Martin.

descriptions of hunting and fishing techniques used by the Yahgán and the Selk'nam (Furlong 1909, 1917a). Wulaia is a famous Yahgán camping place, well known to many travelers and famous because of the killing of members of the Missionary Society in 1859 (Chapman 2010). Furlong proposed that the Fuegian people arrived on foot by traveling down the eastern Patagonian plains, while the “fisherfolk” arrived “in their canoes down the Patagonian channel ways” (Furlong 1917b: 5), leaving little room for local adaptation. He also maintained that the canoe people “reached Tierra del Fuego before the foot peoples” (Furlong 1917b: 7), an interpretation that appears impossible to sustain today.

Work by Samuel Lothrop in Tierra del Fuego in the 1920s produced interesting descriptions of tools, estimations of refuse accumulation rates, and maps with the distribution of shell middens on the coasts of the Beagle Channel (Lothrop 2002 [1928]). He also inspected three archaeological sites in the northeast of the island and described some of the tools, emphasizing the presence of bola stones. Lothrop also accepted that people already occupied the southern archipelagos before the arrival of European sailors.

Milciades A. Vignati excavated at Río Chico in the North Tierra del Fuego in the 1920s (Vignati 1927), and also worked at Bahía Solano near Comodoro

Rivadavia, in the interior of Santa Cruz, in the coasts of Lago Buenos Aires, and in the world-famous Cueva de las Manos (Vignati 1934, 1950). Cueva de las Manos became the center of long-term research during the 1970s and 1980s, given its fantastic pictographs, particularly the hand negatives and guanaco hunting scenes. It also became one of the few archaeological sites in Argentina to be protected by UNESCO. Vignati delegated fieldwork at Cueva de las Manos to Alberto Rex González, then a young doctoral student from the University of Columbia, just returned to Argentina. The publication of the preliminary results obtained at Cueva de las Manos, including some good drawings (Vignati 1950), led to the recognition of its importance and prompted interest by other archaeologists (e.g., Gradin et al. 1976). Vignati also worked in North Patagonia, where he concentrated his efforts in the Limay basin (Vignati 1934). His Fuegian sequence at Río Chico was interpreted mainly in ethnographic terms. For example, Vignati considered the lower occupations of his sequence at Río Chico as a testimony of the presence of Haush groups, after which Selk'nam occupations followed (Vignati 1927). The unreliability of this interpretation is clear now when evidence is mounting showing the Haush as a late cultural configuration (Borrero 2011).

In the Pampas region, the period from the publication of *Early Man in South America* to the end of the 1940s was characterized by a certain empiricism, lacking a defined theoretical framework. Intense discussions on the findings on the seashore took place, and in some cases, they were plagued by ad hominem arguments and findings of dubious authenticity (see Daino 1979; Fernández 1982; Orquera 1971). Each new discovery contributed to the discussion unevenly, depending on the researcher who was interpreting it, and the methods and techniques used to produce results were, a lot of the time, mutually incompatible.

Torres' (1911) scheme of cultural development for the Paraná River Delta was later refined by Outes (1918a), who, on the basis of pottery and other elements, distinguished three successive groups from the Middle Paraná to the Martín García island in the La Plata River. The first had a "very simple" pottery, with few incised or painted samples associated with bone instruments and burials in elevated terrains, "apparently tumuli." The second group built the mounds (used for human burials) and created pottery with zoomorphic appendages, bone tools, and stone artifacts. The third group was the Guaraní, with large polychrome and corrugated funerary urns, polished stone axes, and a few bone instruments. This cultural scheme had a strong acceptance among the researchers who studied the archaeology of the Paraná River during the following decades. Around the same time, the excavation of various sites, such as the Brazo Largo II, brought new findings that showed the archaeological heterogeneity of the area (Politis et al. 2017; Figure 2.10).

The methods of stratigraphic seriation, the lithic and ceramic typology, the classification into cultural units, and the direct historical approach that prevailed in the North American archaeology of the time (Willey and Sabloff



Figure 2.10 Excavation of the Túmulo de Brazo Largo II in 1923 by Museo de La Plata employees Octavio Fernandez and Pablo Gaggero. Photo from the Museo de La Plata Archives.

1980) did not go through significant development when it came to the Pampas and Patagonia investigations. However, the research of Samuel Lothrop (1932) on the Lower Delta of the Paraná River and Junius Bird (1938) in South Patagonia somehow brought to the region the methodology that was being used in North America. However, it certainly was not wholly new in the area, since, in a certain way, Torres had applied it 20 years before.

Among Lothrop's contributions stand out the intention to recover the context, the exhaustive handling of the chronicles to interpret the archaeological record, and extensive excavations (by shovel and contracting local workers, as was the custom at the time) in three sites: Arroyo Malo, El Cerrillo, and Arroyo Sarandí. He basically distinguished between three cultures. The first had cemeteries with urn burials with either painted or corrugated pottery and labrets and stone celts; this culture was attributed to the Guaraní and was typified at the Arroyo Malo site. The second culture was characterized by its pottery, zoomorphic representations, and primary flexed burials placed in "artificial mounds like those of North America" (Lothrop 1932: 183). The third culture was distinguished by plain pottery with simple forms, sometimes decorated with incised patterns or painted bands. Burials

were placed in naturally elevated land. This third culture is typified in the Arroyo Sarandí and was attributed by Lothrop to the Querandí people.

The impact of archaeological research by Junius Bird, representative of the American Museum of Natural History, New York, was more important. Bird was an archaeologist with extensive field experience in Arctic and subarctic lands, including the first test pit at the now-famous bison jump site Head-Smashed-In, Canada (Reeves 1978). Clark Wissler, then director of the anthropology division of the museum, was interested in constructing chronological frameworks for the different areas where archaeologists from the museum were working (Freed 2012), and accordingly, that was also one of Bird's primary goals. It was a time during which no efficient dating techniques existed, but Bird was prepared to make useful estimations calculating sediment accumulation rates, observing stratigraphic order, and using geomorphological relationships with fluctuating lakes (Bird 1938). During long field seasons, he worked at several places in the Chilean side of Patagonia and Tierra del Fuego, including an exploration of the archipelagos between Chiloé Island and Tierra del Fuego. This dangerous enterprise was accomplished in about five months in a 6-meter-long boat, "seeking and checking archaeological sites among the islands" (Bird 1988: 1). His observations were not detailed but were instrumental for the recent modeling of the use of the channels by maritime hunter-gatherers (Borrero 1982). In fact, even today very few places along Bird's route were systematically interrogated by archaeologists (see Reyes 2021). Once in Punta Arenas, Bird started a series of land explorations using a Ford Model T that included Laguna Blanca, the coasts of the Strait of Magellan, and the Pali Aike Volcanic Field. The access to most of those places, lacking roads at the time, was very difficult, a situation that was even more complicated given the harsh climatic conditions. Since the end of the 1930s, he published some of his results, which clearly suggested a Late Pleistocene age for the first inhabitants of Patagonia (Bird 1938, 1946). When the technique of radiocarbon dating was discovered at the beginning of the 1950s, Bird was among the first archaeologists to contribute samples. He sent charcoal samples from Patagonia to Willard Libby's laboratory, and the results of those analyses confirmed a Late Pleistocene age for human occupations at Fell Cave at the Pali Aike Volcanic Field, with the added significance that those humans were interacting with extinct fauna (Bird 1988). These results are basically confirmed by more recent research (Martin 2021; Waters et al. 2015). Based on his excavations in Fell and Pali Aike Caves and his tests at a number of sites along South Patagonia, Bird presented a cultural sequence organized into six periods. This sequence started with the association between humans and extinct fauna and finished with the European contact in the sixteenth century (Bird 1946, 1988). This sequence was a classic example of the cultural-historical approach that was current in the United States (Freed 2012; Harris 1983 [1968]) and provided the chronological framework for the archaeology of Patagonia for decades.

Unfortunately, Junius Bird never published his results in any detail, so most of his important field accomplishments remained scarcely known for decades. It was only with the editorial work of John Hyslop in the 1980s that most of Bird's results in South Patagonia began to be widely known and used (Bird 1988). Hyslop not only worked with Bird's notes and photographs from Fell Cave, Pali Aike Cave, Cerro Sota Cave, Cañadón Leona, and Cueva del Milodón, but also included information organized by Ian Tattersall about the human remains and Thomas Amorosi about the faunal remains, as well as reports about the carnivore remains and the palynologic sequence at Fell Cave (Clutton-Brock 1988; Markgraf 1988). Detailed tables compiled the basic list of tools obtained at each of the sites. Hyslop also commissioned a biography of Junius Bird by Gordon Willey (Willey 1988).

Bird also worked during the winter months in South Tierra del Fuego at the Beagle and Murray Channels and produced a basic scheme of human occupations for that area divided into two periods initially named "Shell Knife Culture" and "Pit House Culture" (Bird 1946). Later work by Menghin (1956) commented on some aspects of this scheme, but it was necessary to wait until the 1970s for intensive and significant stratigraphic work (Orquera et al. 1977). Orquera and colleagues worked in 1975 at the site Lancha Packewaia on the North Coast of the Beagle Channel, where they isolated two main archaeological components, the older reaching ca. 4000 BP. Large lithic tools, including projectile points, and bone tools, including harpoon heads, characterize these older occupations. They were associated with abundant guanaco and pinniped remains, complemented by birds, fishes, and mollusks. A different adaptation appears to be represented in the upper layers, which are dated to within the last 1,000 years. Marine mammals and bone technology dominate them. Despite these differences, later studies by the same team integrated both occupations within a single tradition. This excavation was immediately followed by research at the Túnel site, not too far from Lancha Packewaia, where they found even older occupations starting around 6,500 years ago, based on the same sets of resources, routinely accompanied by abundant bone tools (Orquera and Piana 1999).

During this period, some archaeological localities would be important in defining the first archaeological entities of the Pampas. The most important one was Goya-Malabrigo, which derives its name from the union of two of the most studied localities in the beginnings of the archaeology of the Argentine Northeast: Goya, in the Corrientes province on the left bank of the Paraná River (Ambrosetti 1894), and Malabrigo, to the southwest of the former (Frenguelli and Aparicio 1923). Early on, both type-localities were recognized as the focal points of an area with a greater abundance of zoomorphic appendages, whose distribution would reach the Paraná River's Delta, although with less density (Aparicio 1939; Serrano 1930). The Túmulo de Campana was recognized as another of the type sites of this archaeological entity as well and as its southernmost expression.

At this time, Antonio Serrano started his pioneer research in the Argentine Northeast. His early investigation was basically descriptive notes or schematic generalizations (Serrano 1930, 1934), but soon he developed integrative models (Serrano 1950, 1955) and placed his research in a cultural-history theoretical framework that he refined throughout his career (Serrano 1972). The work of Serrano was intensive and covered many areas of the Argentine Northeast. Without any doubt, he was the first to systematize the archaeological knowledge of the region, producing an impact that is still recognizable.

In 1939, long before obtaining his doctorate in archaeology at the University of Columbia, González (1947) carried out his first excavation at the archaeological site of Cerro Grande del Paraná Pavón, which differentiates itself from the aeolian elevations recognized by Frenguelli (Frenguelli and Aparicio 1923) and from the earth mounds with possible intentional addition of sediments described by Torres (1911). Like Lothrop (1932), he proposed that the site had been formed from a small natural elevation that had slowly increased its volume because of natural deposition and, in a lower proportion, because of human intervention. This site has been now attributed to the archaeological entity Goya-Malabrigo and dated to 630 BP (Bonomo et al. 2017).

In 1946, Gaspar (1950), a disciple of Serrano, started his investigations in the islands in front of the city of Rosario, where he excavated the anthropic mound Cerro Grande de la Isla Los Marinos. Interestingly, this author associated a hollow immediately adjacent to the hill with the extraction area of the sediments used for construction. The identification of the area of borrowing was something new at the time. In addition, he extracted an important quantity of human skeletons, a number of them painted with abundant red ochre. This site has been recently dated to 460, 590, and 660 BP (Kozameh et al. 2018).

THE AUSTRIAN-GERMAN CULTURAL-HISTORY SCHOOL: A NEW PARADIGM ARRIVES AT THE PAMPAS AND PATAGONIA

The arrival of foreign anthropologists such as José Imbelloni and Alfred Metraux in the first half of the twentieth century was instrumental in spreading the cultural-history approach represented in two main variants, one closer to the Anglo-Saxon cultural history (e.g., Serrano 1955), and another related more to the Austrian-German orientation (the so-called *kulturkreise* school) (Boschin and Llamazares 1984; Kohl and Perez Gollán 2002; Politis 1988). Using the framework of Anglo-Saxon cultural history, Willey (1946) and Willey and Howard (1948) synthesized what was known at the moment of the Pampean archaeology based on the published information. Their articles did not contribute significantly to the regional archaeological knowledge, and

their only merit was organizing and spreading published data of diverse origin and quality to the English-speaking world.

On the other hand, the Austrian-German cultural-history school represents the second period, in which a theoretical-conceptual body acquired popularity for over 30 years and marked the archaeological production in the Pampas and Patagonia from the 1950s to the 1970s. Numerous papers have been published that develop the theoretical basis of this school (Bórmida 1964; Imbelloni 1936; Menghin 1931), recognizing F. Ratzel, L. Frobenius, F. Graebner, W. Schmidt, W. Koppers, among others, as precursors at an international level. This current of thought has been the object of many critical analyses, not only from a strictly scientific point of view but also concerning its political dimension (Arnold 1990; Boschín and Llamazares 1984; Fontán 2005; Kohl and Pérez Gollán 2002; Madrazo 1985; Mederos Martín 2014; Politis 1995, 2021; Silla 2021).

In 1948, Oswald Menghin arrived in Argentina. He was a prestigious Austrian prehistorian affiliated with the Nazi regime in Austria during World War II (Fontán 2005; Kohl and Pérez Gollán 2002). Marcelo Bórmida, who had arrived from Italy a year before, became one of the most known of Menghin's disciples in Argentina. The arrival of Menghin and Bórmida at the end of the 1940s had a strong theoretical impact and opened a new field of investigation on sites related to prehistoric hunter-gatherers in the Pampas and Patagonia aimed at identifying the temporal depth of human occupation there.

Menghin was a fervent sponsor of the "theory of cultural circles" (*kulturkreise*), a diffusionist current that came to be known in South America by the name "Austrian-German cultural-history school" and was even self-described in its local version as the "Buenos Aires school" (Luco 2009). Menghin had made transcendent contributions toward the development of this school: he had written the well-known book *Weltgeschichte der Steinzeit* (*World History of the Stone Age*), and it was precisely he who proposed the existence of one of the three primal cultural cycles: the "Protolithic bone culture" (Menghin 1931). This cultural cycle provided the framework within which sites considered to represent early cultural manifestations in the Pampas and Patagonia were accepted (Menghin 1957a). Some cases led to what now may be seen as innocent interpretations of surface materials (Sanguinetti de Bórmida 1970a), while others led directly to the acceptance of bone pseudoartifacts as representatives of the cycle (Curzio 1976). Menghin's investigations in Egypt and various places in Europe had won him international prestige. His academic position, first as a professor and then as the rector of the University of Vienna, had acted as an institutional trampoline. He was, without a doubt, one of the best-known prehistorians of the time and a sizable opponent of Vere Gordon Childe. From different theoretical positions, they were discussing the world's prehistory.

In the field of Pampean archaeology, the founding research of the Austrian-German cultural-history school was carried out by Menghin and Bórmida in



Figure 2.11 View of the entrance of Gruta del Oro, excavated by Oswald Menghin and Marcelo Bórmida in 1949. Photo courtesy Agustina Massigoge.

1949, when they excavated the Oro and Margarita caves in Tandilia (Figure 2.11). The results were published the next year (Menghin and Bórmida 1950), and from that moment on, the school was the almost exclusive theoretical current until the end of the 1960s. The last archaeological synthesis framed within the cultural-history school was published in 1970 (Sanguinetti de Bórmida 1970b). However, some theoretical-methodological elements related to this school survived until the 1980s (Castro 1983; Conlazo 1983; Mesa and Conlazo 1982; Silveira and Crivelli Montero 1982).

Menghin and Bórmida (1950) excavated two trenches in the Gruta del Oro and a trench in the neighboring cave, which they named Margarita, and concluded that the scarce lithic material found in the third layer and in the roof of the fourth had been deposited around 7000 BP. Years later, Orquera and collaborators (1980) reexcavated the site and dated the organic matter of the third layer, obtaining a date of 6560 BP, considered a minimum age. Surprisingly, despite the speculative manner in which they estimated the antiquity of the archaeological level, Menghin and Bórmida had been relatively close to the probable age of the strata.

Menghin and Bórmida (1950: 34) proposed the existence in the area of “a very primitive culture of protolithic morphology” named Tandiliense Cultural Complex and carried to America by “inferior-hunters,” which would have developed from around the sixth to the fifth millennium BC. This culture



Figure 2.12 Oswald Menghin inspecting an artifact probably recently found in the Chacra Briones site in Patagonia in 1956. His wife Margarita is standing on the left. Photo courtesy Nicolás Sanchez Albornoz.

would belong to a sui generis natural cycle named by Menghin as the “Protolithic Bone Culture.” This cultural complex was considered epiprotolithic, which in Menghin’s classification refers to a Late Protolithic, with the prefix “epi” added to indicate that it survived “in times much later than those of its original formation” (Menghin and Bórmida 1950: 34). The assignment to what they called “inferior-hunters” allowed them to infer a type of subsistence: generalized hunting (not centered on large prey, like “superior-hunters” were) and gathering. Last, this exiguous assembly of lithic material “seems to be an indication that most of the instruments of these cultural complexes were manufactured from other raw material, that is, wood and bone” (Menghin and Bórmida 1950: 34). And then they completed the argumentative sequence: materials from the Gruta del Oro and Eberhard Cave – which is no other than the Cueva del Milodón visited by Menghin in 1953 (Menghin 1961) – could belong to the “Protolithic Bone Culture” cycle, whose existence Menghin had been defending since 1931 with the publication of *World History of the Stone Age*. Many of the bone tools used to support this argument are now considered pseudotools (Borrero and Martin 2008).

The research of Menghin in Patagonia was also highly influential since his initial visits to the region in the 1950s, combining results from the study of surface assemblages with limited excavations (Figure 2.12). For decades, surface finds on the eastern steppes, particularly on sites along the Atlantic coast and

the Río Gallegos basin, were assigned chronologies using a simplistic typological scheme mainly derived from Menghin's work (1960), in particular, his expectations concerning the crude technology that he associated with the earlier occupations. The presumed antiquity of the sediments above which the artifacts were deposited – usually fluvial or marine terraces – was taken as evidence for the age of the archaeological assemblages. In practice, those studies inevitably produced maximum dates. A number of archaeologists influenced by the Austrian–German cultural–history school organized their research along those lines, and many provided minimal variation to the original scheme at different places in Patagonia and elsewhere (Bórmida 1962, 1964; Sanguinetti and Schlegel 1972; Sanguinetti de Bórmida 1970a; Schobinger 1969). It took some time to accept that no credible chronological content existed on those surface collections (Bate 1982; Borrero 1980; Orquera 1984–1985). Menghin's research at Los Toldos cave (Menghin 1952a) was more important, followed by stratigraphic work in that and other caves that simply repeated the sequence (Cardich et al. 1973; Sanguinetti de Bórmida 1976). The scheme constructed by Bird in Chile was used, within the wider scheme of the *kulturkreise*, as a basis for Menghin's cultural sequence. As completed by his followers, this sequence was presented as a succession of industries named, from older to younger, “Level 11 Industry,” Toldense, Casapedrense, and Patagoniense (Cardich et al. 1973; Gradin et al. 1979; Menghin 1952a). Generally speaking, this scheme relied more on population replacement than on innovation and changed through time, reflecting Menghin's opposition to evolutionary frameworks.

The study of human remains was one of the primary concerns of researchers working in Patagonia. These remains were basically interpreted within a diffusionist paradigm based on the shape of the skull and a typology of cranial deformation (Bórmida 1953–1954; Imbelloni 1937–1938).

At the same time, Menghin carried out several field trips in the west of La Pampa province. In 1950s he studied several sites in the localities of Carro Quemado, Estancia Chicalcó, and La Vega Lake (Berón 2013). Later on, in 1952–1953 and 1957, he excavated the Fortín Necochea site (Crivelli Montero et al. 1994) at the Interserrana area. Unfortunately, he did not publish these sites in any detail, although they were instrumental in consolidating the existence of the Tandiliense, which he later differentiated into three stages (Menghin 1963).

In later years, numerous investigations were developed that had a notable theoretical–methodological similarity. Bórmida (n.d., 1960) proposed on the basis of exhaustive typological analyses of surface findings, and the information obtained in some test pits, the existence of two “industries” derived from the Tandiliense: Bolivarense and Blancagrاندense. Following the methods of this school, he interpreted ground stones, present in the Bolivarense, as “neolithizing” (*neolitizantes*) elements, an adjective used to

explain certain inconsistencies in his expectations of the archaeological record of the “South American Protolithic.” Obtaining relatively large lithic surface samples, particularly from the northeast coast of Patagonia, was another important line of research pursued by Marcelo Bórmida during the 1960s and early 1970s. In practice, these studies added a few new industries to the list initiated by Menghin and implanted some order into a complex archaeological whole. Those collections were systematically obtained, studied, and published (Bórmida 1964). They offered insights into the great morphological, typological, and technological variability present at the coastal sites. The most important research done in Patagonia during the last decades of the twentieth century was organized according to Menghin’s scheme of successive industries (Gradin et al. 1976, 1979), which proved to be extremely resilient (i.e., Castro et al. 2016).

Amid the rise of cultural history, Bórmida (1962, 1969) and Austral (1965) applied a similar method – intensive surface collecting determining micro-areas of association and detailed typological analyses – and identified three new industries in the Pampean and North Patagonia seashore: Palomarense, Puntarrubiense, and Jabaliense. Furthermore, Sanguinetti de Bórmida (1966) proposed the existence of two “industrial contexts” called Trenque Lauquen A and B, which she interpreted as a territorial expansion of the Bolivarense. Also, Zetti and Casamiquela (1967) published the results of an archaeological survey in the Lihué Calel hills (in the Salado-Chadileuvú-Curacó area) that was influenced by the *kulturkreise* school (Berón 2013).

The popularity of this theoretical current in the archaeological investigations of the Pampas and Patagonia can be attributed to a number of causes. Initially, it effortlessly occupied the vacant place in the country left by evolutionism. Later on, long years of development in Europe and later in Argentina gave it scientific maturity and consolidated it as one of the most elaborate diffusionist currents. Third, its practitioners were prestigious and occupied important political-academic positions, which produced a quick and fluid theoretical transfer. Finally, the ascription to cultural-historical principles provided them with explicative statements that could be used even when the archaeological record was scarce. In this way, the artifactual exiguity of some of the sites could be interpreted by relying on identifying the cultural cycle to which they belong, a method derived from the theoretical framework of the school and intimately related to the diffusionist paradigm.

However, the investigations derived from the *kulturkreise* school reactivated the interest in studying the Pampas and Patagonia region beyond its maritime littoral. Furthermore, typological studies were encouraged, new sites were detected and excavated, and important efforts were carried out to systematize the surface assemblages and geologically date them. Nevertheless, extensive excavations were left aside; even when contemporaneous with other sites in Argentina, they had given very good results (i.e., Intihuasi Grotte, González

1960), and there was little interest in using the new techniques of radiocarbon dating. On the other hand, even when the findings in stratigraphy in lake banks indicated several diachronic occupations, the assemblages of artifacts found in the surface were considered synchronous (Bórmida 1960), as were the superficial associations between active dunes, without paying attention to the countless factors of disturbance and mixing (e.g., Austral 1965). Subsequent research noted anomalies in Menghin's scheme, but they were typically explained with ad hoc hypotheses, basically adding new cultural units to a more and more complex sequence (Cardich et al. 1973; Gradin et al. 1979). Using typological markers, these and other units derived from analysis of surface collections were organized in different cultural phyla remotely related to the European Palaeolithic (Menghin 1957b). It was an extremely complicated scheme that required information that was rarely available to correctly attribute any given archaeological assemblage to one of those units.

With lights and shadows, Menghin and Bórmida had a lasting influence and remained in the history of the archaeology of the Pampas and Patagonia. The epistemological principles that underpinned the cultural-historical model, as well as the empirical basis on which it was built, were criticized from the 1980s. Extreme diffusionism, together with the mechanical and arbitrary inclusion of archaeological materials in the circles and cultural cycles defined ad hoc by this theoretical perspective, did not resist the criticisms of a Pampean and Patagonian archaeology that was definitely oriented toward processualism. However, for three decades this model played a central role in the discussion of the past in both regions.

THE THEORETICAL ALTERNATIVES IN THE 1960S

While some of the investigations carried out in the La Plata River littoral and the lower course of the Uruguay River by Mario Cigliano (1963; Cigliano et al. 1971) were not framed within the *kulturkreise* school, the transition that would lead to a departure from this school's theoretical structure toward the search for alternatives to interpret the Pampean archaeological record began with Guillermo Madrazo's publications. Toward the end of the 1960s, Madrazo (1968, 1972) questioned the antiquity of the Tandiliense and its derived industries, its ascription to a category of "inferior hunters," and the underlying idea of a Pampean cultural homogeneity. He proposed a model based on the postulation of three "hunter niches" (of Pleistocene fauna, guanaco, and Pampas deer) with different temporal and spatial locations and also discussed some of the chronological problems from a stratigraphic perspective, taking a clear multidisciplinary approach. His fieldwork contributed with fresh data to the regional discussion and included the findings of blades from Quequén Chico in "Platense" sediments (Middle to Late Holocene),



Figure 2.13 Guillermo Madrazo's camp during a survey in the Ventania Hill Range in the late 1960s. Madrazo is on the right.

Fishtail projectile points from the hilltop of El Sombrero, and stratigraphic findings in the Blanca Grande lake and in several sites in Ventania and the CPD (Figure 2.13). The finding of Fishtail projectile points at El Sombrero hill marked a turn in the Pampean investigations and showed, for the first time since Ameghino, the possibility of a Pleistocene peopling in the region.

Madrazo's main contribution resided in the search for theoretical-methodological alternatives when the rest of the scientific community interested in the Pampean region was under the umbrella of diffusionism. The adaptive concepts, which produced some explicative statements, introduced by Madrazo (1973, 1979), opened up a whole new line of analysis and interpretation that flourished over the next decade (Mazzanti 2005; Politis 1988, 2005).

The contributions of Antonio Austral, framed at the beginning within the Austrian-German cultural-history school, also produced a theoretical change toward the beginning of the 1970s. In his article about the Vallejo site (Austral 1971), he proposed a new model based on the selection of "relevant taxonomic attributes of the contexts" (1971: 63): lithic projectile points, polished lithic artifacts, and pottery. Based on the presence of these elements, he identified three "industrial stages": Early Lithic, Late Lithic, and Ceramic-Lithic. In this stance of Austral's investigations, a preoccupation for incorporating novel concepts and methods is evident, but the persistence of cultural-history elements can also be detected (Austral 1971: 66).

Both Madrazo's and Austral's (after 1970) contributions are difficult to frame within a defined paradigm, perhaps because they were theoretical transition alternatives. None of these two authors carried out extensive excavations, or at the very least, they did not base their models on information obtained from them. Madrazo used test pits only at several sites and Austral published his first stratigraphic results in 1977. While Madrazo oriented his investigation toward an adaptive approach, Austral did it toward the systematization of lithic typology.

The Paraná River Delta and the northeast areas have been integrated into the cultural models and discussions of the Argentine Northeast (Lafon 1971; Serrano 1972). Under the influence of cultural-history approaches, diverse analytical-classificatory categories were built, and cultural sequences separated into two great "stages" or "periods," defined by the presence or absence of pottery, were established (Caggiano 1984; Rodríguez 2001; Serrano 1972). In the period that goes from the emergence of ceramics to the Spanish conquest, the archaeology of the alluvial plain of the Lower and Middle Paraná and the Lower Uruguay was characterized by the succession of different cultural entities; among others, "cultures" were identified such as the "Entreterriana or Basic Littoral Culture," "Ribereños Plásticos," and "Tupí-Guaraní" (Caggiano 1984; Serrano 1972), and traditions and sub-traditions such as "hunter-gatherers," "neolithic," "generalized Tupí Guaraní" (Lafon 1971), "Salto Grande," "Ibicueña," "Ribereña Paranaense," and "Tupiguaraní" (Rodríguez 1992). These archaeological units were subdivided into phases such as "Ibicuy" or "Ibicueña," and "Lechiguanas" (Caggiano 1984; Serrano 1972).

With a very different methodology from the *kulturkreise*, Omar Ortiz Troncoso studied selected surface collections from the southern plains of Patagonia, which were published with excellent drawings (Ortiz Troncoso 1972, 1973). The information offered by these and similar studies was important, but it took some time for archaeologists to recover their interest in surface samples. They were more inclined to look for sites with stratigraphy, seeking sequences of occupation. This was at least partly a reaction against some of the excesses of research made under the *kulturkreise* paradigm and constituted a clear case of throwing the baby out with the bathwater. Those studies of surface collections, together with new studies of those materials and new methodologies, constituted a solid basis on which a new understanding of the archaeology of the Patagonian lands was constructed, one in which we can take advantage of both kinds of discoveries (Alberti 2019; Borella and Cardillo 2011; Borrero et al. 1993). The archaeological exploration of the plateaus was important but limited, given the difficulties of access. Carlos Gradin, who moved around on horseback, was among the first to obtain significant information from those remote areas (Gradin 1959–1960, 1971). His discoveries included rock structures that were probably used as guanaco hunting blinds.

On the other hand, intensive explorations of large tracks of land, sometimes accompanied by testing or excavations, were made on the coasts of the Strait of Magellan and the Sea of Otway (Johnson 1976; Legoupil 1980; Massone 1979; Ortiz Troncoso 1973). The results from these explorations were fundamental in guiding fieldwork afterward. Among other issues, they contributed toward an initial understanding of the coastal distribution of green obsidian, a high-quality rock probably obtained at the Sea of Otway. Also, Massone's research confirmed the importance of coastal settings among so-called terrestrial hunter-gatherers. At the same time, intensive excavation programs were beginning at several places, including the Río Pinturas Basin (Gradin et al. 1976), the coasts of the Strait of Magellan and the Sea of Otway (Empeaire and Laming 1961; Ortiz Troncoso 1973, 1975), western Chubut (Aschero 1975), and the island of Tierra del Fuego (Chapman and Hester 1973; Laming Empeaire et al. 1972; Orquera et al. 1977). In most cases, these excavations were accompanied by archaeological surveys nearby, usually focused on the location of large concentrations of artifacts. Stratigraphic work was again taking place at Cueva del Milodón (Empeaire and Laming 1954; Saxon 1976, 1979), informing for the first time in French, Spanish, and English about the different periods of occupation of the cave by ground sloths and humans, which were not necessarily associated. As already mentioned, this information was available in Swedish since the end of the nineteenth century, as a result of the work by Erland Nordenskjöld, but was practically unknown. At any rate, since Cueva del Milodón is so big and was discontinuously used by animals and humans, new excavations always provided new information.

Beginning in the 1950s, rock art studies became systematic compared with the scattered efforts of the turn of the century (Menghin 1952b). The quest for the location of particular rock art styles and the initial discussions about their origin and significance are magnificently narrated by Carlos Gradin, undoubtedly one of the most important Patagonian archaeologists, in his book of memories *Recuerdos del Río Pinturas* (1999). Since the 1960s, some of those studies have tried to go beyond the description of motifs and panels, establishing some context and initiating a serious discussion of chronology based on stratigraphic observations (Bate 1970, 1971; Gradin 1966–1968, 1978). The corpus of information recovered by these studies is nothing short of impressive (see Podestá et al. 2005).

This was also the time when Junius Bird was completing the radiocarbon dating of the whole sequence of Fell Cave (Bird 1988), thus making it stronger than Menghin's. Bird directed John Fell, the owner of the ranch where the cave was located, to recover charcoal samples from different sectors of his profiles, which he used to obtain radiocarbon dates for all his periods. He also did additional fieldwork at the cave and other sites, particularly an open-air site near Laguna Tom Gould, during the 1970s (see Massone 1989–1990). On the other hand, even when the industries defined by Menghin were recognized

and dated by different research teams at different places in Patagonia, mostly caves, the initial chronological results were not consistent (Borrero 1989). Bird's scheme served well for decades, but near the end of the twentieth century, more regional approaches were preferred, and new sequences produced evidence of much more variability than that accepted by the original framework (Bate 1982; Borrero 1989; Gómez Otero 1987; Martin 2021; Massone 1981). These problems were found in both schemes and resulted from efforts made by different teams to construct a comprehensive chronology based on well-defined stratigraphic strata and organize reasonable sequences of human occupation. Then, the most important synthetic schemes were beginning to show operational difficulties. This was not unexpected since both sequences were formulated very early in the history of research. Nevertheless, in the 1980s, it was becoming clear that fidelity to those schemes was an invitation to stagnation. Given that Bird's scheme was published in English in the highly visible *Handbook of South American Indians* (Bird 1946), it was more widely cited outside Chile and Argentina (i.e., Willey 1971). In contrast, Menghin's papers written in Spanish and German were rarely mentioned outside the Southern Cone. With few exceptions, these systems have been no longer in use since the end of the twentieth century, given their logical, chronological, and field inconsistencies (Borrero 1980; Boschin and Llamazares 1984; Orquera 1980, 1984–1985). In retrospect, it can be said that they were important schemes to organize the archaeology of a poorly known region.

Archaeologists from the French Patagonian Mission working in south Chile during the 1960s and 1970s (Laming-Emperaire 1968, 1972) produced important stratigraphic and chronological results at crucial localities like Marazzi in Tierra del Fuego (Laming-Emperaire et al. 1972) (Figure 2.14) and Englefield in the Sea of Otway (Emperaire and Laming 1961). Both indicated important Middle Holocene occupations based on hunting guanacos at Marazzi and the exploitation of marine resources at Englefield. The results of these excavations clearly showed that human occupation of the Patagonian coasts was much older than expected and constituted the basis on which the excavation programs led by Ortiz Troncoso in Chile and Luis A. Orquera and Ernesto L. Piana in Argentina began. The French Mission also made complementary studies at Fell Cave, which helped in the understanding of the history of occupation of that site, which at the time was only sketchily known (Emperaire et al. 1963). Notably, these studies also included a relatively detailed presentation of the fauna (Poulain-Jossien 1963). The sustained efforts by members of the Mission were concentrated on the archaeology of maritime hunter-gatherers but also contributed useful studies that helped clarify the interaction between terrestrial and maritime hunter-gatherers at places like Ponsonby or Marazzi (Laming-Emperaire 1968; Laming-Emperaire et al. 1972). One important result was an understanding of the geographical variation existent within maritime adaptations, which was accompanied by



Figure 2.14 Marazzi, Tierra del Fuego, Chile. Photo courtesy Flavia Morello.

differences in adaptation, which were later detected by different research teams (Orquera et al. 1977; Ortiz Troncoso 1975).

THE DECADE OF THE 1980S: NEW DIRECTIONS

Toward the beginning of the 1980s, a significant theoretical change came about in Pampean and Patagonian archaeological investigations. This change is based fundamentally on adopting methods, concepts, and interpretative tools coming from the so-called ecological-systemic paradigm or processual archaeology (Binford and Binford 1968). These new ideas gave a new impetus to archaeological research in both regions. Archaeologists started to look more carefully at the environmental distinctions in the Pampas and Patagonia and began to discuss these differences in terms of adaptive strategies. Moreover, there has been a marked increase in researchers who systematically investigate both regions. New generations have increasingly become interested in these regions, and new methods and theoretical perspectives emerged. During the late 1970s and throughout the 1980s, the intensity of Patagonian archaeological research under the processual paradigm increased substantially, and beyond producing a multitude of cultural-historical sequences, it clearly showed that

there was much more variation than that encapsulated in Bird's or Menghin's sequences (Borrero 1989).

In his synthesis of the archaeology of the Pampas and Patagonia, Orquera (1987: 346) agreed with this view, recognizing that since 1980 the archaeology of both regions has "achieved a solid scientific foundation." In this article, devoted mainly to Patagonia, one can notice a shift, since there is no mention of the *kulturkreise* units whatsoever. In the same vein, most of the regional syntheses written since the 1980s recognized this paradigmatic change (Berón and Politis 1997; Borrero 1989; Crivelli 1999; Politis 1988; Politis and Madrid 2001; Salemme 1994).

Toward the beginning of the 1980s, most of the new researchers interested in Pampean archaeology avowed that there is a great ecological and cultural diversity, and therefore it cannot be assumed to be a homogenous development as was stated before. Also, different areas can be recognized in the region from an environmental point of view, and each of these presents certain differences in the archaeological record. However, this mosaic was not considered a priori as representing ethnic frontiers. Finally, and probably due to the ecological perspective, research projects posed a multidisciplinary approach with geologists and paleontologists' active participation. At the same time, archaeologists specialized in analytical procedures, and therefore lithic analysts, zooarchaeologists, taphonomists, and others proliferate. Site formation processes, detailed rock art studies, and site functionality were new approaches emerging in the 1980s.

As mentioned, most of the initial efforts made by archaeologists in Patagonia focused on obtaining sequences. Those from the Pinturas River Basin (Gradin et al. 1979) and the Beagle Channel in Tierra del Fuego (Orquera et al. 1977) were among the most important, because they helped to organize the long history of human occupation. This was true despite the initial use of Menghin's scheme to describe the key sequence of the Cueva de las Manos (Gradin et al. 1976). With the passage of time, the use of those cultural labels – the industries – in both the Pampas and Patagonia was more of a burden than a help.

All the research done during the 1960s and 1970s in Patagonia was useful and produced a necessary basis on which new goals began to be selected. The slow incorporation of new questions, like those related to the extinction of the megafauna, the adaptations to the southwestern channels, or the divergent cultural trajectories on both sides of the Strait of Magellan, prompted a number of changes in methodology, particularly in research designs. As mentioned, mostly regional approaches began to be selected since the 1970s, which inevitably began to change the previous focus on large archaeological sites into a search for the different classes of sites (Figure 2.15). One important result was the incorporation of evidence of functional variation. Most of these studies concentrated on the search for variability, which opened the field beyond the analysis of lithics and the counting of bones. A new emphasis on



Figure 2.15 View of San Martín Lake Basin, with Cach Aike Hill in the background. Photo courtesy Juan Bautista Belardi.

archaeozoological studies and a replacement of typological concerns with technological questions was spreading fast (Mansur-Franchomme 1983; Mengoni Goñalons and Silveira 1976; Nami 1986; Silveira 1979). The importance of these studies was demonstrated by the discussion concerning the presence of dogs during the Late Pleistocene or Early Holocene of Patagonia, one of many debated issues at the time. According to Juliet Clutton-Brock's analysis, the canid remains found by Bird at Fell Cave were interpreted as dogs (Clutton-Brock 1977, 1988), and canid remains recovered at Los Toldos were also interpreted as dogs (Cardich et al. 1977). Later work determined those remains as pertaining to the extinct *Dusicyon avus* (Caviglia 1976–1980; Prevosti et al. 2011).

The important work from foreign researchers in Patagonia, like the French and the Spanish Missions, collaborative work with Norwegian archaeologists, or the relatively isolated works of Samuel Lothrop or David Yesner in the southern archipelagos, do not have a massive impact on regional archaeology. As noted, the input of the cultural-historical approach had a longer effect in both the Pampas and Patagonia, but as a result of the theoretical turn at the end of the twentieth century, it was clear that processual archaeology predominated in both

regions. Many of these regional projects that regularly included archaeozoological, and sometimes botanical, components were increasingly combined with multidisciplinary studies. This trend shaped the interpretation of the past in both regions, and what is called “archaeological sciences” and archaeometric analysis increasingly had a more prominent role. However, other theoretical currents had their influx: Felipe Bate, Assumpció Vilá, and Jordi Estevez used Marxist categories to interpret the archaeology of Patagonia, while some issues from the post-processual agenda, such as agency, symbolism, and political dimensions, were present in Pampean archaeology. These influences can also be seen in Patagonian rock-art studies, which are reformulating previous discussions focused on the definition and distribution of styles. Also, processual-plus/neo-processualism approaches were slowly being incorporated within the research programs of several teams. In both regions, landscape-oriented studies have increasing importance. Evolutionary and neo-Darwinian approaches were also developed in the 1990s, especially from the Universidad de Buenos Aires. Many of these discussions incorporated phylogenetic studies, particularly since the beginning of the twenty-first century.

Finally, the impulse for archaeology and other sciences, which occurred due to the return to democracy in Argentina at the end of 1983, also benefited Pampean and Patagonian archaeology. New degree programs in archaeology were opened in universities in different provinces, and the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) incorporated many archaeologists in permanent positions. New professionals started research in both regions, resulting in an exponential increase in archaeological fieldwork, material analysis, and overall generation of fresh and abundant data and models. The outcome of these growing research activities in the last 40 years, which are the core of modern Pampean and Patagonian archaeology, is summarized and discussed in the following chapters.