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Archaeology in Antarctica: Nineteenth-Century Capitalism Expansion Strategies

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Antarctica was the last continent to be discovered in the early nineteenth century. In order to become acquainted with the process of incorporation of Antarctica to the scope of the capitalist system we have focused on particularity: i.e., specific economic and technological and ideological aspects of everyday life in sealer camps spread along the coastline of the South Shetland Islands. Archaeological research in Byers Peninsula–Livingston Island provides an approach to the mechanisms implemented to organize the first resource exploitation in these lands.

KEY WORDS: Antarctica; capitalism.

INTRODUCTION

Official discourses about Antarctic history have focused on the well-known heroes who arrived in these territories in the early twentieth century due to their spirit of adventure, or their good luck. Archaeological research in Antarctica provides an alternative approach to understand the mechanism by which this continent was incorporated to the scope of the capitalist system at the end of the eighteenth and the beginning of the nineteenth centuries. This incorporation included strategies enacted at global and local scales in which industrial companies competed in the search for goods and supplies, especially marine resources, such as seals and whales. Hundreds of men spent their summers working and living in

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these unwelcoming lands placed at the bottom of the world in order to supply the ever expanding capitalist market.

In this paper we are interested in presenting this "other" version of history, offering an alternative way of interpreting the past through the results of the archaeological research of sealer camps settled in Byers Peninsula Livingston Island South Shetlands in the early nineteenth century. The information is divided into two parts: the first dealing with the characteristics of the camps, and the second concerning the organization of sealers' labor and everyday life. We have considered it necessary to give a brief summary of the first chapters of Antarctic history and the different lines of archaeological research developped in Antarctica as an introduction to our experience in the South Shetlands.

ANTARCTIC HISTORY: THE FIRST CHAPTERS

Antarctica was the last vast territory to be discovered at the end of the eighteenth century and the early nineteenth century, largely because of its remote location. It consists of a continental area and adjacent islands. Master narratives about Antarctica focus on the event of the discovery, about which there is more than one version, especially as regards dates and protagonists (see Miers, 1920; Ossoinak Garibaldi, 1950). Some authors state that a British trader was the discoverer (see Fitte, 1959, 1962, 1974), whereas others mention survivors of a Spanish shipwreck (Pinochet de la Barra, 1992). Some writers even propose members of a crew of whale- or seal-hunting vessels as the first human beings to have landed there (see Berguño, 1993a,b; Bertrand, 1971; Hodge, 1976; Martin, 1940; O'Gorman, 1963; Slaney, 1921; Stackpole, 1955). Nevertheless, it is generally accepted that the South Shetland Islands were reached during 1819, and since then, that companies from various countries started the seasonal exploitation of sea-mammals in the region.

Our research is not focused on the discovery of Antarctica but on its process of its incorporation to the rest of the world. We must bear in mind the world context in the late eighteenth and early nineteenth centuries to understand that the human presence in Antarctica was the result of capitalist expansion. This incorporation was not performed by countries wishing to expand their sovereignty but by private companies that extended the boundaries to further exploitable lands in search of greater profits. This process took place simultaneously in different parts of the world such as the Indian Ocean isles (Richards, 1982), Southern Patagonia and the Southern Atlantic isles (Senatore, 1999; Silva, 1985), among others, where maritime resources were temporarily exploited according to a complex cost-benefit equation.

As a result of the logic of capitalism, the occupation of Antarctic lands was episodic. The discovery and exploitation of new colonies of maritime mammals produced an overabundance of derived products such as oil and furs in international

markets. This overabundance resulted in the fall of international prices, which forced an increase in the volume of exploitation. As overexploitation reduced the mammal population, the companies moved elsewhere in search of greater profits. This 4- or 5-year cycle was repeated several times during the nineteenth century.

Master narratives do not give much information about sealers in Antarctica, with only find brief descriptions of productive tasks but nothing relating to everyday life in sealer camps. Information from logbooks describe the spread of groups of men, led by officers, along the shore where resources were available and where they had to stay until they were picked up. Captain Burdick's log for the *Huntress* (a vessel sailing along the coastline of the South Shetland Isles in 1820), contains this entry for December 9, 1820: "Begins with brisk breezes from NW sent Mr. Coleman first mate of the Huntress and Eight men on board the Shallop with one boat the Ship sent twenty-two and 2 boats at 10 A.M. the Shallop went out to find a place to land the men for Sealing" (Stackpole, 1955, p. 3).

Thus, an archaeological understanding of the process of incorporation of the Antarctic Continent to the circuit of control and influence of the new World System in the nineteenth century (Hopkins and Wallerstein, 1987; Wallerstein, 1974; Rosh, 1989) may be considered as a different line of approach to the study of the "modern world" (Orser, 1996) or modern society (Funari *et al*., 1999). In order to become acquainted with the process of incorporation of Antarctica to the scope of the capitalist system we focused on particularity: the spread of sealer camps along the coastline of the Shetland Islands. We believe that "big" questions "must be rooted in these local contexts" and that "even as we look at the small scale and the particular, we fit these into large scale processes" (Johnson, 1999, p. 220). The way these men organized these camps in the furthest edge of the world has a lot to tell us about the dynamics and conflicts of capitalist society.

ARCHAEOLOGY IN ANTARCTICA

Archaeological research in the Antarctic continent is recent. It started during the 1960s with conservation and restoration work in shelters built in the early twentieth century regarded as historically important. Among those shelters are those of the first expeditionaries that reached the South Pole, such as Sir Robert Falcon Scott and Roald Amundsen, or those places related to the expedition of Baron Otto Nordenskjöld in the isles of Cerro Nevado, Bahía Esperanza and Ross Island (Anon, 1983; Arrastía de Viglione *et al*., 1987; Capdevilla, 1992; Capdevilla and Ageitos, 1993; Chester, 1986; Comerci, 1983; Quartermain, 1963; Harrowfield, 1978; New Zealand Antarctic Society, 1977a,b, 1978a,b, 1995a,b). In addition geologists from the British Antarctic Survey observed and described shelters that they attributed to nineteenth-century seal hunters. Their records were made during 1957–58, 1965–66, 1981 (Hobbs, 1968; O'Gorman, 1963; Smith and Simpson, 1987).

Accidental findings have frequently led to the development of archaeological investigation in Antarctica. The finding by the Chilean geologist Daniel Torres in Shirreff Cape, Livingston Island, of a young female skull identified as Amerindian (Torres, 1992) and a projectile point (see Stehberg and Lucero, 1985a,b) ended in a research project. This project, headed by investigators from the Chilean Antarctic Institute, is aimed at studying the presence of American Indians in Antarctica (Lucero and Stehberg, 1996; Stehberg and Cabeza, 1987; Stehberg and Nilo, 1983).

At the beginning of the 1990s, an interdisciplinary crew was organized as part of an agreement between Spain and Chile. The team, including archaeologists from the University of Zaragoza and the Chilean Antarctic Institute, planned to conduct a study of terrestrial and underwater archaeology. Fieldwork was oriented toward the search of the remains of the Spanish ship *San Telmo*, considered to be the first vessel to reach Antarctica in 1919 (Martín-Bueno, 1995a,b, 1996). At the same time, the team instituted an experimental program of conservation of organic remains in cold environments. Some years later, the project was continued by the same Spanish archaeologists but in agreement with Uruguayan colleagues. Despite all the efforts, however, the *San Telmo* has not yet been found (Cabrera, 2002). Finally, Australian and South African scientists have started to develop investigations on sub-Antarctic islands seal sites (Cooper and Avery, 1986; McGowan, 2000).

We began our research in 1995, due to the discovery made by a group of geologists from the Argentinean Antarctic Institute of archaeological material in a cave in Byers Peninsula, Livingston Island. This find allowed us to create a larger project aimed at the study of the process of incorporation of Antarctica to the capitalist circuit of exploitation of the end of the eighteenth and beginning of the nineteenth centuries.

ARCHAEOLOGY OF CAPITALISM IN ANTARCTICA

From the beginning, our research was aimed at studing early settlement and exploitation strategies in Antarctica. This approach involves highlighting the historical context, understanding the expansion of the capitalist system and the development of modern society, and using the material culture as an alternative means of reaching the past.

The general approach comprises the whole of the Antarctic Continent. However, our research took place in the Southern Shetland Isles, which are approximately 120 km northwest of the Antarctic Peninsula. Within these isles we focused our investigation on Livingston Island (S. Lat. 62°30′ and W. Long. 60°30′). This island is 62.8-km wide and from 14.5 to 19.3 km long. The research area is centred in Byers Peninsula, a 72 km^2 surface, separated from the rest of the island by a glacier. Within this project, four seasons of summer fieldwork was conducted in 1995/1996, 1996/1997, 1999, and 2000.

Sealer Camps in Byers Peninsula, Livingston Island, Southern Shetland Isles

When starting the archaeological research we were interested in defining the economic strategies used in Antarctica on a regional scale. In Byers Peninsula alone, over 20 human-built rock shelters were found. These structures are located only along the shore. In the south beach, 15 sites were located in a 13 km^2 area, in the north beach 10 sites were located in a 9 km^2 area and in the west beach one site was located in a 5 km^2 area (Fig. 1). Most of these sites are shelters placed within 250 m of the seashore. They were built in natural shelters, such as a cave or open air rock formation, using such natural features as walls and piling up local stones to close them. Morphological patterns showed square, rectangular, semicircular, or irregular spaces with varied entrances. Some presented smaller structures standing against or very near them. Inside and outside the structures, whale vertebrae, ribs, and jaw fragments were found. These objects may have been used to outfit the shelters or external areas. Open-air shelters are less than 20 m^2 and over 80% are under 15 m^2. We consider that roofing possibilities may have restricted the size of these structures. The limited size of the structures suggests that they were either used as shelters by small groups of workers or that they were used for tasks that did not require the presence of many workers inside them at a time.

As the research continued, the excavations provided interesting data, and with it a ray of light over the organization and function of the space in those man-built shelters. The first results appeared with the diggings in Playa Sur 1 site, which consisted of two structures of different sizes (Fig. 2). The particular organization of these spaces and the analysis of the samples recovered allowed us to learn the function of each one (see Senatore and Zarankin, 1999). In this way we determined that the larger shelter worked as a space for everyday life, and the smaller one was used for some specific activity probably related to the production of oil.

The large shelter showed the use of local resources to outfit the space within. We found rocks belonging to formations on the beach, seal furs for the roof, and whale vertebrae as furniture. There were also small hearths fed with coal. Material culture included evidence of clothes, wine bottles, game boards with their pieces, and white clay pipes. The small structure presented a large and well-built combustion structure fed with large quantities of coal.

The artifacts found when excavating the structures were dated to the late eighteenth–early nineteenth centuries (see Moreno, 2000; Senatore and Zarankin, 1996). They consisted of tools related to maritime resource exploitation and everyday life. We determined that subsistence was based on local fauna, in addition to animal and vegetable supplies brought by the workers, including pork, beef, and barley (see Muñoz, 1997, 2000). Local raw materials were identified as having been used in building shelters and for manufacturing different artifacts (Senatore and Zarankin, 1997).

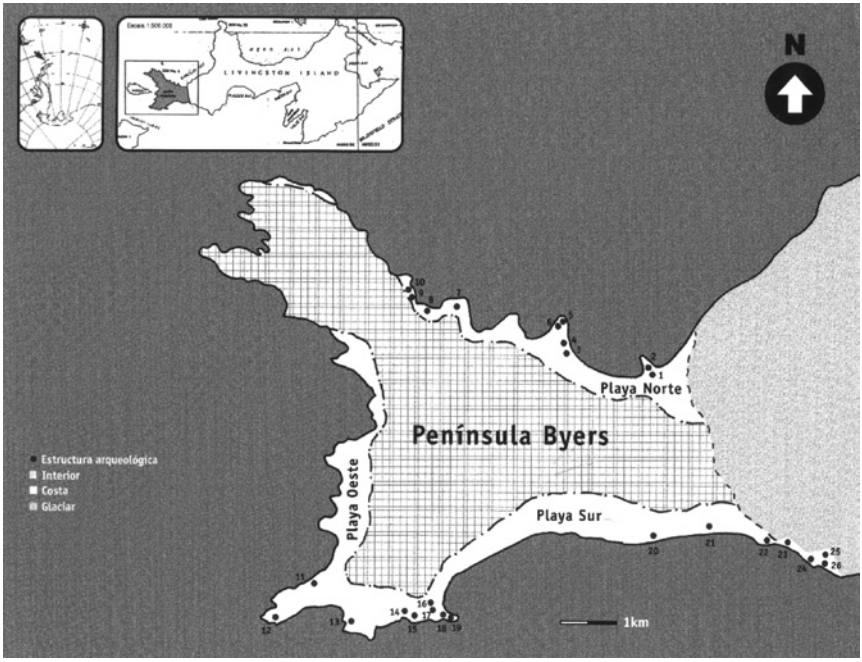

Fig. 1. Geographic location of the Antarctic peninsula and South Shetland isles (top right corner). Map of Livingston Island and location of Byers Peninsula (central area). Byers peninsula and demarcation of sampling areas—inner and coastal sections. the dots show the localization of the registered archaeological sites. Names of the structures researched (1) Cutler 1; (2) Cutler 2; (3) Robbery' Beach; (4) Lair Point 2; (5) Lair Point 1 (6) Lima-Lima Cave 1 and 2; (7) Varadero Point; (8) Pencas 1; (9) Pencas 2; (10) Pencas 3; (11) Devil's Point1; (12) Devil's Point; (13) Long Rocks; (14) Sealer Hill 2; (15) Sealer Hill 1; 16 Sealer Hill 4; (17) Sealer Hill 3; (18) Vietor Point 2 and Vietor Point 3; (19) Vietor Point 1; (20) Cerro Negro; (21) Playa Sur 1; (22) Stackpole 2; (23) Stackpole 1; (924) X Point 2; (25) X Point, X Point 1. All the structures marked can be categorized as man-built shelters, except numbers 4, 13, 22, and 23.

Thus, from an archaeological perspective we can say that the organization of the exploitation of these lands consisted of the spreading—by means of vessels—of groups of people with the purpose of collecting specific maritime resources. This spreading can be appreciated in the archaeological landscape which has already been described in earlier papers (Zarankin and Senatore, 1996, 1997). The strategy of the system consisted of logistics that increased the productive period by using different places offering exploitable resources simultaneously. As part of an organized production system in these territories.

Labor Organization Strategies in Seal Camps

For Foucault (1976), "discipline" as a hierarchical/cellular/standardized organization of space is a structural condition for the correct functioning of work

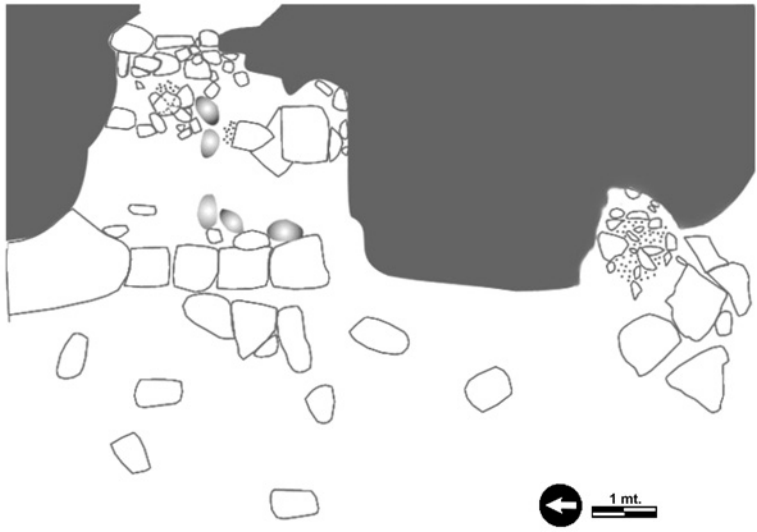

Fig. 2. Playa Sur 1 site.

in capitalist society. We start from the idea that the incorporation of a particular model of production (with all its characteristics) to a new territory will contribute to guarantee the mechanical and automatic exercise of power.

Antarctica at the beginning of the nineteenth century was an "empty" territory, a new space where the system did not have the resources to guarantee the exercise of power (for example, there were no policemen, no police headquarters, doctors or hospitals, nor citizens or countries). In other words, there were no rules or judges, or established laws that may be associated to that place unambiguously. Consequently, alternative strategies were needed to guarantee that the exploitation of local resources would be fulfilled in the most efficient way.

This context made us wonder, among other things, about the mechanisms used to get the job done. For example, how was conflict minimized?

Our reading of different authors who discussed labour organization in capitalist society (Donzelot, 1981; Forrester, 1996; Foucault, 1976, 1981, 1986;

Gaudemar, 1981; Marx, 1959) led us to first approach this problem through two main analytical lines: "hierarchical differentiation," and "standardization." As we mentioned above, these two principles underlie capitalist production. In the case of seal camps in Byers we look forward to identifying and discussing both while studying the material recovered (aiming at the possibility of inferring which objects refer to social differentiation or individual consumption), and the organization of the built space.

Another source we used were the scant written documents about these occupations. We know from them, for example, that at least one individual was placed above the rest (an officer or "mate in charge of the group"; Stackpole, 1955).

It is interesting to note that from the material culture and the organization of space the status difference among the workers at the camp was not observed. Analyses showed that in the living and shelter space there were no subdivisions or particular fittings, that could be described as a single space. The lack of individual artifacts related to eating, which were so common in other contexts at the time, were striking. On the other hand, there appeared traces of activities closely related to shared social practices, such as entertainment, games, and tobacco and alcohol consumption (Zarankin and Senatore, 1999a,b). That almost all the objects found in this context could be considered for communal use or consumption, or related to activities of socialization, is to be taken into account (Fig. 3).

Another fact that drew our attention was that the shapes, building, sizes and characteristics of the shelters, showed great diversity. We expected to find architecturally standardized camps showing a high degree of space division according to hierarchy and functions, but the results were completely different. Figure 4 shows the design and morphology schemes of human-built shelters.

It is suggestive that neither the spatial organization of the refuges nor the objects found rendered any element that could be interpreted as related to hierarchical differentiation or standardization. As a preliminary approach we interpret this situation as a deliberate strategy oriented to the generation of a landscape without elements of conflict. We can think that the suppression of any material reference to hierarchy and inequality ends up generating an artificial feeling of equality that facilitates the exercise of power by decompressing tension and maximizing workers' productivity (Zarankin and Senatore, 1999a,b).

CONCLUSIONS

The investigations conducted until now have allowed us to develop an alternative analytical line to study the history of the incorporation of Antarctica to the capitalist system in the late eighteenth and early nineteenth centuries. From archaeology we can construct a history centred on groups of workers invisible in the official discourses only concerned with discovery. We start from the analysis of Byers Peninsula, Livingston Island, on a local scale, to generate ideas about

Fig. 3. Artifacts found in archaeological excavations: clay tobacco pipes; checkerboard; wine bottle fragments; *garrote*, made of peaces of wood from shipwrecks gathered along the coastline.

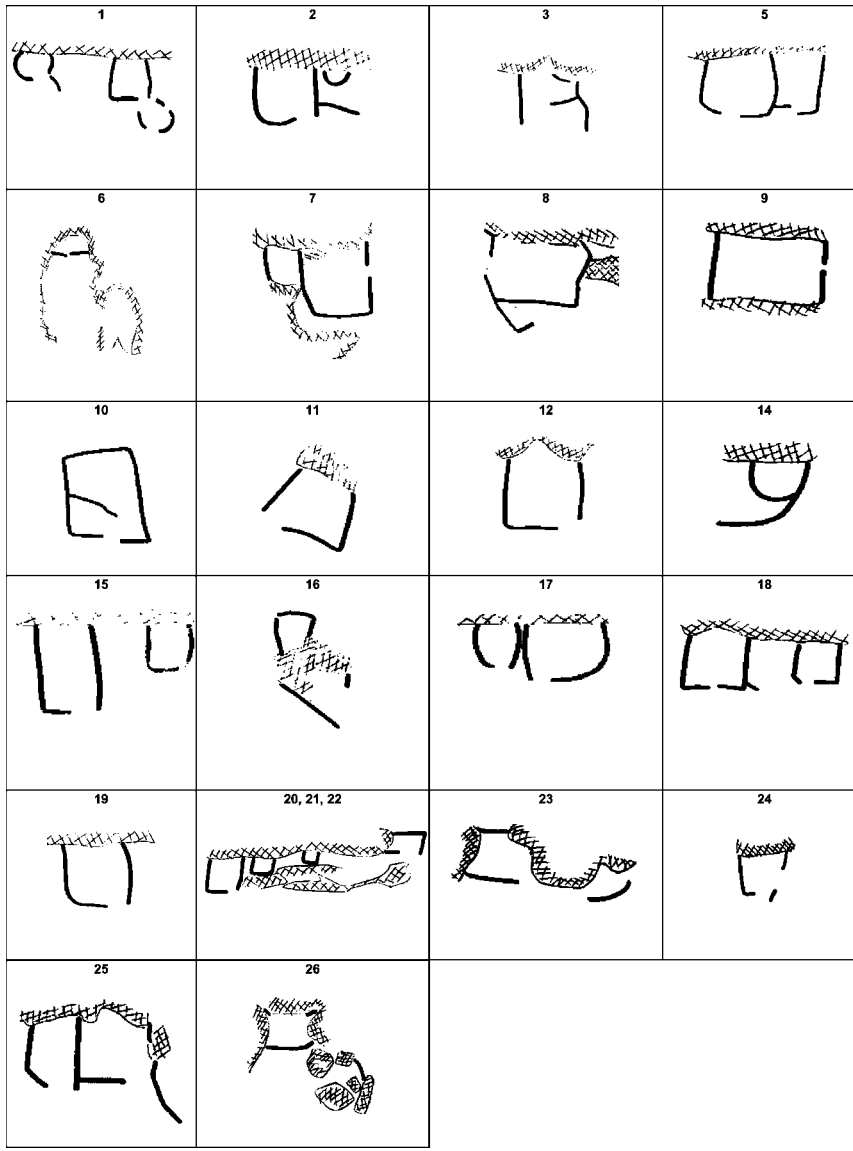

Fig. 4. Design and morphology schemes of human-built shelters. The walls made of rocks are represented by black lines and the shaded area marks natural rock formations. The numbers correspond to the following structures. (1) Cutler 1; (2) Cutler 2; (3) Roberys' Beach 1; (5) Lair Point 1;(6) Lima Lima Cave 1 and 2; (7) Varadero Point; (8) Pencas 1; (9) Pencas 2; (10) Pencas 3; (11) Devil's Point 2; (12) Devil's Point 1; (14) Sealer Hill 2; (15) Sealer Hill 1; (16) Sealer Hill 4; (17) Sealer Hill 3; (18) Vietor Point 2; (19) Vietor Point 1; (20, 21, 22) Cerro Negro 1; (23) Playa Sur 1 (24) X Point 2; (25) X Point 3 S; (26) X Point 1.

the economic, technological, and ideological mechanisms that guarantee the best profit possible for the system with the least monetary and time investment. The results at which we arrive are only preliminary but the development of new lines of analysis and information will allow us to deepen our interpretations.

Nowadays, the few seals, whales, and animals that succeeded in surviving the hunts in the nineteenth and twentieth centuries, have long ago stopped being a priority for large commercial corporations presently in search of other resources: not only is Antarctica the biggest world reserve of fresh water, but also oil and minerals attractive to multinational enterprises. At this time, an agreement of nonexploitation of Antarctic resources is delaying the arrival of a new capitalist cycle.

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