BRETON BREAD OVENS OF THE PETIT NORD: THE ARCHAEOLOGICAL LANDSCAPE OF FOODWAYS IN THE FRENCH FISHING STATIONS OF NEWFOUNDLAND

GENEVIÈVE GODBOUT

Breton Bread Ovens of the Petit Nord: The Archaeological Landscape of Foodways in the French Fishing Stations of Newfoundland

by

© Geneviève Godbout

A thesis submitted to the
School of Graduate Studies
in partial fulfilment of the
requirements for the degree of
Master of Arts

Department of Anthropology and Archaeology / Faculty of Arts
Memorial University of Newfoundland

May 2008

St.John's, Newfoundland

Abstract

From the sixteenth century to the early twentieth, French fishermen came to the Petit Nord, a region of northern Newfoundland, to harvest and process cod. After 1713, international treaties prevented them from over-wintering or settling on the Petit Nord, and fishing rooms typically comprised ephemeral and minimalist structures, with the interesting exception of large bread ovens. French fishermen built such ovens in Newfoundland at least since the late eighteenth century, during the decades surrounding the French *Révolution*. During that time, a growing symbolic association of bread with cultural identity participated in the development of French nationalism. French people, regardless of their social situation or occupation, yearned to consume bread of a good quality, apparently including fishermen engaged in migratory fishing expeditions to Newfoundland. The French bread ovens of the Petit Nord suggest the socio-economic importance of bread in the fishing crews' lifeways and in the expression of their identity in the landscape.

Acknowledgements

Support for the present research was provided by SSHRC Canada, the Institute of Socio-Economic Research of Newfoundland, the Government of Newfoundland and Labrador's Provincial Archaeology Office, and Memorial University.

I would like to thank Dr. Peter Pope, my supervisor, for his guidance and help throughout my M.A. research project. Special thanks to Stéphane Noël, who assisted me closely during fieldwork and analysed the faunal remains gathered in the process. This research would not have been possible without the help of the *Archaeology of the Petit Nord* 2007 field crew (Rita Barrett, Harley Brown, Mélissa Burns, Scott Carroll, Geneviève Duguay, Rébecca Janson, Sarah Newstead, Allison Small, Peter Pope), and the French Shore Historical Society. In Brittany, Michaël Delagrée (*Association Tiez-Breiz*), François Juguet, Jean-Claude Toy (*La P'tite Boulange*) and the *Association Acigné Autrefois* enthusiastically shared with me their knowledge of baking and of traditional bread oven building techniques. Dr. Mike Deal kindly accepted to have some of our samples processed by Dave Wilkes, one of the students enrolled in his palaeo-ethnobotanic class, which he supervised. Lastly, merci à Papa, Maman et Marie-Christine, pour les conseils, les encouragements et la joie.

TABLE OF CONTENTS

List of Tables

List of Figures

List of Abbreviations

Anon.	Anonymous
CEW	Coarse earthenware
CSW	Coarse stoneware
MAPAQ	Ministère de l'Alimentation, des Pêcheries et de l'Agriculture du Québec
NAC	National Archives of Canada
Pers. comm.	Personal communication during informal interviews
PAO	Provincial Archaeology Office of Newfoundland and Labrador
REW	Refined earthenware
RSW	Refined stoneware
TEW	Tin-glazed earthenware; same abbreviation used for faïence

List of Appendices

"We may not be able to get certainty, but we can get probability,

and half a loaf is better than no bread."

C.S. LEWIS

Introduction

From the discovery of Newfoundland in the late fifteenth century to the ratification of the *Entente cordiale* in 1904, European fishermen have intensively exploited the once-immense stock of cod found in Newfoundland waters. French fishing crews sustained a remarkably steady transatlantic fishing industry throughout this period, and they significantly contributed to the formation of the present-day Newfoundland landscape.

Since 2003, Dr. Peter E. Pope of Memorial University has developed a project on *An Archaeology of the Petit Nord*, a long-term program of archaeological research on the French migratory fisheries in Newfoundland. More specifically, the project focuses on the region once known as the *Petit Nord*, the east coast of Newfoundland's Great Northern Peninsula (Fig.1). The project aims at using a maritime cultural landscape approach to better understand French migratory fisheries in northern Newfoundland, both on a regional and local site-centered scale (Pope in press). The research reported here is nested within *An Archaeology of the Petit Nord* and was carried out as part of a Master of Arts program at Memorial University.

Figure 1

Map of the Petit Nord showing French fishing stations c.1680 (black dots), as well as the location of known archaeological French bread ovens in the region (pink dots). Dos-de-Cheval site marked with yellow dot. French bread ovens identified on the west coast of the Northern Peninsula are also identified with pink dots, even if they are not on the Petit Nord. Contemporary sites names in italic.

(Adapted from Eastaugh, for An Archaeology of the Petit Nord)

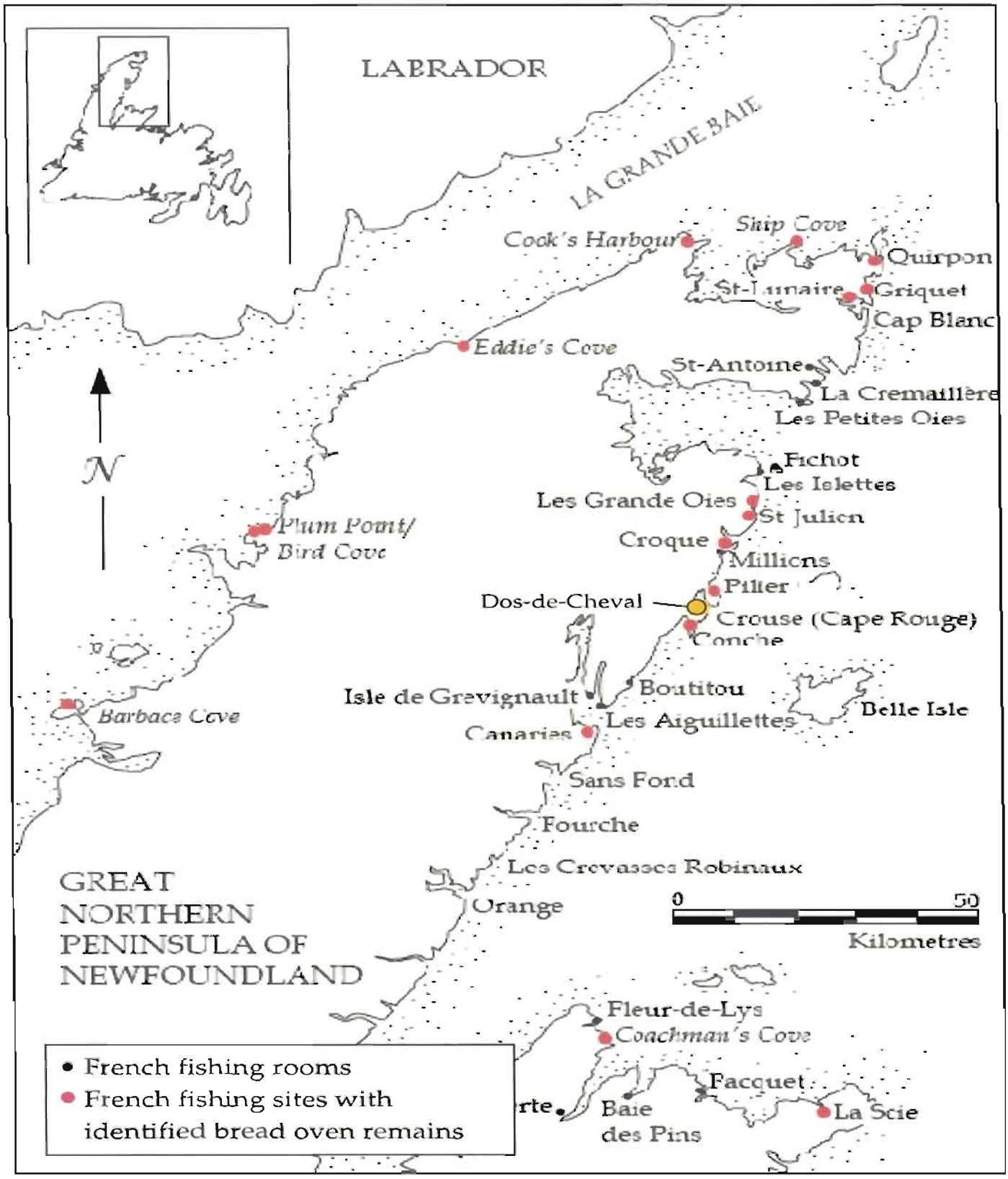


Figure 1 (Caption opposite left)

The main objective of the present research is to better understand why bread ovens became part of the built environment of French fishing rooms of the Petit Nord, and what role those ovens played in the socio-economic and spatial organisation of Breton fishing stations. This problematic also encompasses the role of fresh bread consumption in French fishing rooms, and its impact on the logistics and organisation of inshore fisheries on the Petit Nord. Particular attention is given to the archaeological remains of a bread oven at Dos-de-Cheval (EfAx-09), the site of a Breton fishing room formerly known as Champs Paya.

The goals of my research are to try to determine, or at least to collect data about, the date of utilisation of bread ovens in French fishing rooms, the relationship of those bread ovens to the overall fishing rooms landscape, as well as the significance of fresh bread consumption in French fishing crews and its potential socio-cultural value. My working hypothesis is that a changing socio-economic and political *conjoncture* in France influenced the internal organisation of the seasonal French inshore fishing stations of the Petit Nord; this was manifested in an intensification of the consumption of fresh bread among French fishing crews and, consequently, the integration of large bread ovens into the built environment of the fishing rooms.

The structure of the present paper reflects the sequence of the reflection that led to the resolution of the research problematic. This research used the idea of landscape as main theoretical framework, and the discussion of this

theoretical orientation presented below relates the particular angle of approach used here to archaeological landscape research in general. The history of baking and bread consumption in France provides a useful context to tie the history of French fisheries to Newfoundland with archaeological evidences of baking in fishing rooms. The baking tradition of Brittany is given particular attention here, since the crews who frequented Dos-de-Cheval (EfAx-09) were from Brittany. The four themes explored (landscape, bread in French society, French fisheries to Newfoundland and archaeology of a Breton fishing station) are then discussed together, in order to address directly the research problematic. Themes of cultural identity, appropriation of space, and the complexity of the French fishermen seasonal maritime society become apparent as a result of this exercise.

Methodology

Various methodological approaches were used in conjunction for the present research, in order to include several sources of data and different perspectives on the problematic explored here.

A literature review was undertaken at the initial stage of the project, drawing predominantly from secondary sources. The literature review confirmed that few archaeological or historical works had previously been published about French bread ovens in Newfoundland or about bread

consumption among French migratory fishing crews. Sources about bread consumption in France were more easily available and, although the majority of work accessed during the literature review addressed the socio-politics of bread consumption during the eighteenth century, they were sufficiently varied to sketch a portrait of bread consumption in France from the Renaissance to the late nineteenth century. Some archival documents from the seventeenth to the nineteenth century were retrieved from the Saint-Malo municipal archive and the Departmental Archives of Ille-et-Vilaine in France. Other archival documents used for this research were available through the Library and Archives Canada online database, Archives Canada-France online database, and through the Center for Newfoundland Studies (Memorial University).

The central portion of the project consisted of archaeological field work at Dos-de-Cheval (EfAx-09), a French fishing station site located near Conche, on the east coast of Newfoundland's Great Northern Peninsula. Two mounds, identified as potential French bread ovens, were partially excavated. In addition, a potential bread oven mound identified at the Northeast-Crouse French fishing room site (EfAx-11), located across Cap-Rouge Harbour from Dos-de-Cheval, was assessed during a survey. Rita Barrett, Harley Brown, Mélissa Burns, Scott Carroll, Geneviève Godbout, Rébecca Janson, Stéphane Noël and Dr. Peter Pope all contributed to the work. During excavation, events were determined stratigraphically and recorded by square-meter units,

each positioned according to a site-wide alphanumerical grid. The site grid itself was mapped using a total station; the grid was positioned according to an arbitrary north, with 43 degrees of eastern deviation to magnetic north.

Sites, Areas and Features designations established by Dr. Peter Pope for *An Archaeology of the Petit Nord* at EfAx-09 during his 2004 survey and 2006 excavations were used for the 2007 field season. To facilitate the simultaneous recording process in different areas of the site, each excavation team of the 2007 field season at Dos-de-Cheval was allotted a sequence of Event numbers; those used in the excavation of Features 22 and 952 were even numbers between 1000 and 1098. In addition to this lot of numbers, Event number 1202 was used to designate the bread oven base.

Artifacts recovered during excavation were washed and pre-treated in the field laboratory by Geneviève Duguay, Sarah Newstead and Allison Small. Geneviève Duguay, a Parks Canada material culture specialist, helped with the identification of several ceramic types in the field. After the field season, the artifacts recovered were numbered and catalogued by the author at Memorial University archaeology laboratories, where they are conserved and stored to this day. All archaeological data gathered in the 2007 field season was entered in, and is now accessible through, the *An Archaeology of the Petit Nord* database.

Archaeological fieldwork and documentary research were completed with some informal field assessments in Brittany, France. Several traditional bread ovens were observed and documented with regards to their construction and their relationship to the landscape. The *Heritage Inventory of Brittany* database also supplied data about traditional bread ovens still existing in the Breton landscape and helped orienting informal survey in Brittany. Bread-oven builders and connoisseurs from *Association Tiez Breiz* (represented by M. Michaël Delagrée) and *Association Acigné Autrefois*, as well as Mm. François Juguet and Jean-Claude Toy also supplied valuable ethnographic information about bread oven technology.

The informal ethnographic work was conducted in Brittany after archaeological fieldwork, and it proved crucial in providing supplementary information to the rather scarce literature about Breton bread ovens. Discussions with bread oven builders and observation of traditional Breton bread ovens in situ helped clarify some aspects of the heat-retaining oven technology left unresolved by archaeological fieldwork, particularly with regarding building technologies and baking techniques. Most importantly, informal ethnographic work in Brittany allowed a better interpretation of the archaeological data, by explaining the deposition pattern of bread ovens observed in French fishing sites of Newfoundland and by clarifying the relationship of the bread ovens with their surroundings and within the domestic landscape.

I

Theoretical Orientation: Landscape Archaeology

"Everything not only has a history in time, but a geography in space."

(Gould 1997: 138)

The word "landscape" is familiar and commonly used to describe a variety of scenes representing beautified outdoor spaces, from paintings to computer desktop-pictures. Despite the familiarity of the word, the concept of landscape proves frustratingly elusive to define. For archaeology, the idea of landscape lies beyond purely aesthetic parameters and can be used to study the human experience in its intricacies. Most landscape research in archaeology shares an acknowledged interest in the interaction between humans and their surroundings, but the definitions of what exactly a landscape is are perhaps as varied as the researches themselves. It is therefore necessary to look into the development of the idea of landscape, and then choose and define an angle of approach to landscapes, in order to make such a concept useful to historical archaeology.

Landscape of the Enlightenment and empiricism

The notion of landscape first appeared in the fine-art sphere during the Renaissance in Northern Italy and Flanders, and it then served to designate a new artistic genre: landscape paintings (Johnson 2007: 6). The concept of landscape thus emerged to designate the visual appreciation of the land by a disengaged observer, as transmitted through artistic and material depiction. With the Enlightenment, the idea of landscape was sharpened by the philosophical envisioning of the relationship between humans and nature as one in which Man had to harness nature into submission, lest he should be overcome by it (Cosgrove 1984:21). The dichotomy between human and nature was the same as the tension felt in visual depictions of the land between the observer and the land gazed-upon, which effectively disengaged artists and viewers from the scene (Samuels 1979, Thomas 2001: 168). The views of the Enlightenment would remain influential until present times, particularly with regards to their emphasis on empiricism, and they would shape the first wave of archaeological landscape research.

The first landscape studies, conducted in England by antiquaries, were rooted in empiricism. They originally defined landscapes as tangible phenomena bearing the accumulated physical transformations which generations of humans have wrought on them (Grzymski 2004: 8,

Johnson 2007: 57, Thomas 2001: 165). According to this view, the history of what had been done to the land could read like a palimpsest, and archaeologists could peel back layers of historical transformations to reveal and read each individual stages of a landscape's history. The first empirical focus on accumulation (as defined by Meinig 1979: 6) lingered in the archaeological definitions of landscape well into post-modernity, perhaps because of its intrinsic affinities with the archaeological practice. The paradigm of succession is indeed ingrained in archaeology as a discipline, because of its importance to the key concepts such as chronology, stratigraphy and seriation. Although the idea of accumulation should not be ignored altogether in landscape archaeology, it should be approached with a sensibility for inter-penetrability, erasure and duplication, phenomena which may alter logical succession and deposition patterns. Overall, landscape studies that used an antiquarian empiric approach were generally unconcerned with the influence of human actions and interactions in the creation and maintenance of landscapes.

Processual landscape archaeology

Processual landscape studies of the 1960s and 1970s focused more on landscape as the spectrum of resources which could be exploited by humans

for their subsistence. This current of thought argued that the potential of the land, as well as the human exploitation of it, could be assessed quantitatively and objectively. Human adaptation was perceived as teleological struggle with nature, the success of which could be measured in terms of efficiency in the exploitation of resources and of the creation of a landscape as "habitat" (McGlade 1999: 464, Meinig 1979: 35). For processual archaeological landscape studies, diachronic research aimed at monitoring humans' relationship with their surroundings in such a way as to allow tracking any modification through time. Modifications or continuities could then be linked to changes in the overarching cultural process which guided the use of spaces (Lewis 1979: 15). This generation of research understood the organisation of landscapes as structured and conditioned by cultural systems. Human land-use could be interpreted essentially in economic and functionalist terms, particularly with regards to resources, distances, and political boundaries; such phenomena in turn reflected the structure inherent to the social system and, to a greater scale, to cultural processes (Daly and Lock 2004, Grzymski 2004, Johnson 2007: 121).

In this perspective, landscapes offered an opportunity to synthesize archaeological data in order to recognise the systems within, in the form of "input-output matrixes"(Meinig 1979: 38). Landscape research of the 1960s

and 1970s experimented with human geography models, like the ones derived from Christaller's central-place theory (Grzymski 2004: 9-10). In this regards, "site-catchment analyses", first developed by Vita-Finzi and Higgs in 1970, epitomise the processual period of archaeological landscape studies. Although the models created for processual landscape studies are appealing, for their straightforwardness and quantitative nature, they can yield misleading results when they are disconnected from other socio-cultural factors which may influence human land-use, such as symbolism and political structure. Such an isolation of the quantified landscape effectively disconnects archaeological data from its latent social meaning. In the wake of post-processualism and post-modernity, essentially materialist, not to say commoditizing definitions of archaeological landscapes proved too narrow to account for the socio-cultural forces at work in shaping both physical transformations and cognitive perceptions of the human surroundings (Thomas 2001: 168).

Post-modernity and the idea of landscape

Whereas studies in the 1960s and 1970s defined landscapes in term of human use and domination of a strongly deterministic nature, post-modern studies defined landscapes as external worlds mediated through human experience (Cosgrove 1984, Hirsch 1995, Layton and Ucko 1999). As a broad

intellectual current, post modernism objected to the possibility of a disengaged observation of reality and sought meaning in cultural symbolism and phenomenology. This theoretical path was taken up in landscape archaeology, with the focused exploration of themes such as identity, gender and power, rather than on cultural processes (Bender 2002, Johnson 2007, McGlade 1999 for examples). The influence of anthropology and geography on landscape theory tended to translate itself into a semantic, place-centred discourse that emphasized identity of the landscape at the expense of cultural process (McGlade 1999: 460). More and more, the concept of landscape became fluid and overarching, and came to include other notions such as places and spaces, agency, movement, representation and memory, as well as the relationships between these concepts (Bender 2002: 76, Hirsch 1995: 4). Post-processual studies generally defined landscape as both signified constructions and physical realities, at the interface of which meaning was negotiated. Considering the crucial importance of abstraction and social symbolism in the construction of landscapes, reconstituting, reassembling, and making sense of past landscapes thus appears to be an almost unworkable intellectual challenge.

With regards to post-modern themes of identity, agency and power, the phenomenological perspective has been – and still is – very influential in

landscape archaeology. Phenomenological studies stress how people's experience of a landscape, as well as their movements and interactions with and within it, influences the meaning they give to it (Robin and Rothschild 2002, Tilley 1994). In order to understand the creation of past landscapes, archaeologists approached them in terms of Heideggerian "being-in-the-world" – that is, in terms of the actions and knowledge incorporated in the acts of "residing, dwelling, and being accustomed to a world" (Thomas 2001 : 172). To appreciate how people of the past dwelt in their world, landscapes can be viewed as more or less voluntary autobiographies of social selves, not to be read as books but to be searched for remains from the performance of past daily lives (Lewis 1979: 13, Tilley 1994).

Although they may provide stimulating hermeneutic avenues, purely phenomenological approaches are often challenging, if unrealisable in landscape archaeology because of the sheer difficulty of recreating accurately perceptual experiences of the past. In addition, approaches emphasizing the theorization of human use of space may overlook the very real influence of the physical environment in the creation of landscapes, removing social meaning from its context among the materiality of lived spaces in the same way purely materialist studies can ignore social meaning. Humans draw resources for

subsistence from their environments, and their occupation of space is somewhat contingent upon the kind of resources they exploit.

To bridge the gap between conceptual and material approaches to the study of space and the creation of places, later post-processualist landscape archaeology has experimented with the concept of agency – particularly as defined in Bourdieu's theory of practice and in Gidden's structuration theory (Dornan 2002, Layton and Ucko 1999, McGlade 1999, Robin and Rothschild 2002: 160). Studies of agency and intentionality promise stimulating avenues for landscape archaeology, but they are not essential in acknowledging that cultural patterns and identities are latent in any landscape construction regardless of their intentionality or purposefulness, and that they can be studied as such (Hood 1996).

Landmark, taskscapes and living landscapes

The physical environment, socio-cultural actions, and social networks and memories are three major forces simultaneously at work in the landscape. They act upon each other and interact in an ongoing "trialectic", making for dynamic and ever-changing landscapes (Lazzari 2005). This definition of the idea of landscape by no means totalizes human being-in-the-world, but it makes for a global appreciation of how humans occupy spaces and places.

Defining landscapes as the product of the interaction between physical, material and cognitive perceptions and actions, allows acknowledging that both material realities and human consciousness shape the landscape without overemphasising one over the other (Daly and Lock 2004, Morowski and Beaudry 1992).

Many factors can destroy or erase cultural landscapes, such as natural disasters, change of political systems, abandonment of exchange networks, and modification of social practices. When one of the elements shaping a given cultural landscape ceases to exist, the landscapes created by the particular balance between nature, cognition and social life existing prior this disturbance, also disappears. Remains of this landscape can remain in the land and in social practices, but the landscape itself, alive from a particular equilibrium, a particular combination, has ceased to exist in its whole. Human landscapes are kept alive and reproduced through varied and flexible networks of social relationships, through the spatial images of a land they create, and through the material culture they engage with (Lazarri 2005: 191-192). This social nature of landscapes can be linked to the phenomenological emphasis on experienced space. Landscapes are used to perform social order and relational networks; they are dynamics and change as they are lived in

and as the society who dwells in them transforms (Hood 1996, Meinig 1979, Stewart *et al.* 2004).

In all societies, the occupation of space is framed by a set of more or less flexible social rules; they identify which areas can and should be used for specific activities; what forms and manners of dwelling are acceptable; what boundaries, whether political, cultural, socio-economic, or between private and public spheres, should be inscribed in space. Those rules, which coordinate human movements and activities in space and time, are learned as part of the socialisation process and only then do they acquire meaning and connect with space (Tuan 1979: 90-91). Landscapes are ever created and reproduced in societies as the result of a social memory of places, itself founded on accumulated experiences of a social and physical environment (Meinig 1979: 3). Oral histories, traditional practices and memories of social networks thus carry on the social performance of being-in-the world and ensure its perpetuation between generations. In that sense, landscapes can be approached as social institutions.

In their creation of landscapes, people engage materially with their surroundings and leave tangible evidences of the resulting appropriation of space (Daly and Lock 2004: 350). The creation of material space can occur at different scales, from objects and features, to sites and networks of sites. In the

material landscape, landmarks act as reference points for both activities and meanings (Zedeño 2000). Landmarks are places or features that anchor people in the land and mark their relationship to it; they guide the way in which individuals and communities execute their daily activities, interact, and make sense of the world (Thomas 2001:177-179).

Landmarks exist within the materiality of landscapes and are readily visible components of landscapes, or at least are recognizable as such for the people who use them. Conversely, the same feature can have different meanings, of different importance or intensity, for different groups of people using a same landscape; this is particularly true of the use of same spaces through time. For instance, a river can be an important landmark for a group, dividing territorial boundaries, whereas for other groups, the same river may be a secondary feature, used for travelling and getting fresh water.

The concept of landmark allows flexibility in its use and interpretation, since landmarks can exist simultaneously and complementarily at different scales of the material space, which nest into each other within a given landscape (Pope in press, Zedeño 2000: 102). Objects, features, sites and network of places can all be used as landmarks, if on different scales. Landmarks are among the major components influencing the making of places and landscapes. They help creating the boundaries of social practices and

encourage the recurrent use of meaningful places, which they at once mark materially and represent within spatial networks of interaction (Kent 1990, Thomas 2001, Zedeño 2000,).

Architectural features also are powerful in creating spatial boundaries, even in imposing specific ways of using space and of moving through it. For instance, a fence can both delineate an area used for a certain activity or by certain people and at the same time prevent circulation through the area enclosed, suggesting a way around instead. The use of space however conditions the built environment more than the other way around, which makes buildings the more interesting in the study of the use of space (Kent 1990: 2). Daily use of space is the scale at which cultural practices intersect with the built environment. It is at this level that space is organised to accommodate labour and dwelling, and that activity areas are defined within the landscape. To this purpose, man-made landmarks can therefore help to define and bound in space different networks of activities, or taskscapes (Ingold 1993).

A taskscape can be circumscribed with regards to the execution of a specific task, the modes of occupation, the paths of movements and the places involved and interlocked in the realisation of an activity, which carries forward the process of social life (Ingold 1993: 157). For example, the

taskscape of pottery making in a given centre of production could comprise the potter's shop, the source of clay used, the retailers from which the potter buys other production material (mould, transfer prints, tools), the market at which the pottery is sold, and all the connection routes and activities necessary to the whole production process. Beyond their deceiving simplicity, taskscapes mirror the social organisation of a certain space; interwoven taskscapes and the landmarks they interact with thus form the social fabric of landscapes (Ingold 1993, Zedeño 2000: 107). The concept of taskscape and its application to the interpretation of archaeological contexts highlights that landscapes are both the outcome and the medium of social relations and tasks (Mitchell 2005). The interpretation of social landscapes in terms of taskscapes should not be limited to the functions of space, since the spatial performance of daily activities is also permeated by symbolic cultural practices (Hood 1996: 123).

The concept of taskscape brings into play the temporality of landscape, that is, the way in which the passing of time and of interlocking events are perceived by a given community through its activities and its interaction with the land (Ingold 1993: 161). Taskscapes feed on the accumulated time people spend encountering landscapes and interacting with them. Patterns of taskscapes are maintained by the social memory created through the recurrence of activity patterns (Barrett 1999, Bender 2002, Ingold 1993, Layton

and Ucko 1999: 8, Tilley 1994: 8). Landscapes are formed by "an unfolding of activity rather than a momentary creation", and they evolve with the movement of human activities and labour (Stewart *et al.* 2004: 184).

The sequences of movement imprinted on the landscape by taskscapes are constructed and performed in time and space simultaneously (Barrett 1999: 24, Soubeyran 1985: 161). Time and space can be further compressed when patterns of activity shift locations during the course of their executions, creating "landscapes-on-the-move" that can be transplanted from one location to another, or carried as portable mementos (Bender 2002: 77-80). Landscapes in movement are experienced for instance by nomadic populations and migrants, but also by people engaged in seasonal activities involving travel, such as the French fishing crews who came seasonally to exploit cod in Newfoundland. Seafaring is one of the many ways landscapes can be transplanted from one location to another.

The maritime cultural landscape

In maritime archaeology, one can refer to the maritime cultural landscape in order to include the sea, as well as the relation between land and sea, into landscape studies (Cooney 2003, Pope in press, Westerdahl 1998). When considering the landscape occupied by coastal populations, focusing

solely on the land results in losing a major part of the people's relation to their surrounding and, ultimately, of their social identity. In coastal landscapes, paths, taskscapes and activity areas extend beyond the coast and continue into the sea. Coast and water are interdependent and interlinked; land and sea are both a vital and intricate part of coastal populations' mode of being-in-the-world (Pope in press, Westerdahl 1998). The maritime cultural landscape thus presents itself as a juxtaposition and combination of seascapes and terrestrial landscapes, which are studied as an integrated whole.

How to behave around the sea and how to exploit its resources is as much a part of socialisation in maritime societies as are social rules framing inland activities and interactions; seascapes are as much part of the socialisation process as terrestrial landscapes are (Cooney 2003: 324). Without an engagement with underwater archaeology, maps and travel accounts can help grasp the importance of the sea in the settlement pattern or the occupation of space of certain groups. Places and landmarks exist on the sea as much as they do on the land, and they have names in the daily conversations of the people who use them. Shoals, fertile fishing grounds, navigation routes and sea-faring techniques all exist in the coastal landscape as vividly as land-based activities. The people of Brittany, in north eastern France, live in a maritime culture and engage daily with a definitively maritime landscape (Cabantous 1987, Foucher 1976). This closeness to the sea

is reflected in the activities of the coastal population, traditionally dominated by fisheries and their associated industries such as boat-building, net-weaving, or the distribution of fish in markets. In tension with the maritime landscape exists inland Britanny, the *lande* (back-country), with its rural landscape dominated by farms and rolling hills; the dynamics of the relationship between coastal and inland Brittany makes for a contrasted landscape.

Landscapes acquire meaning only through people's interpretations of them, which are subject to idiosyncrasies and change (Soubeyran 1985: 155). People have an effect on landscape in the same manner that the landscape they live in affects them. Landscapes are form, meaning and representation all at once, both an outcome and a medium of social relations (Mitchell 2005: 49). Even if the boundary between landscapes and the people is sometimes permeable, as in the case of taskscapes for example, landscape studies must avoid solipsism (Samuels 1979: 69). Landscapes of the past as they originally occurred and the way they are reconstituted in the mind of the present are both subjective, but their materiality nonetheless exists and persists through time, in forms accessible to archaeologists. Archaeologically reconstituted landscapes are a perceived "interface of thought" with archaeological materiality, with the same limitations as all archaeological constructs and narratives, but with also the same potential for better understanding the human experience (Morowski and Beaudy 1992: 190).

Historical landscape archaeology

Europe entered the modern era in part as the result of improvement in sea-faring technologies, which had the effect of compressing distances and blurring the cultural boundaries between the Old and the New Worlds. Historical archaeology of the modern world therefore often studies cultural processes, and perspectives on these processes, rather than limiting itself to specific eras or conditions (Hall and Silliman 2006: 2). Historical archaeology's focus on process appears as highly compatible with the study of landscape formation, maintenance and transformation. Landscape approaches can efficiently be used to overarch historical archaeological studies looking at different scales and long time-spans.

This is illustrated by Peter Pope's approach to the study of French migratory fisheries in Newfoundland in *An Archaeology of the Petit Nord* (Pope in press). Historical archaeology can use landscape features and landmarks to frame its research and provide perspective on particular research questions. As such, I will study a specific landmark of the French fishing stations, bread ovens, to better understand the relationship of French fishermen with Newfoundland, the transformation of this relationship through time, and the socio-economic movements of the fishermen's society.

II

Bread as a Social Institution: Baking and Bread Consumption in France, from the Middle Ages to the Late 19th Century

"Enfin je me rappelai le pis-aller d'une grande princesse
à qui l'on disait que les paysans n'avaient pas de pain,
et qui répondit: Qu'ils mangent de la brioche[1]*"*

(J.J. Rousseau, Confessions VI, 1754)

The social history of bread in France

Bread is made by baking in an oven a flour- and water-based dough, previously risen using either yeast or leaven. Breads can be made in a wide spectrum of flavours, from saccharine to sour and savoury. Unlike pastries such as croissants and cakes, they are not intended as sweet foods.

Origins of the social life of French bread

In Christian tradition, bread is used for the eucharist in remembrance of Christ's last supper, and symbolises the sacrifice of God in flesh. With the

[1] Translation: "Finally, I recalled the snap response of a great princess who was told that the peasants had no bread and who replied: 'Let them eat cake."

performance of the eucharist, bread ties the mortal commoners to the divinity of God through a holy (if dietary) union. For Christians, bread is a powerful spiritual metaphor, deeply rooted in the daily concerns of agrarian societies for subsistence (Kaplan 1997: 2). The importance of bread in the French lifestyle is anchored in early Christian medieval times, and it unfolds during the sixteenth century Renaissance (Jacob 1944:125, Kisbán 1986: 5, Mathan and Mathan 1982: 373).

In addition to its purely dietary value, bread in rural France quickly became involved in several superstitions mixing Christian and ancient pagan rites. For example, in Brittany, to appease storms, sailors would throw in the sea a piece of blessed bread (Cabantous 1987: 230). Routine activities surrounding the consumption of bread were often ritualized; for instance, the sign of the cross was carved on new loaves of bread with a knife before the first slice was cut off. Wasting bread was seen as a blasphemy and putting a loaf of bread upside down on a table brought bad luck (Ganachaud 1986: 26). Overall, there existed a symmetry in meaning between the ritual host and domestic loaves, marking the intrinsically distributive function of bread consumption in French households (Bouyer 1984, Kaplan 2002: 14, Sébillot 1895).

Figure 2

Plate from the Encyclopédie *by Diderot and D'Alembert, showing the various objects typically found in a bakery. Note the baker using a peel in the background, as well as the kneading table on the right, Letter A (Diderot 1751: "Boulangerie" Plate).*

Bread as the staple of French diet

Bread fully imposed itself as the staple of the French diet during the Renaissance, while decrease in meat consumption marked a move away from medieval provisioning patterns (Teuteberg 1975:64). In itself, this shift towards a bread-based diet was a major historical change in French foodways (Teuteberg 1992: 1). Commercial baking, and consequently the profession of baker, appeared with urbanisation; this occupation was unknown in the country where bread was made in the household (Albala 2003: 22, Diderot 1751: 358) (Fig.2). With the accession to the throne of the Bourbon dynasty in 1589, the French monarchy moved toward absolutism (Jones 2003:3). The presence of a divinely appointed monarch called for magnificent luxury, even in food (Jacob 1944: 143). Breadways were transformed by the gentrification of the nobility's foodways, and the progressive seeking of white bread instead of coarse, rural, dark loaves emerged as an urban phenomenon in the course of the seventeenth century (Kaplan 1997:20).

In early-modern France, most foods available to a community came from local production, which left hardly any choice in diet (Postel-Vinay and Robin 1992: 494). Major cities, particularly Paris, could benefit from larger catchment zones and exchange routes, and diet tended to be more diverse in the city than it was in the country. Traditional rural diet consisted of a

monotonous menu of bread, vegetable soup and pork (Tardieu-Dumont 1980: 239). The range of ingredients available to the poorest people was narrow, and their diet depended as a rule on seasonal products and preserves when on hand (Albala 2003: 21). Unlike the bread most households consume today, traditional French bread was baked in large, dark and dense loaves, usually weighting between 6 kg and 26 kg (Mathan and Mathan 1982: 381, Poitineau 1970: 147). While wheat bread and whiter loaves were quasi ubiquitous in the cities, regional variations in bread recipes existed in the country where other cereals such as barley and rye were used (Bernard 1975: 20, Kaplan 1997:7, Thuillier 1970: 155). Also, in Brittany, particularly in the Saint-Malo region, bakers used fermented molluscs as leavening agent when brewer's yeast or leaven was not available (Bouyer 1984: 70).

Urban and rural populations alike depended heavily on bread for their subsistence. It was eaten with a piece of *lard* (fatty pork) or *tome* (goat cheese), soaked in soup to thicken it when bread was too hard, or consumed with ham and sausages on feast days (Bernard 1975:30). Sailors' diet, particularly aboard ships bound to migratory fisheries or commercial voyages, relied heavily on hardtack or biscuit, a form of bread dried following a medieval technique (Jacob 1944: 258). Historical ethnographies suggests an average working man

consumed around 1 kg of bread daily; when this ration dropped to a quarter of its usual volume, a state of famine would be declared (Thuillier 1970: 156).

Bread was usually not baked everyday, but rather every week, every other week, or even every month (Bernard 1975: 30, Tardieu-Dumont 1980: 239). In the country, most people would bake in communal bread ovens the dough they had prepared in their household, which allowed sharing the cost of fuel. Peasants rarely had private bread ovens; often, they were in fact constrained to use the bread oven of their feudal master and to pay the related tax (Bernard 1975: 30). In early-modern cities, a crier would announce when the oven was hot, so that women could bring to be baked the dough they had prepared in their household (Sébillot 1895: 28). This practice disappeared with time and urban dwellers ordinarily got their bread from the bakery.

Bread and social contracts[2]

Access to sufficient food supply was one of the pillars of the social contract of the French *Ancien Régime;* if the King could ensure the people had affordable access to sufficient food, then he could rely on their servitude. As a

---

[2] A 1770 poem by La Condamine brilliantly illustrates the social symbolic of bread in *Ancien Régime* France; see Appendix 1.

result, bread came to symbolise continuity and fidelity to the tacit dietary agreement between the king and his subjects, and the availability and price of bread "served as a measure of diverse sorts of legitimacy" (Kaplan 1997:1). Monitoring the bread market was consequently a high priority political issue, part of an economic absolutism inscribed in a canvas of moral obligations (Tilly 1971:29)[3].

French absolute monarchy was divinely appointed, and it had the responsibility of maintaining the bound between God and the commoners by ensuring all subjects could secure their daily bread, the informal eucharist of the daily meal. During the *Ancien Régime*, French foodways and alimentary comportments were ruled by a bread paradigm; that is to say that bread was "at the core of both the material and symbolic organization of everyday existence" (Kaplan 1997:1). Analysis of French archival records suggests that bread accounted for up to 79 percent of the average daily popular caloric intake in early-modern France (Aymard 1979: 10). Although historical reconstitutions of a population's dietary intake present serious limitations, they still provide a heuristically useful illustration of the importance of bread in French foodways.

---

[3] Tilly's study of French economic absolutism is inspired by Thompson's moral economy; see Thompson 1971.

Provisioning crises and famine were common in medieval France and, although they tended to become progressively milder after 1690, they reoccurred until the first half of the nineteenth century (Chevet and Ó Gráda 2004 : 173). The threat of famine and hunger, real or imagined, thus loomed over the French population for centuries, shaping both people's relationship to bread and the overall spirit of their foodways. Demand for bread was always high, particularly in time of scarcity, since it remained the most economical food even when prices soared (Appleby 1979: 868). Bread purchase was at the heart of domestic consumption patterns; the population watched the price of bread eagerly and would be distressed by the emergence of inflation tendencies. High prices and/or scarcity of bread were among the most frequent causes of civil unrest, and early modern governments were careful to ensure supply and maintain standard weights and loaf sizes (Albala 2003: 22).

Bread was such an intricate part of the social definition of proper diet that any suggestion the French population should turn to alternative foods was viewed as an attempt at manipulation or subversion aimed at bending the social contract of the *Ancien Régime* (Kaplan 1997:22)[4]. The symbolic potency of bread certainly contributed to secure its dietary supremacy and slowed

---

[4] Kaplan explores "Famine plot persuasions" as a social phenomena in his 1982 essay *The famine plot persuasion.*

down the introduction of alternative products as a base for sustenance by fostering a marked dietary conservatism (Kaplan 1997:5, Poitrineau 1970: 147).

French Révolution and the symbolic of bread

The eighteenth century was a period of relative social peace, at least until the *Révolution* ended the *Ancien Régime* and tipped French society into a socio-political turmoil that would last for several decades (Doyle 2001, Jones 2003, Kaplan 2002: 23). During the years preceding the *Révolution*, people went hungry and food was expensive (Jones 2003: 30). In early-modern France, food provisioning crises often originated in, or at least were aggravated by, the inequality and inefficiency of food distribution. Scarce food supply and consequent high prices were felt harshly by the poorest social classes, particularly in urban areas where the poorer population did not produce foodstuffs as in the country, and where the higher classes had privileged food entitlement (Pilcher 2006: 42).

In that regard, food provisioning crises were for the most part food entitlement crises; with the prices of food soaring out of grasp of the poorer people, the lower classes could not successfully command access to food through their usual means of entitlement and therefore were exposed to

famine. More than solely agricultural phenomena, food provisioning crises and high bread prices were also the result of social conflicts within the food entitlement network (Tilly 1991: 334).

During the second half of the eighteenth century, the traditional order of food entitlement and distribution was perturbed by harvest failures and the increasingly rapid delocalisation of food production and distribution, as well as by the intensification of networks of socio-economic and political inter-dependency influencing access to food (Jones 2003: 30, Pelto and Pelto 1983: 507). While socio-political stability deteriorated during the last decades of the eighteenth century, the boundaries between political restlessness, hunger and yearning for change blurred into one another in popular demands. In the revolutionary discourse, bread was conceptually located at the intersection of these material, symbolic, economic and cultural crises and demands (Kaplan 2002: 13).

From a contemporary historical perspective, the *Révolution* began on the 14th of July 1789 with the storming of the Bastille, a Parisian prison and fortress (Jones 2003). This event "[would] have appeared to the contemporaries as a kind of harvest festival" in which the people were hoping to reap the fruits of political overthrown (Jacob 1944: 149). A few months later, on October 5th 1789, Parisian women marched on Versailles in a demonstration driven by

hunger and the desire to seek out the King, the "baker" who had failed to fulfil his duty to supply good, affordable bread to his people (Jones 2003, Pilcher 2006:42). The King and his family were efficiently brought back to the capital where the *Révolution* was picking up speed, sealed in its irreversibility by that demonstration in October.

Overall, the spirit of the *Révolution* expresses a "mutual disenchantment" of the people with the failure and the inadequacy of French absolute monarchy and its paternalistic economy (Kaplan 1982: 72, Jones 2003). Post-Revolutionary governments, seeking to abolish political, social and economic institutions of the *Ancien Régime*, soon liberalised grain-trade in the hope it would stabilise provisioning network and relieve food shortages (Darrow 1991, Doyle 2001). However, the transition to free-trade in the food markets wasn't smooth; if the the *Révolution* indeed gave more economic and civic liberty to the French citizens, it didn't solve grain provisioning crises nor did it bring down the price of bread. In 1793, drawing from the outlawed heritage of the *Ancien Régime*, the *Convention Nationale* government instituted a maximum price for bread, which instantly generated a climate of economic terror. This measure effectively deflected the blame of high food prices from the government to professional bakers, traditional social enemies all over the country. The *Convention Nationale* thus channelled the blame of a poor

economic situation into traditional consumer-retailer conflicts, efficiently fending off another potential civil revolution (Darrow 1991: 499, Pilcher 2006: 63).

French foodways and people's relationship to bread in post-revolutionary France are better known for cities, such as Paris and Bordeaux, where documentation is more abundant and political action was more intense than in the countryside. It nonetheless appears that the liberty brought to the peasant-class by the *Révolution* emancipated them from feudal taxes and duties, including those related to food. For example, peasants who were in the past obligated to use their lord's bread oven to bake their bread, were encouraged by their new liberty to build and use private bread ovens as a token of citizenship (Mathan and Mathan 1982: 373).

Eating to show social status is a well documented phenomenon throughout history and was well-developed in France since at least the Middle Ages, in bread as in other types of food (Kisbán 1986:4). There existed a social hierarchy of bread, a correspondence between dietary practices and social prestige strictly adhered to during the *Ancien Régime*: white bread was reserved for the nobility and the ecclesiasts, *bis* (a mix of white flour and of darker one) for the better off commoners, and dark breads for the poor. Bread consumption was a daily reminder of a social order in which "people should

never be tempted to forget who they were and what their real needs were" (Kaplan 1997:20, Guy 2001: 499). The difference in the quality of the bread consumed provided a striking contrast between the luxury to which the mercantile classes had access, and the poverty to which the peasants and the workers were confined (Brace 1946: 650).

In the French hierarchy of food, white bread was a symbol of purity, of opulence and nourishment; it would remain the most coveted type of bread well into the twentieth century and arguably until the present day (Kaplan 1997: 8). The prestige and social power of white bread under the *Ancien Régime* and the consequent social hierarchy of bread survived the *Révolution*. In their demands as new citizens, people wanted more loaves of *whiter* bread, not endless supplies of cheaper wholegrain or rye loaves. After the *Révolution*, white bread remained a source of civil dignity: the access to whiter bread signified that hard times had ended and that social and political life could be regarded upon with positivism and hope (following Kaplan 2002: 15).

"Bread was one of the rare pivotal institutions of the *Ancien Régime* that revolutionaries openly respected." (Kaplan 1997: 30) The main difference between the potent power of bread in *Ancien Régime* and in post-Revolutionary France is the sense of social identity it sustained; in Republican France, the metaphor of bread and the performance of foodways united people

within a single body of citizen more than it split them in socio-economic strata of masters and servants (Kaplan 1997:31). The main change brought by the *Révolution* to French breadways was the possibility for everyone to access high quality bread and thus social freedom and mobility. This major semantic change in itself constitutes a food revolution, an overthrowing of the social order of bread (Graeber 2004).

Throughout the late eighteenth and nineteenth centuries, French society underwent major social transformations, sliding from the *Ancien Régime* into modernity, from kingdom to nation-state. During this transition, France underwent processes of industrialisation, urbanisation, proletarisation and laicisation of society (Jones 2003, Rompkey 2004: 15). A constant, safe margin of food supply was successfully secured owing to more intensive agricultural techniques, improved transportation and technologies for food preservation (the invention of the tin can in 1810, for example). As a result, standards of nutrition quickly and efficiently improved throughout the country (Teuteberg 1975: 66). In addition, throughout the nineteenth century, the French people developed an increasingly commoditized relationship with food, in which more people bought their foods in city markets rather than producing it. In Brittany, this change was reflected, for example, in the way food riots sparked by high prices of bread were dealt with in 1832. The crisis was managed by

the authorities not in terms of social contract, as it would have been during the *Ancien Régime*, but in terms of commercial liberty (Gemie 2007: 141).

In parallel, a major dietary shift unfolded during the second half of the nineteenth century, constituting the same kind of milestone in the history of French foodways as the adoption of bread as a staple of diet during the Renaissance. The price of cereals generally decreased, bringing down the price of bread. Households thus needed to spend less to acquire the same quantity of bread, making room in the food budget for other foodstuffs such as eggs, cheese and meat. Access to a wider range of foodstuffs made for a more varied diet, relying increasingly less on bread. As a consequence, the overall bread consumption declined, even if bread remained at the centre of the French food paradigm (Aymard 1979: 6, Guy 2001: 502, Postel-Vinay and Robin 1992:507).

Another influential transformation of French foodways, which occurred first in better-off urban communities before spreading in more rural locations, was the development of a French bourgeois cuisine, the French cuisine as we know it today. All these changes took place in a socio-political context from which France would emerge as a nation-state. French cuisine soon imposed itself as a "national foodway", a symbol of France's perceived cultural superiority over other European nations which became a jealously

guarded vehicle for the affirmation of a national identity (de Garine 1980: 227). The social symbolic of bread inherited from the *Révolution* was consolidated and absorbed in the national foodways. Bread continued to be the implicit testimony of people's participation in a shared social project, although the significance inscribed in food evolved progressively from that of a shared citizenship to the pride of a culturally revered nationality.

Brittany and the history of French breadways

Brittany became a vassal of France in 1234, and it was officially incorporated to the kingdom of France in 1532 (Chédeville and Croix 1996: 49-64). As early as the thirteenth century, the influence of French politics over the Breton policies effectively integrated Brittany into the French international exchange network (Chédeville and Croix 1996: 50). From the late-medieval period to the nineteenth century, Brittany thus never fully integrated France and retained a distinct cultural identity, yet it never claimed a complete independence either (Gemie 2007: 3).

Brittany had been an integrated part of France for more than two centuries when the Révolution started in 1789, and that, overall, Brittany participated actively in the Révolution while usually advocating political

moderation (Chédeville and Croix 1996: 89-90, Le Goffic 1910)[5]. The power of social movements and trends brought by the Révolution and by the industrialisation process certainly reached Brittany and influenced it, just like other regions of France (Gemie 2007: 182, Le Goffic 1910: 145-163 and 1930). Foodways, like other socio-political phenomena such as transatlantic trade, must also have been characterised by a certain symmetry between the Breton trends and broader French social currents. Thorough ethnographic and archival work would be necessary to fully understand Breton food history, but the evidence gathered during the present research and the historical ties binding Brittany and France both suggest that a certain correspondence between the history of both French and Breton foodways can be assumed.

Bakers: the early-risers

Bakers obtained a professional status in 1637, from which time the training of new bakers was organised as an apprenticeship system (Diderot 1751: 360). Aspiring bakers had to master several techniques, including those of rising and kneading the dough and using a bread oven properly. Making good

[5] The complex nature of the Révolution in Brittany is the object of an ongoing historiographical dispute, which will not be detailed here (Chédeville and Croix 1996: 50, Gemie 2007).

quality bread was highly time consuming and required skill – a fact as true in early-modern times as it is today (Kaplan 2002: 30). As early as the seventeenth century, the profession of baker was tightly framed by laws and regulations. Everything from the price of loaves to market-place regulations were monitored scrupulously by local governments and, while bakers were exempted certain civil tasks and military draws, they also had to work everyday and were forbidden to take days off (Albala 2003:21, Diderot 1751: 360, Jacob 1944: 136). Both price of bread and the margin of profit bakers were entitled to make were regulated by municipal laws which were reviewed regularly (Muller 1986: 9).

In France, bakers had a bad social reputation for centuries. They were the figure the people associated with increases in the price of bread, which often foreshadowed provisioning crises. The population resented the bakers for bringing them news of hard times to come, and the people did not hesitate to blame them for high prices, limited availability or low quality of bread brought about by subsistence calamities (Jacob 1944:135, Kaplan 2002: 236, Sébillot 1895: 1). As a social figure, bakers were generally distrusted and served as scapegoats for an array of socio-economic problems (Muller 1986: 9). In times of bread scarcity, they were resented for having the "enviable position of feeding [their] own family first", and bakeries were frequent targets during popular riots, particularly the food-related ones (Darrow 1991: 519, Pilcher 2006: 43,

Sébillot 1895: 36). *Taxations populaires* were a particularly cathartic phenomena practiced in France from the Middle Ages to the nineteenth century, in which an angry mob would invade one or several bakeries, appropriate all the bread they could find and leave behind what they considered to be a just payment for what they had taken (Harkins 1970: 335). Bakeries were purely commercial in nature and didn't provide an element of sociability, as opposed to taverns or blacksmith shops for example, which further contributed to the longevity of popular animosity against bakers (Darrow 1991: 518).

Breton bread ovens

The tools used by artisan-bakers are as numerous as the specific tasks they accomplish, from measuring ingredients to getting baked loaves out of the oven. The material culture associated with artisanal bread-making is well documented (Diderot 1751: *Boulangerie* plate; Fig.2). The most crucial piece of equipment for successful baking is the bread oven (Fig 3 and 4 below).

Bread ovens can be either attached to a building and thus built-in, with access through a door from the inside, or can be separate, freestanding, outdoor cooking structures (Rainville 1977, Tardieu Dumont 1980: 244). The former type of bread oven is usually preferred in urban bakeries and bake-

houses serving large households, whereas the latter is common in smaller household ovens and communal installations.

There are several ways of baking leavened breads, such as Dutch ovens (portable ovens heated in a fire-pit and efficient for small quantities or occasional baking)[6], ovens heated by a continuous fire lit underneath the baking floor (commonly used in commercial bakeries), and heat retaining ovens (the traditional rural type). Semi-interred freestanding bread ovens and ovens built in embankments are also known; this mode of construction both maximises heat retention and minimises the amount work required to build the oven structure (Cloarec *et al.* 1997: 7). Although some structural differences exist between freestanding heat-retaining bread ovens and those attached to buildings, the basic components and modes of use are the same for both (Fig. 3).

[6] Bailey (1937) provides a good description of the Dutch oven technology.

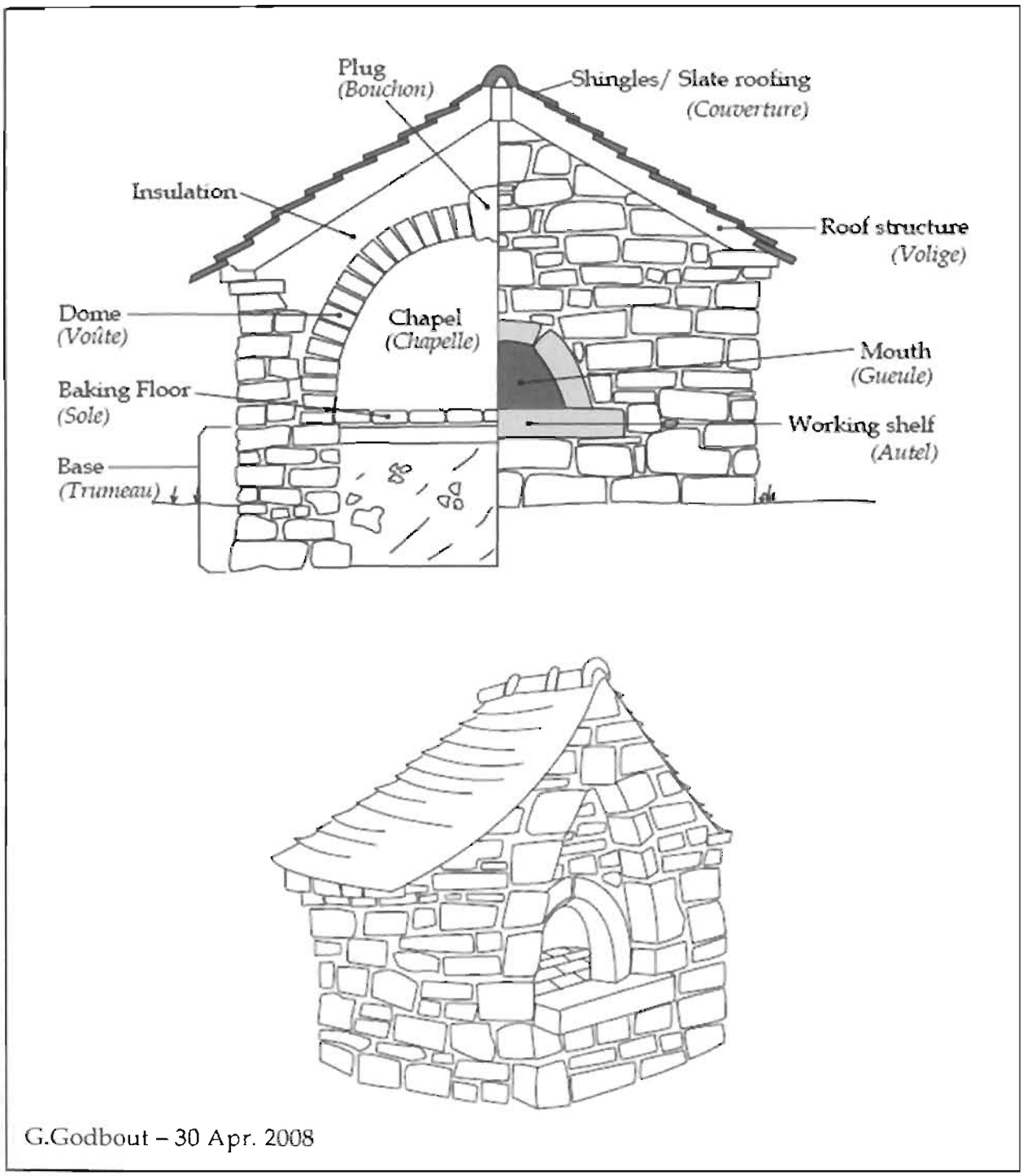


Figure 3

Sketch of a typical Breton stone bread oven, with its main components identified (French translation in parentheses). A three-quarter profile view is shown below (Adapted from Association Acigné Autrefois 2000)

Figure 4

Examples of traditional clay and brick bread ovens of Québec

(Boily and Blanchette 1979: 13)

A great variety of forms exist in documented bread ovens of Brittany (Delagrée pers. comm., Juguet pers. comm.). The materials used to build bread ovens are varied: clay, wood, stone, brick, mortar and turf are chosen according to their local availability, which usually results in heterogeneous structures. The base of the bread oven (or *trumeau*) is fundamental to the durability of the structure. To make the base, a square or ovoid perimeter is first created, by digging it out of an embankment or building it up using bricks, stones or rough pieces of lumber. The hollow base is then filled with compacted rubble, overlaid with a thin layer of smoothed sand or compact gravel, on which in turn rests the baking floor. A properly filled bread oven base provides good insulation and a stable foundation to the baking floor and dome, thus making for an overall more durable bread oven. The baking dome rests on the perimeter of the base; the hollow baking area created by the base, the dome and the baking floor form the baking chamber or *chapel* (Boily and Blanchette 1979, Delagrée pers. comm., Juguet pers. comm.)

The simplest form of Breton domestic bread ovens consists of a clay baking dome, built on a low platform, is often protected by a wooden roof-like structure (Boily and Blanchette 1979:13, Delacrétaz 2000: 28, MAPAQ 2003: 2) (Fig. 4). Clay ovens have to be baked themselves in order to become resistant enough to be used in repeated food preparation activities. A fire is lit inside the dome until it reaches the proper heat for the clay dome to transform into

ceramic – in Breton folklore this corresponds to the moment when a bottle placed in the opening of the oven melts (Bouyer 1984: 75). Clay bread ovens tend to be small household cooking structures. Commercial or communal ovens are commonly made of more durable materials such as stones and bricks.

In larger bread ovens, the dome can be made of bricks and/or stones, and insulated with clay, turf and/or other exterior structures such as shingles and stones. The bricks and stones of the dome are assembled as they are positioned lying against a heap of compacted sand shaped like the desired format of the chapel. Regardless of the size of the oven or the material used for the dome, bread oven baking floors can be made of tile, rock, brick, or beaten earth. Tiles remain the material most commonly used and bricks, when used, are laid down with their small size up (*de chan*) to provide better insulation (Rainville 1977: 62). The floor is the part of a bread oven most likely to be frequently damaged by the raking of tools used during each baking episode, and the flooring material is not fixed but only laid on the levelled sand, in order to allow easy replacement of broken pieces (Cloarec et al. 1997: 11, Juguet pers. comm., Toy pers. comm.).

The preferred baking dome shape is that of a semi-circular low-arc which minimizes the quantity of fuel necessary to heat up the baking chamber

(Boily and Blanchette 1979, Rainville 1977: 88). If the dome is made of bricks or stones, the interior of the baking chamber can be protected, as well as being further insulated, with a slip of clay. The door opening, or mouth, is usually no more than 60 cm wide by 40 to 50 cm high, and an oblong or rectangular shape is usually preferred. Cast-iron bread oven doors appear during the second half of the nineteenth century but never became a standard feature of heat-retaining bread ovens. In Brittany, the mouth of a bread oven is frequently closed with whatever is at hand, like a large stone or a wide wooden board (Boily and Blanchette 1979: 19, Delagrée pers. comm., Mathan and Mathan 1982: 379). Traditionally, urban bread ovens were made by professional oven builders, usually masons, whereas in the country they were built by a skilled local craftsman or by a member of the household who had learned construction and repair techniques from his or her elders (Boily and Blanchette 1979: 4).

Regardless of the construction materials used, traditional domestic bread ovens work on a heat-retention principle. Consequently, the quality of a bread oven is measured by its capacity to accumulate calorific energy and then release it slowly and evenly (Delacrétaz 2000: 16). To bake bread, a fire is lit inside the dome and left to consume itself into embers until the oven reaches the desired temperature – usually evaluated by the colour of the dome and the

baker's evaluation of the heat. To heat up the oven properly, all surfaces must absorb heat and the embers generated by the fire have to be spread and moved around the baking floor (Delacrétaz 2000: 60, Toy pers. comm.). Bread ovens are preferably heated with small pieces of firewood because these produce an intense and brief flame which quickly turns to embers (Delacrétaz 2000: 59, Delagrée pers. comm., Juguet pers. comm.). The specie or type of wood used does not influence the taste of bread and, as a rule, only the baking sequence and the quality of ingredients used, not the choice of fuel, truly influences the quality of bread (Kaplan 2002: 57). When the bread oven is warm enough (about 350° Celsius) the ashes and remaining coals are scraped out, the baking floor is wiped clean with a soaked rag, and the loaves of bread to be cooked are placed in the oven (Boily and Blanchette 1979, Bouyer 1984, Delacrétaz 2000: 56).

The oven opening is quickly blocked to maximise heat retention. Once the bread is baked (after about an hour or two), bread ovens can be used to cook or heat other foods, as well as to perform other activities (for drying, sterilising and smoking purposes for example), thus using the heat generated for bread-making to its full potential (Boily and Blanchette 1979: 28-32, Mathan and Mathan 1982: 381). The time it takes for a bread oven to completely cool down depends on the quantity of food baked in it, on the time it was left open,

and on the overall efficiency of the oven insulation; a complete cool-down can easily take up to 24 hours (Delacrétaz 2000: 63).

In rural France, bread ovens can be private or shared between several families or even an entire village (Tardieu-Dumont 1980: 244). A well-built bread oven can last 20 to 40 years without needing major repairs (Mathan and Mathan 1982: 376). The size of the chapel of a bread oven is a direct indication of the quantity of bread that can be cooked in it in one batch and, consequently, of the number of people sustained by it (Rainville 1977: 32). Domestic bread ovens used by a single household, perhaps comprising up to 20 persons, are typically about 1.5 m in diameter (MAPAQ 2003: 2). An oven with a baking chamber of 2 to 2.70 m in diameter could bake up to 150 kg of bread at once (Kaplan 2002: 55).

There seems to be a recurrent pattern in the location of Breton bread ovens within their surroundings. The organisation of bread-making in the landscape is similar for both freestanding and built-in bread ovens. As a rule the mouth of Breton bread ovens never opens to the south in order to avoid dominant winds, but the location of bread ovens themselves has less to do with precise cardinal orientation than with landscape features (Rainville 1977: 25). The baker must have enough space to manipulate his tool. The length of peel and rake shafts is proportional to the size of the bread oven, and

it can reach 4.5 m for a bread oven with a baking surface of 3 m in diameter, and 2 m for a 1.5 m baking surface (Delacrétaz 2000: 27, Rainville 1977: 96).

Bread ovens have to be located in accessible and convenient places, to best integrate their use within household life and routine domestic activities (Rainville 1977: 14, 22). Bread ovens are part of domestic life, conceptually associated with the indoors; even as independent exterior structures, they are considered a continuity of the domestic space (Boily and Blanchette 1979: 11, Robin 2002). Bread ovens are utilitarian and usually do not constitute an element of social prestige; therefore, in villages or colonial settlements, they are usually built in backyards and are not visible from the front (Rainville 1977: 21).

As a whole, bread ovens are a reflection of technology, of the conditions imposed by the physical environment, of the standards of living of a community, and of the spatial organisation of domestic activities (Boily and Blanchette 1979: 3). Because they bear witness to such varied aspect of French society, bread ovens are culturally significant elements of the material culture and deserve to be studied as such. Bread ovens also offer a window on bread consumption patterns of a given community which, considering the importance of bread as a manifestation of French socio-cultural identity, is an appealing way to approach the social history of France and its people.

III

French migratory fisheries to Newfoundland

General historical context

The official discovery of the island of Newfoundland by John Cabot in 1497 turned the attention of European countries to new fishing grounds where the supply of cod was seemingly inexhaustible. Cod was already widely consumed in the Old World, particularly in Roman catholic countries where religion restricted the consumption of red meat to only a few days of the year (Innis 1954: 26). In France, cod was the only dry or cured fish making its way to the wealthiest tables, its white colour fitting within the scheme of the ideal dietary purity and sophistication characterising French foodways at least since the Renaissance (Turgeon 1987: 157). The enthusiasm created by Cabot's discovery gave momentum to a feverish mercantile enterprise in European colonial metropolises – principally England, Portugal, Spain and France (Innis 1954). Seasonal fisheries to Newfoundland soon became a central part of the French economic exploitation of North-American resources colonies. Because

of its importance to fisheries and its strategic position at the mouth of the Saint-Lawrence River, Newfoundland had an interest for the French that other parts of the New World did not have and the desire to secure access to it shaped, in great part, French colonial policies in North America (de la Morandière 1967: 3).

The French North-Atlantic cod fisheries remained a remarkably stable industry for nearly four centuries, roughly between 1504 and 1904. Compared to other colonial resources such as fur, cod engaged a stable demand and maintained a reasonably stable value, making it the most important and sought-after resource from the northern American French colonies (Pope 2004: 14, Pope 2006: 28). Cod fisheries also provided the basis for a relatively stable economic activity in France itself, where the benefits of the trade would reach all the way to the "back-country", which provided the migratory fisheries with both men and supplies (Service éducatif 1996: 18, Anon. 1801: f. 1v). The development of migratory fisheries also fostered the emergence of a broader bourgeois ship-owner class, and provided employment to numerous fishermen as well as to peasants coming from rural areas (de la Morandière 1967: 24 – 27, Hébert 1997:10, Turgeon 1987).

While European fishing rights in North-America waters were framed by international treaties, the North-Atlantic cod fisheries industry remained

decentralised, retained regional particularities and in general proved hard to circumscribe within governmental regulations (Pope 2004: 18). Nonetheless, the migratory cod fisheries soon became a highly politicised endeavour in both France and England, where they served to promote political and military power. Migratory fisheries, particularly those conducted from shore-based fishing stations, involved tasks requiring little prior seafaring experience and offered the opportunity to provide an *ad hoc* naval training to a broad range of the male population. A vast pool of able sailors was thus readily available for the drafts of the Navy when war arrived (Brière 1990: 221, de la Morandière 1967: 28, Janzen 1988: 36, Anon. 1801: f. 1r).

Similarly, documents from this period often reiterate how political influence in Europe could be enhanced by the control of colonial resources; most commentators of the time thus express a steady concern for the monopoly over cod fisheries in the New World (Clement 1761: f. 14-17, Anon. 1801). The battle for the domination of the Atlantic and therefore for the control of maritime communications and exchanges between Europe and North-America was at the heart of French-English conflicts in the New World, particularly in the seventeenth and eighteenth centuries.

Movements and transformations of the French fisheries in Newfoundland

The French fishing crews who came to Newfoundland over the centuries frequented both the island's shores and the Great Banks. On the island, French fishermen mainly visited two areas: the *Petit Nord*, the name given to the east coast of Newfoundland's Northern Peninsula between Bonavista and Quirpon, and the *Chapeau Rouge*, the coast stretching from Placentia to the south-western tip of the island (Hiller 1996: 1). Two different types of seasonal fisheries were practiced in Newfoundland, namely the ship-based bank fisheries and the shore-based inshore fisheries; each are described more fully below. Fishermen from Brittany, in north western France, were amongst the first Europeans to exploit cod in Newfoundland, coming to the island perhaps as early as 1504. Bretons dominated the French fisheries in the Petit Nord until the early twentieth century; place names and numerous archaeological remains of the fishing stations they occupied still bear witness to their presence on the Newfoundland's Northern Peninsula (Fig. 1).

The sixteenth century

The first known French fishing expeditions to Newfoundland occurred in the early-sixteenth century and, by 1516, the French fisheries to the Petit Nord appear already well-established (Turgeon 1987: 136). French North-

Atlantic cod fisheries progressively gathered speed throughout the sixteenth century, and more ships with incrementally larger tonnage were sent from various fishing ports of northern France to Newfoundland (de la Morandière 1962: 233). The ports that sent ships to Newfoundland were at that time of relatively modest size and spread out along the French coast. Migratory fisheries were active on a rather modest scale, at that time, and relied essentially on the investment of several small ship owners each providing for a limited fleet, rarely with royal funding or support (Minois 1992: 515).

The Normans and the French Basques also carried out important fishing activities in Newfoundland. Nevertheless, Brittany clearly engaged in the Newfoundland fisheries more aggressively than other regions of France (Minois 1992: 516, Cabantous 1987, de la Morandière 1967). Brittany's strong transatlantic tradition would endure for nearly four centuries, and would always account for an important portion of the French fishing fleet.

The second half of the sixteenth century was a period of general economic growth in France, and migratory cod fisheries were no exception. A steep growth in the volume of those fishing activities was recorded during the 1540s and continued throughout the following decades (Turgeon 1987: 136, Villemarqué 1995: 27). During the last quarter of the century, however, French fisheries to the Petit Nord were slowed down because of wars and at the same

time, English fisheries emerged as a solid competitor in the previously largely French domited Newfoundland fishery (de la Morandière 1962: 397, Pope 2004: 16).

The seventeenth century

During the seventeenth century, several factors contributed to the concentration of armaments to Newfoundland in fewer, larger and more powerful ports. Larger ports with more important fleets attracted more investors, perhaps because they offered more stable commercial opportunities. Certain ports also abandoned Newfoundland fisheries for other more profitable trades, like slave trading and commerce to the Caribbean. The revocation of the Edict of Nantes (1685), which abolished religious liberty in France, pushed several Protestant ship owners to leave France which reduced the number of investors and contributed to the concentration of Newfoundland armaments in the hands of fewer ship owners. In addition, natural phenomena, such as the hindrance to maritime traffic in shallow ports caused by the accumulation of silt, rendered inaccessible some smaller ports and contributed to the growth of ports such as Bordeaux or Saint-Malo. (de la Morandière 1962: 271, Minois 1992: 516).

Although French fishing crews had to compete more and more with English rivals, French cod fisheries in Newfoundland still produced twice the yieldof their English counterpart throughout the seventeenth (Pope 2004: 19). Simultaneously, inshore fisheries to the Petit Nord gained importance and flourished within the overall French migratory fishery. Saint-Malo came to dominate the whole industry, most particularly and durably the inshore fisheries to the Petit Nord (de la Morandière 1962: 385, Villemarqué 1995: 28). To structure the attribution of fishing harbours in the Petit Nord, the inhabitants of Saint-Malo agreed on a unified procedure in a Petition, deposited with the Breton Parliament in 1640, and later ratified by ordnance of the Ministry of the Marine in 1681 (Bernet 2007: 200-203).

According to the Saint-Malo Petition, fishing rooms were to be attributed to crews on a first-come, first-served basis. The first ship to reach the "Havre du Croc" (Croque Harbour), on the Petit Nord coast, gained the right to use the best fishing room in the fishing station of their choice and was in charge of the peaceful and just use of the fishing rooms at this station for the season. As other fishing crews arrived in the Havre du Croc, their captains would choose from the available fishing rooms and register their name and harbour of choice in a log book (de la Morandière 1962: 164, 390). Of course, the first ship to reach Newfoundland at the end of the spring and sail into

Croque harbour had advantages over the others, and this pushed ships to leave France earlier than was advisable. The need to register for rooms at Croque would then spur dangerous regattas through the floating ice often present in Petit Nord harbours, through the month of June. Apart from the 1640 Saint-Malo Petition, however, Breton fisheries retained an individualistic character, with ports carrying out different administrative policies (Minois 1992: 516).

In parallel to the concentration of shipping in particular ports, the tonnage of ships bound for inshore fisheries on the Petit Nord grew, a tendency already in evidence by the mid sixteenth century (Turgeon 1987: 144, Villemarqué 1995: 25). Nonetheless, the overall volume of the fisheries decreased during the second half of the seventeenth (Turgeon 1987: 143). This decrease can be attributed in part to maritime conflicts between France and England, notably the War of the League of Augsburg (1689-1697) and the War of the Spanish Succession (1704-1713) which disrupted French traffic to Newfoundland. While fishing expeditions had been essentially commercial during the sixteenth century, during the seventeenth century they took on a markedly political connotation, as France and England competed for maritime hegemony in the Atlantic (Archives municipales de Saint-Malo 1992: 8, Turgeon 1987). This struggle for commercial and political dominancy

periodically erupted into wars but was carried out constantly and more subtly in the fight for fishing grounds and for access to the fish stocks of Newfoundland (de la Morandière 1962: 213).

The eighteenth century

The political and strategic importance of Newfoundland fisheries peaked during the eighteenth century. The most revealing witness of the Anglo-French rivalry in Newfoundland and of the strategic importance of this island and of the migratory fisheries industry in general, is arguably the Treaty of Utrecht (Hiller 1991, Anon. 1713). Signed in 1713 during the peace negotiations which ended the War of the Spanish Succession, the Treaty of Utrecht forbade any permanent French settlement on the island of Newfoundland, ending colonial French attempts, including the fortified port of Placentia. The islands of Saint-Pierre and Miquelon also became British in 1713, but were later restored to France by the Treaty of Paris in 1763 (Brière 1990). In addition, according to the Treaty of Utrecht, the French kept the right to use fishing harbours in northern Newfoundland for their seasonal fishing activities, on a chosen portion of the coast designated as the French Shore.

Originally stretching from Cape Bonavista to Point Riche, the French Shore was relocated from Cape St.John to Cape Ray, after the Treaty of

Versailles (1783), which ended the American Revolutionary War. The Petit Nord was included in both of these delineations of the French Shore, which allowed a recurrent occupation of the region and the development of a remarkably stable, if seasonal, landscape for the French fisheries (Pope in press). The Treaty of Utrecht, or more precisely the diplomatic interpretations of its articles, proved to have a tremendously durable influence over Anglo-French relations in Newfoundland, particularly regarding the regulation of the French presence on the island (Hiller 1991 and 1996).

The French migratory fisheries were repeatedly disrupted by Anglo-French naval conflicts throughout the eighteenth century (Innis 1954: 214). The French frequentation of Newfoundland shore-based fishing rooms was interrupted completely during the Seven Years War (1756-1763) and, although they had picked up their pace by the 1770s, French migratory fisheries to Newfoundland were now surpassed in importance by the British industry (Hiller 1996: 8). The British fisheries were rooted in the growing Anglo-Irish permanent settlement of the east coast of Newfoundland which, as it spread progressively to the north, came into direct competition with the French for fishing grounds, particularly after the mid-eighteenth century (Hiller 2007).

Competition for space was fierce and often manifested itself by both direct confrontations and indirect outburst of violence and vandalism between

French and English crews (Wilkshire and Wilkshire 1992: 148). For example, English settlers of Newfoundland came to the Petit Nord during winter to hunt seal, when the region was deserted by the French fishing crews. They often left the cobbled beaches of fishing stations soiled with blood and blubber and frequently vandalised French installation and fishing gears left behind. Such disturbances caused delay in the start of French fishing season, since more mending and cleaning work was necessary when crews arrived the following spring (de la Morandière 1962: 168). Both French and English parties appealed to interpretations of the Treaty of Utrecht favourable to their cause and there seemed to be no end to negotiations and disputes.

Overall, migratory fisheries maintained their importance during most of the eighteenth century, even if fishing activities themselves were completely interrupted during the last seven years of the century by yet another war (Turgeon 1987: 147, Villemarqué 1995: 26). Armaments for Newfoundland fisheries continued to be increasingly concentrated in fewer, larger, ports, chiefly Granville in Normandy and Saint-Malo and Saint-Brieuc in Brittany, as well as a few Basques fishing ports of the Adour region, like Saint-Jean-de-Luz (Archives municipales de Saint-Malo 1992: 34).

As the eighteenth century unfolded, British and, later on, also American competition, increasingly pressed the French fisheries, a tendency which

continued throughout the nineteenth century (Turgeon 1987: 144, Anon. 1801: f. 3v). Fierce rivalries were nonetheless paralleled with economic exchanges and contact between the fishing crews in Newfoundland waters. Such contacts had occurred at least since the eighteenth century when Louisbourg acted as an active trade port for products coming from Québec, Acadia, New-England, and French Atlantic ports such as Saint-Malo and Saint-Jean-de-Luz (Balcom 1984: 12). Similarly, Cape Ray in south-western Newfoundland was the base of effervescent and often illicit exchanges and trade between French and English mariners (Janzen 1988). Little is known of the commercial ties between French fishing crews visiting the Petit Nord and the earliest settlers, or of commercial dealings that may have occured between the two groups.

By the mid-eighteenth century, the germination of European nationalisms was translated in the migratory fisheries by a shift from mercantilism to more nationalistic forms of capitalism (Bowles 2007, Grassby 1999, Minois 1992: 516). In addition, during the last decade of the eighteenth century French society was shaken by the social turmoil brought about by the *Révolution* of 1789. The conjoncture of bankruptcy of the state, famine, and unemployment was hurt the migratory fisheries, and the volume of Breton

fisheries in Newfoundland decreased (Innis 1954: 214).[7] Although the *Convention Nationale*, the post-revolutionary government of the First Republic, 1792-1795, reinstituted and kept the *Ancien Régime* maritime regulations and although no official effort was made to halt fisheries at Newfoundland, French fishing crews seemingly deserted the Petit Nord roughly between 1790 and 1815 (Pope in press, Villemarqué 1995: 26).

The nineteenth century

During the first decade of the nineteenth century, French migratory fisheries to Newfoundland were further challenged by the Napoleonic wars, which started in 1802 and ceased only with the 1814 coup-d'état stripping the emperor Napoleon I of his powers. Political instability recurred in post-Napoleonic France at least until the Second Empire (1852-1870), with the rather rapid succession of the First *Restauration* (1814), the Hundred Days (the brief return to power of Napoleon I in 1815), the Second *Restauration* (1815-1830), the July Monarchy (1830) and the Second Republic (1848-1852). As aforementioned, in time of war, men who would usually constitute the

[7] The actual volume of the fisheries is often hard to assess through archival documents; for this period, the *Révolution* disrupted recording practices and lead to the destruction of some records coming from royal authorities.

backbone of the migratory fishing crews were drafted to serve in the Navy; other sailors temporarily engaged in lucrative privateering, so they also deserted Newfoundland's shores (Minois 1992: 519).

After a sporadic debut in the nineteenth century, French fisheries on the French Shore began to return to stability in 1815 and generally recovered a normal pace by 1820 (Rompkey 2004: 13). After reaching an apogee at the middle of the century, French cod fisheries to Newfoundland steadily declined throughout the nineteenth century (Bougeard 1992: 2). In some regions of Atlantic France, ship owners who invested in migratory fisheries increasingly sought governmental aid in order to maintain their commercial prosperity (Anon. 1830). In parallel, French fishing crews increasingly abandoned the inshore fishery of Newfoundland to the profit of fisheries, such as those practiced on the cod banks off Iceland and in the North Sea (Turgeon 1987: 70). In the wake of industrialisation, new dietary preferences and a general drop in the observance of religious days of abstinence affected the demand for cod, threatening the secular stability of markets for cod (Turgeon 1987: 153-156). Moreover, the political importance of the North-Atlantic fisheries in the training of much-needed sailor decreased steeply, as the Anglo-French struggle for the control of Atlantic commercial resources and communications vanished (de la Morandière 1967: 31).

In the end, French fishing activities on the French Shore officially stopped in 1904, when the France gave up its right to establish seasonal fishing stations on the increasingly populated coast of northern Newfoundland.

Logistics of the French fisheries

Dry Fisheries, Green Fisheries

From the sixteenth to the early twentieth century, French fishing crews practiced two different fishing techniques in North-Atlantic waters: bank (or green) fisheries and inshore (or dry) fisheries (de la Morandière 1967, Denys 1672, Duhamel du Monceau 1775). In green fisheries, ships would station themselves on the offshore cod banks found several hundred kilometres from Newfoundland, where fish congregated, and fish from there with a limited crew of about twenty men on average. The fish was eviscerated, filleted, washed and salted aboard the ship, on the main deck, under which the men would sleep in cramped quarters.

Inshore fisheries relied on the use of shore-based fishing stations to process the fish and establish the crew's living quarters (Fig. 5). Dry fisheries operated from the shore-based fishing rooms, and followed a different treatment procedure. Shore-based fishing crews often comprised 50 men or

more, and the ships on which the fishermen travelled, and which would later serve to bring the catch back to France, were moored or careened during the fishing season. Fishing operations were conducted from smaller open boats that would commute daily between the fishing room on shore and the inshore fishing grounds.

A basic inshore fishing work unit typically consisted of five men, three of whom would depart each morning in boats and head along the coast to find a propitious fishing location where they would spend the day. In the evening, the boats would return to the fishing room with their daily catch and transfer the cod they had caught to the land-based crew. Those men would then proceed to eviscerate, filet and rinse the fish on the stage or *chaufaud*, a dock-like structure covered by crude roofing, often the sails of the fishing ship (Fig. 5). Clean fish would then be salted and laid on the cobbled beach to dry by the thousand. In parallel, cod livers would be processed in a large vat to extract precious barrels of train oil (Pope in press, Zysberg 2001).

Figure 5

Depiction of an eighteenth-century French fishing room.

(Duhamel du Monceau 1776, plate 112)

Both green and dry French fisheries to Newfoundland were seasonal, and so were the fisheries practiced in French settlements such as Placentia prior to 1713, and those based on the islands of Saint-Pierre and Miquelon after 1763. The French fishing season was ruled by the weather and by the seasonal migrations of the cod, which usually occurred between April and August. The fishing expeditions would depart from France at the beginning of April and would leave Newfoundland in early Fall, usually in August or September. Most crews would return to Europe by the end of October. Following this schedule, the fishing crews would benefit from almost the full length of the migratory passage of cod in Newfoundland's waters, but they also had to navigate carefully around dangerous floating ice at the beginning of the fishing season (Service éducatif 1996: 5).

Establishment of a fishing station

Since fishing crews would occupy the same fishing room for three or four months at least, securing the use of a good fishing harbour was crucial to the success of the fishing season. Certain characteristics were most desirable for fishing stations; the proximity of good fishing waters was of chief importance, and other advantageous features included easy, yet sheltered,access to the harbour for the fishing boats, the availability of wood

and fresh water, the existence of enough room to lay out large quantities of cod, and climatic conditions propitious for drying fish (Balcom 1984: 26).

At the beginning of each season, four to five weeks of work had to be allotted to the establishment of the fishing room, and a few more weeks had to be allotted for its dismantlement at the end of the season. The main structure erected in fishing rooms was the stage, around which the core of the fishing activities revolved. Light dwelling structures and cook-rooms were also constructed, usually from wood interlaced in the manner of retaining fences, turf and tarps or sails. Other light structures, as well as bread ovens, could also be built to suit the various activities linked to cod processing and the daily life on shore.

The establishment of a shore-based fishing station required an important investment of time, resources and manpower (Turgeon 1987: 170). Knowing the installations could be damaged in the winter and that there was no guarantee a fishing crew could return to the same harbour several years in a row and reuse installations, buildings were usually scarce. This instability of occupation somewhat lessened when a new system for the assignment of fishing stations was introduced in 1815 (Bernet 2007: 211, de la Morandière1962: 1105, Pope in press). Rather than giving away fishing harbours on a first come first served basis, a draw was introduced to allot

fishing rooms to crews for five consecutive years. Returning to the same station every year was valuable because it fostered work efficiency and a quicker start to the cod harvest, and the French eventually started hiring *gardiens*, caretakers who would look after their fishing rooms during the winter (Hiller 2007:22-24, Rompkey 2003, Pope in press).

Food and subsistence

French migratory fisheries employed large crews who usually spent four to six months away from France and, to ensure the subsistence of all crewmembers, provisioning had to be planned carefully. The logistic of food provisioning both during transatlantic seafaring and the fishing season properly speaking was indeed a crucial matter, since poor diet, more so than harsh work conditions or living conditions in general, was a chief source of conflict and unrest among the crews (Cabantous 1987: 222, Grossetête 1921). The food provisions embarked on ships bound to Newfoundland were covered by the insurance contract, along with the rigging, ammunitions and fishing gear (Garnier 1733, Malapert 1771).

At the time when French fishing crews came to the Petit Nord, bread already was the staple of the diet of most of the French population and it accounted for up to 60 percent of the total food intake of people of low social

status, including peasants, workers and fishermen (Brace 1946, Toutain 1995). The nature of provisions taken aboard each ship was left at the discretion of the ship owners, but food supplies were as a rule dominated by hardtack or bread. The types of foodstuffs taken for the voyages to Newfoundland consisted of simple and easy to conserve provisions, which varied little from the sixteenth to the nineteenth century (de la Morandière 1962: 71).

Cargo lists usually mention rations of lard, cider or wine, beans, hardtack, pork and, exceptionally, flour (Denys 1672: 270). An example of ship's cargo list mentioning flour exists for the *Grand Adrien Marie*, a vessel of 300 tons which sailed from Granville with 135 men in 1770, carrying over 5594 livres worth of wheat and flour, and over 145 livres worth of black wheat and peas, together accounting for about one fifth of the total reported outfitting budget.[8] It appears however that often the flour was bought in order to be baked into hardtack in France before departure, to provide the expedition with sufficient biscuit supply (de la Morandière 1962: 80). In all cases, it is obvious that bread or biscuit dominated the diet of French fishermen, both in dry and green fisheries.

---

[8] "Livres" were monetary units in *Ancien Régime* France, and are not to be confused with its homonymous weight measure which stands for pounds.

A 1729 decree of the Marine concerning the migratory fisheries obligated ship owners to supply each crewmember with at least five months worth of food ration. For a voyage to Newfoundland's Grand Banks of an expected duration of six months, about 210 pounds (95 kg) of biscuit would be embarked for each crewmember, securing for each one a daily ration of about 500 grams. At Sables d'Olonne, a 1725 decree similarly fixed at 250 pounds of biscuits the minimal food ration for six months, a quantity ship owners had to supply every man (de la Morandière 1962: 72). The daily bread consumption recorded aboard ships bound to bank fisheries in Newfoundland in 1914 was slightly larger, with a ration estimated at roughly 600 grams of biscuit per sailor per day (Grossetête 1921: 141). These figures are, all in all, comparable with the daily bread consumption of working men in traditional rural France.

In the 1725 Sables d'Olonne decree, hardtack was referred to as "*pain*" (bread), an indifferent use of the term which is common in period documents and can sometimes be confusing. In general, when used to designate ship cargo and provisions, the term *pain* refers to biscuit or even to food rations in general, a phenomenon which illustrates the preponderance of bread in traditional French diet. For example, in the insurance contract of the *Saint-Esprit* (1733), in which bread is mentioned as part of the insurance package, the word *pain* is used to refer to the food provision in general

(Garnier 1733). The composition of the insured food cargo is not detailed, and it cannot be determined if hardtack or the ingredients to make bread were embarked.

Archaeological evidence, most obviously the presence of bread ovens at French fishing stations, point to the consumption of fresh bread among fishing crews, at least from the late eighteenth century on. Bread-making, whether in fishing rooms of Newfoundland or in mainland France, required the use of an array of material culture, from peels and kneading tables to baking dishes and moulds. The presence of a *huche,* a piece of furniture serving both to prepare and store bread, is documented in more permanent fishing stations of Acadia between 1713 and 1758, and it is more than likely that kneading tables were also brought to the seasonal fishing rooms of the Petit Nord (Balcom 1984: 31).

Flour is necessary to bake fresh bread; it must therefore have been available to French fishing crews who built and used bread ovens in Newfoundland. When flour is not mentioned in cargo lists, one can only deduce that either hardtack was consumed by the crew, or that flour was acquired through trade during the expedition to the New World. Most food supplies seem to have come from France, although the possibility of commercial exchanges with the local population or with English and American merchants and mariners should not be excluded. Indeed, on the

south coast of Newfoundland, Cape Ray "quickly... it developed into a centre for trade between French and Anglo-American shipping." (Janzen 1987: 184)

Overall, the diet of French fishermen employed in the shore-based fisheries was less monotonous than that of their compatriots engaged in the bank green fisheries. Apart from relying on provisions brought from France and bread baked on site, fishermen stationed on the French Shore could make gardens to complete their diet, a practice well documented in French military outposts in Canada, and which could have perhaps been the privilege of the captain (de la Morandière 1962: 81, Denys 1672, Miville-Deschênes 1987: 51). Not surprisingly, fresh fish was an integral part of the fishermen's diet (Grossetête 1921: 135). In addition, some live animals such as pigs and hens could also be brought along for the voyage, and hunting was certainly practiced in some measure. The artisanal preparation of alcoholic beverages was also part of the subsistence activities commonly carried out in French fishing rooms of Newfoundland (Balcom 1984: 36). As reported to the Navy at Saint-Malo in 1786, the brewing of spruce beer was supervised by wounded or incapacitated men (de la Morandière 1962: 76). It could not be determined from the available records if ready-made leavening agents, such as brewer's yeast, were brought on the ships for the voyage or if the crews used other brewing techniques relying on the on-site fermentation of wild yeast.

For lunch, the fishermen would bring with them on the boats a barrel of water, beer, or diluted wine, and a basket (*corbillon*) of bread or biscuit (de la Morandière 1962: 171, Denys 1672: 294). In absence of a cook, either a fore-shipman or, if there was one among the crew, the surgeon was in charge of preparing the crew's supper. The evening meal usually consisted of a combination of boiled or roasted fish, soup, bread, beans, and occasionally other foods such as game or vegetables (Denys 1672: 318, Pope 2004: 25).

Designated cooks, or *maistre-valets* (stewards) were employed in French fishing rooms as early as the seventeenth century (Denys 1672). Their presence among the fishing crews allegedly improved both the quality of food made available to the men and the standards of hygiene observed on site (Lefort and Lemesle 1994: 56). As soon as the crew landed, stewards supervised the construction of a makeshift cook-room, constructed with interlaced fir branches and sails or tarps, like the stage and other buildings of the fishing room. The stewards were in charge of managing the provisions and of cooking daily for the entire crew, but whether they were also involved in baking activities is unclear. There is a mention of a baker among the crew of a French schooner fishing on the Great Banks of Newfoundland in 1907 but, in the course of the present research, the author could find no other clear documentary evidence of a designated baker for earlier periods (Grossetête

1921: 137). Perhaps most revealingly, Denys' 1672 account of the French fisheries in Acadia describes in great detail the set-up of a typical fishing room, yet does not mention the use of bread ovens (Denys 1672).

Vernacular industry and maritime society in French fishing rooms

Throughout their history, inshore fisheries relied on traditional fishing techniques virtually unchanged from the Middle Ages to the early twentieth century, which projects the image of an industry suspended in time (Service éducatif 1996: 46, Turgeon 1987: 133). Technological advances brought about by industrialisation profoundly transformed other sectors of production and of natural resource extraction on land. Mechanisation, railway transportation and improved preservation techniques modified other economic sectors of French economy, like the sardine fisheries, but they had little effect on the migratory cod fisheries. During the nineteenth century, while other sectors turned to intensive industrial capitalism, the only way for inshore cod fisheries to increase their productivity was to put larger crews at work and to increase division and specialisation of labour (Brière 1990: 58-59, Turgeon 1987: 167). Shore-based fisheries could expand the size of the fishing rooms they occupied seasonally, allowing for more crewmembers to be put at work and thus maintaining a "strong demand for labour" (Pope in press).

The large crews hired for inshore fisheries travelled from France to Newfoundland in cramped quarters on large ships (de la Morandière 1967, Grossetête 1921, Villemarqué 1995: 25). Since the crew would work and dwell in a shore-based station, no space had to be preserved aboard to provide work and storage space, as it had to be inthe bank fisheries. At the end of the fishing season, the ships would be loaded with cod and only a little room remained them for crewmembers. About a quarter of the original crew boarded the cod-loaded ship to manoeuvre it towards ports where the cod was sold, like Bordeaux or, more often, Marseilles (de la Morandière 1962: 389). The remainder of the crew would be put on boats, or *sacques*, bound directly for Brittanywhere the men piled up like human cargo (Clement 1761: f. 149r). Those ships bound to the commercial port of Marseilles would sell their fish there and load the ship anew with products from southern France destined for Brittany – such as olive oil, wine and soap (de la Morandière 1962: 201). French migratory fisheries were therefore part of a commercial network extending beyond the exploitation of cod, which brought products from the Mediterranean to the North-Atlantic regions of France.

In the agreements for crews departing for Newfoundland, little detail is usually offered about the specific occupations of the crewmembers. Besides captains, surgeons and pilots, the other crewmembers are, as a rule, listed as

sailors or novices (Malapert 1771). Some specialised workmen were nonetheless part of the crew, such as carpenters and *saleurs* (men in charge of the delicate operation of salting the cod), and they were better paid, because their job was specific and required skills (de la Morandière 1962: 203). No mention of specialised bakers is however to be found. The hiring of a doctor for fishing voyages to Newfoundland was mandatory for crews of 20 men or more, which would have generally been the case for shore-based fishing expeditions (Service éducatif 1996: 41). Defying royal and, later, governmental ordinances, ship owners often refused to take a surgeon on board, and relied instead on a *médecin de papier* or "paper doctor" – that is, a medical instruction manual placed in the chest containing medical supplies (de la Morandière 1967: 26). Conversely, few surgeons volunteered to serve during dry fisheries expeditions, since they were obligated to participate in fishing activities once they arrived in Newfoundland (de la Morandière 1967: 29, Denys 1672).

Crew members were often recruited within a limited population basin and usually came from the same geographic areas (Pope 2006). With men sharing the same cultural background, life-ways at fishing stations in Newfoundland must have retained most of the regional characteristics of the sailors' place of origin. Some cultural encounters certainly took place among French fishermen, Native people, and Anglo-Irish settlers and fishermen, but

did not seem to have profound, archaeologically noticeable effects on the cultural organisation of French fishermen's seasonal societies. In Breton crews, the contact between the men from port cities and those from the *lande* or back-country, may have generated the most active cultural negotiation (Cabantous 1987). A large proportion of the crews, half or more in some cases, came from rural areas located more or less close to the shore, which had a cultural background imbued with maritime life, in various intensities (de la Morandière 1967: 27).

Inshore fisheries generally did not require much prior maritime experience, at least for the men who did not have to sail the boats; they therefore provided an excellent training ground for novice sailors. All crews had to employ a certain number of men without experience, or "green men", thus constantly renewing the population of trained sailors. A royal ordinance in 1745 established that at least 1 in 5 of the crewmembers departing for Newfoundland had to be *novices*, aged between 16 and 25 years old (Service éducatif 1996: 22). This scheme of employment favoured the training of men by a sort of informal apprenticeship, which made for a vernacular industry dependant upon learning directly from other men's skills and experience. (Pope 2004: 30).

Over the centuries, migratory fisheries acquired a strong tradition of proper practices, passed down to the next generation of fishermen at the same time their knowledge of Newfoundland landscape was transferred to them. Furthermore, crews from specific regions tended to return to the same harbour, like Breton fishermen to the Petit Nord, creating a cultural symmetry between the fishing harbours of given regions and their European counterpart (Pope 2006, Pope in press). The vernacular character of the industry thus developed with informal training and by the recurrent occupation of same fishing harbours by crews from the same region (Cabantous 1987, Pope 2006, Pope in press, Turgeon 1987).

One might expect that the implacable seasonality of French fisheries to the Petit Nord, combined with the influence of Anglo-French conflicts on the industry, would have created and maintained a certain instability and movement among the French migratory fishing society. Yet, continuity in the seasonal fishing routine and technical traditions anchored the French fisheries to Newfoundland in the North-Atlantic landscape and sustained maritime societies for centuries. The tension between uncertainty and permanence is materialised fully in the very architectural and spatial structure of the fishing rooms, particularly with regards to the use of semi-permanent structures.

IV

Archaeology of Breton Bread Ovens of the Petit Nord: Dos-de-Cheval Site (EfAx-09) and Archaeological Comparisons

When close attention is paid, the remains of bread ovens can be seen on several archaeological sites formerly occupied by French fishing crews. Before *An Archaeology of the Petit Nord* was initiated by Peter E. Pope in 2003, bread ovens of the French Shore had been the object of limited archaeological attention. Several potential bread ovens were signalled by Bell, Renouf, Pottle and Hull during the Heritage inventory of the Great Northern Peninsula (Bell *et al.* 2000 and 2001). In recent years, M.A.P. Renouf has also excavated a French-Basque bread oven at Barbace Cove, Port-au-Choix (EeBi-12) (Renouf *et al.* 2004 and 2005). Similar but less extensive work was undertaken by Hartery at Fishermen Cove 2 (EgBf-04), as part of the Bird Cove-Plum Point Archaeology Project (Hartery 2005). During a survey he conducted along the Petit Nord coast in 2004, Pope identified several potential bread oven mounds at French fishing stations archaeological sites (Pope 2005). The main aim of the archaeological fieldwork presented here was to assess archaeologically potential bread oven mounds found on the site of Dos-de-Cheval (EfAx-09) (Fig. 1 and 6).

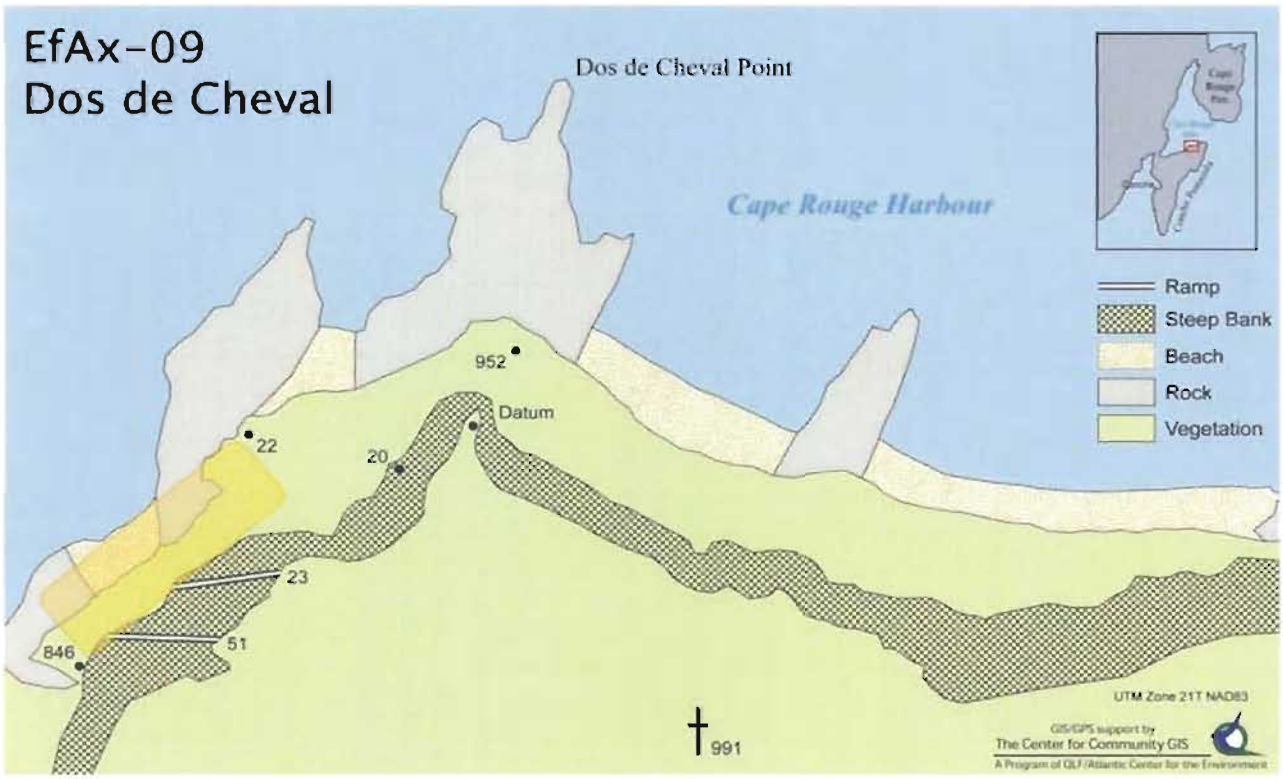


Figure 6

Plan of Dos-de-Cheval (EfAx-09), with Features 22 and 952 showing. The main fish-processing activity area is highlighted

(S. Green, The Center for Community GIS, for An Archaeology of the Petit Nord)

Crouse Harbour, site of the fishing one known as Champs Paya and now the archaeological site of Dos-de-Cheval (EfAx-09), was one of the French Shore harbours Breton fishermen would come to during the fishing season, to harvest and transform the cod found on this coast. French occupation of the site occurred at least from 1640 to the late nineteenth century. Dos-de-Cheval/ Champs Paya is located on the eastern side of Cape Rouge Harbour, where a large terrace overlooks the cobbled beach and the few bedrock formations that punctuate the broken shoreline. Fresh water from a stream and a pond located further inland, as well as wood from the surrounding forest, are available on site today, as they certainly would have been to fishing crews in the past. Several archaeological features associated with the former fishing room are readily visible in the landscape, most noticeably a ramp, footpaths, a whitewashed oak cross, the remains of a possible cook-room and cabin, and several mounds. Two potential bread oven mounds were assessed during the field season 2007, identified respectively during the initial survey as Feature 22 and Feature 952 (Pope 2005).

Feature 22

Feature 22 was an oval mound, extending approximately 5 m north-south by 4 m east-west (Fig 7, 8, 9 and 10). The slope of the mound was gradual, and these limits were defined to include the mound as completely as possible. Feature 22 was located in an accessible but not central area of the site, close to the beach, near a bedrock formation. The mound feature was located on its west side along this prominent bedrock. The mound appears to have been partially eroded to the north, close to the ocean where the deposit seemed very thin and washed away. Thick deposits were found to the east and south of the mound, which determined our choice of the zone to be excavated. The mound had a roundish depression in its centre, making for an overall distinctive annular or donut pattern. Within the area excavated, three main phases of occupation were distinguished (see Fig. 11 and 12 for profiles, Appendix 2 for Events description, Appendix 3 for Harris Matrix, and Table 1 for artefacts count).

Figure 7

EfAx-09, Area A; general plan of Feature 22 Bread oven

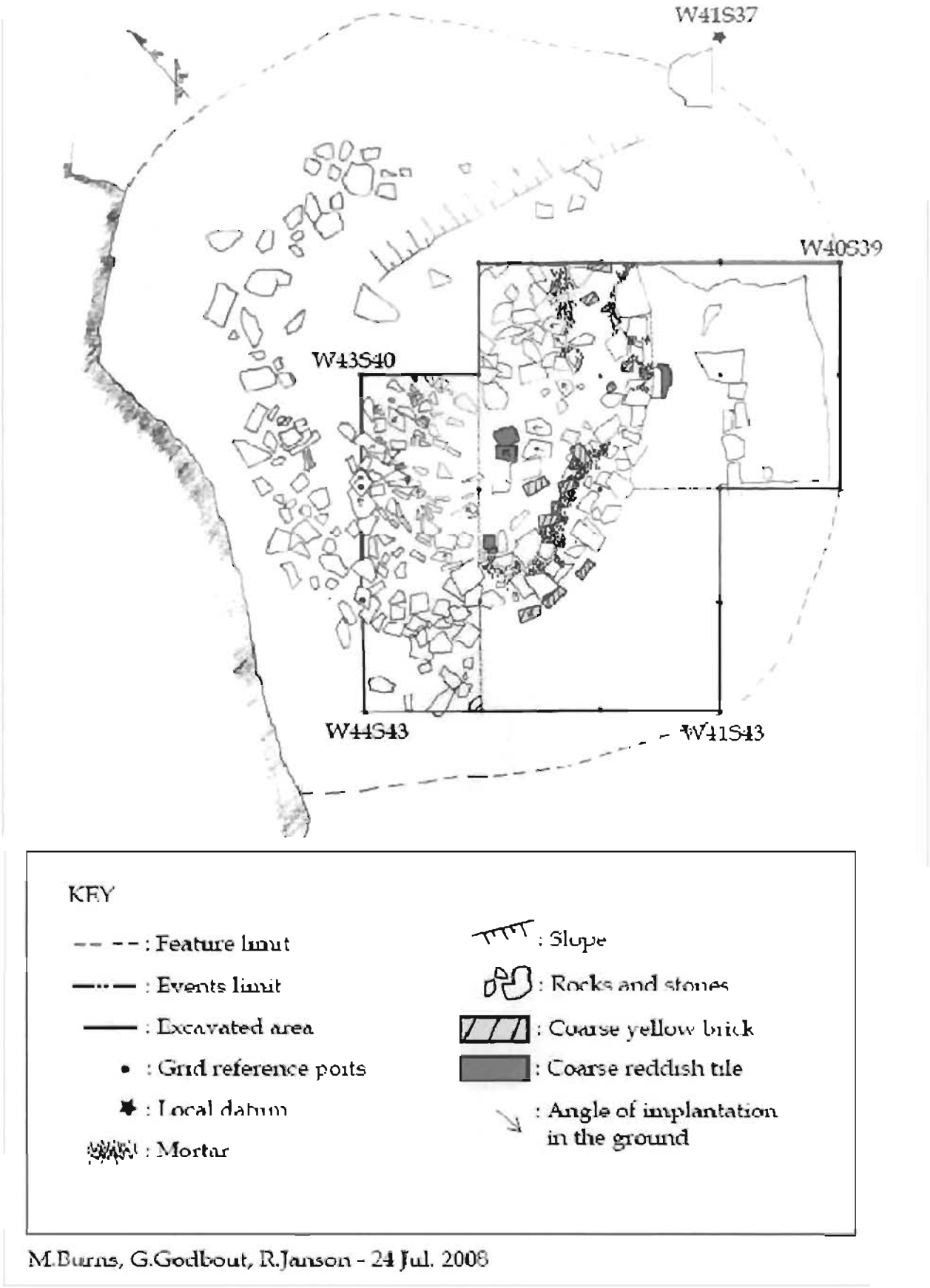


Figure 7 (Caption opposite left)

Figure 8

EfAx-09, Area A, Feature 22(Bread oven) prior to excavation, to the west. The relationship of the feature to the nearby bedrock formation is shown.

Figure 9

EfAx-09, Area A, Feature 22 at mid-excavation, Events 1028, 1038, 1044, 1046, 1064 and 1030 showing, to the east.

Figure 10

Final stage of excavation of EfAx-09, Area A, Feature 22 (Bread Oven), to the east.

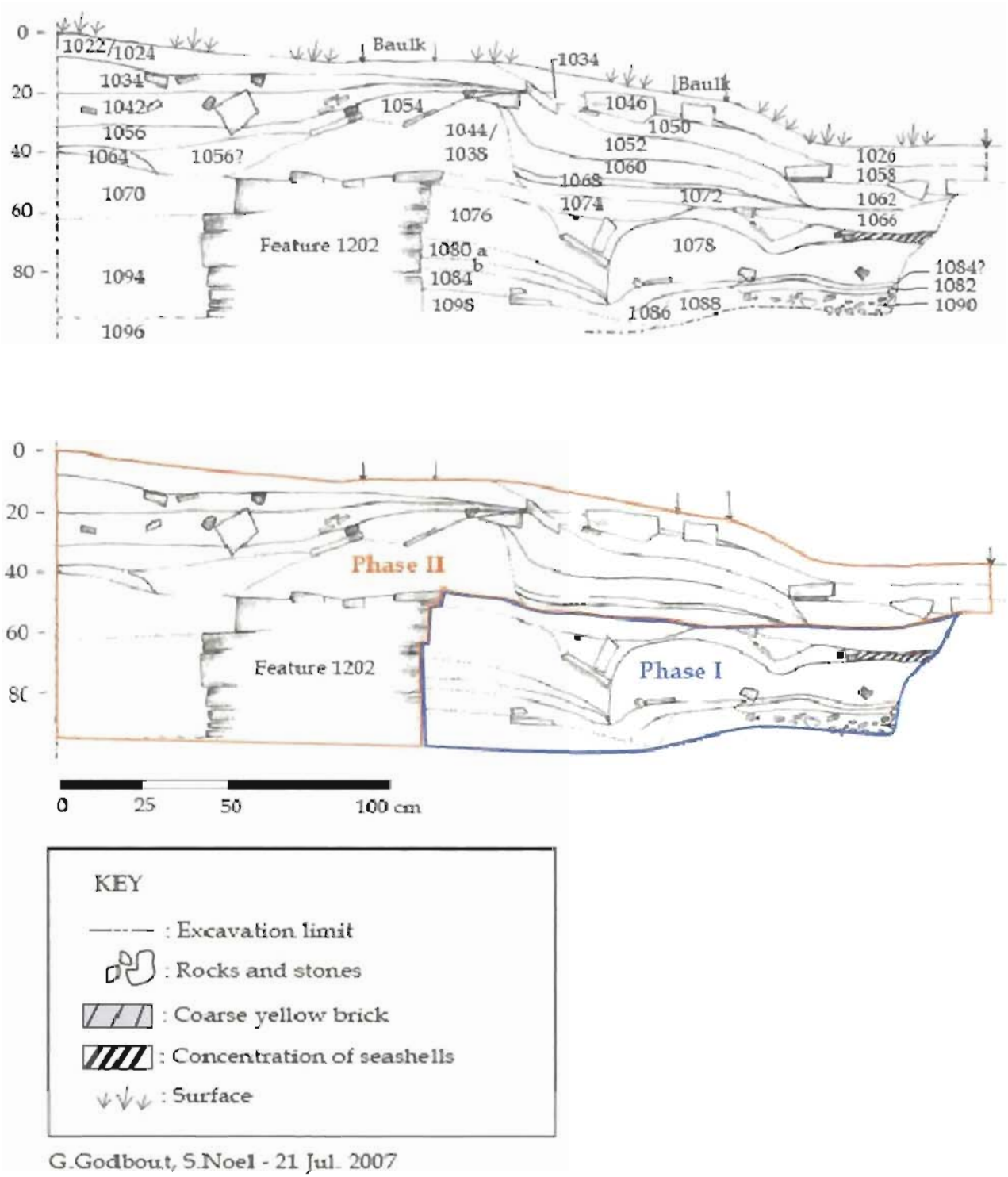


Figure 11

EfAx-09, Area A, Feature 22 (Bread oven), W43S40-W40S39, north profile. Phases of occupation I and II shown in duplicate.

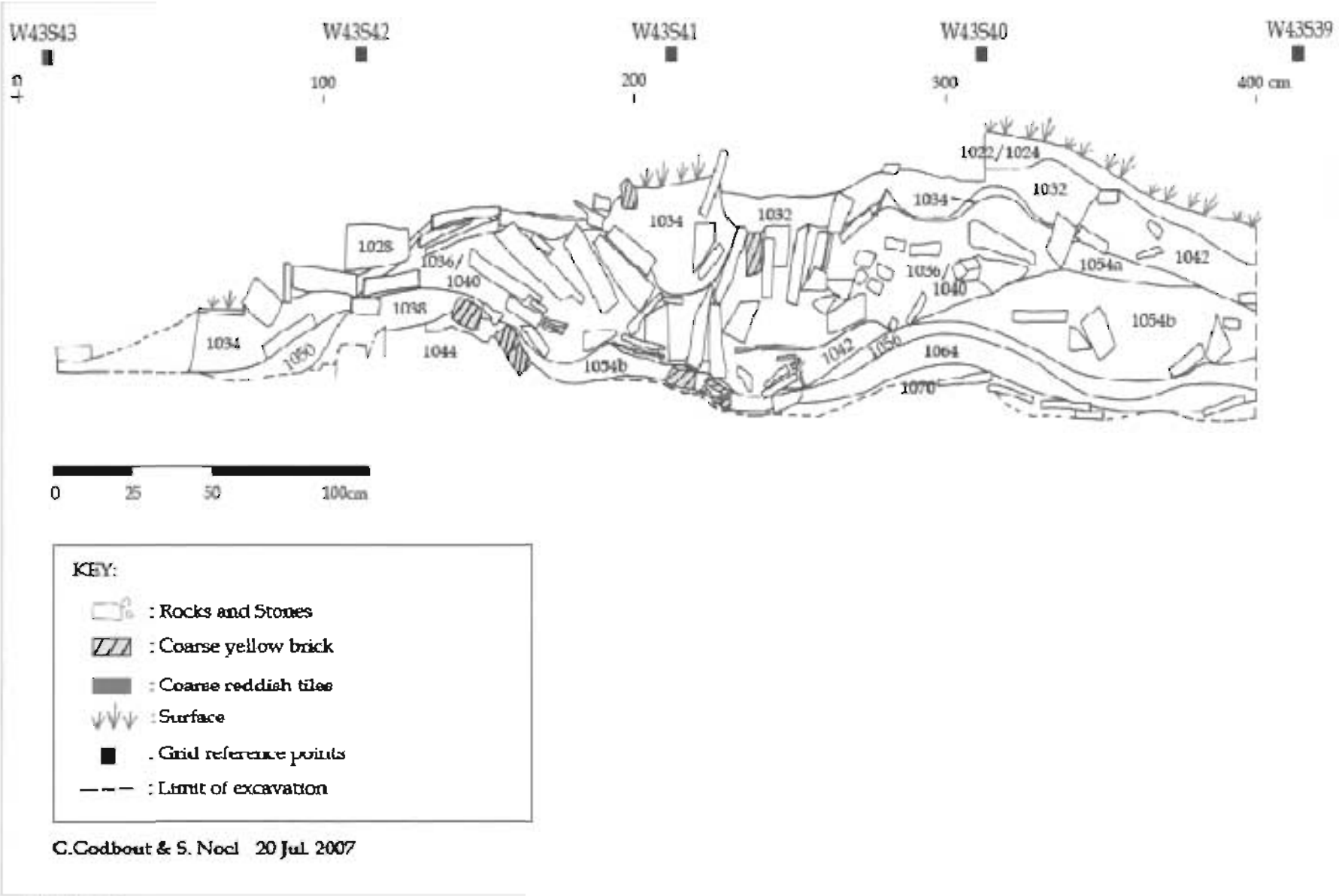


Figure 12

EfAx-09. Area A. Feature 22 (Bread oven). W43S43-W42S39. west profile.

Table 1

EfAx-09, Area A, Feature 22 (Bread oven): Artifacts count

Artefact Type	Date (Provenance)	Count
ARCHITECTURAL		**(566)**
Coarse reddish brick	n/a (Europe)	24
Coarse yellow brick	n/a (Europe)	24
Coarse rectangular tile	n/a (France)	12
Coarse curved tile	n/a (Europe)	1
Nails		
Small (0 to 5 cm)	19th c. or earlier (Europe?)	234
Medium (5.5 to 10 cm)	19th c. or earlier (Europe?)	193
Large (>10cm)	19th c. or earlier (Europe?)	78
CERAMICS		**(32)**
CEW:		
Green-glazed	(France)	3
Huveaune	18th c. or later (Huveaune, Southern-France)	6
Breton CEW	n/a (Brittany, France)	1?
Other CEW	n/a (France?)	5
TEW:		
Faïence brune	n/a (France)	1
REW:		
Creamware	1766 or later (England)	8
Pearlware	1778 or later (England)	1
Pearlware (transfer print décor)	1780 or later (England)	1
Hand painted décor	1766 or later (Europe)	1
Other REW	n/a (unknown provenance)	4
CSW:		
Bottle	n/a (Europe)	1
GLASS		**(3)**
Green bottle glass	n/a (Europe)	2
Clear drinkware glass (painted décor)	n/a (Europe)	1
CLAY TOBACCO PIPES		**(13)**
Bowl fragments	19th century (Europe)	5
Stem fragments	n/a (Europe)	8
MISCELLANEOUS		**(16)**
Fish hook	19th c. or earlier (France?)	9
Glass button	19th c. or later (Europe)	1
Bone button	18th -19th century (France?)	3
Gunflint	19th c. or earlier (France)	1
Lead spill	n/a	2
TOTAL:		**630**

Phase I: Food preparation?

The oldest phase of occupation observed for Feature 22 was found 40 cm to 90 cm below surface on average. Most events associated with this phase contained charcoal, reddish and/or yellowish brick fragments, and some measure of mortar (Events 1074 to 1098). Events 1074, 1076 and 1078 contained higher concentrations of mortar than the other events associated with Phase I. The events succeeded themselves in a rather horizontal fashion, except Event 1078 which appeared to have been vertically cut through prior to the deposit of Events 1076 and 1080. The cause of this particular deposition could not be determined.

The material culture associated with Phase I consisted essentially of nails, ceramics, clay tobacco pipe fragments, buttons and faunal remains. The assemblage was dominated overall by food-associated artifacts, such as creamware, other refined earthenwares (REW), fish, pig and goat bones, and a knife handle. The material found was very fragmented and overall proved difficult to identify or date precisely. For instance, the clay tobacco pipe fragments were so small their stylistic characters could not be dated with the precision sometimes achieved with such artifacts in historical archaeological contexts and they could only be associated with nineteenth-century production in general (Brassard and Leclerc 2001, Campbell 1984, Marier 1996, Noël Hume 1969, Oswald 1975, Savard and Drouin 1990).

The presence of various refined earthenware points to an occupation after 1778, the date at which pearlware, the seemingly most recent ceramic type found, was introduced (Brassard and Leclerc 2001: 80, Noël Hume 1969: 130). Due to the interruption of the use of the site by French fishermen between the 1790s and 1815, the presence of pearlware seems more likely to indicate an occupation during the second decade of the nineteenth century or later. The presence of refined earthenware (REW) of English production in the assemblage could possibly indicate an English presence on the site during the period French crews deserted the site. English white wares were however the object of illicit marketing in France by c1785, and could thus have been used by either French or English people on site (Pope pers. com). REW was found in such small quantity in the assemblage that no conclusion can be made as to cultural origin of its deposition. Unlike the English white wares, French coarse earthenware (CEW) was not exported, and its presence in the Phase I assemblage suggests this occupation is linked to French fishing crews.

A few bone and glass buttons were found in association with Phase I of occupation, but they could not be dated with precision; similar buttons were found at Place Royale (Québec City) in nineteenth century contexts (Marier 1996: 156-167). Apart from these clothing items and clay tobacco pipe fragments, the functional scope of the material culture found in Phase I was

limited to that of architecture (with bricks and nails) and predominantly food consumption and/or preparation (REW, CEW, knife handle, faunal remains). This suggests Phase I was associated with food-related activities, and that some form of structure, now destroyed, existed in the area.

The main trace of such a structure is a linear dry masonry structure, Feature 1088, found about 75 cm below surface, on average (Fig. 8). Only one course remained of the dry masonry structure, which originally comprised at least two courses. The rocks used to build the structure were 12 by 20 cm on average, with some small stones used in the assemblage. Traces of wood ran along the west side of the feature. East of Feature 1088 was Event 1090, a level of cobbles, gravel and small rocks which were circumscribed by the dry masonry. Event 1090 was likely a work or circulation area and the event directly overlying it, Event 1082, contained several fragment of REW and CEW. Two postholes were found east of Feature 1088 and ran vertically through Events 1078, 1084 and 1082. The postholes, dry masonry wall and circulation surfaces suggest the presence of a building in the area, likely a shed or shelter of some sort. The stratigraphical relationship between Events 1078 and 1076, particularly with regards to the deposition pattern of rocks observed in the profile, could suggest another unknown installation existed at the end of Phase I occupation.

Event 1084, a compact yellowish clay covered by flat stones, laid directly over Feature 1088 and its associated Events 1082, 1084, 1086 and 1090. A decaying, slightly curved tile about 40 cm by 60 cm on average, was also found lying curved side down on top of Event 1084 and seemed to have been left there randomly, in a secondary deposit position (Fig. 13). The tile was of a poorly fired, coarse red material highly tempered with quartz, and no documentation regarding such a type tile could be found. The bread oven builders I interviewed in Brittany had never encountered such tiles either and had only a hypothesis to offer as to its original use. It is possible that the tile may have been use as part of a drainage device, which would have taken advantage of the tile's shape. No other clear trace of such a system were found within Feature 22, and no conclusion can be reach as to the function of this odd piece of material culture.

Considering the nature of the material culture found within Phase I and the presence of faunal remains and charcoal in most events excavated, this phase of occupation can arguably be associated with food preparation activities, perhaps even baking. Such activities could also account for the presence of a shelter and circulation surfaces. The construction of a bread oven in the following Phase II of occupation indicates that the area of the site occupied by Feature 22 was appropriate for the establishment of food-preparation structures. It is likely this location in the landscape was reused over time for similar activities.

Figure 13

EfAx-09.1072A5283, large curved tile; EfAx-09, Area A, Feature 22 (Bread oven), at the interface of Events 1072 and 1084.

Phase II: Bread oven

The second phase of occupation was found at varying depths below surface throughout the excavated area. It lay about 40 cm below surface at the north-eastern limit of excavation and from 17 to 97cm below surface at the north-western limit of excavation. Phase II started right under the sod of Feature 22 for most of the mound's area (but Phase III for an exception). The top of Feature 22 mound, Event 1028, was composed of rocks and stones, some arranged in a circular manner, some scattered around the feature, all intermingled with brownish-red to reddish, clayish soils (Events 1024 to 1042). The pattern of deposition of the stone was visible prior to excavation, reflected in the very characteristic annular or donut shape of Feature 22 mound (See Fig. 9 and 10).

Events 1028 to 1042 corresponded to the collapsed baking dome of a bread oven; they yielded brick fragments, but no diagnostic artifacts. The presence of medium-sized flat stones arranged in a circular manner at the centre of the top of the feature mound suggests the dome of the bread oven was composed of both stones and bricks, producing a result similar to one observed in Commana, Brittany (Fig. 14). According to bread oven builders in Brittany, the form of the collapsed deposit, the overall small quantity of material present, and the absence of brick indicate the bread oven structure

Figure 14

Interior of the chapel of a bread oven in Commana, Brittany, France.

(picture by the author).

was not destroyed naturally as a result of disrepair, but was instead demolished and taken apart purposefully (Delagrée pers. comm., Juguet pers. comm.). Charred clay fragments with straw-like inclusions, some of which were vitrified, were mixed among the brick fragments and stones. The charred clay came in plaques and the larger ones were slightly curved, which suggests the interior of the baking dome was coated with clay, about 5 cm thick on average.

The first traces of the oven's structure exposed were Events 1044 and 1046, two alignments of stones arranged in a semi-circular manner and assembled with Event 1038, a yellowish clay that oxidized to greyish brown (Fig. 9). Event 1046 likely corresponds to a layer of flat rocks used to cover the base of the baking dome, and possibly strengthen it; they had been pushed aside and rested in a secondary position. Event 1044 and 1038 covered a layer of thin and narrow wooden boards (about 10 cm wide, with a conserved length of 30 cm on average), which in turn was laid on the first course of Feature 1202, a semi-circular dry masonry wall, the base-wall of the oven (Fig. 15, 16 and 17). The wall presented about seven semi-regular courses of various-sized rocks and stones. The irregular courses and the size of the rocks and stones used are similar to the building techniques of Breton bread ovens still standing today.

Figure 15 and Figure 16

EfAx-09, Area A, Feature 1202(Bread oven base), to the east. Plan view followed by a close-up of the masonry courses visible inside the base

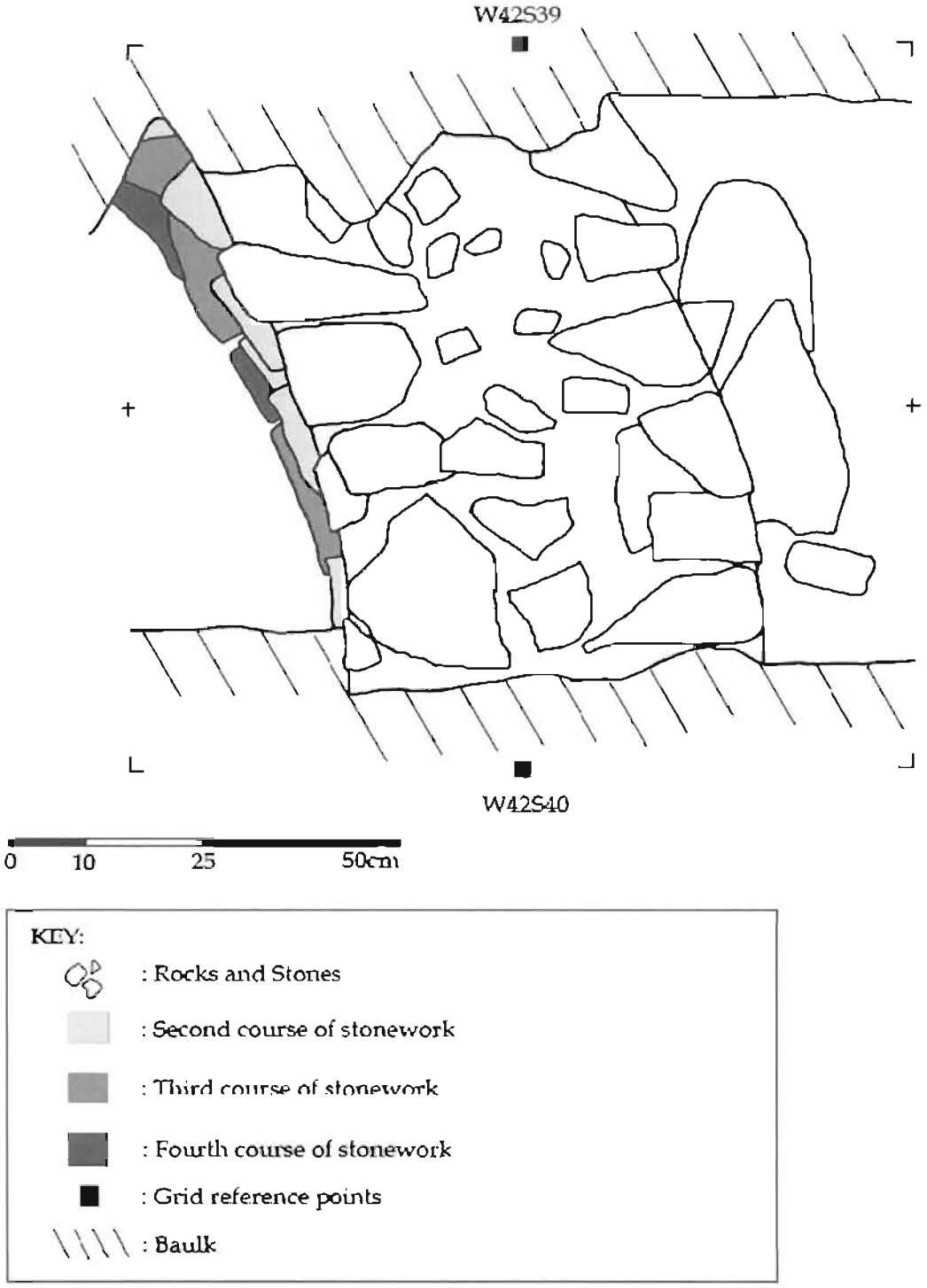


Figure 17

EfAx-09, Area A, Feature 22 (Bread oven); plan of Feature 1202, dry masonry wall.

The overall aspect of the work bears striking resemblance with Breton slate quarry working huts. The builder's trench of the bread oven had been dug into deposits associated with Phase I of occupation – as clearly shown on the north profile of the excavated area. The dry masonry wall was built against the walls of the builders' trench. The builders leaned their work on the edges of the trench, making for a regular surface inside the bread oven base and an irregular, inclined surface on the site lying against the trench walls. When completed, the bread oven would have been partially buried, and only the outer layer of the baking dome would have been visible.

As the material associated with the destruction of the baking dome was removed and a clear outline of the bread oven's perimeter was revealed by Event 1044, distinctive soil colour schemes emerged for the different zones of the structure. The structure of the bread oven itself delineated in a brownish grey the separation between the reddish soils associated with the interior of the baking chamber and the dark brown to black colour of the deposits found outside the oven's structure (Fig. 9).

Directly under the events associated with the collapsed dome, Event 1056, a deep red, clayish, gritty soil was exposed. Underneath it lay Event 1064, a level of bright red gritty soil on which coarse red tile fragments and fragments of fired clay rested (Fig. 10). Although the original smoothness of the surface had been disturbed, Event 1064 clearly corresponded to the baking

floor of the bread oven, on which some charcoal and a medium-sized piece of partially charred wood still laid. The baking floor was originally covered with large, coarse tiles (originally about 14 by 12 cm, and 4 cm thick), only a small number of which were still present during excavation. The tiles recovered were almost all very fragmentary and damaged. Since the material covering the baking floor of the bread oven is usually not fixed in order to facilitate repair, most tiles were likely removed by the occupants of the fishing room when the bread oven fell into disuse, before its destruction. Interestingly, the wear pattern observed on the most complete specimen found during excavation compared well with the wear pattern of the tiles making up the baking floor of the traditional bread oven used by M. Jean-Claude Toy, artisan baker of Brittany (Toy pers. comm.). M. Toy estimated that the baking floor of his bread oven was prematurely worn out by the wooden tools he uses, due to the poor firing of the tiles he used; the tiles found during the excavation of Feature 22 were also poorly fired and crumbled easily, which may have help produce a similar wear pattern.

The baking surface of Feature 22 bread oven must have had an oval shape, and its original diameter can be estimated at just over 2 m. According to ethnographical and archaeological examples, it can be inferred that the bread

oven was used to bake large quantities of bread (Boily and Blanchette 1979, Cloarec et al. 1997).

The remains of the baking floor (Event 1064) rested on Event 1070, some loose rocks, within which the gritty soil of Event 1064 had partially trickled, accounting for the irregular surface of Event 1064. The rocks laid on Event 1094, a heterogeneous brown clayish loam. These two events filled the oven base (Feature 1202), to insulate the baking floor against humidity and cold.

Around the baking surface, and covering Event 1044 partially, lay Event 1054 an array of bricks and stones in a friable mortar that became malleable when wet. This could be the remains of the base of the cooking dome; more specifically, of the contact point between the dome and the base of the oven. Event 1054 is the deposit in which the largest concentration of mortar was found within the bread oven structure.

East of the bread oven base, outside of the original structure, lay a succession of events associated with the use of the oven. The oldest level clearly associated with the occupation of the bread oven was Event 1072, a heterogeneous, greyish, gravely loam with lenses of yellowish clay and of red gritty material (possibly decayed coarse tiles) and some charcoal. About 25 cm below the surface lay Event 1060, a thick layer of charcoal. Palaeobotanical analyses of a sample taken from this event yielded inconclusive results, beside

suggesting kindling was used in the fire. The absence of floral remains in the charcoal sample was hardly surprising and is comparable with palaeobotanical analyses conducted on bread ovens from the province of Québec (Bouchard-Perron pers. comm.). The preparation of food to be baked or cooked in the bread oven would have occurred in a separate preparation area and the food that reached the oven was already processed and unlikely to generate much botanical deposition. The little flora that would have found its way inside the bread oven would have been raked out with the charcoal and is unlikely to be found in other deposits – something confirmed by palaebotanical analyses (Wilkes 2007). Furthermore, floral remains associated with bread which could have been deposited in the bread oven would have been in the form of flour, which left no traces identifiable through palaeobotanical analyses.

Underneath Event 1060, the layer of charcoal, lay Event 1068, a heterogeneous greyish loam with charcoal, coarse yellow brick fragments and spots of yellow clay, also associated with the use of the bread oven. This event contained some varied material culture and faunal remains. Underneath, Event 1072, a gravely greyish loam with gritty red lenses (probably decomposed tile fragments) yielded material culture similar to that of Event 1068. Events 1052, 1060, 1068 and 1072 were all contained within a

roughly 1 m wide area, east of the bread oven base. At this junction point, lay Event 1062, some tabular rocks in an organic matrix, which seemingly served as a circulation and work surface near the bread oven. Similar coarsely paved circulation surfaces are found in other areas of the site (for example Event 1012 of Feature 952– see below).

Event 1058, another similar circulation surface overlay Event 1062, suggesting the perimeter of the oven was maintained and arranged to favour circulation of workers in this area during the period of use of the bread oven. Similarly, the Feature 22 bread oven was likely protected by a shelter of a yet unknown nature, maybe even by a tent, as suggested by a spike wrapped in ropes, found in Event 1066 (Fig. 18). Some form of crude roofing partially laid on the nearby bedrock formation could also have been achieved with limited effort.

The most revealing artifactual find from deposits associated with the bread oven was several fragments of a coarse earthenware vessel with white slip and a translucent yellowish glaze manufactured in the Huveaune region, near Marseilles, in southern France (Brassard and Leclerc 2001: 53-54) (Fig. 19a, 19b and 20).

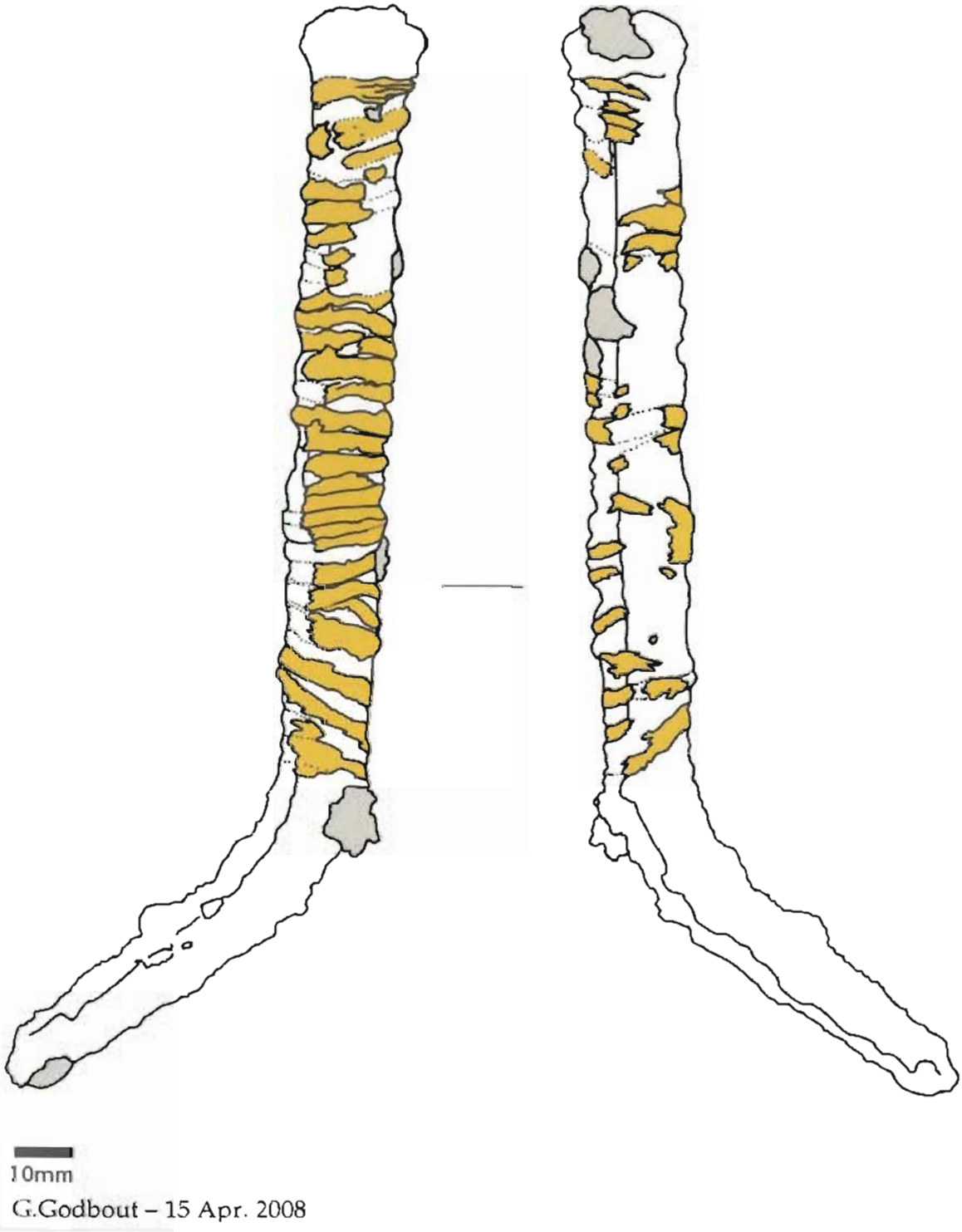


Figure 18

EfAx-09.1066N5420, iron spike wrapped in ropes; EfAx-09, Area A, Feature 22 (Bread oven), Event 1066.

Figure 19a and 19b

EfAx-09.1052E5306, Huveaune CEW pot fragments; EfAx-09, Area A, Feature 22 (Bread oven), at the interface of Events 1052 and 1068.

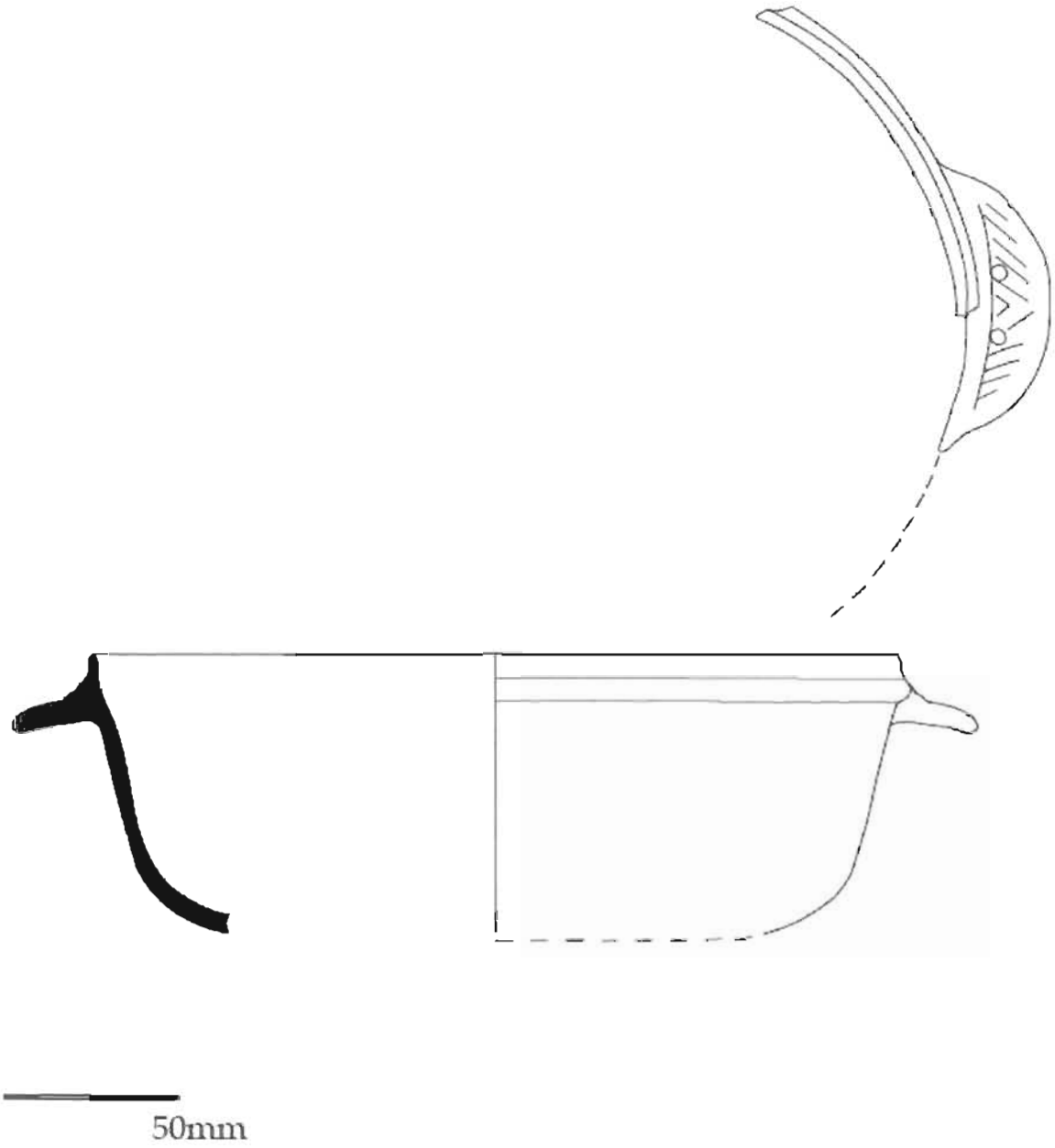


Figure 20

EfAx-09.1052E5306, Huveaun CEW cooking pot; EfAx-09, Area A, Feature 22 (Bread oven), Event 1052.

The fragments were found at the interface of Events 1052 and 1068. The original object was an open, 9 cm deep dish with an estimated diameter of 23 cm. The pot had at least two lugs pierced with holes, to allow suspension with a twine. The original vessel could have resembled in form a hollow dish used in the preparation of wet or simmered meals (Blanchette 1981: 61, Chapelot 1978: 140-141, Faure-Boucharlat *et al.* 1996: 199, 202). The Huveaune earthenware dish could have been used to cook stews and pot-pies in the bread oven while it was still hot, evoking secondary functions of the bread oven and alternative domestic activities on the site.

The mouth of the bread oven itself was not located during excavation, but its position could be estimated according to landscape features and patterns of deposition. The mouth was most likely to the north, opposite to the rounded southern extremity of the mound, on the flatter side of what would have been a horse-shoe shaped bread oven. This impression was confirmed by Breton bread oven builders and restaurateurs, to whom pictures of the excavation were shown (Delagrée pers. comm., Juguet pers. comm.). In addition to this, Event 1060, the charcoal deposit found east of the bread oven base extended only 1.5 m south of the northern limit of the excavation unit, suggesting the charcoal deposition occurred from the north. The point of origin of this deposit would have been the mouth of the bread

oven, at the north side of the structure. The same deposition pattern was observed in Event 1052, a material-culture rich deposit. Furthermore, to the north a portion of the beach is protected from high winds by the bedrock formation, the same one against which Feature 22 mound meets to the west. This protected area would have provided a sufficiently large sheltered work area to deposit the moulds containing bread dough waiting to be baked and sufficient room for the long-shafted baker's tool to be manoeuvred with ease when loaves were hurriedly placed in the oven (Fig. 21).

The presence of clay spots, mortar dust, brick and tiles debris, and nails in the deposits found outside the bread oven structure suggests episodes of active maintenance or building. Mm. Delagrée and Juguet have pointed out that the stones used to frame the mouth of the bread oven were valuable pieces, particularly the horizontal stone laid at the junction of the opening and of the baking floor which served as a work surface. They suggest that these stones were possibly removed and either hidden on site or brought back to Brittany after each fishing season, which would have generated a need for repair upon each return.

Figure 21

EfAx-09, Area A, Feature 22 during excavation, showing the sheltered working area found north of the feature, to the northeast.

The smaller fragments of building materials, particularly coarse tile fragments, could also have been deposited as a result of the normal wear caused by the use of the bread oven, particularly by the regular raking of the baking floor by wooden tools. Moreover, Event 1052, the uppermost layer of occupation of Phase II (Event 1052) was a heterogeneous deposit containing a significant quantity of decayed brick, both mortar and yellowish clay spots and a large amount of rather small nails (5 cm or less). Part of the architectural debris found in this event was likely deposited during the destruction of the bread oven.

The large quantity of smaller nails found in Event 1052 (8cm or less) appears singular on the site, where assemblages are usually dominated by the larger nails and spikes used in the construction of coarse wooden structures, such as fishing stages. Smaller nails could have been useful to secure roofing elements, like shingles, or fasten temporary roofing, like a tarp, to a wooden frame. The preponderance of small nails in Event 1052 could thus be explained by the presence of a roofed structure around the bread oven.

The material culture found in association with the bread oven of Phase II is highly similar to that of Phase I; it dates roughly to between 1815 and the third quarter of the nineteenth century and it attests to a French presence. As noted for the material culture found within Phase I of occupation, the presence

of whitewares in the deposits is likely the result of consumption of imported British wares by the French fishermen. Again, a possible British occupation of the structure, perhaps during winter months or in years when French fishermen would not come to the site, cannot be entirely ruled out. The faunal assemblage for Phase I is largely composed of cod head bones, which is consistent with the dominant fish processing activity carried out on site. Charred cod bones, as well as other wild and domestic mammal bones found in the assemblage, may also indicate such foods were processed in Feature 22 bread oven (Noël 2007).

As explored throughout this account of the excavation of Feature 22 bread oven, the overall deposition pattern of Phase II indicates that the bread oven did not collapse from disrepair. Bread ovens usually crumble from the outside first, leaving the baking dome intact for a long period of time, perhaps even decades (Delagrée pers. comm.). The bread oven of Feature 22 was dismantled purposefully. The people who did it first had to remove the roofing of the bread oven, if any, and then the insulation layer, most likely composed of compacted dirt, clay and turf. Only then could the baking dome be accessed and the bricks of which it was partially made removed and reused by the dismantlers – to weigh down fishing nets for example. Once the dome was exposed, the people trying to take down the bread oven without

damaging too much its constituent materials likely pushed in the *bouchon* (literally "the plug"; Fig. 3), the central stone against which the traditional Breton bread oven domes rests. Once the *bouchon* was removed, the baking dome would have collapsed under its own weight. The smaller central stones were of no interest to the dismantlers of the oven, who left them in place; this accounts for the creation of the distinctive annular shape of the Feature 22 mound.

Other unwanted material, particularly stones but also fragmented bricks and tiles, were either pushed aside and scattered or left in situ. Most of the bread oven structure was likely assembled with mortar, which would have clung to the material that was taken away, accounting for the deceivingly small amount of mortar found during excavation.

Phase III: Campfire

Finally, the most recent phase of occupation of Feature 22 occurred after the demolition of the bread oven. It is documented by only one event, Event 1032, a greyish ash deposit in a reddish soil matrix located in the annular depression found on top of Feature 22 mound. The deposit contained a lead musket ball, lead spills and pipe bowl fragments. Event 1032 corresponds to a

camp-fire type of occupation during which some lead smiting occurred, either accidentally, for instance with at least two musket balls being dropped in a blazing campfire, or purposefully, as part of a casting episode. The clay tobacco pipe fragments found in Event 1032 have been manufactured in all likeliness dring the nineteenth century (Noël Hume 1969) . Considering the deposition sequence documented for Feature 22, the presence of material dating from the mid- to late-nineteenth century in the previous phases of occupation logically restricts the datation of the the pipe fragments found in Event 1032 to the mid-nineteenth century or later. Even if no precise date can be obtained from the material culture retrieved in Event 1032, it still provides an interesting, if vague, terminus *ante quem* for the occupation and dismantling of Feature 22 bread oven. It is coherent with the interpretation offered for the first two phases of occupation, which frames the occupation of Feature 22 within a nineteenth-century seasonal fishing room context, with possible English use of the French cooking installations.

There is no significant gap in the dating of all events excavated and the material culture seems rather consistently dated throughout all phases of occupations of Feature 22. This suggests all three phases occurred within a relatively short period of time, perhaps within the span of half a century. The material culture found at Feature 22 remains, however, very fragmentary and

not specifically diagnostic. Compared to the common rate of finds expected on historical sites of this period, there was overall only a small quantity of clay tobacco pipe fragments in the assemblage, which suggests smoking was not a dominant activity around the bread oven (Table 1).

The Cloué map of 1858 records several features of EfAx-09 fishing room, then known as Champs Paya, including a large structure near the location of Feature 22 (Fig. 22). Although the exact nature of the structure represented cannot be known with certainty, it is tempting to speculate about its relationship to Feature 22. The structure represented on the map appears to stand a little south of the archaeologically determined location of the Feature 22 bread oven, and is also larger than the bread oven itself would have been (about 6 x 4 m for the structure, compared to roughly 4 x 4 m for the bread oven). It is possible that the building Cloué drew was built after the bread oven was dismantled, which would place the destruction oven in 1858 or before, a date coherent with the interpretation of the material culture found in association with Feature 22. However, it is also possible that the structure represented by Cloué actually sheltered the bread oven of Feature 22, making the bread oven itself indistinct on the map. Again, the material culture found in association with the bread oven would be consistent with an 1858 occupation.

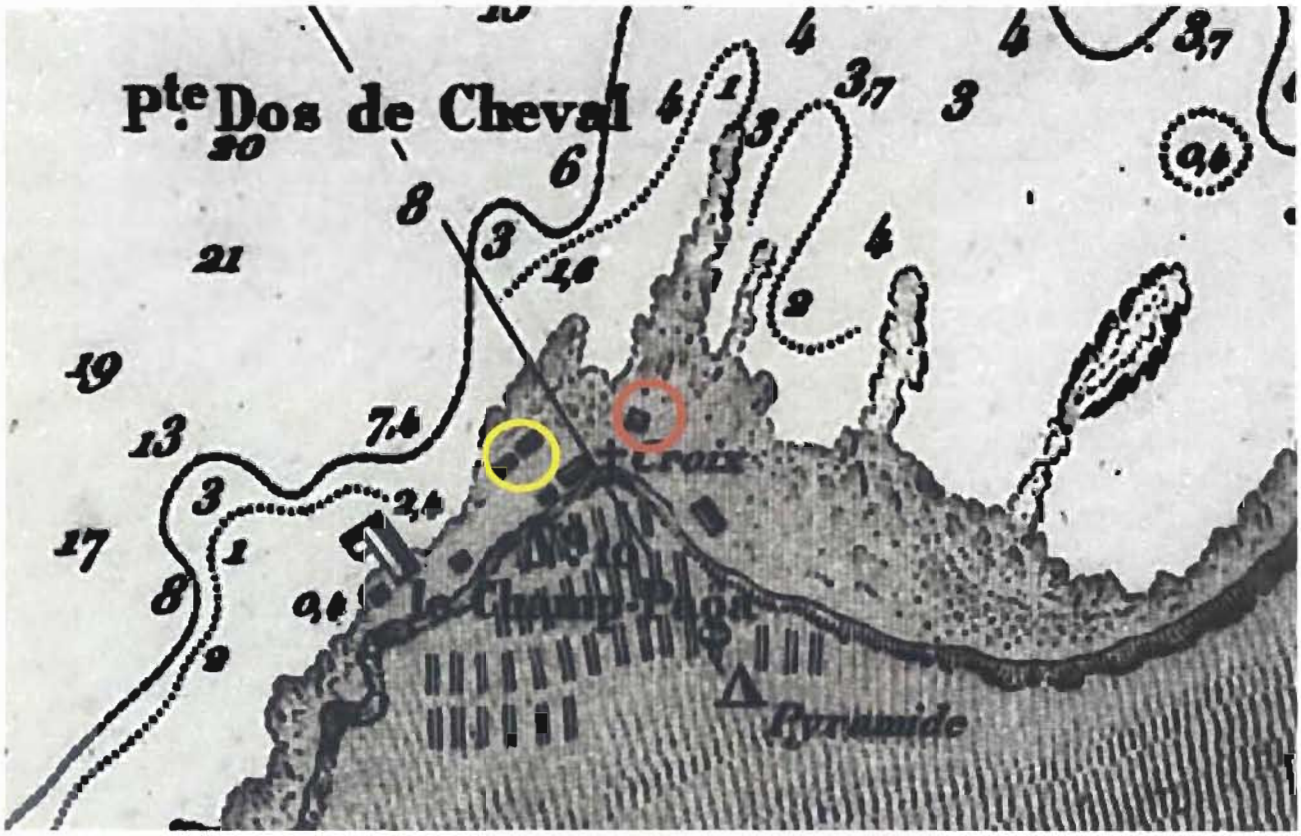


Figure 22

Detail from "Plan du Hâvre de Cap Rouge (côte nord-est de Terre-Neuve)" *[Map of Cape-Rouge Harbour] by G.-C. Cloué, sketched in 1858 and deposited at the French Navy Maps and Plans Library in 1864. The section shown depicts Champs Paya, now the site of Dos-de-Cheval (EfAx-09). (Center for Newfoundland Studies, Map 193). Location of archaeological Features 22 identified in yellow, and of Feature 952 in red.*

Feature 952

Feature 952, identified as a potential bread oven mound in the initial survey of EfAx-09 in 2004, was a sub-rectangular mound, partially washed away to the north, measuring about 6 m by 3 m (Pope 2005) (Fig. 23). It was located near a bedrock formation close to the active beach and in the fishing room landscape, it would have been accessible but out the way of other activities, such as fish processing. The landscape location of Feature 952 was very similar to that of Feature 22 bread oven. Despite its relationship to the landscape, however, Feature 952 was not a bread oven (Appendix 2 for Events description and Table 2 and 3 for artifacts count).

The feature essentially consists of Event 1004, a pile of rocks measuring between 15 cm to 50 cm in length, with the bigger stones of Event 1006 placed at the perimeter and at the bottom of the accumulation. Some material culture was found among the rocks and stones; the assemblage consisting of pipe stems, small CEW fragments (possibly Breton), drinking glass and a wooden button fragment. Surprisingly few nails were found in Events 1004 and 1006. Underneath the rock pile formed by Events 1004 and 1006 laid an organic soil containing fish and pig bones, as well as *faïence brune* (Event 1008) (Brassard and Leclerc 2001: 69). The deposit quickly developed mould and an unpleasant smell, and had been disturbed by recent mice burrows. This domestic refuse rested directly on the natural beach, and could well have been deposited as the result of a one-time activity.

Event 1012, a circulation surface made of flat rocks laid in a brown, organic matrix was found immediately south of Feature 952 (Fig. 23). It was littered with nineteenth-century material, such as pipe bowl and stem fragments. A pipe bowl fragment was imprinted with a thistle motif, a design common around the mid-nineteenth century (Oswald 1975). Some faunal remains and a small lead spill (about 5 cm wide) also laid on the circulation surface. The proximity of the circulation surface to Feature 952 mound and its position, level with the top of the mound, suggests an association between the two areas.

The function of Feature 952 mound is unclear. The feature is quite levelled and it might have served as a platform for an installation without nails. In 1858, Cloué recorded a building near the location of Feature 952, without specifying its nature (Fig. 22). The material culture found in and around Feature 952 is not very diagnostic, but nonetheless does not contradict a mid-nineteenth century occupation. Also, compared to the clay tobacco pipe assemblage with Feature 22 bread oven, the pipe assemblage of Feature 952 was proportionally much more important. This could suggest that Feature 952 was the locus of some social or leisurely activity involving smoking, contrary to Feature 22 which, as aforementioned, yielded very few pipes probably because it was not a location where gathering occurred (Table 1 above and Tables 2 and 3 below for comparison).

Figure 23

EfAx-09, Area B, Feature 952; general view of the feature after excavation with Event 1012 circulation surface showing, to the north.

Table 2

EfAx-09 – Area B – Feature 952 : Artifacts count

Artefact Type	Date (Provenience)	Count
ARCHITECTURAL		**(19)**
Nails		
Small (0 to 5 cm)	19th c. or earlier (Europe?)	3
Medium (5.5 to 10 cm)	19th c. or earlier (Europe?)	14
Large (>10cm)	19th c. or earlier (Europe?)	2
CERAMICS		**(8)**
CEW:		
Breton CEW	n/a (Brittany, France)	1
Other	n/a (France)	1
TEW:		
Faïence brune	n/a (France)	6
GLASS		**(2)**
Clear drinkware glass	n/a (Europe)	2
CLAY TOBACCO PIPES		**(15)**
Bowl fragments	19th century (Europe)	2
Stem fragments	n/a	13
MISCELLANEOUS		**(1)**
Wood Button	n/(Europe?)	1
TOTAL:		**45**

Table 3

EfAx-09 – Area B – Event 1012, circulation area : Artifacts count

Artefact Type	Date (Provenience)	Count
ARCHITECTURAL		**(27)**
Nails		
Small (0 to 5 cm)	19th c. or earlier (Europe?)	24
Medium (5.5 to 10 cm)	19th c. or earlier (Europe?)	2
Large (>10cm)	19th c. or earlier (Europe?)	1
CERAMICS		**(3)**
Breton CEW	n/a (Brittany, France)	3
CLAY TOBACCO PIPES		**(5)**
Bowl fragments	19th century (Europe)	2
Stem fragments	n/a	3
MISCELLANEOUS		**(1)**
Lead spill	n/a	1
TOTAL:		**36**

Other archaeological examples

Champs Paya was only one of the several French fishing stations established around Cape Rouge Harbour. Across the bay from EfAx-09 is Northeast-Crouse (EfAx-11), an archaeological site consisting of the remains of several French fishing stations. In Area J of the site, which corresponds to the former fishing room of Gauguelin, Feature 11 was identified as a potential bread oven mound by Peter Pope (Pope 2005). Several similarities exist between Feature 11 at EfAx-11 and Feature 22 bread oven from EfAx-09, located on the other side of the bay. Feature 11, an oval mound of about 4 x 5 m, was located near the drying area yet in a location peripheral to the main fishing transformation activities. The mound stands against a high cliff to the west that would protect it from the prevailing wind, and it presented an annular shape similar to one observed for Feature 22 bread oven across the bay. A narrow stripe of thin sod (roughly 200 x 30 cm) was removed from the top of Feature 11, allowing the recovery of two brick fragments. The annular form of Feature 11 mound, its location in the fishing room landscape and the presence of bricks reinforced our interpretation of it as the remains of a bread oven.

In 2003, M.A.P. Renouf began the excavation of a French-Basque bread oven at Barbace Cove (EeBi-12) fishing site, near Port-au-Choix (Renouf *et al.* 2004 and 2005). The Barbace Cove bread oven dated from the late-eighteenth,

early-nineteenth century. It was smaller than Feature 22 from EfAx-09 (about 2.5 m in diameter), and was made of a baking dome resting on a rectangular rock platform. The bread oven nonetheless presented the same type of occupation deposit, composed of successive rather thin, horizontal layers containing charcoal. Interestingly, the bread oven of Babace Cove, like the one at Dos-de-Cheval/ Champs Paya (EfAx-09, Feature 22) didn't seem to have served as a locus of social activity, since few clay tobacco pipe fragments were found in that assemblage either.

Archaeological assessment of a French bread oven was also undertaken at the Old Ferolle site of Fishermen Cove-2 (EgBf-04) in 2004 (Hartery 2005). No invasive archaeological work was conducted, but vegetation was cleared from the bread oven feature to document its condition. The bread oven found on this site was about 4 m in diameter, and the circular limestone base of the bread oven was the main component of the structure still in situ. The structure of Old Ferolle bread oven bears similarities to the base of the bread oven of Dos-de-Cheval/ Champs Paya (EfAx-09, Feature 22) but, since archaeological excavations have yet to be undertaken at Old Ferolle site, no further comparison can be made.

Little documentary evidence of the use of bread oven in French fishing stations of Newfoundland exists in the archival record. The subject of

foodways is in general little addressed in documents of the period and it is rarely mentioned in captain's logs and reports, or in travel accounts. Some traces of bread ovens are however present in the map record of the Petit Nord, at least from the eighteenth century on – Cloué's series of maps being a good example of this. Even when maps are supplied with a key, bread ovens are usually not represented with a distinct symbol; the same symbol it often used to represent an array of small or secondary feature, for example *cageots* (cage-like structures used to rinse the fish in the ocean), thus making it difficult to distinguish bread ovens from other small features with certainty (Fig. 24).

Interestingly, a *Havre du Four* ("Oven Harbour") is known on the Petit Nord as least since 1680. A French navigation guide to Newfoundland published in 1784 describes some fishing stations of the Petit Nord, including the *Havre du Four*. The description of this harbour specifies that firewood is readily available on site, a characteristic not noted for other harbour descriptions in the guide (Ministère de la Marine 1784). It is quite possible a bread oven existed at the *Havre du Four*, but this has not yet been confirmed archaeologically.

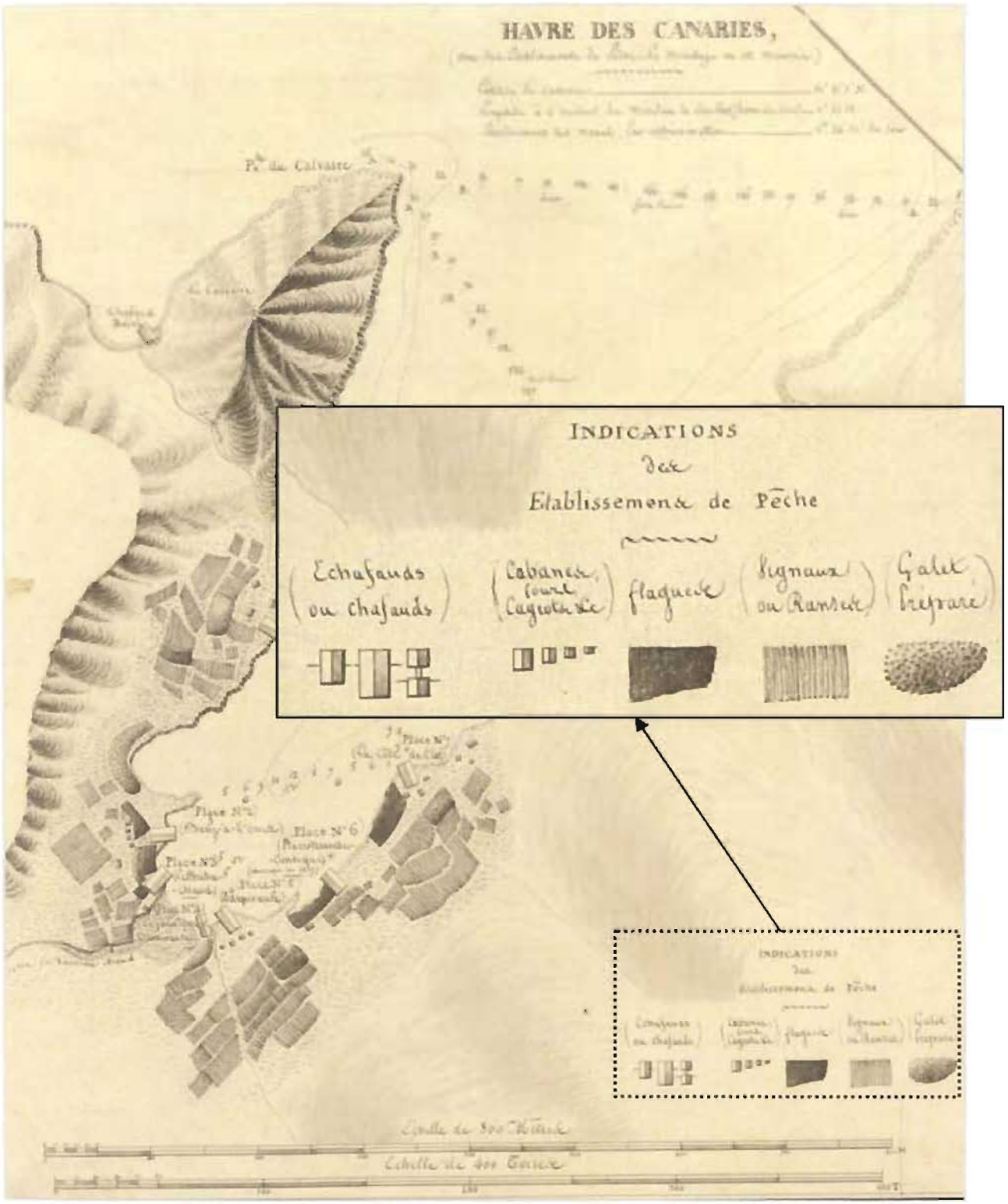


Figure 24

Map of Canaries harbour which mentions ovens ("fours") in the key.

(Pope, An Archaeology of the Petit Nord)

V

Discussion

The presence of bread ovens in Breton fishing stations of the Petit Nord can sustain archaeological reflection about various facets of the French fishermen's experience of seasonal fishing in Newfoundland. Themes of social structure, of landscape genesis and appropriation of space and of cultural identity are explored here more fully.

Bread-making in the society of the fishing room

French fishing sites of Newfoundland were commercial in aim, and feeding the crew was part of the financial planning of the commercial expedition. The execution of baking and cooking activities however were more linked to the domestic subsistence activities on site than with the economic exploitation of cod.

The building of bread ovens in French fishing rooms of Newfoundland implies an important investment of time, energy and resources. Building a

large bread oven usually takes a few days of work, which would have been considerable in the short period of time allocated to the setting up of the fishing room at the beginning of the season. The use of bread ovens also required a certain measure of planning and forethought, particularly with regards to the inclusion in the ship's outfitting of all material and foodstuffs necessary to bread-making. To ensure on-site baking could be carried out as efficiently as possible, some form of kneading table, baker peels and rakes (possibly derived from oars), bread moulds, almost certainly yeast or leaven, flour, and even perhaps the structural component used to make the bread oven's door had to be shipped from France.

As far as the division of labour on site is concerned, the presence of bread ovens at larger fishing rooms leads one to think that the activity of larger crews was more thoroughly structured than in stations where no baking occurred (Balcom 1984: 75). Baking is a very time consuming task and it requires skills and attention, in the preparation of the dough as much as in the use of the bread oven and the baking of bread as such. Bread ovens do indicate a rather high level of domestic complexity, which in turn suggests a willingness of the French fishermen to give a certain measure of permanence to their seasonal dwelling spaces, thus bringing to their migratory society a level of household complexity similar to that they encountered in France.

The bread oven found at the site of Dos-de-Cheval (EfAx-09, Feature 22) is comparable in size to communal Breton bread ovens, which implies enough bread could be baked at once to supply an entire fishing crew of 50 to 100 persons. Moreover, it is possible that different kinds of bread were simultaneously baked, with the possibility of supporting different social statuses in bread consumption even in the micro-society of the fishing room. Different qualities of bread for the crew and for the captains or the surgeons could have been prepared although in France, after the *Révolution*, bread consumed by all social classes was often quite similar.

Even if the baking capacity of the bread oven of a French fishing room is known, any appreciation of the quantity of bread actually baked during one fishing season remains quite speculative. More precise data on the quantity of flour brought to Newfoundland as part of fishing ships' cargo could shed some light on the question. However, cargo lists alone could potentially not account for the entire quantity of flour used to make bread on fishing sites. Trade and acquisitions made by French fishing crews on the Newfoundland markets are little documented, no doubt in part because of their illegality and some transactions involving flour may thus be impossible to trace. Nonetheless, it seems unlikely that flour would have been traded in large amounts between the population of Northern Newfoundland and French

crews in remote fishing harbours, since flour was likely a prized and rare resource for all concerned in these regions where cereal cultivation was exceptional.

Palaeobotanical analyses on samples from Dos-de-Cheval (EfAx-09) suggests that small branches of fir trees were used to heat the Feature 22 bread oven, which is consistent with both the forest cover found near the site and the Breton ethnographic record. To maximise the use of the heat generated, foods other than bread were certainly processed in bread ovens during baking episodes. Little traces survive of secondary uses of the bread oven, and only educated guess can be put forward. The presence of fragments from a Huveaune CEW vessel in association with Feature 22 bread oven of EfAx-09 suggests slow-cooked meals, like stews and pot-pies, were also prepared in the bread oven. Furthermore, bread ovens could be use to bake and dry the hardtack the crew would need for the trip back to Brittany. Other uses, such as sterilising clothes from a sick or deceased crewmember, as well as *ad hoc* use of the bread oven by settlers or seal hunters between fishing seasons, could also have occurred.

If one is willing to overlook gastronomic enjoyment, any men of the fishing crew could cook a meal if coerced to do so, as the young *mousses* were, on the ships fishing on the banks. Bread, on the other hand, can only be

successfully made by people with the right knowledge and experience. Bread-making is a specialised, time-consuming activity that requires both skills and good timing. The quantities of ingredients, the kneading techniques, the raising time and the operation of the bread oven all have to be mastered, at least minimally, for baking to produce edible loaves. Bread also has to be kneaded and left to rise several times before it is baked, which requires some commitment to the activity. In the fishing rooms, baking must have been under the supervision of someone in particular, who had the proper knowledge and who remained on the site during the day. The operation of a bread oven similarly requires attentiveness and, when the proper temperature is reached, the dough must be placed quickly inside the bread oven and its baking must be monitored closely. The size of the bread ovens documented at EfAx-09 and EfAx-11 suggest that baking took place at a large and labour-intensive scale, while still remaining closer to communal baking practiced in rural Brittany that to high-volume, urban, commercial baking.

However, the labour of the baker's operations would be interrupted during raising and baking times, and would not occupy the chief-baker for every hour of the day. Since time was perhaps the most precious and efficiently spent resource in French fishing rooms, it is likely that the designated baker had other odd jobs and might also have been a cook,

surgeon, or butcher... or perhaps even all those responsibilities at once. In addition, baking likely didn't take place every day, leaving further flexibility for the baker's additional tasks among the fishing crew. One crewmember may well have been baker for one day out of every two weeks, and fisherman the rest of the time. It is worthy to note that a French urban male citizen of the nineteenth century or before likely would not have been familiar enough with baking techniques to carry them out successfully in the inshore fishing stations of Newfoundland. It is thus improbable that the metropolitan priests or doctors known to have occasionally been part of French fishing crews could have served as makeshift bakers, although they were certainly involved in various manual activities.

Regardless of who the baker was in fishing crews, bread-making still required time and skills, and must have therefore been appointed as a specialised task. This suggests that fishing rooms where bread ovens were used had logistically more intricate food consumption patterns and a greater degree of social complexity than fishing rooms where hardtack and other foods were consumed. Baking and bread distribution was yet another activity that had to be integrated with clockwork efficiency to the schedule of the fishing seasons, lest it would have interfered with other more crucial economic activities carried out on the site.

Bread ovens and the appropriation of space

Bread ovens are culturally significant elements of the Breton traditional material culture. They actively structure domestic space, even if they exist at the periphery of the main circulation and activity areas. Bread ovens are an intricate part of food preparation and they are systematically present in rural communities of Brittany, either as part of private farmstead or as communal cooking structures. In the case of French fishing rooms of the Petit Nord, bread ovens were also one of the most permanent structures found on site, which suggests domestic activities were an integral part of the basic organisation of the fishing rooms.

Bread ovens of the Petit Nord could have served as landmarks at the landscape scale of the fishing rooms. Within the fishing station, bread ovens were part of the taskscape of food preparation and served to indicate boundaries between domestic activities and commercial ones – particularly fish processing. The boundaries created this way were tacit and only existed by virtue of an understood use of space, of informal rules created through the recurrent use of space. Archaeological data and map evidences suggest that the taskscape of bread-making preparation did not intersect with taskscapes it did not need to participate in, most particularly dwelling and fish processing.

The activities appropriate to each taskscape of the fishing rooms could be carried out simultaneously without interfering one with another.

The location of the bread oven of Champs Paya (Dos-de-Cheval EfAx-09) at the periphery of the main fish processing area, composed of the cobbled beach and stage suggests that baking was a secondary activity on site and was associated with a different taskscape. The position of baking installations at the margin of the core activity area of the site could also indicate that baking was included in the fishing room's routine late in the development of French inshore fisheries, as an addition to an already well-established and well-rehearsed work and dwelling pattern. The area occupied by the fishing room expanded as its social landscape became more complex, with an additional layer of activities developing around the main fishing activity.

Interestingly, food preparation and food consumption appear to have been given different social value and meaning within the French crews' daily life. The consumption of bread and of other foods processed in the bread oven occurred outside the area included with the bread oven, and was therefore not part of the bread-making process. Arguably, food consumption would have been the final node of the bread-making taskscape, the point at which it was relayed into the taskscape of dwelling. As witnessed in both commercial and

community baking in Brittany, the sequence of bread making ceases when the loaves and other foods are taken out of the oven; the consumption of bread itself occurs in a different context, usually implying some form of social gathering in which the redistribution of food can be more or less ritualised. Similar distinction between baking and bread consumption would certainly have taken place in French fishing rooms of Newfoundland. The isolation of bread-making from other dwelling activities and, similarly, the limited amount of clay tobacco pipe fragments found in association with the bread ovens of both Dos-de-Cheval (EfAx-09) and Barbace Cove (EeBi-12) seem indeed to indicate that bread ovens were not loci of sociability in fishing rooms, and that gatherings would take place not around the bread oven but at the table where fresh bread was served.

Evidence however suggests that bread ovens were not systematically used on French fishing sites, pointing at possible variations in the structure of crews' foodways. In the absence of a bread oven on site, food preparation and consumption would likely have occurred in more closely related taskscapes than on site where baking took place; food-related activities then probably gravitated around cook-rooms, dwellings or outdoor cooking fires.

The bread ovens assessed archaeologically in French fishing stations of Newfoundland have in common both their location in the landscape and the

pattern of deposition, which may suggest a recurrent trend in the region. This is highlighted by the similarities between the bread oven of Dos-de-Cheval (EfAx-09, Feature 22) and the likely bread oven mound at Northeast-Crouse (EfAx-11, Feature 19). These features had similar locations in the fishing room's landscape, both being accessible but out of the way, in a sheltered area of the site. Such a pattern of location of bread ovens in French fishing rooms of Newfoundland bears striking similarities with the one observed for bread ovens in the Breton landscape. There also, bread ovens are usually located in accessible but not central locations of household sites. While bread-making is not a dominant force in the creation of the Breton domestic landscape, its omnipresence is nonetheless an evidence of its perceived importance. Baking is an activity so ingrained in the French foodways paradigm that it is taken for granted and almost goes unnoticed.

Whatever the motivation was for French crews to build bread ovens at their fishing stations, it cannot be directly correlated with economic prosperity in the migratory fisheries. In other words, the presence of bread ovens in fishing stations does not imply that ship outfitters supplied funds with particular generosity for a given fishing season, allowing the superfluous investment of building a bread oven at the fishing room once in Newfoundland. Bread ovens are documented in French fishing rooms of

Newfoundland throughout the nineteenth century and were most likely used until the very end of the French presence on the Petit Nord coast, in 1904. However, French fisheries to Newfoundland and the amount invested in them declined steadily throughout the nineteenth and early twentieth century. The presence of bread ovens in French fishing rooms of Newfoundland during this period thus does not illustrate a general climate of increased prosperity in the fishing industry.

Similarly, the adoption of more labour-intensive foodways does not correlate with increased or sustained national prestige of the migratory fisheries in France; on the contrary, the political importance of migratory fisheries and the attention they received atrophied during the nineteenth century, as migratory fishing expeditions became less important in the formation of sailors for the Navy. If political and economic factors seem to have little influence over the French fishermen's choice to build and use bread ovens in Newfoundland, other factors do appear however to have come into play.

The new system for assigning fishing rooms, introduced in 1815, contributed to give a more permanent character to the French sedentary fishing activities in Newfoundland. Although the crews were still forbidden by treaties to build permanent structures or to overwinter in fishing rooms, the

allotment of the same fishing site for five consecutive years may have encouraged French crews to leave more installations behind, hoping they would find them in a reusable state, the following year. For instance, most of the structure of a bread oven would certainly have withstood winter abandonments, even if some minor repairs would have been needed in the spring, particularly if certain parts of the ovens had been removed and brought back or hidden between fishing seasons and needed to be fitted back into place. Prior to 1815, bread ovens might thus have been built essentially on sites frequented by large crews, whose dietary needs could justify the building of bread ovens for a single season. After 1815 however, bread ovens likely became more frequent in French fishing stations of all sizes, since the cost of building a bread oven could be justified by a potential use for at least five years.

The stability of occupation, real or perceived, of the Newfoundland landscape by French fishing crews seems to have contributed in making bread ovens a sensible investment in the eyes of the French fishermen. In the last century or so of the French frequentation of the Petit Nord, tasks in the fishing room were rehearsed to perfection, and land-based and off-shore activities had struck an effective equilibrium. After the Napoleonic wars, maritime conflicts between France and England in the North-Atlantic subsidised and, at the same

time, the French political situation tended towards more stability. In conjunction with the 1815 edict, this socio-political conjuncture further augmented the probability that migratory fisheries would carry on every year, and that French fishing crews could access Newfoundland's shore without major hindrance year after year. These conditions were all favourable to maintaining and reinforcing bread oven building and baking practices among Breton crews who went to the Petit Nord.

Conversely, the recurrent occupation of the same fishing grounds made fisheries more efficient because they provided an element of stability to the seasonal activity (Pope 2004). French fishing crews progressively developed a familiarity with Newfoundland's landscape as they encountered it season after season, and their work in the fishing room became consistently efficient. The acquisition and maintenance of such knowledge and abilities by the French fishermen lead to micro-scale changes and transformations within their seasonal society, which paradoxically infused migratory fisheries with some measure of permanence and predictability. Such changes can be seen for instance with the use of more permanent structure, such as bread ovens, as well as with the integration of baking activities to the rigid calendar of the fishing season.

The attachment of French fishing crews to the Petit Nord's landscape, even if it was primarily commercial, was further strengthened and stabilised when fishing masters started hiring Irish *gardiens* to keep watch over the fishing stations between fishing seasons (Rompkey 2003 and 2004). It is likely the presence of *gardiens* encouraged more substantial investment in the built environment of French fishing stations. *Gardiens* and their family also possibly used some of these structures between fishing seasons, when they settled in a fishing harbour. Given their domestic nature, bread ovens were very likely used by the *gardiens*, perhaps even year-round. Although the construction of bread ovens was clearly not limited to sites where *gardiens* lived, a thorough analysis of archival documents might determine whether sites inhabited by *gardiens* were on the other hand systematically furnished with a bread oven.

The experience of migratory fisheries was in part the experience of particular landscapes: those of the jagged Newfoundland coast, of the North-Atlantic waters with their floating ice, and of the seasonal fishing stations as a particular form of temporary settlement. The knowledge French fishermen had of these landscapes and places was acquired through direct encounter with the Newfoundland landscape, and it was passed down between generations of fishermen through a system of informal apprenticeship and oral narratives. Green men were trained by a form of vernacular apprenticeship

based on observation, which fostered the re-creation of the work structure and routine developed by the preceding generations of fishermen. As they took their place in the crews, green men trained on the Petit Nord gained familiarity with the shore-based migratory fisheries; they progressively became seasoned sailors and, ultimately, by training green men themselves, they participated actively in the perpetuation of a particular maritime society.

Bread as a marker of cultural identity

The effort and care put toward the building and use of bread ovens by French fishing crews in Newfoundland suggests the consumption of fresh bread was important, even essential, to the crews. The fact that the bread oven of Dos-de-Cheval (EfAx-09) is one of the more permanent French structures on site is, in this regard, eloquent. From a logistic and functional point of view, fresh bread appears a rather luxurious good in the context of the migratory fisheries, in which the emphasis was put on productivity and efficiency, and which traditionally relied on hardtack as a main supply of food.

Just as the invention of bread predates the invention of bread ovens, the desire to consume fresh bread predates the need for bread ovens (Delacrétaz 2000). The presence of bread ovens in French fishing rooms indeed implies some fresh bread was consumed on site; the fishermen who frequented the

Petit Nord built bread ovens because they wanted fresh bread, not because they wanted ways to occupy their time. This observation raises the question of the importance of fresh bread in the lifeways of French fishermen and, more generally, of the maintenance of traditional foodways, far from the mother continent. Archaeological data and documentary evidences suggest interconnectedness between the structure of Breton fishermen's seasonal society, their familiarity with Newfoundland's Petit Nord landscape, and how they enacted a changing socio-political identity through the performance of certain foodways.

Identity is a social construct, manifested and expressed though various phenomena, including social structure and lifestyle (Martin 2005). Lifestyle can be defined as the overall way people ensure their subsistence, organise their life (activities and social behaviour alike), and use the space around them. Lifestyles have their own spatially recognised pattern of socially-framed, interconnected networks of taskscapes and social behaviours, including the performance of foodways. The definition of what constitutes appropriate food and socially-acceptable eating pattern is culturally contingent. In the contemporary world, for example, national cuisines constitute culturally integrated foodways systems, with their particular ingredients, rules of food consumption and proper ways of interacting during meals. The performance

of foodways constitutes in itself a manifestation of identity through the integration or rejection of the set of social rules associated with certain food-related behaviours; therefore, eating clearly participates in individuals' "identity-acquisition and validation strategy" (Crouch and O'Neil 2000:183, Messer 1984).

The case of bread ovens in French fishing rooms of Newfoundland is in this regard interesting. As discussed above, bread became a powerful political and social symbol after the *Révolution* of 1789; the consumption of similar bread by most people became a manifestation of citizenship and of social prosperity. The importance of bread to French identity was consolidated, as France rose as a nation state and throughout industrialization, and it kept carrying meaning and a memory of things past well into post-modernity.

According to documentary evidence and archaeological data, bread seems to have become an intricate part of the French fishermen's life in Newfoundland, mostly after the *Révolution*. However, fishing room maps are predominantly available only from the late eighteenth century on, which skews our contemporary appreciation of the use of space and its evolution in French fishing stations of Newfoundland. Also, the limited scope of archaeological research completed thus far on bread consumption in French fishing rooms limits our knowledge of baking practices on the Petit Nord.

The presence of bread ovens on French fishing sites is nonetheless significant, regardless of the period of time at which it occurred, since it is a manifestation of cultural identity in all cases. The changing social life of bread, particularly its potent political and identity-defining value in post-revolutionary France, does provide an appealing frame of interpretation for the landscape of French fishing rooms and its social meaning. It is possible that the consumption of fresh bread became laden with potent social pride, particularly the one of being part of a body of equal, brotherly citizens, after the *Révolution*, and that bread consumption in a variety of dwelling arrangements became more of a priority at that time. French people, regardless of their social situation or occupation, yearned to consume bread of a good quality, apparently including fishermen engaged in migratory fishing expeditions to Newfoundland.

In all likelihood, the captain of fishing crews, and not the crewmembers themselves, would have decided on building a bread oven and would have coordinated the work, in accordance with what the financial backers had agreed to pay for. The fishermen would have executed the work, while benefiting from baking activities on site but, considering the hierarchy known within fishing crews, they probably didn't have a final say in the matter. Nonetheless, the socio-political importance of bread in French society could have conditioned the French fishermen's choice of building bread ovens and

not other structures when they had time, energy and resources to spare. The fact that bread ovens are one of the most permanent structures known at French fishing stations thus appears significant. The socio-political significance of bread consumption in post-revolutionary France may have encouraged the fishing masters who came to the Petit Nord to consider that the need for fresh bread should be prioritized over other luxuries, such as improved dwelling conditions or large-scale brewing, and that the construction of large bread ovens was a sensible investment of resources.

Interestingly, however, the use of bread oven on the Petit Nord predates the *Révolution* by at least a few decades in certain French fishing stations. This could be interpreted as an early manifestation of the social changes incubating within French society and reaching all the way to remote Newfoundland outposts. This observation could conversely simply invalidate the hypothesis presented above, suggesting an understanding of bread consumption patterns in French fishing rooms should be sought in other spheres than social identity and change.

For instance, the decline of French fisheries to Newfoundland during the nineteenth century, coupled with an increased prosperity of the Breton back-country, may have affected the recruitment of crewmembers for fishing expeditions (de la Morandière 1967: 1063). In such a context, better life

conditions during the fishing expeditions, such as including fresh bread to the daily diet of the fishermen, may have served as an incitation in recruitment (Sweeny pers. comm.).

In the case of French fisheries, bread consumption and not bread-making seems to be the most sought after vector of cultural identity. Baking would occur when the crew was busy with the day's work, and it was but the necessary means to secure access to fresh bread. It is the consumption of bread alone that would have been experienced by most members of the fishing crew and would have had value in their subsistence on the site.

Such a differential value of baking and of bread-consumption is consistent with the picture of bread consumption in mainland French society from the seventeenth to the nineteenth century. In cities, the baker was a despised social figure, and his activity was tolerated only because of its necessity. Similarly, in rural France, bread dough was prepared in the intimacy of the household before communal or private baking episodes, and baking itself was far less ritualised and framed with social rules than bread consumption – particularly with regards to the initial cut of a new loaf of bread. In contemporary France, however, and arguably as portrayed in recent ethnographic literature, the use of bread ovens in the household provides an element of conviviality, a mean of diversifying culinary practices and marking

a particular social occasion (Juguet pers. comm.). This can be ascribed to the fact that most bread ovens are now disused and that their use consists of a novelty rather than of a menial daily task, as it would have been in the France of centuries past.

The use of bread ovens rendered possible the consumption of fresh bread in remote fishing rooms of Newfoundland, thus bringing a desirable aspect of normal continental life into the seasonal maritime society of the fishermen. This established a thread of continuity between dietary practices in the French social context known to the fishermen, and their recreation in Newfoundland, at the micro-scale of the fishing room. Implanting an aspect of your home culture in a foreign context through the building of semi-permanent structures, such as bread ovens, is a form of appropriation of space. It is also an identity statement about the importance of the portions of the original culture transplanted in the new surroundings. In using and leaving behind such structures as bread ovens, French fishermen made it manifest that Newfoundland, and the Newfoundland coastal landscape, the landscapes they seasonally revisited and lived in, had become an appendix to the Breton maritime cultural landscape.

Conclusion

This study of Breton bread ovens from the Petit Nord has experimented with the interpretation of elements of material culture in terms of cultural identity, social structure, and production of places. Throughout the history of French migratory fisheries in Newfoundland, socio-political changes occurring in France appear to have had an influence over small-scale changes occurring in the shore-based landscape of fishing stations, such as the construction of semi-permanent structures. The changing socio-economic situation of France during the eighteenth and nineteenth century, particularly with regards to the development of French national identity, seems to have promoted the use of bread ovens in the French fishing rooms of the Petit Nord.

However, to relate this phenomenon more closely to the overall history of French presence in Newfoundland, more data would be needed about the foodways of French fishing crews during the sixteenth and seventeenth centuries. Better knowledge of diet and food-related practices would help determine whether the use of bread ovens in shore-based fishing stations from the eighteenth century on indeed marked a change in the fishing crews'

foodways and if so, to what degree. Differential conservation of bread ovens in Newfoundland French fishery sites, accelerated by the recuperation of building material from disused structures, may have obliterated older ovens from the landscape of the fishing room, and therefore skewed the archaeological record. The bread ovens documented in the Petit Nord nonetheless provide new insights into the foodways of French fishermen in Newfoundland, if only for their later stage of development.

This research did not resolve all questions regarding the consumption of fresh bread among French fishing crews of Newfoundland; on the contrary, it suggests that the study of bread ovens has potential for further research, which would help test hypotheses brought forth in this study. The concepts borrowed from landscape archaeology, particularly those of taskscape and landmarks, proved useful in interpreting the archaeological remains of bread ovens of the Petit Nord in relationship with the other features found on site. Ideas of landmarks and taskscapes helped conceptualise the spatial organisation of the French fishing room, allowing to define the role of bread ovens within this organisation and to speculate about to the role of bread-making and bread consumption in the crews' daily life. Thinking in terms of activity paths and activity sequences also helped to better understand the general organization of work and life on French fishing sites of Newfoundland.

Further archaeological assessment of bread ovens in French fishing stations of Newfoundland could be aided by the knowledge gained from the excavation carried out for this research. The annular or donut-shaped deposition pattern observed for bread oven mounds at Dos-de-Cheval (EfAx-09) and Northeast-Crouse (EfAx-11), two sites in Cape Rouge Harbour as well as their recurrent location within the landscape of the fishing room, may constitute a recurrent character allowing the identification of yet unknown bread oven mounds in French fishing stations sites in the future. The recognition of these characteristics may be a significant pratical outcome of this research, readily applicable in the field. More extensive archaeological fieldwork would confirm or invalidate this supposition.

Similarly, a better identification and dating of potential bread ovens remains identified so far in Newfoundland (fig. 1) could shed some light on the origin in time of the consumption of fresh bread in French fishermen's foodways. The frequency with which bread ovens would be identified in fishing stations could also indicate the scale and span of baking activities in the Petit Nord.

The presence of bread ovens in the landscape of French fishing rooms in Newfoundland offers a glimpse of the structure of fishermen society, and of the performance of cultural identity through both foodways and the built

environment. The study of bread ovens as culturally significant cooking installations complements the knowledge gained from the study of written sources and from palaeobotanical and zooarchaeological analyses. As a result, historical archaeology of French fisheries to Newfoundland achieves a richer understanding of foodways and their significance to the Breton fishing crews.

Because they imply the consumption of fresh bread, the bread ovens found in French fishing rooms illustrate that certain food-related comportments carried out in France were significant enough to be maintained and perpetuated in Newfoundland. These ovens witness an adaptation of the French rural culture to the fisheries context, a transposition of selected features of the French domestic landscape to seasonal sites. The social value of bread was essential enough to French fishermen to justify an important investment of precious time, resources and labour in securing fresh bread supplies in the Petit Nord.

Overall, the use of bread ovens in French fishing stations relates to micro-scale changes in the socio-economic dynamics of French fisheries, such as the greater familiarity of the fishing crews with Newfoundland landscape, and the potential for recurrent use of fishing rooms offered by the 1815 decree. In addition, with the conclusion of the Anglo-French struggle for the dominance of north eastern Atlantic commerce and communications, to the

advantage of the British, an increased political stability was achieved, which paradoxically lead to fewer interruptions in French migratory fisheries activity.

Socio-economic processes occurring in France on a larger scale have also influenced the French fishermen foodways in the Petit Nord. Industrialisation brought more stability in food provisioning and the rise of France as a nation state consolidated the importance of bread in the constitution of French identity. Bread ovens of the Petit Nord therefore help us to better understand how, while major socio-political transformations occurred in France, foodways were used seasonally by the French fishermen to perform their social and cultural identity in Newfoundland.

References

ALBALA, K. (2003) *Food in early modern Europe*. Greenwood Press, London, UK.

ANON. (1713) Traité d'Utrecht. Copy of the original at NAC, microfilm F-1578.

----- (1745) Ordonnance royale obligeant tous les navires à embarquer un nombre de novices proportionnel au nombre de matelots. France, Archives Nationales, AS, VII, 5. Copy deposited at Saint-Malo municipal archives.

----- (1801) Au citoyen Barbé Marbois, Conseiller d'État à Paris, sur la pêche de la morue. Copy. Ille-et-Vilaine departmental archives, 8M, 9-11.

----- (1830) Rapport du Sous-préfet de Saint-Malo sur les difficultés économiques de la grande pêche (1830, 21 octobre). Copy. Ille-et-Vilaine departmental archives, Dossier Commerce maritime- grande pêche, 8M.

APPLEBY, A. B. (1979) Grain prices and subsistence crises in England and France, 1590-1740. The Journal of Economic History 39(4): 865-887.

ARCHIVES MUNICIPALES DE SAINT-MALO (1992) L'activité maritime à Saint-Malo dans la seconde moitié du XVIIIe siècle. Mairie de Saint-Malo et Service Éducatif des Archives Départementales, Saint-Malo, France.

ASSOCIATION ACIGNÉ AUTREFOIS (2000) Construire un four à pain. Privately printed, Acigné, France.

AYMARD, M. (1979) Toward the history of nutrition: Some methodological remarks. In *Food and drink in history*, R. Forster and O. Ranum, editors, pp. 1-16. Johns Hopkins University Press, Baltimore, MD.

BAILEY, W. (1937) A Jamestown baking oven of the seventeenth century. *William and Mary Quaterly* 2nd Ser. 17(4): 496-500.

BALCOM, B. A. (1984) La pêche à la morue à l'île royale, 1713-1758. Parks Canada, Ottawa, ON.

BARLÖSIUS, E. (1992) The history of diet as part of the vie matérielle in France. In European food history: A research review, H. J. Teuteberg, editor, pp. 90-108. Leicester University Press, Leicester, UK.

BARRETT, J. C. (1999) Chronologies of landscape. In *The archaeology and anthropology of landscape: Shaping our landscape*, R. Layton and P. J. Ucko, editors, pp. 21-30. Routeledge, New York, NY.

BELL, T., M.A.P. RENOUF, AND C. POTTLE (2000) Heritage Inventory: Humans on the landscape. Boat Harbour to Goose Cove, Great Northern Peninsula, Newfoundland. Report to PAO Newfoundland and Labrador, St-John's, NL.

BELL, T., M.A.P. RENOUF, P. AND S. HULL (2001) Report of Phase II Heritage Inventory: Targeted Archaeological Survey Between Boat Harbour and Goose Cove, Great Northern Peninsula. Report to PAO Newfoundland and Labrador, St-John's, NL.

BENDER, B. (2002) Landscapes on-the-move. *Journal of Social Archaeology* 1(1): 75-89. BERNARD, C. (1975) Peasant diet in eighteenth century Gévaudan. In *European diet from pre-industrial to modern times*, E. Forster and R. Forster, editors, pp. 19-46. Harper Torchbooks, New York, NY.

BERNET, E. (2007) La présence française sur les côtes de Terre-Neuve à travers la législation française. In *Troisièmes Journées d'Histoire de la Grand Pêche - Granville, 18-19 mars,* E. Barré, editor, pp. 201-213. Société d'archéologie de d'histoire de la Manche, Saint-Lô, France.

BERTAUX, D. (1983) Life Histories: The Bakers of France. *History Today* 33(6): 33-37.

BLANCHETTE, J.-F. (1981) *L'Importance des artefacts dans l'étude des modes d'alimentation en Nouvelle-France entre 1720 et 1780.* Ministère des Approvisionnements et Services Canada, Ottawa, ON.

BOILY, L., AND J.-F. BLANCHETTE (1979) *The Bread Ovens from Québec.* National Museum of Man, National Museums of Canada, Ottawa, ON.

BOUCHARD-PERRON, J. (Pers. Comm.) Dec. 2007. Palaeo-ethnobotany laboratory, Université Laval, Québec, QC.

BOUGEARD, C. (1992) *Des Côtes du Nord au Côtes d'Armor. Les hommes et la mer aux XIXe et XXe siècles.* Service éducatif des archives et CDDP des Côtes d'Armor, Saint-Brieuc, France.

BOUYER, C. (1984) *Folklore du Boulanger.* Maisonneuve et Larose, Paris, France.

BOWLES, P. (2007) *Capitalism.* Pearson/Longman, London, UK.

BRACE, R.M. (1946) The Problem of Bread and the French Revolution at Bordeaux. *The American Historical Review* 51(4): 649-667.

BRASSARD, M., AND M. LECLERC (2001) *Identifier la céramique et le verre anciens au Québec.* CÉLAT - Université Laval, Québec, QC.

BRAUDEL, F. (1970) Alimentation et catégories de l'histoire. In *Pour une histoire de l'alimentation*, J. J. Hémardinquer. Editor, pp. 15-19. Libraire Armand Colin, Paris, France.

BRIÈRE, J. F. (1990) *La pêche française en Amérique du Nord au XVIIIe siècle.* Fides (Collection Fleur de Lys), Montréal, QC.

CABANTOUS, A. (1987) Des paysans pour la mer: la société des pêcheurs (vers 1600 - vers 1850). In *Histoire des pêches maritimes en France*, M. Mollat, editor, pp. 183-239. Privat, Toulouse, France.

CAMPBELL, A. (1984) *Le Creamware.* Publications du Québec, Québec, QC.

CHAPELOT, J. (1978) Vaisselle de bord et de table à Saint-Malo - Saint-Servan du XVIe au XIXe siècle. In *Les dossiers du Centre Régional d'Archéologie d'Alet - Numéro spécial: Les fouilles sous-marines à Saint-Malo*, edited by Centre Régional d'Archéologie d'Alet, Centre Régional d'Archéologie d'Alet, Alet, France.

CHÉDEVILLE, A., AND A. CROIX (1996) *Histoire de la Bretagne.* Presses Universitaires de France, Paris.

CHEVET, J., AND C. Ó GRÁDA (2004) Revisiting "Subsistence Crises": the characteristics of demographic crises in France in the first half of the 19th century. *Food and Foodways* 12: 165-195.

CLEMENT (1761) Pêche de la morue à Terre-Neuve. France, Archives des Colonies, C11F, vol. 3, f. 14-17, in NAC microfilm F-523.

CLOAREC, J., M. MOINARDEAU, AND G. POLIQUEN (1997) Tradition des fours à pain. *Mouezh ar Menez* 13: 1-38.

COONEY, G. (2003) Introduction: seeing land from the sea. *World Archaeology* 35 (3 - Seascapes): 323-328.

COSGROVE, D.E. (1984) The Idea of Landscape. In *Social Formation and Symbolic Landscape*, D.E. Cosgrove, editor, pp. 13-38. Croom Helm, London, UK.

CROUCH, M., AND G. O'NEIL (2000) Sustaining identities? Prolegomena for inquiry into contemporary foodways. *Social Science Information* 39(1):181-192.

DALY, P., AND G. LOCK (2004) Time, Space, and Archaeological Landscapes: Establishing connections in the first millenium BC. In *Spatially Integrated Social Science*, M.F. Goodchild, editor, pp. 349-364. Oxford University Oxford, UK.

DANIÈRE, A. (1958) Feudal Incomes and Demand Elasticity for Bread in Late Eighteenth-Century France. *The Journal of Economic History* 18(3):317-331.

DARROW, M.H. (1991) Economic Terror in the City: The General Maximum in Montauban. *French Historical Studies* 17(2):498-525.

DE GARINE, I. (1980) Une anthropologie alimentaire des Français? *Ethnologie Française* 10(3): 227-238.

DE LA MORANDIÈRE, C. (1962) *Histoire de la pêche française de la morue dans l'Amérique septentrionale*. 3 vol., GP Maisonneuve et Larose, Paris, France.

----- (1967) *La Pêche française de la morue à Terre-Neuve du XVIe siècle à nos jours: son importance économique, sociale et politique.* Sorbonne, Paris, France.

DELACRÉTAZ, P. (2000) *Constuire un four à pain - cuisiner à l'ancienne.* Cabétida, Saint-Gingolph, France.

DELAGRÉE, M. Pers. comm., Sep. 2007. *Association Tiez-Breiz*, Rennes, Brittany, France.

DENYS, N. (1672) *The description and natural history of the coasts of North Amercia.* Reprinted in 1908 by Claude Bobin, Paris.

DIDEROT, D., AND D' ALEMBERT, JEAN LE ROND (1751) *Encyclopédie, ou Dictionnaire raisonné des sciences, des arts, et des métiers.* Paris, France.

DORNAN, J.L. (2002) Agency and Archaeology: Past, Present and Future Directions. *Journal of Archaeological Method and Theory* 9(4): 303-329.

DOYLE, W. (2001) *The Ancien Régime*,2nd sd. Palgrave, New York.

DUHAMEL DU MONCEAU, M. (1776) *Traité des pêches, et histoire des poissons.* Vol. 3, Imprimerie de la société typographique, Neufchatel, France.

FAURE-BOUCHARLAT, E., T. VICAR, B. MACCARI-POISSON, AND S. SAVAY-GUERRAZ (1996) *Pots et Potiers en Rhône-Alpes, Époque Médiévale, Époque Moderne.* Ministère de la culture, Direction régionale des affaires culturelles, Service Régional de l'Archéologie, Lyon, France.

FILIPPINI, J.P. (1970) Le Régime des soldats et miliciens pris en charge par la Marine française au XVIIIe siècle. In *Pour une histoire de l'alimentation*, J.J. Hémardinquer, editor, pp. 96-99. Librairie Armand Colin, Paris, France.

FOUCHER, J. (1976) *Bretagne est Univers: Traditions et Coutumes.* Fayard, Paris, France.

FRIEDERICH, F.H.W. (1975) *Pijpelogie - vorm, versiering en datering van de hollandse kleipijp.* Archeologische Werkgemeenschap voor Nederland, Voorburg, Nederland.

FRIJHOFF, W., AND D. JULIA (1979) The diet in boarding schrools of the end of the Ancient Régime. In *Food and Drink in History,* Vol. 5, R. Forster and O. Ranum, editor, pp. 73-85. Johns Hopkins University Press, Baltimore, MD.

GANACHAUD, G. (1986) *Les traditions Bretonnes.* Secalib, La Gerche-de-Bretagne, France.

GARNIER, G. (1733) Contrat d'assurance passé devant notaire concernant le navire « le Saint-Esprit » (1733, 15 avril). Ille-et-Vilaine departmental archives, Minutes notariales, dépôt Vercoutère.

GEMIE, S. (2007) *Brittany, 1750-1950. The Invisible Nation.* The University of Whales Press, Cardif, UK.

GINDIN, C. (1972) Le pain de Gonesse à la fin du XVIIe siècle. *Revue d'Histoire Moderne et Contemporaine* 19(3): 414-423.

GOULD, P. (1997) The Structure of Space(s). *Geografiska Annaler* 79B(3):127-140.

GRAEBER, D. (2004) *Fragments of an anarchist anthropology.* Prickly Paradigm Press (University of Chicago Press), Chicago, IL.

GRASSBY, R. (1999) *The Idea of Capitalism before the Industrial Revolution*. Rowman and Littlefield, Lanham, MD.

GROSSETÊTE, J.M.A. (1921) *La Grande Pêche de Terre-Neuve et d'Island*. Reprinted in 1988 by L'Ancre Marine, Saint-Malo, France.

GRZYMSKI, K. (2004) Landscape Archaeology of Nubia and Central Sudan. *African Archaeological Review* 21(1): 7-30.

GUY, K.M. (2001) Food and Diet. In *Encyclopaedia of European Social History, from 1350 to 2000*, Vol. 5, P.N. Stearn, editor, pp. 497-505. Charles Scribner's Sons, London, UK.

HALL, M., AND S.W. SILLIMAN (2006) Introduction: Archaeology of the Modern World. In *Historical archaeology*, M. Hall and S.W. Silliman, editors, pp. 1-19. Blackwell Publishing, Oxford, UK.

HARKINS, J.R. (1970) The Dissolution of the Maximums and Trade Controls in the Department of the Somme in 1795. *French Historical Studies* 6(3): 333-349.

HARTERY, L. (2005) Archaeological Research at Fisherman Cove 2 and Old Ferolle Island, Northwest Newfoundland: Bird Cove – Plum Point Archaeology Project 2004. Report to PAO Newfoundland and Labrador, St-John's, NL.

HÉBERT, M. (1997) *La pêche de la morue à Terre-Neuve et en Islande - racontée par la carte postale ancienne*. Charles Corlet, Condé-sur-Noireau, France.

HÉMARDINQUER, J.J. (1970) *Pour une histoire de l'alimentation.* Librairie Armand Colin, Paris, France.

HILLER, J.K. (1991) Utrecht Revisited: The Origins of Fishing Rights in Newfoundland Waters. *Newfoundland Studies* 7(1):23-39.

----- (1996) The Newfoundland Fisheries Issue in Anglo-French Treaties, 1713-1904. *Journal of Imperial and Commonwealth History* 20(1 (January)):1-23

----- (2007) Les habitants du Petit Nord pendant le 19e siècle: Quelques observations. In *Troisièmes Journées d'Histoire de la Grande Pêche - Granville*, E. Barré, editor, pp. 22-29. Société d'archéologie et d'histoire de la Manche, Saint-Lô, France.

HIRSCH, E. (1995) Landscapes: Between Place and Space. In *The Anthropology of Landscape*, E. Hirsch and M. O'Hanlon, editors, pp. 1-30. Clarendon Press, Oxford, UK.

HOOD, J.E. (1996) Social Relations and the Cultural Landscape. In *Landscape Archaeology - Reading and Interpreting the American Historical Landscape*, R. Yamin and K.B. Metheny, editors, pp. 121-146. The University of Tennessee Press, Knoxville.

INGOLD, T. (1993) The Temporality of Landscape. *World Archaeology* 25(2 - Conceptions of Time and Ancient Society):152-174.

INNIS, H.A. (1954) *The Cod Fisheries: the History of an International Economy.* University of Toronto Press, Toronto, ON.

JACOB, H.E. (1944) *Six Thousand Years of Bread. Its Holy and Unholy History.* Doubleday, Doran and Company, New York, NY.

JOHNSON, M.H. (1996) *An Archaeology of Capitalism.* Wiley-Blackwell, Oxford, UK.

--- (2007) *Ideas of Landscape.* Blackwell publishing, Oxford, UK.

JONES, P.M. (2003) *The French Revolution 1787-1804.* Pearson/Longman, Harlow, UK.

JUGUET, F. Pers. comm., Sep. 2007. Saint-Thual, Brittany, France.

KAPLAN, S.L. (1982) *The Famine Plot Persuasion in XVIIIe-century France.* The American Philosophical Society, Philadelphia, PA.

----- (1985) The Paris Bread Riot of 1725. *French Historical Studies* 14(1):23-56.

---- (1997) Breadways. *Food and Foodways* 7(1):1-44.

---- (2002) *Le retour du bon pain.* Perrin, Paris, France.

KENT, S. (1990) Activity areas and architecture: an interdisciplinary view of the relationship between use of space and domestic built environments. In *Domestic Architecture and the use of space,* S. Kent, editor, pp. 1-8. Cambridge Univesity Press, Cambridge, UK.

KISBÁN, E. (1986) Food Habits in Change: The Example of Europe. In *Food in Change: Eating Habits from the Middle Ages to the Present Day,* A. Fenton and E. Kisbán, editors, pp. 2-10. John Donald Publishers in association with the National Museums of Scotland, Edinburgh, UK.

LAYTON, R., AND P.J. UCKO (1999) Introduction: Gazing on the landscape and encountering the environment. In *The Archaeology and Anthropology of Landscape: Shaping our landscape*, One World Archaeology vol. 30, R. Layton and P.J. Ucko, editors, pp. 1-12. Routeledge, New York, NY.

LAZZARI, M. (2005) Traveling Objects and Spatial Images: Exchange Relationships and the Production of Social Space. In *Global Archaeological Theory: Contextual Voice and Contemporary Thoughts*, P.P. Funari, A. Zarankin and E. Stovel, editors, pp. 191-210. Kluwer Academic/Plenum Publishers, New York. NY.

LEAR, H.W. (1998) History of Fisheries in the Northwest Atlantic: The 500-Year perspective. *Journal of Northwest Atlantic Fishery Science* 23: 41-73.

LEFORT, A., AND L. LEMESLE (1994) *La Royale et la Terre-Neuvas*. L'Ancre Marine, Saint-Malo. France.

LE GOFFIC, C. (1910) *L'äme Bretonne, Troisième série.* Champion, Paris. Reprinted in 1977.

—— (1930) *La Chouannerie. Blancs Contre Bleus 1790-1800.* Hachette, Paris, France.

LEWIS, P.F. (1979) Axioms for reading the landscape - Some guides to the American scene. In *The interpretation of ordinary landscapes. Geographical essays*, D.W. Meinig, editor, pp. 11-32. Oxford University Press, Oxford, UK.

MALAPERT (1771) Acte d'engagement de l'équipage de « L'Heureux », bateau appartenant à Gilles Lecoufle (1771, onze mars). Ille-et-Vilaine departmental archives, Minutes notariales, dépôt Vercoutère.

MAPAQ (2003) *Four à pain.* Fiche technique no 80023, Gouvernement du Québec, Québec, QC.

MARIER, C. (1996) *Les menus objets de Place-Royale.* Publications du Québec (Ministère de la Culture et des Communications), Québec, QC.

MARTIN, J. (2005) Identity. In *Cultural Geography: A Critical Dictionary of Key Ideas,* D. Sibley editor, pp. 97-102. I.B. Tauris & Company Ltd, London, UK.

MATHAN, S., AND R. MATHAN (1982) Les fours à pain dans le Bocage normand. *Ethnologie Française* XII(4):373-386.

MCGLADE, J. (1999) Archaeology and the evolution of cultural landscapes: Towards an interdisciplinary research agenda. In *The Archaeology and Anthropology of landscape: shaping our landscape,* R. Layton and P.J. Ucko, editors, pp. 458-482. Routeledge, New York, NY.

MEINIG, D.W. (1979) Introduction. In *The interpretation of ordinary landscapes. Geographical essays,* D.W. Meinig, editor, pp. 1-7. Oxford University Press, Oxford, UK.

MESSER, H. (1984) Anthropological perspectives on diet. *Annual review of anthropology* 13: 205-249.

MILLER, J.A. (1992) Politics and urban provisioning crises: bakers, police and Parlements in France, 1750-1793. *Journal of Modern History* 64 (June): 227-262.

MINISTÈRE DE LA MARINE (1784) Instructions nautiques, relatives aux cartes & plans du pilote de Terre-Neuve, publié au Dépôt Général des Cartes, Plans & Journaux de la Marine, en 1784. Imprimerie Royale, Paris. Copy deposited at the Center for Newfoundland Studies, St.John's, NL. CIHM/ICMH Microfiche series no 63378.

MINOIS, G. (1992) *Nouvelle Histoire de la Bretagne*. Fayard, Paris, France.

MISTRAL (1773) Mémoire sur la nature des engagements que contractent avec leurs équipages les négociants de Granville qui arment pour la pêche de la morue tant sur le Grand Banc que sur la côte de l'île de Terre-Neuve. France, Archive des Colonies, C11F, vol. 3, f.148-149v, in NAC microfilm F-523.

MITCHELL, D. (2005) Landscape. In *Cultural Geography: A Critical Dictionary of Key Ideas*, D. Sibley, editor, pp. 49-56. I.B. Tauris & Company Ltd, London, UK.

MORZOWSKI, S.A., AND M.C. BEAUDRY (1992) Archaeology and the landscape of corporate ideology. In *Earth Patterns - Essays in Lanscape Archaeology*, W.M. Kelso and R. Most, editors, pp. 189-208. University Press of Virginia, Charlottesville, VA.

NOËL HUME, Y. (1969) *A Guide to Artifacts of Colonial America.* University of Pennsylvania Press, Philadelphia, PA.

NOËL, S. (2008) Report on the Faunal Assemblage from Area A and Area B of the 2007 Excavation at the Dos-de-Cheval site (EfAx-09), Newfoundland. Report to An Archaeology of the Petit Nord, Memorial University, St.John's, NL.

OSWALD, A. (1975) *Clay pipes for the Archaeologist.* British Archaeological Reports (14), Oxford, UK.

PELTO, G.H., AND P.J. PELTO (1983) Diet and Delocalization: Dietary Changes since 1750. *Journal of Interdisciplinary History* 14(2):507-528.

PILCHER, J.M. (2006) *Food in World History.* Routeledge, New York, NY.

POITRINEAU, A. (1970) L'alimentation populaire en Auvergne au XVIIIe siècle. In *Pour une histoire de l'alimentation*, J.J. Hémardinquer, editor, pp. 146-153. Librairie Armand Colin, Paris, France.

POPE, P.E. (2004) *Fish into wine - The Newfoundland plantation in the 17th century.* University of North Carolina Press, Chapel Hill, NC.

----- (2005) Petit Nord Survey, 2004 - Preliminary Report. Report to PAO Newfoundland and Labrador, St-John's, NL.

---- (2006) The Scale of early modern Newfoundland cod fishery. In *The North Atlantic Fisheries: Supply, Marketing, and Consumption, 1560-1990, (Studia Atlantica* 8), D.J. Starkey and J.E. Candow, editors, pp. 10-24. NAFHA, Gatineau, QC.

----- (In Press) Transformation of the maritime cultural landscape of Atlantic Canada by migratory European fishers, 1500-1800. In *The North Atlantic fisheries in the Middle Ages and early modern period: interdisciplinary approaches in history, archaeology, and biology*, L. Sicking and D. Abreu-Ferreira, editors, pp. -----. Brill, The Hague.

--- Pers. comm., Apr. 2008, citing Jean Chapelot.

POSTEL-VINAY, G., AND J. ROBIN (1992) Eating, working, and saving in an unstable world: consumers in nineteenth-century France. *Economic History Review* 45 (3):494-513.

RAINVILLE, A. (1977) *Le four à pain à Québec, aux XVIIe et XVIIIe siècles.* Parks Canada (Department of Indian and Northern Affairs), Ottawa, ON.

RENOUF, M.A.P., AND P.J. WELLS (2005) The 2004 field season at the Port-au-Choix National historic Site: Phillip's Garden (EeBi-1) and Barbace Cove (EeBi-12). Report to Parks Canada – Western Newfoundland and Labrador Region, Rocky Harbour, NL.

RENOUF, M.A.P., P.J. WELLS, P.E. POPE, AND J.R. PICKAVANCE (2004) Report of the 2003 Field Season at Port au Choix, Conche and Englee. Report to PAO Newfoundland and Labrador, St-John's, NL.

ROBIN, C., AND N.A. ROTHSCHILD (2002) Archaeological Ethnographies: Social Dynamics of Outdoor Space. *Journal of Social Archaeology* 2(2):159-172.

ROMPKEY, R. (2003) Sans moyens visibles: les gardiens terre-neuviens et la pêche française. *Annales du Patrimoine de Fécamp* 1067-72.

----- (2004) *Terre-Neuve: Anthologie des Voyageurs Français, 1814-1914.* Presses Universitaires de Rennes, Rennes, France.

SAMUELS, M.S. (1979) The biography of landscape - cause and culpability. In *The interpretation of ordinary landscapes. Geographical essays*, edited by D.W. Meinig, pp. 51-88. Oxford University Press, Oxford.

SAVARD, M., AND P. DROUIN (1990) *Les pipes à fumer de Place-Royale.* Publications du Québec, Québec, QC.

SÉBILLOT, P. (1895) Les Boulangers. In *Légendes et Curiosités des métiers*, pp. 1-64, Flammarion, Paris, Reprinted in 1981 by Laffite Reprints, Marseille, France.

SERVICE ÉDUCATIF DES ARCHIVES MUNICIPALES DE SAINT-MALO (1996) *Saint-Malo et la Grande Pêche.* 2nd ed. Mairie de Saint-Malo et Service éducatifs des archives municipales, Saint-Malo, France.

SOUBEYRAN, O. (1985) Organisation, perception et émergence du sens dans le paysage. In *Paysage et Système: de l'organisation écologique à l'organisation visuelle*, V. Berdoulay and M. Phipps, editors, pp. 155-178. Éditions de l'Université d'Ottawa, Ottawa, ON.

STEWART, A.M., D. KEITH, AND J. SCOTTIE (2004) Caribou Crossings and Cultural Meanings: Placing Traditional Knowledge and Archaeology in Context in an Inuit Landscape. *Journal of Archaeological Method and Theory* 11(2): 183-211.

SWEENY, R. Pers. comm., Apr 2008, Memorial University of Newfoundland, St.John's, NL.

TARDIEU-DUMONT, S. (1980) Aperçu sur le pain domestique. *Ethnologie Française* 10(3):239-246.

TEUTEBERG, H.F. (1975) The General Relationship Between Diet and Industrialisation. In *European Diet from Pre-Industrial to Modern Times*, E. Forster and R. Forster, editors, pp. 61-109. Harper Torchbooks, New York, NY.

--- (1986) Periods and turning points in the history of European diet: Preliminary outline of problems and methods. In *Food in Change: eating habits from the Middle Ages to the Present day*, A. Fenton and E. Kisbán, editors, pp. 11-23. John Donal Publishers in association wit the National Museums of Scotland, Edinburg, UK.

---- (1992) Agenda for a Comparative European History of Diet. In *European Food History: A Research Review*, H.J. Teuteberg, editor, pp. 1-18. Leicester University Press, Leicester, UK.

THOMAS, J. (2001) Archaeologies of Place and Landscape. In *Archaeological Theory Today*, edited by I. Hodder, pp. 165-186. Polity Press, Cambridge.

THOMPSON, E.P. (1971) The moral economy of the English crowd in the eighteenth century. *Past and Present* 50 (1):76-136.

THUILLIER, G. (1970) L'Alimentation en Nivernois au XIXe siècle. In *Pour une histoire de l'alimentation*, J.J. Hémardinquer, editor, pp. 154-173. Librairie Armand Colin, Paris, France.

TILLEY, C. (1994) *A phenomenology of landscape: places, paths, and monuments*. Berg, Oxford, UK.

TILLY, L.A. (1971) The food riot as a form of political conflict in France. *Journal of Interdisciplinary History* 2(1): 23-57.

----- (1983) Food Entitlement, Famine, and Conflict. *Journal of Interdisciplinary History* 14(2): 333-349.

TOUTAIN, J.C. (1995) Food rations in France in the eighteenth and early nineteenth centuries: a comment. *The Economic History Review - New Series* 48(4): 769-773.

TOY, J.C. Pers. comm., Sep. 2007. *La P'tite Boulange* bakery, La Chapelle-aux-Filtzmeens, Brittany, France.

TUAN, Y.F. (1979) Thought and Landscape - the Eye and the Mind's Eye. In *The Interpretation of Ordinary Landscapes - Geographical Essays*, D.W. Meinig, editor, pp. 87-102. Oxford University Press, Oxford, UK.

TURGEON, L. (1987) Le temps des pêches lointaines: permanences et transformations (vers 1500 - vers 1850). In *Histoire des pêches maritimes en France*, M. Mollat, editor, pp. 134-181. Privat, Toulouse, France.

VILLEMARQUÉ, J.H. (1995) *La pêche morutière française de 1550 à 1950. Statistiques, Climat, Société.* IFREMER, Louzané, France.

WESTERDAHL, C. (1998) *The Maritime Cultural Landscape: On the concapt of the traditional zones of transport geography.* University of Copenhagen, Institute of Archaeology and Ethnology, Copenhagen, Danemark. <http://www.abc.se/~m10354/publ/cult-land.htm> Accessed 16 Sep. 2006.

WILKES, D (2007) Breton Bread Oven Analysis. Palaeobotanical analysis realized under the supervision of Dr. Mike Deal, Report to Memorial University, St.John's, NL.

WILKSHIRE, M., AND F. WILKSHIRE (1992) Alliances and Conflicts on the French Shore: Captain Hamon's Journal, Written in Greenspond in 1770. *Newfoundland Studies* 8(2):147-154.

ZEDEÑO, M.N. (2000) On What People Make of Place: A behavioral cartography. In *Social Theory in Archaeology*, M.B. Schiffer, editor, pp. 97-111. The University of Utah Press, Salt Lake City.

ZYSBERG, A. (2001) Introduction historique. In *Mémoires d'un terre-neuvas granvillais – Eustache Le Pelley Fonteny (1745-1820)*, M. Le Pelley Fonteny and G. Desiré dit Gosset, editors, pp 9-20. Archives départementales de la Manche, Saint-Lô, France.

APPENDICES

APPENDIX 1

Untitled poem by the French author La Condamine.
First published in *Almanach des Muses* (Paris, 1770).

This revealing 1770 poem by La Condamine illustrates many facets of the French breadways: reverence for white bread despite the opposition of moralists, suspicion of bakers as social figures, difference in the quality of brewer's yeast versus leaven baking, governmental control over commercial baking, social disparity in bread consumption patterns, and the Parisians' taste for fine bread. First published in *Almanach des Muses* (Paris, 1770), the poem was translated to English and reported by Kaplan (1997: 37).

> They knew about pain mollet[1]
> A century before Nicolet;
> "Fit for the queen", they did determine:
> Médicis, who was our sovereign,
> Liked it and decided to
> Use dome in her first ragout.
> So did the city folds, those a court;
> Each one believed in the new sort.
> It all took place quite tranquilly
> Till 1688, you see,
> Gonesse[2] bakers to each other say
> They're enemies of pain mollet.

---

[1] A kind of sweet white bun, allegedly invented for Catherine of Medicis.

[2] Village near Paris that provided the markets of the Metropolis with highly reputed bread.

They saw its taste pleased everyone,

And so for malice, not for fun,

Denounced the bread to Parlement,

As harmful and bad aliment.

Then the leaders of the land,

Health protectors of each man,

Asked the famous faculty,

"Announce to us, no flattery,

What must we think about this bread?"

Some folks have chewed it for sixty years.

It could well be completely sour!

Gui Patin[3], sage of his hour,

And leader of those who opposed,

Spoke out thus and did expose,

Haranguing his brotherhood;

"I predict that there's no good

Can come from this bad industry,

Which does appeal to glutton's taste;

Yes, even those who think clearly

Will find their mind has gone to waste:

This poison does its work slowly,

To undermine life without haste."

---

[3] 17th century *Ancien* French erudite, Dean of the Faculty of Medicine at the College de France in Paris, and renowned for his conservatism and cynicism.

He concluded that death's way

Was quickly found with pain mollet.

The Perrault[4], his antagonist,

Said loud and clear: I'm a "*Pain molletist.*"

"Gentlemen, I do attest,

This bread is easy to digest."

Patin then answered: "But the yeast,

And that from Flanders, to say the least,

Made from an impure beer, that's certain,

Breeds a germ that is quite rotten

And against man's staying well[5].

What kind of devil did instill

This modern, evil, bad invention?"

"Modern!" Perrault's exclamation.

"Your memory has made a wrong turn,

It came from the Swiss canton of Berne;

They made it in Holopherne's time[6].

But even closer to our day,

Into Pliny[7], it finds its way.

---

4 Claude Perrault. 17th century *Moderne* French erudite and architect, active defender of scientific research and innovation; brother of Charles Perrault, author of Cinderella and other tales.

5 Symmetry between the effect of beer on the body and those of bread made with brewers<s yeast is a common argument of eighteenth-century moralists.

6 In the Bible, Holopherne is a general under Nebuchadnezzar.

7 Roman author reputed for his agrarian chronicles.A

I quickly see that Master Patin

Does much better in Greek than Latin."

Patin stepped back, to say the least,

And all because of brewer's yeast.

Each of the men was ready there

To take the other by the hair.

Then the court joined in the fight

And with a law ended the plight:

We forbid you to buy or sell

Yeast from Flanders, her ye well;

And we condemn those who insist

To a fine of five hundred francs at least.

So consequently, from that day,

For a hundred years, that is to say,

In France's capital quite hidden

There entered the yeast that was forbidden.

Each year fined twenty thousand ecus, remember;

And from January to December

Those with "licences", bachelors,

Presidents, and counsellors

Of the Grand-Chambre of the Parlement,

While drinking their café au lait,

Render homage to *pain mollet*.

APPENDIX 2

Dos-de-Cheval (EfAx-09) - Feature 952 and Feature 22
Description of Events and associated artifacts

Dos-de-ChevaAl (EfAx-09) - Feature 952 and Feature 22
Description of Events and associated finds

EfAx-09 – Area B – Feature 952

1000 Surface – grass, moss, roots, sod.

Plastic shotgun cartridge.

1002 Organic, dry, brown soil mixed with dry moss.

1004 Rocks, cobbles (less than 20cm) and a few large rounded rocks (20-50cm) in beach pebbles mixes with brown organic soil, seashell fragments and some gravel.

Nails, pipe stems, fish hook, CEW, copper button.

1006 Large tabular rocks (more than 50cm).

1008 Black organic soil with a few small to medium rocks and cobbles (10-20cm); fetid.

Large quantity of cod bones, CEW, TEW, nails.

1010 Gravel with pebbles (undug)

1012 Flat stones (7-15cm) and tabular rocks (more than 20cm) laid quite horizontally in a brown organic soil.

Surface collection: Pipe stem and bowl fragments, nails, CEW, faunal remains.

EfAx-09 – Area A – Feature 22

1020 Surface – grass, alexanders, buttercups, raspberry bushes.

Cut rib bone, discarded.

1022 Sod.

Flint fragment.

1024 Reddish organic soil, with small rock fragments (less than 5cm).

Red and yellow brick fragments, nails.

1026 Black organic soil.

Nails, red and yellow brick fragments.

1028 Pile of angular rocks and stones (10-25 cm).

1030 Black organic soil.

1032 Red soil with charcoal and ash.

Nail, pipe bowl fragment, lead spills.

1034 Same matrix as E.1024, but with higher concentration of rock fragments.

Nail, glass, brick fragments.

1036 Reddish soil with stones (about 10-20cm) and spots of red clay.

High concentration of brick fragments.

1038 Yellowish-brown clayish soil that quickly oxidizes to greyish-brown, with small rocks (5cm or less), some charcoal and granular lime.

Yellow and red brick fragments.

1040 Reddish-brown loam with small to medium rock fragments (5-15cm) and charcoal.

Yellow brick fragments.

1042 Heterogeneous, gravely, brownish-red clayish loam with dark red clay spots and mortar lenses.

1044 Alignment of angular rocks (50cm or less), mixed with yellowish clay (see Event 1038).

1046 Alignment of angular rocks and stones (10-40cm).

1048 Reddish-brown clayish loam with small rocks (10cm or less), charcoal and grey mortar patches.

Coarse yellow and red brick fragments.

1050 Medium brown, dense, organic, sod-like soil, with some gravel, charred wood and small rocks (15cm or less).

1052 Organic, brown clayish soil with some gravel, small rocks (10cm or less) and mortar.

Coarse yellow brick fragments, CEW, REW, large quantity of rather small nails.

1054 Coarse yellow bricks and mortar in a gritty, reddish loam with some clay spots.

1056 Deep red, gritty and crumbly clayish soil with some gravel and fragments of fired clay.

Coarse yellow brick fragments, coarse red tiles fragments.

1058 Tabular rocks (20cm or less) in dark brown organic soil.

Pipe bowl fragment, glass, nails.

1060 Charcoal.

REW, pipe bowl fragments.

1062 Level of flat rocks (20cm or less) in organic soil – sub-event of E.1058.

Large nail.

1064 Coarse tile fragments and baked clay fragments with their charred side up in a red, gritty loam.

Nail, spike.

1066 Dark brown organic soil with charcoal, some gravel and small pebbles (less than 5cm).

Yellow and red brick fragments, REW, pipe bowl fragment, mandible, nails.

1068 Greyish-brown soil with charcoal and spots of yellow clay.

Yellow and red brick fragments, pipe stem fragment, CEW, bone button, fish bones, nails.

1070 Large, loose rocks (25cm on average), with some decomposed mortar and gritty, reddish-brown loam.

1072 Greyish gravely loam, with charcoal, lenses of gritty orangey-red loam with charcoal.

Coarse red tile fragments, glass button, fish hook, nails.

1074 Gravely mortar and yellow clay with some charcoal.

Coarse yellow brick fragments, large curved tile, RSW?.

1076 Yellowish and greyish brown, gravely, clayish loam with seashell fragments, charcoal, some mortar and reddish gritty spots (decomposed tiles?).

Coarse yellow brick fragments, nails.

1078 Bluish-grey mortar with gravel, resting on heterogeneous, gravely,greyish-brown loam.

Coarse brick fragments.

1080 Dark brown organic soil with small rocks (15cm, or less) and charcoal.

Coarse brick fragments.

1082 Stones (15cm or less), pebbles and gravel in a greyish-brown loam.

1084 Compact yellowish clay mixed with some gravel, with flat stones lying on its surface (15cm or less).

1086 Brown gravely loam with small stones (undug).

1088 Feature: alignment of rocks; dry masonry with one course visible, at least two courses originally.

1090 Small and medium stones (5-15cm), cobbles, small rocks (5cm or less) and some gravel in a dark, greyish-brown loam.

1092 Brown loam with fine pebbles and few cobbles (undug).

1094 Brown clayish loam with charcoal, mussel shell fragments and some small stones (15cm or less).

Coarse red (tiles?) fragments, nails.

1096 Fine pebbles in a brown loam (undug).

1098 Grey organic loam with charcoal.

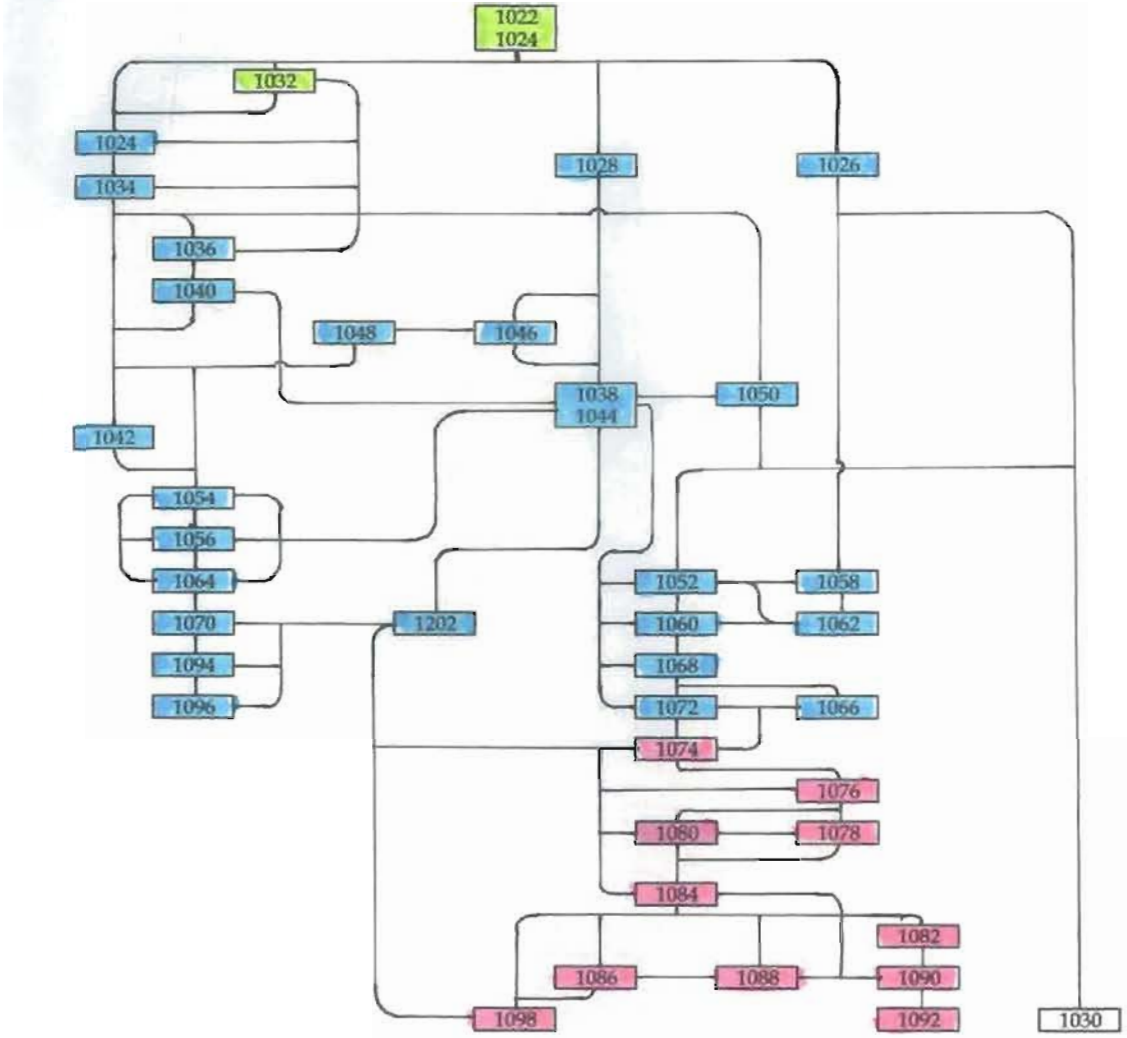
Nails.

1202 Feature: dry masonry wall tilted to the east, with irregular courses (seven on average).

APPENDIX 3

Dos-de-Cheval (EfAx-09), Area A, Feature 22 (Bread Oven)
Harris Matrix

Dos-de-Cheval (EfAx-09), Area A, Feature 22 (Bread Oven)
Harris Matrix



Note: Occupation phases are shown in the following colours: Phase I in pink, Phase II in blue, Phase III in green. Features shown in shaded boxes.