

Considering the number of structures at the site, it is clear that Nulliak held special significance for both Archaic and Palaeoeskimo populations; a more extensive investigation of the early Palaeoeskimo occupation may provide new insight on the PreDorset colonization of Labrador.

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NEW RESEARCH AT STOCK COVE, TRINITY BAY, NEWFOUNDLAND

Christopher B. Wolff, Meghan Negrijn, Lindsay Swinarton, and Eric Tourigny

Introduction

In August of 2008 we began a new research project at the Stock Cove site (CkAl-3), located at the mouth of Bull Arm at the bottom of Trinity Bay in southeastern Newfoundland along the isthmus of the Avalon Peninsula (Figure 1). The focus of the project is to examine human-environment relationships in the region, from its earliest colonization through the historic period. We are taking a historical ecological approach to study how past societies of Newfoundland impacted, and were impacted by, their ecosystem, and how they adapted to changing environmental and climatic conditions at various geographic and chronological scales. The Stock Cove site contains evidence of almost every culture that lived on the island, with the possible exception of the Norse (Robbins 1981, 1985; McLean 2006). Those cultures had to adapt to fluctuating environmental conditions related to climatic events such as the Mid-Holocene Warming (ca. 7000-5000 BP), a late Holocene cooling period (ca. 3500-3000 B), the Medieval Warming Period (ca. 1200-700 BP), and

the Little Ice Age (ca. 400-200 BP). All of these periods would have had varying, but significant, impacts on the nature of the landscape and resource structure of the island, and the North Atlantic region more broadly, and must have affected the economic strategies of the peoples who endured them. Moreover, past Newfoundland peoples may have directly or indirectly made significant impacts on their ecosystem, through their subsistence practices.

The adaptive successes, failures, colonization, and extinctions of the various peoples that occupied Newfoundland can provide us with a great deal of information with which to confront new challenges associated with modern climate change and to devise sustainable economic strategies. With that in mind, the record of Stock Cove, along with work being conducted in other parts of the island (see Bell and Renouf 2008; Bell et al. 2005; Deal 2005; Hodgetts 2005; Rosenberg et al. 2005; Wells 2005) may begin to fill in some of the gaps in our knowledge of human-environment interaction and economic and cultural adaptations of Newfoundland.

Site Background

The Stock Cove site spans an area of over 4000 m², from the hillside down to its eroding banks where

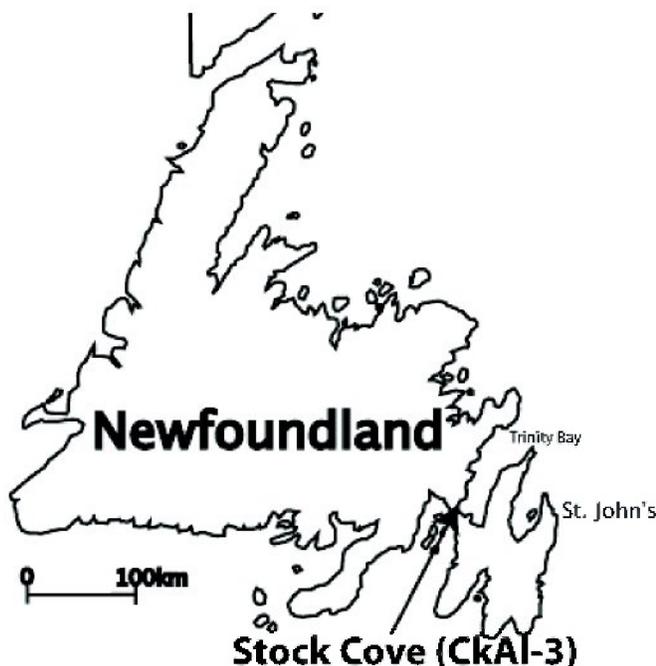


Figure 1: Location of Stock Cove (Wolff et. al.)

it is exposed to the open ocean (Figure 2). The site is located on a small gently sloping landform that terminates at a short beach cut where it is exposed to the open ocean of Trinity Bay. It is surrounded on the other three sides by sharply rising hillsides and large bedrock outcrops. Nearby is a freshwater creek that flowed steadily through the duration of our stay and may have been an attractive resource to the site's occupants. The site provides easy access to both marine resources of Trinity Bay and terrestrial resources of the island.

The Stock Cove site was first systematically investigated in the early 1980's by Douglas Robbins (1981, 1985) as part of his Master's research at Memorial University. Robbins found a great deal of cultural material at the site ranging from the Archaic to the historic, but focused his research on Dorset Paleoeskimo structures that were substantially constructed and contained thousands of artifacts. Robbins did not fully excavate the structures, but the size and nature of the deposits suggest they were part of a larger occupation. Robbins also demonstrated that Stock Cove was repeatedly occupied by several other cultures. He suggested the site would be an important location to study the prehistoric subsistence-settlement strategies of the region, and that its location at a place where the Dor-

set and other groups could take advantage of both terrestrial and marine resources may demonstrate the adaptability and diversity of prehistoric populations in the region (Robbins 1985).

In 2006, Laurie McLean revisited the site to assess environmental impact due to beach erosion and other factors, as well as the future research potential of the site. He found that a considerable amount of the site had eroded into the sea. Our investigations at the site in 2008 agreed with his assessment. There are hundreds of artifacts eroding onto the active beach along the entirety of the site (see Figure 2). Many artifacts were collected along the beach by McLean in 2006, and by us in 2008, and range from Maritime Archaic to historic European materials.

2008 Field Research

In the summer of 2008 the authors revisited Stock Cove to assess its potential to investigate human-environment relationships of prehistoric and historic groups that occupied Newfoundland. Through the help of resident, Robert Snook, of the nearby community of Sunnyside, we enlisted the expert services of another Sunnyside resident, Warrick Seaward, to boat our crew out to Stock Cove from the Sunnyside dock. We set up camp just upslope from the site near the freshwater creek that runs through the area. We camped at the site for three nights and excavated until rain set in on the last day.

Flora and Fauna

The site is wooded, with the middle and main part of the site slightly more open, with fewer trees and more grassland, peat, and small shrubs (see Figure 2). The relatively less dense forest in the middle of the site may be due to environmental factors associated with degradation of the hillside, which is discussed in greater detail below.

While at the site, we observed many animal species that may potential impact the site. First, while we did not see any moose (*Alces alces*), we found a great deal of evidence that they inhabit the area, including deeply grooved trails and droppings. Moose, of course, were introduced in historic times, but their paths and rutting behavior can damage the structure of the site, and therefore are noted here for future research considerations.

Another introduced species that could impact the integrity of the site is the American mink (*Mustela*

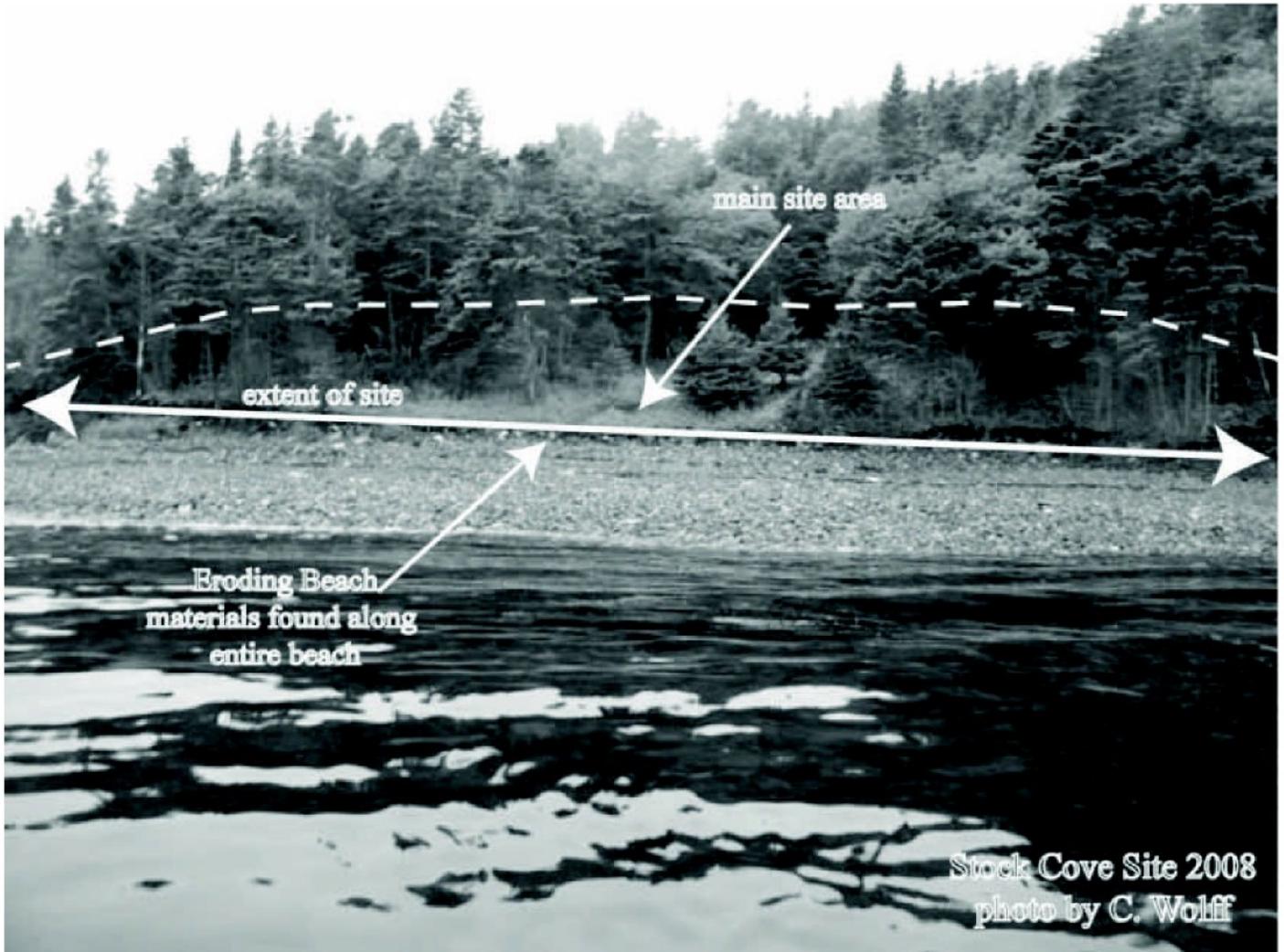


Figure 2: Photo of Stock Cove and Site Extent (Wolff et. al.)

vision). We observed (and smelled) several of them running around the site while we worked, and believe their burrows are currently in some large rocks along the beach cliff. Because mink are burrowing animals that live near the water, they are a potential source of bioturbation, which should be considered during excavation and interpretation of the site's structure and taphonomy, particularly since their subsistence focus on fish, shellfish, and small mammals could be similar to prehistoric human populations and if not accounted for could skew interpretation of human subsistence practices and changes in the ecosystem.

Other observed fauna were; several varieties of near shore fish, crustaceans, and invertebrates, as well as red squirrels, raptors, and many species of waterfowl. No sea mammals were observed during our short stay at the site, although seal bones were recovered at

the site.

Cultural Material

A considerable amount of artifacts were recovered from the eroding beach. Although few diagnostic tools were found, it appears that most of the beach materials date to the Maritime Archaic and Paleoeskimo periods, which makes sense considering the sea level history of the area. When the Maritime Archaic and Paleoeskimos occupied the site in the Middle to Late Holocene, sea levels would have been lower and their occupation may have extended out further onto land that has since eroded away as sea levels rose. In fact, we think that the greater part of the Maritime Archaic site at Stock Cove has been lost to wave erosion, and Paleoeskimo and later cultural deposits have been significantly eroded and are in jeopardy of being lost entirely as sea levels continue to rise.

In addition to surface collection along the beach, we opened test excavations across the site to get a better idea of the depositional history of the area. We placed four parallel rows of test pits (21 total), ranging from 30 cm² to 50 cm², with roughly five meters between units and between each parallel row of units, as the topography would permit. The units were excavated to depths of between 20 and 60 cm until bedrock or consistently sterile soil was found. The exact nature of the stratigraphy of the site is still being analyzed and will be presented in future publications and presentations. However, initial findings were interesting and demonstrated clear differences in tool stone and cultural materials through time and deserve some mention here.

First, the stratigraphy of the site appears to be largely intact, with a few exceptions resulting from post-depositional factors discussed below. The basal deposits for most of the site appear to be early Paleoeskimo, with some Maritime Archaic material showing up near the beach. As discussed above, this is probably because the Maritime Archaic people were living close to the shore that has since been mostly eroded away and only the part of their occupation that was furthest inland remains at the site. However, many of the artifacts found in the basal deposits were not diagnostic and further excavation at the site is needed to assess the earliest occupation levels.

In the middle stratigraphic levels for most of the site, there is a very clear, and very large Middle Dorset occupation that rivals some of the biggest Dorset sites on the island. This was expected based on earlier work by Robbins (1981, 1985). We found significant numbers of tip-fluted endblades, and several perforated harpoon tips made from slate, as well as cores, scrapers, microblades, and perhaps most significant for our research, seal bone. This suggests that marine mammals were still a part of Dorset subsistence even in a location far from known historic paths of migratory seal species. While the single phalanx and temporal bone we found are not attributable to species, further excavation should reveal more bone that may be identifiable and we can learn if they belong to migratory or non-migratory species—information which carries connotations concerning subsistence-settlement strategies of Dorset people in southeastern Newfoundland—and about the prehistoric resource structure and

environment of that region. This elevates the importance of this site, because it is rare to find faunal preservation in the acidic soils of Northeastern North America, and, therefore, it has great explanatory potential regarding human-environment relationships in that broad region.

Directly above the Paleoeskimo material we found a significant amount of Recent Indian artifacts, and it appears that there are lenses of faunal material (bone and shell) mixed in with the related stratigraphy. Most of the diagnostic artifacts were small projectile points resembling notched Little Passage points, but there may be finer-grained changes in cultural patterns during the Recent Indian period that will be revealed with wider excavation. Initial examination suggests that during the Recent Indian occupation of Stock Cove, there were shifts in stone material used for their tools, which may help in the assessment of settlement patterns and cultural developments of the region. There may also be some chronological overlap between late Paleoeskimo groups and early Recent Indians at Stock Cove, and investigating that possibility and possible contact between the groups will be part of our future research.

Finally, on the surface near the margins of the site we observed cobble hearths. We spent most of our time and effort with the test excavations, and did not examine these very closely, but they appear to have been historic period Beothuk hearths, and Jim Tuck (personal communication 2008) informed us that Beothuk hearths were found on the surface in earlier cursory surveys of the site. It will be interesting to investigate these further in the context of cultural change and development during the Recent Indian period, as well as contact period relationships between the Beothuk and Europeans.

Taphonomy

The Stock Cove site has an interesting taphonomic history. The erosion of the beach appears to be one of the main factors affecting the site, and some salvage work, and perhaps a breakwater should be built (see McLean 2006) to help mitigate the loss of material from this important site. As sea levels rise, the damage caused by wave action will only increase, and it is obvious that a significant amount of material is being eroded from the site daily.

The site also appears to have been impacted by

degradation of the hillside. In the middle of the site it appears that the layers post-dating the Middle Dorset occupation have been washed into the bay, probably from hillside slippage resulting from heavy precipitation events. The stratigraphy of that section of the site shows a layer of pebbles and cobbles, and some larger boulders, that appear to have washed down from the steep hillside at the back of the site and essentially armored the cultural deposits below. During that same event any Recent Indian and historic materials (and maybe later Paleoeskimo materials) would have been washed into the ocean. The soil that has since accumulated is mostly sterile, and the modern hillside shows evidence for degradation with large boulders and felled trees making their way down slope toward the site. On the margins of the site (roughly $\frac{1}{4}$ of the site on both sides, so approximately $\frac{1}{2}$ of the site), trees appear to be anchored more firmly and the soil and stratigraphy is intact, and that is where you find the bulk of Recent Indian and historic artifacts. Further excavation will provide better information about post-depositional processes, as well as environmental information concerning climate and precipitation regimes.

As mentioned above, some of the region's fauna may have affected the integrity of the site (e.g. burrowing animals like mink and red squirrels, moose trails); however, we think their impact is minimal, and with careful excavation we should be able to recognize any resulting bioturbation.

Conclusions

It has been demonstrated that the Stock Cove site has great potential to address some important questions in the cultural and environmental history of Newfoundland. While a great deal of future study is needed to fulfill that potential, initial research is promising. There are two main questions that Stock Cove may directly address. First, how have people affected, and how were they affected by, their relationship to the dynamic resource structure and environment of Newfoundland? The examination of the impact that the various subsistence strategies pursued by prehistoric and historic people had on the ecology of the region has possible connotations for modern economic and subsistence practices and policies. Moreover, past adaptations to climate change and attendant sea level fluctuation, even at a different scale, has modern relevance, as these are increasingly important concerns of

current populations of Newfoundland and around the world. Information recovered from Stock Cove can provide a deeper chronological context for the development and assessment of modern strategies to deal with this issue.

The second question is; what level of cultural interaction existed between historic groups, and how did it affect their subsistence-settlement strategies? While we know a lot about the individual cultures of Newfoundland, the examination of the level and type of interaction they may have conducted is still largely unknown. Sites like Stock Cove that have a well-defined stratigraphy, with evidence of most of the main actors in the cultural history of Newfoundland, could provide important information about the nature of chronological overlap and interaction between those groups.

Future Plans

Currently, the main author is writing grant proposals for a multi-year, interdisciplinary study to address the main questions outlined above. He plans to collaborate with regional researchers and specialists, as well as with people in nearby communities interested in the history of their region. If funding permits, he will be opening up broader excavation and systematically surveying the surrounding region, to start to piece together its historical ecology. A great deal of good research in the area has previously been conducted (e.g. Gilbert 1990, 2006, 2008; LeBlanc 1998, 1999, 2000, 2003; McLean 2006; Robbins 1981, 1985) on which to append and extend this research, and we are excited about its potential to address some important questions and issues.

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PUBLICATIONS, CONFERENCES, ANNOUNCEMENTS ETC.

BIRD COVE AND BEYOND: CELEBRATING A DECADE OF REGIONAL ARCHAEOLOGY ON A GLOBAL SCALE

Latonia Hartery
University of Calgary

In 2008, the Bird Cove-Pond Cove Archaeology project did not engage in a regular field season but instead focused its energies on preparing a conference that celebrated its 10th anniversary, which was held September 3-6, 2008. The conference promoted a decade of archaeological research and achievement in the Bird Cove – Pond Cove region. It also showcased this project's contribution to Newfoundland and Labrador history, culture and public education, as well as highlighted the benefits created for the local communities in terms of employment opportunities, as well as increased tourism. The conference was an international forum that put Bird Cove-Pond Cove and Newfound-

land research into a regional, national, and international context not only for the scientific communities targeted, but also for the public which has supported and actively participated in the research. The conference, entitled *Bird Cove and Beyond: Celebrating a Decade of Regional Archaeology on a Global Scale*, was the first event of this magnitude devoted to archaeology and held in our region. In addition to being a scholarly endeavour, it provided the opportunity for local organizations involved in the heritage, tourism and economic development industries to exchange information on how to promote the various research, tourism and economic development projects within the local and international communities.

The conference lasted four nights (3-6th) and three days (4-6th) during which 50 speakers and performers discussed the culture and history of Newfoundland, Labrador, Canada, the United States, and