
Canadian Institutions and Lower Central American Archaeology: An Historical Overview of Research along the Southern Mesoamerican Periphery

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ABSTRACT. Canadian universities have played an important role in the founding and development of archaeological programs in lower Central America, especially with regard to the geocultural interface that exists at the southern periphery of Mesoamerica. These developments range from the establishment of basic culture history to more nuanced theoretical inquiries, particularly relating to concepts of social identity and ethnic affiliation. This paper presents a brief overview of the major contributions made by Canadian institutions and their affiliated researchers, with a focus on significant pioneering advances achieved in northeast Honduras, El Salvador, and Pacific Nicaragua.

RÉSUMÉ. Les universités canadiennes ont joué un rôle important dans la création et le développement de programmes d'archéologie portant sur le sud de l'Amérique centrale, surtout en ce qui concerne l'interface géoculturelle présente à la périphérie méridionale de la Mésoamérique. Ces développements vont de la simple histoire culturelle jusqu'aux recherches théoriques les plus nuancées, en particulier en ce qui concerne les concepts d'identité sociale et d'affiliation ethnique. Cet article présente un bref survol des principales contributions apportées par les institutions canadiennes et leurs chercheurs affiliés, en se concentrant particulièrement sur les avancées des travaux pionniers réalisés au nord-est du Honduras, au Salvador et sur la côte pacifique du Nicaragua.

To the student of American archaeology there can be no more interesting field for research than Nicaragua. Here was the debatable land between North and South America, between Mayas and Aztecs on one side and Muyscas or Chibchas on the other, and, as a third grim factor, the savage of the Atlantic coast occasionally stepped in to dispute supremacy with his more civilized but less warlike neighbors. Over this whole region may be observed the marks left by the ebb and flow of the tide of conquest, and we may hope, by diligent investigation and the study of the relics in which the country so abounds, to contribute something towards the unraveling of the series of prehistoric events in America [J.F. Bransford 1881:82–83].

DESPITE BRANSFORD'S ELOQUENT admonition for "diligent investigation" in the late nineteenth century, lower Central America¹ has remained a neglected area of study. In large part, this may be due to the fact that it does not possess the massive monumental

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architecture and highly structured and easily recoverable remnants of statehood that pre-Columbian Mesoamerica has afforded archaeologists. Most of what we do know, however, comes from the work of a few dedicated archaeologists who have conducted some of the earliest research in lower Central America on, or just beyond, the Mesoamerican southern periphery. This work has focused primarily on understanding diachronic sociocultural developments and the mechanisms that likely served as the impetus for these changes—particularly questions of Mesoamerican influence versus local indigenous developments. While many of these archaeologists were born and educated in the United States, their careers are firmly tied to Canadian institutions and they are responsible for training and mentoring the first Canadian archaeologists working along the northern frontier of lower Central America.

This paper looks at archaeology in the countries located at the *geocultural interface* between Mesoamerica and pre-Columbian regions of lower Central America. While there have certainly been significant contributions made by archaeologists working at Canadian Institutions in other regions of lower Central America², we restrict our discussion to those areas considered to share a “frontier,” or adjacent boundary zone with Mesoamerica to the north. Here we take a geographical approach moving from northeast Honduras in the east to El Salvador and Pacific Nicaragua in the west (Figure 1), considering the important contributions Canadian institutions have made to our understanding of lower Central American archaeology.

Since the general critique of over-arching culture areas, greater emphasis

has been placed on understanding sub-regions of Mesoamerica. One prominent approach has used world systems theory to subdivide the region into core, periphery, semi-periphery, and frontier zones (Carmack and Salgado González 2006; Kepecs and Kohl 2003). From a diachronic perspective, regions considered in this essay have fluctuated between peripheral and frontier territories in relation to the larger Mesoamerican world system, albeit with the possibility of larger centers such as Cihuatán (see below) fulfilling more of a port-of-trade role as a semi-peripheral site. This interest in the peripheral and frontier status of lower Central America unifies the areas that will be considered, while also outlining ways that Canadian scholars have accepted the challenge raised by Bransford over 100 years ago.

Northeast Honduras

The archaeological region of northeast Honduras comprises the Bay Islands in their entirety, the Department of Colón, the Department of Olancho, and the western portion of the Department of Gracias a Dios, eastward as far as the Río Patuca. It remains one of the least studied and least understood regions in lower Central America. That said, the majority of what we do know comes from the early work of Paul Healy, who began his tenure at Trent University in Ontario in 1976. While not the first archaeologist to brave this completely undeveloped region—in fact, early archaeologists including Herbert Spinden (1925), Duncan Strong (1935), and Junius Bird (Epstein 1957:33) explored both the Caribbean coast and the Bay Islands in the early part of the twentieth century—Healy was responsible for the first formal survey of sites in the Trujillo area with a focus on the Aguán River Valley.

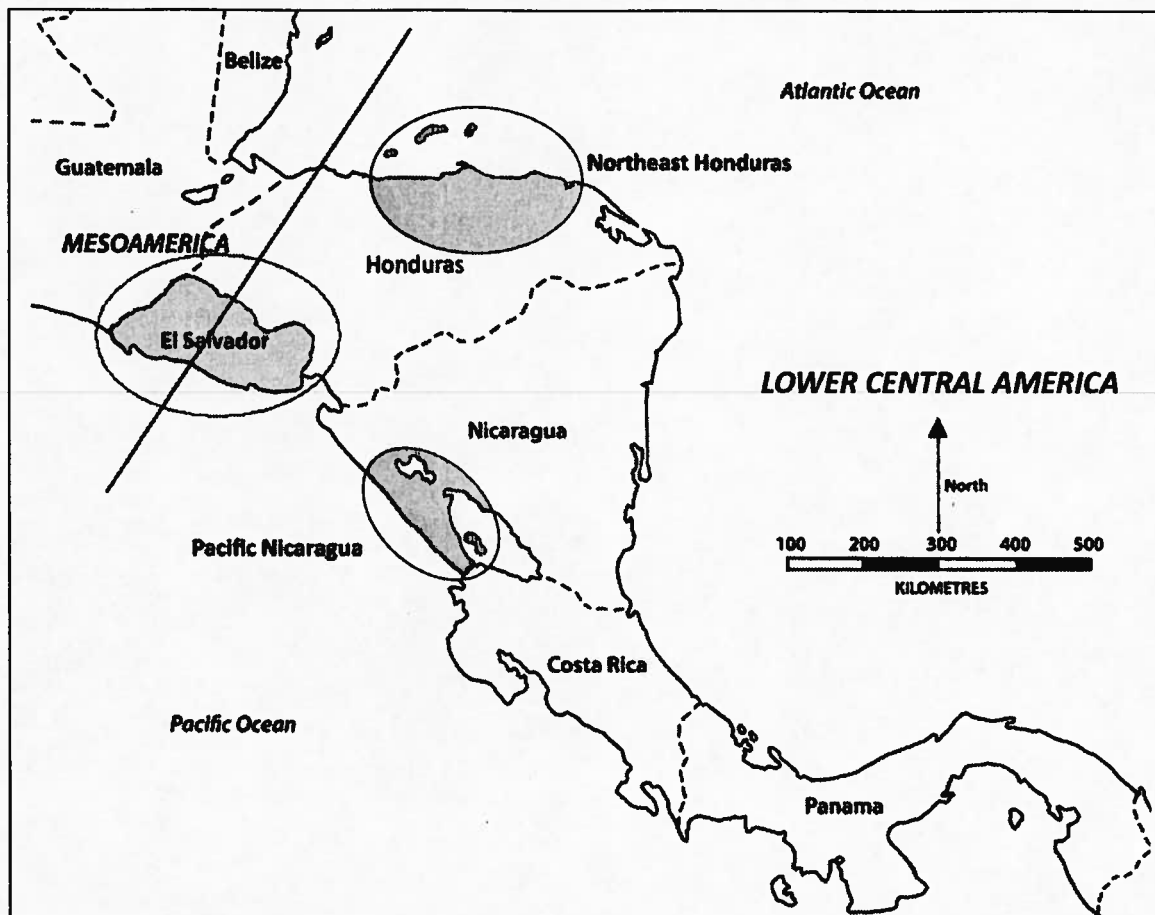


FIGURE 1. Map of archaeological regions discussed in the text (map by Carrie Dennett).

Beginning in the mid-1970s, Healy surveyed the Cuyamel Caves (H-CN-14, H-CN-15, and H-CN-16) (1974a) and undertook extensive excavations at the sites of William's Ranch (H-CN-4) (1975), Selin Farm (H-CN-5) (1978a), and Río Claro (H-CN-12) (1978b). This resulted in the first formally mapped archaeological sites, the first radiocarbon dates, and the first truly "scientific" study of material culture with context for the region (Figure 2).

Faunal analysis from the Selin Farm site provided the first insight into pre-Columbian dietary patterns in northeast Honduras (Healy 1983). This analysis indicated a broad-based diet of diverse mammal, reptile, bird, shellfish, and freshwater and marine fish species.

Radiocarbon dates from the sites of Selin Farm and Río Claro allowed for a restructuring and refinement of the chronology in northeast Honduras (Healy 1978a, 1978b). Most importantly, however, this exercise demonstrated that significant change in settlement patterns and ceramic typology occurred between A.D. 800 and 1000. During this transitional period local settlement patterns shifted from loosely organized layouts and unstructured mounds at sites such as Selin Farm prior to A.D. 1000, to tightly organized and highly structured arrangements post-A.D. 1000 at sites such as Río Claro. Healy (1993) also demonstrated that accompanying this change in settlement layout was a shift from painted ceramics prior to A.D. 800 to mono-

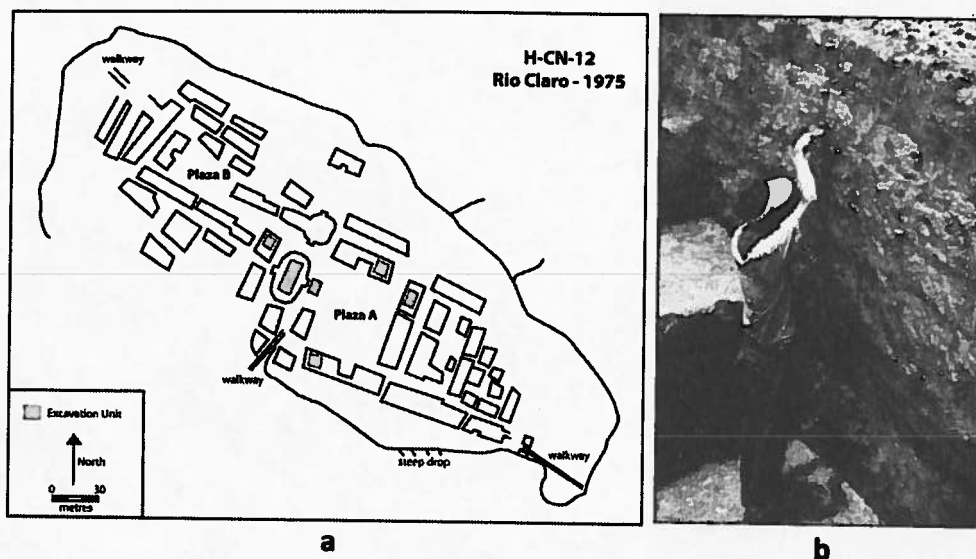


FIGURE 2. (a) Site plan of Río Claro, northeast Honduras (after Healy 1978b:Figure 3; map digitized by Carrie Dennett). (b) Paul Healy taking soil samples from deep excavation in Mound A at Río Claro (photo courtesy of Paul Healy).

chrome incised wares in later times. These new data provided insight into the culture history of the region and changing social structure across time. Through his early research in the region, Healy (e.g., 1984a) is also notably responsible for the public promotion of a broader Honduran archaeological synthesis.

Largely because of his training as a Mesoamerican archaeologist, Healy (1978b, 1984a, 1984b, 1984c, 1993) originally interpreted these changes in settlement layout and ceramic typology as evidence for Mesoamerican intrusion into the region. However, several decades later and in conjunction with Carrie Dennett's (2007) M.A. research at Trent University, this original interpretation underwent extensive revision due to new anthropological interpretations being forwarded for pre-Columbian Costa Rica and Panama (see Hoopes 2005). This new research suggests that ceramic types and decorative modes demonstrate strong linkages with indigenous cultural groups of lower Central

America who spoke historically-related languages of the Chibchan stock, rather than with Mesoamerican groups (Dennett 2007, 2008a, 2008b). Further, this ceramic data, in association with settlement planning, architecture, and other diverse forms of material culture, indicates significant local indigenous developments during the Classic period (A.D. 300–800) and subsequent internal social restructuring during the Classic to Postclassic transition (A.D. 800–1000); these changes occurred largely free of direct Mesoamerican influence (Dennett 2007; Healy and Dennett 2006; but see also Healy et al. 1996).

While the bulk of Healy's excavation in northeast Honduras was conducted through Harvard University in the 1970s, the majority of his related publications and subsequent analyses were undertaken during his tenure at Trent University. Healy and former Trent supervisee Dennett continue to collaborate, presenting and publishing on various aspects of northeast Honduran material

culture including figurine production, musicology, and ceramic typology (Dennett and Healy 2008, 2012; Dennett et al. 2008; Healy et al. 2010).

El Salvador

Canadian institutions, involving professors and doctoral students, have laid the groundwork for major advances in our understanding of Mexican migrations and the archaeology of “Mesoamerican” El Salvador. El Salvador is located on the southern frontier boundary of the Maya cultural zone, but was also occupied by Nahua migrants from central Mexico and the Gulf Coast who entered the region during the Postclassic period (ca. A.D. 900).

In the spring of 1975, David Kelley received a letter from the Canadian Ministry of Education seeking graduate students to work on the Cerrón Grande Archaeological Salvage Project in El Salvador. Then-graduate student William Fowler (Figure 3), at the behest of his University of Calgary supervisor, joined the project in 1975–1976 under

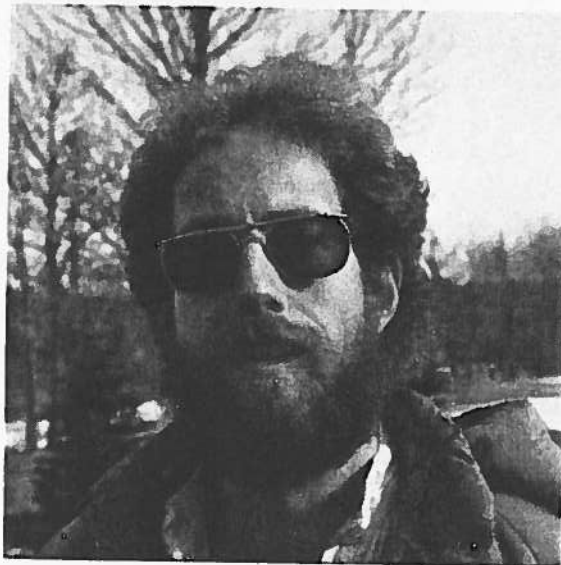


FIGURE 3. William Fowler at Prince's Island Park, Calgary, Alberta in Spring 1976 (photo courtesy of William Fowler).

the direction of Stanley Boggs in order to gain additional field experience. Fowler returned to El Salvador in 1976 and began work at the site of Hacienda Santa María, an Early Postclassic period (A.D. 900–1200) site. On return to Calgary, and in consultation with Kelley, the potential of coordinated archaeological, ethnohistorical, and historical linguistic research was realized, with the ultimate goal of addressing the issue of Toltec connections in Central America. He returned to El Salvador once again during his doctoral studies, from 1977–1979, to work at the site of Cihuatán.

Cihuatán is located in the municipio of Aguilares, in the Department of San Salvador. It was occupied during the Early Postclassic period (A.D. 900–1200). At Cihuatán, Fowler's research resulted in a full-scale, statistically randomized settlement survey of the entire site, excavation of four monumental structures and an elite residential compound of the West Ceremonial Center, analysis of all ceramics and artifacts recovered by his project, and the connection of Early Postclassic Toltec Pipil culture with historic period Pipil groups. This fieldwork led him to documentary research on the ethnohistoric migration myths of the Pipil: a group with Nahua, or Mexican, origins. Results of his archaeological excavations and ethnohistoric study were presented in his two-volume, 1,100 page doctoral dissertation (Fowler 1981), which was later published, in part, by the University of Oklahoma Press (Fowler 1989). Now a professor at Vanderbilt University, Fowler has continued research in El Salvador, especially at the Conquest period site of Ciudad Vieja (Old City), the original capital of the Spanish colony (Fowler 2011). Using innovative remote sensing techniques, Fowler

mapped the stone foundations of the ancient settlement and identified ethnic neighbourhoods relating to historically documented migrant populations from central Mexico who accompanied the Spanish conquistadors. In 1990, Fowler became founding editor of the prestigious Cambridge University Press journal *Ancient Mesoamerica* and continues in that capacity today.

Adding to the University of Calgary legacy at Cihuatán, Jane Kelley (now professor emerita at the University of Calgary), mapped and excavated the San Diaguito neighbourhood north of the site centre in 1979 (Figure 4). The Kelley children, Dennis and Megan, were also involved, assisting William Fowler in the laboratory at the University of Calgary with the analysis of obsidian from the site. Conclusions of Kelley's (1988) research led to the interpretation that Cihuatán was a multicultural metropo-

lis during the early Postclassic period. This interpretation complemented concurrent research at Cihuatán being conducted under the direction of Karen Bruhns, a former University of Calgary professor. Bruhns' project excavated a series of residential structures around the site core (Bruhns 1980) with the objective of gaining insight into daily life: an innovative research agenda for the time and region.

Cihuatán is one of the major archaeological sites in El Salvador, now a UNESCO World Heritage site and popular archaeological park. Canadian investigations have played a major role in developing El Salvador's cultural patrimony. The contribution of the University of Calgary researchers has been to develop the interest in ethnic and cultural identities at Cihuatán, particularly as it relates to migrations from central Mexico into Pacific Central America.



FIGURE 4. Jane Kelley standing on a house platform (Structure A) in the San Diaguito area of Cihuatán, El Salvador, in 1979 (photo courtesy of Jane Kelley).

A final notable addition to this section on El Salvador is the work spearheaded by Michael Blake from the University of British Columbia. From excavations along the southeastern coast of Mexico, Guatemala, and El Salvador, Blake and colleagues (1995) generated radiocarbon dates that allowed for the refinement of a Late Archaic and Early to Middle Formative period (ca. 4000–650 B.C.) microchronology. This refinement resulted in the establishment of 10 archaeological phases that demonstrate detailed cultural development along the coast ranging from early hunter-fisher-gatherer societies to incipient chiefdoms.

Pacific Nicaragua

In the late 1950s, the great synthesizer of Mesoamerican archaeology, Gordon Willey, began research in Pacific Nicaragua looking for evidence of Mesoamerican migration. Historical, linguistic, and art historical evidence all suggested the presence of Mexican populations along the Pacific coast of Nicaragua and northwestern Costa Rica—a region that Willey and his student Albert Norweb termed “Greater Nicoya.” Willey and Norweb conducted several field seasons in the region around the modern city of Rivas in an attempt to characterize the archaeological culture area (Healy 1980:xxv), but unfortunately the project was abandoned until another graduate student, Paul Healy, took up the challenge for his own doctoral research (Healy 1974b).

Healy analyzed materials stored at Harvard University’s Peabody Museum that pertained to a dozen sites, and created a type-variety ceramic classification that is still the foundation of ceramic analysis today (Healy 1980), as well as a refined regional chronology. In a thorough study, he also considered other

aspects of ceramic material culture and, with fellow student Mary Pohl, published the first study of local faunal remains (Pohl and Healy 1980). Following in the footsteps of Willey, Healy was interested in the potential connections linking the Rivas material to those found in the Maya region and broader Mesoamerica (Healy 1988). During his long tenure at Trent University, Healy has inspired (and supervised) several Canadian students through research opportunities related to Pacific Nicaraguan archaeology, including Norma Knowlton (1992, 1996), David Rewniak (2006; Rewniak et al. 2012), and Jamie Houston-Dickson (2009).

In 1999, Geoff McCafferty was appointed to the faculty of the University of Calgary, and at the invitation of Dr. Silvia Salgado of the University of Costa Rica he began a pilot project in Pacific Nicaragua at the site of Santa Isabel (N-RI-44) (Figure 5), one of the major sites previously investigated by Willey and his students. Funded by a Social Sciences and Humanities Research Council Standard Research Grant, McCafferty expanded the project through 2005 as the most extensive archaeological investigation ever conducted in Nicaragua. The research question that inspired the Santa Isabel project was again the search for evidence of pre-Columbian Mesoamerican migration using ethnohistoric documents to construct models of Nahua identity, and therefore to serve as hypotheses for evaluation. Having spent 20 years working at the central Mexican centre of Cholula, a possible point of origin for the historical migrations, comparisons were available with known material culture. Excavations focused on domestic contexts using a holistic approach to analysis of the material culture. Shovel

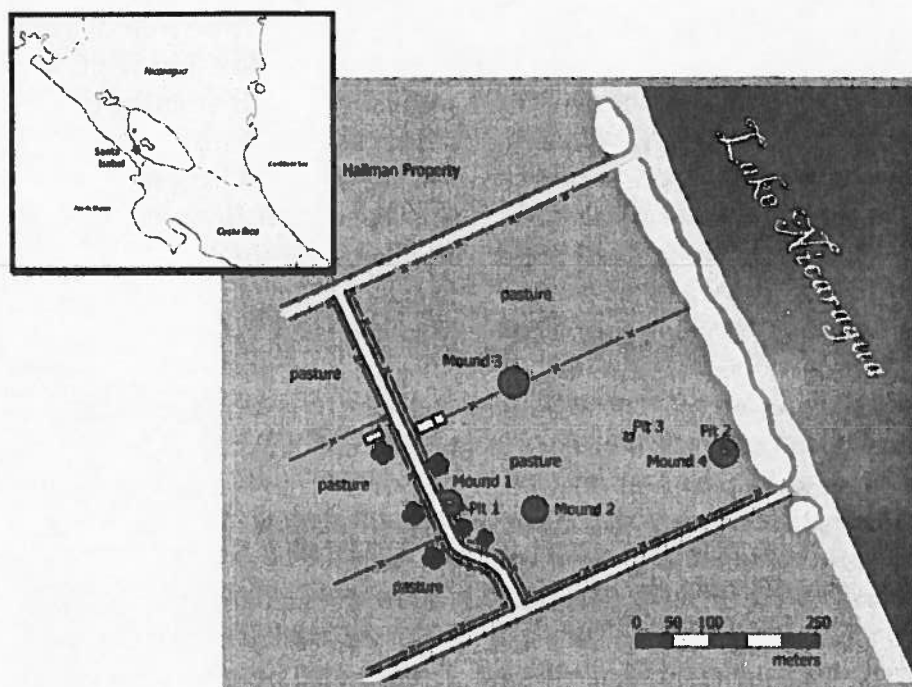


FIGURE 5. Site plan of Santa Isabel, Pacific Nicaragua (after Healy 1980:Figure 13; map by Larry Steinbrenner).

testing of about 6 ha of the site centre sampled about five percent of the 300 ha site (Niemeel 2003), believed to have been the paramount center of a complex settlement hierarchy. Horizontal excavations at five of the approximately 40 low house mounds identified at the site provided a wealth of material culture, including exceptionally well preserved faunal remains (Hoar 2006; López-Forment 2007; McCafferty 2008).

Among the substantive contributions were a revised chronology based on 17 radiocarbon dates, all corresponding to the local Sapoá period (A.D. 800–1250) (McCafferty 2008; McCafferty and Steinbrenner 2005). Larry Steinbrenner (2010) has recently completed a massive study of potting traditions for his doctoral dissertation at the University of Calgary that includes a significantly revised typology as well as innovative considerations of vessel form and design structure. Utilizing lithic materials

collected from the site, Jolene Debert (2005; Debert and Sheriff 2007) completed a Master's thesis at the University of Manitoba that, among other things, included the identification of a new lithic type: a composite tool probably used for processing vegetal materials. An Honours thesis at the University of Calgary by Sacha Wilke (2009) examined ceramic objects from the site of Santa Isabel, including spatial patterning related to domestic practice.

With his wife Sharisse, McCafferty has published several articles on other artifact classes. A detailed study of spindle whorls and bone weaving tools permitted a consideration of specialized textile production (McCafferty and McCafferty 2008), the first time this type of analysis has been conducted in lower Central America. An analysis of ornamentation and figurines has also been published (McCafferty and McCafferty 2009), following the theoretical concept of the

“body beautiful” in which a perspective of emic aesthetics related to the expression of social identity was explored. A summary article on the Santa Isabel project was published in the journal *Latin American Antiquity* dealing with the topic of domestic practice and including architecture, foodways, mortuary practices, and specialized production (McCafferty 2008).

Beginning in 2008, McCafferty and his team moved up the coast to the Granada area, where he conducted excavations at the sites of Tepetate (N-GR-10) and El Rayo (N-GR-39). Tepetate was possibly the ancient Chorotega capital of Xalteva, one of the largest sites reported by nineteenth century explorers, located on the outskirts of the colonial capital and modern city of Granada. Excavations focused on one of the last remaining mounds of the site (the vast majority of the exposed site has been destroyed by modern development and looting). Shovel testing identified the northern edge of the site, as well as several buried features, including two concentrations of burial urns. All of these contexts again dated to the local Sapoá period (A.D. 800–1250), contemporaneous with the site of Santa Isabel, located approximately 80 km to the south.

In 2009 and 2010, the project concentrated at the site of El Rayo, located on the outermost tip of the Asele peninsula in Lake Nicaragua (Figure 6). The site had been impacted during recent road construction which exposed burial urns and human skeletal remains from a Sapoá period cemetery. Excavations encountered several burial clusters that included not only diagnostic shoe-shaped urns from the Sapoá, but also primary interments from the late Bagaces period (A.D. 500–800). Additional excavations explored a residential

area with stratified Bagaces and Sapoá period deposits representing one of the first multi-component sites known from Pacific Nicaragua. Finally, a third locus identified during initial test-pit survey featured shallow burials and burial urns, some of which were aligned in front of a stone foundation, possibly a small shrine (Wilke et al. 2011).

The Granada project provides a valuable comparison with the Santa Isabel data set, which allows for the interpretation of micro-scale identity strategies (McCafferty and McCafferty 2011). Through a focus on household and community-level organization we have been able to make close comparisons of the distribution of material culture in order to approximate exchange and interaction networks. For example, doctoral student Carrie Dennett is in the process of creating a regional com-



FIGURE 6. Geoff McCafferty taking notes at the site of El Rayo, Pacific Nicaragua, in 2009 (photo by Carrie Dennett).

parative database of ceramic composition profiles based on a combination of petrographic, X-ray diffraction, and neutron activation analyses—the latter in collaboration with Dr. Ron Bishop of the Smithsonian Institution. The goal of these researches is to model, for the first time, ceramic economy and, potentially, symbolic interaction at the local level within the region. Based on new knowledge of mortuary practices, the Granada project can characterize a range of social identities (McCafferty et al. 2011). The greatest development, especially from the site of El Rayo, is the opportunity to understand the diachronic relationship between Bagaces and Sapoá period components since this potentially represents social changes that occurred as the indigenous population intermingled with newly arrived immigrants, finally allowing an in-depth evaluation of the Mesoamerican connection.

One of the fundamental goals of the University of Calgary's projects in Pacific Nicaragua has been public outreach, engaging stakeholders at all levels of Nicaraguan society. This has been accomplished through museum exhibitions of archaeological discoveries, radio and television programs about the research, public lectures in museums across Nicaragua, and numerous Spanish-language publications in popular magazines (McCafferty 2010). The project has also included many Nicaraguan students, providing valuable employment as well as training in advanced archaeological techniques. By integrating Nicaraguan, Costa Rican, Salvadoran, and Mexican archaeology students with nearly 100 Canadian undergraduate and graduate students, the Nicaraguan research has been a model for "internationalization," as noted in a 2005 issue of *Maclean's* magazine.

While this section has focused primarily on the Pacific Nicaraguan subregion, or "northern sector," of Greater Nicoya, we also note that Jean-Francois Moreau conducted important archaeological research in the "southern sector" of northwestern Costa Rica in the late 1970s and 1980s throughout his entire graduate career at the Université de Montréal. Moreau's (1980, 1983, 1984) research focused primarily on seasonality, subsistence practices, and maritime adaptations in pre-Columbian northwestern Costa Rica. His investigations and interpretation of shell-midden communities, particularly his work at the Vidor site, remain a seminal resource for researchers working in the area. Moreau is currently a professor and director of the Archaeology Laboratory in the Department of Social Sciences (Humanities) at the Université du Québec à Chicoutimi.

Discussion and Conclusions

Canadians and Canadian institutions have been leaders in the archaeological exploration of lower Central America. The work of Paul Healy in northeast Honduras shaped the culture history of a heretofore little known region. The pioneering influence of Dave and Jane Kelley and their students (particularly William Fowler) at the site of Cihuatán in El Salvador has revealed important aspects of the social organization of the urban site zone, while focusing attention on the ongoing debate about Mesoamerican influences into lower Central America. This same theme has strongly guided ongoing investigations in Pacific Nicaragua, where first Healy, and currently archaeologists from the University of Calgary are investigating a range of social identities, especially ethnicity, and interaction using a broad range of analytical techniques.

Over the past 40 years Canadian archaeologists have made significant contributions to lower Central American archaeology. Time will tell if this trend will continue. With recent University of Calgary Ph.D. Larry Steinbrenner and doctoral candidate Carrie Dennett completing their dissertation research and developing their own research programs, it is hoped that common research interests will branch out for even more far-reaching investigations. Additionally, as nearly 100 Calgary undergraduate students have received practical experience in the region there is a growing interest in lower Central America that may finally realize the potential anticipated so long ago by Bransford (1881).

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Notes

1. Lower Central America, the isthmian landmass that lies between Mesoamerica and South America, has been in a state of "redefinition" for over 50 years. The traditional definition, which we employ here, is geographically oriented and has been commonly used since its formal establishment in the 1980s (see Lange and Stone 1984). However, there are alternate labels that should be discussed briefly here. In a later attempt to define the area in cultural terms, the "Intermediate area" (which includes lower Central America as the northern isthmian portion) designation was introduced and gained favour in the early 1990s (see Lange 1992)—a concept originally introduced in the late 1950s by Gordon Willey (1959:190). As the Intermediate area label became more widely used, it was also being heavily criticized as a misnomer: one that characterized the region as backward and marginal to "higher" civilizations to the north and south (see, for example, Hoopes 2005; Sheets 1992). More recent research has forwarded, instead, the concept of an "Isthmo-Colombian area," a cultural definition based on shared genetic and linguistic traits, as well as long-term continuous occupation and strong material culture affinities (Hoopes 2005; Hoopes and Fonseca 2003). While the area has also been even more recently and non-formally referred to the "Chibchan culture area" or "southern Central America," we have chosen to utilize the "lower Central America" label for sustainability and consistency.
2. For example, and beyond the scope of this paper, is archaeological research conducted by recent University of

Calgary graduate Diana Carvajal-Contreras (2010; Carvajal-Contreras et al. 2008) who studied fishing and faunal remains at the multi-component Vampiros 1 and 2 rockshelters at Parita Bay, central Pacific Panama. Other significant and extensive research has also been carried out in Panama by Mikael Haller of Saint Francis Xavier University in Nova Scotia (see Menzies and Haller 2012, this issue).

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