On the Fringes of New Spain: The Northern Borderlands and the Pacific

Russell K. Skowronek

Introduction

Preparing a synopsis of the history and historical archaeology of New Spain's northwest frontier, not to mention its Pacific holdings, is not simply daunting, it is a Herculean task. At least hundreds of thousands of pages in thousands of books and articles have been published or are hidden in the "gray literature" on countless subjects relating to the broad historical sweep of this vast region. As a result I will limit my comments more toward generalization, and attempt to direct the reader to other, more-comprehensive sources. Omission, therefore, is not a critique.

Nonetheless, after three decades of studying the Spanish empire, from Madrid to Manila and from Labrador to Lima, I believe I have begun to understand its manifestations as a global entity and not just as a collection of sites or regions (Gitlin, 1992). This, I believe, is a crucial observation that needs to be recognized by those studying the early modern era. People lived, and largely interacted, in a single region prior to the era of European colonial expansion (e.g., Wallerstein, 1974; Wolf, 1982). Certainly, there were large, land-based empires (e.g., China, the Inka), but in every case, their holdings were largely contiguous, and they were the dominant political and economic entities in their respective regions. Whether in these empires or in smaller ranked or egalitarian polities, anthropologists have traditionally been able to examine a specific site or community largely as a self-contained entity with minimal superregional connections. Yet,

R.K. Skowronek e-mail: rskowronek@scu.edu

beginning five centuries ago, that began to change as superregional empires that encircled the globe began to form. Each settlement in every geographical area that comprised these early modern empires was shaped by three factors: external systemic concerns, internal colonial constraints, and technological and geographical limitations. Thus, for historical archaeologists, research should neither be site nor regionally focused, for this will result in a skewed perspective vis-à-vis the relative importance of a discovery or the area. Rather, it must be considered in the larger system of which it was a part. Only then can we truly evaluate the significance of our findings.

In the following pages, a model for explaining the formulation and maintenance of the Spanish colonial world is presented. From this framework, the peripheral borderlands of New Spain will be evaluated.

Creating and Maintaining the Spanish Empire

Settlement systems reflect in their pattern and function the social structure of the constituent cultural system of which they are a part. When a complex cultural system colonizes new lands, expressly for the purpose of founding economically specialized areas whose function is to provide goods to the parent state, the new patterns associated with these colonial areas are not unvarying clones of the motherland or of previously founded

colonies. Certain aspects of a colonial area's settlement pattern and function may grossly reflect that of the parent state. Nonetheless, a larger hierarchy exists within the colonial system and serves to differentially separate each area from the motherland. This hierarchy is based on access to desired resources and an economical means of communication with the homeland (Skowronek, 1989). In this chapter, these premises are examined against the fabric of the Spanish colonial empire of the sixteenth through nineteenth century—the nascent expression of the modern world economy (Wallerstein, 1974).

Background

Economic historians have pointed to the early modern era or age of European expansion as the birthplace of the world economy (e.g., Stavrianos, 1981; Wallerstein, 1974, 1989; Wolf, 1982). This Eurocentric view has placed Asia at the periphery of the nascent global economy. Asia was perceived to be an area that had its own insular economic focus, which later was incorporated into this western juggernaut. Others, such as Bergesen (1995:201) and Frank (1995:173, 189), have challenged this view and argued for an Afro-Eurasian world economic system of 5,000-year duration. In this Asian-centered view of history, Europe is seen as the periphery. European states wanted to participate as equal players in the Asian core but were economically, militarily, and politically too weak to challenge the East through Eurasia or southern Asia. In order to overcome these deficiencies, contact was sought to the west. Europe's capture of the Americas was seen as a prelude to the elusive prize of Asia. There they transformed the social and natural environment into a facsimile of their homeland; literally, a New Europe was created in the New World when it became part of their Europeancentered economy (Skowronek, 1989). While the British, Dutch, French, Portuguese, and Spanish would come to establish colonial enclaves in South, Southeast, and East Asia, China remained aloof and closed to the Europeans for the next 350 years (1480s–1830s). Their contact was limited by the Chinese to the regulated exchange of luxury goods at specific ports—a situation that left Europe at the periphery of Asia.

By turning the telescope 180° and "seeing" early modern colonialism in this light, we are able to recognize and thereby measure continuity and change as the economic pendulum shifted from Asia to Europe and as capitalism came into being.

Understanding the Manifestations of the European-Centered World Economy

The complex societies of early modern Western Europe were set apart from their predecessors by their growing economic linkages beyond the political and cultural boundaries of the region. This nascent "European-centered world economy" was established first on the importation of luxury items bulk produce (Wallerstein, on later 1974:15-63). The basis of this "world economy" was the European "core" states' economic capture and/or political control of "peripheral" areas that produced these desired commodities. In this system, the inherently unequal economic relationships of producers and consumers that characterized these complex societies were forcefully extended, through colonialism and imperialism, to include a growing periphery of producers for the elite consumers of the core (Wallerstein, 1974:67-129, 301-344; Wolf, 1982:83–88, 101–157). From the point of view of Europe, the colonies existed primarily to produce commodities for European consumers, to facilitate their transport, or to defend the sources of the commodities (Steffen, 1980:xii-xviii). I have written at length about these issues within the Spanish colonial world and will liberally draw on this work (Skowronek, 1989, 2002) to situate this chapter.

This economy was inherently hierarchical, with producers at one end, elite consumers at the other, and various sorts of middlemen between. Thus, it is suggested that not all colonies or colonial areas occupied the same level in the hierarchy; that is, although all colonies might be part of the "periphery," there was hierarchy within the periphery. Here, the colonial hierarchy is defined in terms of the value and amount of commodities exported from each colonial area. Thus, those areas that

exported large volumes of valued commodities ranked highest in this hierarchy of the systems' periphery. In the case of Spain's colonial empire, this hierarchy is discernible between its far-flung colonies because of the different economic roles each played in the system.

Settlements in colonial areas may characterized by emphases on particular activities. Production activities such as mining, lumbering, plantations, ranching, and fur trading (Steffen, 1980:xiii–xv) were the high-profile, lucrative aspects of the colonial enterprise. These settlements were protected and supported by military, mission, and commercial activities (Lewis 1984:264-268) that characterized various settlements. The unequal economic relationships that characterized the core societies were accentuated in their colonial extensions. The "peripheral" colonies that produced goods for the markets of "core" consumers or were central to transport enjoyed a higher frequency of commercial contact with the motherland than did those whose role was more "protective." Thus, because the nascent world economy was based on mercantilism, colonies that produced desired commodities for the motherland attracted a constant stream of merchant vessels. Colonies that produced no exportable goods did not attract merchants, and outside contact was limited to the infrequent arrival of supply ships.

A cosmopolitan colonial area's position in the economic hierarchy of a colonial system was closely related to its function in the system. Here, the systemic function is defined in terms of the production of desired commodities. Colonies that produced revenues or profits in excess of the costs of supporting their associated governmental, religious, and military infrastructure are considered "productive" and, therefore, of greater value to the motherland. Those colonies whose returns failed to outweigh expenditures attracted fewer colonists. These enjoyed less contact with the mother country and are termed "protective," as their value to the motherland and, thus, their position in the colonial hierarchy of the system, was low. Colonies that produced revenues or profits in excess of the costs of supporting associated governmental, religious, and military infrastructure are considered "productive" and, therefore, of greater value to the motherland (Skowronek, 1989:205-206).

Even with variable economic contact, the focus of both "productive" and "protective" colonies was on the motherland. This tethered the colonies closely to the political and social demands of the motherland and created what Steffen (1980:xii-xiii) has called a "cosmopolitan frontier." Thus, even in these physically remote, peripheral settings, the view of the inhabitants was "cosmopolitan" and focused outward on the "core," or mother country. A hallmark of this outward view was the creation of societal and ecological "New Europe" (Crosby, 1986:146–149). By importing animals, plants, and other material aspects of the Old World, the colonists attempted to transform or standardize their new environment into a facsimile of their cosmopolitan ideal (Crosby, 1986:172). While this transformation was most successful in temperate areas, which were climatically more similar to Europe, the transformation of the tropical environment was successful enough to attract permanent settlers (Crosby, 1986:6, 134, 172-194). In Spanish America, this transformation is apparent in Foster's (1960) concept of "Conquest Culture," in which he notes a regional homogeneity in settlement plan, architecture, foodways, and other cultural traits.

In European cosmopolitan colonization, the economic position of any area plays an important role in the settlers' ability to alter the new setting into an acceptable replication of the motherland. This ability to create a New Europe can be accomplished by physically altering the environment of the area and/ or by importing material goods in a finished form directly from the Old World. Thus, those areas that produce more goods for the core enjoy greater contact with the motherland. They are better able to replicate "Europe" than are areas with less contact. Therefore, the ability of a cosmopolitan colonial area to superficially transform itself into a "New Europe" can be seen as a reflection of the success of the colony in the commercial system of the founding state.

The ability to create a "New Europe" or "New Spain" was related to the amount of commercial contact the colonies enjoyed with the mother country. Here, it was expected that the higher-valued colony would be better able to replicate the Old World. Furthermore, given the focus of this study on the European experience, it should be possible to identify the Old World antecedents for these

idealized "New Europes." The type of colony that developed and the colonial culture that evolved in these peripheral areas were the result of both economic contact with the motherland (external systemic concerns) and internal colonial constraints. The latter included the initial contact and subsequent European interactions with the environment and the aboriginal occupants of the area (Skowronek, 1989).

In the colonial world, settlement pattern is dictated by access to an economical means of communication and transportation to the motherland. Thus, coastal settlements or entrepôts require safe harbors and proximity to sea lanes, while interior settlements stand near exploitable exotica on convenient trails or navigable rivers. If settlement pattern in cosmopolitan colonies is dictated by access to an economical means of communication with the motherland, it would be reasonable to expect that a main street, or corridor, would develop from the entrepôt into the hinterlands.

Just as the settlement pattern of a colony was dictated by an economical means of internal transportation, so too was communication within the larger colonial system. No colony stood alone; each was linked by a combination of terrestrial and waterborne lines of trade and communication into a larger system. Water routes are particularly important in evaluating the development of any colonial area. In the colonial era, roads were at best abysmal affairs, constructed and traveled with great difficulty around such hostile impediments as mountains, deserts, and swamps. Even in the European core countries, the majority of commerce moved by water whenever possible.

In the development of the larger colonial system, sea lanes developed like roads given the available technology. They avoided such hostile, nearshore features as reefs and shoals, and followed the prevailing winds and currents—the routes of least resistance—to safe, deepwater harbors or colonial entrepôts at the heads of interior lines of communication. These sea lanes became de facto main streets of communication that afforded a safe and economically viable means of transportation and helped dictate which lands bordering these lanes would be exploited.

Given that cosmopolitan colonies were established to provide the motherland with goods and

services, it is reasonable to expect that "main streets" of communication would develop that linked the colonies to the motherland. The settlement pattern associated with cosmopolitan colonies is dictated by an economical means of transportation with the motherland. It is reasonable to expect that the colony's entrepôt nearest the main street of communication with the motherland would be the busiest port and, therefore, would have the most contact with the core.

Because communication within the colonial system and, ultimately with the European core, was crucial to the existence of peripheral colonies, the Spanish colonies of New Spain and the Pacific exhibited a similar settlement pattern that is focused on a main entrepôt or port. This settlement will be sited to facilitate communication with both the interior and the external "main street." Other, secondary settlements will be sited near desired commodities and be linked to the entrepôt by a convenient line of communication.

The "productive"/ "protective" economic model outlined above is useful for understanding how the larger systemic issues of maintaining a far-flung, noncontiguous empire affect colonial development. When these economic issues are viewed against the communication technology of the era, the economic remoteness of the Spanish Pacific and New Spain's northern frontier colonies is obvious. These colonial areas were clearly on the "protective" end of the colonization gradient.

The Context for Spanish Colonization of the Northwest Frontier of New Spain and The Spanish Pacific

The Northwest Frontier—California, Arizona, New Mexico, and Texas

In the 1530s, with the return of the Narvaez expedition castaways, the interior of the northwest frontier of New Spain began to be revealed. These reports, following on the heels of the successes of Cortez, Magellan, and the Pizarros, spurred another round of both sea- and land-based exploration for new "El Dorados." From Florida, Hernando de Soto's

column (1539–1543) marched westward into Texas. In the same period (1540–1541), the expedition of Francisco Vazquez de Coronado headed north from Mexico and crossed what we know today as Texas, New Mexico, Arizona, and possibly the southeastern corner of California. At the same time (1542), one of Cortez's trusted lieutenants, Juan Rodríguez Cabrillo, sailed the California coast in a vain search for the mythical Straits of Anian. The remnants of the three expeditions returned empty-handed save for accounts of temperate lands and a polyglot of both nomadic and sedentary indigenous peoples.

All of these aforementioned human and geographical "assets" were in ample supply in other areas of the rapidly increasing empire. As a result of these disappointing (i.e., vis-à-vis the presence of known sources of precious metals) findings, the entire region was primarily ignored, with the exception of some sea-based charting efforts of the California shore, for the next 50 years. In fact, the period of complete neglect was to last in Arizona to the opening years of the eighteenth century, in Texas until 1716, and in California until 1769. It was only among the settled, indigenous, agricultural villagedwellers of New Mexico and the Hopi mesas of what is now Arizona that a Spanish presence was seen in the late sixteenth and seventeenth centuries.

This colonial neglect is best given context when it is viewed against the three previously defined shaping factors: external systemic concerns, internal colonial constraints, and technological and geographical limitations. As history has demonstrated, the region would prove to contain vast deposits of copper, silver, and gold, but as I have noted for New Spain's northeastern borderlands (Skowronek, 1989), the Spaniards who participated in the *entra*das were neither geologists nor prospectors. If the indigenous people did not have precious metals, there was no "science" in a technological sense for discovering same. Geographically, the region was relatively dry, mountainous, temperate in climate, and had few year-round streams. The latter shortcoming added to its remoteness from the "mainstream" of communication. In other words, it contained little in the way of natural resources to recommend it for colonial investment.

Internal colonial constraints included the relatively thin, outside of the upper reaches of the Rio

Grande Valley, seminomadic populations that characterized the region. Spanish imperialism, like that of the Inka and Aztec, worked best when dealing with similar socially ranked, sedentary, agricultural societies that could be co-opted into the European social hierarchy. As in the northeastern borderlands of New Spain, the Spanish were drawn to the sedentary, agricultural chiefdoms for the majority of their colonial efforts (Hann, 1988). The most long-lasting colonial presence was among the Pueblos of the upper Rio Grande Valley. There, alliances were made and maintained against the chichimecs or cimarrones, groups we have come to know as the Apache, Navajo, Comanche, and others, which posed uncontrollable threats to both the Spanish and settled aboriginal ways of life. Thus, at the same time as Franciscan missionaries were being invited into the communities of the Mississippian chiefdoms of La Florida, the first missions, presidios, and colonial towns were established in what would become New Mexico (Kessell, 1987; Moorhead, 1975; Spicer, 1962). By 1680, New Mexico had some 2,800 colonists (Bannon, 1970:79), but beyond this there was no interest in the rest of the region.

It would be external systemic concerns that would spur the colonization of the areas of what are now Texas, Arizona, and California and turn them into a "protective" periphery of New Spain. This observation regarding the defensive nature of this region is nothing new, as generations of historians have clearly shown (e.g., Bannon, 1964, 1970; Weber, 1992). These systemic concerns stemmed from perceived threats by other European powers toward Spain's "productive" New World empire. In the sixteenth century, Spain destroyed and occupied France's nascent colony in what is now Florida because of its proximity to the route of the flota, the "main street" of communication from the "productive" heartland of New Spain (Skowronek, 1989). In the last third of the seventeenth century, France again panicked Spain when their colonies in the Illinois Country and Louisiana split the northeastern and northwestern borderlands of New Spain (Bannon, 1970:108–142). As a result of this French presence, a broad band of east Texas from the modern border with Louisiana to the area of Corpus Christi was occupied in the early eighteenth century by the Spanish, first with a string of

presidios and missions and later with settlements (Poyo and Hinojosa, 1991). A half century later, Alta California, and Arizona as a part of an overland route of communication, would similarly be occupied to forestall Russian expansion from the north and British expansion across the North American continent that ultimately might threaten the route of the Manila Galleons (Officer, 1987). At the same time as Spain was occupying California and Arizona, it gained New Orleans, Louisiana, and the western bank of the Mississippi as far north as St. Louis.

For the balance of the era of Spanish colonial control, the northwest borderlands of New Spain remained a periphery to the periphery. As a defensive march that served to protect the productive core of New Spain (Faulk and Faulk, 1988), the area enjoyed little contact with mainstream colonial culture and the Spanish homeland. Instead, a blend of colonial and indigenous culture developed on the fluid margins of the frontier there. The social order was based less on descent and more on economic prowess in the local community (Bustamente, 1991; Campa, 1979; Foote and Schackel, 1986; Ford, 1987; Frank, 1991; Jones, 1979; Weber, 1979). At the end of the Spanish regime and during the 25 years of Mexican control, areas such as California began to enjoy greater contact with the larger world. It is significant to note that this contact was not with Mexico. Rather, it was as a "Third World" producer of raw materials (hides, tallow, and furs) for nascent First World capitalists in the United States and Britain (Lightfoot, 2005).

The Spanish Philippines

The economic history of the Spanish Philippines can be divided into three distinct periods. First, an era I term the "Prelude" was a time of initial exploration and contact. This period lasted some 50 years, or from the arrival of Magellan in 1521 to the founding of Cebu in 1565, Manila in 1571, and Vigan in 1574 (Fig. 1). It is a gross injustice to decades of work of archaeologists, ethnographers, and historians to generalize about the cultural and natural environment the Spanish encountered in their sixteenth-century capture of the Philippines

(Fig. 2). Any in-depth study should include a survey of the vast literature penned by Filipino and non-Filipino researchers during the last century. These may be found in a number of journals, including *Philippine Studies* and the *Philippine Quarterly of Culture and Society*, and other publications (e.g., Beyer, 1949; Bourne, 1907; Casiño, 1982; de la Costa, 1961; Hutterer and MacDonald, 1982; Junker, 1999; Keesing, 1962; Solheim, 1964).

William Henry Scott (1994) provides a reasonable synopsis of life in the archipelago during the sixteenth century. He posits that 1–2 million people called the Philippines home when the Spanish arrived. Today 80 million people live in the archipelago. In the sixteenth century, the majority were sedentary farmers of rice, millet, taro, yams, bananas, and sago that also kept pigs and chickens. These were kin-based, ranked, or socially stratified societies organized as chiefdoms. Recent archaeological evidence suggests that this level of social complexity had been in existence for over a millennium when the Spanish arrived (Junker, 1999). As a result, there is evidence for centralized craft production and specialization. Warfare was endemic, and seaborne trade was far-flung. In the tenth century, during the Tang Dynasty, the earliest documented contact with China is recorded (Alip, 1959:49; Junker, 1990:178–179). By the sixteenth century, Chinese- and Thai-made porcelain plates were ubiquitous (Scott, 1994:66), and imported ceramics, copper gongs, beads, and other trade items were as important material status markers as were rice fields and livestock (Keesing, 1962:121). Direct evidence of this Asian overseas trade was discovered in 1985 off of Palawan in the central Philippines. Known as the Pandanan wreck, it dates to the late sixteenth century and carried a cargo of porcelains and porcelaneous stonewares, glass beads, copper-alloy gongs, and other metal trade goods (Goddio, 1988).

This epoch was followed by a 250-year period of barter and plunder when the Philippines served as a commercial outpost for the famed Manila Galleon trade. For 250 years, between 1573 and 1815 (Chaunu, 1960; Cushner, 1971:127–128; Legarda, 1955, 1967:3–6; Lyon, 1990:11, 37; Schurz, 1939; Tubangui et al., 1982:89), two Spanish merchant vessels made the 14-month-long round-trip passage from Manila to Acapulco on the western coast of Mexico (Moses, 1929:75). These ships bore the



Fig. 1 Fort San Pedro, Cebu City, Cebu, the Philippines (photograph by the author, 1995)

exotica of the Far East (Cushner, 1971:128, 187; Lyon, 1990:13–14). From the Philippines came cotton goods, copper, silver, and gold. The ships also carried abaca hemp (burlap and rope), dyewoods, hides, and coconut products (copra and shell). India and Ceylon supplied taffetas, pearls, diamonds, topazes, carved ivory, and cotton goods. The Spice Islands—later known as the Dutch East Indies and today as Indonesia—shipped cloves, cinnamon, pepper, camphor, gems, and some ceramics. Indochinese imports included tin, ivory, rubies, and sapphires. Additionally, from Japan came amber, cutlery, and furniture. We know, however, from tax and port records, that the lion's share of the goods on the galleon originated in China and were borne to Manila in Chinese ships (Chaunu, 1960:148-149). Items of silk, jade, sandalwood, ivory, copper, and iron, in addition to pearls and pottery, arrived in Chinese ships (Cushner, 1971:128; Lyon, 1990:14; Tubangui et al., 1982: 51-53). As early as the Sung Dynasty (950–1279 c.e.), and for half a millennium prior to the arrival of the Spanish, Chinese merchants trafficked in earthenware pots and jars, tin, copper and iron wares, and porcelain tablewares and jars. The archaeological record testifies to the volume of this trade, as massive quantities of imported porcelains and other trade commodities have been recovered from both burial and habitation contexts throughout the Philippines (e.g., Aga-Oglu, 1946, 1948; Junker, 1990:167). Under the Spanish, the volume of silks and porcelains increased (Guerrero and Quirino, 1977:1009; Legarda, 1967:3; Mudge, 1986:39; Tubangui et al., 1982:51). The galleons returned from Mexico laden with silver, books, lace, fans, and wine for the Spanish residents of the Philippines (Alip, 1959:53; Cushner, 1971:197; Legarda, 1967:3; Lyon, 1990:36). All told, between 1 and 2 million pesos in goods annually moved between the two colonies (Cushner, 1971:134, 136).

For all of its commerce, the Philippines were an economic liability for the Spanish (Cushner, 1971:129; Legarda, 1967:14–15, 20). Even though the islands had evidenced veins of precious ores and

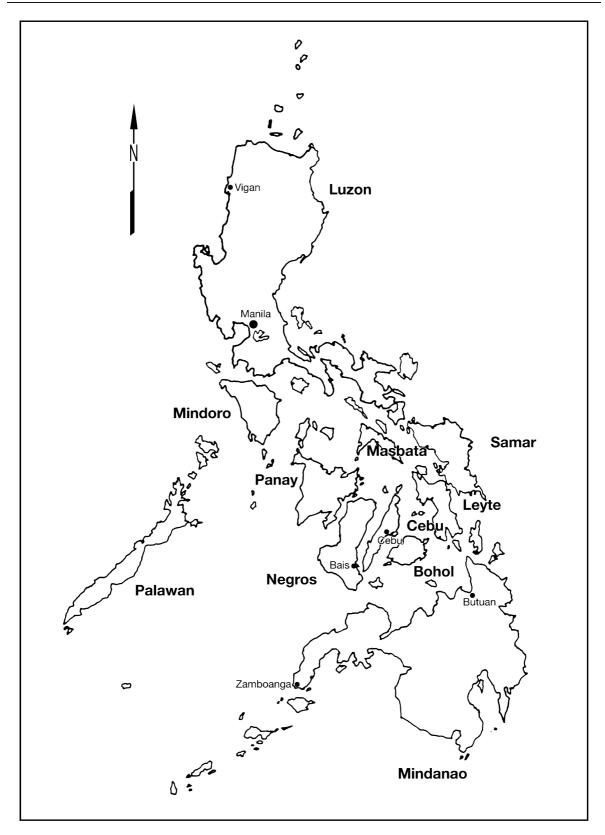


Fig. 2 Map of the Philippines

had an appropriate climate and soils for the establishment of plantations, its remote location placed it in the periphery. The colony itself was impoverished and received an operating subsidy or situado from Mexico-of which it was an autonomous dependency until 1821 (Bauzon, 1977:1037; Cushner, 1971:132; Moses, 1929:75; Phelan, 1967:13, 106, 154; Tubangui et al., 1982:48-50). That situado, plus the taxes collected in Manila and Acapulco on the cargoes of the galleon, went for the maintenance of the flota and the infrastructure of the Spanish colonial government and its representatives (Cushner, 1971:129; Tubangui et al., 1982:47). The reason for these economic shortcomings can be traced to the Manila Galleon and the position of the Philippines as the commercial middlemen for the Mexican-Chinese trade (Casiño, 1982:98). Great profits could be made in Manila brokering these exchanges without having to develop the hinterlands of the colony. Also, because plantations in the New World produced sugar, tobacco, cotton, and indigo, it was economically infeasible to compete with them for such bulk products. In the mid-nineteenth century, this would change with the advent of steam technology, the existence of the Suez Canal, and the growth of the global marketplace.

The market economy did not extend beyond Manila. In the hinterlands of the archipelago, subsistence agriculture was the norm until the last third of the eighteenth century—when the so-called Bourbon Reforms were enacted (Rafael, 1988:193). Prior to that, the Spanish presence in most of the Philippines was limited to Catholic missionaries from the Augustinian, Dominican, Franciscan, Jesuit, and Recollect Orders (e.g., de la Costa, 1961; Keesing, 1962) and a handful of soldiers at number of farflung presidios (e.g., Fenner, 1985; Schreurs, 1983; Spoehr, 1973). At that time, Spain sought to make each colonial area more self-sufficient (de Jesus, 1980:23, 25, 57, 131; Wallerstein, 1989:239). In the Philippines, that meant ending the 200-year-old Mexican subsidy and establishing a governmentregulated monopoly of tobacco, cotton, indigo, abaca, coffee, and sugar. Furthermore, the monopoly of the Manila Galleon was broken when the port of Manila began to be serviced by the Spanishowned Royal Philippine Company.

In the wake of the Napoleonic Wars, Spain struggled to reassert royal authority over its isolated New World colonies. Yet, one by one each gained independence, so that by 1827 only Cuba and Puerto Rico remained in the empire. The Philippines, with these and other scattered colonies in Africa and Micronesia, were the remnants of formerly mighty imperial Spain. At this time, the economic focus of each of these colonies was completely redirected from mercantilism and subsistence agriculture into a plantation export economy. Ports were opened to foreign vessels, and non-Spaniards were allowed to own land for the first time.

The last two-thirds of the nineteenth century was an era of commercial capitalism based on the export of plantation produce (Legarda, 1967:11). In the Philippines, 19 years after the last Manila Galleon sailed, the Royal Philippine Company was disbanded; in 1834, Manila was made a free port for trade. This opened the door and allowed non-Spanish Europeans to own land. Thus, beginning in 1834, the Philippines were transformed into a giant plantation that produced abaca, coffee, sugar, and tobacco for export. It is significant to note that it was only with this transformation that the mission communities were transformed into municipalities (Arcilla, 1971:48–50).

With this open-door policy, British- and American-based banks and insurance companies began to be established in Manila. These institutions in turn founded more plantations that shipped produce through the newly opened (1869) Suez Canal to a growing European market (Constantino, 1975:114–115; Corpuz, 1989:458–460; Trechuelo Spinola, 1978:1345–1349; Legarda, 1967:1–12; Tubangui et al., 1982:85–89). Descriptions of this nineteenth-century trade underscore Spain's shift from mercantilism into commercial capitalism. For example, in the Philippines as early as 1838, royal treasury officer Rafael Diaz Arenas (1979 [1838]:36) nonchalantly wrote of the presence of foreign traders: "All European merchandise carried in non-Spanish ships were to pay a duty of 14%." He went on to discuss their plantation produce and other raw-material exports and the wide variety of foreign imports brought into the Philippines by these individuals (Diaz Arenas (1979) [1838]:45–73)). What I find most interesting in his account is his specification of items imported by "Anglo-Americans," which included crystal ware and ceramics. By the 1880s, Chinese-owned

department stores in Manila dealt in "fine crystal and furniture" from Europe (Legarda, 1967:13). Britain and the United States were the numbers one and two non-Asian importers in the Philippines in the nineteenth century, while the Spanish were a poor third (Cushner, 1971:197; Legarda, 1967:11).

By the 1890s, Spanish political control was rapidly fading in the face of an active independence movement. In 1898, when the Spanish-American War was ignited, the 377-year Spanish presence in the Philippines was ended following a 3-hour-long naval engagement and an hour-long mock land battle. Rather than granting Philippine independence, the United States held the archipelago until July 4, 1946. It is important to note that much of the Spanish colonial architectural history of the Philippines was erased during the fierce fighting that accompanied the American recapture of the islands from Imperial Japan in 1944–1945 (Diaz-Trechuelo Spinola, 1978; Gatbonton, 1985).

Guam and the Marianas

The Micronesian islands of Guam and the Marianas first became known to Europeans when Ferdinand Magellan landed there on March 6, 1521, and claimed the archipelago for Spain. At that time he named the islands the *ladrones* (Spanish for thieves) because of the loss of some materials to the indigenous peoples. In 1565, the Marianas, like the Philippines, were made part of the vast Viceroyalty of New Spain that stretched from Florida to Manila and from Central America to Nootka Sound. Yet for nearly 150 years, until 1668, the islands were rarely visited other than by the Manila-bound sailors of the Manila Galleon and a handful of English and Dutch privateers who hoped to capture the riches of the area. Other than these occasional visitors who stopped to reprovision and refresh their water supplies, only a handful of westerners spent an extended period on the islands (Langdon, 1992:7–16). They included Gonzalo de Vigo on Guam (1521–1526), the shipwrecked (1568) survivors of the San Pablo, and a Franciscan friar and two soldiers in 1596. In 1601, Franciscan Father Juan Pobre de Zamora, and later two other Franciscans, established a mission on Rota that lasted for 2 years (Driver, 1993a:1–3; Reed, 1952:39-42).

When first encountered, the indigenous population of the region, known as the Chamorro, was estimated to number in the tens of thousands (Cunningham, 1992:53; Thompson, 1947:32–33). At that time, the Chamorro were a kin-based, socially ranked society (Thompson, 1947:49). On Guam alone, the population has been estimated at between 30,000 and 45,000 in some 180 settlements (Cunningham, 1992:53; Reed, 1952:23; Thompson, 1947:32–37). The Chamorro antecedent of Agaña, the modern capital, contained over 200 structures as late as 1668. Linguistically, the Chamorro spoke a language that originated from the root Malayo-Polynesian stock, which includes such languages as Bahasa Indonesian and Tagalog (Safford, 1903).

Chamorro subsistence was based on a combination of gardening, gathering, fishing, and some hunting. They cultivated yams, taro, breadfruit, coconuts, bananas, and rice, and gathered a number of shellfish and crustaceans, wild fruits, nuts, and bulbs. Fishing using hooks, gorges, and nets was both a shore and deepwater activity, with the latter being accomplished from large, 24–40-foot-long *proas*—outrigger canoes with a lateen sail woven from palm fronds (McGrath, 1993:36–49). For the hunting of birds and warfare, the Chamorro were armed with spears and slings (Reed, 1952:25–26).

Precontact material culture included ceramic jars and basket containers, pottery cooking vessels, and a variety of shell, bone, and stone tools. Gableroofed, frame-and-thatch structures were elevated on posts of wood or stone. The latter megaliths, known as *latte*, mark the structures of the elite (Cunningham, 1992:47–53; Reed, 1952:24, 26–29).

The archipelago leaves the twilight of protohistory in the late 1660s with the establishment of the first mission and fortification in Agaña (Degadillo et al., 1979:7–8) (Fig. 3). The Jesuit mission was headed by Father Diego Luis de San Vitores. It was he who was responsible for renaming the archipelago for Queen Mariana of Austria, wife of Felipe IV (m. 1649–1665) and regent for her son (1665–1676) Carlos II, who actively supported the missionary activities of the Society of Jesus (Driver, 1993b:5–12).

With the establishment of this mission and military presence, the formerly friendly Chamorro began to resist conversion and colonization. Nonetheless, in the 5 years following the landing of San

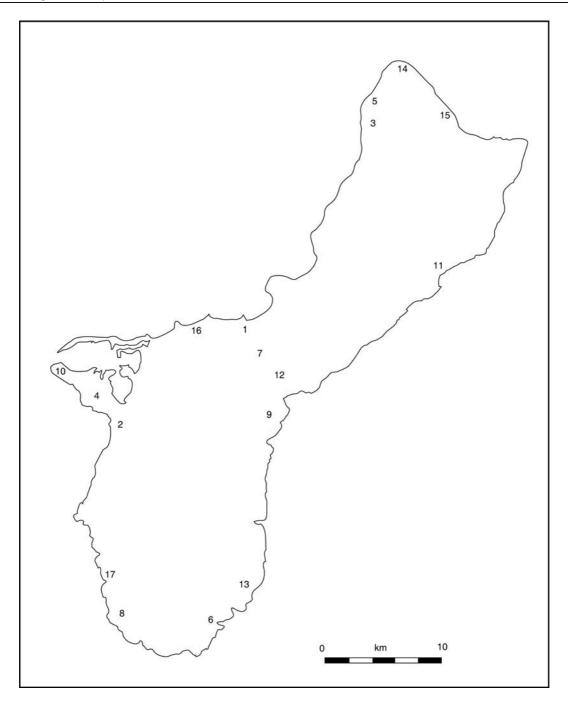


Fig. 3 Map of Guam with Spanish Mission sites (missions were under the Jesuits from 1672 to 1769 and were then replaced by Augustinian Recollects): (1) Agaña, 1668 – present; (2) Agat, 1680–1865; (3) Aryraan, 1675–1693; (4) Fuuna, 1673–1715; (5) Inapsan, 1680–1690; (6) Inarajan, 1680–1865; (7) Mapupun, 1681–1690; (8) Merizo, 1672–1865; (9) Nisihan, 1672–1690; (10) Orote, 1674–1690; (11) Pagat, 1672–1680; (12) Pago, 1680–1855; (13) Pigpug, 1672–1690; (14) Ritidian, 1675–1680; (15) Tarague, 1674–1690; (16) Tepungan, 1674–1680; (17) Umatac, 1680–1849

Vitores, six missions and a single fort were erected on Guam (see Fig. 3). The balance of the seventeenth century was marked by active resistance to

the Spanish, including warfare and revolts. Still, between 1675 and 1683, in the wake of the Chamorro rebellion, 11 new missions, a stone fort,

Santa Maria de Guadalupe, and a gun battery brought the Spanish to every corner of Guam (Degadillo et al., 1979:7–10; Driver and Brunal-Perry, 1994:11–12; Haynes and Wuerch, 1990) (see Fig. 3). These military actions, combined with a number of devastating typhoons and outbreaks of smallpox and other introduced diseases, decimated the population such that by the beginning of the eighteenth century there were fewer than 5,000 Chamorro left on Guam (Reed, 1952:43–52).

Over the next two centuries, much of traditional Chamorro language and culture was transformed through contact with Spanish-speaking civilians, priests, and soldiers from Spain, the New World, and the Philippines (Van Peenen, 1993:21–24). Additionally, large numbers of Filipinos and Caroline Islanders relocated to Guam and the Marianas (Barratt, 1989; Fritz, 1989:16; Reed, 1952:60). The transformation of the island from one which was to be pacified to one that was part of the Spanish colonial system is evidenced in the decline in the number of missions to only five after 1715 (Haynes and Wuerch, 1990). Similarly, the 12 fortifications and batteries that were erected in the eighteenth and nineteenth centuries were built to protect the island from invaders, not from internal insurrections (Degadillo et al., 1979:3; Driver and Brunal-Perry, 1994:12-17).

During these two centuries, Guam and the Marianas were drawn politically, ideologically, and economically into the larger Spanish colonial world. Existing Chamorro communities, and those which were created from the mission reducciones, were incorporated for administrative and tax-collecting purposes as pueblos and villas. As in New Spain and the Philippines, each municipality had a number of appointed and elected officials to carry out the wishes of the governor acting in the name of the Viceroy of New Spain, who lived in Mexico City, and the King of Spain. By the beginning of the nineteenth century, most civilians were wearing Filipinostyle, mestizo clothing and were active in the Catholic Church. At the same time, those who were part of municipal government were speaking Spanish on a regular basis (Thompson, 1947:48, 59, 62).

Economically, the islands stagnated, primarily raising enough crops and livestock to maintain themselves and to refresh the Manila-bound crews of the Manila Galleon after their long journey from

Acapulco (Safford, 1902:727; Schurz, 1939). Only after the loss of the New World did Spanish interest in their Pacific Ocean colonies increase. In this era of waning Spanish colonialism, the island of Tinian in the Marianas was pressed into service for cattle grazing (Carrano and Sanchez, 1964), a parish was reopened on the island of Rota in 1855, and an Augustinian mission was established on Saipan (Reed, 1952:60). It was in the last quarter of the nineteenth century, when steam-powered vessels and the opening of the Suez Canal first shrank the globe, that the Marianas produced its first export cash crop—copra from the coconut palm (Fritz, 1989:58–59). At the same time, Spain exercised its centuries-old claim to the Caroline Islands in 1885 when it established the pueblo of Kolonia on Pohn Pei (Ponape until 1989) to forestall Imperial German claims to the region (Carrano and Sanchez, 1964; Carrell, 1991:154–157).

The remoteness of the Marianas cannot be discounted when considering its history. Indeed, it must have been a lonely existence in the Marianas Islands when they received no situado and no news from Spain for a 6-year period between 1810 and 1816 (del Valle, 1991:10). The reality is that these islands lie some 2,400 km (1,500 miles) from Manila, 8,200 km (5,100 miles) from San Francisco, and 11,263 km (7,000 miles) from Acapulco. In the age of sail, a round-trip navigation from Acapulco to Manila, some 27,353 km (17,000 miles), took 14 months (Moses, 1929:75; Schurz, 1939; Smalley, 1995). With these figures, even the casual observer can begin to see how geography would affect how Spain's Pacific possessions figured in its empire. The harsh reality was that these were remote, insignificant dots on a distant, immense sea. While plantation produce might be grown in the Pacific, there was little reason to compete with New and Old World producers who were closer to European markets and had regular commercial contact with the Spanish motherland (Skowronek, 1997:33–50). Underscoring their remoteness is the fact that on June 20, 1898, Guam was taken by the United States, surprising the Spaniards, who had no knowledge that war had started 2 months earlier and that Manila had already been captured by Dewey on the first of May.

For the next 52 years, with the exception of a 2.5-year hiatus when the island was occupied by

Imperial Japan, Guam was administered by the U.S. Navy. The recapture of the island in 1944, following a devastating naval bombardment and heavy air strikes, almost entirely destroyed Agaña and the other civilian, military, and religious enclaves first established by the Spanish. A trust territory of the United States with a civilian government since 1950, the island is still largely controlled as a military reservation.

An Archaeological Overview of the Spanish Colonial Fringes

The Northwest Frontier

Of the three colonial areas of New Spain discussed in this chapter, it is the North American section that has received the majority of archaeological attention over the past century. Unlike the northeastern borderlands, where interest in the Spanish colonial period was fairly limited until the 1970s, the Hispanic legacy in the U.S. Southwest was never lost. Today, such organizations as the Southwestern Mission Research Center in Tucson, Arizona, and the California Mission Studies Association in Santa Clara, California, are dedicated solely to the study of the Spanish colonial and Mexican Republic era. Their regular publication of newsletters and annual conferences bring scholars together. A number of regional and international research journals have also published widely on this era. They include New Mexico Historical Quarterly, Masterkey, Pacific Coast Archaeological Society Quarterly, Boletín: Journal of the California Mission Studies Association, and Historical Archaeology (e.g., Farnsworth and Williams, 1992). In addition to these, individuals interested in this region today have a number of other excellent and easily obtained sources to consult. Most were published over the past decade in conjunction with the Columbian Quincentennial and the sesquicentennial of the Mexican-American War and should serve as a baseline for all researchers.

Kicking off the Quincentennial was the first of three Columbian Consequences volumes edited by David Hurst Thomas (1989), entitled *Archaeologi*cal and *Historical Perspectives on the Spanish Bor*derlands West. Derived from a session at the Society for American Archaeology annual meetings, it brought together a broad spectrum of the individuals who were then actively involved in northwest borderlands research from Texas to California. Shortly thereafter, Thomas (1991) served as the series editor for a monumental 27-volume compendium of over 400 classic, hard-to-find articles and other source materials documenting interactions between indigenous peoples and the Spanish across New Spain's northern borderlands. These Spanish Borderlands Sourcebooks include titles devoted to ethnology, documents, ethnohistory, and archaeology. No fewer than 12 of the volumes focus on the northern borderlands. It is worth noting that those dealing with archaeology are not overviews, rather they are compendiums of older, often-hard-to-find articles.

There is one bibliography for research in this broad area, The Archaeology of Spanish and Mexican Colonialism in the American Southwest, compiled by James E. Ayres and published by the Society for Historical Archaeology as the third number in the Guides to the Archaeological Literature of the Immigrant Experience in America series in 1995. Divided into three sections, for Texas, New Mexico, and California, this is the most comprehensive bibliography on this region, although it unfortunately lacks a section on Arizona. Each state-focused section has a brief historical overview and a review of significant projects focused on specific site types, such as protohistoric and contactperiod Native American rancherias, or Spanish American presidios, pueblos, missions, ranchos, and material-culture studies. For the most part, this is a descriptive, critical overview of past projects. In the section titled "The Archaeology of Spanish and Mexican Alta California," Barker et al. (1995:21) rightfully lament that the vast majority of work in California (and that could be extrapolated to the rest of the borderlands), is atheoretical in approach and conducted for reconstruction and restoration purposes. Often, reports are nonexistent or difficult to come by as part of the vast and largely unknown, "gray literature." Nonetheless, throughout the region, other descriptive reports and publications on missions, pueblos, presidios, and ranchos (e.g., Hylkema, 1995; Lightfoot, 2005; Shoup, 1995; Silliman, 2004; Skowronek, 1999; Skowronek and Thompson, 2006; Skowronek and Wizorek, 1997; Walter, 2007; Williams, 1992)

continue to add to our knowledge of the various manifestations of Hispanic lifeways on the northwestern corner of New Spain.

Evidence from Shipwrecks

A crucial part of understanding the importance of a colonial area to an imperial power is the area's proximity to a "main street" of communication from the colonies to the homeland. As a result, a colonial area that might otherwise be neglected because it possessed no "valued" exportable commodities still might attract imperial, colonial interest simply to deny it to competing powers—who might use it as a

staging point for attacks on the "main street." Certainly, La Florida was one such "protective" colonial area (Skowronek, 1989), as would be Texas and California later. In the case of the former, over 125 years before La Salle's abortive colonial venture on the Texas coast led to the loss of *La Belle* (Bruseth and Turner, 2005), a nautical "main street" hugging the shores of the Gulf of Mexico was established between Vera Cruz and Havana. The most famous loss in this route was the flota of 1554, off Padre Island (Fig. 4). Perhaps the best archaeologically excavated and documented (e.g., Arnold and Weddle, 1978; Olds, 1976; Skowronek, 1987) Spanish wrecks in the continental United States, the disaster has been commemorated in a wonderful permanent

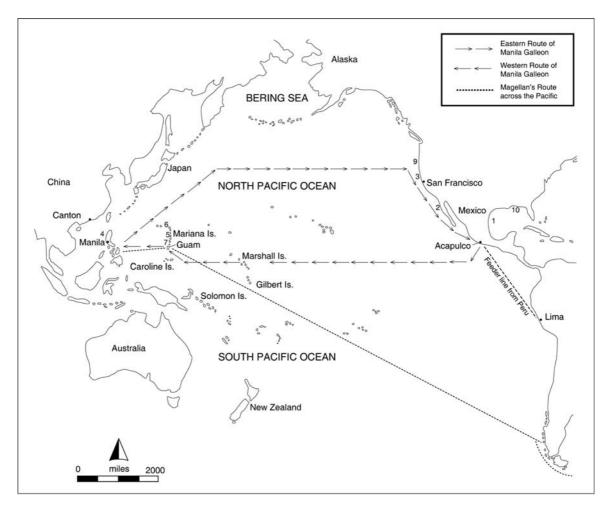


Fig. 4 Spanish shipwrecks mentioned in the text: (1) 1554 flota; (2) San Felipe, 1576; (3) San Agustín, 1595; (4) San Diego, 1600; (5) Santa Margarita, 1601; (6) Nuestra Señora de la Concepción,

1638; (7) Nuestra Señora del Pilar de Saragoza y Santiago, 1690; (8) Santo Cristo de Burgos, late seventeenth century; (9) San Francisco Xavier, 1705; (10) El Nuevo Constante, 1766

display at the Corpus Christi City Museum. The study of these vessels yielded heretofore-unknown details regarding sixteenth-century nautical architecture and technology, as well as on the makeup of cargoes in the first years of New World trade.

Two centuries later, another vessel, El Nuevo Constante (see Fig. 4) was lost in 1766 on the Louisiana coast. This ship, like the 1554 vessels, had sailed from Vera Cruz as part of the New Spain flota when it was lost in a hurricane. As with the earlier wrecks, it was laden with silver and gold coins and bullion, as well as such exotica as dyestuffs cochineal, anatto, and indigo. Exotic foodstuffs included vanilla and chocolate. There was one important difference in this vessel's cargo: a significant portion of it was made up of such bulk items as cheap Mexican-made ceramics and goat and cow hides (Pearson, 1981; Pearson and Hoffman, 1995). The hides are a significant first signal of the transformation of Latin America into a Third World producer of "raw" materials. Previous to the 1763 Treaty of Paris that ended the Seven Years War, hides had not figured as a "valued" export item on Spanish vessels (Skowronek, 1984, 1992). In the wake of this peace treaty, Great Britain won trading concessions in the Spanish New World. This was a trade that would come to be an exchange of English finished goods, such as cloth and ceramics, for the bulk commodities of the New World.

On the Pacific coast of northwestern New Spain, there are a number of known wreck sites representing the era when this vast ocean was Spain's pond. It is worth noting, however, that unlike the work in Texas, underwater archaeology in this region is far less developed due to sea conditions and other factors. Just a quarter of a century after Juan Cabrillo coasted California's foggy, rock-strewn edge in 1540, there began a 250-year-long odyssey known as the Manila Galleon trade. From 1565 to 1815, there was a Spanish trade monopoly between the ports of Acapulco in Mexico and Manila in the Philippines.

Annually, two ships made the 14-month-long round-trip carrying Asian exotica. The ships were constructed in the Philippines. European in style, they were built by Asian craftsmen, and largely crewed by Filipinos. The route followed by the galleons carried them north of Hawaii to the

Mendocino coastline of California. There, they turned south for Acapulco.

It was on the first voyage in 1565 that Father Andres Urdaneta passed California's fog-shrouded coast without making landfall. Not all Manila Galleons were so lucky. One of the first to be lost was the *San Felipe*. Built in Acapulco in 1573, it successfully crossed the Pacific Ocean during the summer of 1575. A year later, the ship sailed for Mexico with a cargo of porcelain and beeswax. It never arrived. In the late 1990s, Edward Von der Porten and a team of Mexican and U.S. researchers identified an archaeological site in Baja California whose associated artifacts suggest it is the remains of the *San Felipe* (Ashley et al., 2003; Von der Porten, 2005) (see Fig. 4).

In 1585, Archbishop Pedro Moya de Contreras ordered the returning vessels of the Manila Galleon to reconnoiter the California coast. After numerous delays in Asia, including the death of Capt. Francisco Gali, the expedition's leader, and the confiscation of the Spaniard's ships by the Portuguese, a *fragata* left Macao on July 12, 1587, for California. Under the command of Pedro de Unamuno, it had a Filipino crew from Luzon and a few soldiers and priests of Spanish descent. On October 18–20, they made a landing on Morro Bay. Following a clash with the resident Chumash that left one Filipino and one Spaniard dead, they sailed for Acapulco (Wagner, 1929:140–151).

Perhaps, for Californians, the most famous Manila Galleon of the hundreds of vessels that made this journey was one that did not complete it—the San Agustín (see Fig. 4). Like Unamuno's expedition, this galleon had been instructed to explore the coastline of California while sailing from Manila to Acapulco (Wagner, 1929: 156–163). Thought to have been lost in what is today called Point Reyes National Seashore in Drake's Bay, it foundered late in 1595. While most of the crew and its captain, Sebastian Rodriguez Cermaño, survived and completed their trip to Acapulco in small boats, the valuable cargo of Asian-made porcelains was lost. Over the centuries, fragments of blue-on-white porcelain have washed up onto the beach in the National Seashore. They are found in archaeological sites up and down the Mendocino coast that are associated with Miwok Indians. The wreck of the San Agustín has never

been found. It remains of intense interest to treasure hunters such as Robert Marx (Delgado and Haller, 1989:179–180; Delgado, 1997:356–358), as well as researchers from the USDI National Park Service and other institutions in the San Francisco Bay Area (e.g., Von der Porten, 1972; Shangraw and Von der Porten, 1981). Currently, Edward Von der Porten is spearheading a renewed effort to identify the location of the wreck and the associated survivors' camp.

In addition to the San Agustín, at least two other potential sites are mentioned in the literature. According to Rogers (1999:244), the Santo Cristo de Burgos was lost off the Kona coast in Hawaii in the late seventeenth century (see Fig. 4). No archaeological research is known to have been conducted. The other is the San Francisco Xavier, lost in 1705 (see Fig. 4). The ship is known to have been carrying a load of beeswax. For more than a century researchers have reported the presence of large blocks of beeswax on the Oregon coast south of Astoria (Clark, 1905:174; James Delgado, personal communication, 1999, 2002:224; Wayne Jensen, personal communication, 1999; Nehalem Valley Historical Society Treasure Committee, 1991; Smith, 1900:73-75; Stafford, 1925:24-41). The Tillamook County Pioneer Museum contains large pieces of beeswax and other artifacts collected from Manzanita Beach. As a result of these discoveries it has come to be known as the Beeswax Wreck. In 2006, a research design for the Beeswax Wreck Project was completed (Williams, 2006), and a study of the site was initiated in 2007.

Terrestrial Archaeology and Ethnohistory

Perhaps the area of research that has exploded the most in the past decade is an interdisciplinary approach using the skills of both the anthropologist and the historian. This no doubt is due in part to the high cost of archaeological excavations, but also may represent the first fruits of the ordering of archives and the compilation of documents begun during the Quincentennial. The result has been an explosion in the number of books and articles by anthropologists and historians focused on the Spanish colonized areas of the United States. Some of the publications have examined demographic change (e.g., Jackson

and Castillo, 1995; Kealhofer, 1996); most have provided new information on history (Lambert et al., 1998; Skowronek and Thompson, 2006) and activities (Schuetz-Miller, 1994) of the northern borderlands that may be testable in the archaeological record.

For example, Richard and Shirley Flint (1997, 2003) have compiled the most comprehensive investigations of the sixteenth-century route of Coronado. These important works provides information on the hard-to-define protohistoric period. Beyond simply placing a line on a map, the Flints' ongoing work allows us to place and name protohistoric peoples in a specific territory before the era of depopulation due to disease or the movement of peoples.

A number of new publications focus on the effects of the mission experience on indigenous peoples in the San Francisco Bay area. Rebecca Allen (1998) has studied how aboriginal culture responded to the mission experience. At Mission Santa Cruz, she found that the neophytes retained much of their traditional culture and only selectively added European material culture. They maintained a separate system of value from that of colonial newcomers. It was a value system based on prehistoric patterns, but incorporating introduced material culture. Allen found that the Cruzeños were marginalized by the military and civilian populace because they did not control the goods produced by their labor as part of the mission system. As a result, ethnic differences between Yokuts and Ohlone faded and were replaced by a generalized neophyte "Indian" identity based on an indigenous value system.

Skowronek (1998a) considered how the missions of the same region had been alternately romanticized and reviled for a century. In order to reconcile aspects of these two opposing views, an interdisciplinary approach was the backdrop for considering culture change and continuity in the Ohlone/Costanoan culture area. Archaeological and documentary records demonstrated that the Ohlone peoples of the San Francisco Bay area maintained tangible aspects of their precontact culture despite more than 60 years of missionary efforts to divorce the neophytes from their traditions.

One of the most powerful ethnohistories on the region was published in 1995. Written by Randall

Milliken, it discusses tribal disintegration resulting from congregation into Bay Area missions. And yet, he notes that Prehispanic marriage patterns continued after congregation. Milliken's (1995) observations on these aspects of family and kinship and social organization may not only be useful for identifying residual tribal patterns in the mission setting, but may, when combined with growing DNA information, lend insights into tribal territories in the precontact era.

Researchers from the University of California have come to the forefront in the application of anthropological theory in the study of colonial encounters in California. Kent Lightfoot (2005) has considered the interplay between Spain and Russia as played out between commercial interests, Franciscan missionaries, and indigenous peoples. Others have focused their attention on the role of native peoples in the rancho economy (Silliman, 2004) and the interplay of culture contact, gender, and ethnicity in the context of the Presidio of San Francisco (Voss, 2002, 2008).

On the eastern edge of the northern borderlands, in what today is Louisiana, Dr. George Avery of Northwestern State University of Louisiana has conducted outstanding research since 1995 at the site of Nuestra Señora del Pilar de los Adaes (Avery, 1995, 1996, 1997, 1998). Located among the Caddo in a region visited by de Soto, this eighteenth-century presidio is perhaps the best-reported project conducted in the past decade. Although these reports might be considered part of the previously mentioned "gray literature," they not only include a detailed technical report of the field procedures, but also illustrations and descriptions of the recovered artifacts, historical-period maps, and translations of pertinent documents. Avery has not simply raised the bar on standards for reporting, but will, when completed in the form of a monograph, have compiled one of the most detailed compendiums of archaeologically recovered eighteenth-century Spanish material culture in the northwestern borderlands.

Another researcher in the forefront of the archaeological study of the Spanish borderlands is Tamra Walter. Her work on one of the sites of Mission Espíritu Santo southeast of San Antonio has used information collected during excavation of the site to obtain a better sense of the daily lives of the people who called the mission home. She and

Avery represent a new generation of scholars studying the archaeology of Spanish Texas.

Material Culture

Beyond Avery's detailed reports, there has never been assembled a "catalog" of Spanish colonial material culture on the northwest borderlands that would complement Deagan's (1987) contribution for Florida and the Caribbean. Nonetheless, the ceramic industries of the region have been a topic of ongoing study. Anita Cohen-Williams and Jack Williams (2004; also Cohen-Williams, 1992) have led the way in the study of majolicas in Arizona and California, while Linda Longoria's (2007) work with porcelains recovered from Spanish colonial sites in Texas has pioneered a new way of interpreting the meaning of this artifact type in the study of the frontier. In areas such as New Mexico and Arizona, where there was a prehistoric potting tradition, researchers (e.g., Carrillo, 1997; Frank, 1991) have been able to convincingly demonstrate local craft specialization for the nascent Hispanic community, as well as for export to Chihuahua.

Ceramics were largely unknown outside of southern California before the arrival of the Spanish in 1769. Given that the vast majority of the indigenous inhabitants were semisedentary fishers, gatherers, and hunters, this is not surprising. Throughout what was Alta California, archaeologists have found fragments of hand-modeled and wheel-thrown, unglazed, low-fired earthenwares in Spanish- and Mexican-period missions, presidios, pueblos, and ranchos. Descriptive analyses of the vessels' forms suggest a wide range of functions including storage, preparation, presentation, and consumption. The acknowledged leader in the study of these earthenwares and their associated fabrication technology is Julia Costello. Over the past two decades she has studied kilns and vessels from Santa Barbara to San Francisco (e.g., Costello, 1985, 1997; Hoover and Costello, 1985).

The extraordinary similarities between earthenwares found hundreds of miles apart have been explained by some as the result of intracolonial trade. Others feel that a more parsimonious answer would be that most of these ceramics were produced and used locally. To answer this question and to

better understand colonial economics, other researchers (e.g., Skowronek et al., 2001, 2003, 2006, 2009) from Santa Clara University and the Smithsonian have begun studying the Spanish colonial and Mexican Republic ceramic industry in California.

To do this, neutron activation analysis (NAA) is being used to compositionally characterize the paste of these earthenwares from the length of California. The study has demonstrated that plain and glazed utilitarian pottery was locally made to fill local needs. While the vast majority of more specialized lead-glazed pottery was imported from at least one major production center in Mexico, the evidence for the production of glazed ceramics in California is now found at five different locales: Santa Clara, Santa Barbara, San Francisco, Capistrano, and Carmel. The discovery of both plain and lead-glazed ceramics with nonlocal compositional signatures may well provide us with evidence for localized exchange (Skowronek et al., 2003). Similar work has been conducted in Texas on collections from a number of mission sites (Carlson, 1994; Carlson and James, 1995; Neff and Glascock, 2002). Another location where ceramics were studied with this technique is a forgotten corner of the empire on what is now the coast of British Columbia. Spain established an outpost at Yuquot (1789–1795), better known as Nootka. Excavated in the 1960s by Parks Canada, the site yielded fragments of majolica tablewares, olive jars, and other lead-glazed earthenwares (Lueger, 1981:109–118). NAA of the latter category was conducted at Brookhaven National Laboratory in Upton, New York. It was postulated that the ceramics originated near Jalisco in western Mexico, but the data did not bear this out (Weigand et al., 1981:171-178). What is significant is that their findings were published and can be used by other researchers a quarter of a century later.

One of the most interesting artifact studies to come out of Manila Galleon cargo studies that can shed light on the birth of a single global economy centered on Europe is the work of Clarence Shagraw and Edward Von der Porten on Chinese porcelains. They have found that those porcelains made for the Manila Galleon or European trade bore design motifs specifically rendered to suit European market preferences (Shangraw and Von

der Porten, 1997). Their work, based on materials from known shipwrecks, can tightly date the styles to 25-year intervals.

The Spanish Philippines

The rich past of the Philippines has been studied by archaeologists for over a century. As with most of the global archaeological endeavors of the past century, the majority of the work has focused on the precolonial era. From an initial desire to create museum displays, there has developed from this work an excellent understanding of Philippine culture history, material culture typologies, and culture process from the Pleistocene through the sixteenth century (e.g., Beyer, 1949; Dizon, 1994a; Jocano, 1975).

Nearly 400 years of Spanish colonialism remained largely unstudied, except for incidental discoveries and a single project in Zamboanga (e.g., Beyer, 1946; Guthe, 1927, 1929; Spoehr, 1973), until 1979. This is understandable when one considers that the Spanish legacy was still very much a part of the life of the Philippines into the seventh decade of the twentieth century. Not only was Spanish colonialism part of the living memories of many individuals, but as late as the 1980s man-Spanish-language training prominent place of Roman Catholicism kept the era alive. Nonetheless, many of the tangible architectural remnants of the Spanish colonial period had been erased from Metropolitan Manila and other locales due to neglect, urban renewal, and the ravages of World War II (Gatbonton, 1985; Zialcita and Tinio, 1980) (Figs. 5-7). This nostalgia for the past was given focus in 1979 when a Filipino Presidential Decree (P.D. 1616) created the Intramuros Administration to restore the walls and rehabilitate the inner city of Manila.

The Anthropology Division of the Philippine National Museum provided archaeological expertise for work in the National Capital Region. From 1979 through 1988, 16 projects were conducted in Intramuros on parts of the fortifications (Fig. 8), the site of the *ayuntamiento*, the church of San Ignacío, and Plaza San Luís (Archaeological



Fig. 5 Ruins of Fort Santiago, Manila (photograph by the author, 1995)

Specimen Inventory Record, Archaeology Division, Philippine National Museum). Much of this early work was highly descriptive and focused on comparisons between the archaeological and documentary record as regards the architecture of the sites investigated (e.g., Accion, 1979, 1982; Accion et al., 1982; Bautista, 1985; Dizon, 1980, 1994b; Gatbonton, 1985; Reyes, 1981).

In 1988, the Archaeology Division of the Philippine National Museum was established with Wilfredo Ronquillo as its chief and Eusebio Dizon as assistant curator and head of the underwater archaeology section. During the first 6 years of its existence, 22 projects were undertaken by this agency on historical-period terrestrial and shipwreck sites from the Spanish period (Dizon, 1994a:200–203, 208–210; Ronquillo, 1990:21–24). Terrestrial investigations have continued in Intramuros and other sites in Metro Manila (e.g., Bautista, 1993, 1994; Bautista and de la Torre, 1992a, 1992b, 1994; de la Torre, 1993a; Orogo, 1993a, 1993b; Orogo and Alegre, 1994).

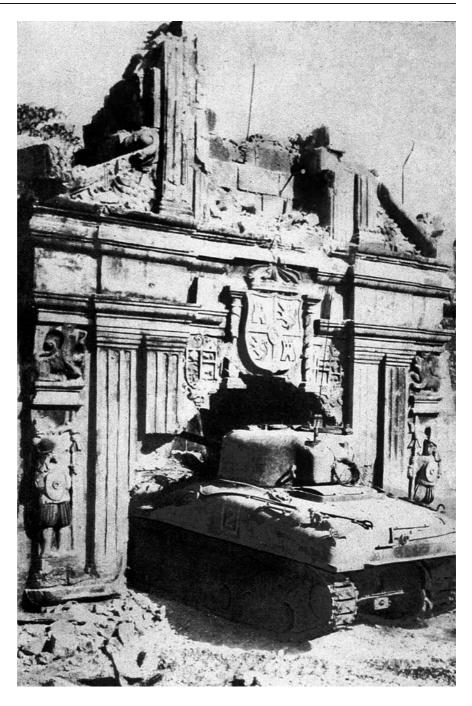
In this same period, the first archaeological research on sites dating from the Spanish colonial

period outside of Manila was undertaken by the Archaeology Division of the Philippine National Museum. This work was conducted in the south of the country on Camiguin Island, off the north shore of Mindanao (Bautista, 1993), at Tukuran Zamboanga del Sur on the west on Mindanao (Bautista and Penalosa, 1994; Bayaca et al., 1994), and on Mindanao proper (Bautista et al., 1994; de la Torre, 1994). Other than these projects, the only work on topics relating to the Spanish colonial period has been funded through the National Endowment for the Humanities and the Thomas Terry Research Fund at Santa Clara University (Skowronek, 1997, 1998b, 2002). This work has focused on the material manifestations of the Spanish Philippines in the larger context of the Spanish colonial world.

Evidence from Shipwrecks

Underwater research in the Philippines has been very prominent since the early 1980s (Dizon, 1994a:208–210; Ronquillo, 1990:21–24). During

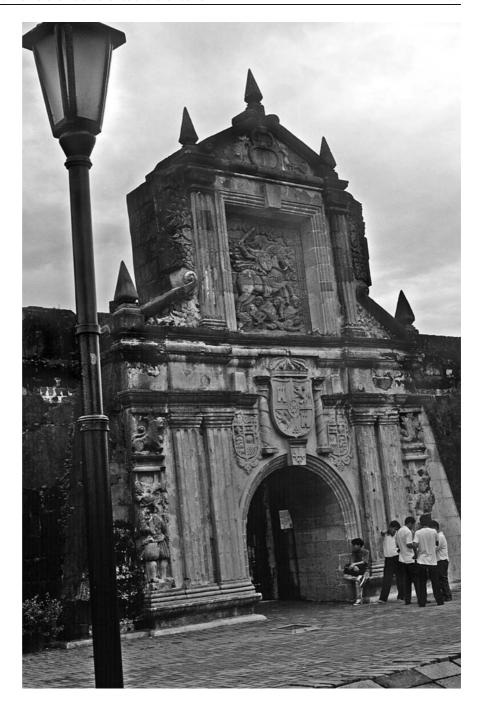
Fig. 6 Gate to Fort Santiago, Manila, in 1945 (Courtesy U.S. Army Signal Corps)



the last two decades, a number of vessels of Spanish colonial origin and others have been studied, usually in joint ventures with for-profit salvors. Although these collaborations have at times been problematic, under the leadership of Dr. Eusebio Dizon the Underwater Archaeology Section at the

Philippine National Museum has gained public prominence with the opening of a "Maritime Gallery" at the National Museum in Manila that showcases the history of maritime technology and culture in the Philippines. Three Spanish colonial wreck sites have been studied. *Nuestra Señora de la Vida*, lost

Fig. 7 Gate to Fort Santiago, Manila (photograph by the author, 1995)



off of Isla Verde in 1620 (Abinion, 1985; World Wide First, 1985); the *San José*, lost on July 3, 1694, off of Lubang Island (World Wide First, 1986); and the *San Diego*. The first two have yielded some architectural remains, ordnance, and some fragments of Chinese export porcelain.

The most famous and best-documented vessel yet examined is the *San Diego* (see Fig. 4). It foundered in 164 feet (50 m) of water off Batangas and just outside Manila Bay following an engagement with a Dutch vessel on December 14, 1600. Beginning in 1991 and continuing through 1993, the *San Diego*



Fig. 8 Restored fortifications of Intramuros with modern Manila in the background (photograph by the author, 1995)

was discovered, excavated, and reburied by World Wide First and the Philippine National Museum. Its great depth protected this Manila Galleon from casual sport divers and treasure salvors, as well as from mechanical dispersion from ocean swells. As a result, the remains of the ship—its stores, accoutrements, and cargo—were laid out as it sank in a 3-m-tall mound of debris. It has been the subject of profusely illustrated poplar books (Desroches et al., 1996), excellent technical reports (Valdes, 1993), and detailed artifact studies (Alba, 1993; de la Torre, 1993b) by researchers from the National Museum and others.

Ethnohistory and Ethnohistoric Documentation

Ethnoarchaeology is based on a combination of oral histories, documentary history, ethnography, and archaeological investigation. The findings of these projects could be used as explanatory models for human behavior whether in the Philippines or California. In the Philippines, there are a number of

excellent recent projects that have provided terrific insights into cultural continuity and change.

Professor Fernando Zialcita of Ateneo de Manila University and his colleague Martin Tinio (1980) conducted a detailed examination of Filipino housing from the beginning of the nineteenth century through the 1930s. They trace how the indigenous bahay kubo was transformed—first with the Antillian styles of the Spanish, and later in the nineteenth century with the Victorian styles of foreign expatriots. One of the strongest messages that is brought out in this study is that while the facades of the structures and their material accourrements may change, the interior division of space and the activities conducted therein remained distinctly Asian (Skowronek, 1998b). Those wishing to visually experience the Spanish colonial Philippines should visit the city of Vigan on Luzon Island (Figs. 9-11). Founded in the late sixteenth century, it, unlike Manila, survived the ravages of World War II and played a central role in Zialcita and Tinio's work.

The largest ethnoarchaeological project was conducted by the University of Arizona among the

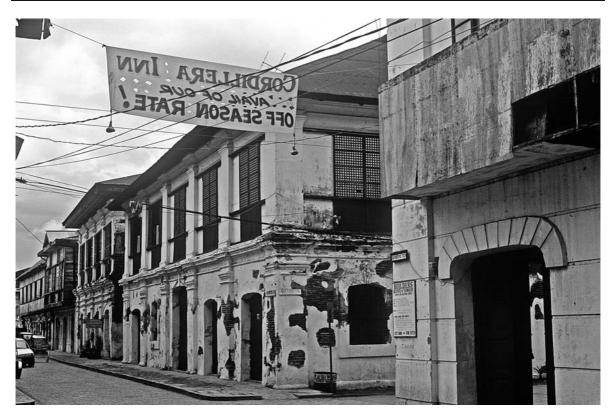


Fig. 9 Historic Spanish colonial streetscape in Vigan (photograph by the author, 1995)

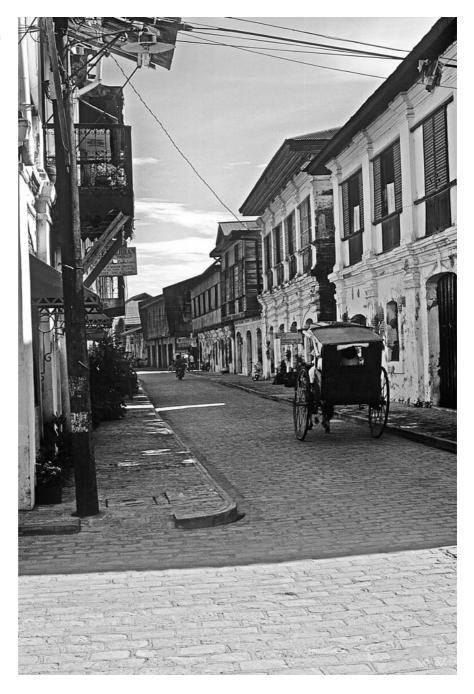
Kalinga (Longacre and Skibo, 1994). Based on 20 years of research among the pottery-making Kalinga of Luzon, in the northern Philippines, it presents at several scales—the pot, the household, the community, and the region—studies on pottery production, the use life of pottery, breakage patterns, form and function, and the regional exchange of ceramics. In this study, the team explored how human behavior and material-culture variability are linked. Ethnoarchaeological projects can identify and measure these linkages in ways that can then be tested in purely archaeological contexts. The notable goal of this project is admirably achieved and should provide much-needed insights into continuity and change in earthenware traditions in societies that are on the cusp of the early modern industrializing world (Skowronek, 1998c:100–103).

Guam and Micronesia

In the century following the capture of the Spanish Marianas by the United States, most archaeological work has focused on prehistoric Chamorro habitation and burial sites (e.g., Thompson, 1932). U.S. National Park Service Regional Archeologist Erik Reed (1952:94) lamented that "Only comparatively little has remained from the 230 years of Spanish occupation, between the normal ravages of time and vegetation and the effects of typhoons and earthquakes, and the destruction of Agaña in July 1944 and other activities connected with the late war." Reed's survey of the island mentions the ruins of the Spanish-period Torres house in Agaña (see Fig. 3); a stone staircase on Orote Point; a church, convent, and three fortifications in Umatac (for the location of the mission, see Fig. 3); and three stone bridges still standing on the island (Reed, 1952:95, 97, 99–102). A quarter of a century later, in 1976, only nine sites with standing architecture dating from the Spanish period were listed in the Guidebook to the Architecture of Guam (Ruth et al., 1990:21-32).

Clearly, many of the sites were damaged or destroyed as a result of military actions associated with the recapture of the island and in the subsequent development of the territory as a U.S. base for naval

Fig. 10 Historic Spanish colonial streetscape in Vigan (photograph by the author, 1995)



and other military activities. Archaeologists who worked at Orote Point in 1978 mention the presence of bomb craters (McCoy et al., 1978:4–5) near Fort Santiago and a number of associated Spanish-period features. Similarly, excavations off of the Plaza España in downtown Agaña noted 6-foot-deep

craters caused by the explosions of bombs and shells (Welch et al., 1992).

For all of the destruction wrought by World War II and the subsequent cleanup and development activities of the twentieth century, archaeological investigations of Spanish colonial sites are proving



Fig. 11 Vigan's cathedral (photograph by the author, 1995)

fruitful. The leading agencies in these endeavors are the Micronesian Area Research Center and the U.S. National Park Service. In Agaña during 1983–1984, the Micronesian Area Research Center at the University of Guam undertook the archaeological investigation of Guam's pre-World War II Government House, Spain's Governor's Palace. These excavations revealed evidence of life on the edge of the eighteenth- and nineteenth-century Spanish colonial world. Ladrillos (bricks); tejas (roofing tiles); and wrought, cut, and wire nails represented aspects of the construction of the building. Glass containers similarly represented a cross section of technological change in these nascent years of the Industrial Revolution, as they include everything from "olive green" blown wine bottles to threepiece-molded containers with hand-finished lips. Most revealing of this lifeway is the range of ceramic artifacts. They include majolicas and burnished earthenwares from Puebla, Tonalá, and Guadalajara in Mexico, English-made refined earthenwares, European- and American-made stonewares, and a

variety of Asian-made porcelains (Schuetz, 1986:105–119). Perhaps as interesting as these obviously imported ceramic vessels was the high incidence of locally made earthenwares in all of the deposits.

A few steps from the Governor's Palace on the Plaza de España, another excavation has recently contributed to our knowledge of the Spanish colonial presence on Guam. Conducted by the International Archaeological Research Institute, Inc., behind the Catholic cathedral that stands on the old colonial plaza, this project has revealed intact, nineteenth-century deposits of artifacts, ecofacts, and architectural features. Faunal dietary evidence included the remains of cattle, pigs, goats, deer, chicken, and fish. Ceramic artifacts include Spanish empire-made majolica, English-made refined earthenwares. Scottish- and American-made stoneware bottles, Chinese Canton-made blue-and-white porcelains, and Japanese porcelains (Welch et al., 1992). The majority of these materials date from the mid-nineteenth century, ca. 1840–1870.

Although little subsurface excavation was conducted on this eighteenth- and nineteenth-century Spanish site, intact prehistoric features suggest that an intact historical-period Spanish component may still be preserved. Recovered artifacts all date to after 1785. This information is revealing because it was in that year that the Spanish opened up Manila as a free port to traders of all nationalities. The comparison of nineteenth-century Spanish colonial sites will help us understand how colonialism radically changed after the beginning of the age of commercial capitalism.

Evidence from Shipwrecks

The submerged cultural resources of the Marianas began to receive their share of archaeological attention in the last two decades of the twentieth century. The most comprehensive survey of these resources was conducted by the U.S. National Park Service (Carrell, 1991). The 600-page volume reporting on this work presents archival information on maritime commerce and losses from the sixteenth through nineteenth centuries. Archaeologically, however, the discussion focuses on the wreckage of ships and aircraft from the World Wars I and II. Nonetheless, there has been archaeological work conducted on three Manila Galleons, Santa Margarita, Nuestra Señora de la Concepción, and Nuestra Señora del Pilar de Saragoza y Santiago (see Fig. 4). The work on these shipwrecks was initiated by commercial salvors, but in every case the projects and their methods were overseen by local government agencies and, as such, have yielded excellent information on these precious resources.

The Santa Margarita left the Philippines for Mexico on July 13, 1600, with 300 passengers on board. Less than 2 weeks after it cleared Manila Bay, it was struck by a typhoon and heavily damaged, losing topmasts, opening seams, and damaging its rudder. Weathering that storm, the vessel was patched together and continued sailing eastward. For the next 5 months, the vessel encountered storm after storm. Starvation and disease decimated the crew and passengers, until it was decided to turn back to the Philippines. The ill-fated Santa Margarita limped westward and anchored off of Rota in 1601 (see Fig. 4). There,

the local Chamorro populace was asked for food. When the Chamorro saw the weakened condition of the 40 survivors they began to strip the vessel of its fittings and remaining cargo. The survivors were picked up the following year by another Manila-bound galleon. IOTA Partners of Bellevue, Washington, initiated work in the vicinity of the wreck site. Archaeologists who have worked on this project include Margaret Rule, and most recently Eusebio Dizon and Jinky Smalley Gardner. The remains of the Santa Margarita have not been located. Nonetheless, IOTA's report to the Commonwealth of the Northern Mariana Islands (IOTA Partners, 1996:16-25) notes that the wreck site contained Chinese-made blue-on-white porcelains and Swatow porcelaneous stonewares, as well as a number of fragments of New World-made tinglazed earthenwares. Also recovered were a number of glass beads, iron fasteners, brass tacks, and Chamorro-made earthenware fragments. Although it might be tempting to attribute the latter as evidence of the initial succor afforded to the survivors by the Chamorro, a more parsimonious interpretation might be that all of the artifacts thus far identified are from a survivor camp or indigenous village that is eroding into the sea.

Lost in 1638 off of Saipan, the *Nuestra Señora de* la Concepción is the most completely excavated and reported Spanish colonial-era wreck site in Oceania (see Fig. 4). As with the Santa Margarita, the vessel sheltered hundreds of passengers until its loss during a September storm on Saipan's surrounding reef. Only a few dozen people survived (Mathers and Shaw, 1993:33). In the years after its loss, the wreck was partially salvaged by the local Chamorro populace and Spanish salvors. More recently, it was excavated in 1987 and 1988. This project, featured in National Geographic (Mathers, 1990:39-52), demonstrated that the remains of the Mexicobound vessel still bore an incredible array of gold filigree jewelry and personal accoutrements, iron ship fittings, glass beads, Chinese-made porcelain tablewares, and Asian-made stoneware storage vessels. Many of the storage vessels bore shippers' marks. It is interesting to note that of the 156 intact storage jars recovered only one was of Europeanmade earthenware, the so-called "ubiquitous" olive jar, known throughout the Americas (Mathers et al., 1990:443-444).

Finally, there is the wreck of *Nuestra Señora del Pilar de Saragoza y Santiago*, lost in 1690 off Agaña, Guam (see Fig. 4). The work on this vessel was initiated by a private group of investigators from Australia with laboratory support from the University of Guam. A monthly report by past project archaeologist R. Duncan Mathewson III (1992) and a 1999 personal communication from project archaeologist Jinky Smalley Gardner indicate that while no organic structural remains had been identified, iron fasteners, silver coins, and three claws from Mexican black bears have been recovered. Significantly, the wreck site has also yielded hundreds of fragments of earthenware storage vessels—olive jars.

Concluding Remarks and Future Directions

In the two short decades since the first concerted effort at historical archaeology by the Philippine National Museum, a descriptive baseline of the Spanish colonial era has begun to emerge. Although the vast majority of this work has been to support the reconstruction of Intramuros in downtown Manila, the work in Mindanao has the promise to reveal more about cultural continuity and change during the Spanish regime. Two other locations have the promise of shedding light on the Spanish Philippines. Vigan, on Luzon, has the potential of becoming another Colonial Williamsburg. Unlike Manila and Cebu, which were badly damaged during World War II, it could become a destination for Filipinos and other nationals for experiencing firsthand the Spanish era and could be for archaeologists a wonderful locale for studying the colonial experience over a four-century period. Another important site, one that might be seen as the Pompeii of Asia, is Cagsaua in Albay Province on the southeastern corner of Luzon. This eighteenth-century community was buried under volcanic ash in 1814. Today it is preserved as a national park. Archaeologists should find a time capsule of life in the era of Latin American independence. Those planning to investigate this site should work through the Institute of Bikol History and Culture housed at the Ateneo de Naga University in nearby Naga City, as they are actively involved in regional research.

Measuring the rate of cultural continuity and change is one of the major contributions archaeology makes to cultural anthropology. These recent projects have components that date from the sixteenth through late nineteenth century, and include artifacts that are indicative of colonial global trade networks and their acceptance into the indigenous status system. For example, a seventeenth-century burial site in Surigao del Norte on Mindanao (Bautista et al., 1994; de la Torre, 1994) contained grave goods of alleged Dutch origin. Given the proximity of the trading center of Batavia (Jakarta) on Java in the Netherlands East Indies, this discovery is not anomalous, but lends itself to comparisons with similar materials from similar contexts in seventeenth-century New York, New Jersey, and Pennsylvania. What materials made in the Netherlands were part of the trader's kit? How did these materials arrive in Mindanao, and did they displace locally produced items of similar function?

Considering the impact of Spanish colonialism should go beyond restorations and descriptions of Spanish colonial building. One of the most promising studies might focus on the collections made by Carl Guthe (1927, 1929) from over 500 burial sites between 1921 and 1924. As Dizon (1994a:197, 201–202) notes, it was this collection, housed at the University of Michigan, that has fueled four generations of Philippines research from that institution (e.g., Aga-Oglu, 1946, 1948). What is most important is that a portion of the graves date to the Spanish period and contain American-, English-, Dutch-, and Spanish-made ceramics from the eighteenth and nineteenth centuries (Baccus, 1989). Their presence begs the question regarding what Asian-made materials they replaced and why.

Similarly, there is terrific potential for exploring the effects of the missionization process. When it came to missionizing the archipelago, it was akin to a gold rush. Often a single island or region would receive Augustinian, Franciscan, and Jesuit missionaries. Did the differing world views of the competing orders result in tangible differences among the neophytes in their subsistence regimen, housing, or public structures?

There is a huge need for more ethnoarchaeology, especially as traditional craft manufacture disappears

as the Philippines becomes one of the economic tigers of Asia. One of the nicest studies of blacksmithing was conducted 5 km southeast of Cebu City in Barangay Basak-Pardo. There, 12 shops forged knives, *bolos* (machetes), butcher knives, horseshoes, and plowshares. These shops have been in operation since the 1890s, but tradition has it that this method of manufacture is of an antiquity that predates the Spanish arrival. The authors (de la Torre and Tubalado 1990) feel that the technology being used is pre-Spanish in style. Overall, theirs is a good report on the ethnoarchaeology of blacksmithing that merits a follow up to provide a definitive answer.

Ethnohistory

A 5-year voyage of scientific inquiry (June 1789) through September 1794) carried Captain Alejandro Malaspina and his crew of naturalists, hydrographers, ethnographers, and artist-illustrators around the globe to the corners of Spain's far-flung colonial empire. In addition to visiting ports the length of South America and Mesoamerica, the navigator in his two ships—the Descubierta and the Atrevidatraveled as far north as Nootka, making a stop at Monterey in Alta California. His voyage continued across the Pacific to Guam and the Philippines before returning to Iberia. While some of the expedition's illustrations and observations have been published (e.g., Cutter, 1990; Driver, 1990; Madulid, 1987), the complete report of the circumnavigation has only been recently published in Spanish through the Museo Naval in Madrid (Higueras Rodríguez, 1985, 1987). Similarly, Otto von Kotzebue, captain of the Russian ship Rurik, is famous in California for his descriptions of the Franciscan missions of the San Francisco Bay region. A supercargo on his vessel was the illustrator Louis Choris. As part of the same cruise that carried them to California, they also visited Guam in November 1817 (Carrano and Sanchez, 1964:127–133; Choris, 1822).

Shipwrecks

The fabled Manila Galleons have received attention because of the exotic cargoes they carried from Asia to the Americas (e.g., Lyon, 1990; Mathers and Shaw, 1993; Schurz, 1939), but once we get beyond these exotica what can they tell us about changing market preference and colonial economics Galvin, 1964; Fournier-García, 1997)? Dr. Peter Grave of the University of New England in Australia and his students have used instrumental NAA to study Asian-made stoneware storage containers recovered from Manila Galleon wreck sites. As a result of these investigations, new insights regarding production and exchange in the interior of Southeast Asia during a relatively unknown protohistoric era have been revealed. Perhaps others will undertake a comparative study of jewelry from the Acapulco-bound vessels with those of the New Spain flota of 1622, the famed (or infamous) Atocha and Santa Margarita. Such studies will provide new insights to students of art history and costuming on Asian and Latin American influences in personal adornment in the seventeenth century and beyond.

Comparative, Systemic, Diachronic Study

This chapter began with a lengthy discussion of how geographical areas come to be incorporated into colonial systems. It was suggested that a combination of geographical, technological, and internal sociocultural constraints with larger external systemic concerns led to the creation of "productive" versus "protective" colonial areas. As anthropologists, we are charged with not simply describing our observations, but also explaining them. In fact, we are seeking to understand the "ethnogenesis" of the Spanish-speaking world. To be able to meet this task, we must understand the forces that shaped the colonial experience. That means a view that is not simply based on missions or presidios (e.g., Bense, 2004; Graham, 1998; Williams, 1992), but all manifestations of colonial life—from protohistoric, indigenous villages to shipwrecks, ranchos, and colonial cities. A few researchers (e.g., Hoover, 1992; Majewski and Ayres, 1997; Wade, 2008) have called for such a systemic approach. Such an approach cannot, however, focus on a colonial region as a closed entity. It must be contextualized through comparative synchronic and diachronic research on other, comparable regions. This clearly is not a new idea, as James Deetz (1991:1–9) advocated the international comparative approach that has been so influential among his students and others in South Africa, Australia, and Ireland. The model presented in this chapter may well be useful for such comparisons in the Spanish colonial world.

In conclusion, it is important to note that the Philippines, Guam, and at least Alta California in the North American borderlands all began to change in the 1830s. What were largely ecclesiastical, insular frontiers with production aimed toward meeting local or regional needs were transformed into secular, wage-based plantation economies intended for the nascent Atlantic/Western European-centered global economy. Their produce—whether hides, hemp, or copra—was meant for the burgeoning capitalist, industrializing economies of the United States and Britain. Historical archaeologists as social scientists have the ability through the material and documentary record to measure how changing economies changed the lives of people and in turn created today's global economy. Many would point out that this economy is homogenizing global culture. It is our job to decipher how the first aspects of this homogenization took place in the early modern era.

Acknowledgments I wish to thank Dr. Teresita Majewski for her editorial comments and leadership in the creation of this book, and, in the Philippines, Dr. Henry Totanes of Ateneo de Manila and Ateneo de Naga Universities, and Mr. Wilfredo Ronquillo and Dr. Eusebio Dizon of the Philippine National Museum in Manila, for their support and assistance with reference materials. Information on Guam was graciously supplied by Dr. Roger Kelly of the Western Regional Office of the U.S. National Park Service and by Mardith Schuetz-Miller. Also, my colleague Dr. George Westermark of Santa Clara University provided a number of references on Spain in the Pacific. Dr. James Delgado of the Vancouver Maritime Museum provided excellent information on a number of Manila Galleon wrecks. I am especially indebted to Jessica Crewse for the creation of the maps found in this chapter. Thanks also to Mr. Elwood Mills of Santa Clara University for digitizing my slides for this publication and to Statistical Research, Inc.'s Graphics Manager Margaret Robbins for making corrections to some of the illustrations.

References

- Abinion, O.V., 1985, Report of the "Nuestra Señora de la Vida" Wreck. Field Report No. 14. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Accion, M., Jr., 1979, Bastion de San Diego Archaeological Project. Field Report No. 2. Manuscript on file, National Museum, Manila, Luzon, Philippines.

- Accion, M., Jr., 1982, Nature and Function of the Circular Structure within the Baluarte of Bastion de San Diego.
 Field Report, No. 7. Manuscript on file, Philippines National Museum, Manila.
- Accion, M., Hosillos, H., and Maloles, E., 1982, 18th Century Cistern of Bastion de San Diego. Field Report, No.
 37. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Aga-Oglu, K., 1946, Ying Ch'ing Porcelain Found in the Philippines. *Art Quarterly* Autumn:315–327.
- Aga-Oglu, K., 1948, Ming Export Blue and White Jars in the University of Michigan Collection. Art Quarterly Summer:201–217.
- Alba, L.A., 1993, Preliminary Analysis of the San Diego (1600) Stoneware. Field Report, No. 26. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Alip, E.M., 1959, Ten Centuries of Philippine-Chinese Relations. Alip & Sons, Manila.
- Allen, R., 1998, Native Americans at Mission Santa Cruz, 1791–1834, Interpreting the Archaeological Record. Perspectives in California Archaeology 5. Institute of Archaeology, University of California, Los Angeles.
- Arcilla, J.S., 1971, An Introduction to Philippine History. Ateneo de Manila Press, Manila.
- Arnold, J.B. III, and Weddle, R.S., 1978, The Nautical Archaeology of Padre Island: The Spanish Shipwrecks of 1554. Academic Press, New York.
- Ashley, R., Berkovich, C., Breiner, S, Galindo, R., Hunter, J., Rojas, C., Skowronek, R., Von der Porten, E., and Watters, M., 2003, *Informe del reconocimiento arqueológico de la localidad de un naufragio reportado cerca de la Laguna de Guerrero Negro, Baja California, Fase II, Temporada de Campo 2000*. Subdirección de Arqueología Subacuática/ Instituto Nacional de Antropología e Historia, Universidad de Santa Clara, Museo Marítimo de San Diego, National Geographic.
- Avery, G., 1995, 1995 Annual Report for the Los Adaes Station Archaeology Program. Department of Social Sciences, Northwestern State University, Natchitoches, Louisiana.
- Avery, G., 1996, 1996 Annual Report for the Los Adaes Station Archaeology Program, Management Unit 1. Department of Social Sciences, Northwestern State University, Natchitoches, Louisiana.
- Avery, G., 1997, Los Adaes Station Archaeology Program 1997 Annual Report. Department of Social Sciences, Northwestern State University, Natchitoches, Louisiana.
- Avery, G., 1998, Los Adaes Station Archaeology Program 1998 Annual Report. Department of Social Sciences, Northwestern State University, Natchitoches, Louisiana.
- Ayres, J.E., compiler, 1995, The Archaeology of Spanish and Mexican Colonialism in the American Southwest. Guides to the Archaeological Literature of the Immigrant Experience in America, No. 3. Society for Historical Archaeology, Tucson.
- Baccus, E., 1989, Description of Philippine Sites with Non-Asian Ceramics in the Guthe Collection. Manuscript on file, Museum of Anthropology, Oriental Range, Ruthven Museum, University of Michigan, Ann Arbor.
- Bannon, J.F., 1970, *The Spanish Borderlands Frontier*, 1513–1821. Holt, Rinehart and Winston, New York.

Bannon, J.F., editor, 1964, *Bolton and the Spanish Borderlands*. University of Oklahoma Press, Norman.

- Barker, L.R., Allen, R., and Costello, J.G., 1995, The Archaeology of Spanish and Mexican Alta California.
 In The Archaeology of Spanish and Mexican Colonialism in the American Southwest, compiled by J.E. Ayres, pp. 3–21. Guides to the Archaeological Literature of the Immigrant Experience in America, No. 3. Society for Historical Archaeology, Tucson.
- Barratt, G., 1989, Carolinian Contacts with the Mariana Islands: The European Record. Micronesian Archaeological Report Series, No. 25. Division of Historic Preservation, Saipan, Marianas Protectorate.
- Bautista, A.P., 1985, Identification of Biological Remains from Ayuntamiento Site, Intramuros, Manila. Field Report, No. 8. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Bautista, A.P., 1993, Inter-Agency Archaeological Assessment Project, Progress Report No. 2, Philippine Navy Ready Force Compound Fort Santiago, Intramuros Walls, Manila. Field Report, No. 10. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Bautista, A.P., 1994, Brief Report on the Inspection of an Archaeological Site in San Andres, Intramuros, Manila (NCR-1982-T6). Field Report, No. 17. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Bautista, A.P., and de la Torre, A., 1992a, Brief Report on the Inspection of an Archaeological Site in Plaza San Luis, Intramuros, Manila. Field Report, No. 4. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Bautista, A.P., and de la Torre, A., 1992b, Rescue Archaeology in Plaza San Luis, Intramuros, Manila. Field Report, No. 5. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Bautista, A.P., and de la Torre, A., 1994, Archaeological Impact Assessment Project of Three Historic Sites within the Intramuros Walls. In *Selected Papers of the Annual Conferences of the Manila Studies Association*, 1989–1993, edited by B.R. Churchill, pp. 35–49. Manila Studies Association, Manila.
- Bautista, A., Dizon, E., de la Torre, A., Garcia, M., Peñalosa,
 A., Batoon, L., and Navarro, G., 1994, Third Status
 Report Surigao Archaeological Project, Panhutongan
 Archaeological Site, Placer, Surigao del Norte. Field
 Report, No. 1. Manuscript on file, National Museum,
 Manila, Luzon, Philippines.
- Bautista, A.P., and Penalosa, A.P., 1994, Archaeological Assessment of Spanish Historical Sites at Tukaran, Zamboanga del Sur. Field Report, No. 14. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Bautista, A.P., Ronquillo, W.P., and Conese, E., 1994, Archaeological Assessment of Spanish Historical Sites at Camiguin Province. Field Report, No. 33. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Bauzon, L.E., 1977, The Mexican Subsidy. In *Filipino Heritage: The Making of a Nation*, vol. 4, pp. 1036–1039. Lahing Pilipino, Manila.
- Bayaca, D., Delgado, R.N., Estember, R., Matulac, C., Paredes, C., Paredes, R., Ricacho, N., and Sayago, A., 1994, A Preliminary Report on Archaeological Assessments of

- Historical Sites in Barangay Militar, Tururan, Zamboanga del Sur. Field Report, No. 51. Manuscript on file, National Museum, Manila, Luzon, Philippines. Archaeological Field School, Department of Sociology-Anthropology, University of San Carlos, Cebu City, Philippines.
- Bense, J.A., editor, 2004, Presidios of the North American Spanish Borderlands. Historical Archaeology 38(3).
- Bergesen, A., 1995, Let's Be Frank about World History. In Civilizations and World Systems, edited by S.K. Sanderson, pp.195–205. AltaMira, Walnut Creek, California.
- Beyer, H.O., 1946, *Manila Ware*. Bulletin, No. 1. Museum and Institute of Archaeology and Ethnology, University of the Philippines, Bureau of Printing, Manila.
- Beyer, H.O., 1949, Outline Review of Philippine Archaeology by Islands and Provinces. Bureau of Printing, Manila.
- Bruseth, J.E., and Turner, T.S., 2005, From a Watery Grave. Texas A&M University Press, College Station, Texas.
- Bourne, E.G., 1907, *Discovery, Conquest, and Early History of the Philippine Islands*. Arthur H. Clark, Cleveland, Ohio.
- Bustamente, A., 1991, The Matter Was Never Resolved: The Casta System in Colonial New Mexico, 1693–1823. *New Mexico Historical Review* 66:143–164.
- Campa, A.L., 1979, Hispanic Culture in the Southwest. University of Oklahoma Press, Norman.
- Carlson, S.B., 1994, Texas Beyond the Periphery: An Archaeological Study of the Spanish Missions during the 18th Century. Unpublished Ph.D. dissertation, Department of Anthropology, Texas A&M University, College Station, Texas
- Carlson, S.B., and James, W.D., 1995, An Instrumental Neutron Activation Analysis of 18th Century Lead-Glazed Earthenwares from Four Spanish Missions in Texas. *Journal of Radioanalytical and Nuclear Chemistry* 196:207–213.
- Carrano, P., and Sanchez, P.C., 1964, A Complete History of Guam. Charles E. Tuttle, Rutland, Vermont.
- Carrell, T., 1991, Micronesia Submerged Cultural Resources Assessment. Southwest Cultural Resources Center Professional Papers, No. 36. Submerged Cultural Resources Unit, USDI National Park Service, Santa Fe, New Mexico.
- Carrillo, C.M., 1997, Hispanic New Mexico Pottery: Evidence of Craft Specialization, 1790–1890. LPD Press, Albuquerque, New Mexico.
- Casiño, E.S., 1982, The Filipino Nation, The Philippines: Lands and Peoples, a Cultural Geography. Grolier International, Philippines.
- Chaunu, P., 1960, Les Philippines et la Pacifique des Iberiques (XVIe, XVIIe, XVIIIe siecles). École Practique des Écoles Hautes Etudes, Paris.
- Choris, L., 1822, Voyage pittoresque autour du monde, avec des portraits de sauvages d'Amérique, d'Asia, d'Afrique, et des iles du Grand Océan... Firmin Didot, Paris.
- Clark, S.A., 1905, Pioneer Days of Oregon History. J.K. Gill, Portland, Oregon.
- Cohen-Williams, A., 1992, Common Maiolica Types of Northern New Spain. In *The Archaeology of the Spanish Colonial and Mexican Republican Periods*, edited by P. Farnsworth and J.S. Williams, pp. 119–130. Historical Archaeology 26(1).

- Cohen-Williams, A., and Williams, J.S., 2004, Reconstructing Maiolica Patterns from Spanish Colonial Sites in Southern California. Paper presented at the California Mission Studies Association Meeting, San Luis Obispo, California.
- Constantino, R., 1975, The Philippines: A Past Revisited. Tala, Quezon City, Philippines.
- Corpuz, O.D., 1989, The Roots of the Filipino Nation. AKLAHI Foundation, Quezon City, Philippines.
- Costello, J.G., 1985, Mission Pottery—Analysis from Feature 1. Appendix G in *Report of Phase III Research for Block 1, San Antonio Plaza, San Jose*, by D. Fredrickson and V. Bente, n.p. Theodoratus Cultural Research, Fair Oaks, California. Submitted to the Redevelopment Agency, City of San Jose, California.
- Costello, J.G., 1997, Brick and Tile Making in Spanish California with Related Old and New World Examples. In *Prehistory and the History of Ceramic Kilns*, edited by P. M. Rice, pp. 195–217. Ceramics and Civilization, vol. 7. American Ceramic Society, Westerville, Ohio.
- Crosby, A.W., 1986, Ecological Imperialism: The Biological Expansion of Europe 900–1900. Cambridge University Press, Cambridge.
- Cunningham, L.J., 1992, Ancient Chamorro Society. Bess, Honolulu, Hawaii.
- Cushner, N.P., 1971, Spain in the Philippines from Conquest to Revolution. Ateneo de Manila University, Quezon City, Philippines.
- Cutter, D.C., 1990, California in 1792: A Spanish Naval Visit. University of Oklahoma Press, Norman.
- Deagan, K., 1987, Artifacts of the Spanish Colonies of Florida and the Caribbean, 1500–1800. Smithsonian Institution Press, Washington, D.C.
- Deetz, J., 1991, Archaeological Evidence of Sixteenth- and Seventeenth-Century Encounters. In *Historical Archaeology in Global Perspective*, edited by L. Falk, pp. 1–10. Smithsonian Institution Press, Washington, D.C.
- Degadillo, Y., McGrath, T.B., S.J., and Plaza, F., 1979, Spanish Forts of Guam. Publication Series, No. 7. Micronesian Area Research Center, University of Guam, Mangilao, Guam.
- de Jesus, E.C., 1980, The Tobacco Monopoly in the Philippines: Bureaucratic Enterprise and Social Change, 1766–1880. Ateneo de Manila University Press, Quezon City, Philippines.
- de la Costa, H., S.J., 1961, The Jesuits in the Philippines, 1581–1768. Harvard University Press, Cambridge, Massachusetts.
- de la Torre, A.A., 1993a, Assessment of Santa Lucia Site, Intramuros, Manila 23 June 1993. Field Report, No. 21. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- de la Torre, A.A., 1993b, Earthenware Vessels from San Diego Shipwreck. Field Report, No. 25. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- de la Torre, A.A., 1994, Surigao del Norte Archaeological Project: An Archaeological Project: An Archaeological Excavation at Barangay Pahhutongan, Municipality of Placer, Surigao del Norte, N.E. Mindanao, Philippines. Paper presented at the 15th Congress of the Indo-Pacific Prehistory Association, Chiang Mai, Thailand, January

- 5–12, 1994. Field Report, No. 7. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- de la Torre, A.A., and Tubalado, N.R., 1990, A Report on the Preliminary Investigation of a Blacksmith's Shop in Barangay Basak-Pardo, Cebu City. Field Report, No. 45. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Delgado, J.P., 2002, Maritime and Underwater Archaeology on the Pacific Coast. In *International Handbook of Under*water Archaeology, edited by C.V. Ruppe and J.F. Barsted, pp. 221–246. Springer, New York.
- Delgado, J.P., editor, 1997, British Museum Encyclopaedia of Underwater and Maritime Archaeology. British Museum Press, London.
- Delgado, J.P., and Haller, S.A., 1989, Shipwrecks at the Golden Gate. Lexicos, San Francisco.
- del Valle, T., 1991, The Importance of the Mariana Islands to Spain at the Beginning of the Nineteenth Century. Micronesia Area Research Center, University of Guam, Mangilao, Guam.
- Desroches, J-P., Casal, G., and Goddio, F., 1996, *Treasures of the San Diego*. Association Francaise d'Action Aristique, Foundation Elf, and Elf Aquitaine International Foundation, Paris and New York.
- Diaz Arenas, R., 1979 [1838], Report on the Commerce and Shipping of the Philippine Islands. 1979 facsimile ed. Translated by E. Alzona. National Historical Institute, Manila.
- Diaz-Trechuelo Spinola, M.L., 1978, Arquitectura Española en Filipinas, 1565–1800. Escuela de Estudios Hispanoamericanos de Sevilla, Seville.
- Dizon, E.M., 1980, The Archaeological Excavation at the Parian Site, Intramuros, Metro Manila (NCR-79-R58). Field Report, No. 14. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Dizon, E.Z., 1994a, A Decade of Archaeological Research in the Philippines, 1982–1992. *Philippine Quarterly of Culture and Society* 22:197–222.
- Dizon, E.Z., 1994b, The Archaeological Excavation at the Parian Site in Intramuros, Metro Manila (NCR-79-R-5B). In Selected Papers of the Annual Conferences of the Manila Studies Association, 1989–1993, edited by B.R. Churchill, pp. 22–34. Manila Studies Association, Manila.
- Driver, M.G., editor, 1990, Guam Diary of Naturalist Antonio de Pineda, 1792. Micronesian Area Research Center, University of Guam, Mangilao, Guam.
- Driver, M.G., 1993a, Fray Juan Pobre in the Marianas 1602. Miscellaneous Series, No. 8. Micronesian Area Research Center, University of Guam, Mangilao, Guam.
- Driver, M.G., 1993b, Mariana de Austria. In Father San Vitores: His Life, Times, and Martyrdom, edited by E.G. Johnson, pp. 5–12. Publication Series, No. 6. Micronesian Area Research Center, University of Guam, Mangilao.
- Driver, M.G., and Brunal-Perry, O., 1994, Architectural Sketches of the Spanish Era Forts of Guam. Micronesian Area Research Center, University of Guam, Mangilao, Guam.
- Farnsworth, P., and Williams, J.S., editors, 1992, The Archaeology of the Spanish Colonial and Mexican Republican Periods. Historical Archaeology 26(1).

Faulk, O.B., and Faulk, L.E., 1988, Defenders of the Interior Provinces, Presidial Soldiers on the Northern Frontier of New Spain. Albuquerque Museum, Albuquerque, New Mexico.

- Fenner, B.L., 1985, Cebu under the Spanish Flag (1521–1896). San Carlos Publications, San Carlos University, Cebu City, Philippines.
- Flint, R., and Flint, S.C., editors, 1997, The Coronado Expedition to Tierra Nueva: The 1540–1542 Route across the Southwest. University Press of Colorado, Niwot.
- Flint, R., and Flint, S.C., editors, 2003, The Coronado Expedition: From the Distance of 460 Years. University of New Mexico Press, Albuquerque.
- Foote, C.J., and Schackel, S.K., 1986, Indian Women of New Mexico, 1536–1680. In *New Mexico Women: Intercultural Perspectives*, edited by J.M. Jensen and D.A. Miller, pp. 17–40. University of New Mexico Press, Albuquerque.
- Ford, R.I., 1987, The New Pueblo Economy. In When Cultures Meet: Remembering San Gabriel del Yunge Oweenge, compiled by H. Agoyo, pp. 73–91. Sunstone, Santa Fe, New Mexico.
- Foster, G.M., 1960, *Culture and Conquest: America's Spanish Heritage*. Viking Fund Publications in Anthropology 27. Wenner-Gren Foundation for Anthropological Research, New York.
- Fournier-García, P., 1997, Tendencias de consumo en México durante los períodos Colonial e Independiente. In Approaches to the Historical Archaeology of Mexico, Central & South America, edited by J. Gasco, G.C. Smith, and P. Fournier-García, pp. 49–58. Monograph 38. Institute of Archaeology, University of California, Los Angeles.
- Frank, A.G., 1995, The Modern World System Revisited: Rereading Braudel and Wallerstein. In *Civilizations and World Systems*, edited by S.K. Sanderson, pp. 195–205. AltaMira, Walnut Creek, California.
- Frank, R.H., 1991, The Changing Pueblo Indian Pottery Tradition: The Underside of Economic Development in Late Colonial New Mexico, 1750–1820. *Journal of the* Southwest 33:282–321.
- Fritz, G., 1989, The Chamorro: A History and Ethnography of the Marianas. Translated by E. Craddock, edited by S. Russell. Division of Historic Preservation, Department of Community and Cultural Affairs, Saipan. Originally published 1904, Die Chamorrow, eine geschicte und ethnographie der Marianen. Ethnologisches Notizblatt 3(3):25–110. Berlin.
- Galvin, J., 1964, Supplies from Manila for the California Missions, 1781–1783. Philippine Studies Quarterly 12:494–510.
- Gatbonton, E.B., 1985, Bastión de San Diego. Intramuro Administration, Ministry of Human Settlements, Manila.
- Gitlin, J., 1992, On the Boundaries of Empire: Connecting the West to Its Imperial Past. In *Under an Open Sky: Rethinking America's Western Past*, edited by W. Cronon, G. Miles, and J. Gitlin, pp. 71–89. W.W. Norton, New York.
- Goddio, F., 1988, Discovery and Archaeological Excavation of a 16th Century Trading Vessel in the Philippines. Kyodo, Manila.
- Graham, E., 1998, Mission Archaeology. *Annual Reviews in Anthropology* 27:25–62.

- Guerrero, M.C., and Quirino, C., 1977, Old Chinatown: 1570–1770. In *Filipino Heritage: The Making of a Nation*, vol. 4, edited by A.R. Roces, pp. 1108–1112. Lahing Pilipino, Manila.
- Guthe, C.E., 1927, The University of Michigan Philippine Expedition. *American Anthropologist* 29:69–76.
- Guthe, C.E., 1929, Distribution of Sites Visited by the University of Michigan Philippine Expedition 1922–1925. Papers of the Michigan Academy of Science, Arts and Letters 10:79–89.
- Hann, J.H., 1988, Apalachee: The Land between the Rivers. University Press of Florida, Gainesville.
- Haynes, D.E., and Wuerch, W.L., 1990, Historical Survey of the Spanish Mission Sites on Guam, 1669–1800. 2nd ed.
 Educational Series, No. 9. Micronesian Area Research Center, University of Guam, Mangilao, Guam.
- Higueras Rodríguez, M.D., editor, 1985, Catalogo crítico de los documentos de la Expedición Malaspina (1789–1794) del Museo Naval, vol 1. Museo Naval, Madrid.
- Higueras Rodríguez, M.D., editor, 1987, Catalogo crítico de los documentos de la Expedición Malaspina (1789–1794) del Museo Naval, vol. 2. Museo Naval, Madrid.
- Hoover, R.L., 1992, Some Models for Spanish Colonial Archaeology in California. In *The Archaeology of the Spanish Colonial and Mexican Republican Periods*, edited by P. Farnsworth and J.S. Williams, pp. 37–44. *Historical Archaeology* 26(1).
- Hoover, R.L., and Costello, J.G., editors, 1985, Excavations at Mission San Antonio, 1976–1978. Monograph 26. Institute of Archaeology, University of California, Los Angeles.
- Hutterer, K.L., and MacDonald, W.K., 1982, Houses Built on Scattered Poles: Prehistory and Ecology in Negros Oriental, Philippines. University of San Carlos Press, Cebu City, Philippines.
- Hylkema, M., 1995, Archaeological Investigation at Mission Santa Clara (CA-SCL-30) for the Re-Alignment of Route 82. California Department of Transportation, District 4, Oakland.
- IOTA Partners, 1996, 1996 Annual Report: The Recovery of the Manila Galleon Santa Margarita. IOTA Partners, Bellevue, Washington.
- Jackson, R.H., and Castillo, E., 1995, Indians, Franciscan., and Spanish Colonization: The Impact of the Mission System on California Indians. University of New Mexico Press, Albuquerque.
- Jocano, F.L., 1975, Philippine Prehistory: An Anthropological Overview of the Beginnings of Filipino Society and Culture. Philippine Center for Advanced Studies, University of the Philippines, Diliman, Quezon City, Philippines.
- Jones, O.L., Jr., 1979, Los Paisanos: Spanish Settlers on the Northern Frontier of New Spain. University of Oklahoma Press, Norman.
- Junker, L.L., 1990, The Organization of Intra-Regional and Long-Distance Trade in Prehispanic Philippine Complex Societies. Asian Perspectives 29:167–209.
- Junker, L.L., 1999, Raiding, Tradin., and Feasting: The Political Economy of Philippine Chiefdoms. University of Hawaii Press, Honolulu.
- Kealhofer, L., 1996, The Evidence for Demographic Collapse in California. In *Bioarchaeology of Native American*

- Adaptation in the Spanish Borderlands, edited by B.J. Baker and L. Kealhofer, pp. 56–92. University Press of Florida, Gainesville.
- Keesing, F., 1962, The Ethnohistory of Northern Luzon. Stanford University Press, Stanford, California.
- Kessell, J.L., 1987, Kiva, Cross, and Crown: The Pecos Indians and New Mexico, 1540–1840. University of New Mexico Press, Albuquerque.
- Lambert, D., Reinhart, N., Russel, L., and Von Herzen, G., 1998, A Year in the Life of a Spanish Pueblo, San José de Guadalupe in 1809: Official Correspondence. Research Manuscript Series on the Cultural and Natural History of Santa Clara, No. 9. Santa Clara University, Santa Clara, California.
- Langdon, R., 1992, Sixteenth Century Spanish Castaways in the Caroline and Marshall Islands. In *Pacific History: Papers from the 8th Pacific History Association Conference*, edited by D.H. Rubinstein, pp. 7–16. University of Guam and Micronesian Area Research Center, Mangilao, Guam.
- Legarda, B., Jr., 1955, Two and a Half Centuries of the Galleon Trade. *Philippine Studies* 3:345–372.
- Legarda, B., Jr., 1967, The Philippine Economy under Spanish Rule. *Solidarity* 2(10):1–21.
- Lewis, K.E., 1984, The American Frontier: An Archaeological Study of Settlement Pattern and Process. Academic Press, Orlando, Florida.
- Lightfoot, K.G., 2005, *Indians, Missionaries, and Merchants: The Legacy of Colonial Encounters on the California Fron- tier.* University of California Press, Berkeley, California.
- Longacre, W.A., and Skibo, J., editors, 1994, Kalinga Ethnoarchaeology: Expanding Archaeological Method and Theory. Smithsonian Institution Press, Washington, D.C.
- Longoria, L.D., 2007, Chinese Export Porcelain in the Missions and Presidios of Eighteenth Century Spanish Texas. Unpublished Master's thesis, Department of Anthropology, University of Texas, San Antonio.
- Lueger, R., 1981, Ceramics from Yuquot, British Columbia. In *The Yuquot Project*, vol. 3, edited by W.J. Folan and J. Dewhirst, pp. 103–170. History and Archaeology, No. 44. National Historic Parks and Sites Branch, Parks Canada, Ottawa.
- Lyon, E., 1990, Track of the Manila Galleons. *National Geographic* 178(3):5–38.
- Madulid, D.A., 1987, The Philippines in the Year 1792 as Portrayed by the Malaspina Expedition Artists. *Philip*pine Quarterly of Culture and Society 15:219–254.
- Majewski, T., and Ayres, J.E., 1997, Toward an Archaeology of Colonialism in the Greater Southwest. Revista de Arqueología Americana 12:55–86. Instituto Panamericano de Geografía e Historia, Mexico City, México.
- Mathers, W.M., 1990, Nuestra Señora de la Concepción. National Geographic 178(3):39–52.
- Mathers, W.M., Parker, H.S. III, and Copus, K.A., 1990, Archaeological Report: The Recovery of the Manila Galleon Nuestra Señora de la Concepción. Submitted to the Commonwealth of the Northern Mariana Islands. Pacific Sea Resources, South Dartmouth, Massachusetts.
- Mathers, W.M., and Shaw, N., 1993, Treasure of the Concepcion. APA Publications, Hong Kong.
- Mathewson, R.D. III, 1992, The Pilar Project: Monthly Report, July. Manuscript on file, Historic Preservation Office, Agaña, Guam.

- McCoy, P.C., Price, S.T., and Craib, J., 1978, Archaeological Review of Orote Historical Complex, Orote Point, Guam.
 Submitted to the Pacific Division, U.S. Department of the Navy. Manuscript on file, Pacific West Regional Office, U.S. Department of the Navy, Oakland, California.
- McGrath, T.B., S.J., 1993, The Proas of the Marianas. In *Father Sanvitores: His Life, Times, and Martyrdom,* edited by E.G. Johnson, pp. 36–49. Micronesian Area Research Center Publication Series, No. 6. University of Guam, Mangilao.
- Milliken, R.T., 1995, A Time of Little Choice: The Disintegration of Tribal Culture in the San Francisco Bay Area, 1769–1810. Ballena, Menlo Park, California.
- Moorhead, M.L., 1975, *The Presidio: Bastion of the Spanish Borderlands*. University of Oklahoma Press, Norman.
- Moses, B., 1929, *Spain Overseas*. Hispanic Society of America, New York.
- Mudge, J.McC., 1986, *Chinese Export Porcelain in North America*. Clarkson N. Potter, New York.
- Neff, H., and Glascock, M.D., 2002, Instrumental Neutron Activation Analysis of Ceramics. In *Nuestra Señora del Refugio (41RF1)*, *Refugio County, Texas*, edited by C.L. Tennis, Appendix H. Archaeological Survey Report, No. 315. Center for Archaeological Research, University of Texas, San Antonio.
- Nehalem Valley Historical Society Treasure Committe., 1991, *Tales of the Neahkahnie Treasure*. Tillamook County Pioneer Museum, Tillamook, Oregon.
- Officer, J.E., 1987, *Hispanic Arizona*, 1536–1856. University of Arizona Press, Tucson.
- Olds, D.L., 1976, Texas Legacy from the Gulf: A Report on 16th Century Shipwreck Materials from the Texas Tidelands. Miscellaneous Papers, No. 5. Publication, No. 2. Texas Memorial Museum and Texas Antiquities Committee, Austin.
- Orogo, A.B., 1993a, First Status Report, RE: Santa Lucia Archaeological Excavation Project, Intramuros, Manila. Field Report, No. 36. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Orogo, A.B., 1993b, Summary Report RE: Result of the Archaeological Excavation Conducted at Santa Barbara Site in Fort Santiago, Intramuros, Manila. Progress Report on Inter-Agency Archaeological Project, pt. 3. Field Report, No. 30. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Orogo, A.B., and Alegre, L.A., 1994, Archaeological Investigation conducted at P. Guevarra Elementary School Compound Corner Asuncion and San Fernando Streets, Binondo, Manila 19 July 1994. Field Report, No. 20. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Pearson, C.E., 1981, El Nuevo Constante: Investigations of an Eighteenth Century Spanish Shipwreck off the Louisiana Coast. Anthropological Study, No. 4. Department of Culture, Recreation and Tourism, Louisiana Archaeological Survey and Antiquities Commission, Baton Rouge.
- Pearson, C.E., and Hoffman, P.E., 1995, The Last Voyage of El Nuevo Constante: The Wreck and Recovery of an Eighteenth-Century Spanish Ship off the Louisiana Coast. Louisiana State University Press, Baton Rouge.
- Phelan, J.L., 1967, The Hispanization of the Philippines. University of Wisconsin Press, Madison.

Poyo, G.E., and Hinojosa, G.M., editors, 1991, Tejano Origins in Eighteenth-Century San Antonio. University of Texas Press, Austin.

- Rafael, V.L., 1988, Contracting Colonialism: Translation and Christian Conversion in Tagalog Society under Early Spanish Rule. Ateneo de Manila University Press, Manila.
- Reed, E.K., 1952, General Report on Archaeology and History of Guam. USDI National Park Service, Santa Fe, New Mexico.
- Reyes, J.C., 1981, Preliminary Report on the San Luis Site Excavation in Intramuros. Field Report, No. 22. Manuscript on file, National Museum, Manila, Luzon, Philippines.
- Rogers, R.W., 1999, Shipwrecks of Hawaii: A Maritime History of the Big Island. Pilialoha, Haleiwa, Hawaii.
- Ronquillo, W., 1990, Philippine Underwater Archaeology: Present Research Projects and New Developments. Bulletin of the Australian Institute for Maritime Archaeology 14(1):21–24.
- Ruth, H.M., Jones, J.B., and Grobins, M.M., 1990, Guidebook to the Architecture of Guam. American Institute of Architects, Guam and Trust Territories of the Pacific Chapter. China Color Print Company, Taipei.
- Safford, W.E., 1902, Guam and Its People. American Anthropologist 4:707–729.
- Safford, W.E., 1903, The Chamorro Language of Guam. American Anthropologist 5:289–311, 508–529.
- Schreurs, P., 1983, The Royal Fort of Tandag (1609–1823). *Philippine Quarterly of Culture and Society* 11(2–3):107–122.
- Schuetz, M.K., 1986, The Archaeology of the Governor's Palace, Plaza de España, Guam. Micronesian Area Research Center, University of Guam, Mangilao, Guam.
- Schuetz-Miller, M.K., 1994, Building and Builders in Hispanic California, 1769–1850. Southwestern Mission Research Center, Tucson.
- Schurz, W.L., 1939, *The Manila Galleon*. E.P. Dutton, New York.
- Scott, W.H., 1994, Barangay: Sixteenth-Century Philippine Culture and Society. Ateneo de Manila University Press, Manila.
- Shangraw, C., and Von der Porten, E.P., 1981, The Drake and Cermeño Expeditions' Chinese Porcelains at Drakes Bay, California 1579 and 1595. Santa Rosa Junior College, Santa Rosa, California; and Drake Navigators Guild, Palo Alto, California.
- Shangraw, C., and Von der Porten, E.P., 1997, Kraak Plate Design Sequence, 1550–1655. Drake Navigators Guild, San Francisco.
- Shoup, L.H., 1995, Inigo of Ranch Posolmi: The Life and Ties of a Mission Indian and His Land. Submitted to Tasman Corridor Archaeological Project, Santa Clara County Transportation Agency, San Jose, California. Archaeological/Historical Consultants, Oakland, California.
- Silliman, S.W., 2004, Lost Laborers in Colonial California: Native Americans and the Archaeology of Rancho Petaluma. University of Arizona Press, Tucson.
- Skowronek, R.K., 1984, Trade Patterns of Eighteenth Century Frontier New Spain: The Flota and St. Augustine. Volumes in Historical Archaeology. South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Skowronek, R.K., 1987, Ceramics and Commerce: The 1554 Flota Revisited. *Historical Archaeology* 21(2):101–111.

- Skowronek, R.K., 1989, A New Europe in the New World: Hierarchy, Continuity and Change in the Spanish Sixteenth-Century Colonization of Hispaniola and Florida. Unpublished Ph.D. dissertation, Department of Anthropology, Michigan State University, East Lansing.
- Skowronek, R.K., 1992, Empire and Ceramics: The Changing Role of Illicit Trade in Spanish America. In *The Archaeology of the Spanish Colonial and Mexican Republican Periods*, edited by P. Farnsworth and J.S. Williams, pp. 109–118. Historical Archaeology 26(1).
- Skowronek, R.K., 1997, End of the Empire: The Spanish Philippines and Puerto Rico in the Nineteenth Century. *Itinerario* 21(2):33–50.
- Skowronek, R.K., 1998a, Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California. *Ethnohistory* 45(4):45–78.
- Skowronek, R.K., 1998b, The Spanish Philippines: Archaeological Perspectives on Colonial Economics and Society. *International Journal of Historical Archaeology* 2:45–71.
- Skowronek, R.K., 1998c, Review of Kalinga Ethnoarchaeology: Expanding Archaeological Method and Theory, edited by W.A. Longacre and J. Skibo. Historical Archaeology 32(4):100–103.
- Skowronek, R.K., 1999, Identifying the First El Pueblo de San José de Guadalupe: Some Archaeological, Historica., and Geographical Considerations. Occasional Papers, No. 2. California Mission Studies Association, Santa Clara University, Santa Clara, California.
- Skowronek, R.K., 2002, Global Economics in the Creation and Maintenance of the Spanish Colonial Empire. In Social Dimensions in the Economic Process, edited by N. Dannhaeuser and C. Werner, pp. 295–310. Research in Economic Anthropology 21. JAI/Elsevier Science, Amsterdam.
- Skowronek, R.K., Blackman, M.J., Bishop, R.L., Ginn, S., and Garcia Heras, M., 2001, Chemical Characterization of Earthenware on the Alta California Frontier. In Proceedings of the 3rd International Symposium on Nuclear and Related Techniques, edited by R. Padilla Alvarez, pp. 1–19. Havana, Cuba.
- Skowronek, R.K., Bishop, R.L., Blackman, M.J., Ginn, S., and García Heras, M., 2003, Chemical Characterization of Earthenware on the Alta California Frontier. *Proceedings of the Society for California Archaeology* 16:209–219.
- Skowronek, R.K., Blackman, M.J., and Bishop, R.L., 2009, To Produce and Consume: Ceramic Composition Variation in the San Francisco Presidio District. *Historical Archaeology* 43(4), in press.
- Skowronek, R.K., Reyes, R., Ginn, S., Greenwalt, K., Blackman, M.J., and Bishop, R.L., 2006, From Science to Humanism: Finding the Pots in the Sherds. In San Diego, Alta California and the Borderlands: Proceedings of the 23th Annual Conference, California Mission Studies Association, San Diego, edited by R.M. Beebe and R. Senkewicz, pp. 155–173. California Mission Studies Association, Santa Clara University, Santa Clara, California.
- Skowronek, R.K., and Thompson, E., 2006, Situating Mission Santa Clara de Asís: 1776–1851, Documentary and Material Evidence of Life on the Alta California Frontier:

- A Timeline. Academy of American Franciscan History, Berkeley, California.
- Skowronek, R.K., and Wizorek, J.C., 1997, Archaeology at Santa Clara de Asís: The Slow Rediscovery of a Moveable Mission. *Pacific Coast Archaeological Society Quarterly* 33(3):54–92.
- Smalley, J., 1995, Life on Board Manila Galleons. *Bulletin of the Australian Institute for Maritime Archaeology* 19(1):29–32.
- Smith, S.B., 1900, Beginning in Oregon. In *Proceedings of the Oregon Historical Society*, pp. 72–97. W.H. Leeds, State Printer, Portland, Oregon.
- Solheim, W.G., I., 1964, *The Archaeology of the Central Philippines: A Study of the Iron Age and Its Relationships.* Bureau of Printing, Manila.
- Spicer, E.H., 1962, Cycles of Conquest: The Impact of Spain, Mexic., and the United States on the Indians of the Southwest, 1533–1960. University of Arizona Press, Tucson.
- Spoehr, A., 1973, Zamboanga and Sulu: An Archaeological Approach to Ethnic Diversity. Ethnology Monographs, No. 1. Department of Anthropology, University of Pittsburgh, Pittsburgh, Pennsylvania.
- Stafford, O.F., 1925, The Wax of Nehalem Beach. *Quarterly of the Oregon Historical Society* 26(2):24–41.
- Stavrianos, L.S., 1981, Global Rift: The Third World Comes of Age. Morrow, New York.
- Steffen, J.O., 1980, Comparative Frontiers: A Proposal for Studying the American West. University of Oklahoma Press, Norman.
- Thomas, D.H., 1989, Columbian Consequences: The Spanish Borderlands in Cubist Perspective. In Archaeological and Historical Perspectives on the Spanish Borderlands West, edited by D.H. Thomas, pp. 1–14. Columbian Consequences, vol. 1. Smithsonian Institution Press, Washington, D.C.
- Thomas, D.H., series editor, 1991, Spanish Borderlands Sourcebooks. Garland, New York.
- Thompson, L., 1932, Archaeology of the Mariana Islands. Bernice P. Bishop Museum Bulletin, No. 100. Bishop Museum, Honolulu, Hawaii.
- Thompson, L., 1947, Guam and Its People. Princeton University Press, Princeton, New Jersey.
- Tubangui, H.R., Bauzon, L.E., Foronda, M.A., Jr., and Ausejo, L.U., 1982, The Filipino Nation: A Concise History of the Philippines. Grolier International, Philippines.
- Valdes, C.O., 1993, Saga of the San Diego. Concerned Citizens for the National Museum, Vera-Reyes, Manila.
- Van Peenen, M.W., 1993, Chamorro Legends on the Island of Guam. MARC Publications Series, No. 4. Micronesia Area Research Center, Mangilao, Guam.
- Von der Porten, E.P., 1972, Drake and Cermeño in California: Sixteenth Century Chinese Ceramics. *Historical Archaeology* 6:1–22.
- Von der Porten, E., 2005, The Manila Galleon Trade, 1565–1815: Traces & Treasures. Noticias del Puerto de Monterey 54(1):15–23.
- Voss, B.L., 2002, The Archaeology of El Presidio de San Francisco: Culture Contact, Gende., and Ethnicity in a Spanish-Colonial Military Community. Unpublished Ph. D. dissertation, Department of Anthropology, University of California, Berkeley.

- Voss, B.L., 2008, The Archaeology of Ethnogenesis: Race and Sexuality in Colonial San Francisco. University of California Press, Berkeley.
- Wade, M.F., 2008, Missions, Missionaries, and Native Americans: Long-Term Processes and Daily Practices. University Press of Florida, Gainesville.
- Wagner, H.R., 1929, Spanish Voyages to the Northwest Coast of America in the Sixteenth Century. Special Publications 4. California Historical Society, San Francisco.
- Wallerstein, I., 1974, The Modern World-System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century. Academic Press, New York.
- Wallerstein, I., 1989, The Modern World-System III: The Second Era of the Great Expansion of The Capitalist World-Economy, 1730–1840s. Academic Press, San Diego, California.
- Walter, T.L., 2007, Espíritu Santo de Zúñiga: A Frontier Mission in South Texas. University of Texas Press, Austin.
- Weber, D.J., 1992, *The Spanish Frontier in North America*. Yale University Press, New Haven, Connecticut.
- Weber, D.J., editor, 1979, New Spain's Far Northern Frontier: Essays on Spain in the American West, 1540–1821. Southern Methodist University Press, Dallas, Texas.
- Weigand, P., Ward, S., and Harbottle, G., 1981, Mexican Sherds Recovered from the Archaeological Excavations at Yuquot, British Columbia. In *The Yuquot Project*, vol. 3, edited by W.J. Folan and J. Dewhirst, pp. 171–178. History and Archaeology Series, No. 44. National Historic Parks and Sites Branch, Parks Canada, Environment Canada, Ottawa.
- Welch, D., Goodwin, C., and McNeil, J., 1992, The Development of Agaña, Guam, 1500–1991. Paper presented at the 25th Conference on Historical and Underwater Archaeology, Kingston, Jamaica.
- Williams, J.S., 1992, The Archaeology of Underdevelopment and the Military Frontier of Northern New Spain. In *The Archaeology of the Spanish Colonial and Mexican Republican Periods*, edited by P. Farnsworth and J.S. Williams, pp. 7–21. *Historical Archaeology* 26(1).
- Williams, S.S., 2006, A Research Design to Conduct Archaeological Investigations at the Site of the "Beeswax Wreck" of Nehalem Bay, Tillamook County, Oregon. http://www.nagagroup.org/BeesWax/proposal/proposal.htm.
- Wolf, E.R., 1982, Europe and the People without History. University of California Press, Berkeley.
- World Wide First, 1985, Preliminary Summary Report of the "Nuestra Señora de la Vida" Wreck, Isla Verde, Philippines. Field Report, No. 31. Manuscript on file, Philippine National Museum, Manila.
- World Wide First, 1986, Preliminary Report of the San Jose Excavation: Lubang Island. Field Report No. 1. Manuscript on file, Philippine National Museum, Manila.
- Zialcita, F.N., and Tinio, M.I., Jr., 1980, *Philippine Ancestral Houses* (1810–1930). GCF Books, Quezon City, Philippines.