*Proceedings of the British Academy*, **81**, 67–104

# From Contact to *Criollos*: The Archaeology of Spanish Colonization in Hispaniola

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**Summary.** The processes and events of Spanish–American interaction during the first decades of contact in the Caribbean directly shaped the American world as it exists today. Much of the information relevant to this interaction, however, is accessible only through the integrated documentary and material approach of historical archaeology. Three archaeological projects undertaken at very early Spanish colonial sites in Hispaniola provide the data base from which to explore questions of American Indian responses to the arrival of Europeans and Africans, and European and African responses to the demands of colonial adjustment in the Americas.

OF ALL THE FAR-REACHING CONSEQUENCES provoked by the meeting of Europe and America in 1492, those in the Spanish Caribbean during the first half century of contact were perhaps the most dramatic. Not only did traditional Caribbean Indian society disappear with stunning rapidity, but an entirely new and syncredic Euro–Afro–American society emerged.

The "new world"—which had its roots in this era—was shaped by confrontation and interaction between literate and non-literate peoples, making it therefore impossible to rely upon written or material evidence alone in reconstructing its origins. For this reason, our understanding of both Amerindian demise and syncretic cultural formation in the Americas

has depended heavily upon historical archaeology in the region (see Deagan 1988 for a review of this work).

This discussion is concerned with the processes and events of Spanish–American interaction during the first decades of contact in the Caribbean. Three archaeological projects undertaken in Hispaniola by the University of Florida, working in collaboration with researchers in Haiti and the Dominican Republic, provide the data base from which to explore questions of American Indian responses to the arrival of Europeans and Africans, and European and African responses to the demands of colonial adjustment in the Americas.

These sites—excavated as part of a decades-long effort to understand the adaptive mechanisms that led ultimately to the emergence of Hispanic–American society—span a continuum of occupation from 1492 to 1580 on Hispaniola (Figure 1). Studied by a multidisciplinary team of researchers (archaeologists, historians, zooarchaeologists, palaeoethnobotanists, material scientists, etc.) the sites offer a multi-evidentiary base from which to study the changes between initial contacts and the emergence of a *criollo* colonial society. They include En Bas Saline in Haiti (A.D. 1250–ca. 1510), believed to have been a town of the Taino cacique Guacanacaric who gave refuge to Columbus after the wreck of the *Santa Maria* in 1492; La Isabela in the Dominican Republic (1493–1498), the first town established by Columbus; and Puerto Real in Haiti (1503–1578), one of the first colonial towns in the Americas established under the auspices of the Spanish colonial government (Figure 1).

## The Structure of Spanish Contact

It was in Hispaniola that both Spaniards and Indians first developed the institutional and individual policies for dealing with the cultural and ecological confrontations that took place after 1492. A major part of initial Spanish colonial enterprise was concerned with the organization and exploitation of the natural and human resources of the Antilles, and a major part of Taino Indian response was concerned with resistance to those practices (for detailed discussions of the structure and policy of early contact see Moya Pons 1986; Elliott 1987; Gibson 1987, 1966; Lockhart and Schwartz 1983: 59–86; McAlister 1984; Sauer 1966).

During the initial 25 years of Spanish presence in the New World certain interrelated institutions developed from the Iberian *Reconquista* tradition, and these later radiated with the Spaniards on their subsequent colonizing ventures. Such institutions as religious organization and interaction, new forms of coercive labour organization, political administration,

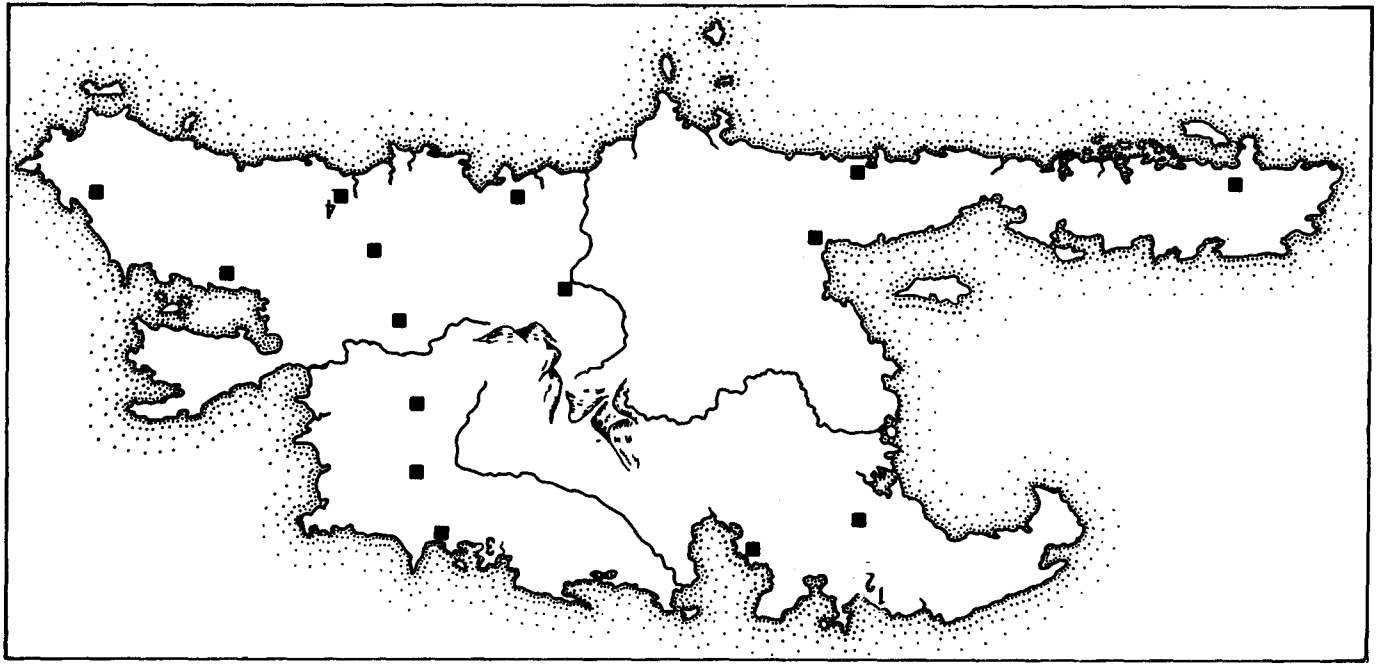



**Figure 1** Contact period and colonial sites in Hispaniola. 1, En Bas Saline. 2, Puerto Real. 3, La Isabela. 4, Santo Domingo. Squares indicate locations of original towns established by Nicholás de Ovando in 1503.

town and settlement patterns, and mercantilist economy acquired the forms they were to assume throughout the Spanish New World in the first years of contact (Phillips and Phillips 1991; Elliott 1987; McAlister 1984; Lockhart and Schwartz 1983).

This pattern of colonization of conquered lands was first translated from the *Reconquista* to the Spanish conquest and colonization of the Canary Islands, which was completed under Queen Isabela between about 1477 and 1497 (Tejera and Aznar 1992; Phillips and Phillips 1991:55–63; Crosby 1986:73–99; McAlister 1984:63–65). After sustained resistance and dramatic loss of population, the Guanche natives were given the privileges of free Castilian subjects as long as they adopted Christianity and accepted the sovereignty of Spain. The status and privileges of their chiefs were recognized, and intermarriage between Spanish men and Guanche women was not uncommon (Tejera and Aznar 1992). Those Guanches who continued resistance, however, were considered appropriate candidates for enslavement and despoliation.

One of the cornerstones of Spanish policy toward the American Indians was respect for, and recognition of, the political importance of the caciques (McAlister 1984:180; Gibson 1987:377; Hanke 1964:27; Hussey 1932). This policy was developed in the Canary Islands and subsequently extended to the Caribbean, and later came to characterize Spanish–American interaction in those areas of the Americas with strongly differentiated chiefs and stratified societies. By securing the alliance of caciques, it was expected that conversion and civilization would then be imposed through that group to the rest of the Indians (Gibson 1987:377; Hanke 1964). This hierarchical approach was appealing to the already hierarchically-organized Spaniards, and the recognition of Indian political organization and chiefly privilege was formalized in 1512 by the Laws of Burgos (Hussey 1932).

A less formal but perhaps more influential factor in the emergence of post-1500 American society was Spanish–Indian intermarriage. In the earliest years of contact this included intermarriage between Spanish conquistadors or soldiers and Indian chieftainesses (Deagan 1985:304–5; Lyon 1976:148; Floyd 1973:59–61; Mörner 1967:37), although this appears rather quickly to have extended to all social levels. The resulting admixture of Spanish and American Indian gene pools and cultural traits in Spanish colonial households—*mestizaje*—was to become the defining process in the development of Spanish–American culture (Deagan 1983:304–306).

The Catholic Church also played a major role in all aspects of colonial life, including the structure of Spanish–Indian interaction in the Americas (Gibson 1987:15; Hanke 1964). It served simultaneously as a philosophical base for paternalistic treatment of the Indians, and as a force for the

mitigation of abuse. These are illustrated by church-inspired protective legislation—best seen through the writings of Bartolomé de Las Casas (1974).

## The Taino People

The first American Indians to encounter Europeans were the Taino Indians of the Greater Antilles and Bahamas. The Taino were among the most densely settled pre-state, sedentary societies in the New World (Feinman and Nietzel 1984; Wilson, this volume), and apparently sustained one of the most strongly differentiated chiefly positions in the Americas, both symbolically and socially (Rouse 1992; Keegan 1992; Wilson 1990).

Fully-developed Taino cultural patterns appeared in the Greater Antilles at about A.D. 1200 (Rouse 1992; Keegan 1992) and persisted until about A.D. 1500. These were characterized by larger sites in a wider range of locations than previously; organization around plazas or ballcourts, often with a central raised area for the chief's house (see Alegría 1985), manioc-based farming, extensive inter-island trade networks, complex hereditary chiefdoms and incipient social stratification (Keegan 1992; Wilson 1990; Alcina Franch 1983; Dreyfus 1980; Cassa 1975). Material culture was characterized by Ostionoid ceramic traditions (Rouse 1986, 1992); and the development of an elaborate artistic–ritual tradition (Garcia Arévalo 1979; Deive 1980; Rouse 1992).

Population estimates for the Taino have ranged from 100,000 suggested by Rosenblatt (1954), and 400,000 suggested by Moya Pons (1992) to the higher estimates of 3,000,000 by Las Casas (1951 v.2:ch.1) and 6–8,000,000 of Cook and Borah (1971) (see also Henige 1978). Archaeological data suggest that on Hispaniola, at least, one of the higher figures may have been more accurate, given the site densities encountered in the very few areas of the island that have been surveyed (Veloz-Maggiolo and Ortega 1980; Moore 1985, Rouse and Moore 1984; Hamilton 1984, Appendix D; Rainey 1941:5).

What is known, however, is that in Hispaniola, Taino peoples had been reduced from perhaps several million in 1492 to fewer than 25,000 by 1515 (Moya Pons 1992; Arranz Marquez 1991; Sauer 1966:200–1), victims primarily of introduced European disease, but also of warfare, slavery, and social disintegration resulting from all of these disasters. Although none of these forces was unknown in the Americas prior to 1492, they were accelerated to an unprecedented and unsustainable level with the arrival of Columbus. This process began with the first extended interaction and

coexistence among Spaniards and Tainos, which took place in 1492–93 in what is today northern Haiti, at or near the site of En Bas Saline.

## En Bas Saline: First Contacts

The site of En Bas Saline was discovered in 1977 by medical missionary Dr William Hodges, a lifelong resident of northern Haiti. Hodges had been involved in a decades-long search for La Navidad, the doomed settlement of 39 Spanish sailors established by Columbus in 1492 after his flagship, the *Santa Maria*, was wrecked off the north coast of Haiti (Morison 1939). Local farmers took Hodges to a very remote site at the tiny farming hamlet of En Bas Saline, about 15 kilometres to the east of present-day Cap Haitien. The site had never been previously recorded, and is located one and a half kilometres from the sea, adjacent to an oxbow lake that three centuries ago was a river connecting the site to the sea at the coastal village of Limonade Bord de Mer (Figure 2).

**Figure 2** Aerial view: En Bas Saline. Dashed lines indicate location of raised perimeter earthwork and central mound. Photo: Maurice Williams.

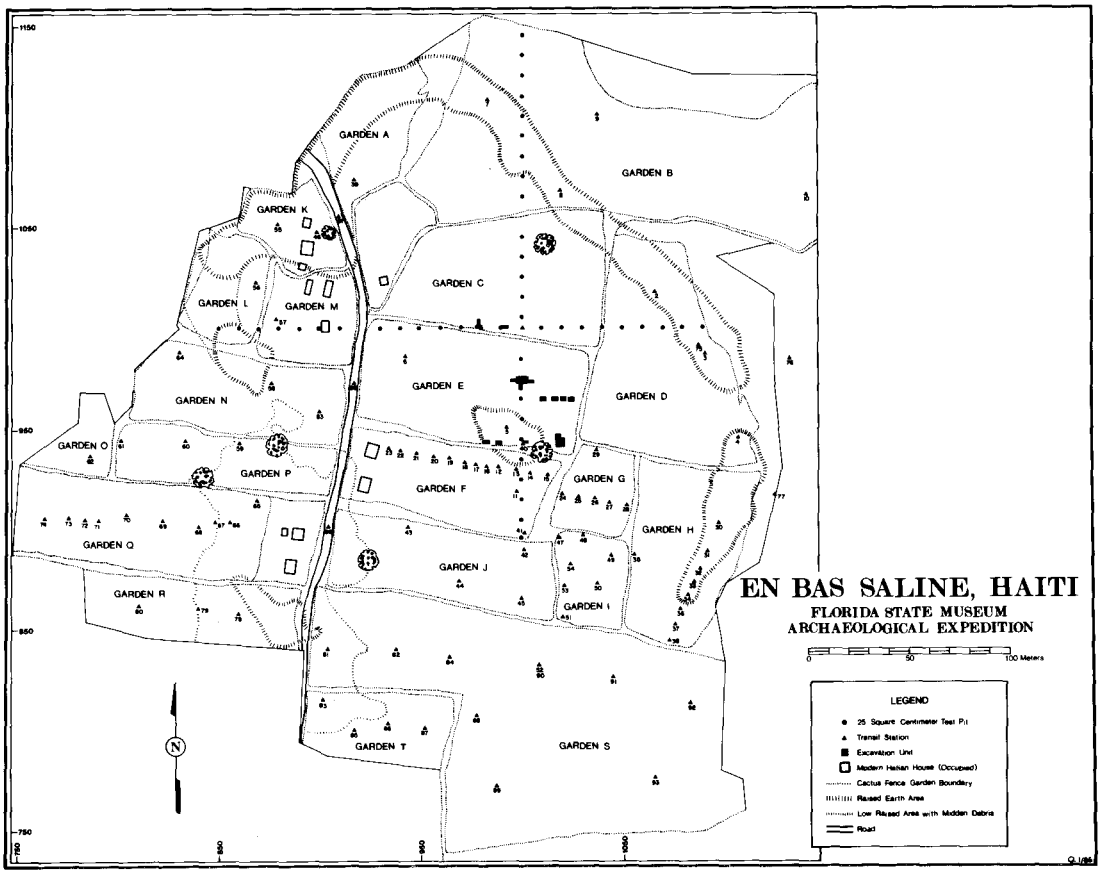
Most researchers agree that the *Santa Maria* went aground on the reefs approximately half a kilometre off the coast of the town of Limonade Bord de Mer, close to a principal village of the Taino Indian cacique Guacanacaric. This cacique and his people assisted the Spaniards in salvaging what they could from the *Santa Maria*, which could itself not be saved (Ramos Gomez 1990; Ramos 1989; Deagan 1986, 1987; Hodges 1983; Raviani 1984, vol. 2:153–7; Morison 1939). Unable to transport his crew on the remaining ships, Columbus ordered a small fort constructed, possibly by fortifying Guacanacaric's longhouse (Varela 1982; Hodges 1983; Morison 1939), or possibly, as suggested by others (Ramos 1989:69–82; Hodges 1986), some distance away from the Indian village on the coast at the town of Limonade Bord de Mer. He ordered that the fort should be named La Navidad, and apparently believing that the Taino were weak, pacific and timid, began the return voyage without seeing the construction of the fort. He left 39 of his men there to trade with the Indians and to find gold.

Upon his return in November of 1493, Columbus found all of his men dead, the fort burned, and the supplies dispersed among the Indians over a distance of several kilometres. Various accounts indicate that the men died as a result of disease, outmigration, internal fighting, antagonizing their hosts by their greed regarding gold and women, and finally by an attack from another Taino cacique. Columbus, with a considerably altered attitude toward the Taino Indians, abandoned the area, and left to establish La Isabela to the east (discussed below).

At 200,000 square metres in area, En Bas Saline is the largest Taino site mapped so far in Haiti. Archaeological investigations at the site, carried out from 1983 to 1988 by the University of Florida working with Hodges, provide strong evidence that En Bas Saline was, in fact, the town of the cacique Guacanacaric. Its size and shape indicate a chiefly capital, in that the village is in the shape of a circle surrounding a plaza and raised mound for the chiefly residence (Figure 3) (Williams 1989). The site was established at about A.D. 1200, and its artifacts and chronometric dates, in conjunction with documentary sources, indicate that the site was inhabited until shortly after A.D. 1500. Late fifteenth century European materials were present in the upper strata and deposits from the site (Deagan 1986, 1987), and the location of En Bas Saline closely conforms to the descriptions of Guacanacaric's town as given in the log of Columbus and the chronicles of the second voyage (Gil y Varela 1984:166–171).

Extensive excavations at En Bas Saline have located a cluster of very early historic features on the raised mound in the central plaza. These are associated with a very large oval structure that was built in prehistoric times, used over a long period, and burned shortly after 1492. The

**Figure 3.** En Bas Saline archaeological basemap.



structure was at least twelve, and possibly as many as twenty metres in diameter. It had clay-covered wattle and daub walls, and a thatched roof.

Radiocarbon dates from charred wood in the posts of the structure's earliest level, and thermoluminescence dates from Taino ceramics in the fill provided a mean adjusted date of ca. A.D. 1300 (Beta Analytic 10527, 46759, 46763). Burned refuse from the upper floor levels (apparently from structural collapse), and materials deposited in the holes left when some of the posts had been pulled out of the ground, provided TL and $C^{14}$ dates of A.D. 1400 ± 35 (1405–1475) (Beta 10526, 10528; Alpha 1912, 1914).

We can refine this later date, however to shortly after 1492, by the presence of European pig (*Sus scrofa*) and rat (*Rattus rattus*) bones in the deposit. These bones have been studied by Elizabeth Wing (University of Florida) and Jonathan Ericson (University of California at Irvine), whose stable isotope analyses of the bones strongly indicate that the individual animals came from the Old World, and not from the Americas (Ericson n.d.). This is significant in assessing the very early date for the site's post-Columbian occupation, because very few pigs came to Hispaniola after Columbus's second voyage. In the absence of competing species, pigs rapidly multiplied with enormous success in Hispaniola, and quickly became a pest (Crosby 1972:75–77; Sauer 1966:156–57). Pigs were not among the relief supplies requested at La Isabela in 1494 (Parry and Kieth 1984:187).

Only 18 European artifacts were excavated from reliable contexts at En Bas Saline, but all of them (as well as all of the European animal bones) were found in and adjacent to the large burned structure. Tiny fragments of metal, *melado* glazed earthenware, majolica pottery and glass were found here. Interestingly, the glass fragments from La Isabela are very close in chemical characterization to those excavated at La Isabela, Columbus's 1493 settlement discussed below (Brill 1992).

Regardless of whether or not En Bas Saline was the location of La Navidad, its critical contribution to the study of the contact period has been in the insights it provides about the social consequences of European arrival for the Taino Indians. It should be noted that, despite the fundamental importance of those consequences to cultural development in the Caribbean during the first century after Columbus, this has been one of the most elusive areas of contact-era scholarship. No written documents generated by Taino Indians exist, and those written by Spaniards are heavily distorted by perceptual biases, political motivation and simple misunderstanding (see for example Todorov's discussion of Columbus's observations, 1985:14–50 and Bucher 1981). Taino demise was furthermore so rapid after contact that it has been extremely difficult to archaeologically locate and isolate post-contact Taino occupation components.

Other than that at En Bas Saline, the most substantial such components have been identified at Yayal in Cuba (Dominguez 1984), and at various burial sites in the Dominican Republic (Garcia Arévalo 1978a, 1990; Garcia Arévalo and Morban Laucer 1971; Chanlatte Baik et al. 1971; Vega 1979; Goggin 1968:30–31).

Contact period Taino towns have been located and tested throughout the Greater Antilles, but none has yet been systematically excavated with an orientation toward contact period cultural dynamics. These include Taino sites adjacent to La Isabela (Veloz Maggiolo and Guerrero 1986; Taviani 1984, vol. 2:161; Caro 1973), and several sites in Jamaica such as those at Sevilla Nueva (Lopez y Sebastian 1986; Hammond 1969; Goggin 1968:37–39; Goodwin 1946). In the Bahamas the only stratigraphically documented post-contact Lucayan site excavated so far has been the Long Bay site on San Salvador (Hoffman 1986; see also Keegan 1992:202–204).

Analyses of the post-contact contexts at En Bas Saline tentatively suggest some of the initial changes experienced by the Taino after contact and before their demise (Deagan 1986; Cusick 1989, 1991). These changes reflect very early, non-directed responses to social disintegration, and do not include replacement of native technologies, materials or functions by European counterparts, or the adoption of European stylistic and formal elements in native craft traditions. The phenomenon of adopting European elements is documented at several slightly later and longer-lived Taino sites, such as that at Yayal in Cuba, where Taino-produced objects show clear evidence of European formal influence (Dominguez 1984). This is undoubtedly due, at least in part, to the difference in duration of post-contact occupation at the two sites, since Yayal was occupied by Taino people for several decades after contact, and is one of the longest-occupied post-contact Taino sites in the Caribbean.

At En Bas Saline, however, a general stylistic simplification and loss of specialization is suggested in the post-contact period assemblage. A smaller proportion of ceramics was decorated, and there was a loss of several formal and decorative elements in the ceramic repertoire (Cusick 1989). A lower proportion of ornamental and ritual items occurs in the post-contact contexts. There was also a significant reduction in the quantity of items related to manioc production (griddles and abraders) during historic times, and an increase in the diversity of shellfish species used (Wing n.d.).

These trends—admittedly based on preliminary data—may indicate changes in response to depleted population, a loss of demographic normality through the removal of males for mine labour, and a breakdown in the transmission of specialized knowledge of craft traditions. Taino population depletion and these associated processes undoubtedly began

immediately after the establishment of La Navidad and the exposure of Guacanacaric's people to common European pathogens.

When Columbus returned in 1493, the village of Guacanacaric had been burned along with the fortified area in which the Spaniards lived, and it is not known whether or not the site was re-occupied by the Taino. The instructions for the 1514 *repartimiento* (the division of the surviving Indian population among Spanish settlers as obligated labour) indicate that there were very few Indians in the area of Puerto Real (just 2 kilometres from En Bas Saline) in 1513 (Arranz Marques 1991:265).

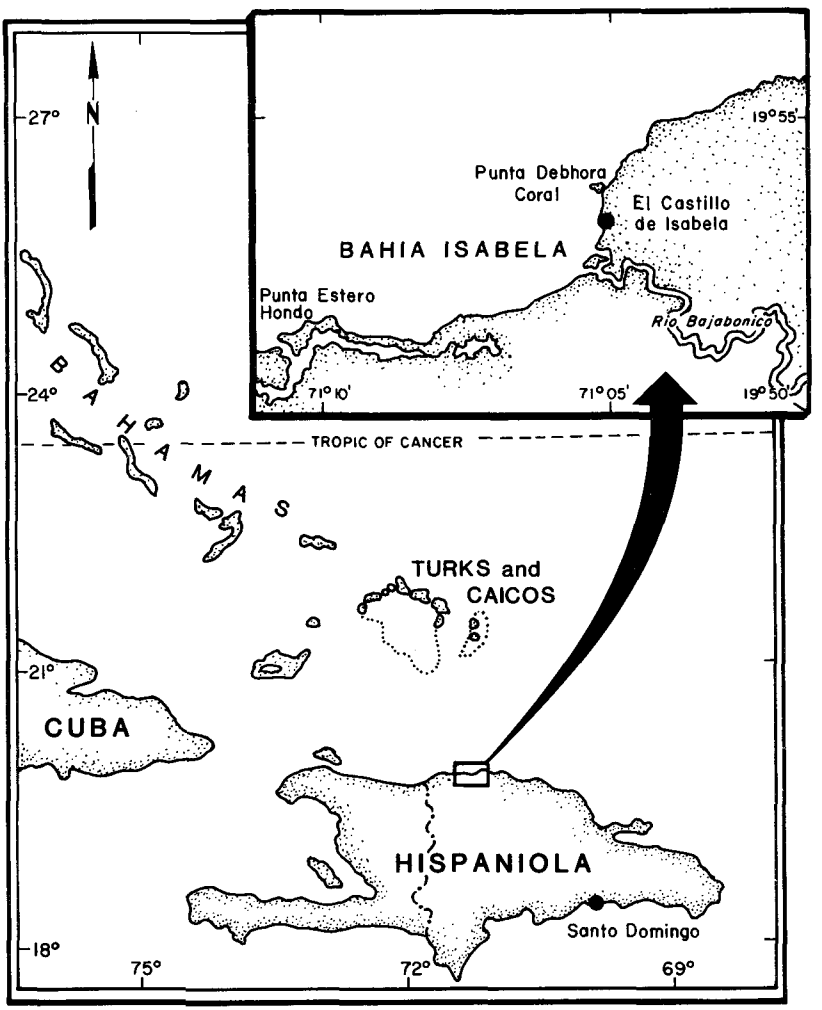



**Figure 4** Location of La Isabela.

The second expedition of Columbus to the Americas included 17 ships, some 1500 men (no women) and all the things considered necessary for a proper colony (see Las Casas' description of preparations for the second voyage in Parry and Kieth 1982:70–71). After learning the fate of his men, Columbus decided that La Navidad was an unhealthy area for his first settlement, and fled some 150 kilometres to the east, near present day Puerto Plata. The fleet dropped anchor on January 2, and said the first Mass on January 6, the Epiphany, and officially established La Isabela (Figure 4).

## La Isabela: First Colony

La Isabela is the first Old World colonial venture leading to permanent occupation in the Americas, and the only wholly medieval site in the Americas. It was here that European plants and animals were first introduced systematically, and here that an exchange of American and European cultural elements was sustained.

The site is today the National Park, "Solar de las Americas", located on the north coast of the Dominican Republic at the small fishing village of El Castillo. The current archaeological project began through the instigation of the Dominican National Park Service in 1986, when a team from the University of Florence under the direction of B. Chiarelli excavated portions of the cemetery of La Isabela in conjunction with the Museo del Hombre Dominicano (Chiarelli 1987; Luna Calderón 1986).

In 1987 José F. Maria Cruxent of the Universidad Nacional y Experimental Francisco de Miranda of Venezuela began large-scale excavations at La Isabela for the Dominican National Park Service, and took up year-round residence at the site. In 1989 a joint collaboration was initiated among the Dominican National Park Service, Cruxent, the University of Florida team directed by Deagan, the Fundación Garcia-Arévalo in Santo Domingo, and the Spanish Agencia Española de Cooperación Internacional.

For centuries since Columbus dropped anchor at La Isabela, historians and sailors have pondered the question of why that site was chosen. Despite its advantages, which include a good defensive position (on a rocky cliff, surrounded on three sides by water) the proximity of a stone quarry and proximity to the traditional Taino trade route into the allegedly gold-rich interior of the island, the site also had several disadvantages. The open bay did not have an anchorage that was well-protected from hurricanes, nor was it close to a supply of fresh water or to agricultural soils. Scholars have suggested over the years that Columbus was a poor

judge of an appropriate site for his colony, and although that may have been partly true, recent archaeological evidence somewhat mitigates this interpretation.

In his surveys of the areas surrounding La Isabela in 1986, Cruxent located an indisputable late fifteenth century site across the bay from El Castillo in the area known today as "Las Coles" (Cruxent 1990) (Figure 5). Las Coles contains evidence for a small domestic settlement, and an area of pottery production, and may well be the place referred to by the physician-chronicler Dr Chanca as "Ciudad Marta" (Cruxent 1990; Gil and Varela 1984:152). A pottery kiln dating to the late fifteenth century was discovered at Las Coles (Figure 5), along with abundant evidence for the production of pottery vessels, roof tiles and bricks (Cruxent 1989). A radiocarbon determination based on charcoal from the interior of the kiln yielded a date of A.D. 1470 ± 40.

Cruxent believes that it was in this area of Las Coles—on the left bank of the Bajabonico river—that the Spaniards disembarked upon their arrival and established their initial settlement adjacent to the river, fertile agricultural soils and clay deposits. This seems to have been a service settlement, occupied by farmers and artisans for the support of the primary administrative and military settlement at El Castillo. Until the present archaeological project, the settlement at El Castillo had always been

**Figure 5** Las Coles kiln during excavation, La Isabela. Photo: José Cruxent.

considered as the only site of occupation at La Isabela. The discovery of this "service" settlement at Las Coles provides an entirely new insight into Columbus's strategy for spatial organization, which was based on multiple, spatially discrete nuclei.

The exploitation of Hispaniola's resources—especially gold—was the driving impetus for the colony, and Columbus's primary concern for a settlement location was proximity to the interior gold fields of the Cibao (Guerrero y Veloz-Maggiolo 1988; see also Chanca's discussion in Parry and Kieth 1984:84). The "Paso de los Hidalgos"—the primary Indian communication route between the allegedly gold-rich Cibao and the coast —opened to the bay of Isabela. Possibly recognizing this and wishing to take advantage of it, Columbus built his military and trade centre in the best defensive position in the bay, and supported it with a satellite settlement in the best subsistence position in the bay.

The primary settlement of La Isabela, located today at the town of El Castillo, across the bay from Las Coles, has been the focus of much of the archaeological work. The site covers an area of approximately 250 metres by 200 metres, all of which was enclosed by an earthen wall during Columbus's occupation (Cruxent 1990; Deagan 1992a; Dobal 1988; Puig-Ortiz 1973).

One of the most interesting questions at La Isabela to historians of urban planning is whether or not Columbus established the prototype of the Spanish American grid-plan town in 1492. Despite the evidence of documents (Varela 1986) the limited archaeological data so far suggest that this was not the case, and that Isabela may have been organized by medieval principles. No evidence for the regularity of orientation characteristic of a grid-plan town has been documented so far at the site, in that all of the principal stone buildings at the site (church, storehouse, Columbus house, powder house) are aligned at unique angles in relation to north, with no two structures sharing the same orientation (Figure 6).

The town plaza and principal masonry buildings, including the church and its cemetery, the fortified storehouse, the powder house, the house of Columbus, and a circular watchtower are arranged along the seafront. Chronicles indicate that the settlers lived in some 200 palm thatch and wood "huts", which were located behind the bayfront to the rear of the site.

The house documented as belonging to Columbus served as a small citadel, with its own fortification wall describing an enclosed circle of some 18 metres in diameter, into which the inhabitants of La Isabela could take refuge if the earthen walls surrounding the town were breached (Figure 7). This structure has been stabilized and preserved by the architects with the Agenica Española Cooperación team (Campos Carrasco et al. 1992).

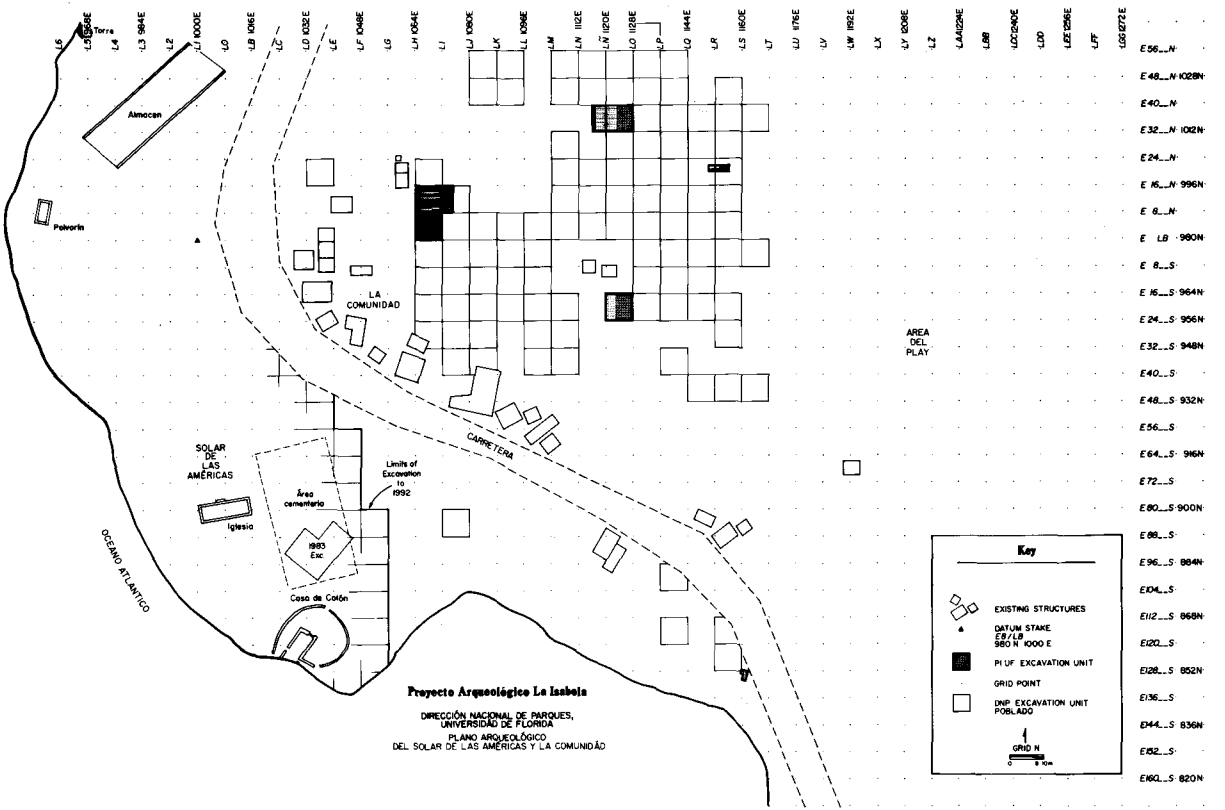



**Figure 6** La Isabela basemap showing orientations of the principal stone structures (Alhóndiga/Almacén; Colombus House, Church).

**Figure 7** Foundations of the Casa de Colón (Columbus House), La Isabela. Photo: Kathleen Deagan.

The architectural technique used by the Spaniards in the principal buildings of La Isabela was predominantly the packed earth, post-reinforced wall construction known as *pisé* or *mampostería* in medieval North African sites (Redman 1986:76). The long walls of the principal buildings were constructed of courses of packed earth coated with white lime plaster, built over shallow stone footings.

The short façade ends of the structures appear to have been constructed of cut limestone blocks, quarried a few hundred metres south of the site. Quantities of clay rooftiles (*tejas*) and flat bricks (*ladrillos*) were made locally at Las Coles and used extensively in these buildings.

The largest building at La Isabela was the storehouse–customs house structure—the *alhóndiga*. This measured 35 metres by 18 metres, and was also built of packed earth on the long walls and cut stone at the ends. The roof was of *teja*, and its immense weight was supported by 18 massive stone pillars inside the structure.

Evidence for domestic structures in the residential area is ephemeral, owing to the fragile palm-thatch construction of the settlers' huts, which is both noted in documentary accounts and shown in the shallow and inconclusive posthole patterns excavated in the residential section of La Isabela.


**Figure 8** Spanish hearth feature, La Isabela. Photo: Ricardo Fernandez-Sardina.

The areas surrounding the huts contain considerable quantities of fifteenth century European materials, and several deep hearths have been located in this residential area, associated with post patterns (Figure 8).

Equally as important as the architectural evidence from La Isabela are the artifacts recovered from the site. This assemblage is remarkable for a number of reasons, one of the most striking of which is its size. Despite the small size of the permanent population and the short, four-year duration of the settlement, as well as intense ground-disturbance and collecting activities over the years (Cruxent 1990), more than 586,900 excavated artifacts have been catalogued so far, and are described elsewhere (Deagan 1992b, Deagan and Cruxent 1992).

The artifacts of La Isabela provide not only a direct representation of the material world of Columbus in America, but also an insight into what Columbus and his cohorts perceived as necessary and appropriate for this first European colonial venture in the Americas. At least part of this perception appears to have been the recreation of fifteenth century Spanish life—a translation of material elements with relatively little intention of adopting American techniques or materials. This latter insight is particularly important to students of post-1500 Euro–American cultural development, in that it provides a baseline against which to assess adaptive change in response to the environmental and social realities of colonization in America.

Much of the European material at La Isabela was locally produced; for example, the unglazed coarse earthenware ceramics believed to have been made at the Las Coles kiln site constitute 82% of the European artifact assemblage. Emlen Myers and Jacqueline Olin of the Smithsonian Institution are currently studying the technological and physical aspects of these ceramics, and have established through neutron activation analysis that this pottery was made at La Isabela and not imported from Spain (Myers et al. 1992, Myers and Olin 1992).

There is so far no compositional evidence that glazed tableware pottery (*majolica, melado* and lead glazed wares) were produced locally at La Isabela. These do not differ substantially from the Sevillian glazed ceramic tradition already well-documented for late fifteenth century Andalucia (Lister and Lister 1987).

The production of familiar Spanish utility ceramics was obviously considered essential by the first European colonists in the Americas; however, these locally-made European utilitarian ceramics at La Isabela have no known parallel in post-Columbian America. At later sites, such as Puerto Real (see below), St Augustine, Florida (Deagan 1987:103–104) and Havana, Cuba (Dominguez 1984), Spanish settlers adopted locally-

**Figure 9** Locally-made European earthenware vessels, La Isabela. Left: Escudilla. Right: Mortero. Top diameter of Mortero is 13 cm. Photo: George Avery.

made Indian or African ceramics for utilitarian use and only occasionally attempted to produce them in traditional Spanish forms.

The pots made at La Isabela were furthermore produced in such typically hispanic–moresque medieval forms as amphoroidal jars (*tinajas*) broad concave plates (*platos*), carinated bowls (*escudillas*) and small globular jars (*jarras*) (Figures 9–10). *Morteros* were used for grinding spices, medicines and grain, and *bacines* and *lebrillos* for sanitary functions. The assemblage is quite similar to that documented for the fifteenth and sixteenth century Portuguese colonial site of Qsar Es Seghir in Morocco (Myers 1989; Redman 1986; Boone 1980).

Several of these pottery forms (braziers, morteros, amphoroid vessels and globular, high-collared jars) are found very rarely in the Americas outside of the fifteenth century sites of La Isabela and Concepción de la Vega. It should be noted that this is not the case in Spain, where such work as that of Fernando Amores, Bonnie McEwan (1988) and Florence and Robert Lister (1987) has documented the use of these vessels through the sixteenth century and later in Andalucia.

The materials from La Isabela are also unique in the Americas as the only wholly medieval European assemblage. The town and its material world are strongly influenced by Moorish material traditions and are medieval in character. This has been documented in the site's architecture, weaponry technology, horse equipment, metallurgical activities, personal ornamentation and coinage (Deagan and Cruxent 1992; Stahl 1992; Brill 1992).

Although ceramics numerically dominate the site's assemblage (86.6% of all European materials), the non-ceramic remains at La Isabela provide the clearest insights into the exploratory motives for the colony. Weaponry-related materials, for example, constitute only 0.4% of the materials, but reveal the late medieval military character of the expedition. Several small field guns (65 mm bore) of the variety known as *falconeta, culverin* or *feldschlange* were located, along with a large number of lead and iron balls ranging from 17 to 45 mm. Fragments of crossbow boltheads, however, were somewhat more frequent. Defensive concerns are also reflected in armour of both brigandine plate and chain mail varieties, horse equipage, and fragments of swords.

Much of this military activity took place in support of the search for gold. The expectations of Columbus in this regard can be seen in the large numbers of crucibles, lead sprue fragments and galena lumps excavated at the site, as well as some 55 grams of loose mercury.

The non-ceramic assemblage from La Isabela does, however, also contain a variety of intriguing late fifteenth century personal items, including some 17 finger rings in base metals. Many of these—particularly

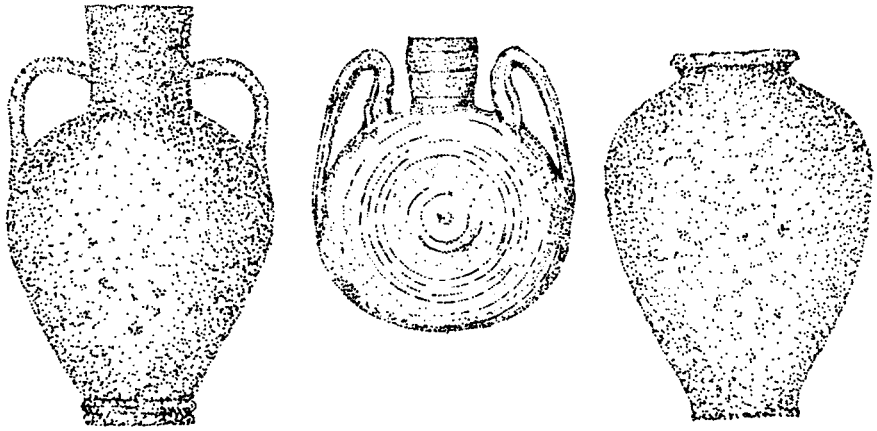


**Figure 10** Common unglazed earthenware utilitarian forms from La Isabela. Left to right: Amphora-necked tinaja; Cántaro; Tinaja. Drawing: George Avery.

several examples with a raised maltese cross on the simple bezel—were apparently intended for the Taino Indians of the region. Reliquary pendants, clothing ornaments, a single crucifix and nearly 100 late medieval coins were also recovered. The coins—mostly low denomination billón—included a variety of Castilian, Portuguese, and other European examples (Stahl 1992).

Almost no materials of these kinds (except the horse equipage) are found on Spanish–American town sites established after 1500, and the striking differences between La Isabela and these slightly later sites reflects the change from medieval to Renaissance patterns in technology, spatial patterning and social relations. (This is illustrated below by a comparison of the archaeological data from La Isabela with those from the post-1503 Hispaniolan site of Puerto Real).

Despite the substantial supplies of European items present in the colony and the availability of much of the range of late fifteenth century European science and technology, La Isabela began its decline within a very few years. By 1496—within 2 years of the colony's establishment—people began to relocate to the south coast, where Santo Domingo is located today. This process was virtually complete by 1498, and La Isabela fell into ruins. The site of the re-established settlement, "La Nueva Isabela", has recently been located and studied on the west bank of the Ozama river, opposite the modern city of Santo Domingo (Veloz Maggiolo and Ortega 1992).

By 1503, Santo Domingo was firmly established as the administrative seat of Spanish presence in the Caribbean, and in that year a series of thirteen outlying communities was founded throughout Hispaniola in order to subdue the island and its resources (Moya Pons 1986; Floyd 1973:62–4). One of these was the town of Puerto Real, occupied between 1503 and 1578, and established just a few kilometres from En Bas Saline (Figure 1) (Deagan, in press).

## Puerto Real: Emerging Spanish–American Criollo Society

Puerto Real was a cattle ranching community, with a thriving and often illicit trade in meat and hides (Hodges 1980; Lyon 1981). At its peak (during the second decade of the sixteenth century) it was occupied by more than 300 Spaniards and 1,000 unfree Indian labourers, many of whom were relocated from other parts of Hispaniola and the Caribbean. The town was forcibly abandoned and destroyed in 1578 at the instigation of the Spanish crown, because of the inability of the Santo Domingo officials to halt the illegal trade between the townspeople and foreign

traders, pirates and corsairs (Hodges 1980; Hoffman 1980:118–21; Lyon 1981).

The site of Puerto Real was also discovered by medical missionary William Hodges in 1976, while searching for La Navidad (Hodges 1980). The University of Florida carried out excavations in conjunction with Hodges at Puerto Real between 1979 and 1985, in order to study the structure of the town, the development of and changes in adaptive strategies of the Spaniards, the evidence of Spanish–Indian interaction and influence, and to understand the lifeways of the settlement (Deagan in press; Ewen 1987, 1991; Smith 1986; Williams 1986; Reitz 1986; McEwan 1986, 1983; Willis 1984; Shapiro 1983; Marrinan 1982; Fairbanks and Marrinan 1981).

A programme of mapping and sub-surface transect tests revealed a site area of approximately 16 hectares, arranged in a rectangular form of about

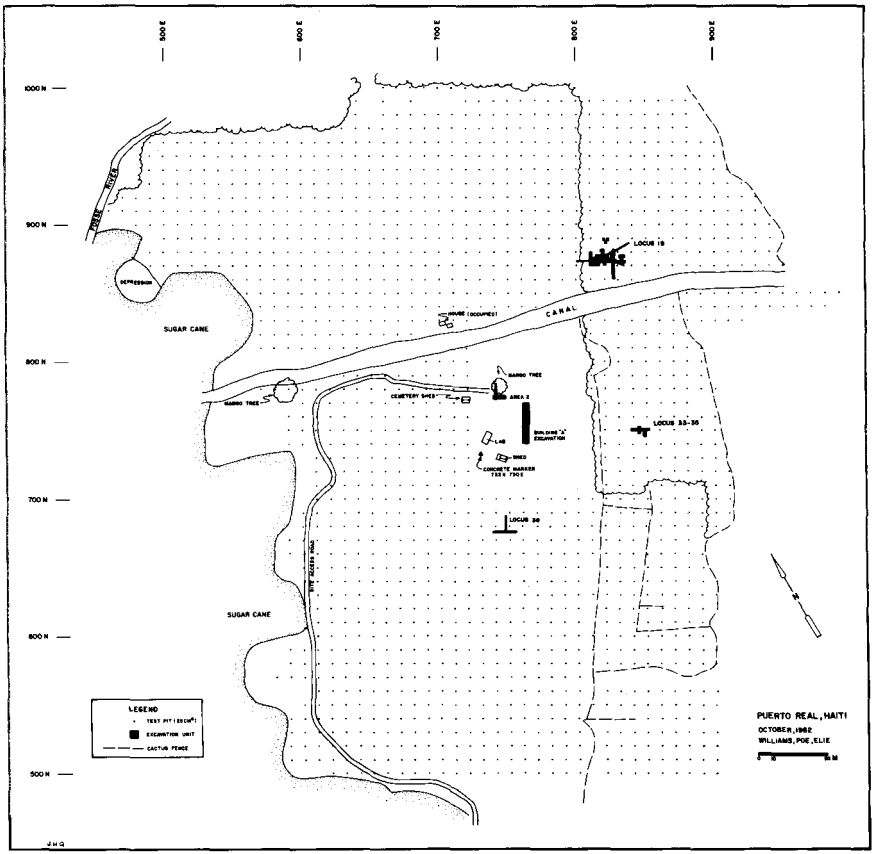



**Figure 11** Puerto Real archaeological basemap.

500 or 400 metres. The town was arranged—most probably on a grid plan—around a central plaza containing public buildings, a church and a cemetery (Figure 11) (Willis 1984; Marrinan 1982). All of the buildings revealed through excavation are aligned at an angle of approximately 30 degrees east of magnetic north. Sub-surface testing revealed the locations of 57 masonry structures, and there were undoubtedly many more non-masonry buildings. The material assemblages associated with these sites varied considerably according to site function and community status (Williams 1986).

Excavations have been carried out in the central plaza and church areas (Willis 1984; Marrinan 1982), revealing the remains of large stone buildings believed to have been the church and monastery or *audiencia* (Figure 12). The church structure measured 27 metres by seven metres, and was built and floored with the flat Spanish bricks known as *ladrillos* (Willis 1984:72–84). The building's walls were ornamented with *cuenca* tile and the exterior ornamented with carved limestone gargoyles. The cemetery was located on the west side of that building, with extended burials facing the building (faces towards the east), with arms crossed on the chest in the traditional Catholic mortuary pattern.

Three other areas at Puerto Real have been excavated, including two domestic sites (Ewen 1987, 1991; McEwan 1983, 1986; Deagan in press),

**Figure 12** Excavation of the Church site at Puerto Real. Photo: Ray Willis.

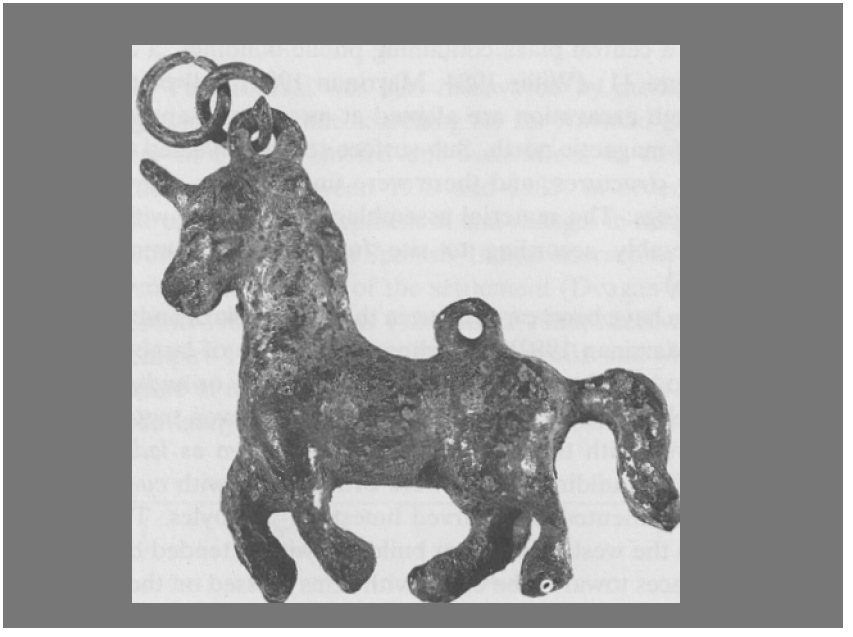


**Figure 13** Gilded unicorn pendant, Puerto Real (length, 2 cm). Photo: James Quine.

and a site believed to have been a commercial or manufacturing area, because of the huge quantities of cattle bone, awls and coins; and the small amount of domestic refuse recovered there (Reitz 1986; Deagan in press).

The domestic sites in particular have provided information about colonial life and the adaptive strategies of the Spaniards at Puerto Real. A diverse and international assemblage of items has been recovered from the town, including Spanish ceramics, Italian glass and ceramics, German stoneware, Oriental porcelain, a variety of metal ornaments and book fasteners, weaponry, jewellery, and many other small domestic implements such as knives, candlesticks and scissors (Figures 13–14).

Several archaeologically evident features of the Puerto Real site stand in contrast to those at La Isabela. Many of these, obviously, are consequences of the differences between the two settlements in such circumstances as length of occupation, economic bases (cattle ranching versus farming and metals prospecting), gender balance in the populations, the increased regularity of shipping and, therefore of supplies, after 1500, and the differences in defensive needs (Tainos versus non-Spanish Europeans).

Other differences, however, reflect a new post-medieval colonial strategy in place at Puerto Real, which was qualitatively different from that documented at La Isabela.

One example of the latter is the shift to a regular, patterned grid plan

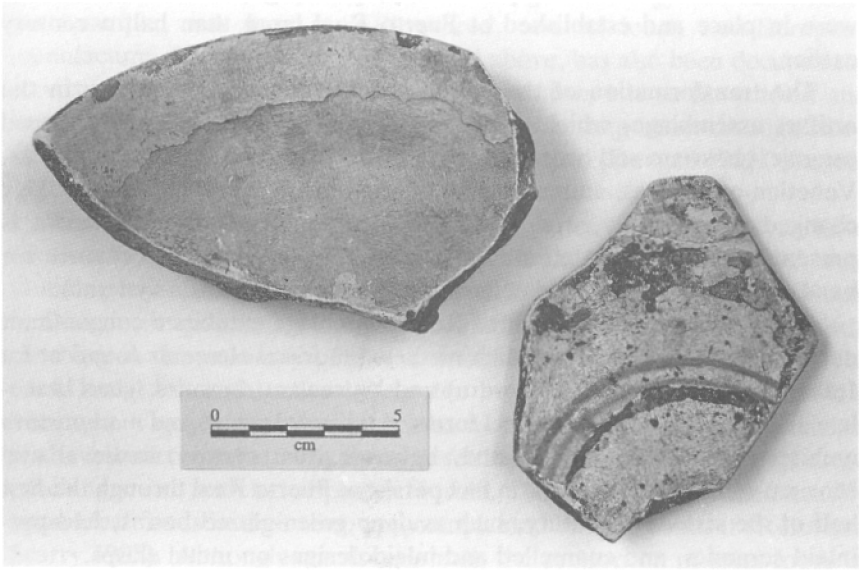



**Figure 14** Spanish majolica from Puerto Real. Left: Columbia Plain. Right: Yayal Blue-on-white. Photo: James Quine.

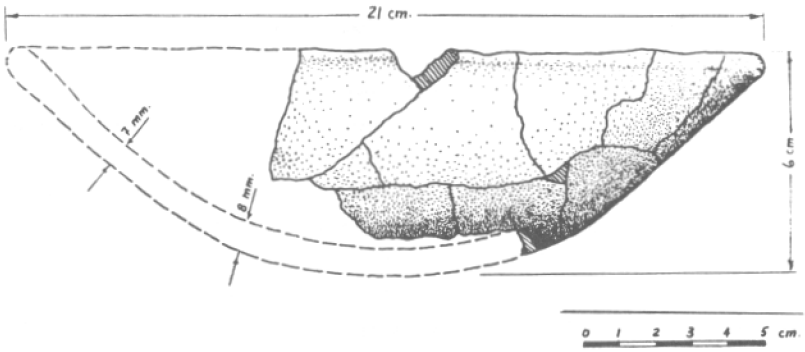



**Figure 15** Colono-ware bowl, Puerto Real. Drawing: William Hodges.

town layout, with a church and plaza in the centre. The orientation of the built environment at Puerto Real is extremely regular, suggesting a linear, grid-like organization. The public structures in the centre of the town, as well as the three non-public structures excavated so far, are oriented at an angle of approximately 30 degrees east of magnetic north. This indication of linear regularity in the town plan has suggested to many researchers at Puerto Real that at least some of the planning principles formally outlined

in the 1573 ordinances for Spanish town planning (Crouch et al. 1982), were in place and established at Puerto Real more than half a century earlier.

The transformation of the medieval pattern can also be seen in the artifact assemblage, which shows a sharp increase in Italian-influenced ceramic, glassware and ornament styles (Montelupo and Ligurian majolicas, Venetian glasswares, animal pendants, glass beads). Weapons technology changed dramatically, and although some evidence for crossbows is present at Puerto Real after 1503, there is more abundant evidence for hand-held firearms (with wheellock and matchlock ignition systems).

At the same time, the Puerto Real assemblage exhibits a concomitant decrease in the incidence of such medieval morisco elements found at La Isabela as *cuerda seca* (resist-ware) and lustreware ceramics, glass bracelets, filigree work, Moorish vessel forms, Arabic-style spurs and *mampostería* architecture. It should be noted, however, that certain medieval and Morisco-influenced traits do, in fact persist at Puerto Real through the first half of the sixteenth century, such as deep green-glazed basins, feldspar-inlaid ceramics, and enamelled and inlaid designs on metal clasps.

One of the most striking distinctions between La Isabela and Puerto Real, however, is the evidence at Puerto Real for adaptation to local circumstances through the adoption of local technologies and traits. Neither the tradition of producing locally-made European utility ceramics seen at La Isabela, nor the forms in which they are made, were continued at Puerto Real. There is also no evidence so far from other Spanish Caribbean sites that they were continued elsewhere. The scarcity at post-1500 American sites of both these traditions suggests that the adoption of American-influenced cooking techniques in the last years of the fifteenth century caused ollas and braziers to be replaced with aboriginal vessels and open fires for cooking; amphoroidal vessels for storage to be replaced by Indian vessels and olive jars (Goggin 1960); and that manos, metates and griddles for the preparation of corn and cassava were more useful in Spanish American households than were the morteros and other equipment for processing traditional Spanish plant foods.

This appears to reflect a profound shift in colonial social behaviour after 1500—the reproduction of traditional and familiar Spanish material life was no longer of primary importance in the domestic arena. This was in turn undoubtedly correlated with the increasing rate of intermarriage among Spanish men and Indian women in Hispaniola during this period (Dobal 1985:53–57; Floyd 1973:59–61; Mörner 1967:26–37) and the acceptance and incorporation of American wives and American technologies into Spanish households.

This pattern is reflected archaeologically in the household assemblages

of Puerto Real. The majority of the cooking technology at Puerto Real, for example, was hand-built, low-fired, and of local, non-European manufacture. This phenomenon, as noted above, has also been documented at virtually every post-1500 Spanish colonial town site so far studied and reported in the Caribbean or Florida, and is an important distinguishing characteristic from Anglo–American colonial sites (Deagan 1983: Chapter 10).

The diet of the Spanish colonists at Puerto Real appears to have consisted primarily of beef and pork, with little incorporation of local faunal species (Ewen 1992; Reitz 1986; McEwan 1983; Reitz and McEwan in Deagan, in press). This was undoubtedly due to the primacy of cattle ranching in the economy of the town, which produced an abundance of beef. Local fish and turtles were eaten by the Spanish colonists, but did not make a major contribution to the diet. This stands in sharp contrast to the faunal record at early Spanish settlements more remote from cattle ranching areas, such as in Spanish Florida. There the settlers relied heavily upon local foods in their diet, and complained bitterly about it (Reitz and Scarry 1985). Although remaining small, the proportion of local foods in the diet of the Puerto Real colonists increased through time, possibly reflecting greater familiarity with the environment, a decline in cattle ranching activities, or sampling bias.

It is not possible to compare the Spanish diets from Puerto Real and Isabela, since the preservation of floral and faunal remains at Isabela is extremely poor. Those bone fragments recovered from excavations have come from disturbed contexts, and do not provide a reliable sample of fifteenth century diet, while flotation of a large number of soil samples has yet to produce carbonized plant remains.

Plant remains are unfortunately not well-preserved at Puerto Real either; however, the presence of Taino-style ceramic griddle fragments in the archaeological record of Spanish households indicates that local cassava bread was used to some extent.

Puerto Real has provided an important source for understanding some of the adaptive mechanisms employed by the Spaniards in the Americas as second and third generation *criollos* established themselves in the colony. The work to date has indicated that the use of native New World technologies by the Spanish colonists follows the pattern documented for Spanish Florida (Deagan 1983:271) of a Spanish–Indian syncretism found primarily in non-socially visible areas, and those typically associated with women's activities (Ewen 1992). Socially visible areas remained characteristically Spanish.

Detailed analysis of the locally-made utilitarian ceramic assemblage from Puerto Real by G. Smith (1986) has also helped to provide

demographic insights into the decline of the indigenous Taino peoples used as a labour force, and their replacement by enslaved Africans.

The rapid demographic collapse of the native population of the Greater Antilles through introduced disease and social disruption has been discussed above. The resulting loss of the labour force exploited by the Spaniards had a grave effect on Native Americans even in regions peripheral to the Greater Antilles. Even before colonization efforts began, slave raids were common in the Lesser Antilles, the Bahamas, Florida, the Yucatan Peninsula, the northern coast of South America and in Panama (Keegan 1992:218–23); Elliott 1987:18–21; Sauer 1966:189–94). These had the effect of depleting Amerindian populations in advance of European settlement through both the taking of slaves and the introduction of diseases.

By 1518, even these more distant groups could not satisfy the Spanish demand for labour. Exacerbating this situation was the eclipse of mining by sugar and hide production as the primary economic activity in Hispaniola (Lockhart and Schwartz 1983:73–75), requiring an even larger labour force. This spelled doom not only for the native inhabitants of the Caribbean, but also for many thousands of African people brought to the Caribbean as slaves after this date to fill the labour vacuum.

Social and material exchange among African, Amerindian and European populations began immediately, and occurred extensively through the colonial period. The demographic and racial patterns that characterize the region today emerged from this interaction. Although the resulting Afro–Caribbean tradition has been studied in detail (e.g. Landers 1990; Price 1973; Crahan and Knight 1979; Deive 1978; Mintz 1974; Armstrong 1989, among others) its origins in the Spanish contact period have been given little archaeological attention (exceptions include Arróm and Garcia-Arévalo 1986; Smith 1986; Vega 1979; and Veloz Maggiolo (1974)).

The Puerto Real site has been able to help inform us about the material aspects of this transition through analysis of the non-European utilitarian pottery from Spanish households. Smith (1986) has shown that during the earliest stages of occupation in the town, small amounts of Taino Carrier pottery were present in the Spanish households. They were associated with a simple undecorated ceramic ware with a paste similar to the Taino wares, but with forms and surface treatment not documented for prehistoric times. These latter sometimes had European formal elements.

Along with these wares of probable historic Amerindian origin—and increasing and replacing them through time—was a thick, low-fired, dark, pottery referred to in general as "colono-ware" (Figure 15). Temporal analysis of its distribution at Puerto Real suggests that this pottery may have been made by African, rather than Indian, slaves, since it occurs most frequently in contexts dating after the demise of the Indian population. It

also constitutes an increasing percentage of the entire material assemblage through time (Ewen 1991). This pottery incorporates European and African formal elements, but it is likely that Amerindian influence was incorporated as well. These ceramics are among the very first material expressions of the social process that shaped the society of the "new world".

Very similar wares have been reported from sixteenth century Spanish contexts in Cuba (Romero 1981:90; Dominguez 1978); Nueva Cadiz, Venezuela (Willis 1976), and the Dominican Republic (Garcia Arévalo 1978a, 1990). Regardless of the origin of the wares, however, it is clear that the Spaniards adopted locally-produced non-European wares as their primary kitchen pottery throughout the circum-Caribbean region, and that this trend not only persisted but increased throughout the colonial period (Deagan 1985:19, 1983:ch. 10).

## Conclusion

Archaeological investigations at contact era and early colonial sites in Hispaniola have provided a basis for developing models to describe both the cultural processes related to European–American encounters in the Antilles, and the results of those processes.

En Bas Saline is the earliest excavated Taino site at which contact with Spaniards took place. Although the site was apparently occupied for no longer than two decades after contact, changes resulting from this contact are evident in the archaeological record. These include loss of both form and design elements in the post-contact ceramic repertoire, a loss of overall diversity in the artifact assemblage, a decrease in manioc production, and a loss of specialization in the procurement of faunal resources.

Post-contact changes at this very early site do not appear to have included the replacement of Taino elements by Spanish elements, or the incorporation of Spanish stylistic traits in the Taino material assemblage. This is not true of Taino sites occupied for a longer period after Spanish contact, such as Yayal, or some of the Dominican Taino burial sites. At these sites there is in fact evidence for both the incorporation of European items in the material assemblage, and the adoption of European stylistic and formal traits in Taino ceramic traditions.

This limited sample of sites suggests that initial uninterest in or rejection of Spanish influence by the Taino, in favour of maintaining their traditional patterns, was not a successful strategy in the early contact period. Those Taino groups who survived after the first decade of contact

apparently accepted and incorporated certain European elements, at least in the material sphere.

Spanish adjustments to the encounter were, in a certain sense, structurally similar. The earliest colonists at La Isabela clearly attempted to reproduce and transpose a late-medieval Spanish social and material template onto the American landscape, with little attention to American technologies. This was not a successful strategy, and, in those settlements that persisted, colonists soon developed a uniquely American adjustment, characterized by the adoption and incorporation of Amerindian traits. The archaeological record suggests that this admixture included the incorporation of Amerindian elements in non-socially visible, infrastructural areas, such as diet and food preparation, while visible symbols of social identification—and especially those related to male activities—remained rigidly Spanish. Even after the extinction of the native Taino and related Amerindian people in the Caribbean, Spanish colonists continued to incorporate non-European traits into their households, replacing Indian contributions with African.

The social patterns that distinguish Spanish America today have their roots in these early Spanish colonial sites, and they are most clearly seen in the archaeological record. They stand in sharp contrast to patterns documented on Anglo–American colonial sites, which show instead a systematic exclusion of non-European traits in the colonists' households (Schuyler 1976; Deetz 1977). The cherished notion of the multi-ethnic and multi-racial "melting pot" as the process by which North American society developed is not substantiated in the archaeological record of Anglo–American colonial sites. It is perhaps ironic that it is instead in the Spanish colonial world—currently the focus for considerable political reproach for the consequences of Columbus's voyages—that a genuine Euro–American "melting pot" is being brought to light.

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