The Oxford Handbook of Caribbean Archaeology
OXFORD
UNIVERSITY PRESS

Oxford University Press is a department of the University of Oxford. It furthers the University's objective of excellence in research, scholarship, and education by publishing worldwide.

Oxford New York
Auckland Cape Town Dar es Salaam Hong Kong Karachi
Kuala Lumpur Madrid Melbourne Mexico City Nairobi
New Delhi Shanghai Taipei Toronto

With offices in
Argentina Austria Brazil Chile Czech Republic France Greece
Guatemala Hungary Italy Japan Poland Portugal Singapore
South Korea Switzerland Thailand Turkey Ukraine Vietnam

Oxford is a registered trademark of Oxford University Press in the UK and certain other countries.

Published in the United States of America by
Oxford University Press
198 Madison Avenue, New York, NY 10016

© Oxford University Press 2013

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, without the prior permission in writing of Oxford University Press, or as expressly permitted by law, by license, or under terms agreed with the appropriate reproduction rights organization. Inquiries concerning reproduction outside the scope of the above should be sent to the Rights Department, Oxford University Press, at the address above.

You must not circulate this work in any other form and you must impose this same condition on any acquirer.

Library of Congress Cataloging-in-Publication Data
p. cm.
Includes bibliographical references and index.
F169.O94 2012
930.109729—dc23
2012009019


1 3 5 7 9 8 6 4 2
Printed in the United States of America on acid-free paper
The contrast between the insatiable European ambition for gold and an apparent lack of interest in using it by the locals has contributed to a popular image that underestimates the cultural importance of metals among the indigenous population of the Antilles. This situation is worsened by the scanty presence of metals in the archaeological record and the limitations in our knowledge about their characteristics and insertion in the societies that the Spaniards encountered in the fifteenth century.

Traditionally, this topic has received very little attention. In the last few years, however, new research has focused on the functions and mythical meanings of metals, emphasizing their value to understand the links between the insular and the continental Caribbean. It is also worth highlighting the development of archaeometric studies focused on materials excavated from Cuba. This chapter summarizes this recent work together with ethnohistorical and documentary information, presenting a generalizing view that acknowledges the importance of metal artifacts to indigenous cultures, notes continuities and changes in their use, and explores their role in the social transformations in the area.
The earliest references to the use of metals among the indigenous communities of the Antilles come from the first Colombian voyage. Columbus (Colón 1961) mentions the presence of gold nose rings in the Bahamas and a possible silver object in Cuba. In Hispaniola, the recovery of gold objects increases dramatically; metals are received as gifts from chiefs and other important people, in the form of sheets, ornaments, and guaízas. From these sources, one can also obtain a general view about the names employed for the different metals. In the Northeast, the area where the Ciguayos lived, indigenous peoples described as different from those seen previously, gold was known as tuob; to the West, it was called caona; in the remaining islands (Bahamas and Cuba), nozay. There was also low [carat] gold (oro bajo) or alambre, known as tuob in Hispaniola. It is reported that the latter was very abundant in two islands, Matinino and Goanin. During his visit to the Ciguayo area, Columbus also reports the presence of copper, but he does not specify whether the natives used it.

When discussing Columbus’s information and considering further aspects of the conquest, Las Casas (1875a:326) states that silver was not used, and clarifies that Goanin or Guanín is not an island, but a kind of low-carat gold, purplish in color, which the Indians recognized by its color and valued very highly. Las Casas refers to its use in La Hispaniola, but there are also references to pectorals of this metal among chiefs of Puerto Rico (Fernández de Oviedo y Valdés 1851:480) and Jamaica (Bernáldez 1962). According to Las Casas (1875b:226), Columbus sent samples of guanín to be assayed in Spain, where they were determined to be an alloy of gold, silver, and copper. This metal was used to pay for wives. The sheets and ear spools of this material were known as taguaguas. The Spaniards knew of its enormous value among the Indians, who preferred guanín to gold (Las Casas 1875c:496), so they even gave it to the chiefs in exchange for great quantities of higher carat gold.

The sheets or plastas of gold in Hispaniola were not cast, but manufactured by hammering together gold nuggets collected from rivers (Las Casas 1875a:411), a process also described in Cuba (Velázquez 1973:68). The local lack of knowledge about metal smelting is noted by Columbus in his second voyage. According to Fernández de Oviedo (1851), the Indians recovered the gold from the rivers, never from mines; in Hispaniola, the process of gold collecting required a period of preparation, during which men had to fast and remain separated from their wives.

The inventory of material obtained between 1495 and 1496 by means of barter, gifts, expropriation, or tribute in Hispaniola (Alegria 1980a) reiterates the dominant role of gold in the form of sheets and also highlights the variety of artifacts adorned with these: guaízas, inhalers, ornaments, vomit spatula, cotton belts and hats, spear throwers, idols. These are all ritual implements, religious images or attributes for chiefs. Metal sheets were incrusted, inserted, or sewn onto other
materials. In one case, they cover one piece completely. There is also mention of “a gold grain turned into a frog” that has been interpreted as a carving, as well as a small gold chain. Only two guanin pieces are mentioned, and neither of them appears as an incrustation on other material. Even though guanin was not the preferred metal for the Spaniards, it was useful as an element for barter with the local populations. Hence, its scarce presence in the inventory may be an indication of a real scarcity in general.

The majority of the artifacts originate from chiefs. Caonabo and his relatives provide 30 percent of the 332 gold objects mentioned, excluding grains or nuggets. This distribution shows a clear hierarchical control over metals and, especially, objects adorned with metal. In Puerto Rico, gold was used as an offering to idols; ear spools and nose rings made of this metal were generally worn by chiefs (Moscoso 1986:366). These are the ones who tell Europeans about the rivers where gold is found, which possibly indicates a restricted access to this information. Showing where to find gold-bearing rivers is one of the gestures of friendship by the chief Agüefabana to Juan Ponce de León, in addition to giving him an Indian name and one of his sisters as a wife (Chanlatte Baik 1977:19). Jamaica seems relatively poor in gold; however, one of the chiefs on this island shows him lavishly adorned with gold and guanin. These appear to be special accoutrements worn in a second encounter with the Europeans (Bernáldez 1962:329), while no metals are mentioned in the report of the first encounter. This is an important piece of information about the circumstantial use of the metal, as it could help to understand the apparent simplicity in the ornamentation of chiefs on other islands such as Cuba and Bahamas. In any case, this does not explain the relatively poor European recovery of metals reported for these islands or even for Jamaica itself.

Guanin appears to be strongly linked to the lands to the East, in an area controlled by very bellicose Indians that the Spaniards name Caribes. Its abundance is reported in Martinino, an island to the East of Puerto Rico identified with current Martinique (Whitehead 1996:99). By 1498, the search of spaces to the Southeast of Hispaniola and Puerto Rico led to the discovery of Trinidad and the continental coasts, where many Indians with gold and guanin were seen (Fernández de Navarrete 1922:279).

The picture that emerges from these data is one that shows the presence of metals in the various islands, seemingly including ethnic groups with different linguistic traits, behavior, or body appearance. Gold is the dominant metal, but the scarce guanin has higher value, always related to high-status individuals and mainly used for special occasions. Gold is strongly related to the elites, but some body ornaments appear to be of daily use and perhaps accessible to commoners in certain circumstances. In Hispaniola, the use of gold is reported among men and woman, whereas guanin is predominantly associated to males. On this island, metals seem more abundant. In particular, gold appears employed as an ornament, as well as forming part of religious artifacts; among them, the valuable idols or cemíes, revered as supernatural objects and treasured by chiefs. The guatizas or carátulas, representations of
human faces commonly used as a gift in alliances, are noted not only because of their abundance but also the richness of their ornamentation, reaching up to 10 gold incrustations.

The indigenous communities quickly noticed the European interest in gold, which may have prompted ostentatious displays, as well as occultation. Gold would be useful to strike alliances with the Europeans or to attenuate the confrontation; using promises of gold, they could lead them away, removing their dangerous presence. This may have triggered a re-evaluation of gold not only in terms of its exchange value but also in its importance in ceremonial contexts. Potentially, its symbolic power grew, as evidenced in Cuba when it is treated as an idol or entity imbued with cemí, that is, animated and with the capacity to interact with the cosmos (Oliver 2007:47). Las Casas (1994, 1844) narrates how gold is both adored and destroyed in a ceremony where the devastation brought by Europeans to Hispaniola, caused by their ambition for gold, is acknowledged. The ritual includes dances and chants, and it prepares the indigenous resistance combining their resources for handling the supernatural: gold is invoked as a spiritual mediator with the newcomers but it is also annihilated as done with the cemíes of enemy chiefs.

Although many or all of the European objects attracted great interest among the indigenous communities, brass had a special appeal. The chief Guacanagarí expressed an interest in a brass bacín (chamber pot) that Columbus ended up offering to him as a gift; Caonabo was tricked into putting on handcuffs of a precious metal. According to Las Casas (Las Casas 1875a:204), “anything made of brass was esteemed more than anything else, and because of this, for a aglet, they would give without difficulty as much as they had in their hands; they called it turey, as a thing from the sky, as turey was the name they used for the sky.” The term turey could designate a range of European materials, although some researchers (Oliver 2000; Vega 1987) relate it specifically to brass. Las Casas specifies that the Indians appreciated a special smell in brass, akin to what happened with guanín. Its sheen and color also evoked those of guanín. In addition, its remote origins in Spain, and the exoticism of those who brought it, charged brass with a special value. These circumstances determined its rapid insertion in the local symbolism of power: Europeans would capitalize on the growing demand for brass, analogous to that of guanín, and exchange the European copper alloy for pure gold. Gold and guanín are projected as manifestations of a complex system of complementary and opposed elements (Oliver 2000). Guanín, and by extension turey, as a remote material, combined its special smell, the gleaming elements featuring in stars and other parts of the natural world, with notions of day, masculinity, and chief. On the contrary, gold, available locally, is related to night, femininity, profanity, and weak scent. Beyond this dichotomy, guanín embodied a sacred principle that adopted the numinous quality of both metals, providing chiefs with the quality that legitimized their powers to rule and to communicate with the supernatural. In an environment where iridescence appears to have been so important, the position of
guanín, reddish and perhaps less shiny than gold, may have been supported by other factors. Potentially, features such as its stronger smell may have played an important role. As a non-Antillean object, it allowed references to other spaces, including those of ancestors, as well as to mechanisms of interaction and situations of mobility; these are concepts that communities in different islands probably adapted to their own religious schemes and sociopolitical contexts. In this sense, and while taking different expressions on each island, guanín may have served as a shared symbolic resource that justified and facilitated social relationships and exchanges.

**Late Guanín**

Toward the late fifteenth and early sixteenth centuries, the Spaniards arrived at Mesoamerica and northern South America, where gold and guanín are found in abundance. It is believed that easier access to guanín may have stimulated its exchange for gold in the Greater Antilles. Sued Badillo (2001:184) reports a 1501 royal bill that still prohibited the sale of guanín in Hispaniola “as this was used for dealings with the local Indians in exchange for, presumably, gold from mines.” The scarce documentation available appears to support this situation, even if it also indicates a notable reduction in the availability of gold and guanín among the indigenous populations.

The accounts of the treasurer of La Hispaniola, Cristóbal de Santa Clara, referred to 1505–1507 (Mira Caballos 2000:31), mention metal artifacts obtained through war, tribute, or gift on this island. Although specific reports of guanín are not many (four at least), this quantity means an increment compared to the figures obtained from the 1495–1496 inventory. In various cases, the artifacts reported are complete figures and not sheets (gold idols, gold *macucos*), which, together with the guanín (of unspecified shapes) suggest that objects of non-Antillean origin may have been obtained through mediation by the Europeans. It is difficult to tell the extent to which this exchange was promoted on other islands. In attacks to indigenous settlements in Puerto Rico following the 1511 uprising, only three guanín objects were obtained, and no gold at all. One of them is described as a “copper guanín,” and the rest as “fake guanín,” so they might constitute sheets of European copper (Alegria 1980b:436). This situation indicates a rather rapid contraction in the availability of gold and a certain persistence in the use and acquisition of guanín.

Given the lack of coins, guanín was used as an alternative currency in Hispaniola, acquiring higher value than the gold it contained (Sued-Badillo 2001:184). During the 1520s, it was used to purchase Indian slaves in northern South America (Deive 1995:195). During this period, there is an important flow of guanín to the Greater Antilles coming from the Costa de Perlas, Nicaragua, and
Santa Marta in Colombia (Deive 1995; Freide 1951; Real Academia de la Historia 1885). The melting of guanín objects in Cuba toward 1527 suggests a change in the use of these objects, possibly owing to a reduction in the productivity of gold extraction on the islands.

These changes take place during moments of total European control of the local populations of the Greater Antilles, and in the middle of demographic and political crises. As such, the use of guanín as a means of payment, for barter or as a rescue, may no longer be as important as before. In the Lesser Antilles, however, in relatively independent communities, metals retained their value and Europeans continue to use them for deals with the indigenous population. Toward the end of the sixteenth century, Carib chiefs in Dominica are described as employing brass ornaments obtained from the Europeans (Hulme and Whitehead 1992:60), and throughout the seventeenth century one can commonly find mentions of the use of caracoli or karakoulis, an alloy similar to guanín. According to Breton (1978:61), in 1635 the Caribs from Guadalupe obtained this metal from rival groups on the continent. The artifacts were sheets of various shapes, mainly half moons employed as nose rings, ear spools, and pectorals. The caracoli was deemed a male ornament, and it was a prominent commodity in the exchange networks that connected the Greater Antilles with the groups of northern South America (Boomert 1987:38). Apparently, it lacked the complex connotations attributed to guanín in the Greater Antilles; instead, it was associated to aesthetic aspects, as well as symbolic concepts around purity (Helms 1987:75).

**The Archaeological Record**

The limited consumption of metal in funerary contexts, together with the Spanish plunder, means that the number of metal artifacts recovered archaeologically is very limited (Table 34.1). Metals do not appear in Archaic contexts, and the oldest piece is a guanín found in Maisabel, Puerto Rico, associated to Cedrosan Saladoid material in strata dated to A.D. 70–374 (cal 2 sigma; Siegel and Severin 1993:77). In Vieques, another object was found whose coloration suggests it could be guanín (Oliver 2000:200; Siegel and Severin 1993), in Terminal Saladoid or possibly transitional Elenan Ostionoid contexts. The easternmost metals (a gold sheet and a possible guanín one) have been found in Cinnamon Bay, Virgin Islands, at a site with Elenan Ostionoid and Chican Ostionoid ceramics. On the islands to the Southeast, including Trinidad, no metals have been recovered.

In Puerto Rico, Luis A. Chanlatte Baik (1977:46) found a gold nose ring at a burial in late Ostionoid contexts, in Tecla 1. He reports references to the finding of a metal sheet in Monserrate, Luquillo, which could be made of the same metal. For the Dominican Republic and Haiti, a few items purported to be of gold have
Table 34.1. Details of Gold and Guanín Objects Recovered from Indigenous Archaeological Sites in Caribbean Islands.

<table>
<thead>
<tr>
<th>Object</th>
<th>Length/diameter (mm)</th>
<th>Max. width (mm)</th>
<th>Possible metal identified</th>
<th>Metal Type of Cu % Ag % Au %</th>
<th>Country/island</th>
<th>Site/region</th>
<th>Bibliographic reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nose ring</td>
<td>22</td>
<td></td>
<td>gold</td>
<td>x</td>
<td>Puerto Rico</td>
<td>Tecla I</td>
<td>Chanlatte Baik 1977</td>
</tr>
<tr>
<td>Sheet</td>
<td></td>
<td></td>
<td>gold</td>
<td></td>
<td>Puerto Rico</td>
<td>Monserrate</td>
<td>Chanlatte Baik 1977</td>
</tr>
<tr>
<td>Sheet</td>
<td>10 7</td>
<td></td>
<td>guanín</td>
<td>SEM-EDS</td>
<td>Puerto Rico</td>
<td>Maisabel</td>
<td>Siegel and Severin 1993</td>
</tr>
<tr>
<td>Sheet with several perforations</td>
<td></td>
<td></td>
<td>guanín</td>
<td></td>
<td>Puerto Rico</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>10</td>
<td></td>
<td>gold</td>
<td></td>
<td>Islas Virgenes (USA)</td>
<td>Cinnamon Bay</td>
<td>Wild 1999</td>
</tr>
<tr>
<td>Sheet with two perforations</td>
<td>12</td>
<td></td>
<td>guanín</td>
<td></td>
<td>Islas Virgenes (USA)</td>
<td>Cinnamon Bay</td>
<td>Knippenberg, Personal communication with Valcárcel Rojas, 2011</td>
</tr>
<tr>
<td>Two sheets with perforation</td>
<td></td>
<td></td>
<td>gold</td>
<td></td>
<td>Haiti</td>
<td>Cadet</td>
<td>Chanlatte Baik 1977</td>
</tr>
<tr>
<td>Sheet</td>
<td>20</td>
<td></td>
<td>gold</td>
<td></td>
<td>Haiti</td>
<td>Limonade</td>
<td>Vega 1987</td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>100</td>
<td></td>
<td>gold</td>
<td>99</td>
<td>R. Dominicana</td>
<td>Montecristi</td>
<td>Vega 1987</td>
</tr>
<tr>
<td>Sheet</td>
<td>23</td>
<td></td>
<td>gold</td>
<td>99</td>
<td>R. Dominicana</td>
<td>Montecristi</td>
<td>Vega 1987</td>
</tr>
<tr>
<td>Sheet</td>
<td></td>
<td></td>
<td>gold</td>
<td></td>
<td>R. Dominicana</td>
<td>La Cucama</td>
<td>Vega 1987</td>
</tr>
<tr>
<td>Sheet</td>
<td>50</td>
<td>15</td>
<td>gold</td>
<td>R. Dominicana</td>
<td>La Cucama</td>
<td>Vega 1987</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>----</td>
<td>----</td>
<td>------</td>
<td>---------------</td>
<td>-----------</td>
<td>-----------</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>27</td>
<td>13</td>
<td>gold</td>
<td>R. Dominicana</td>
<td>La Cucama</td>
<td>Vega 1987</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>13</td>
<td>5</td>
<td>gold</td>
<td>R. Dominicana</td>
<td>La Cucama</td>
<td>Vega 1987</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>18</td>
<td>5</td>
<td>gold</td>
<td>R. Dominicana</td>
<td>La Cucama</td>
<td>Vega 1987</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>21</td>
<td>16</td>
<td>gold</td>
<td>7.2 92.5</td>
<td>Jamaica</td>
<td>Bellevue-White River Lee 1985</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>14</td>
<td></td>
<td>gold</td>
<td>Cuba</td>
<td>Potrero de El Mango Rouse 1942:144, plate 8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>24</td>
<td>6</td>
<td>guanín</td>
<td>Cuba</td>
<td>La Rosa de Los Chinos Mesa 1989</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>12</td>
<td>10</td>
<td>gold SEM-EDS</td>
<td>5.6 94.4</td>
<td>Cuba</td>
<td>Toma del Agua Torres Etayo 2006: 58</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>35</td>
<td>7</td>
<td>gold</td>
<td>Cuba</td>
<td>El Martillo Yero Masdeu et al. 2003: 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>13</td>
<td></td>
<td>gold XRF</td>
<td>1.5 20.1 78.4</td>
<td>Cuba</td>
<td>Esterito * Valcárcel Rojas et al. 2007</td>
<td></td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>14</td>
<td>7</td>
<td>gold</td>
<td>Cuba</td>
<td>El Paraiso Ulloa Hung 2000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>20</td>
<td>16</td>
<td>gold XRF</td>
<td>0.1 8.5 91.4</td>
<td>Cuba</td>
<td>Laguna de Limones * Valcárcel Rojas et al. 2007</td>
<td></td>
</tr>
<tr>
<td>Human figure</td>
<td>48</td>
<td></td>
<td>guanín</td>
<td>Cuba</td>
<td>Santana Sarmiento Miguel Alonso 1951</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Continued)
Table 34.1. (Continued)

<table>
<thead>
<tr>
<th>Object</th>
<th>Length/ diameter (mm)</th>
<th>Max. width (mm)</th>
<th>Possible metal identified</th>
<th>Metal type of analysis</th>
<th>Cu %</th>
<th>Ag %</th>
<th>Au %</th>
<th>Country/island</th>
<th>Site/region</th>
<th>Bibliographic reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheet with perforation</td>
<td>21</td>
<td>9</td>
<td>guanín</td>
<td>XRF</td>
<td>49.5</td>
<td>13.9</td>
<td>36.5</td>
<td>Cuba</td>
<td>El Boniato</td>
<td>* Valcárcel Rojas et al. 2007</td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>13</td>
<td>9</td>
<td>gold</td>
<td>XRF</td>
<td>0.1</td>
<td>3.8</td>
<td>96.0</td>
<td>Cuba</td>
<td>El Morrillo</td>
<td>* Valcárcel Rojas et al. 2007</td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>20</td>
<td></td>
<td>gold</td>
<td>XRF</td>
<td>6.5</td>
<td></td>
<td>93.5</td>
<td>Cuba</td>
<td>Loma del Aïte</td>
<td>* Valcárcel Rojas et al. 2007</td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>13</td>
<td>17</td>
<td>guanín</td>
<td>SEM-EDS</td>
<td>47.9</td>
<td>12.6</td>
<td>39.5</td>
<td>Cuba</td>
<td>El Chorro de Maïta</td>
<td>Martinón-Torres et al. 2007</td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>19</td>
<td>15</td>
<td>guanín</td>
<td>SEM-EDS</td>
<td>55.1</td>
<td>10.0</td>
<td>34.9</td>
<td>Cuba</td>
<td>El Chorro de Maïta</td>
<td>Martinón-Torres et al. 2007</td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>16</td>
<td>15</td>
<td>guanín</td>
<td>XRF</td>
<td>41.7</td>
<td>12.9</td>
<td>45.4</td>
<td>Cuba</td>
<td>El Chorro de Maïta</td>
<td>* Valcárcel Rojas et al. 2007</td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>23</td>
<td>24</td>
<td>guanín</td>
<td>SEM-EDS</td>
<td></td>
<td></td>
<td></td>
<td>Cuba</td>
<td>El Chorro de Maïta</td>
<td>Guarch Delmonte 1996</td>
</tr>
<tr>
<td>Bell</td>
<td>13</td>
<td></td>
<td>guanín</td>
<td>XRF</td>
<td>26.8</td>
<td>30.0</td>
<td>43.1</td>
<td>Cuba</td>
<td>El Chorro de Maïta</td>
<td>* Valcárcel Rojas et al. 2007</td>
</tr>
<tr>
<td>Sphere</td>
<td>3</td>
<td></td>
<td>guanín</td>
<td>XRF</td>
<td></td>
<td></td>
<td></td>
<td>Cuba</td>
<td>El Chorro de Maïta</td>
<td>Guarch Delmonte 1996</td>
</tr>
<tr>
<td>Item</td>
<td>X</td>
<td>Element</td>
<td>Technique</td>
<td>SEM-EDS</td>
<td>XRF</td>
<td>XRF</td>
<td>XRF</td>
<td>Location</td>
<td>Authors</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----</td>
<td>---------</td>
<td>-----------</td>
<td>---------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-------------------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Bead</td>
<td>2</td>
<td>gold</td>
<td>SEM-EDS</td>
<td>1.3</td>
<td>5.2</td>
<td>93.4</td>
<td>Cuba</td>
<td>El Chorro de Maíta</td>
<td>Martinón-Torres et al. 2007</td>
<td></td>
</tr>
<tr>
<td>Bead</td>
<td>2</td>
<td>gold</td>
<td>XRF</td>
<td>1.8</td>
<td>8.1</td>
<td>90.1</td>
<td>Cuba</td>
<td>El Chorro de Maíta</td>
<td>* Valcárcel Rojas et al. 2007</td>
<td></td>
</tr>
<tr>
<td>Bird figure</td>
<td>23</td>
<td>guanín</td>
<td>SEM-EDS</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>Cuba</td>
<td>El Chorro de Maíta</td>
<td>Guarch Delmonte 1996</td>
<td></td>
</tr>
<tr>
<td>Sheet</td>
<td>21</td>
<td>guanín</td>
<td>SEM-EDS</td>
<td>57.0</td>
<td>6.4</td>
<td>36.6</td>
<td>Cuba</td>
<td>Alcalá</td>
<td>Martinón-Torres et al. 2007</td>
<td></td>
</tr>
<tr>
<td>Sheet with perforation</td>
<td>22</td>
<td>9</td>
<td>XRF</td>
<td>53.0</td>
<td>8.6</td>
<td>38.4</td>
<td>Cuba</td>
<td>Vega de Labañino</td>
<td>* Valcárcel Rojas et al. 2007</td>
<td></td>
</tr>
</tbody>
</table>

*Note: X indicates the unquantified presence of a given element. Chemical compositions reported in weight percent (wt%). * indicates compositional data from the ongoing study by Marcos Martinón-Torres, Roberto Valcárcel Rojas, and María Filomena Guerra. X-Ray Fluorescence (XRF), Scanning Electron Microscopy-Energy Dispersive Spectrometry (SEM-EDS).*
been found, but the identity of the metal has only been confirmed in those found by Krieger in Montecristi (Vega 1987:36). The largest number of metal objects comes from Cuba, totalling 22. One of them is from Laguna de Limones, a site with a mixture of Meillacan Ostionoid and Chican Ostionoid materials. The one from Vega de Labañino lacks a clear context, and its authenticity cannot be ascertained. The rest of the artifacts where recovered in Meillacan Ostionoid contexts. Archaeometallurgical analyses have allowed the identification of 10 of these artifacts as guanin and another seven as unalloyed gold (Cooper, Martinón-Torres, and Valcárcel Rojas 2008; Guarch Delmonte 1996; Martinón-Torres et al. 2007; Torres Etayo 2006; Valcárcel Rojas et al. 2007). Of the remaining pieces, two could be guanin, and three visually appear to be gold. Also from a Meillacan Ostionoid context is the laminar disc with embossed decoration found in Bellevue-White River, Jamaica.

In addition to the 40 objects reported in Table 34.1, the Antillean record includes a wooden stool (Oliver et al. 2009:248) and a small bone idol (Chanlate Baik 1977:61, Plate 8), both from the Dominican Republic and with laminar incrustations that appear to be of gold (seven in total); there are also reports of gold fragments and nuggets from this part of Hispaniola (Ortega 2005:257) and Puerto Rico (Oliver 2000:200).

The predominant forms in gold are sheets of thickness less than 1 mm, with simple subcircular, oval, or trapezoidal shapes (Figure 34.1), often with a perforation for suspension or attachment to another material. In other cases, gold sheets may have served as incrustations, as suggested by their extreme thinness, reaching 20 μm in a piece from Laguna de Limones (Figure 34.1h). In some cases, imperfections give the impression that the artifacts were unfinished. Their size rarely exceeds 3 cm, which may be related to the limitations imposed by the small size of the natural gold nuggets. The largest sheets come from the Dominican Republic. Some gold pieces are decorated with embossed lines, although this is an unusual feature in gold, and occurs preferentially in guanin. The latter alloy, although occurring as laminar pendants as well, also appears as three-dimensional objects obtained by lost-wax casting (Figure 34.1a and b).

Only seven pieces are not laminar. With the exception of the nose ring from Puerto Rico and two extremely small cylindrical gold beads from El Chorro de Maita, Cuba, the remaining of these artifacts are guanin from the Yaguajay area, in northeast Cuba. One anthropomorphic figure recovered in Santana Sarmiento and a bird head found in a burial of El Chorro de Maita (Figure 34.1a to b), are clearly reminiscent of Colombian typologies. The former is similar to Zenú pendants, while the latter could be an element of a Tairona pectoral from Sierra Nevada de Santa Marta (Valcárcel Rojas et al. 2007:121). Also from El Chorro de Maita are a small sphere and a guanin bell. Cuban sites with metal cover the whole period of Meillacan Ostionoid presence on the island; however, the majority of guanin objects are associated to a post-Columbian indigenous burial from El Chorro de Maita.
So far, archaeological data are in agreement with ethnohistorical information with regards to the manufacture and composition of metal artifacts. No evidence of smelting or casting installations has been found, which again confirms European references to the lack of high-temperature metallurgy in the Antilles. In some
metal sheets from Jamaica and Cuba, it was determined that their manufacture involved the cold hammering of one or more gold nuggets (Lee 1985:344; Torres Etayo 2006:58). One of them was polished, possibly using clay as an abrasive (Lee 1985, 344). Hammering appears to be the technique employed to manufacture the extremely small cylindrical gold beads found in Cuba, although heat was applied to facilitate bonding (Martinón-Torres et al. 2007:197). The chemical composition of the gold artifacts analyzed strengthens the supposition of an alluvial origin, as it shows the typical presence of small quantities of silver and copper as impurities, with no indication of refining or artificial alloying. All of these data are consistent with the possibility of local manufacture.

The chemical composition of guanín artifacts clearly denotes the use of artificial alloys. Even though it is difficult to determine whether the silver levels are natural or artificially adjusted, the high copper levels, exceeding 25 percent (Table 34.1), are not found in natural alloys and must have been obtained through high-temperature smelting. Considering the absence of evidence for smelting technology in the Antilles, together with the ethnohistorical references and the stylistic parallels noted, it is likely that all the guanín artifacts found in the Antilles constitute imports.

These features of the chemical data have been noted for the piece from Maisabel (Siegel and Severin 1993:77), and for some of the Cuban examples (Martinón-Torres et al. 2007:197; Valcárcel Rojas et al. 2007:120). An ongoing study by Marcos Martinón-Torres, Roberto Valcárcel Rojas, and María Filomena Guerra, employing hand-held X-ray fluorescence (XRF), scanning electron microscopy (SEM), and proton induced X-ray emission (PIXE) has identified new gold and guanín artifacts in a relatively wide sample of Cuban items (Table 34.1). Their compositions are, in general, similar to those of previously analyzed artifacts, but slight variations in the levels of silver, copper, and trace elements suggest the possibility of various sources for both types of metals.

This study is also offering new information regarding the differences in the manufacture of gold and guanín objects. In the former, it is possible to observe remnant porosity from the nugget structure, as well as seams and overlaps that indicate the combination of one or more nuggets; the abundance of microcracks confirms a process of intense hammering. These observations agree with those made by the Europeans when describing the indigenous work on alluvial gold. The outline shape of these laminar objects is achieved through cutting and breaking actions that often leave recognizable traces on the edges. Although the surfaces may appear polished, the marks on the edges are not polished or smoothed beyond some occasional lateral hammering. Some sheets display perforations that were clearly made by piercing with a sharp needle from one side; with burrs left around the hole on the opposite side (Figure 34.1f). This suggests that either there was no concern for a careful finishing of the pieces, or these pendants were pierced or sewn onto other substrates in a manner that would not show their back sides.

Guanín laminar artifacts show a different manufacture. Here, potential traits of hammering, cutting, or perforating have been removed through a very thorough
polishing action. Perforations are perfectly polished, with no burrs left (Figure 34.1d). Except for the Vega de Labañino piece, hammer marks are not identifiable, and the polishing agent employed for the surface must have been very soft and fine-grained. The embossed decorations are sometimes achieved by discontinuous strokes, perhaps with a chisel. The guanín bell from El Chorro de Maíta can be confirmed to have been manufactured by the lost-wax technique (Figure 34.1c). Thus, the preliminary results of this study confirm the technological and compositional differences between gold and guanín, and reaffirm the nonlocal character of the latter.

Archaeometallurgical studies have also identified brass aglets in burials from El Chorro de Maíta. Their ornamental use shows the indigenous appropriation of a metal that, among the indigenous communities, was not considered as merely utilitarian but held important symbolism (Valcárcel Rojas et al. 2010). Akin to brass, given that guanín was obtained through contact with other cultural spheres both before and after the conquest, its value and meaning must have changed in the process of incorporation to the Antillean social and symbolic structures. In the Antilles, guanín was a finished object; in Colombia, where it was manufactured, it was both material and object and, as such, less valuable than gold. There, the creative power and symbolism of alloying gold (male) and copper (female) was recognized, resulting in an allegory of the processes of transformation and origin of the human existence (Falchetti 2003:350).

**FINAL CONSIDERATIONS**

It is assumed that in the early expressions of the Cedrosan Saladoid (from 400 to 350 B.C.), guanín objects must have been among the commodities exchanged between the islands and the South American continent, as a part of wider interaction schemes that facilitated the survival of the colonisers and their access to the continental regions (Boomert 2007:8). Their use was not destined to highlight individuals as much as the communal spirit—a phenomenon also recorded for other valuable objects in Maisabel (Siegel 1996:326). In later societies, access to metal would be more restricted and individualized, as discussed by Oliver (2000) for Chicán Ostionoid contexts. This change is related to development of social complexity initiated in communities with Ostionan Ostionoid contexts (after A.D. 600). From these, we only have one gold nose ring, from Tecla 1; its location in a burial may be associated with an accentuation of the hierarchical use of such items. It is significant that the finds for Cedrosan Saladoid sites are only of guanín (or suspected guanín), whereas such material is absent in Ostionan Ostionoid occupations. Although archaeological information is meager, it is useful to consider the possibility of a trend toward the replacement of continental metals by Antillean ones, or at least an increase in the use of local gold. Similar phenomena have been
proposed for the use of some rocks employed for ornaments and ritual paraphernalia (Knippenberg 2004). This behavior could be a response to difficulties in the supply of guanín but also to the progressive growth of insular aesthetic and ritual expressions as local developments of the Ostionan Ostionoid.

Ethnohistorical sources indicate that the import of guanín continued in both the Greater and Lesser Antilles. The location of the Lesser Antilles, as a link with the continent and with Puerto Rico, makes them a potential route of access for guanín, and possibly gold, to the Greater Antilles. One should also consider imports resulting from direct voyages between the Greater Antilles and the continent—a type of mobility documented in European sources (Amodio 1991:599). Continental sources may have been varied. North Guyana has been proposed as a potential provider of guanín for the Greater Antilles (Whitehead 1996:121) but this point has not been confirmed. The only metal piece found to the northeast in South America, the pectoral from the Mazaruni River in Guyana, seems related to production and exchange activities generated in Colombia.

As noted by Rodríguez Ramos (2010), the date ascribed to the guanín from Maisabel coincides with a moment of expansion of Colombian gold work that could perhaps be linked to early exchange networks connecting Colombia and the Antilles. For Rodríguez Ramos (2010), the absence of guanín in the Lesser Antilles and the Central North and Northeast of South America, strongly support the possibility of direct interaction between the Greater Antilles and the Intermediate Area. Although many of the guanín pieces from Cuba seem to originate in Colombia, it is difficult to date their moment of arrival, and thus the possibility that many of them were obtained through European interaction remains open.

The expanded and repeated use of metal, especially guanín, seems to mark a link that confirms the relationship between the Cedrosan Saladoid and the Ostionan Ostionoid with the developments Chican Ostionoid and Meillacan Ostionoid. This connection defines the continuity of some symbolic aspects and strengthens the idea of permanent interaction with continental areas, parallel to the diverse changes and readjustments documented for societies in the region. In this sense, and in certain islands, metal seems to be one of the cultural elements, objects, practices, and structures (Curet and Oliver 1998; Siegel 1999) that the elites manipulated in the transition from egalitarianism and communal solidarity to the progressive political and religious hierarchization.

The Chican Ostionoid spaces in the Dominican Republic are likely the result of processes of this kind. Here, gold appears concentrated in few sites, but always in significant quantities and in contexts of strong hierarchization. A single burial with a high concentration of gold, guanín, and other ornaments in El Chorro de Maita, Cuba, may express a similar situation. However, metals on this island are dispersed throughout almost all the space inhabited by groups with Meillacan Ostionoid ceramics. Furthermore, very few artifacts tend to be reported per site, and many of these sites lack evidence for strong hierarchization. This seems a pattern that starts from the inception of these communities, as indicated by a gold pendant from El Paraíso in a context dated to cal A.D. 638–1218 (2 sigma). These
examples seem to respond to different modes of sociopolitical organization. They demonstrate how some practices are shared but also adjusted in a diverse cultural environment.

The use of gold in Chicolan Ostionoid and Meillacan Ostionoid contexts is significant. This is not just a marginal activity. In Hispaniola, it develops into a well-defined expression of local Antillean gold work. Here, gold sheets are large; Columbus (Colón 1961:135) mentions some as big as a hand. The combination of gold with diverse materials such as cotton, stone, wood, or shell required specific technical solutions such as incrustation with adhesive resins, sewing, embossing, or even a total coverage of other substrates with gold. As such, specialized knowledge would be needed for the selection of nuggets and sheets, their cutting and shaping, as well as a consideration of aspects such as shape, relief, chromatism, and texture. All of these details, in addition to the ritual-imbued process of searching for gold, point toward a well-established craft activity with clear social recognition.

Gold and guanín respond to clearly different technological and compositional patterns. So does their mobility. Guanín circulates as a finished object, always in small quantities and among elites. Gold may have moved in similar schemes, possibly even as a semifinished product, but its presence can generally be explained as resulting from local manufacturing traditions like those described for Hispaniola and Cuba. Frequently, gold forms a part of objects made of other materials, contributing to their special qualities for communication with the supernatural. The generally small size of both gold and guanín metalwork may be related to a similar feature in the metallurgical tradition of the Intermediate Area (Colombia, Panama, Costa Rica), as noted by Helms (1987). This tradition follows human scales and aims at marking specific individuals with the sacred iridescence and sheen that enables them as rulers and communicators with the supernatural. Having said this, their different technological and geographic origins give these metals specific places in both real and symbolic value systems. From this perspective, gold is a means of qualifying individuals whereas guanín is, in addition to this, a foremost emblem of the dynamic and interconnected character of the insular universe and of the latent link with continental spaces and ancestors.

References Cited


Fernández de Oviedo y Valdés, G. 1851. Historia General y Natural de las Indias, Islas y Tierrasfirma del Mar Oceano. Imprenta de la Real Academia de la Historia, Madrid.


