# domestic furniture of the Indians or one of their Gods.

# The Study of Lucayan Duhos

Joanna Ostapkowicz, World Museum Liverpool William Brown Street Liverpool, L3 8EN, UK Joanna.Ostapkowicz@liverpoolmuseums.org.uk

Of the 26 duhos known from the Lucayan archipelago – the largest concentration of wooden ceremonial seats in the entire Caribbean – fifteen have survived. This paper summarizes recent studies of their chronology, materiality and stylistic range, with the aim of interweaving pieces with good provenance back into the (pre-)histories of the islands. The extant Lucayan duhos date between ca. A.D. 1000 and A.D. 1630 and their distribution spans Eleuthera in the north to the southern Turks & Caicos chain, coterminous with wide-spread permanent settlement of the region. The main stylistic duho categories – both 'low-back' and 'high-back' – are in evidence early on, and the accomplished carving hints at an emerging Lucayan aesthetic that combines substantial size with elaborate two-dimensional carving. Anthropomorphic carvings predominate the corpus, which also ranges from naturalistic animals to faceless heads, indicating a rich iconographic diversity. Guaiacum sp. together with Cordia sp. are among the woods selected for carving – the latter a uniquely Lucayan preference. Duhos with good provenance are linked to islands that show increased evidence of trade and socio-political links to the Greater Antilles, suggesting that economic prosperity may have spurred increasing social hierarchy and a concomitant reliance on elite accourtements that functioned to reconfirm mores of status and hospitality.

Sur les 26 duhos connus de l'archipel de Lucayan, qui présente la plus grande concentration de sièges de cérémonie en bois de la Caraïbe, seuls 15 subsistent encore aujourd'hui. Ce document résume les études récentes concernant leur chronologie, leur importance et leur portée stylistique, afin de pouvoir replacer les pièces dont la provenance est connue, dans la (pré-) histoire des îles. Les duhos Lucayan connus sont datés entre environ 1000 et 1630 ap. J.-C. et leur distribution s'étend entre Eleuthera au nord et la chaîne de Turks et Caicos au sud, ce qui coïncide avec l'expansion maximale de ce peuple dans la région. Les principales catégories de duho stylistiques, tant « dossier bas » que « dossier haut », sont présentes dès les premiers temps, et les sculptures abouties font allusion à une esthétique Lucayan émergente qui combine format substantiel et gravure en deux dimensions. Le corpus est dominé par des sculptures anthropomorphes mais il présente également une large gamme allant des animaux naturalistes à des têtes sans visage, indiquant une riche diversité iconographique. Les essences de Guaiacum sp. et de Cordia sp. sont représentées dans les bois sélectionnés pour les sculptures, Cordia étant une préférence Lucayan unique. Les duhos dont la provenance est attestée sont liés à des îles qui présentent une augmentation des preuves de commerce et des liens socio-politiques vers les Grandes Antilles, ce qui suggère que la prospérité économique a peut-être incité de plus en plus la hiérarchie sociale et, de façon concomitante, le recours aux attributs d'une élite dans le but de confirmer les coutumes de statuts et d'accueil. De los 26 dujos que se conocen del archipiélago de las Lucayas - la colección más extensa de asientos ceremoniales de madera en el Caribe - quince han sobrevivido hoy día. Este trabajo resume los estudios recientes de sus cronologías, materialidad y rango estilístico, con el propósito entretejer estas piezas con buena información de proveniencia de vuelta a la (pre-)historia de las islas. Los dujos existentes han fechado entre ca. A.D. 1000 and A.D. 1630 y su distribución cubre desde Eleuthera en el norte a la cadena de las islas Turcas y Caicos en el sur, que coinciden con la expansión de asentamientos permanentes en la región. Las categorías estilísticas principales para dujo de espaldares bajos y altos son evidentes desde muy temprano, y la calidad del tallado apunta a una estética Lucaya emergente que combina tamaños substanciales con tallado bidimensional elaborado. Tallados antropomórficos predominan en el cuerpo, los cuales también oscilan desde animales naturalistas a cabezas sin caras, indicando una iconografía rica y diversa. Guaiacum sp. junto a Cordia sp. están entre las especies seleccionadas para el tallado – la última siendo una preferencia única de las Lucayas. Los dujos con buena información de proveniencia están asociados a islas que muestran evidencia de un incremento en el intercambio y con lazos con las Antillas Mayores, lo que sugiere que la prosperidad económica pudo haber motivado un incremento en la jerarquía social y en una dependencia en la elite lo que reconfirmaba los valores de estatus y hospitalidad.

#### Introduction

On November 3, 1835, in a letter to the Secretaries of the Wesleyan Committee, Rev. Theophilus Pugh (b. 1802, d. 1874) briefly describes the purchase of a duho during his visit to Savannah Sound, Eleuthera (Figure 1):

The Island in many places bears evident marks of having been under a state of high cultivation by the Indians, the original inhabitants. We saw many heaps of stones which they had collected in cleaning the ground for planting. The mind lingers with intense interest on everything connected with those interesting people who were either banished from, or butchered on these barren rocks by their avaricious invaders. Hearing that one of the Leaders had found in a cave hole an Indian stool curiously carved [I had the] stool ... sent for. It is made out of a hard piece of wood very durable. It stands 3 <sup>1</sup>/<sub>2</sub> inches high, 8 inches broad, and 14 inches long – it has 4 feet and the head of some nondescript animal carved at one end. The man asked for a trifle for it, which I gladly gave him.

Rev. Pugh (1835:152)

Pugh clearly had an interest in the archaeology of the region, and he recognised

that the *duho* (ceremonial seat) was an exceptional 'find'. Aware of its importance, he had the following inscription carved into the underside some years later:

This stool was found in a Cave in the Island of Eleuthera, Bahamas, about the year 1820 by James Thompson, a Slave, and purchased of him by Theos. Pugh, Wes. Missy. in 1835. It is supposed to be either a piece of domestic furniture of the Indians or one of their Gods. It is at least 300 years old. 1850'

On 8 July, 1918, a letter arrived at the British Museum (BM), offering for sale this 'quaint and unique piece of furniture'. Sir Hercules Read, then Keeper of British and Medieval Antiquities and Ethnography, replied with interest, and in a personal note scribbled to the side of one of the subsequent letters, wrote 'this could be very important' (BM archives, 11 July 1918). By August, the duho was secured for the museum's collections, and by January 1919, T. A. Joyce, Assistant Keeper of the collections, published an article describing the piece, noting that "Objects of wood from the West Indies are by no means common, and specimens from the Bahamas are exceedingly rare" (Joyce 1919:2).

#### Lucayan Duhos

The above is but a brief history of a fascinating object – the earliest documented duho from the Bahamas – charting its chain of custody, but also providing hints of the early understandings of these objects, which were considered rare curiosities of uncertain meaning (e.g., as Rev. Pugh's juxtaposition of furniture with divinity attests). This history is, to a degree, self-evident: it is scripted on the duho's surface, referred to in

letters – written by the men who acquired it in the 19<sup>th</sup> and early 20<sup>th</sup> centuries. What is less obvious is the prior, indigenous history of the object – its age, what material was selected to carve it, how it was made, and ultimately, why it was made. The meaning and value to the people who originally produced it is still poorly known and the way it fits into the duho/artistic style(s) of the region much less charted.



I clance a AMES & DOLL THE YEE mes Thomasona S wrebused of him by tes. Missim Eth. trs tobe eithers pieceolthe a side there that a of the Indians

Figure 1. Low-backed duho, *Guaiacum* sp., AD 1186-1273, Eleuthera, Bahamas [2]. L: 355mm; W: 196mm; H: 105mm (max). The duho bears an inscription on its ventral surface, recounting the history of its discovery in 1820 by James Thompson, and later purchased by Theophilus Pugh, a Wesleyan Missionary working in the Bahamas in 1835. Courtesy, Trustees of the British Museum (Am1918.1).

Recent research suggests that far from being rare examples, the Bahamas and Turks & Caicos Islands (TCI) provide the of highest concentration documented wooden duhos in the entire Caribbean (Figure 2): at least 26 examples are known Lucayan archipelago,<sup>1</sup> from the in comparison to 24 from the much larger island of Hispaniola, 16 from Puerto Rico, 8 Cuba and 2 from from Jamaica (Ostapkowicz 1998). Only when stone examples are included do Puerto Rico and Hispaniola exceed the number attributed to the Bahamas and TCI, from which no stone pieces are known. In addition, although duhos from both the Bahamas and TCI share

broad similarities to their Hispaniolan, Puerto Rican and Cuban counterparts, they display a cohesion suggestive of a local Lucavan style. Many are substantial carvings, measuring over a meter in length — making them the largest duhos from the entire Caribbean (Figure 3). Their distinctive features include, for those with extended backs, a long, gently tapering "tail" extension with the terminal end cut horizontally across the tip. Those without an extended tail terminate abruptly above the high, conical hind legs. For the most part, the facial carving of the anthropomorphic and zoomorphic heads appear more rounded and artistically freeform than the highly

stylized and angular conventions seen in southern duhos. In addition, some feature among the most accomplished twodimensional design panels seen in any Caribbean duhos (Figure 4). All this suggests that the elaboration of the duho reached new heights among the Lucayans.



Figure 2. Distribution map of the Lucayan archipelago (Bahamas and Turks and Caicos Islands), showing the provenance of 26 known duhos (17 from the Bahamas, and 9 from TCI); 11 of these have disappeared since discovery (illustrated in white, where archival images are available; in grey scale font, where their appearance is unknown). The surviving duhos – 10 from the Bahamas and 5 from TCI – were radiocarbon dated as part of the study (the calibrated dates listed below the titles are at 95.4% confidence) (Ostapkowicz 2012a, 2013a). The bracketed numbers cross reference with Tables 1 and 2, where more information about the individual duhos can be found.

This paper will briefly explore the chronological and stylistic ranges of this region's duhos, based on the examples selected as part of the 'Pre-Hispanic Caribbean Sculptural Arts in Wood' project, supported by grants from the British Academy and Getty Foundation (2007-2010) (Ostapkowicz et al. 2012a-c; Ostapkowicz et al. 2013a). This multidisciplinary study worked to determine each sculpture's radiocarbon age, the material from which it was carved and, for a sub-set, provenance through strontium isotope analysis, alongside clear documentation of each carving's collection history. Of the 26 duhos known from the region through archival documentation and recent artefact survive - 11 research. 15 having disappeared from the record shortly after discovery, most likely into private hands. These 15, together with a platter, paddle and axe, were among a group of Bahamian and TCI artefacts selected for the project (see Ostapkowicz et al. 2012a: Table 1). Of the surviving duhos, 10 were from (or attributed the Bahama archipelago. to) their distribution stretching from Eleuthera in the north to Acklins in the south. The central Bahamian islands yielded the highest

Figure 3. Graph showing the length of the Lucayan high-back duhos (in red, with artefact numbers listed below; Ham refers to the Hamilton duho, which disappeared at some point after 1954, when measurements were recorded by Fr. Frey, St. Augustine's College Nassau) in comparison to high-back duhos from the Greater Antilles (in blue): those from the Bahamas/TCI are by far the largest examples currently known.

concentration of duhos, most notably Long Island with four extant examples. Five duhos were from TCI, with three sourced to Providenciales. This tally also included two artefacts that previously lacked any detailed provenance in museum records: one duho [15] – a small, low-back that had been previously identified in museum records as a 'Mexican pillow' was traced through various unpublished documents, where Bahamian eventually its provenance emerged (Table 2). The strontium results, wood identification and stylistic features of another duho [5], which was vaguely attributed to the 'West Indies', strongly suggest a Bahamian/TCI provenance hence its inclusion here. Less firm attributions - such as the SCVA duho (Fig 9; Ostapkowicz et al. 2012a:[55]), which features certain traits consistent with the regional style - were not included in the tally as the critical strontium isotope sample could not be obtained to help firm up provenance. Perhaps future studies may be able to establish whether it came from a Bahamian/TCI source, and if so, the number of wood duhos from the region would rise to 27.

 $\int_{a}^{40} \int_{a}^{40} \int_{a}^{40$ 



Figure 4. Two duho back panels, showing the elaborate nature of Lucayan designs (*not to scale:* height: L:104mm; R: 90mm max). The labyrinthian carvings are symmetrically balanced and skilfully cut into the dense surface of *Guaiacum* sp., suggesting that the designs were conceived in advance, and both artists were accomplished woodworkers. A minimum of 70 years separates the two duhos. Left: duho from Long Island, Bahamas [4], A.D. 1285-1396; Courtesy, Hill Museum & Manuscript Library. Right: duho from TCI [1], A.D. 1044-1215; Courtesy National Museum of the American Indian, Smithsonian Institution, Washington (059385).

The goal has always been to tie the objects with good provenance back into the histories of the islands they came from, and so be able to explore their wider chronological context and, ultimately, what they may have meant to the people who made and used them. This requires a foundation of detailed data from previous work on the islands, and although there have been significant advances in the last few decades (e.g., Berman 2011; Berman and Gnivecki 1995; Berman et al. 2013; Granberry 1955; 1956; Hoffman 1967, 1970; Keegan 1985, 1992, 1997, 2007; Sears and Sullivan 1978; Sinelli 2010; Sullivan 1974; 1981; Winter 1981; Winter et al. 1987) there are many limitations to our primarily current knowledge, because information is largely based on past site surveys and sporadic test excavations rather than long-term, systematic excavations, with but a few exceptions (Gnivecki 1995:212). Even some of the exceptions (e.g., Long Bay, North Storr's Lake, Pigeon Creek dune

1, Ward-Minnis sites), which have yielded findings, remain important largely unreported (Mary Jane Berman, personal communication, 2013). Further, many parts of the Bahamas and TCI remain relatively unexplored archaeologically (Granberry and Winter 1995:5), while progress on resort developments have irrevocably damaged important sites (Pateman 2011:5) – a problem that is, of course, not just unique to the Bahamas/TCI (Siegel and Righter 2011). Apart from the need for more detailed future investigation, there is the need for a thorough collating of the work already undertaken: as in many other parts of the Caribbean, valuable reports are scattered amidst obscure or out of print volumes, or remain unpublished, filed in government offices (Fitzpatrick 2004). Another major issue is the building of chronologies for the islands, currently hindered bv the inconsistent reporting of dates (Keegan 1994:263; Berman and Gnivecki 1995:426; Fitzpatrick 2006) and by unknown

associations between the dates and the cultural material they represent (Berman et al. 2013:267). To give some sense of the state of the literature: it is not unusual to find a single 'mean' or 'intercept' date listed for an entire site, without the full date range provided (e.g., 'A.D. 1492' - whether calibrated or uncalibrated is also often left undefined) or a group of radiocarbon dates from a single site 'averaged', without a critical eye to context or material (e.g., fish bone grouped with wood. without accounting for the marine reservoir effect). There is little consistency of reporting dates even within the same article, where - for example - uncalibrated raw dates are reported next to calibrated ranges at '1 sigma' (64.8%), or calibrations (even if at 95.4%) are provided without the critical BP date. The general lack of details such as laboratory numbers and material dated (for example, whether the piece of charcoal selected for a date was a slow-growing wood, and which part of it was dated - e.g., pith? - a factor that can skew the interpretation of the site considerably), as well as discussion of potential contamination problems, all hinder the usefulness and reliability of the date achieved. Without these basics, it is not clear what is dated, and what the results mean, or how they can be interpreted. Notably, Fitzpatrick (2006), in his review of radiocarbon dating in the Caribbean, lists only two dates for the entire Bahamian/TCI region that pass his chronometric hygiene criteria, and mentions that generally, the radiocarbon results for this region are 'extremely vague' (Fitzpatrick 2006:418). Rejecting sites with only a single date or those based on unreliable carbonate bone or where the cultural association could not be firmly established, meant the exclusion of a number of radiocarbon dates - although, as acknowledged (Fitzpatrick 2006:411), there were dates that were missed due to the widely scattered literature, as well as those

that were as yet unpublished: these included a number from the Bahamas specifically (Marv Jane Berman. personal communication, 2013). Table 3 – which is primarily restricted to the islands discussed in this article (where information is available/accessible) - is included here mainly to give a wider context to the duho chronologies, and with a few exceptions (e.g., Providenciales), the majority of dates listed fulfill several of Fitzpatrick's criteria. Recent work is tackling some of the dating issues, but overall much still needs to be building done on the chronological resolution for the Bahamas/TCI. Given the above caveats, the histories presented below will undoubtedly be refined as work continues to clarify island chronologies.

# Methodology and Results

Establishing a reliable chronological framework for the sculptures depends on achieving a date as close to the felling of the tree as possible within the limitations of the carving; ideally, sapwood was selected, but where this was lacking, the carving was oriented relative to its position within the original bole of the tree, and the sample extracted from the extreme outer edge. worked Team members in close collaboration with each institution's curators and conservators to ensure best care for the objects - often exploiting already present cracks in the wood to keep the sampling as discrete as possible. For a detailed review of the methodologies used see Brock et al. (2012) and for an overview of the Bahamian/TCI dates in the context of the wider project see Ostapkowicz et al. (2012ac; 2013a).

Table 1. AMS radiocarbon results from 15 duhos involved in the 'Pre-Hispanic Caribbean Sculptural Arts in Wood' project (see Ostapkowicz *et al.* 2012a and Ostapkowicz *et al.* 2013a, for full overview of dates from this project). The Oxford Radiocarbon Accelerator Unit lab numbers (OxA) are provided alongside the material and sample site (ie., terminus: sapwood or outer growth rings, to indicate when tree was felled and likely carved). Dates BP and calibrations at 95.4% are listed, the most likely calibration ranges highlighted in bold. All dates are calibrated using the IntCal09 dataset (Reimer *et al.* 2009) and OxCal v4.2.2 (Bronk Ramsey 2013). This table can be cross-referenced with Table 2 (Collection Histories) via the number in the first left hand column.

	Artefact	Provenance	Institution/ Accession number/ Donor	OxA	Material	<sup>14</sup> C BP	Calibrated date range
1	Duho (high back)	Grand Turk Island', <sup>1</sup> TCI (?)	National Museum of the American Indian, Washington, USA; 059385; Lady Edith Blake	OxA-19116	Guaiacum sp., terminus	890 <u>+</u> 24	A.D. 1044-1101 (33.1%) A.D. 1119-1215 (62.3%)
2	Duho (low back)	Cave?, Eleuthera, Bahamas	British Museum, London, Am1918.1; G.D. Saul	OxA-21155	Guaiacum sp., terminus	$804 \pm 25$	A.D. 1186-1273 (95.4%)
3	Duho (low- back/'dog')	'Bahamas'	National Museum of the American Indian, Washington, USA: 058027: Lady Edith Blake	OxA-19059	Guaiacum sp., terminus	658 <u>+</u> 25	A.D. 1280-1320 (46.3%) A.D. 1351-1391 (49.1%)
4	Duho (high back)	Cave, Mortimers, Long Island, Bahamas	Saint John's Abbey, Collegeville, Minnesota, USA; 89.190; Fr. Arnold Mondloch, OSB	OxA-19177	Guaiacum sp., terminus	636 <u>+</u> 27	A.D. 1285-1329 (40%) A.D. 1340-1396 (55.4%)
5	Duho (high back)	'West Indies' Bahamas/TCI?	Peabody Museum of Natural History, New Haven, USA; ANT.137676; Mr. and Mrs Ledyard Cogswell	OxA-19173	Cordia sp., terminus	623 <u>+</u> 27	A.D. 1291-1400 (95.4%)
6	Duho (high- back/'dog') <sup>2</sup>	Cartwright Duho Cave, Mortimers, Long Island, Bahamas	Antiquities, Monuments and Museums Corporation, Nassau, Bahamas; 1988-01-02; Mr. Carlton Cartwright	OxA-18912	Cordia sp., terminus	524 <u>+</u> 22	A.D. 1329-1341 (4.8%) A.D. 1396-1439 (90.6%)
7	Duho (high back)	Cave, Blue Hills Settle- ment, Providenciales, TCI	National Museum of Natural History, Washington, USA; A030053; Mr. David R. Frith	OxA-21854	Carapa sp., terminus	498 <u>+</u> 24	A.D. 1407-1445 (95.4%)
8	Duho (low back)	Cave, Blue Hills Settle- ment, Providenciales, TCI	American Museum of Natural History, New York, USA; 25/234; Mr. George Gibbs	OxA-20843	Carapa sp., terminus	475 <u>+</u> 27	A.D. 1411-1451 (95.4%)
9	Duho (high back)	Cave, Blue Hills Settle- ment, Providenciales, TCI	National Museum of Natural History, Washington, USA; A030052; Mr. W. M. Gabb	OxA-21894	<i>Guaiacum</i> sp., terminus (sapwood)	464 <u>+</u> 26	A.D. 1413-1455 (95.4%)
10	Duho (high-back/ 'bat) <sup>3</sup>	Cartwright Duho Cave, Mortimers, Long Island, Bahamas	Antiquities, Monuments and Museums Corporation, Nassau, Bahamas; 1988-01-01; Mr. Carlton Cartwright	OxA-18793	Guaiacum sp., terminus	454 <u>+</u> 24	A.D. 1418-1462 (95.4%)
11	Duho (high-back/ 'turtle')	Cartwright Duho Cave, Mortimers, Long Island, Bahamas	Antiquities, Monuments and Museums Corporation, Nassau, Bahamas; 1988-01-03; Mr. Carlton Cartwright	OxA-18448	Cordia sp., terminus	424 <u>+</u> 24	<b>A.D. 1430-1491 (93.4%)</b> A.D. 1602-1610 (2%)
12	Duho (high-back)	Cat Island ('San Salvador'), Bahamas	Bryn Mawr College, Pennsylvania, USA; 97-1-65; Capt. Wheeler	OxA-20839	<i>Cordia</i> sp.; terminus (sapwood)	409 <u>+</u> 25	<b>A.D. 1435-1515 (87.3%)</b> A.D. 1600-1618 (8.1%)
13	Duho (low-back)	Spring Point Cave, Acklins, Bahamas	National Museum of the American Indian, Washington, USA; 032575; Theodoor de Booy	OxA-19054	Cordia sp., terminus	405 <u>+</u> 25	<b>A.D. 1437-1516 (85.5%)</b> A.D. 1598-1618 (9.9%)
14	Duho (high-back)	Caicos islands?	Turks and Caicos National Museum, TCI; 2003.30.1; unknown donor	OxA-18449	Cordia sp., terminus	395 <u>+</u> 25	<b>A.D. 1440-1522 (79.4%)</b> A.D. 1578-1581 (0.4%) A.D. 1591-1620 (15.6%)
15	Duho (low-back)	Cat Island ('San Salvador'), Bahamas	Manchester Museum, Manchester, UK; 0.9323/468; Mr. A. R. Binns	OxA-18101	Guaiacum sp., terminus	3 <u>55 + 2</u> 5	A.D. 1454-1529 (46%) A.D. 1544-1634 (49.4%)

<sup>1</sup> The 'Grand Turk' provenance listed in the museum documents, is likely the reference to the original collector's residence (pre-Lady Blake), rather than the find spot of the duho (see Ostapkowicz *et al.* 2012b).

<sup>2</sup> All Cartwright duhos underwent conservation in 1988, which included a treatment of 40% lanolin, 7% potassium lactate, 0.25 % paranitrophenol and 6% Neatsfoot oil.

<sup>3</sup> Shellac was identified through GC-MS on the surface samples from the Manchester duho, and may have affected the date, skewing it slightly later.

Table 2. Collection histories of the 15 Lucayan duhos, based on earliest documentation (e.g., Eleuthera Duho – history from 1820). The bracketed numbers immediately before the descriptive title cross-reference to the numbers used in Table 1, which list them in chronological order based on the AMS radiocarbon dates. The descriptive titles (intended as mnemonic devices) are based on the provenance of the duho, ideally to a site/island name, but where this is not available, on the donor or institution name (see discussion in text).

Descriptive title	Museum/Accession no.	Provenance	Year collected	Acquired from				
[2] <b>Eleuthera duho</b> Low-backed anthropomorphic duho	British Museum, London, UK BM Am1918.1	Eleuthera, Bahamas	1820	G. D. Saul (purchased by BM via the Christy Trust in 1918)				
Collection history: Inscription on duho's ventral surface outlines recorded history: 'The Stool Was found in a Cave in the Island of Eleuthera, Bahamas, about the year 1820 by James Thompson, a Slave, and purchased of him by Theos. Pugh Wes. Missy in 1835. It is supposed to be either a piece of domestic furniture of the Indians or one of their Gods. It is at least 300 years old. 1850'; Theophilus Pugh (b. 1802; d. 1874) was a Wesleyan Missionary working in the Bahamas in the mid-1830s, and travelled extensively in the region. He visited Eleuthera on 01 October, 1835, and acquired the duho from James Thompson, whom he calls a 'Leader' (defined as a lay person who leads small groups or 'classes') in his correspondence to the Wesleyan Committee, in contrast to his relegation as a 'Slave' in the inscription on the duho. Slavery was abolished in 1833, so its use in 1850 to describe a Wesleyan leader is surprising, especially given the strong anti-slavery stance of the Wesleyan Church. It may have been used as a lay person who ladispersed among members of the family or sold, eventually to make it in the collection of G. D. Saul of Matlock, Derbyshire, who purchased it 'for a few pounds' (15 July, 1918). In his correspondence with the British Museum, Saul refers to it as being made '…in the shape of a turtle, with a quaint carved head probably resembling a god… I think personally it may have been used as a prayer stool' (Saul to Sir Hercules Read, British Museum, 08 July 1918, British Museum Archives). For further details see Joyce (1919).								
[12] <b>Capt. Wheeler duho</b> High-backed anthropomorphic duho	Bryn Mawr College, Pennsylvania, USA 97-1-65	'St Salvador', Cat Island, Bahamas	1825	Capt. Wheeler; via the Academy of Natural Science, Philadelphia (Acc 4443)				
Collection history: A faded label on the duho's upper surface records the history: "This (?) Stool was taken out of a Cave on Guanahani or St. Salvador near where Columbus first landed on the discovery of America in 1492 (333 years ago) and as all the Indians were made Slaves of by the Spaniards and carried[to?] Hispaniola [It] must necessarily [be] 300 years old probably more. Brought by Capt. Wheeler, June 1825, to Philadelphia". Cat Island was called 'St Salvador' or 'Guanahani', the first island Columbus 'discovered', well into the late 19th century (Donald and Kathy Gerace, personal communication 2011); Watling Island officially became San Salvador in 1925. Hence, despite 'St Salvador' appearing on the label, Cat Island is the more likely source of the duho. The duho originally entered the collections of Philadelphia's Academy of Natural Science, although no trace of its acquisition there has, as yet, been found. It was deaccessioned in 1950, when it was sent to Bryn Mawr College, Pennsylvania.								
[15] Manchester duho Low-back anthropomorphic duho	Manchester Museum, Manchester, UK 0.9323/468	Cave, middle district, 'St. Salvador' [Cat Island] Bahamas	1864	Mr. A. R. Binns [?]				
Collection history: The duho was found in a 'cave, middle district, St. Salvador, Bahamas' in June 1864 (Augustus Franks Ethnographic Notebooks, LS 13, ff. 53), and donated to the Salford Museum in 1865 by Mr. A. Binns (?), Esq Oldham'. In the Salford Museum registers, under accession number 1865.40, it was listed as "An ancient wooden head-rest carved by the aboriginal indians of the Bahama Islands about 350 years ago". Unfortunately, at some point during its history at Salford Museum and/or its transfer to the Manchester Museum in 1948, it acquired the following attribution 'wooden Mexican pillow from St. Salvador', thus obscuring its true purpose and provenance. Although reinstated as a Caribbean duho in the late 1990s (see Ostapkowicz 1998:355-357), it's 'St. Salvador' (Cat Island) provenance did not emerge until the Franks' notebooks were consulted in 2007. As noted for the Capt. Wheeler duho, above, Cat Island was called San Salvador in the late 19th century, suggesting that the true provenance of the duho is the 'middle district' of Cat Island.								
[7] <b>Frith duho</b> High-back anthropomorphic duho	National Museum of Natural History, Washington, USA; A030053	Cave, Blue Hills Settlement, Providenciales, TCI	1876	Mr. David R. Frith				
Collection history: Mr. Frith, a resident of Grand Turk, wrote of his acquisition of the duho that he later presented to the NMNH: "I was on a visit at the Caicos Island in 1876 and went on shore at the Blue Hills Settlement on the North side of the Island, when I was about leaving an old colrd [sic] man said to me O Mr. Frith I forgot to show you an Idol or Chair I found in a Cave. I was then some distance from his house. He said never mind when I go to Grand Turk I will take it to you – but I was determined not to lose the run of it, fearing I might not get it. I induced him to return and bring it to me, and I gave him \$2.50 for it.' (2 April, 1897; NMNH accession file) (see also Gabb duho, below).								

[9] Gabb duho High-back anthropomorphic duho	National Museum of Natural History, Washington, USA; A030052	Cave, Blue Hills Settlement, Providenciales, TCI	1876	Dr. W. M. Gabb via Mr. David R. Frith			
Collection history: In a letter dated 2 April, 1897, Mr. Frith recounts his acquisition of a duho he later sold to Dr. Gabb, and which the latter presented to the NMNH in 1876: 'After I returned to Grand Turk I heard of another that was found by an old Colrd [sic] woman in a Cave near the same place [Blue Hills Settlement, Provodenciales]. I immediately wrote her and she sent it to me, I also gave her \$2.50 for it. She thought it was a big price and said to me 'My dear Sir, when I found it I thought it would do for fire wood, I took it home and threw it down in the yard, and one of my Boys cut the hind legs off, if I had known dat old ting was wof all dat money I wod taken more care of it' (spelling and emphasis as in original letter). Gabb, in his letter to Prof Baird (20 January 1877, NMNH accession file) notes: 'On arriving at Turk's Island I saw Mr. Frith He had another chair, placed in his hands for sale. Like the first it had suffered a little from moisture and the feet had rotted off; but the sculpture was better preserved than the first. I bough it at once for \$12.00 a [?] small price The chair with the feet is to be presented in <u>his</u> name and I take the pleasure in presenting the other'							
[8] <b>Gibbs duho</b> Low-back anthropomorphic duho	American Museum of Natural History, New York, USA; 25/234	Cave, Blue Hills Settlement, Providenciales, TCI	1877	Mr. George Gibbs			
Collection history: Found in a cave near the Blue Hills Settlement in July 1877 and, together with 26 other artefacts including celts, stone balls and idols, sold to the AMNH in 1900. Prior to the sale, the family loaned the collection to the Jamaican Exhibition of 1891.							
[3] <b>Lady Blake duho 2</b> Low-back zoomorphic duho	National Museum of the American Indian, Washington, USA; 058027	'Bahamas'	1884-1896	Lady Edith Blake			
Collection history: Likely acquired by Lady Blake during her residence in the Bahamas (1884-1887), when her husband, Sir. Henry Arthur Blake was Governor. However, as Jamaica had administrative responsibilities for the Bahamas when Blake was Governor of Jamaica (1888-1896), and there were strong links between the two regions, especially relevant during the Jamaica Exhibition of 1891 (see Lady Blake duho 3, below), it is also possible that this Bahamian artefact came into her possession through her links while in Jamaica.							
[1] Lady Blake duho 3 High-back anthropomorphic duho	National Museum of the American Indian, Washington, USA; 059385	'Grand Turk', TCI	Pre-1885	Lady Edith Blake			
Collection history: The duho was first illustrated by Mason (1885:828-9), who refers to it as a 'low wooden stool from Turk's Island, collected by the late W. M. Gabb'. This history is echoed by Ober (1893:82) and Holmes (1894:74), although these early references are counter to the museum's accession documents, which state that it was acquired as part of Lady Edith Blake's collection in 1916. Gabb (d. 1878), a geologist with wide-ranging interests and connections, worked in the Caribbean from 1869, when he undertook a survey in the Dominican Republic, remaining on the island until 1872 (Dall 1909:354). He travelled via the various Caribbean islands periodically on other business, and while there endeavoured to search out archaeological collections, urging the owners to donate them to the Smithsonian, or purchasing on behalf of the museum (see 'Frith duho' above; NMNH archives). It may be that at some point after 1869 he acquired photographs of the duho, which was at that time part of a private collection – and, when these were circulated to the Smithsonian staff, with whom he was in regular contact (e.g., Prof. Baird), the duho was attributed to him in error. Lady Edith Blake (d. 1926) was wife of Sir. Henry Arthur Blake, Governor of Bahamas (1884-1887) and Governor of Jamaica (1888-1896), and had an avid interest in the archaeology of the region. Her husband organised Jamaica's Great Exhibition in 1891, when many of the Caribbean islands sent displays including archaeological collection that included three duhos, all provenanced to the Bahamas/TCI. The source of this, the largest of her duhos is listed in museum records as 'Grand Turk' based on the original list supplied by the Blake (NMAI archives, OC123, folder 25), although this more likely refers to the residence of the original collection (see Ostapkowicz et al. 2012b). The other two wooden duhos in her collection (Lady Blake duhos 1 & 2) were attributed to the Bahamas in museum records: one of these (Blake duho 1) was deaccessioned from the Heye collecti							
[14] <b>TCNM duho</b> High-back anthropomorphic duho	Turks and Caicos National Museum, TCI; 2003.30.1	Caicos islands, TCI	Pre-1893	unknown			
Collection history: In 1893, Ober (1893:83) recorded 'several duhos' on display in the Victoria Library on Grand Turk. Two of these duhos, and two platters, were still on display there in the late 1970s, when they were stolen. Some three decades later, one of these – the larger and more complete example of the two – was found and repatriated in 2003 and is now in the collections of TCNM (Ostapkowicz 2008; Ostapkowicz et al. 2012b). It is unclear when these artefacts originally entered the Library's collections, who donated them, how many there were, or where they were found, as any relevant archival records burging the library is directly for the dube were they were they were found, as any relevant archival records the dube were the library is collections.							

kept in the library were lost to water and termite damage. The current, indirect information on the duho suggests that it, together with the smaller, damaged duho, were recovered from the Caicos group of islands during the height of the guano mining in the late 19th century. Intriguingly, two duhos were found on Middle Caicos ca. 1880, near Conch Bar (de Booy 1912:99), but disappeared soon after, likely into private hands. Although speculative, these Conch Bar duhos may be the same as those donated to the Victoria Library: Grand Turk was the capital where many TCI entrepreneurs settled – it is possible that the donor of the duhos was a resident on the island with business ventures on the Caicos chain of islands, and presented (or loaned) the duhos to the museum after they were found. de Booy (1912:100), however, mentions that the Conch Bar duhos were 'small wooden stools': although duhos are generally considered 'small', the TCNM duho among the largest from the Bahamas/TCI (which are themselves, the largest in the Caribbean), and wouldn't naturally be described as 'small'. Hence, questions still linger about the original source of the TCNM duho.

[13] <b>Acklins duho</b> Low-back (?)	National Museum of the American Indian, Washington, USA; 032575	Spring Point cave, Acklins	Pre-1912	Theodoor de Booy			
Collection history: found in a small, open cave on Spring Point, possibly just behind the settlement at Delectable Bay (de Booy 1913:5; Keegan and Mitchell 1983:123). By the time it reached de Booy, who was undertaking a reconnaissance of the island during the Smithsonian's 1912 Bahamian Archaeology Expedition, the duho had changed hands a number of times: the original discoverer, who fortuitously found the duho beneath a large limestone slab while sheltering in the cave during a rainstorm, brought it to the attention of Mr. Darrell, who presented it to Dr. F. A. Holmes, a Nassau physician, who in turn presented it to de Booy (1913:5). de Booy returned to the cave to see if further artefacts could be recovered, but was not successful in finding any more material. Keegan and Mitchell (1983:123), in their reconnaissance of Acklins Island, spent two days attempting to relocate the cave, but were unsuccessful.							
[4] <b>Mortimers cave duho</b> High-back anthropomorphic duho	Saint John's Abbey, Collegeville, Minnesota, USA; 89.190	cave, Mortimers, Long Island, Bahamas	1938 or 1939	Fr. Arnold Mondloch, OSB			
Collection history: The duho was discovered along with a wooden platter in a cave near Mortimers on Long Island by Fr. Mondloch (d. 1944) in 1938 or 1939, possibly when he was working to build a church at Hard Bargain, Mortimers (A. Mondloch, OSB to Abbot Alcuin Deutsch, OSB, 24 October, 1940, Saint John's Abbey Archives). Family records suggest that he brought duho and 'several bowls' back to the Minnesota family home in the early 1940s, and they were donated to St John's Abbey (SJA) sometime between 1944 and 1957. No further particulars are given in Fr. Mondloch's personal papers held at St John's Abbey, where the duho was donated in the early 1940s by Fr. Modloch's mother, but there are several photographs of him posing with the duho and platter in the cave (see Barry 1940).							
[5] <b>PMNH duho</b> High-back Faceless duho	Peabody Museum of Natural History, New Haven, USA; ANT.137676	'West Indies'	Pre-1946	Mr and Mrs Ledyard Cogswell via Mr. Benjamin Walworth Arnold			
Collection history: donated to the PMNH, Yale, New Haven in 1946 by Mr. and Mrs Ledyard Cogswell. The piece can be traced back to Mr. Benjamin Walworth Arnold (b. 1865-1932) – a wealthy businessman with far ranging interests, who amassed a large collection of archaeology/ethnography and natural history, spanning South and Central America to Oceania. The vague 'West Indies' provenance suggests that Arnold must have acquired the piece indirectly – possibly through a dealer or other collector.							
<ul> <li>[10] Cartwright 'bat' duho;</li> <li>[6] Cartwright 'dog' duho;</li> <li>[11] Cartwright 'turtle' duho;</li> <li>High-backs (3) zoomorphic (3)</li> </ul>	Antiquities, Monuments and Museums Corporation, Nassau, Bahamas; 1988-01-01; 1988-01- 02; 1988-01-03	Cartwright Duho Cave, Mortimers, Long Island, Bahamas	1988	Mr. Carlton Cartwright			
Collection history: The 'Cartwright duhos' – the largest group of duhos recovered in situ in the Caribbean – were discovered by Mr. Carlton Cartwright of Mortimers, Long Island on 12 May 1988. Shortly after the discovery, the cave was excavated by Aarons (1988) – essentially, the first detailed attempt to understand the depositional context of duhos. The duhos were acquired by the Bahamian government, and were transferred to the Department of Archives, Nassau, where they remain today, awaiting display in the new National Museum of the Bahamas.							

Table 3. A selection of chronologies for sites discussed in text, with the caveat that due to the difficulties of accessing both unpublished and published data this is by no means a thorough review of the current literature. Laboratories include Beta Analytic (Beta) and Illinois State Geologic Survey (ISGS), and for the latter the dates are listed as uncorrected in Carlson (1999:144). Reported dates are as published in the reference listed, and in the case of Carlson (1999) are based on Calib version 2.0.

Island	Site name	Lab number	Material	<sup>14</sup> C BP	Reported dates	Reference
TCI: Grand Turk	GT-2: Governor's Beach	Beta-42983	charcoal	830 <u>+</u> 80	A.D. 1004-1280	Carlson 1999:144
		Beta-42985	charcoal	820 <u>+</u> 50	A.D. 1041-1280	Carlson 1999:144
		Beta-61150	charcoal	910 <u>+</u> 60	A.D. 1000-1260	Carlson 1999:144
		Beta-42984	shell	1170 <u>+</u> 60	A.D. 1120-1330	Carlson 1999:144
		Beta-42986	shell	$1080 \pm 50$	A.D. 1250-1410	Carlson 1999:144
	GT-3: Coralie	Beta-80911	charcoal	1280 <u>+</u> 60	A.D. 650-885	Carlson 1999:52
		Beta-93912	shell	1170 <u>+</u> 60	A.D. 665-905	Carlson 1999:52
		Beta-98698	charcoal	$1230 \pm 60$	A.D. 670-970	Carlson 1999:52
		Beta-80910	charcoal	1160 <u>+</u> 60	A.D. 720-1105	Carlson 1999:52
		Beta-61151	charcoal	1120 + 120	A.D. 650-1160	Carlson 1999:52
		Beta-114924	charcoal	1120 <u>+</u> 50	A.D. 800-1015	Carlson 1999:52
		Beta-98697	charcoal	1010 <u>+</u> 50	A.D. 970-1165	Carlson 1999:52
		Beta-93913	shell	930 <u>+</u> 60	A.D. 895-1145	Carlson 1999:52
		Beta-96700	wood	940 <u>+</u> 60	A.D. 995-1125	Carlson 1999:52
		Beta-98699	charcoal	900 <u>+</u> 50	A.D. 1040-1215	Carlson 1999:52
TCI: Providenciales	P-1	ISGS-2632	charcoal	660 <u>+</u> 70	A.D. 1220-1420	Carlson 1999:144
	P-4	Beta-70797	shell	960 <u>+</u> 50	A.D. 1320-1460	Carlson 1999:144
	P-5	Beta-70798	shell	1250 <u>+</u> 50	A.D. 1040-1270	Carlson 1999:144
TCI: Middle Caicos	MC-6/Ia góra	ISGS-2633	charcoal	450 <u>+</u> 70	A.D. 1327-1636	Carlson 1999:144
		Beta-155021	bone (Burhinus sp.)	400 <u>+</u> 40	A.D. 1430-1530	Jones O'Day 2002:4
					A.D. 1560-1640	
		Beta-155020	bone (Burhinus sp.)	320 <u>+</u> 40	A.D. 1460-1660	Jones O'Day 2002:4
	MC-12	Beta-70335	Charcoal	950 <u>+</u> 60	A.D. 990-1230	Carlson 1999:144
		ISGS-896	Charcoal	800 <u>+</u> 70	A.D. 1030-1280	Carlson 1999:144
		ISGS-1098	Charcoal	680 <u>+</u> 70	A.D. 1220-1410	Carlson 1999:144
	MC-32	Beta-67886	Charcoal	660 <u>+</u> 50	A.D. 1260-1410	Carlson 1999:144
	MC-36	Beta-70608	Charcoal	740 <u>+</u> 80	A.D. 1170-1400	Carlson 1999:144
Eleuthera	Preacher's Cave	Beta-218518	charcoal	1220 <u>+</u> 50	A.D. 700-980	Carr et al. 2006:55
		Beta-218519	charcoal	700 <u>+</u> 40	A.D. 1270-1320	Carr et al. 2006:55
					A.D. 1340-1390	
		Beta-218520	charcoal	390 <u>+</u> 50	A.D. 1430-1650	Carr et al. 2006:55
		Beta-220176	charcoal	410 <u>+</u> 40	A.D. 1460-1520	Carr et al. 2006:55
					A.D. 1580-1630	
		Beta-260751	Human bone	1720 <u>+</u> 40	A.D. 230-410	Schaffer et al. 2010:53
		Beta-260752	Human bone	1120 <u>+</u> 40	A.D. 810-1010	Schaffer et al. 2010:53
		Beta-260753	Human bone	860 <u>+</u> 40	A.D. 1040-1100	Schaffer et al. 2010:53
					A.D. 1120-1260	

Briefly, the results reveal a span of calibrated dates stretching from ca. A.D. 1000 to 1630 (Table 1). Within this, the results appear to segregate into three general phases - early (A.D. 1000-1280) represented by two duhos, middle (A.D. 1280-1400) with three, and late (A.D. 1400-1630), with ten. Critically, nothing appears to date to the initial period of island colonisation conservatively placed at ca. A.D. 700. The phases are used here solely as an organizational device, and are not intended to imply or refer to any established culturehistorical framework. Discussion will proceed chronologically, with all calibrated dates reported at 95.4 percent probability unless otherwise noted. Bracketed numbers (eg., [4]) in the text cross-reference with Figure 2 and Tables 1 and 2, where more detailed information on each artefact can be found.

As there has been much confusion regarding the histories of some of the pieces - often with conflicting documentation concerning provenance the (see Ostapkowicz 1998:297-347), Table 2 is included to clarify the accession and archival documentation for each carving. This is to more concretely tie the artefact to a contextual framework, linking it more closely with the histories of the source islands, and to be better able to explore regional and temporal variation. The descriptive titles used to distinguish the duhos are based on their provenance, ideally to a site/island name ('Eleuthera duho'), but where this is not available or remains inconclusive, to the donor ('Lady Blake duho 3') or institution name ('PMNH duho'). This mnemonic device is used here purely for ease of reference, so that each piece, even within the same collections (e.g., the 'Gibbs' and 'Frith' duhos in the National Museum of Natural History), is easily distinguished.

Apart from the chronologies, another important aspect to the study was the identification of the woods used to carve the

duhos, summarised under materials in Table 1 (see Ostapkowicz et al. 2011a-b; 2012a-c for full overview). Seven of the 15 duhos in this study are carved from Guaiacum sp., followed by six carvings of Cordia sp., and two of Carapa sp. Guaiacum, among the world's hardest woods, was used since at the Saladoid period (Newsom least 1993:148) as a fuel and construction wood, and entered into medical lore as the sixteenth century 'Indian' cure for syphilis Hutton 1536:11; Oviedo (von 1959 [1526]:2:9-11). It is clear that its qualities were perceived and appreciated on many different levels - from practical to esoteric. Guaiacum has long been assumed as the wood of choice for elaborate Taíno and Lucayan sculpture, yet in the Bahamas and TCI more duhos were carved from other, lesser-known species - including Cordia, which seems to be a consistent selection for duhos post-A.D. 1400, spanning much of the Bahamian archipelago – from Cat Island to TCI. Notably in the results for the wider project. Cordia has not been identified for any carvings outside the Bahamas/TCI. Certain species of Cordia – such as C. allidora and C. bahamensis – show parallels to Guaiacum in being durable and resistant to decay, with many medicinal uses (e.g., Richev-Abbev 2012:81-2; Timvan 1996:213). The identification of two Carapa sp. carvings provenanced to Providenciales is intriguing given that the wood does not currently grow in TCI. However, their stylistic features are consistent with other carvings from the Bahamas/TCI. as are their strontium isotope results (Ostapkowicz et al. 2013a), which offer further support for their local manufacture -- though, of course, limestone geologies also occur elsewhere. Further work is needed to explore these issues in more depth.

#### Early Duho Phase (A.D. 1000-1280): Context of Earliest Examples

From about A.D. 600-800, the central Bahamas were settled by migrants

from northern Cuba (Berman and Gnivecki 1995:429, 431) or northern Hispaniola (Keegan 2007), while the latter also expanded into the Turks & Caicos by about A.D. 700 to take advantage of the rich marine resources there (Keegan 1997, 2007). This early presence on a handful of islands was, as Sinelli (2013:225) points out, "...not a harbinger of rapid, mass migration into the region. Rather, the Bahama archipelago seems to have been sparsely populated until after the turn of the first millennium". Indeed, although this initial period is, as yet, poorly known given the dearth of early sites, with only a handful providing reliable dates pre-A.D. 1000 (Berman 2011:Table 7.4; Keegan 1997:21; Carlson 1999:52; Carr et al. 2006:55), it generally suggests only sporadic forays into the region by seasonal migrants from the south. Although there is some evidence for permanent settlements going back to ca. A.D. 700 (e.g., Three Dog site, San Salvador - Berman 2013; Berman 2011: Table 7.4; Berman and Gnivecki 1995:430), most sites suggest opportunistic or seasonal use either in resource procurement or the manufacture of specialist goods rather than long-term (Keegan 1997:20-25). occupation As Carlson (1999:209) points out for the Coralie site (GT-3), the evidence "...suggests that when people came to live on Grand Turk, they brought with them the items they needed to sustain themselves for a period of time, but only the bare necessities." In such a situation, there would be no need for travelling with large elite objects such as duhos. Even if we assume that some wealth items may have been carved from perishable materials and did not survive in the archaeological record, the general picture that emerges from these temporary sites is that they were specifically focused on procuring consumables for export back to Hispaniola or the manufacture of specialist goods such as shell beads - essentially a 'working' environment,

not one where the presence of prized elite goods is expected.

It is not until after A.D. 1000 that permanent settlements and populations increased in both the Bahamas and TCI (Keegan 1992:54), including a much more intensive colonisation in certain areas (Sinelli 2013:225-226). A distinctly local material culture developed, most notably Palmetto Ware (although antecedents for this could be traced back to ca. A.D. 800 see Berman and Gnivecki 1993:174; 186; 1995; Keegan 1997:38). Palmetto Ware is a combination of Bahamian clay with burned and crushed conch shell which, although distinct, shows a clear continuity with shelltempered wares manufactured in the Greater Antilles (Keegan 1997:38-9; 2007:78). There are at least three recognisable styles of Palmetto Ware (Palmetto Ware, Abaco Redware, Crooked Island Ware), which have been related to possible ethnic distinctions (see Granberry and Winter 1995; Keegan 1997:39; Berman et al. 2013:270). The emerging complexity in ceramic material culture might equally be applied to duhos: the earliest examples, post-dating A.D. 1000 and provenanced to the opposite ends of the Lucavan archipelago (one attributed to 'Grand Turk', TCI and the other from Eleuthera, Bahamas), suggest both links to source communities to the south as well as emerging local aesthetics.

# Lady Blake Duho 3 (A.D. 1044-1215)

The earliest duho from the entire Bahamas/TCI region is tentatively attributed to 'Turks Island' (Grand Turk) through museum documentation (Table 2), and dates to A.D. 1044-1215 [1] (Figure 5). This accomplished carving features characteristics that came to dominate the Lucayan high-back duho style for the following centuries, such as large size, a long extension to the back which terminates in a sharp horizontal cut, high conical legs broader

critical period of local expansion and

adaptation. The dates for this earliest duho

coincides with a period of more intensive

settlement of TCI - certainly by A.D. 1200,

sites become "...larger, more deliberately

designed, and with material evidence for a

array of domestic activities,

indicating that the settlers had established permanent and independent communities" (Sinelli 2013:228). This would imply that, unlike the seasonal nature of earlier sites in the region, larger groups of people began to view these islands as permanent homes - and the infrastructure of prerogatives status and differentiation became rooted locally, including the use of status objects such as duhos.



Figure 5. High-backed duho ('Lady Blake duho 3'), *Guaiacum* sp., AD 1044-1215, Caicos Islands (?), TCI [1]. L: 855mm; W: 158 (max); H: 203 (max). This is among the most accomplished duhos from the region, showing deep carving and an elaborate back panel, together with elements that distinguish the Lucayan duho (large scale, low extension to the back with a blunt, horizontal terminal end, high conical legs). Courtesy, National Museum of the American Indian, Smithsonian Institution, Washington (059385).

Looking more closely at the context of this carving, several things emerge to suggest a more complex picture. By the time the duho was carved (A.D. 1044-1215), Grand Turk was in its final phase of occupation, having been periodically settled since ca. A.D. 700 (Keegan 1997:21; 2007:86; Carlson 1999:52). This initial date is from the seasonal/short term occupation at the Coralie site, at the north end of the island, which features quartz-tempered Ostionan Ostionoid ceramics suggestive of an Hispaniolan outpost primarily for exploiting the rich marine resources for export (Carlson 1999; Keegan 2007:86; Carlson and Keegan 2004). This use of the site appears to have lasted until ca. A.D. 1170 (Keegan 1997:21). A second 'wave' of seasonal settlers, this time Meillacan peoples from northern Hispaniola (Haiti), established sites on the southern end of the island (GT-2, GT-4) from ca. A.D. 1100, both for exploitation of local resources as well as the manufacture of highly prized shell beads that are believed to have been exported to Hispaniola (Keegan 2007:88); both sites appear to have been abandoned ca. A.D. 1280 (Carlson 1999:144; Keegan 2007:90). Thus, current evidence suggests that Grand Turk was not permanently settled, but rather was exploited through seasonal occupation, which did not last beyond ca. A.D. 1280 (Keegan 2007:88; 90).

The lack of evidence for а permanent, long-term settlement on Grand Turk – one large enough to be considered a residence of an affluent leader/cacique whose status befitted the use of such an elaborate, finely carved duho - sits uneasily with the attribution of the carving to the island.<sup>2</sup> Given that the use of duhos - at least by Hispaniolan and Cuban standards was reserved for caciques and other elites, one might expect an infrastructure of a large, vibrant community with a central residence that reflected a prosperous and wealthy leader. And given that the duho features the emerging Lucayan style, it was most likely something that was carved in the region. The nearest large villages at this time are to the west, in Middle Caicos, where permanent settlements were first established by A.D. 1000, and Keegan (2007:90) has argued for the early prominence of sites such as MCwhich grew into 12. а substantial settlements. Keegan posits that the swift abandonment of GT-2 may suggest a forceful eviction of the Meillacans by the Lucayans from the Caicos Islands to the west and north. reflecting '...the

competition between the Taíno chiefdoms in Haiti and their offspring in the Caicos Islands as part of their annexation of the southern Lucayan periphery'. It's tempting to think that with this influx of Lucayans to the island, specifically set on consolidating the area under Lucayan cacical authority, locally made elite goods would be the very thing to mark their expansion and ultimately their control over the area. But even if this were feasible, how would the duho survive, given that there are no caves on Grand Turk - unlike its much larger Caicos neighbours only small exposed rock shelters that would have provided little protection for such a large object (Brian Riggs. personal communication, 2009)?

Given the above, a more likely scenario is that the provenance listed in the museum records for the duho reflects the residence of the original collector (pre-Lady Edith Blake), not the find spot of the duho. In the late nineteenth century, when guano mining was at its height on the Caicos islands, and when many duhos were recovered, affluent collectors with an interest in archaeology - such as George Gibbs and David R. Frith - resided in Cockburn Town, Grand Turk, the region's capitol. They were able to acquired duhos through local connections: the three duhos that belonged to Gibbs and Frith [7-9] were found in Providenciales - but wound up in their residences on Grand Turk (and were occasionally mistakenly attributed to Grand Turk in publications and museum records). Three other TCI duhos were found in Middle and East Caicos (see de Booy 1912:99-100; 103-4). It is perhaps to some of these 'Grand Turk' collections that David R. Frith (1876) refers to when he notes of "...there being other Indian curiosities in private hands on the Island found also at the Caicos". Together with the archaeological evidence from Grand Turk, this would suggest that the duho's provenance was most likely one of the large Caicos islands,

where permanent, larger-scale settlements were emerging and competition between caciques likely spurred the elaboration of the duho to the quality and scale seen in this fine, early example.

# Eleuthera Duho (A.D. 1186-1273)

The other early duho, recovered from Eleuthera and bearing the inscription noted at the start of the paper, is a low-back seat dating to A.D. 1186-1273 [2](Figure 1). It marks the northernmost extent currently known for duhos, while sharing broad similarities with other, later Bahamian lowbacks found further south on Long and Cat Islands. Together with the large high-back from TCI discussed above [1], these carvings indicate that the use of the duho was well established in the islands north of Hispaniola shortly after A.D. 1000, and the two key duho categories (high- and lowbacks) were both present relatively early in the permanent settlement of the islands. What is also clear from these two duhos is that stylistic diversity is already evident which may help us explore the issues of local versus regional styles.

Archaeological surveys and investigations on Eleuthera since the 1930s have documented 32 sites (Carr et al. 2006:15; Keegan 1992:70; Sullivan 1974). earliest reliable radiocarbon The determination, taken directly from a burial recovered from Preacher's Cave, gives a calibrated date range of A.D. 810-1010 ('Burial 2', Schaffer et al. 2010:52; see Table 3), suggesting that the island was inhabited - or at least used by seasonal migrants – by at least this date. The same site also yields another two burials, the most recent of which is that of young adult male, whose remains date to A.D. 1040-1260 ('Burial 3', Schaffer et al. 2010:52). This burial was wrapped in woven basketry

fibers, possibly dyed with colorants such as red ochre (Schaffer et al. 2010:58), and features associated grave goods that are suggestive of status, including a charm comprising over two dozen sunrise tellin shells, red ochre and a fish bone pin interpreted by the authors as a 'scarifier' (Schaffer et al. 2010:54). This is one of the few documented examples of grave goods in direct association with a Lucavan burial, and offers insights into differential burial treatment at this time, potentially linked to status (see also Winter et al. 1997) - indeed, based on the burial goods, the authors suggest that Burial 3 was a ceremonial leader or village headman (Schaffer et al. 2010:61). The fact that this burial overlaps in date with the duho – and both infer status - would suggest that by this time, the Lucavans had socio-political systems in place that recognised elevated status whether cacique or 'big-man' (Berman 2011:108).

Whether endemic to the island (i.e., carved locally) or an import, the presence of the duho on Eleuthera suggests that the use of these elite seats extended at least this far north in the Bahamian archipelago. Intriguingly, the style of the facial carving bears striking similarities to several Hispaniolan duhos – for example, the famous gold-encrusted duho in the British Museum - but equally, to the Mortimers Cave duho, recovered from Long Island [4] (Figure 6). The Eleuthera duho is carved of Guaiacum sp., and its strontium isotope results (0.70924) fall slightly outside the range of other Bahamian/TCI carvings (70914-70920 at three standard deviations), and the comparative dataset from Guaiacum sp. and Swietenia sp., taken on Cat and Long Islands, as well as the Caicos Islands (0.709168 + 0.00012) (Ostapkowicz et al. 2012c:27; Ostapkowicz et al. 2013a, b). The

#### Lucayan Duhos



Figure 6. The faces of duhos from Hispaniola (left), Eleuthera (center) and Long Island (right), featuring overlapping design elements – including furrowed brow, fleshy cheekbones, triangular nose with demarcated nostrils, slightly downturned, ridged mouth and elaborately carved ears that, like the eyes, are excavated for inlay. Left to right: 'Oldman duho', high-back, *Guaiacum* sp., AD 1290-1400, Hispaniola; head size: H: 59mm; W: 56mm. Courtesy, Trustees of the British Museum (1949.22.118). Center: 'Eleuthera duho', low-back, *Guaiacum* sp., AD 1186-1273, Eleuthera. [2]; head size: H: 47mm; W: 55mm. Courtesy, Trustees of the British Museum (1918.1). Right: 'Mortimers Cave duho', high back, *Guaiacum* sp., AD 1285-1396, Long Island [4]; head size: H: 51mm; W: 65mm. Courtesy, Hill Museum & Manuscript Library (89.190).



Figure 7. Low-back duho ('Lady Blake duho 2'), *Guaiacum* sp., AD 1280-1391, 'Bahamas' [3]. L: 360mm; W: 120mm; H: 90mm (max). Courtesy, National Museum of the American Indian, Smithsonian Institution, Washington (058027).

possibility of contamination must be considered, but if this value can be accepted after further investigation, it may suggest an import, perhaps from Hispaniola. This would conform to what is currently known regarding the import of desired materials post-A.D. 1100 from the Greater Antilles to the Bahamas/TCI (Berman 2011:126) - and occasionally finely finished articles (see, for example, the stone effigy from the vicinity of Kew, North Caicos; de Booy 1912:99; Plate VI, NMAI 032200). However, given that the strontium results are only 0.00004 away from the end range of the other Bahamian/TCI artefact results, and given that our comparative dataset is still very small, it may still be largely consistent with

a limestone island origin. Further work is required to explore these possibilities (Ostapkowicz et al. 2013a, b).

#### Middle Duho Phase (A.D. 1280-1400)

As noted above, Lucayan communities were well established by A.D. 1200, with permanent settlements on many of the larger islands. Population increased, as did the production of locally made artifacts (Berman 2011:108), including duhos. The three duhos that date between A.D. 1280-1400 are a study of contrasts, indicating the variety of styles present on the islands during this period, from zoomorphic low backs to faceless high backs.



Figure 8. High back duho ('Mortimers Cave duho'), *Guaiacum* sp., AD 1285-1396, Long Island, Bahamas [4]. L: 860mm; W: 152mm; H: 292mm (max). Courtesy, Hill Museum & Manuscript Library (89.190).

# Lady Blake Duho 2 (A.D. 1280-1391)

The earliest zoomorphic duho (A.D. 1280-1391) [3] (Figure 7) to come from the islands has no detailed provenance listed in museum documents apart from 'Bahamas' features – including (Table 2). Its downturned ears, a long, prognathic muzzle terminating in upraised nostrils and a narrow mouth – suggest the head of a dog. The naturalistic carving of this low-back has parallels to other zoomorphic examples most notably the Cartwright 'dog' duho [6] (see discussion below).

# Mortimers Cave Duho (A.D. 1285-1396)

A large duho [4] (Figure 8) was recovered in 1938 or 1939 from a cave near the town of Mortimers, Long Island. It is one of seven duhos attributed to this island (only four of which could be included in this study, three having disappeared): this constitutes the largest concentration of duhos known from any single island in the Bahamas (Ostapkowicz 1998:297-327) (see further discussion of Long Island archaeology below). Dating to A.D. 1285-1396,<sup>3</sup> it is the earliest duho currently known from Long Island. In the complexity of its two-dimensional designs and long extension to the tail, it presents parallels to the TCI duho [1] discussed earlier. In keeping with the emerging Lucavan style, it features a high back with a blunt, horizontal cut at its tip, high, straight conical legs, and a large, elaborately carved back panel positioned immediately above the hind legs. Its facial features, as can be seen in Figure 6, share similarities with the Eleuthera duho, as well as the Hispaniolan 'Oldman' duho - notably in the depiction of the semi-circular, 'fleshy' cheekbones, triangular nose, furrowed brow and downturned mouth with a prominent central ridge (a device used to better secure inlays). The strontium isotope results for the duho are in keeping with those of the other Bahamian/TCI duhos (Ostapkowicz et al. 2012c:27; Ostapkowicz et al. 2013b), suggesting that the wood used to carve it came from a limestone island. This together with the Lucayan features would indicate a local manufacture, although something potentially still influenced by Hispaniolan carving styles.

#### Peabody Museum of Natural History [PMNH] Duho (A.D. 1291-1400)

A duho dating to A.D. 1291-1400 tentatively [5], attributed to the Bahamas/TCI based on size, shape, wood (Cordia sp.) and strontium isotope results, features a form so edited that despite being fully finished, it lacks the typically deep-set eyes and mouth seen in other duhos. This is the first of an intriguing group of 'faceless' duhos, of which four are currently known, one from Cuba and three attributed to the Bahamas/TCI [5; 7; SCVA duho] (Figure 9) (see Pendergast 1997:35; Ostapkowicz 1998:294-295). These are not simply 'unfinished' pieces: they are fully carved, with conical legs and backs terminating in a horizontal cut. The carving of the duho to this stage is in itself a considerable investment of time. Three of these 'faceless' duhos feature ear 'platforms', and in profile, some show edges that are suggestive of a nasal ridge or a sunken eye - but done so subtly that these are difficult to see without a raking light. This treatment is in striking contrast to the majority of duhos, where the deeply carved face forms the focal point, especially when inlaid with brightly contrasting materials such as gold or shell.

There must be a reason to omit facial details in so important an object, especially in this critical area: when in use, the seat was straddled, with the duho's head positioned between the legs of the sitter – a suggestive, and no doubt significant phallic allusion. Apart from this potent imagery, the treatment of this area also functioned to emphasise the wealth of the owner – not

#### Lucayan Duhos

only in their ability to harness resources necessary to create such an object (e.g., gold, dense woods), but also to secure the work of a skilled artist. But perhaps there were other ways of adding these 'missing' details: one possibility is that the face was painted with pigments that have not survived, or perhaps a cotton mask or guaiza was positioned over the face. Looking at the wider corpus, some surviving Taíno sculptures feature grooves cut into areas such as the upper arms and lower legs, or large ear perforations, most likely for the additions of cotton ornaments. In this sense, the Taíno did have composite sculptures, Ostapkowicz

with additional materials (cotton, feathers, gold, shell) layered on to finish the carving. Interestingly, the faceless duhos that have been dated range between ca A.D. 1290-1445, potentially suggesting that this period may have been a horizon for this style of duho. The fact that one of this group is provenanced to Cuba, while the majority are likely from the Bahamas/TCI – and these share similarities beyond the 'faceless' heads (e.g., a blunt cut across the back) – merit further investigation, and could potentially point to links between the two islands.



Figure 9. Three 'faceless' duhos, each devoid of any pronounced facial features – except for very subtle additions, such as the nasal ridge and chin in the example on the right. Left: 'PMNH duho', high-back, *Cordia* sp., AD 1290-1400, 'West Indies' (Bahamas/TCI?) [5]. Head measurements: H: 44mm; W: 55mm; D: 51mm (to base). Courtesy, Peabody Museum of Natural History, New Haven (ANT.137676). Centre: 'Frith duho', high back, *Carapa* sp., AD 1407-1445, Providenciales, TCI [7]. Head measurements: H: 59mm; W: 63mm; D: 51mm (to base). Courtesy, Department of Anthropology, National Museum of Natural History, Smithsonian (A030053). Right: 'SCVA duho', low-back, *Guaiacum* sp., AD 1315-1427, provenance unknown (Bahamas/TCI?). Head measurements: H: 54mm; W: 52mm; D: 67mm (to base). Courtesy, Robert and Lisa Sainsbury Collection, University of East Anglia (UEA 1045).

#### Late Duho Phase (A.D. 1400-1630)

By far the largest group of duhos, 10 in total, emerge post-A.D. 1400, comfortably within the final period of escalating complexity in the region. Four of these are from TCI [7; 8, 9; 14] and six from the Bahamas [6; 10-13; 15] (Table 1). Long Island and Providenciales share the highest number of duhos for this period, with three each. Of these, the slightly earlier 'group' of duhos is provenanced to the vicinity of the Blue Hills Settlement in Providenciales.

# Providenciales Duhos: Frith, Gabb and Gibb Duhos (A.D. 1407-1455)

The three duhos from Providenciales provide a tight date range of A.D. 1407-1455 [7-9] (Figure 10). Each duho was found separately (Table 2), so despite both a chronological and provenance overlap, their relationships to one another are not clear. Providenciales (38 sq miles/98 square km) is intriguing on a number of levels, not least because it appears to have the greatest concentration of duhos yet recovered from TCI. The only other multiple duho find within TCI with firm provenance came from Conch Bar on Middle Caicos, where guano workers found two duhos around 1880 (de Booy 1912:99-100). This in itself would place Providenciales fairly prominently as a center of some importance, certainly as an island community that boasted several examples of this cacical accoutrement. Further, their strontium isotope values, which cluster closely, are not inconsistent with their being carved from local trees (Ostapkowicz et al. 2013b).

There is a minimum of nine open air and two cave sites currently known from Providenciales, including a large village site (Keegan 1997:33; Keegan 1985:202; 319; Sullivan 1981:20-21; 321). This small number of sites likely reflects a combination survey of insufficient coverage and destruction by local development (e.g., Brian Riggs, notes on file in the TCNM, 19 June 1998)<sup>4</sup>: consequently, the importance of the island pre-historically cannot be adequately gauged at present. There are a handful of AMS dates from some of these sites, ranging from A.D. 1040-1460 (Table 3). Unfortunately, the context for many of these dates is not clear, nor are there multiple dates from a single site, so it is difficult to gauge how accurately they reflect the chronologies of the sites. They are. however, retained here to give a rough estimation of island occupation, and to give

a timeframe within which to interpret the duho dates. The earliest of these dates is on a shell from the P-5 site, providing a calibrated date of A.D. 1040-1270 (Carlson 1999:326). The largest site currently known from the island – P-1 – reportedly measuring over several hundred meters long by close to 100 meters wide before most of it was destroyed by dredging associated with the construction of the marina (Sullivan 1981:326). The remaining site, reduced to some 20x20 m yielded imported ceramics (52%) mostly Meillacoid in style, suggesting to Sullivan links to western Hispaniola or Cuba. An AMS date on charcoal provided the highest calibrated probability of A.D. 1251-1418. Finally, a shell from the small site of P-4 provided a marine-reservoiradjusted date of A.D. 1320-1460 (Carlson 1999:144). Collectively, these dates suggest that the island was occupied in the later phases of TCI settlement and expansion although, of course, this observation does not preclude the possibility that further work may reveal earlier sites.

#### Cartwright Duhos (ca. A.D. 1418-1491)

In addition to the Mortimers Cave duho discussed above, another three duhos are provenanced to Mortimers, on the south end of Long Island (Figure 11). The Cartwight duhos, recovered from Cartwright Duho Cave, are the largest duho group recovered in situ from the entire Caribbean (Aarons et al. 1988; Aarons 1989; Ostapkowicz 1998). their stvlistic similarities Given the expectation was that they would be contemporaneous - and indeed, their date ranges are broadly similar, with two of the duhos clustering well between A.D. 1418-1491 [10-11; 93.4% range for 11] and all overlapping during the period A.D. 1418-1438 [6; 10-11]. However, one of the duhos - carved in the form of a dog - is an outlier of the group, with a slightly earlier date of A.D. 1329-1439 [6] (although 90.6% of the probability falls within A.D. 1396-1439),

and as a result, the dates for the group fail to combine statistically (Ward and Wilson 1978; X<sup>2</sup>, df=2, T=101.6 (5%, 6.0]). But while this suggests that the three duhos might not have been made at the same time, they may still have shared histories, possibly deposited together as a group, as suggested by their close association in the small cave (Aarons et al. 1988). Keeping in mind that the terminus dates can only provide an indication of the felling time for the selected trees and the likely carving period assuming the wood was carved fresh - the dates do not indicate the actual period of use or final deposition for the objects, which may have been curated for varying periods of time (e.g., the 'dog' duho may have been older by some decades before all three were deposited together in the cave). It is quite probable that having been carved in the late 14<sup>th</sup>/early 15<sup>th</sup> centuries, their use may have stretched to several decades, if not a century, before European slave raids, diseases and warfare had a major impact on the Lucayan way of life. Given the impact of this early colonial history, it seems reasonable to suggest that within two or three generations after being made, they were secreted away in the Long Island cave for safe-keeping.



Figure 10: Three duhos recovered from the vicinity of Blue Hills Settlement, Providenciales, TCI. Although they have separate collection histories, they tightly overlap chronologically. Left: 'Gabb duho', high-back, *Guaiacum* sp., AD 1413-1455 (90.6%)[9]. L: 1085mm; W: 180mm; H: 190mm (min, due to damaged hind legs). Courtesy, Department of Anthropology, National Museum of Natural History, Smithsonian Institution, Washington (A030052). Centre: 'Gibbs duho', low-back, *Carapa* sp., AD 1411-1451 [8]. L: 457mm; W: 247mm; H:165mm (max). Courtesy, the Division of Anthropology, American Museum of Natural History, New York (25/234). Right: 'Frith duho', high-back, *Carapa* sp., AD 1407-1445 [7]. L: 825mm; W: 186mm; H:380mm. Courtesy, Department of Anthropology, National Museum of Natural History, Smithsonian Institution, Washington (A030053).

Lucayan Duhos

Including the four duhos recovered from Mortimers discussed above, there are a total of seven duhos documented from Long Island, some of which have long ago disappeared, possibly into private collections (e.g., de Boov 1912: Ostapkowicz 1998). The majority are from the southern end of the island, suggesting that this region was a center of some importance from the late 13<sup>th</sup> century onwards. Long Island, some 278 square miles (448 sq km) in size, has also yielded the largest concentration of sites in the Bahamas – a minimum of 59, including 44 open-air sites and 15 caves (Keegan 1997:33; Craton and Saunders 1992:11). Four of the largest settlements (over 200m

Ostapkowicz

in length) are located on the northern half of the island, with a minimum of 7 smaller village sites (90-199m in length) scattered along the northwestern length of the island; relatively less archaeological work has been done on the southern end of the island. where many of the duho finds have been made (Keegan 1985:206; 325-26).<sup>5</sup> Miller's Bay, LN-18, is among the largest sites in the entire Bahamian archipelago, perhaps a result of its position in a trade network that extended to Cuba (Keegan and Mitchell 1983:12). Indeed, quartz sand-tempered pottery from Cuba has been recovered from Long Island (Winter et al. 1987; Keegan 1992: 52) and inter-island trade between



Figure 11. The three duhos recovered from Cartwright Cave, Mortimers region, Long Island – the largest group of duhos found together in the entire Caribbean. Left: 'Cartwright turtle duho', high-back, *Cordia* sp., AD 1430-1491 (93.4%)[11].L: 1210mm; W: 205mm; H.245mm. Centre: 'Cartwright bat duho', high-back, *Guaiacum* sp., AD 1418-1462 [10]. L: 1000mm; W: 207mm; H: 170mm. Right: 'Cartwright dog duho', high-back, *Cordia* sp., AD 1396-1439 (90.6%)[6]. L: 1050mm; W: 213mm; H: 212mm. All courtesy Antiquities, Monuments and Museums Corporation (1988-01-01-3).

#### Lucayan Duhos



Figure 12. Two duhos recovered from Cat Island in the early to mid-19<sup>th</sup> century, when the island was known as San Salvador. Left: 'Captain Wheeler duho', high-back, *Cordia* sp., AD 1435-1515 (87.3%)[12]. L: 610mm; W: 200mm; H: 590mm. Courtesy, Bryn Mawr College (97-1-65). Right: 'Manchester duho', low-back, *Guaiacum* sp., AD 1454-1634 [15]. L: 390mm; W: 164mm; H: 107mm. Courtesy, Manchester Museum, The University of Manchester (0.9323/468).

Cuba and some islands in the Bahama archipelago was apparently still active when Columbus visited Long Island in 1492 (Berman 2011:113; Keegan 1997:50). In terms of regional importance, Aarons (1990:12) noted that 221 (45%) of all recorded Bahamian archaeological sites (491) were concentrated within a 170 miles radius centered upon the Mortimers-Deadman's Cay area of southern Long Island, and that this "...must have had a major significance in terms of the Lucavan centers of population as well as the seat of Lucavan archipelagic power". He argues that the domain of the paramount Lucavan cacique must have been located within this radius, supported by the fact that the majority of duho finds for the archipelago were also found here (Aarons 1990:14). This

has led some to suggest that this core area – along with the Caicos Islands (where other multiple duho finds have been made) – may have been centers for ritual and ceremonial focus for the Lucayanas as a whole (Craton and Saunders 1992:29; 402). However, it is likely that the presence of duhos may have had as much to do with socio-political manoeuvring as ceremony/ritual, perhaps pointing to escalating cacical or big man competition in the region. Ceremony and politics were intertwined – as they were on the larger islands to the south.

#### Cat Island: Captain Wheeler and Manchester Duhos (A.D. 1435-1634)

Between 1825 and 1864, two duhos [12; 15] (Figure 12) were recovered from 'St. Salvador', known today as Cat Island. In the 19<sup>th</sup> century, Cat Island was considered the first island visited by Columbus on 12 October 1492, and hence was commonly known as 'St.' or San Salvador (see Washington Irving 1828:239-271), until the name officially transferred to today's San Salvador (previously Watling's Island) in 1925. This has led to some confusion regarding the provenance of these pieces: the name changes meant that they have long been incorrectly associated with today's San Salvador, rather than with Cat Island.

Thirty-two archaeological sites are known from Cat Island (150 sq miles/389 sq km), of which 31 are open-air sites, with only one cave site documented on the south end of the island (Keegan 1997:33; MacLaury 1968). The paucity of caves is notable given that, apart from waterlogged sites, duhos are predominantly recovered from caves. At least five of the open-air sites are substantial settlements, well over 200m in length, with four sites over 100m in length (MacLaury 1968; 1970; Keegan 1985:330), suggesting a healthy population, and potentially a lengthy settlement period. Unfortunately, there are no radiocarbon dates available for any of the sites on the island: the chronology is based entirely on assemblages – primarily of ceramic Palmetto Ware - that are inferred to span A.D. 1000-1500 (MacLaury 1968:43-44). A finely polished greenstone adze fragment was recovered from one of MacLaury's test pits at CI-4, clearly indicating an import from the Greater Antilles. Despite the lack of evidence for ceremonial activities in the island (MacLaury's 1970:44), the presence of duhos does suggest that some degree of social differentiation was present by the 15<sup>th</sup> century.

The two Cat Island duhos overlap chronologically, both post-dating A.D. 1435 (but see below) and, while conforming to the 'cannons' of Lucayan duho style, are notably different to each other, suggesting a diversity of stylistic 'interpretation'. The

duho now in the collections of Bryn Mawr College [12] was found in 1825 (Table 2), and dates to A.D. 1435-1618: it is a substantial. high-back with unusually shallow carving of the facial features. It is clear that the eyes were never intended to hold inlay, yet they are carved in concentric circles, mimicking the deeply recessed circles seen in the low-backed duho from Cat Island [15] (Figure 13), and many other duhos in the region. This shallow carving of the eyes does not appear in any other duhos that have the inner eye area exposed (Ostapkowicz 1998). In contrast, the low back [15], which was found in the 'middle district' of the island in June 1864 (Table  $2)^{6}$ , and dates to A.D. 1454-1634, is a compact, finely carved example, finished with the conical legs and flat cut across the back, characteristics which are typically seen in other duhos from the Lucayan archipelago. The superficial differences to the finish of the pieces are in part a result of their differential preservation (in turn partly due to the woods selected - Guaiacum sp., in the case of the low-back and Cordia sp. for the high-back), as well as more recent conservation treatments, such as a coating of shellac on the low-back. Shellac, although soluble in alcohol and sodium hydroxide (the standard pre-treatments for radiocarbon dates - see Ostapkowicz et al. 2012a:2243) may have affected the date of the lowbacked duho: if so, it would make it appear more recent, and so mask a deeper chronology to the presence of duhos on Cat Island. Given that both high and low-backed examples were present on the island, it is clear that they followed the conventions seen in the wider region, quite likely also conforming to an established system of use and meaning.

Of interest is the fact that the dates for these two duhos extend into the 17<sup>th</sup> century (see also [13-15]). As noted by



Figure 13. The two duhos from Cat Island showing a striking difference in the detail and depth of facial carving, with a unique treatment of the eyes as concentric circles. Left: head measurements: H: 83mm; W: 85mm; Courtesy, Bryn Mawr College (97-1-65); Right: head measurements: H: 70mm; W: 62mm; Courtesy, Manchester Museum, The University of Manchester (0.9323/468).

Sinelli (2010:449-452) and Berman (2013:275), there is a growing body of radiocarbon evidence extending beyond the early 16<sup>th</sup> century, the period commonly believed to mark the Lucavan 'extinction': these are beginning to call into question our current understanding of the colonial period in the archipelago (see Morsink, this volume). This issue is an important one, and needs dedicated research over the coming years. But, as suggestive as some of the duho dates are - ranging to A.D. 1634 - it is important to be clear on the statistical probability of their late manufacture. Of the five duhos [11-15] with such late dates, the probability of four of them actually being

made post- A.D. 1600 ranges from 2% [11] to 15.6% [14]; by contrast, their greatest probabilities (79.4-93.4%) fall prior to A.D. 1522. The only exception to this is the Manchester duho [15] which has an almost equal likelihood of falling either in the period A.D. 1454-1529 (46%) or A.D. 1544-1634 (49.4%) – although the contamination issues discussed above are a concern and may be partly responsible for this late result. Thus, even if some Lucayans did survive the ravages of the early colonial period, traditional practices that relied on significant investments in time, effort and inter-island connections – such as the manufacture and use of high-status goods - could not be

Elite objects such as duhos sustained. required an intact socio-political system, which was critically and irrevocably damaged in the Taíno heartland (Hispaniola), and the wider region, by the mid-16<sup>th</sup> century (Deagan 2004; Guitar 1998; Keegan 1992). If control of exchange fuelled socio-political differentiation in the Bahamas and TCI, as is argued here, and this was based, in part, on links to Hispaniola, the post-conquest collapse of cacicazgos on the latter would also undermine conditions in the Lucayan archipelago. Population decline due to slave raids and newly introduced epidemics took

their toll across the region, and although small, isolated settlements might well have escaped the full brunt of their impact, the collapse of network links, among other things, had damaging consequences. All this would lead to a breakdown of the cacique/big man infrastructure, and hence use of elite objects such as duhos. There is a small chance that duhos, as curated objects, may have been used for a period of time into the mid-16<sup>th</sup> century, but it is more likely that they were carefully secreted away in caves by this period.



Figure 14. 'Acklins duho', *Cordia* sp., AD 1437-1516 (85.5%)[13]. L: 317mm; W: 238mm; H: 140mm. Courtesy, National Museum of the American Indian, Smithsonian Institution, Washington (0325757).

The most southerly island in the Bahamian chain to yield a duho is Acklins, an island roughly 150 square miles (241  $km^2$ ) in size, with a minimum of 29 open air sites and two caves (Keegan 1997:33; Craton and Saunders 1992:11). The duho [13] (Figure 14) was recovered from the vicinity of the largest settlement in the entire archipelago - the 6 km long site of Delectable Bay (Keegan 2007:77). De Booy (1913:5) acquired the duho in 1912: it was reportedly found in an open cave near Spring Point (Table 2). Keegan (1983:74-75, 123) was unable to find the cave (designated AC-25) in 1983, despite two days searching for it, although he understood from his informants that it was located behind the settlement at Delectable Bay. This area is exceptionally rich in archaeology - particularly the site of AC-14 which, according to Keegan (1992:110), vielded 27.3% by weight of imported ceramics - evidence that it was involved in long-distant exchanges that '... exceeded by several magnitudes the scale of exchange in the remainder of the Bahamas'. This heightened participation in long-distance trade, he argues, '... is consistent with Columbus's report that a 'King' (paramount chief) who held hegemony over all the central Bahamas resided on Acklins Island' (Keegan 1992:110).

The duho provided a date of A.D. 1437-1618 (95.4%), with the highest probably at A.D. 1437-1516 (85.5%). The intriguing possibility that it was recovered in such close proximity to so large a site, yielding a wealth of imported ceramics, suggests that the area was a center for the circulation of goods, which may have encouraged socio-political hierarchies, and the concomitant use of such 'elite' items as duhos. This interpretation, however, hinges on the site being contemporaneous with the dates of the duho – and unfortunately there

are no radiocarbon dates for the site nor, indeed, the island as a whole. The duho's strontium isotope results are consistent with those of the other Bahamian duhos and with the island's biogenic strontium signal (as determined by extensive measurements on modern plants), which is at least consistent with local manufacture, though it does not exclude an origin on another limestone island or region outside the Lucavan archipelago. Perhaps more importantly, it is carved from Cordia sp., which on present evidence appears to have been restricted to the Bahamas/TCI, at least in the corpus of 66 wood sculptures that formed part of the wider study (Ostapkowicz et al. 2012a). Unfortunately, due to its poor condition, it has no surviving diagnostic carving that would link it stylistically to the Bahamas, apart perhaps from its very high conical legs - nor is it possible to tell whether it is a lowor high-back due to the damage sustained at both ends. Overall, however, it is most likely that the duho was carved locally, for local use.

#### A Return to Turks and Caicos: The TCNM Duho (A.D. 1440-1620)

The last duho – currently the only TCI duho to remain on the islands, displayed at the Turks & Caicos National Museum (TCNM) [14] (Figure 15) – brings this discussion full circle, back to the islands that vielded the earliest duho in the Lucavan archipelago [1]. The five TCI duhos studied span half a millennium, yet remain fairly consistent - among the largest and most elaborate examples of their kind. This, the voungest duho of the group, dates to A.D. 1440-1620 (95.4%), with the greatest likelihood of being carved around A.D. 1440-1522 (79.4%). It has long been associated with Grand Turk. being publically displayed there since 1893, although the Caicos islands are its more likely source, with an abundance of large caves and a history of duho finds made during commercial guano mining in the late 19<sup>th</sup> century (for full discussion see Ostapkowicz et al. 2012b; see also Lady Blake Duho 3, above for context of Grand Turk archaeology). At this time, there was a growing interest in the archaeology of the region, and any finds were documented with interest, such as the duho recovered from a cave near Jacksonville, East Caicos or the two from the vicinity of Conch Bar, Middle Caicos, all found in the 1880s (Sharples 1884:249; de Booy 1912:99-100; 103). It is possible that the TCNM duho is one of these – and it is an interesting coincidence that it was also displayed with another duho in the library before both were stolen in the 1970s (only the larger of the two has been repatriated): although tentative, this might suggest that the duhos in the library and those recovered from near Conch Bar were one and the same.



Figure 15. 'TCNM duho', high-back, *Cordia* sp., AD 1440-1522 (79.4%)[14]. L:1105mm; W: 280mm; H: 550mm (max). Courtesy, Turks and Caicos National Museum (2003.30.1).

If the duho is from Middle Caicos, there is a good chronological framework available for the island to assist in providing some context. Apart from de Booy's (1912) brief foray, Middle Caicos has been the focus of several major archaeological projects over the last few decades, initiated by Shaun Sullivan in the late 1970s/early 1980s, intensified by Keegan in the 1990s (e.g., Keegan 1997; 2007), and continued, most recently, by Sinelli (2010) and Morsink (2011). There are 36 open-air sites currently known from the island, three of which are over 200 m in length, and eight cave sites (Keegan 1997:33; Craton and Saunders 1992:11). These encompass early

seasonal occupation sites such as MC-8 and MC-10, primarily established for the extraction of resources that were exported to Hispaniola (Sinelli 2010; Keegan 2007:171), to MC-12, the first permanent settlement in TCI (ca. A.D. 1000) through to large-scale settlements such as MC-6, a site featuring two stone-lined plazas and astronomical alignments with strong parallels to Hispaniolan settlements (Keegan 1997:83-The site has been 86; Keegan 2007). interpreted as both a ceremonial center and a 'gateway community' founded by Hispaniolan entrepreneurs to control the trade of local goods (cotton, salt and dried salted marine resources) exported to the Greater Antilles (Keegan 2007:81; 87; Sullivan 1981:415; 425-430). It features what Sullivan (1981:386) has interpreted as a 'cacique's house', although recent work within this complex revealed no elite goods or food remains and only a small quantity of imported ceramics, suggesting that it either did not house elites, or that their day to day activities were no different to those of other community members (Keegan 2007:177; O'Day 2002). Established no earlier than ca. A.D. 1300 (based on the exclusive presence of Chican imports) and lasting for a time after Spanish contact (based on the presence of a brass caracol and post-1500 radiocarbon dates - Table 3), the site's occupation lasted roughly two centuries. This period saw a general increase in the number and size of sites on the island (e.g., MC-32, another substantial site, potentially emerged at about the same time) (Keegan 2007:182). This period of increasing complexity overlaps with the dates for the duho - ca A.D. 1440-1520 - and would be fitting within a context of emerging elites, enhancing their status via trade links with Hispaniola, where such objects were de rigueur.

# Conclusions

From the elaborate nature of the earliest surviving examples, it is clear that the duho was an important component of Lucayan material culture post-A.D. 1000 – a period which coincided with full-time many of the islands, sedentism on population increase and a growing reliance on locally produced items of material culture, such as Palmetto Ware (Keegan 2007; Rouse 1992). Lucayan duhos are the largest examples of their kind in the unique not only in their Caribbean, iconography but their use of woods such as *Cordia* sp. Further, the majority of strontium isotope results are consistent with their production on limestone islands. The earliest examples feature both low and high-backed styles spanning the Lucayan archipelago, showing a diverse iconography ranging from naturalistic animals to faceless heads, suggesting specific design choices made by artisans or perhaps dictated by the specific contexts in which they were used, including the status of the individuals for whom they Given current were carved. our understanding of the permanent settlement of these islands (mostly post-dating A.D. 1000), this would suggest a relatively short period of local stylistic development and elaboration. Although inspired by distant, 'homeland' prototypes, and perhaps retaining their symbolic referents within specific contexts of use and meaning, their style shifted in response to a different milieu and aesthetics. Planned future work will delve more deeply into these local and regional Lucayan aesthetic expressions.

During the late duho phase (A.D. 1400-1630), duhos are predominantly linked to islands that show increased evidence of trade and likely socio-political links to the Greater Antilles – such as Providenciales, Middle Caicos, Long Island and Acklins Island. It is possible to suggest that control over the export of local resources to Hispaniola or Cuba likely brought an economic prosperity that spurred increasing social hierarchy and differentiation, and it is here that elite accoutrements - duhos among them - may have come to reinforce rank and position. They could have served to cement links between distant trade partners: the Lucayan hospitality of honoring guests, especially when important transactions were being negotiated, may well have involved inviting them to sit on duhos, as was the practice in the south (Ostapkowicz 1997; 1998). The use of duhos was something that these regional partners had in common, and understood in terms of value, hence they functioned to reconfirm mores of status and hospitality. while at the same time proffering the correct protocols during important negotiations.

The Lucayans are thought to have had smaller political units than those of the Classic Taínos (Keegan and Maclachlan 1989:617) yet the presence of so many in the Lucayan archipelogo duhos (exceeding the total of wooden duhos from the Taíno heartland, Hispaniola) post-A.D. 1000 suggests that these smaller groups still socio-political maintained some form protocols of a hierarchical society (assuming Bahamian/TCI duhos had the same importance as those in the Greater Antilles). The first migrants into the Lucavan archipelago must have maintained the mores of their ancestral homeland as well as some of its aesthetics (e.g., Winter 2009:14, 21) and iconic material culture, including the When the Bahamian/TCI islands duho. were first permanently settled, duhos were ingrained within Caribbean socio-political systems - their use in the region stretching back to ca. A.D. 400 (Ostapkowicz et al. 2011b, 2012a). By ca. A.D. 900, if not earlier, the elaboration of the duho alongside other cohoba-related paraphernalia and reliquaries - into large, finely finished carvings intended for display, was established on islands like Hispaniola (Ostapkowicz et al. 2011a; 2012a). The

quality of their carving, and the elaboration of their finish (with gold and shell inlays, cotton ornaments and feathers, etc.), likely reflected on the powers of the people who 'controlled' these potent, spiritually-charged objects (or, rather, 'beings'). This was likely the same in the Lucayan archipelago, where not only did the size of the carving imply access to large trees and the skills to turn them into ceremonial objects, but it also may have implied access to the 'exotics' necessary to carve the dense woods: due to the carbonate limestone matrix of the islands, any igneous and metamorphic stone necessary for wood carving tools had to be imported from the Greater Antilles (Keegan 1997:59; Keegan 2007:77; but see Keegan and Mitchell 1986) - although local shell adzes and other means of felling trees were also likely to be used. Another suggestive aspect is the impressive size of Lucayan duhos: it is tempting to view them as reflecting the aspirations of emerging entrepreneurial elites, where competition in the scale and impressive carving (in contrast to the smaller sizes in Hispaniola or Cuba) carried a certain caché (cf. Wilson 2007:143-144), and hence led to the fluorescence of the duho in the Lucayan archipelago. Thus, the Lucayan caciques or other elites who commissioned and used these duhos were integrated into a wider circum-Caribbean chiefly iconography and ideology - using them to establish and reaffirm their central role as powerful leaders, with links to the larger islands to the south.

But these links began to break down during the early years of Spanish invasion, with Hispaniolan populations the first to be hit hard by the combined impact of slavery and European diseases as well as enforced assimilation policies, their cacicazgos significantly diminishing in power by the mid-16<sup>th</sup> century (Deagan 2004:603; Guitar 1998:208). While Lucayan connections with these neighboring groups may have continued at a decreasing scale over the decades that followed, the *raison d'être* for duhos, as signifiers of cacical/big man authority and their links to those beyond the distant horizon (Helms 1988), also began to wane, so that duho manufacture and use effectively ceased by the early to mid-16<sup>th</sup> century. Although the chronological range of some Lucayan duhos extends post-A.D. 1600, these dates are statistically unlikely – not only in light of their low probability ranges (2-15%), but also of our current understanding of the stark realities of the time. Such material culture, so critical to the

maintenance of chiefly prerogatives, was put aside as priorities shifted in the colonial period. Thus, the chronologies provided by this study allow a general overview of the duho 'horizon' in the Lucayan archipelago (as far as the surviving examples allow us to judge): from the earliest evidence for their presence post A.D. 1000, to a short, marked fluorescence from A.D. 1400, followed quickly by a sharp decline post- A.D. 1500. Throughout this period, they maintained a distinctive Lucayan style – a recognisable variant within the leadership iconography of the circum-Caribbean.

### Notes

1. The 26 examples include 15 duhos from the Bahamas, and 9 from TCI (Ostapkowicz 1998), and two that previously lacked clear provenance but which have been more firmly attributed to the region during the course of this project [5; 15]. Of these 26, 11 have disappeared since their first documentation: 3 provenanced to Long Island (Hamilton Cave Duho; Darville Duho; Krieger Duho); 1 from Rum Cay (Black Bluff Duho); 1 from Exuma or Crooked Island (Long Cay Duho); 2 from an unknown Bahamian source (Blake Duho 1, Nassau Public Library Duho); 2 from Middle Caicos (Conch Bar Duhos); 1 from East Caicos (Jacksonville Duho) and one once displayed in Grand Turk's Public Library (Ostapkowicz 1998). Due to the often meager information associated with some of the early duho finds, it may be that there is some overlap to those currently listed separately: for example - there is the possibility that the two duhos once displayed in the Grand Turk Library may be the same as those recovered from Conch Bar, Middle Caicos. If this proves to be the case, this would bring the Bahamian/TCI total number to 24 – which is equal to the number of wooden Hispaniolan duhos (24). Of note, however, is the fact that there is the potential that other duhos - such as the duho in the collections of the Sainsbury Centre for the Visual Arts (SCVA), which bears features consistent with the regional style – may, with further research, be more firmly attributed to the region. This possibility would certainly suggest that the duho presence in the Lucayan archipelago is on par with the quantity of examples from Greater Antillean islands.

2. There is the possibility that the early colonial development of Cockburn Town (from ca. 1720) would have destroyed any sites within this extensive area, so that all traces of even a large-scale site would have been removed. This is further compounded by the issue of coastal erosion of the western shoreline, where any Lucayan site, typically located right behind the first dune ridge, could have been washed into the sea (Brian Riggs, personal communication, 2009).

3. A platter was also recovered from the cave, although it is unclear whether the objects were found in direct association or in separate areas of the same large cave. The platter, dating to A.D. 1019-1155 (Ostapkowicz et al. 2012a:[1]) is at least a century earlier than the date for the duho. This could suggest two periods of deposition or, alternatively, that the platter may have

been curated for some time before being deposited in the cave with the duho. It is finely carved to a uniform thinness and features zoomorphic handles in the form of reclining birds.

4. For example, Brian Riggs (notes on file in the TCNM, 19 June 1998) indicates that two sites found during Sullivan's surveys in 1976 – close to Juba Point and Bermudian Harbour Bay – have been destroyed by dredging activity, and recent developments at Grace Bay were all carried out prior to impact surveys.

5. Given the quantity of duhos recovered from the south of the island, one would expect the Mortimers area to show evidence of large-scale village sites dating post A.D. 1200, the domains of important caciques or 'big men'. Unfortunately, the southern region is an area that has not been surveyed extensively, and only one site – LN-30 – a hamlet of some 30 x 15 m with light pottery and shell scatters – has been documented there (Keegan 1985:206; 326). The nearest large scale site, interpreted as a village settlement (LN-24) is roughly 25 miles distant on the northeast coast, close to today's Clarence Town (Keegan 1985:206, 326), while villages exceeding 200 m in length were recorded only in the northern half of the island – a considerable distance from Mortimers. Perhaps future work will reveal neighboring large-scale villages, but there is the equal possibility that these cave locations were specifically targeted because they were remote.

6. The only documented cave site on Cat Island is in the south of the island, so this reference to one in the 'middle district' suggests the possibility of at least one other cave site for the island.

Acknowledgements: This paper is based on research undertaken as part of the multidisciplinary Pre-Hispanic Caribbean Sculptural Arts in Wood' project, funded by grants from the Getty Foundation and British Academy (2007-2010). Colleagues directly involved in 14C dating and material and chemical identification of the artefacts discussed in this paper include Christopher Bronk Ramsey, Tom Higham and Fiona Brock (Research Laboratory for Archaeology and the History of Art, University of Oxford, UK), Alex Wiedenhoeft (Center for Wood Anatomy Research, USDA Forest Service, Madison, WI, USA) and Michael Richards (Max Plank Institute, Leipzig, Germany): this publication would not have been possible without their contributions and insights over the course of the project.

I am grateful to the participating museums for their support – not only for sampling permissions but also for the generosity of their time during my often lengthy visits to study collections: the Antiquities, Monuments and Museums Corporation, Nassau, Bahamas; British Museum, London, UK; Bryn Mawr College, Pennsylvania; Manchester Museum, Manchester, UK; National Museum of the American Indian and National Museum of Natural History, Washington, D.C., and American Museum of Natural History, New York, US; Peabody Museum of Natural History, New Haven, US; Sainsbury Centre for the Visual Arts, University of East Anglia, Norwich; Saint John's Abbey, Collegeville, Minnesota; Turks and Caicos National Museum, Grand Turk, TCI.

A shorter version of this paper was presented at the 2012 Society of American Archaeology meetings, in the dedicated session 'Lucayans and their World', organised by Mary Jane Berman. I thank Mary Jane for the invitation to expand on the points raised in this article, and for her valued editorial input. My many thanks to those who have generously contributed information, including Brian Riggs, Bob Carr and William Shaffer. Rick Schulting provided insightful comments on an earlier version of this paper. The Trustees for Methodist Church Purposes provided permission to include the quote from Rev. Theophilus Pugh, which opened the paper. Unless otherwise noted, all photographs and illustrations are by Joanna Ostapkowicz.

#### **References Cited**

Aarons, George Anthony (1989). The Lucayan Duhos: 1828-1988. *Journal of the Bahamas Historical Society* 11 (1): 3-11.

Aarons, George Anthony (1990). The Cartwright *Duho* Cave, Long Island. In *Aspects of Bahamian History*, pp. 11-14. Department of Archives, Ministry of Education, Nassau, Bahamas.

Aarons, George Anthony, Kim Outten, Grace Turner and Carlton Cartwright (1988). Report on Long Island Expedition: Cartwright Duho Cave Excavation (LN-37), 22nd-28th September, 1988. Unpublished report on file at the Department of Archives, Bahamas.

Barry, Colman (1940). Upon these Rocks. St. John's Abbey, Collegeville.

Berman, Mary Jane (2011). Good as Gold: The Aesthetic Brilliance of the Lucayans. In *Islands at the Crossroads: Migration, Seafaring, and Interaction in the Caribbean,* edited by L. Antonio Curet and Mark W. Hauser, pp. 104-133, University of Alabama Press, Tuscaloosa.

Berman, Mary Jane and Perry L. Gnivecki (1993). The Colonization of the Bahamas. In *Proceedings of the Fourteenth International Congress for Caribbean Archaeology*, edited by A. Cummins and P. King, pp. 170-186. International Association for Caribbean Archaeology, Barbados.

Berman, Mary Jane and Perry L. Gnivecki (1995). The Colonization of the Bahama

Archipelago: A Reappraisal, *World Archaeology* 26:421-441.

Berman, Mary Jane, Perry L. Gnivecki and Michael P. Pateman (2013). The Bahama Archipelago. In *The Oxford Handbook of Caribbean Archaeology*, edited by William F. Keegan, Corinne L. Hofman, and Reniel Rodríguez Ramos, pp. 264-280. Oxford University Press, Oxford.

Brock, Fiona, Joanna Ostapkowicz, Christopher Bronk Ramsey, Alex Wiedenhoeft, Thomas Higham, and Caroline Cartwright (2012). Paired Dating of Pith and Other Edge (terminus) Samples from Pre-Hispanic Caribbean wooden sculptures. *Radiocarbon* 54(3-4):677-688.

Bronk Ramsey, Christopher (2013). OxCal Program, v. 4.2.2 Radiocarbon Accelerator Unit, University of Oxford. C14.arch.ox.ac.uk/oxcalhelp/hlp\_contents.ht ml (14 July 2013).

Carlson, Lisbeth A. (1999). Aftermath of a Feast: Human Colonization of the Southern Bahamian Archipelago and Its Effects on the Indigenous Fauna. Ph.D. dissertation, University of Florida, Gainesville. University Microfilms, Ann Arbor.

Carlson, Lisbeth A., and William F. Keegan (2004). Resource Depletion in the Prehistoric Northern West Indies. In *Voyages of Discovery: The Archaeology of Islands*, edited by Scott M. Fitzpatrick, pp. 85-107. Praeger Publisher, Westport.

Carr, Robert S, Jane S. Day, Jeff B. Ransom, William C. Schaffer, and John G. Beriault (2006). An Archaeological and Historical Assessment of Preacher's Cave, Eleuthera, Bahamas, AHC Bahamas Technical Report no. 4, Research Atlantica, Inc and the Archaeological and Historical Conservancy, Inc., Atlanta.

Craton, Michael, and Gail Saunders (1992). Islanders in the Stream: A History of the Bahamian People, Volume I: From Aboriginal Times to the End of Slavery, University of Georgia Press, Athens.

Dall, William H. (1909). Biographical Memoir of William More Gabb 1839-1878. *National Academy of Sciences Biographical Memoirs Volume VI*, Washington.

Deagan, Kathleen (2004). Reconsidering Taíno Social Dynamics after Spanish Conquest: Gender and Class in Culture Contact Studies. *American Antiquity* 69:597-626.

de Booy, Theodoor (1912). Lucayan Remains in the Caicos Islands. *American Anthropologist* 14:81-105.

de Booy, Theodoor (1913). Lucayan Artifacts from the Bahamas. *American Anthropologist* 15:1-7.

Frith, David R. (1876). Letter to Prof. S. J. Baird, 16 December 1876, National Museum of Natural History, registrar's file for accession no. A5658

Fitzpatrick, Scott M. (2004). *Quo vadis* Caribbean Archaeology? The Future of the Discipline in an International Forum. *Caribbean Journal of Science* 40:281-290.

Fitzpatrick, Scott M. (2006). A Critical Approach to 14C Dating in the Caribbean: Using Chronometric Hygiene to Evaluate Chronological Control and Prehistoric Settlement. *Latin American Antiquity* 17:389-418.

Granberry, Julian (1955). A Survey of Bahamian Archaeology. Master's thesis, University of Florida, Gainesville. University Microfilms, Ann Arbor.

Granberry, Julian (1956). The Cultural Position of the Bahamas in Caribbean Archaeology. *American Antiquity* 22:128-134

Gnivecki, Perry L. (1995). Rethinking 'First' Contact: Evidence and Nonevidence. In *Proceedings of the 15<sup>th</sup> International Congress for Caribbean Archaeology*, R.E. Alegría and M. Rodríguez, eds., pp. 209--217, Centro de Estudios Avanzados de Puerto Rico y el Caribe, San Juan.

Granberry, J. and J. H. Winter (1995). Bahamian Ceramics. In *Proceedings of the* 15<sup>th</sup> International Congress for Caribbean Archaeology, Ricardo E. Alegría and Miguel Rodríguez, eds., pp. 3-14, Centro de Estudios Avanzados de Puerto Rico y el Caribe, San Juan.

Guitar, Lynne A. (1998). Cultural Genesis: Relationships among Indians, Africans and Spaniards in Rural Hispaniola, first half of the sixteenth century. Ph.D. dissertation, Vanderbilt University. UMI, Ann Arbor, Michigan.

Helms, Mary W. (1988). Ulysses' Sail: An Ethnographic Odyssey of Power, Knowledge and Geographical Distance. Princeton University Press, Princeton, New Jersey.

Hoffman, Charles A., Jr. (1967). Bahama Prehistory: Cultural Adaptation to an Island Environment. Ph.D. dissertation, University of Arizona. University Microfilms, Ann Arbor. Hoffman, Charles A., Jr (1970). The Palmetto Grove Site on San Salvador, Bahamas. *Contributions of the Florida State Museum, Social Sciences*, No. 16. Florida State Museum, Gainesville.

Holmes, William H. (1894). Caribbean Influence in the Prehistoric Art of Southern States. *American Anthropologist* 7:71-79.

von Hutton, Ulrich (1536). Of the wood called guaiacum, that healeth the Frenche pockes, and also healeth the goute in the feete, the stoone, the palsey, lepree, dropsy, fallynge euyll, and other diseases in Aedibus. London: Tho. Bertheleti.

Keegan, William F. (1985). Dynamic Horticulturalists: Population Expansion in the Prehistoric Bahamas. Ph.D. Dissertation, University of California at Los Angeles. University Microfilms, Ann Arbor.

Keegan, William F. (1992). *The People Who Discovered Columbus: The Prehistory of the Bahamas*. The University Press of Florida, Gainesville.

Keegan, William F. (1994). West Indian Archaeology 1: Overview and Foragers. *Journal of Archaeological Research* 2:255-284.

Keegan, William F. (1997). Bahamian Archaeology: Life in the Bahamas and Turks and Caicos before Columbus. Media Publishing, Nassau.

Keegan, William F. (2007). *Taíno Indian Myth and Practice: The Arrival of the Stranger King.* The University Press of Florida, Gainesville.

Keegan, William F., and M. D. Maclachlan (1989). The Evolution of Avunculocal Chiefdoms: A Reconstruction of Taíno Kinship and Politics. *American Anthropologist* 91:613-630.

Keegan, William F. and Steven W. Mitchell (1983). An Archaeological Reconnaissance of Long Island, Bahamas, Report to the Government, Commonwealth of the Bahamas, ms. on file at the Department of Archives, Nassau.

Keegan, William F. and Steven W. Mitchell (1986). Possible Allochthonous Lucayan Arawak Aritfact Distributions, Bahama Islands, *Journal of Field Archaeology* 13:255-258.

Jones O'Day, Sharyn (2002). Late Prehistoric Lucayan Occupation and Subsistence on Middle Caicos Island, North West Indies. *Caribbean Journal of Science* 38(1-2):1-10.

Joyce, Thomas A. (1919). Notes on a Wooden Stool from the Island of Eleuthera, Bahamas. *Man* 19:1-2.

MacLaury, J. C. (1968). Archaeological Investigations on Cat Island, Bahamas. Unpublished Masters thesis, Department of Anthropology, Florida Atlantic University, Boca Raton.

MacLaury, J. C. (1970). Archaeological Investigations on Cat Island, Bahamas. *Contributions of the Florida State Museum*, *Social Sciences*, 16, Gainesville.

Mason, Otis T. (1885). The Guesde Collection of antiquities in Poite-à-Pitre, Guadeloupe, West Indies. *Smithsonian Institution, Annual Report for 1884*, pp. 729-837, Washington, D.C.

Morsink, Joost (2011). Treasures on the Salina. *Times of the Islands*, Spring.

Newsom, Lee A. (1993). *Native West Indian Plant Use*. Ph.D. Dissertation, Department of Anthropology, University of Florida. University Microfilms, Ann Arbor.

Ober, Frederick (1893). In the Wake of Columbus: Adventures of the Special Commissioner sent by the World's Columbian Exposition to the West Indies. D. Lothrop Company, Boston.

Ostapkowicz, Joanna (1997). To Be Seated with 'great courtesy and veneration': Contextual Aspects of the Taíno Duho. In *Taíno: Pre-Columbian Art and Culture form the Caribbean*, edited by Fatima Brecht, Estrellita Brodsky, John Alan Farmer, and Dicey Taylor, pp. 56-67. El Museo del Barrio and the Monacelli Press, New York.

Ostapkowicz, Joanna (1998). Taíno Wooden Sculpture: Duhos, Rulership and the Visual Arts in the 12<sup>th</sup>-16<sup>th</sup> Century Caribbean. Unpublished Ph.D. dissertation, Sainsbury Research Unit, University of East Anglia, Norwich.

Ostapkowicz, Joanna, Alex Wiedenhoeft, Christopher Bronk Ramsey, Erika Ribechini, Samuel Wilson, Fiona Brock, and Thomas Higham (2011a). 'Treasures... of Black Wood, Brilliantly Polished': Five Examples of Taíno Sculpture from the Tenth-Sixteenth Century Caribbean. *Antiquity* 85:942-959.

Ostapkowicz, Joanna, Christopher Bronk Ramsey, Alex Wiedenhoeft, Fiona Brock, Thomas Higham, and Samuel Wilson (2011b). 'This Relic of Antiquity': Fifth to Fifteenth Century Wood Carvings from the Southern Lesser Antilles. In Communities in Contact: Essavs in Archaeology. Ethnohistory and Ethnography of the Amerindian Circum-Caribbean, edited by Corinne Hofman and Anne van

Duijvenbode, pp. 137-170. Sidestone Press, Leiden.

Ostapkowicz, Joanna, Christopher Bronk Ramsey, Fiona Brock, Thomas Higham, Alex Wiedenhoeft, Erika Ribechini, Jeanette J. Lucejko, and Samuel Wilson (2012a). Chronologies in Wood and Resin: AMS 14C Dating of Pre-Hispanic Caribbean Wood Sculpture. *Journal of Archaeological Science* 39:2238-2251.

Ostapkowicz, Joanna, Fiona Brock, Alex Wiedenhoeft, and Michael Richards (2012b). Carved Histories II: A Duho Biography. *Times of the Islands* 99:40-45, 47.

Ostapkowicz, Joanna, Bryan Naqqi Manco, Michael Richards, and Alex Wiedenhoeft (2012c). Hidden Stories: Trees and the Charting of Lucayan Histories. *Times of the Islands* 99: 22-27.

Ostapkowicz, Joanna, Christopher Bronk Ramsey, Fiona Brock, Caroline Cartwright, Stacey, and Mike Richards Rebecca Birdmen, Cemís and Duhos: (2013a). Material studies and AMS 14C Dating of Pre-Hispanic Caribbean Wood Sculptures in British the Museum, Journal of Archaeological Science 20:4675-4687.

Ostapkowicz, Joanna, Rick Schulting, Alex Wiedenhoeft, and Michael Richards (2013b). Provenancing Taíno and Lucayan Wooden Sculptures Using Strontium (<sup>87</sup>Sr/<sup>86</sup>Sr) Isotopes, Preliminary report on file at National Museums Liverpool, Liverpool, UK.

Oviedo, Gonzalez Fernando de, (1959 [1526]). Historia general y natural de las Indias. Volumes 1–5 (Biblioteca de Autores Españoles 119), edited by J. Perez de Tudela Bueso, Madrid: Ediciones Atlas. Pateman, Michael P. (2011). The Bahamas. In *Protecting Heritage in the Caribbean*, edited by Peter E. Siegel and Elizabeth Righter, pp. 1-8. University of Alabama Press, Tuscaloosa.

Pendergast, David M. (1997). Up from the Shallows: A Look at the ROMs first Archaeological Excavation in Cuba. Rotunda 30(2):28-35.

Pugh, Theophilus (1835). Letter to the Secretaries of the Wesleyan Committee, 3 November, 1835, SOAS Library, Methodist Missionary Society (MMS)/West Indies/Correspondence/General/FBN 11. Reproduced by permission of the Trustees for Methodist Church Purposes (TMCP).

Reimer, Paula J., Mike G. L. Baillie, Edouard Bard, Alex Bayliss, J Warren Beck, Paul G. Blackwell, Christopher Bronk Ramsey, Caitlin E. Buck, George S. Burr, R. Lawrence Edwards, Michael Friedrich, Pieter Meiert Grootes., Thomas Ρ. Guilderson, Irena Hajdas, Timothy J. Heaton, Alan G. Hogg, Konrad A. Hughen, Klause Felix Kaiser, Bernd Kromer, Gerry McCormac, Stuart W. Manning, Ron W. Reimer, David Richards, John Southon, Sahra Talamo, Christian S. M. Turney, Johannes van der Plicht, and Constanze E. Weyhenmeyer (2009). IntCal09 and Marine09 Radiocarbon Age Calibration 0-50,000 Years cal BP. Curves, Radiocarbon 51(4):1111-1150.

Richey-Abbey, Laurel (2012). Bush Medicine in the Family Islands: the Medical Ethnobotany of Cat Island and Long Island, Bahamas, Unpublished PhD thesis, Miami University, Oxford, Ohio.

Schaffer, William C., Robert S. Carr, Jane S. Day, and Michael P. Pateman (2010).

Lucayan-Taíno Burials from Preacher's Cave, Eleuthera, Bahamas. *International Journal of Osteoarchaeology* 22:45-69. Sears, William H. and Shaun O. Sullivan (1978). Bahamas Prehistory. *American Antiquity* 43:3-25

Sharples, S. P. (1884). Turks Islands and the Guano Caves of the Caicos Islands. *Proceedings of the Boston Society of Natural History* 22:242-253.

Siegel, Peter E., and Elizabeth Righter, editors (2011). *Protecting Heritage in the Caribbean*. University of Alabama Press, Tuscaloosa.

Sinelli, Peter T. (2010). All Islands Great and Small: The Role of Small Cay Environments in Indigenous Settlement Strategies in the Turks & Caicos Islands. Unpublished Ph.D. dissertation, University of Florida, Gainesville.

Sinelli, Peter T. (2013). Meillacoid and the Origins of Classic Taíno Society. In *The Oxford Handbook of Caribbean Archaeology*, edited by William F. Keegan, Corinne L., Hofman, and Reniel Rodríguez Ramos, pp. 221-231. Oxford University Press, Oxford.

Sullivan, Shaun D. (1974). Archaeological Reconnaissance of Eleuthera, Bahamas. Unpublished Master's thesis, Department of Anthropology, Florida Atlantic University, Boca Raton.

Sullivan, Shaun D. (1981). The Colonization and Exploitation of the Turks and Caicos Islands. Ph.D. dissertation, University of Illinois, Urbana. University Microfilms, Ann Arbor. Timyan, Joel (1996). *Bwa Yo: Important Trees of Haiti*. South-East Consortium for International Development, Washington.

Ward, G.K., and S. R. Wilson (1978). Procedures for Comparing and Combining Radiocarbon Age Determinations: a Critique. *Archaeometry* 20 (1): 19-31.

Winter, John H. (1981). Archaeological Reconnaissance on San Salvador, Cat Island, and Rum Cay. *Bahamas Archaeology Project Reports and Papers for* 1981. Bahamian Field Station of the College Center of the Finger Lakes, San Salvador, Bahamas.

Winter, John H. (2009). Rock Art within the Bahamian Archipelago. In *Rock Art of the Caribbean*, edited by Michelle Hayward, Lesley Gail Atkinson, and Michael A. Cinquino, pp. 13-21. University of Alabama Press, Tuscaloosa.

Winter, John, Julian Granberry, and Art Leibold (1987). Archaeological Investigations within the Bahamas Archipelago. In *Proceedings of the Tenth International Congress for the Study of Pre-Columbian Cultures of the Lesser Antilles*, edited by Louis Allaire and F. Mayer, pp. 83-92. Centre de Recherches Caraïbes, Université de Montréal, Montréal, Canada.

Winter, John, Elizabeth S. Wing, and Lee A. Newsom (1997). A Lucayan Funeral Offering. In *Proceedings of the 17<sup>th</sup> Congress for Caribbean Archaeology*, edited by John H. Winter, pp. 197-210. Molloy College, Rockville Centre, New York.