



THE BEAD FORUM

Newsletter of the Society of Bead Researchers

Issue 62

Spring 2013

Seed Beads from a Shipwreck: More Than Pretty Trinkets

Part II in a series of II articles

Lisa Hopwood

The case study from the Autumn 2012 *Bead Forum* article was a bead assemblage collected from a shipwreck located off the coast of West Africa near the town of Elmina, Ghana (Hopwood 2012). The sample collection was estimated at approximately 35,256 beads consisting of 16 visually identifiable types of beads. The assemblage almost entirely consisted of monochrome glass seed beads. A detailed description of the assemblage is provided in an appendix at the end of this article.

Archaeologists from Syracuse University, assisted by Panamerican Consultants, Inc., originally recorded the Elmina shipwreck site in 2003. Syracuse University, in cooperation with the University of West Florida (UWF), received funding from the National Geographic Society and permission from the Ghanaian government and the Ghana Museum and Monuments Board (GMMB) to investigate the Elmina shipwreck site in 2005 (Cook et al. 2006). Investigators are still working to discover the nationality and age of the shipwreck, but current radiocarbon dates from the ship's hull are from the mid-seventeenth century (Greg Cook 2011, pers. comm.). The shipwreck site has collected some artifacts that date to the eighteenth and nineteenth centuries, such as onion bottles and a transfer-print sherd with a steamboat image. Current consensus is that the ocean surge deposited more recent artifacts from the nearby town of Elmina.

The subject of the previous article discussed the lack of comparable research due to typology practices that hindered the ability to analyze the Elmina shipwreck bead assemblage. The second

part of this archaeological research series explores the interpretive potential of beads, specifically non-diagnostic beads. The norm among researchers has been to discuss the “fancy” beads and mention the “common” beads only in passing. As such, there has been very little analysis on seed beads, which tend to be the most ubiquitous artifact found at historic sites across the world. Researchers often forego investigation of these beads due to the difficulty of extracting any explicit cultural significance. The void is most apparent in archaeological studies, but is also absent from other types of bead research. Non-diagnostic bead types, including monochrome seed beads, could reveal aspects about their various roles within societies when analyzed by cross-cultural studies. For the purposes of this research, the author defined “seed beads” as beads that could be considered either “short globular” or “short

Continued on page 2

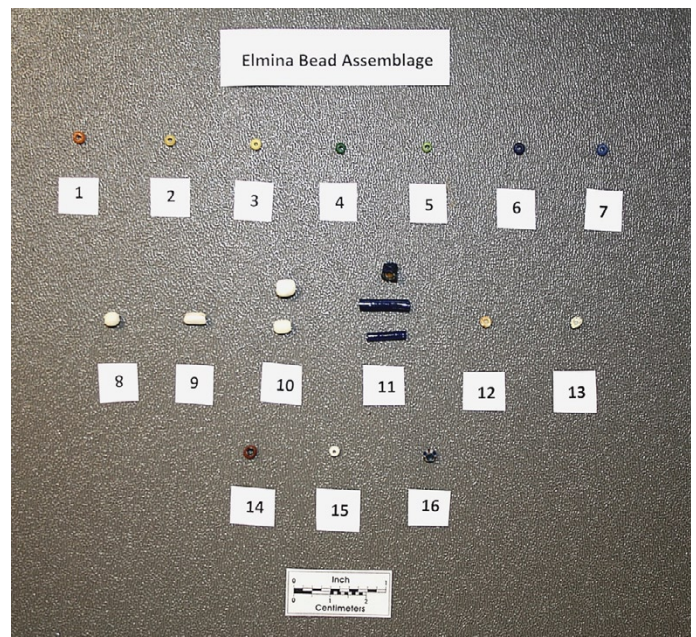


Figure 1. Elmina Bead Types 1-16.

The Bead Forum

Continued from page 1

oblate” and are small in size, 2-4mm in diameter or smaller. The term “short” is defined by the length of the bead being equal to or less than the diameter of the bead (DeCorse et al. 2003:91-102).

This article discusses the considerable analytic potential that could reveal technological or even regional relationships involving seed bead color, size, shape, and design. Descriptive details about any type of bead help researchers to uncover cross-cultural information to further interpret historic trade routes, establish dates of archaeological sites, and better understand cultural activities; all of which significantly supplement the current archaeological record and increase our knowledge of regional histories. It is the author’s belief that seed beads, as a group, should no longer be thought of as insignificant, but should be viewed as having a real impact in cultural settings. Future bead investigations would greatly benefit by reforming the way researchers,

both professional and amateur, conceptually approach beads as an artifact class.

RESEARCH METHODOLOGIES

The Elmina shipwreck bead assemblage was interpreted using the ethnohistoric method of research, which led to the tentative conclusion that the historic West African bead industry was the intended destination for the bead cargo. Historic documents revealed clues that bead cargos were often purchased along the coast for use as coloring agents for a thriving African powder-glass bead industry. Detailed conclusions about bead uses within individual groups were problematic since the ethnographic material for smaller historic groups such as the Ewe, Dangme, and Ga, were lacking. The larger groups, such as the Fante and Asante, had better historic documentation, but lacked accounts concerning the ethnic uses of nondescript beads.

Continued on page 5

Society News

SBR 2013 Business Meeting

The SBR’s annual business meeting was called to order at 1 PM EST on May 3, 2013 by Bill Billeck in a telephone conference call. Attending the meeting were Bill Billeck, Laurie Burgess, Karlis Karklins and Alice Scherer.

OLD BUSINESS

President’s Report

The finances are in order, *Beads* Volume 24 came out on time as did the Autumn *Forum*. Both the Spring 2013 *Forum* and Volume 25 of *Beads* are on track to come out on time. The Society is in good shape.

Editor’s Report

The journal continues on track. Vol. 24 was printed and distributed last November and Vol. 25 is well under way with an expected late fall publication date. Vol. 26 is also in the works with a major article on trade beads already in hand.

Secretary/Treasurer’s Report

The internal audit of the SBR’s finances has been completed and all accounts balanced, with a net gain

of \$1,132.94. A new accounting system has been put into place and we have moved to quarterly reimbursement and balancing procedures. The first quarter 2013 books balanced perfectly.

Secretary/Treasurer Scherer reports that in 2012 the SBR had 126 paid members; in 2011 we had 146, for a loss of 20 members. Our members are mostly from the U.S. (99) and Canada (9), but Europe is the home of 12, Africa and the Middle East 2, Asia 2, and Australia 2. Institutions make up 17 of our members and Bead Societies three.

Total revenues for 2012 were \$8,021.85 and total expenditures were \$11,789.51.

As of December 31, 2012, the balances in the various SBR accounts were:

U.S. Bank Checking Account	US\$ 3,488.73
PayPal Account	US\$ 127.04
Vanguard Account*	US\$ 17,452.21
TD-CT (CD\$346.23)	US\$ 359.01
Total	US\$ 21,426.99

* The amount as noted above for our Vanguard account did not include \$818.07 in unrealized gain.

Summary Report

Balance End of 2011*	US\$ 25,850.06
Plus 2012 Income	+US\$ 8,021.85
Subtotal	US\$ 33,871.91
Minus 2012 Expenses & Reimb.	-US\$ 11,789.51
Subtotal	US\$ 22,082.40
Minus Credits, Reimburse., Refunds	-US\$ 655.95
Subtotal	US\$ 21,426.45
Foreign currency translation gain	US\$.54
Balance End of 2012	US\$ 21,426.99

*Balance end of 2011 was adjusted from that previously posted (\$25,750.06) to reflect changes in accounting practices and corrections to a small number of errors.

The Bead Forum Editor's Report

The 2013 spring newsletter has been ready to send out pending approval of SBR budget report. The newsletters seem to be well received by the membership, based on comments received. As with past years, authors were very good about submitting short research articles. Alice Scherer continues to provide excellent layout and design, and she brings many small details to the editor's attention, which results in an improved newsletter. The bulk of the newsletters are sent out electronically, and hardcopies, in black and white, are still mailed to libraries and to individuals without email addresses.

NEW BUSINESSBeads Vol. 3 to the SBR Web Site (Karklins)

Beads 3 is now officially out of print with the last five copies being reserved for those who buy complete journal sets. To ensure that the contents of this issue continue to be available to researchers, it will be made available on the SBR web site in a PDF format some time later this year.

Bibliography of World Beads for the SBR Web Site (Karklins)

The SBR continues to receive requests for references to bead research around the world. As there is no comprehensive bibliography on bead research, the SBR is initiating the compilation of such based on the Recent Publication sections of *The Bead Study Trust Newsletter* and *The Bead Forum*, and the reviews in *Beads* as well as references encountered along the way. This is a major undertaking but it is hoped a searchable product will be on the SBR web site towards the end of the year.

Sample Card Collections for the SBR Web Site (Karklins)

There are a number of important collections of sample cards in museum collections around the world that are of interest to researchers. Some are available on line, others are not. It is hoped that major card collections that fall into the latter category will be made available on the SBR web site in the relatively near future.

Promotion of the Society and its Publications (Scherer)

All agreed that the Society needs to do more to promote its offerings. It was agreed to create a \$1,000 budget for advertising and the Secretary/Treasurer will look into placing ads in several likely publications. It was noted that there were no archaeology magazines with ad space. Bead Societies will be approached to see if they will donate ad space, perhaps in exchange for periodic articles on beads from the Society, drawn from earlier *Forums*. A Facebook page has been created and will be finalized this summer. It was agreed to not allow postings on the Wall of the Society's page, to prevent inappropriate posts.

Munsell Bead Color Book (Scherer)

Munsell has asked us to provide them with potential places to promote the *Bead Color Book* for bead researchers. In the past, we've put a notice on Arch-L, Hist-Arch, Beads-L and BeadCollector.net and perhaps we might try doing that again. It was also decided that perhaps a "research tools" page on our website could talk about the kinds of things people use when conducting bead research and show the *Bead Color Book* on that.

Presidential Term Ends December 31, 2013

William T. Billeck's term as SBR president ends on December 31, 2013 and he has decided not to run for a third term. If you are interested in running or would like to submit a nomination, please contact Karlis Karklins (karlis4444@gmail.com). The nominee must be a member of the Society in good standing. The term for the position is three years. Ballots for the presidential election will be sent with the fall *Bead Forum*.

There being no additional new business, the meeting was adjourned at 2:00 PM EST on May 3, 2013.

— Respectfully submitted,
Alice Scherer, Secretary/Treasurer

The Bead Forum

SBR Treasurer's Summary Report for 2012

OPENING BALANCE AS OF JANUARY 1, 2012	\$24,717.12
Post-audit Correction, Gain	\$1,132.94
Actual Opening Balance	\$25,850.06
INCOME	\$ 8,021.85
Annual dues	
Individual-North America	1,643.70
Individual-Overseas	570.00
Sustaining (\$135), Patron (\$150), Benefactor (\$150)	435.00
Publication Sales	2,648.70
Journal	3,687.76
Newsletter	151.50
Investment Income	3,839.26
Vanguard Int, Cap Gains \$924.06, TD-CT (Canada) \$. 11	924.17
Donations and Grants	205.00
Miscellaneous	
Pre-paid postage, Pay Pal Fees	404.72
EXPENSES	\$11,789.51
Journal Production (1 issue #24)	
Artwork, image fee	1,003.21
Layout	860.00
Printing	5,891.86
Newsletter Production (2 issues)	7,755.07
Printing	160.41
Postage/Shipping	
Journal	853.53
Newsletter	125.99
General	763.99
Web site (domain name, web hosting, analytics)	1,743.51
Office Expenses (stationery, supplies)	176.04
Secretary/Treasurer	272.58
Journal office expenses	111.89
Miscellaneous	384.47
Donation Roderick and Linda F. Sprague Library	500.00
SHA Conference Book Room Table Fee	300.00
Oregon Business filing fees	60.00
Bank and PayPal charges, Cost of Selling	710.01
Preliminary closing balance as of December 31, 2012	1,570.01
After Credits, Refunds, & Reimbursements, some from previous years of	\$22,082.40
Foreign currency translation gain	(\$655.95)
	\$21,426.45
	\$.54
FINAL CLOSING BALANCE AS OF DECEMBER 31, 2012	\$21,426.99

Proposed Budget 2013

Opening Balance as of January 1, 2013	\$21,426.99
INCOME	\$8,900.00
Annual Dues	
Individual-North America	2,000
Individual-Overseas	700
Sustaining	150
Patron	200
Benefactor	200
Publication Sales	3,250
Journal	3,900
Newsletter	100
Investment Income (Interest, Capital Gains Vanguard Acct)	4,000
Donations and Grants	1,000
PrePaid Postage and PayPal fees	300
	350
EXPENSES	\$12,625.00
Journal Production (1 Issue #25)	
Translation and Image Fees	2,000
Layout	800
Printing	5,000
Preparing Volume 3 for Online Distribution	500
Newsletter Production (# 62 and 63)	8,300
Printing	140
Website (paid through 2013)	0
Postage/Shipping	
Journal (\$900), The Bead Forum (\$125) General Shipping (\$900)	1,925
Office Expenses (stationery, supplies)	
Secretary/Treasurer (\$250), Journal Editor (\$150)	400
Miscellaneous	
2014 SHA Conf. Book Room Table Fee, Advertising	1,300
Bank and PayPal charges, cost of selling, refunds	500
Oregon Business filing fees	60
	1,860
Anticipated Balance as of December 31, 2013	\$17,701.99

Respectfully submitted, Alice Scherer, Secretary/Treasurer (April 21, 2013)

Continued from page 2

The author did find the occasional documentation of small bead use along the Gold Coast. However, the most detailed accounts of small bead use were contemporary and came from Brigid Sackey's (1985) ethnological work from the 1980s. While historic descriptions did not often discuss beads in a comprehensive manner, there were some recorded details. For instance, among the Akan peoples, small children and infants were known to wear small beads. Larger, decorative beads were normally reserved for adults and used during rites of passage into adulthood. For women especially, beads played a significant role in these rites and demonstrated the wealth and class standing of the presenting family.

The archaeological method of interpretation utilizes techniques such as artifact classification and spatial distribution. As with other artifact classes, researchers should be able to evaluate bead assemblages using comparative studies of assemblages recovered from other areas. Archaeological sites that have an established chronological record are particularly important for this type of research. The bead assemblage from the Elmina shipwreck is unique in that it provides a glimpse of cultural material usage in one specific year, unlike terrestrial sites that represent usage over decades or even centuries. Once the shipwreck's date of sinking is discovered, the timeframe for the assemblage will be set.

INTERPRETING CULTURAL AFFILIATION WITH BEADS

The current challenge has been to use historic documents along with archaeological contexts to record beads through time and across geographic space. Other authors have written about bead interpretation mainly through instructions on how to classify beads in hopes of extracting this hidden information. Janet D. Spector (1976), Kidd and Kidd (1983), Karlis Karklins (1985), Peter Francis, Jr. (1988), and Christopher DeCorse (1989) are some of the main contributors to this line of research. These sources were invaluable in establishing the methods this author used to interpret the Elmina shipwreck bead assemblage.

Ethnographic studies of historic trade encounters have revealed preferences for specific material items. Beads are just one example of material items that reflect cultural behavior. Many researchers have

investigated how these behaviors are associated with bead use in particular societies. Anthropologists have often examined these documents to uncover early bead nomenclature and classification systems used by traders and their constituents. The traders' descriptions also included common dress fashions of the different ethnic groups. These accounts were sent back to Europe where manufacturers attempted to market their products accordingly. The popularity of beads was often dictated by the color schemes that were prevalent within each region and were associated with the fundamental and religious beliefs of the people themselves. Therefore, the purchase of so called "trinkets" was not just a whimsical buy, but was based upon some culturally derived significance.

While every trade good had trends in popularity, certain goods held steadfast. Janet Spector (1976:17-18) researched bead preferences by using the American Fur Company papers. A review of these papers provided insight into specific trade good inventories in direct relation to particular geographic regions. Naturally, inventories changed because of cultural affiliations linked to each tribal group and temporal factors inherent in long distance trading. Spector concluded that with proper documentation and archaeological research, the ability to distinguish the differences between cultural and temporal factors should be possible. She also noted that companies normally traded with only certain tribal groups residing within particular regional localities. Thus, the beads sold to these groups "should have cultural significance when the time factor is held constant. Conversely, if one investigates the yearly records of an individual outfit, changes in the inventories should be reflecting temporal shifts with respect to bead style preferences" (Spector 1976:18).

Following Spector's line of thought, there is a real potential for archaeologists to reconstruct trending items verses items that held persistent cultural values, or even utilitarian uses. The Elmina bead assemblage likely represents regional significance to the historic West African market and even though the materials were not yet purchased by local merchants, it could still show a presumed cultural significance. Additionally, archaeologists could uncover trading patterns for specific regions once several bead cargos from shipwrecks are recovered. Such information could identify purchasing patterns in relation to stylistic changes within

the historic West African powder-glass bead industry.

A shipwreck's identity would also help fill in missing information on regional bead sales with a review of the paper inventories from the companies that owned the ships. Historic trade records not only reveal evidence of style or color preferences, but also "frequency distributions; and changes through time in buying patterns" (Spector 1976:27). During the course of researching the Elmina shipwreck bead assemblage, the author found several archaeological reports of shipwreck sites that contained bead assemblages. Unfortunately, as discussed in the Autumn 2012 *Bead Forum* article, the lack of proper descriptions and use of outdated classifications made any real comparisons impossible at this point in time (Hopwood 2009, 2012). Again, the potential for comparative bead analysis and the ability to derive cultural significance is attainable, even for those beads that are unsold trade items found on shipwrecks.

Cultural Patterns and Beads

In reality, every bead type has a cultural function, but some beads are more versatile in use and serve in more than one way. Finding the various patterns of use for the common bead will be more complex than with diagnostic beads, whose functions are usually limited to specific uses (i.e., rites of passage, spiritual protection, group affiliation, monetary, etc.). As pointed out before, the relative frequencies of bead types bought from year to year can show regional temporal shifts in style preferences related to regional ideals. It is this author's belief, as with many other researchers, that seriation studies could tease out patterns in the frequency of common bead types.

Temporal distributions of non-diagnostic beads may eventually be uncovered for West African regions. It could also bring new insight into European bead manufacturing and product sales, particularly as the industry grew to the mass-production that was well known during the industrial revolution. Beads sales were directly related to regional cultural demands and/or European industrial changes. It is also important to differentiate purposeful bead characteristics from "accidental" bead attributes. Physical features can reflect the intention of glassmakers, but could also reflect technological abilities or inabilities. Recognizing intention in early bead specimens is somewhat difficult since the technologies for standardized colors, sizes, and shapes



Figure 2. Monochrome drawn seed beads.

was not possible until the late nineteenth century (see Peter Francis, Jr. 1988 for more details). The point made is that researchers should be careful how they separate cultural characteristics from mechanical characteristics. Inferring mechanical imperfections as purposeful could lead a researcher to claim false social interpretations.

Currently, anthropologists are now starting to work towards a temporal bead interpretation. However, archaeologists distinguish most temporal horizons through ceramic pattern changes. There are several setbacks to temporal bead research: one is that beads did not always have simultaneous introductions to regions along trade routes and another is that all previous archaeologically recovered bead assemblages need re-evaluation using newer classification systems, especially those from before the creation and use of the Kidd and Kidd typology. Theoretically, all bead assemblages could also go through regional seriation studies. This would be a daunting task, but if completed, resulting patterns could uncover cultural influences, migrations, or even cross-cultural relationships not yet realized.

Furthermore, by including shipwreck assemblages in seriation studies, investigators could potentially close chronological gaps or at least define the historic periods of use and introduction with more precision. Shipwrecks by nature can contain very large bead assemblages that often can only be rivaled by manufacturing sites. Finding such large assemblages would be key for seriation studies, which leads us back to the common seed bead; a non-diagnostic bead group that is found in greater numbers than almost any other type of bead. Thus, the non-diagnostic bead assemblages



Figure 3. Monochrome drawn (non-seed) beads.

would provide better statistical results, which could be supplemented later by including diagnostic beads to create a holistic temporal view.

What These Seed Beads Tell Us

In the current case study, the bead assemblage's context is as cargo in a shipwreck; a context that places the beads in somewhat of a cultural limbo where they exist only as a European trade good. Any cultural or intrinsic value would be attributed by the Europeans selling the cargo, which likely changed at every port to match the specific cultural ideals held in each different society met along the trade route.

Once on land, the beads would change intrinsic and social values according to the society that purchased the beads. In the case of the Elmina shipwreck, the bead assemblage was comprised of a high number of seed beads. This author postulates that while the

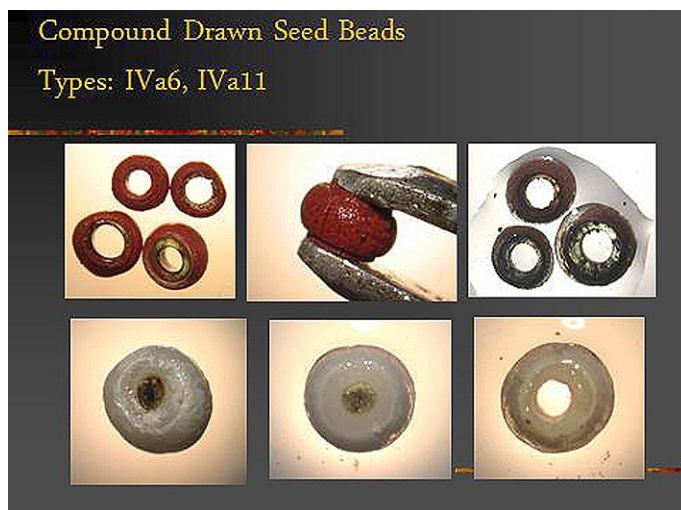


Figure 4. Compound drawn seed beads

seed beads did not likely have intrinsic value in their original form, they would have increased in such value after being traded to local artisans who altered or reworked the beads into regionally recognized powder-glass beads. Once transformed into locally sought and revered beads, the monetary value would have risen



Figure 5. Compound drawn bugle beads

and as a direct result, the social value would have also increased.

For those seed beads that did not get used as raw material, but sustained their original form, they did get used in socially important roles too. Some of the seed beads' social value for this region of West Africa can be found in ethnographic reports. For example, mothers used small beads to track an infant's health and growth by tying strands around their legs and arms. These strands would be constantly replaced as the child grew. Small beads were also worn by children of all ages, a custom believed to keep harmful spirits away, but this use was also to mimic the look of their elders as they could not own valuable beads until after their rites of passage into adulthood. Additionally, sometimes adults of very low status wore plain beads, which could be any size, but likely still consisted of nondescript monochrome beads.

CONCLUSIONS

Shipwreck assemblages can link cultural insights to a very specific timeframe. For instance, the significance of the Elmina bead assemblage is that it offers insights into European trade to the Gold Coast, information about West African bead preferences that influenced market demand and the later aftermarket use by lo-



Figure 6. Composite drawn seed bead.

cal bead-makers. The author's research of the Elmina shipwreck beads concluded that if they had made it to the West African market, then the monochrome beads would likely have been bought as coloring agents for the local powder-glass bead industry, while the compound and composite beads would have been more likely bought for adornment.

As a raw material, glass beads, along with bottles and other glass objects, contributed to the growth of West African bead-making. Regional glass trade started by land and led to the establishment of the bead-making craft, but it was through maritime trade that artists were able to obtain most of their materials. Therefore, it was the maritime trade that became invaluable to a bead-making society that could not produce its own source of glass (Gott 2002:9). Today, Ghanaians, particularly the Krobo and Asante, still

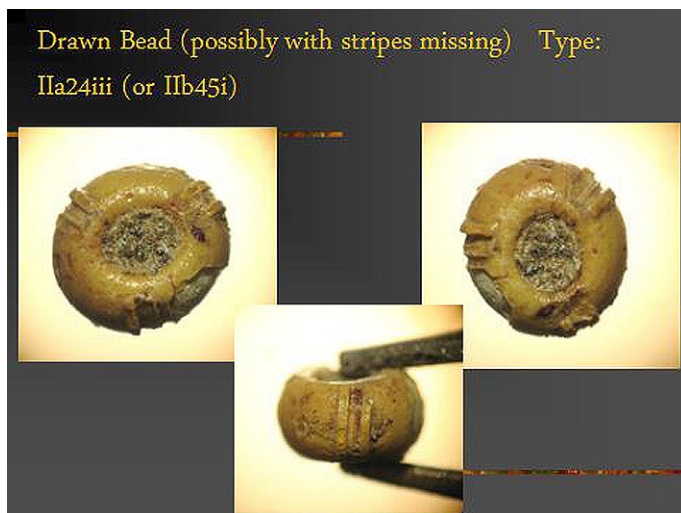


Figure 7. Drawn Beads with Possibly Missing Stripes

produce beads in the same clay mold fashion as those before them, and they still use imported glass to make their beads. However, much of the glass now comes in pre-ground packets and glass pigmentation is available in the local markets.

Overall, as an assemblage, the beads simply represent mass production of seed beads in various colors. As obvious as that might appear to be, the study of mass-produced glass beads is often only attainable from large bead assemblages found at glass factories or



Figure 8. New Bead Type: IIbb26i

on shipwreck sites. These sites are limited in number, and only a few have been archaeologically investigated. The significance of non-diagnostic glass bead assemblages is often forgotten and possibly even unknown to some in the archaeological field, but as an artifact class, glass beads hold the same potential to serve as a valuable research tool as do other artifact classes.

Additionally, the assemblage did contain interesting attributes such as clear coats and protruding ends that the author noted during bead analysis. Clear coats on seed beads seem to have an end date in the 1860s (Francis 1988b), but the author was unable to conclusively state whether the protruding ends were a result of tool marks.

Eventually, through comparative studies, the beads presented here could reveal general cross-cultural stylistic distinctions for cargo bound to West Africa. However, the beads are less likely to be linked to specific ethnic groups because no West African groups actually had the chance to manipulate or use these beads. The hope is that the Elmina shipwreck bead assemblage has the potential to become a reliable dating index that can be applied to future chronological research.

APPENDIX A: THE ELMINA BEAD ASSEMBLAGE: TYPE CLASSIFICATIONS IN DETAIL

Sixteen bead types were identifiable within this bead assemblage. The bead types consist of four forms of construction: 2,384 are simple (one layer of glass with no designs), 1,030 are compound (more than one layer of glass with no designs), nine are complex (one layer of glass with designs), and 396 are composite (more than one layer of glass with designs). The majority of the beads are considered small, 2-4 mm in diameter (Kidd and Kidd 1983). The overall count for the report includes the concreted beads (over 35,000), but are not included here since they would skew the proportions of the sample.

The assemblage was categorized as Elmina Types 1-16 and given detailed descriptions (as shown in Figure 1). For example, Elmina Types 1-7 are small monochrome drawn seed beads that average 2-3 mm in diameter and 1.5-2.5 mm in length (Figure 1).

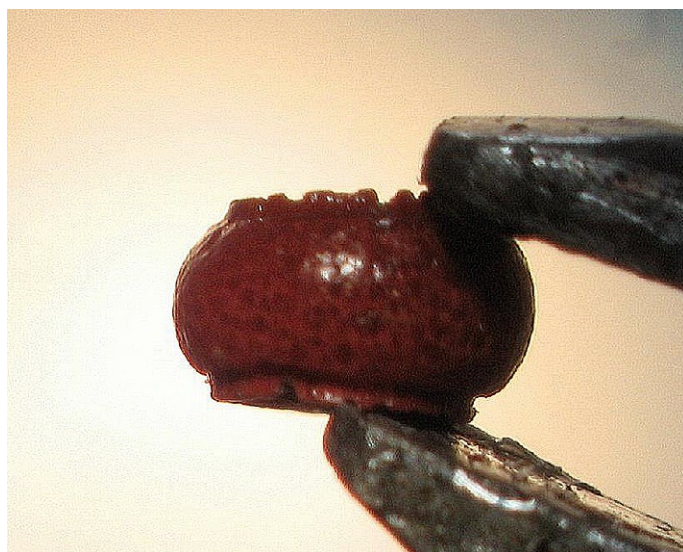


Figure 9. Bead with Protruding Ends

Elmina Types 1-7 are equivalent to Kidd variety IIa and are as follows: translucent orange beads, translucent yellow beads, opaque yellow beads, translucent dark green beads, opaque light green beads, transparent blue beads, and opaque light blue beads (Figure 2). These beads are all varieties of Kidd Type IIa and are thus designated as varieties IIa* according to Karlis Karklins' (1985) expanded classification. Elmina Type 1 is similar to Kidd Type variety IIa19, and Elmina Type 6 is similar to Kidd Type variety IIa41; however, the author was unable to create a color equivalency chart

at the time and the Munsell *Bead Color Book* was not yet published.

Elmina Types 8-10 are small (2-4 mm) to medium (4-6 mm) monochrome drawn beads, differing in the shape and size category from the aforementioned seed beads (Figure 1). Type 8 is opaque white and round, and it is equivalent to Kidd Type variety IIa13. Type 9 is opaque white and ellipsoidal, and it is equivalent to Kidd Type variety IIa15. Type 10 is opaque white and short tubular or barrel shaped, and it is considered a Kidd Type IIa*. These three types make up the group of simple, non-seed beads in the Elmina shipwreck assemblage (Figure 3).

Elmina Types 11 and 12 are small striped drawn seed beads that are in deteriorated states, and both are varieties of Kidd Type IIbb (Figure 1). Type 11 is a bead that is opaque yellow with an inlay of three stripe sets of yellow/missing stripe/yellow; the middle stripes and other glass sections are missing (Figure 1). Beadmakers usually marver beads before the glass is drawn and by pressing the glass against a marble or metal platform, the surface will smooth out giving the decorations a unified look (Francis 1988). The Type 11 specimen has stripes raised above the surface; a characteristic that indicates that there is missing glass (Karlis Karklins 2008, pers. comm.). The bead core and visible stripes are the same color. Type 12 consists of beads with an opaque green core and a similar triad decoration of one opaque red stripe in between two yellow stripes (i.e. red on yellow). The surface between the triad of stripes has a discolored black or dark grey appearance, and only where the patina has flaked off is the interior identifiable as opaque green (Figure 5).

The Elmina shipwreck assemblage includes the following compound (multilayered) beads that have three layers that are blue/white/blue. Elmina Type 13 is cylindrical (tube shape) equivalent to Kidd Type variety IIIa10 and make up the majority of non-seed beads in the assemblage (Figure 1 and Figure 6). Elmina Type 14 and 15 are also compound, but are seed beads equivalent to Kidd Type varieties IVa6 and IVa11 (Figure 1 and Figure 7). Type 14 beads are opaque red on transparent green. Type 15 beads are opaque white/opaque bright white/opaque white. Lastly, the assemblage contains one variety of a composite (layered and striped) seed bead, Elmina Type 16, and it is equivalent to Kidd Type variety IVb16. Type

16 beads are opaque white on transparent blue with a design of alternating stripes, three blue and three red (Figure 1 and Figure 6). The collection also includes 209 indeterminate beads.

The Assemblage as a Whole: Hidden Attributes

Most of the assemblage (99 percent) consists of drawn monochrome seed beads with gauged sizes ranging from 7/10 to 10/10, or about 1 to 4 millimeters in diameter (see Francis 1997 and 2009a for a discussion on bead sizing). The author determined the gauged sizes from a visual reference at The Bead Museum in Arizona before it closed in 2011. The assemblage also contains polychrome seed beads; one type is commonly called “green hearts” (often confused with *Cornaline d’Aleppo*) along with several types of striped seed beads. The few non-seed beads, which consist of white beads about the size of pony beads (4-6mm), are round, tapered, or barrel shaped. There are also tube beads (bugle beads) with a blue/white/blue layering. The bead types from this assemblage are most likely Venetian or Bohemian. Karlis Karklins explains that shipwrecks postdating 1700 will not contain drawn beads of Dutch manufacture because at the end of the seventeenth century the Dutch drawn bead industry died out (1974:66).

Oddly, some of the beads in the Elmina shipwreck assemblage have distinct protruding ends (see Figures 4, 6, and 9). The author photographed the beads through the lens of a microscope, set between 20x to 25x magnification. Karklins suggests two possible reasons for the protruding ends. First, he notes that the striped beads (Elmina Type 16) were likely eroded by salt water, leaving the denser inner blue core to protrude. Second, he contends that overheating beads during the heat-rounding process can make the ends pucker outward (Karlis Karklins 2008, pers. comm.).

A third possibility is that the beads reflect tool use. The appearance resembles segmentation, a process where glass canes are rolled across a horizontal mold that segments a glass cane into beads. However, the act of segmenting beads with stone molds is an old technique believed to be outdated and unused in the later centuries of bead-making. The technique started in Egypt in the second or third century B.C. and lasted until the thirteenth century in eastern Europe. It was most popu-

lar with gold-glass beads—beads with two glass layers and metal foil in between the layers (Spaer 1993).

Additionally, Karklins makes the point that a glass manufacturing house would not likely use two different finishing techniques. Especially, for example, if the individual companies were competing during the nineteenth century for bead business among other commercial European beadmakers (Karlis Karklins 2008, pers. comm.). Therefore, if these beads were made in the same place, they should all be finished in the same manner. Instead, the differences could be incidental from something simple like not all of the beads making it into the pan for heat rounding or not heating the beads for very long. Beads with segmentation marks should not be confused with “collared” beads or “hot-pinched” beads, both of which have distinct appearances that are different from segmented beads.

The only supporting evidence for such tool use comes from a “hollow” glass bead assemblage recovered from an archaeological site on St. Catherine’s Island (Blair et al. 2009). Peter Francis examined the assemblage and believed he saw evidence for bead segmentation. The site contained several colors of thin-walled glass beads that had attributes similar to segmentation tool marks, which Francis has claimed to have seen at other Spanish colonial sites dating into the seventeenth century (Francis 2009b:94). Francis contends that the “evidence from St. Catherine’s Island extends the use of the [segmentation] process by half a millennium” (2009b:95). The assemblage contains seven bead types and numbers in the hundreds, but has not been examined by other archaeologists for confirmation or rejection of his segmentation hypothesis.

Another interesting attribute found on several beads within the collection were found on Elmina Types 14 and 15, which have evidence of a very thin layer of clear glass coating the outside of the bead (see Figure 4) that Karlis Karklins (2008, pers. comm.) termed “flashing,” and Francis (1997:8) simply called “clear coat.” However, the term “flashing” should not be confused with Francis’s use of the term “flash” for molded bead seams that are created when glass seeps between the mold halves (2009b:93). Karklins notes that the clear layer is not considered a layer for classification purposes. He explains that the clear coat was likely used to prevent oxidation and discoloration of other layers during the heat-rounding process and thereafter, and possibly as a means of increasing the

bead's brilliancy (Karlis Karklins 2008, pers. comm.). Francis (1997:8) asserts that white seed beads with clear coats were no longer produced after the late 1860s. If this statement can be confirmed, then it would provide a tentative *terminus ante quem* for the Elmina shipwreck, which had other artifacts from that general era.

In conclusion, this assemblage as a whole presents researchers with several interesting prospects. Whether it is information for seriation studies, an example of non-diagnostic bead attributes, or a detailed description of an assemblage for comparative analysis, the Elmina shipwreck bead assemblage is just starting to reveal its usefulness. The analytical potential is in the eye of the beholder, and this author hopes others will recognize the worth of these little trinkets.

REFERENCES CITED

- Blair, Elliot H., Peter Francis, Jr., Lorann S.A. Pendleton, Eric A. Powell, and David Hurst Thomas**
 2009 *The Beads of St. Catherines Island*. Anthropological papers of the American Museum of Natural History, Number 89. American Museum of Natural History, New York.
- Cook, Gregory, Raymond O. Agbo and Christopher R. DeCorse**
 2006 *West Africa and the Atlantic World: Shipwreck Investigations off of Elmina, Ghana*. Research Report, 2005 Season. Submitted to the Ghana Museums and Monuments Board. Available from Syracuse University and the University of West Florida.
- DeCorse, Christopher R.**
 1989 Beads as Chronological Indicators in West African Archaeology: A Reexamination, edited by Karlis Karklins. *Beads: Journal of the Society of Bead Researchers* 1:41-53.
- DeCorse, Christopher R., François G. Richard and Ibrahima Thiaw**
 2003 Toward a Systematic Bead Description System: A View from the Lower Falemme, Senegal. *Journal of African Archaeology* 1(1):77-110.
- Francis, Peter, Jr.**
 1988 *The Glass Beads of Europe: Their Manufacture, Their History, and Their Identification*. The World of Beads Monograph Series 8, Center for Bead Research. Lapis Route Books. Lake Placid, NY.
 1997 Seed Beads. *The Margaretologist* 10(2) Issue 24.
- 2009a The Glass Beads of the *Margariteri* of Venice. In *The Beads of St. Catherines Island*. Anthropological Papers of the American Museum of Natural History 5(89):59-66. Archaeology of Mission Santa Catalina de Guale, Saint Catherines Island, Georgia.
- 2009b The Glass Beads of Spain. In *The Beads of St. Catherines Island*. Anthropological Papers of the American Museum of Natural History 5(89):85-96. Archaeology of Mission Santa Catalina de Guale, Saint Catherines Island, Georgia.
- Gott, Edith Suzanne**
 2002 Precious Beads and Sacred Gold: Trade, Transformation, and the Unifying Principle of Generative Nurturance in the Arts of Southern Ghana. Ph.D. dissertation submitted to the School of Fine Arts, published by UMI Dissertation Services, Indiana University, Bloomington.
- Hopwood, Lisa E.**
 2009 Glass Trade Beads from an Elmina Shipwreck: More Than Pretty Trinkets. Thesis submitted to the Department of Anthropology, the University of West Florida, Pensacola.
 2012 Bead Classification Methods: An Archaeological Case Study from a Shipwreck in Elmina, Ghana. *The Bead Forum*, 61:1-2,7-12.
- Karklins, Karlis**
 1974 Seventeenth-Century Dutch Beads. *Historical Archaeology* 8:64-82.
 1985 *Glass Beads: The Levin Catalogue of Mid-19th Century Beads; A Sample Book of 19th Century Venetian Beads; Guide to the Description and Classification of Glass Beads*. Studies in Archaeology, Architecture and History. Ottawa: Ministry of Supply and Services Canada.
- Kidd, Kenneth E. and Martha A. Kidd**
 1983 A Classification System for Glass Beads for the Use of Field Archaeologists. In *Proceedings of the 1982 Glass Trade Bead Conference*, edited by Charles F. Hayes III. Rochester Museum and Science Center, Research Records 16:219-257. Rochester, New York.
- Munsell Color (Firm)**
 1976 *Munsell Book of Color, Glossy Finish Collection*. Macbeth Division, Kollmorgen Corporation, Baltimore.

The Bead Forum

2012 *Munsell Bead Color Book*. Munsell Color, Grand Rapids, Michigan.

Sackey, Brigid

1985 The Significance of Beads in the Rites of Passage among Some Southern Ghanaian Peoples. *Institute of African Studies Research Review (New Series)* 1(2):180-91.

Spaer, Maud

1993 Gold-Glass Beads: A Review of the Evidence. *Beads: Journal of the Society of Bead Researchers* 5:9-25.

Spector, Janet D.

1976 The Interpretive Potential of Glass Trade Beads in Historic Archaeology. *Historical Archaeology* 10:17-27.

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Exhibitions

The Corning Museum of Glass, Corning, New York, is mounting a major exhibition on beads and beadwork which will open on May 18, 2013 and run through till the end of the year. For details see:

<http://www.cmog.org/press-release/3500-years-glass-beads-featured-major-exhibition-corning-museum-glass>.

Conferences, Symposia

The Borneo International Beads Conference ("Beads and Heritage") will be held in Borneo, October 11-13, 2013. For more information, please send an email to crafthub@gmail.com or visit the website www.crafthub.com.my. To register, kindly email Alexis at alexis@ucscommunications.com.



Beads: Life, Trade, Ritual, the Corning Museum of Glass's 52nd Annual Seminar on Glass will be held October 18-19, 2013. This year's seminar discusses beads and beaded objects created throughout glass history and from all parts of the world. The seminar will feature lectures, live demonstrations, and tours focused around the topics represented in the Museum's 2013 major exhibition, *Life on a String: 35 Centuries of the Glass Bead*. This unique exhibition expresses the power and significance of beads across cultures and through-

out history and explores the use of glass beads for fashion and ornament, as symbols of power and wealth, as traded goods, and as objects of ritual.

Guest speakers and demonstrators include Robert Liu, founder and co-editor of *Ornament Magazine*; renowned beadmaker and teacher Kristina Logan; Ralph Mossman and Mary Mullaney of Heron Glass; beadwork scholar Alice Scherer; bead scholar Karlis Karklins; Christopher DeCorse, professor of anthropology at Syracuse University; and Michele Majer, assistant professor of clothing and textiles at Bard Graduate Center.

For more information, go to <http://www.cmog.org/programs/lectures-seminars/annual-seminar-on-glass>.

Selected Publications/Other Media

Andersen, Jan Holme and Torben Sode

2010 The Glass Bead Material. In *Ribe Excavations 1970-76, Volume 6*, edited by M. Bencard and H. Brinch Madsen. Jutland Archaeological Society, Højbjerg, Denmark.

Locally made and imported glass beads excavated from Ribe, dating to the Late Iron Age, provide the first evidence of a domestic bead production site in Scandinavia. The description and classification of beads from the Ribe excavations are presented here, along with a bead chronology. Tesserae and other glass forms are also discussed. Andersen and Sode present a very thorough study of an important assemblage excavated in the 1970s.

Bar-Yosef Mayer, Daniella E.

2013 Towards a Typology of Stone Beads in the Neolithic Levant. *Journal of Field Archaeology* 38(2):129-142.

This study is an attempt to develop a comprehensive typology of the earliest stone bead assemblages in the southern Levant from Late Natufian and Neolithic sites. I propose this typology as a tool for studying stone beads almost a century after Horace Beck published his monumental bead typology. Beads are often neglected artifacts in archaeological excavations, but a bead typology can contribute to definitions of relative chronology and to a broader understanding of social and economic aspects of certain prehistoric societies. (Daniella Bar-Yosef Mayer)

Bertini, Martina

2012 Beads of Time: Analyzing Our Past. *Chemistry Review*: 21(3):19-23.

Abstract: "A collection of beautiful glass beads has been discovered in Scotland. Their origins are a mystery, but analytical chemistry including techniques such as mass spectrometry, can shed light on their composition, which in turn provides clues as to how and where they were made. The glass consists of oxides of various elements, combined with pigments and crystals to produce colours and effects. It seems that the evidence points to an ancient form of glass recycling between the Romans and the Iron Age Caledonians" (Bertini 2012:19).

Bertini, Martina, Andrew Shortland, Karen Milek and Eva M. Krupp

2011 Investigation of Iron Age North-Eastern Scottish Glass Beads using Element Analysis with LA-ICP-MS. *Journal of Archaeological Science* (2011):1-17.

Abstract: "Class 13 and 14 Iron Age Scottish glass beads are a group of highly decorated beads of British origin or design, dating indicatively to the 1st and 2nd century AD and typically found in Aberdeenshire and Moray district (Guido, 1978, 85e9). Their distinctive stylistic characteristics and geographical segregation renders them ideal for the investigation of whether the glasses employed in their manufacture were imported rather than produced locally, and for the assessment of the technology used in the production of the deep colours. Studies performed in the 1980s on different specimens pertaining to the same Classes (Henderson, 1982) showed compositional characteristics differing from Iron Age southern British beads, suggesting a different source of glass for their manufacture. Here, a set of 19 beads which was never investigated before was analysed for 32 major, minor and trace elements using Laser Ablation-Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS). The sample set shows good homogeneity in major and minor element composition, indicating the use of imported natron glass, with standardized composition typical of Roman glass of the period, also reflected in the recipes used for colouration. Evidence for the use of cullet and waste glass was found, which, along with the particularity of the design, suggests a local origin of the beads and possible production by native glassworkers" (Bertini et al. 2011:1).

Busch, Jürgen

2013 Kiffa Beads of Mauritania: A Fall from Grace. *Ornament Magazine* 36(2):56-61.

"Kiffa Beads" discusses the history of trade in Western Africa, the role of the Kiffa bead, or *muraqad*, in women's headdress, the method of manufacture, the ritual nature of the colors used, and how the beads and their history were almost lost due to a disastrous drought in Western Africa during the 1970s and early '80s.

Carter, A.

2012 Garnet Beads in Southeast Asia: Evidence for Local Production. In *Crossing Borders in Southeast Asian Archaeology. Selected papers from the 13th International Conference of the European Association of Southeast Asian Archaeologists*, Berlin, edited by Mai Lin Tjoa-Bonatz, Andreas Reinecke, and Dominik Bonatz, pp. 91-114. NUS Press, Singapore.

Carter, A. and J. Lankton

2012 Analysis and Comparison of Glass Beads from Ban Non Wat and Noen U-Loke. In *The Origins of Angkor, Volume 6: The Iron Age: Summary and Conclusions*, edited by Charles Higham and Amphan Kijngam, Fine Arts Department of Thailand, Bangkok, 91-114.

Holliday, Vance T. and David Killick

2013 An Early PaleoIndian Bead from the Mockingbird Gap Site, New Mexico. *Current Anthropology*, 54(1):85-95.

Abstract: "Beads are the only direct indicator of body adornment from Upper Paleolithic and PaleoIndian contexts, although not common. Geoarchaeological coring at the Mockingbird Gap (Clovis) site, New Mexico, resulted in the recovery of a small tubular bead of Paleo-Indian age. The bead was found in alluvial sand 9.20 m below the surface of Chupadera Draw, an intermittent drainage that borders the site. The ornament is made of calcium carbonate and is the only known PaleoIndian bead of this material in North America. All known tubular beads of this age are bone. Other beads are made of shell or teeth. The bead probably was made by using a rotary drill to modify a segment of a rhizolith, which is a cemented calcium carbonate cylinder representing root molds. Beads could easily be made from these cylinders although they would be relatively fragile, likely accounting for their rarity. The bead has a minimum age of ~10,550 ¹⁴C years BP. This suggests a Folsom association. Scattered Folsom sites are known within 1 km of the site. The Clovis occupation is more extensive and intensive, however, and within 120 m of the findspot" (Holliday and Killeck 2013:85).

Hylkema, Mark G. and Rebecca Allen

2009 Archaeological Investigations at the Third Mission Site, Santa Clara University, and a Comparison of Shell Bead Assemblages with Recent Mission-Era Findings. *Proceedings of the Society for California Archaeology* (21):28-35.

Abstract: "Olivella and clam shell beads have been found in abundance in a neophyte cemetery associated with the third Mission Santa Clara site. More recent excavations have found features associated with neophyte residency, and recovered similar shell bead assemblages. Comparison of these materials has implications for dating the features, and prompts further discussion of neophyte systems of value" (Hylkema and Allen 2009:28).

Liu, Robert K.

2012 Islamic Glass Beads: The Well-Traveled Ornament. *Ornament Magazine*, (36)1:58-63, 70. Islamic Period glass beads "originated in the Middle East and flourished mostly between the seventh and twelfth centuries." Liu's article focuses large on glass eye beads with wave form trailing, segmented foil beads, folded beads, pierced mosaic beads and "the so-called Fustat fused-rod beads...". He discusses their manufacture and the role of itinerate bead makers, what is known about archaeological sites yielding these sort of beads, and recognizes those who have performed research on this subject. Numerous color photographs highlight the beads being described and a substantial list of references/bibliography completes the article.

Milliken, Randall T. and Al W. Schwitalla

2012 *California and Great Basin Olivella Shell Bead Guide*. Left Coast Press, Walnut Creek, CA.

Abstract: "Olivella shell beads are ubiquitous at Central California Indian sites and were traded far inland by the local inhabitants. Their distinctive patterns of manufacture provide archaeologists with important chronological, morphological, and distributional information. This guide — authored by a professional artifact replicator and an archaeological expert on shell bead typology — offers a well developed 16-category typology, including the descriptive, temporal, and metric characteristics of each style, illustrated with almost 200 color photographs. Spiral bound to facilitate field and laboratory work, it is an essential tool for conducting archaeology in the American west" (Milliken and Schwitalla 2012).

Gijanto, Liza

2011 Personal Adornment and Expressions of Status: Beads and the Gambia River's Atlantic Trade. *International Journal of Historical Archaeology* 15(4):637-668.

Abstract: “The presence of glass trade beads at Atlantic trade period sites is often thought to provide limited information for the analyst. Several archaeologists working in West Africa have addressed the difficulty of using beads as chronological markers, let alone using these objects to discern local patterns of demand, preference, or consumption. Overall, few scholars have moved beyond the development of descriptive catalogues to determine what information can be ascertained from bead collections other than chronological data. At Jufrure on the Gambia River, bead attributes such as shape, color, and size inform the analyst of how change in the demand for and availability of beads were tied to changing local notions of taste and value” (Gijanto 2011:637).

García-Heras, M., J. Ma. Rincón, A. Jimeno and M. A. Villegas

2005 Pre-Roman coloured glass beads from the Iberian Peninsula: a chemico-physical characterisation study. *Journal of Archaeological Science* 32(5):727-738.

Abstract: “This paper reports results derived from a chemical and microstructural characterisation study undertaken on a representative sample set of coloured glass beads that recent archaeological fieldwork carried out in the second century BC Celtiberian necropolis of Numantia (Upper Duero Valley, Spain) has provided. The main objectives of the research were to understand the production technology and provide some insights into their probable provenance. In addition, corrosion and decay processes were also assessed to determine the influence of the cremation ritual within the beads structure. The resulting data suggest that both soda-lime-silicate and, probably, alumino-silicate glasses were produced in the making of these glassy materials, using some transition metal oxides as chromophores or colouring agents. The compositional evidence gathered also suggests that Numantian glass beads were the outcome of trade or exchange practices rather than locally produced” (García-Hera et al. 2005:727).

Janssens, Koen H.A., editor

2013 *Modern Methods for Analysing Archaeological and Historical Glass*. Wiley, John and Sons, Inc. Chichester, United Kingdom.

Members of the Association Internationale pour l'Histoire du Verre and other scholars present a comprehensive overview of current techniques for the analysis of glass composition for both archaeological

and historical glass. The many contributors consist of a broad range of researchers from around the world.

Ownby, Mary F. and Jenny L. Adams

2012 What is it Made of? Scanning Electron Microscopy of Minuscule Beads. *Archaeology Southwest Magazine*. 26(2):7.

The authors use electron scanning microscopy to determine whether very small beads are made of clay or stone.

Sode, Torben, Claus Feveile and Ulrich Schnell

2010 An Investigation on Segmented, Metal-foiled Glass Beads and Blown, Mirrored Glass Beads from Ribe, Denmark. In *Zwischen Fjorden und Steppe: Festschrift für Johan Callmer*. Edited by Claudia Theune, Felix Biermann, Ruth Struwe and Gerson H. Jeute. Verlag Marie Leidorf GmbH, Rahden/Westf.

Abstract: “Several thousand glass beads dating to the 8th and 9th centuries have been excavated from the marketplace in Ribe over the years. An essential group among these glass beads are imported beads, especially prevalent in the late 8th and beginning of the 9th century. This article presents a discussion of the segmented metal-foiled glass beads, blown mirrored glass beads and faceted drawn high lead glass beads. Lead isotope and chemical analyses of a group of these beads indicate that they were manufactured in the Near East” (Sode et al. 2010:327).

Schuyler, Lucy C.

2010 *The Jewelry of Tijeras Pueblo. Maxwell Museum Technical Series No. 15*. Maxwell Museum of Anthropology, Albuquerque. Full article available at: http://www.unm.edu/~maxwell/technical_series/Tech%20Series%2015%20rev%20Nov%202011.pdf.

Who We Are

The Society of Bead Researchers is a non-profit corporation, founded in 1981 to foster research on beads of all materials and periods, and to expedite the dissemination of the resultant knowledge. Membership is open to all persons involved in the study of beads, as well as those interested in keeping abreast of current trends in bead research. The society publishes a semi-annual newsletter, *The Bead Forum*, and an annual journal, *BEADS: Journal of the Society of Bead Researchers*. The society's website address is <http://www.beadresearch.org>.

Contents of the newsletter include current research news, requests for information, responses to queries, listings of recent publications, conference and symposia announcements, and brief articles on various aspects of bead research. Both historic and prehistoric subject materials are welcome.

The deadline for submissions to the next *Bead Forum* is September 1, 2013. Electronic submissions should be in Word for Windows 6.0 or later with no embedded sub-programs such as "End Notes." References cited should be in Historical Archaeology format (http://www.sha.org/publications/for_authors.cfm).

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