The
BEAD FORUM
Newsletter of the Society of Bead Researchers

Issue 82 Spring 2023

# Chevron Bead Production in Southwestern Germany During the Early Modern Period

Karlis Karklins

## INTRODUCTION

While Venice was the major source of chevron beads during the early modern period (ca. 1450-1750), several other European centers also produced them as expatriate Venetian glassmakers spread their knowledge to other countries. Amsterdam (Gawronski et al. 2010:121) and Middelburg (van der Storm and Karklins 2021:7) in the Netherlands and Rouen in France (Karklins and Bonneau 2019:4) are among them. Germany was also marginally involved in their manufacture at this time, based on finds at two glassmaking sites (Neulautern and Walkersbach) in the southern state of Baden-Württemberg (Gradmann et al. 2013; Hasenmayer and Denzler 2015). In that these finds are currently the only instances of the production of chevron beads in Germany, and the cited reports are in German and rather obscure, the author translated them and the derived material is presented below, with some appended personal observations. For full details, especially as regards the archaeometric analysis, see the original works.

## THE NEULAUTERN GLASSWORKS

The site of the Neulautern glassworks is situated at the eastern edge of the Löwenstein Hills in the forested mountain region of northern Baden-Württemberg, about 35 km to the northeast of Stuttgart. The works operated with varying degrees of success for almost 300 years, from 1530 to 1822 (Hasenmayer and Denzler 2015:147).

Emergency excavations conducted at the site in 2003 uncovered wasters of many of the products. Among them were 13 items related to the production of seven-layer chevron beads: an intact production tube, eight longitudinally broken production tubes, and four bead fragments with faceted ends (Figure 1) (Hasenmayer and Denzler 2015:147). The color sequence from the exterior to the core is cobalt blue/white/red/white/light blue/white/light blue. Some specimens have twelve rays on all the layers, while in others the two innermost layers have only eight (Figure 2). Although no measurements are provided in the available reports or images, Figure 1 clearly reveals that they had a considerable size range. Several blue glass rods were also recovered (Gradmann et al. 2013:290).

*Figure 1. Chevron bead production tubes and faceted bead fragments from the Neulautern glassworks (courtesy: Rena Gradmann).*

*Figure 2. Chevron production tube from Neulautern with eight rays on the two innermost layers (courtesy: Rena Gradmann).*

## THE WALKERSBACH GLASSWORKS

Situated in the Welzheimer Forest about 30 km southeast of Neulautern and 35 km east of Stuttgart, the Walkersbach glassworks is first documented in 1508. It was owned by the famous glassmaking Greiner family. Destroyed during the Thirty Years' War (1618-1648), it was rebuilt before the end of hostilities, but ceased production in 1714 (Hasenmayer and Denzler 2015:147-148).

A surface survey of the site by Marianne Hasenmayer in 2010 yielded a seven-layer chevron production tube fragment and a faceted chevron bead (Figure 3). She does not provide measurement but notes that the items are smaller in diameter than those from Neulautern (Hasenmayer and Thomas Denzler 2015:148). Previously, more than 60 cobalt-blue glass tubes and rods with square and round cross sections had been found nearby (Figure 4) (Gradmann et al. 2013:290).

*Figure 3. The chevron production tube and faceted bead from the Walkersbach glassworks (courtesy: Rena Gradmann).*

*Figure 4. Cobalt-blue production tubes/beads and rods from the Walkersbach glassworks (courtesy: Rena Gradmann).*

## COMPOSITIONAL ANALYSIS

To determine whether the beads and canes were local products or imports, 13 glass samples were analyzed using the JEOL JXA 8800 Electron Microprobe at the University of Würzburg to determine their chemical composition. Included were two chevron samples, two blue cane samples, and two red glass samples from a crucible fragment at Neulautern, and four chevron and three blue glass samples from Walkersbach (Figure 5) (Gradmann et al. 2013:290).

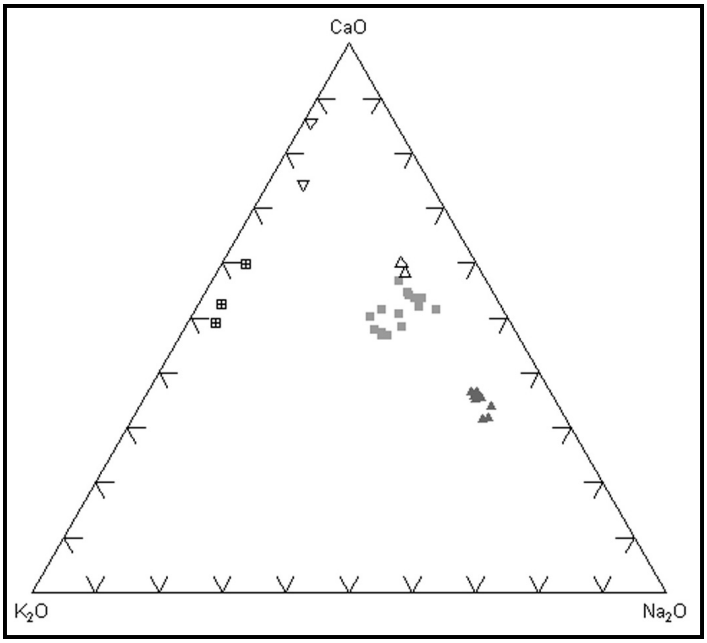


*Figure 5. Ternary CaO-$K_2O$-$Na_2O$ plot of the basic composition of the bead and cane samples. Gray triangles: chevron glass, Neulautern; open triangles: glass rods, Neulautern; open inverted triangles: red enamel, Neulautern; gray squares: chevron glass, Walkersbach; open squares with cross: glass canes, Walkersbach (after Gradmann et al. 2013:291).*

All the color layers of the chevron glass from Neulautern exhibit a uniform basic composition: $Na_2O$ as the main component (12.1-16.0 wt%) with CaO (7.4-10.4 wt%), $K_2O$ (2.7-3.6 wt%), and MgO (0.6-3.5 wt%). Compared to Neulautern, the Walkersbach chevron glass has a lower $Na_2O$ content (4.7-7.8 wt%), CaO (7.8-11.4 wt%), $K_2O$ (2.1-4.1 wt%), and MgO (2.8-4.2 wt%) (Gradmann et al. 2013:291).

The basic composition of the blue glass rods from Neulautern falls within the range of the chevron beads from Walkersbach, while the blue glass canes from Walk-

ersbach are composed of a glass rich in potassium (12.6-14.9 wt%) with a CaO content of 15.0-20.5 wt%, $Na_2O$ ca. 1.3 wt%, and MgO ca. 0.7-0.9 wt%. The red glass from the Walkersbach crucible is high in CaO (19.5-20.7 wt%) and low in $Na_2O$ (1.5 wt%), with 5.6 wt% $K_2O$, and 4.1 wt% MgO, a marked difference with the other glasses (Gradmann et al. 2013:291).

All the blue glasses are colored with Co, but in different proportions. The Neulautern chevron glass contains 0.17-0.21 wt% CoO, while the blue canes contain 0.68-0.86 wt%. The Walkersbach chevrons have a CoO content of 0.45-0.64 wt%, but the glass rods have only 0.11-0.12 wt%. The pale blue layers appear to be colored by $Fe_2$+. The chevron red glass has a CuO content of 0.5-1.8 wt%, while the red crucible glass contains 1.6-2.9 wt% (Gradmann et al. 2013:292).

The white chevron glass contains 3.9-9.7 wt% $SnO_2$. Almost all the other glasses also contain noticeable amounts of $SnO_2$. The red chevron layers and the blue rods from Neulautern contain up to 4.4 wt%, while the blue canes from Walkersbach and the red crucible glass from Neulautern are completely Sn-free. PbO is also found in all the chevron layers. In the red layers, the content is 0.8-4.7 wt%, while the white layers contain 9.4-18.1 wt%. In contrast, the blue layers, as well as the blue canes from both sites, have significantly higher PbO levels (1.8-6.9 wt%), while the two red crucible samples contain 0.3 wt% and 24.3 wt%, respectively (Gradmann et al. 2013:292-293).

**SUMMARY**

The chevron beads from Neulautern are made of soda-ash glass, a type that has not as yet been demonstrated in southern Germany. The chevron beads from Walkersbach differ significantly in composition from those from Neulautern in that they are composed of a mixed-alkali glass with a slight Na dominance but an overall low alkali content (Gradmann et al. 2013:293).

The glass of the blue canes from either site is clearly different from that of the associated chevron beads. While the Neulautern canes are similar in composition to the Walkersbach chevrons, those from Walkersbach consist of a potash glass which is typical for southern German glass production in the early modern period. The red crucible glass from Neulautern, with a low alkali content and high CaO, sometimes also high in PbO, has nothing in common with the other glasses (Gradmann et al. 2013:293).

**OBSERVATIONS**

The Neulautern and Walkersbach glassworks belonged to the forest-glass (Waldglas) tradition of northwestern and central Europe which utilized potash from wood ash as a flux. It is therefore likely that the soda-glass chevron production tubes are imports. While it is possible that they could have been made locally using imported fluxes or glasses, this would probably not have been financially feasible considering the relative complexity and duration of the chevron-cane production process in addition to the cost of the raw materials.

Venice is the likely source of the Neulautern chevron canes, though other contemporary chevron-producing centers such as Amsterdam also used soda glass for their beads (Karklins et al. 2002). The mixed-alkali content of the Walkersbach chevrons, as well as the blue rods from Neulautern, suggests a source other than Venice. The potash-rich blue tubes and rods from Walkersbach are clearly local products.

The foregoing suggests that the role of the two glassworks in the production of chevron beads was simply to segment imported production tubes and grind the end facets to create finished beads, possibly for the domestic market. As regards the blue tubes from Walkersbach, the absence of any heat-rounded specimens suggests that they were intended for the production of tubular beads. The rods were likely used to decorate glassware.

The high Sn/Pb content in all the chevron material and the Neulautern rods indicates that they predate ca. 1650, a time of transition from the use of lead-tin oxide as an opacifier to antimony-based opacifiers (Blair 2017:36; McCabe and Billeck 2018). The absence of Sn in the Walkersbach canes and the red crucible glass from Neulautern suggests that they are of a later date and/or were made using a different glass recipe.

It is hoped that additional analysis of the Neulautern and Walkersbach chevron material will be undertaken in the near future seeking trace and rare-earth elements which may help to determine the source of the production tubes.

**ACKNOWLEDGEMENTS**

My thanks to Rena Gradmann for providing color images of the production tubes and beads and to Ulrich Schüssler for permitting the use of the graph.

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# Glass Beads as Architectural Décor at Alcáçovas, Portugal

**Brad Loewen and Andreia Martins Torres**

## INTRODUCTION

During the conference of the Society for Historical Archaeology held in Lisbon, Portugal, on 4 January 2023, participants in the glass bead symposium "Global Artefacts, Local Perspectives" visited a 17th-century chapel in Alcáçovas, known for its walls decorated with seashells, colored stones, majolica, and glass beads. Alcáçovas is a quiet town set in a landscape dominated by vast farms, about 90 minutes drive southeast of Lisbon. The group travelled to Alcáçovas in a small bus, met with a guide who showed them the site, and lunched in a local restaurant before returning to Lisbon.

Considering its rural, inland setting, Alcáçovas at first sight seems an unlikely place to find a major artwork created with seashells and 17th-century glass beads. Alcáçovas was a typical county seat, one of about 300 that dotted the Portuguese countryside. The seigneurs of Alcáçovas, however, were also prominent residents of Lisbon who owned a palace in the port of Paço de Arcos, west of the city, and another on a hill overlooking the capital itself. Established as the seigneurs of Alcáçovas in 1430, the Henriques dynasty stemmed from the Castilian crown, whose influence in Portugal derived from trade, military service and diplomacy. As early as the 1470s, the Paço dos Henriques (Henriques Palace) in Alcáçovas hosted Portuguese and Castilian negotiators for a series of international treaties. The chapel in their rural fiefdom, with its exotic decor of seashells and glass beads acquired through seaborne trade, reminded pilgrims of the status in the larger European world that the seigneurs enjoyed (Figure 1).

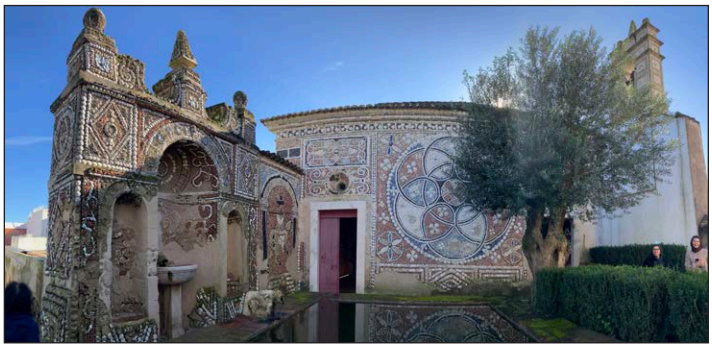

*Figure 1. View to the south across the reflecting pool, showing the façade with its font and statuary nooks on the left, followed by the panel representing a noble horseman, and the north wall of the chapel (photo: Heather Walder).*

## DESCRIPTION

The chapel of Nossa Senhora da Conceição is set in a walled courtyard, now curated as a garden with olive and orange trees (Figure 2). In addition to the chapel, the garden takes in a decorated archway entrance and

*Figure 2. The entrance archway seen from inside the garden, view to the west. The Paço dos Henriques (Henriques Palace) appears in the background (photo: Tom Blair).*

shrine, as well as a reflecting pool, a belfry, a cistern, and walkways paved with black and white stones patterned in the Portuguese manner. The interior walls of the chapel and archway (Figures 3, 4) are festooned with seashells, stones in rich colors, ceramic *azulejo* tiles, blue-on-white majolica shards and porringers, and large glass beads, all pressed into a mortar support to create various fields and

*Figure 3. The decoration inside the archway entrance, view south toward the chapel. Twisted, square-sectioned chevron beads outline the cross above the chapel doorway (photo: Tom Blair).*

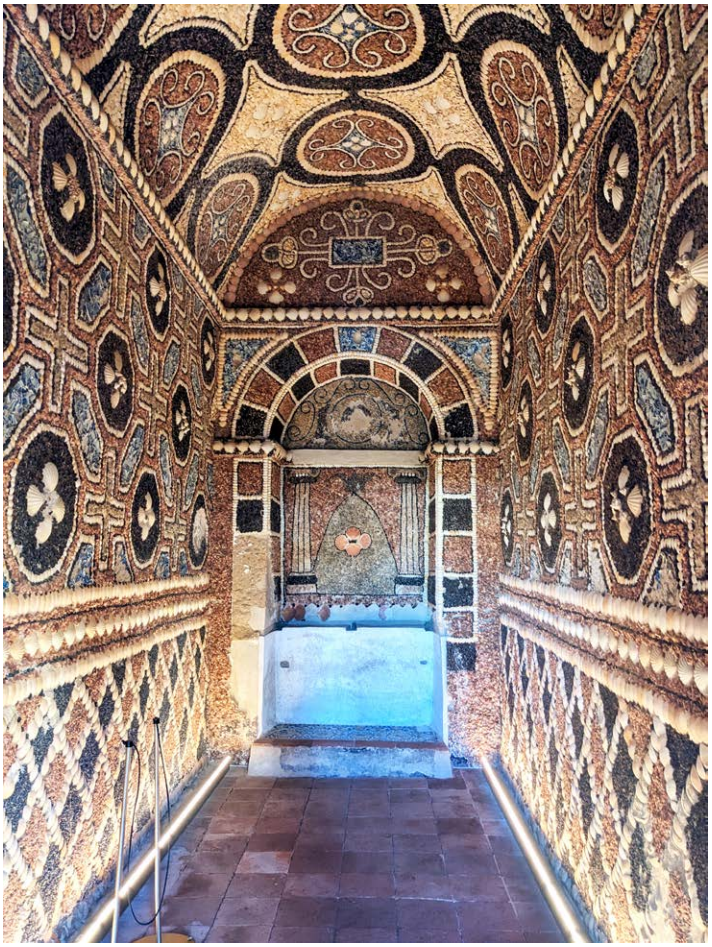

*Figure 4. An alcove inside the chapel, showing the densely decorated walls and ceiling (photo: Elliot Blair).*

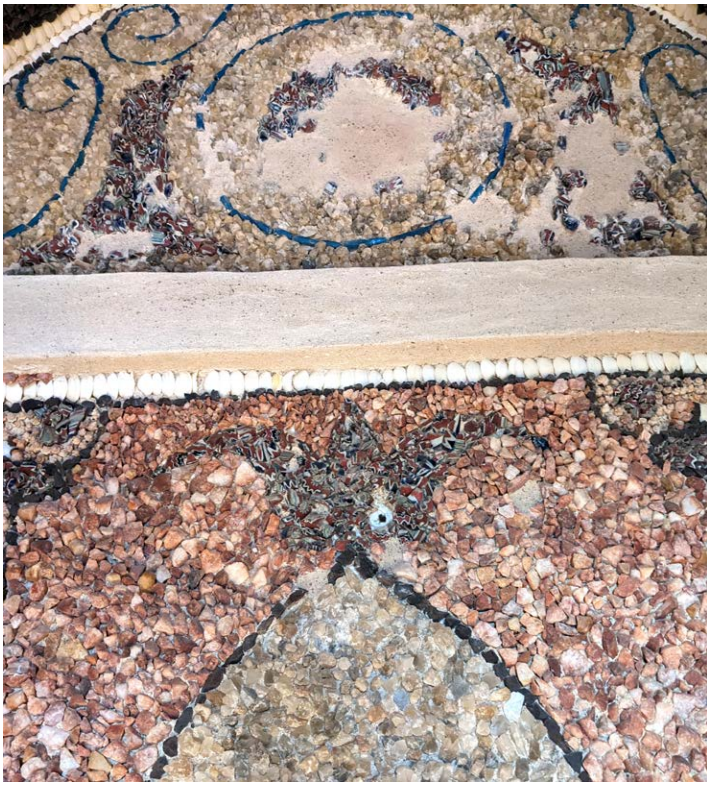

*Figure 5. Detail of the alcove, showing the arrangement of twisted chevron beads forming curved patterns (top), and a field of chevrons representing a lily (center) (photo: Elliot Blair).*

patterns (Figure 5). The freestanding shrine and two walls facing the pool have a similar décor. One panel, east of the pool, portrays a noble horseman armed with a javelin, thought to represent Henrique Henriques (1601-1685), 7th seigneur of Alcáçovas and captain-general of Alentejo province. It is tempting to see this figure as the garden's patron (Figure 6). The majolica and *azulejo* styles also point to a date in the 17th century. Today, the Jardim das Conchinhas (Seashell Garden) is part of the Paço dos Henriques historical site, across the street to the west. One can visit the garden virtually by way of Google Maps, and even proceed inside the chapel (Figure 7).

At least four kinds of glass beads decorate the facades of the chapel, shrine, and archway. Alignments of Nueva Cadiz beads are used to outline decorative fields. These non-twisted tubular beads have a distinctive square section and three layers of colored glass. The outer layer is turquoise, the middle layer is white, and the inner layer is dark blue (Figure 8). The Alcáçovas examples are quite

*Figure 6. The panel of the noble horseman, thought to represent the 7th seigneur of Alcáçovas, Henrique Henriques (1601-1685). View to the east (photo: Michele Hoferitza).*

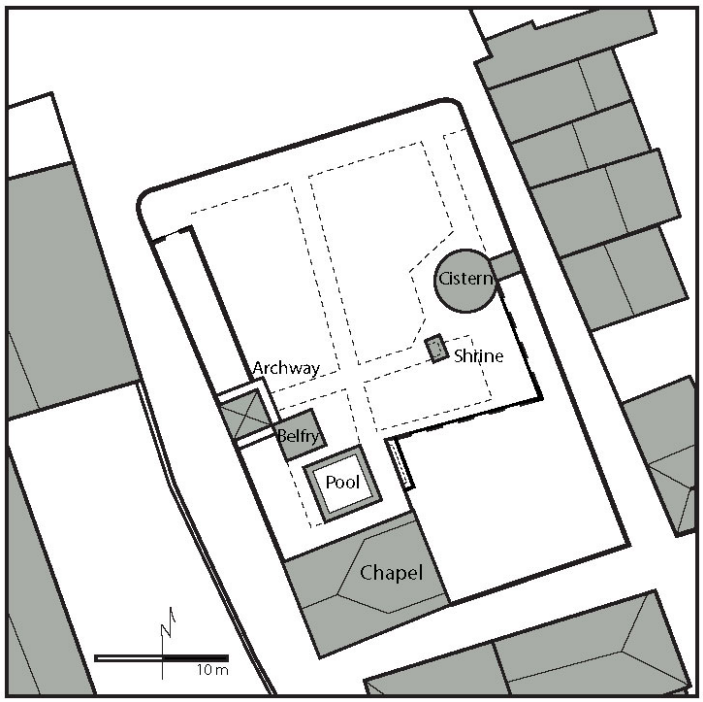


*Figure 7. Plan of the Jardim das Conchinhas in central Alcáçovas. Seashells, majolica, and glass beads decorate the inside of the entrance archway, the end of the aisle north of the archway, the free-standing shrine, the façades enclosing the pool to the east and the south, and the interior of the chapel (image: Brad Loewen).*

large, measuring about 1.0 cm in thickness and 5-15 cm in length. Long beads appear in linear outlines, while short ones serve to create curved outlines. Several hundred examples embellish the site (Figures 9, 10).

The most numerous items are fragments of chevron tubes, used to create brilliant fields. Measuring 2-3 cm in diameter, the fragments contain seven colored layers. The outer layer is blue, underlain successively by

*Figure 8. A Nueva Cadiz bead, showing its three-layer construction (photo: Elliot Blair).*

*Figure 9. Typical arrangement inside the chapel of a majolica porringer used as a medallion, with frame of Nueva Cadiz beads, above the azulejo wainscot (photo: Michele Hoferitza).*

*Figure 10. Typical arrangement of a field of chevron fragments and an outline of Nueva Cadiz beads, along with seashells and stones with their mortar support (photo: Michele Hoferitza).*

white, red, white, blue, white, and colorless layers (Figure 11). The chevron fields stand out against the surrounding areas of stones and seashells. Chevrons were notably used to create a butterfly in the panel of the noble horseman (Figure 12). While gaps disfigure many chevron fields, the site still likely holds thousands of tube fragments.

An unusual bead style is a five-layer, twisted chevron tube with a square section. Underneath its blue exterior lie white, red, white, and colorless layers. It notably occurs in the outline of the cross above the chapel entrance, while one example inside the chapel lies on its own outside the decorative fields. This exceptional bead and its solitary position may have conveyed a special meaning for the person who placed it there (Figure 13). All of the chevron and Nueva Cadiz bead varieties noted at Alcáçovas have also been recovered from excavations in Lisbon which was active in the slave trade since the middle of the 15th century (Rodrigues 2003).

*Figure 13. Isolated example of a twisted, five-layer chevron bead, above a decorative arch inside the chapel (photo: Tom Blair).*

*Figure 11. Detail of the seven-layer chevron fragments with seashells and fragments of Chinese porcelain (photo: Heather Walder).*

Finally, oval blue beads with three white stripes form the contour around some embedded majolica porringers. Observed inside the archway, they bring the number of bead varieties at Alcáçovas to at least four (Figures 14, 15).

## DISCUSSION

It is difficult to interpret this remarkable collection without more knowledge on the beads' historical context, their distribution within the Jardim das Conchinhas, their typological parallels, and their chemical composition. However, Andreia Martins Torres (2007)

*Figure 12. A field of chevron fragments outlined by black stones, appearing as a butterfly hovering near the hand of the noble horseman (photo: Tom Blair).*

*Figure 14. Detail of an arch inside the chapel, showing chevron fragments and oval blue beads with white stripes arranged around the imprint of a missing majolica porringer. Seashells, stones, and majolica shards appear in a typical pattern, pressed into sandy mortar (photo: Tom Blair).*

*Figure 15. Detail showing a row of twisted chevron beads, above a field of chevron fragments, along with seashells, contrasting black and beige stones, and mortar support (photo: Elliot Blair).*

has shown that chevron and Nueva Cadiz beads occur as mural décor in several 17th-century buildings in Portugal. For a short time, glass beads were a decorative fashion in Portuguese architecture.

Researchers do not believe, however, that Portuguese artisans made these beads. Venice produced chevron and Nueva Cadiz beads, and chemical analyses lend support to such a provenance (Loewen and Dussubieux 2021; Walder et al. 2021). In the 18th century, Lisbon was a transshipment point for Venetian beads to the Atlantic world (Sofia 2021). For much of the 17th century, however, France and Holland dominated the transatlantic bead trade, and the Alcáçovas assemblage correlates with a nadir in the westward trade of Venetian beads. It is thus striking to find these beads used as architectural décor.

From a stylistic standpoint, the large size of the chevron tubes and Nueva Cadiz beads in the Jardim das Conchinhas contrasts with the smaller size of examples that reached the Americas in the 16th century (Smith and Good 1982). In regions where Venetian beads were present throughout the 16th-19th centuries, as in central and eastern Africa, researchers observe a long-term trend toward larger Nueva Cadiz beads (Loewen and Dussubieux 2021). The Alcáçovas specimens seem to fit this trend.

## FURTHER RESEARCH

The group that visited the Jardim das Conchinhas (Figure 16) discussed the potential for further research that the beads and their context offer. While beads are not rare in European museums and archaeological holdings, Alcáçovas provides a golden opportunity to study an in situ assemblage. There is a need to fully record the beads within their architectural setting. Historical research can shed light on the benefactors and artisans who created the garden and help to date the beads more precisely. Typological and chemical study can contextualise the beads and retrace their technology and provenance. All these avenues remain open, and the visiting group – in concert with their hosts in Alcáçovas – wish to encourage further investigation.

## ACKNOWLEDGEMENTS

Thanks to James Bradley for kindling interest in the Alcáçovas beads, to Heather Walder for finding a bus in Portugal in the midst of a transportation strike, to Tom Blair, Elliot Blair, Heather Walder, and Michele Hoferitza for their attentive photography, and to Karlis Karklins and Michele Hoferitza for their editorial dexterity.

*Figure 16. Members of the group photographed with the reflecting pool in the foreground and the chapel's wall as a backdrop (photo: Tom Blair).*

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# Resources

**Taking Care of Home Collections: Baskets and Beadwork**

The "Programs" section of the New York State Museum website provides an archive of various video productions addressing many interesting topics. Of particular interest to our readers is the section called "Taking Care of Home Collections" (https://www.nysm.nysed.gov/programs/program-series/taking-care-home-collections). The video series features curators and a NYS Archives conservator who provide information on caring for a variety of items, including a video that specifically addresses beaded items. This online video series includes tips for taking care of textiles, garments, art objects, prints, and photographs, as well as identifying and preventing common pests from damaging collections.

*Taking Care of Home Collections: Baskets and Beadwork* features Dr. Gwen Saul, Curator of Ethnography, and can be found at https://youtu.be/YqlwlNZS0jQ. Dr. Saul explains vacuuming and cleaning techniques that can prolong the life of antique beaded items.

Free downloads of many past articles in *The Bead Forum* are available at https://surface.syr.edu/the_bead_forum/

# Society News

## SBR BUSINESS MEETING MINUTES

The SBR's annual business meeting was called to order at 3:40 P.M. CST on 7 April 2023 via Skype by President Elliot Blair. In attendance were Blair, Editor Karlis Karklins, and Secretary-Treasurer Alice Scherer.

## OLD BUSINESS

### President's Report

This being his first board meeting, President Blair stated that he looked forward to working with the other Society officers and promoting the SBR and its goals at conferences and other events in hopes of recruiting new members and soliciting articles for both the SBR journal and newsletter.

### Editor's Report

Volume 34 of *BEADS: Journal of the Society of Bead Researchers* was finalized at the end of November and printed in mid-December. While the issues destined for Canadian and international members were mailed in late December, weather conditions delayed the shipment of those bound for the United States until early January. As in pre-COVID days, these were driven to Ogdensburg, NY, to take advantage of media mail rates. Special thanks to my buddy, Chuck Bradley, for helping with the heavy lifting as well as getting the journals to Ogdensberg. I once again also thank Dave Weisel for the wonderful job he does in producing the journal

Associate Editor Alison K. Carter helped review submitted articles and also sought additional ones. The spring issue of *The Bead Forum* was compiled by Newsletter Editor Rosanna Falabella. Having taken the job on a temporary basis until a replacement could be found for Chris DeCorse, she subsequently resigned her position and was replaced by Michele Hoferitza. To our delight, Michele not only compiled the autumn issue, but also did the layout, thereby freeing Alice Scherer from this task. Our sincere thanks go to Rosanna for her valued service to the Society and to Michele for stepping into the breach.

Due to ever increasing mobility issues, it has become difficult for the Editor to deal with packaging and mailing the SBR journal, even with help. Printing the journal in Oregon under the supervision of either Alice or Alison was considered but turned out to be significantly more expensive than printing in Canada. Consequently, it was decided that the 2023 journal would be printed in Ottawa, but bulk shipped directly from the printer to Oregon or another closer U.S. destination for redistribution. The cost of the bulk shipping would be countervailed by not having to pay taxes on a print job that is shipped directly to the United States.

### Secretary/Treasurer's Report

Secretary-Treasurer Scherer reports that the SBR had 208 paid members in 2022; in 2021 we had 217, for a loss of 9. Our members are mostly from the United States (147) and Europe (33), but also from Canada (18), the Middle East (2), Asia (4) and Australia (4). Institutions make up 13 of our members and bead societies/museums 4. There were also 9 comp'ed or traded memberships.

Total revenues for 2022 were $11,317.03 * and total expenditures were $10,155.03.*

As of December 31, 2022, the balances in the various SBR accounts were:

| | |
|---|---|
| U.S. Bank Account (Portland) | US $ 4,831.79 |
| TD-CT Account (Canada) (CD$8,275.98) | US $ 6,276.88 |
| Vanguard Account** | US $ 24,265.52 |
| PayPal Account | US $ 24.01 |
| Petty Cash | US $ 312.72 |
| **Sub-Total as of December 31, 2022** | **US $35,710.92** |
| Minus outstanding TD Central 2022 Expenses (CD$7,798.43) | -US $ 5,915.87 |
| **Sub-total** | **US $29,795.05** |
| Minus 2022 expenses January 2023 from petty cash | -US $ 89.42 |
| **Total** | **US $29,705.63** |
| **Total Monies on Hand End of 2022** | **US $ 29,705.63** |

*The revenue and expenditure totals above include ($4.29) in credits and reimbursements.

**The amount as noted above for our Vanguard account does not include $3,235.91 in *unrealized* loss which is reflected in the 12/31/22 Vanguard statement balance of $21,147.45. (A full accounting of Vanguard monies is available upon request.)

**Summary Report**

| | | |
|---|---|---|
| Balance End of 2021 | US$ | 28,563.40 |
| Plus 2022 Income | +US$ | 11,287.12 |
| **Subtotal** | **US$** | **39,850.52** |
| Minus 2022 Expenses | -US$ | 10,120.83 |
| **Subtotal** | **US$** | **29,729.69** |
| Credits | +US$ | 29.91 |
| Reimbursements | -US$ | 34.20 |
| Reconciliation | +US$ | 19.77 |
| **Total Monies at end of 2022** | **US $** | **29,705.63** |

**NEW BUSINESS**

**The Future of the Journal**

In that Secretary-Treasurer Scherer will not be running for reelection when her term ends in 2024, coupled with the ever increasing cost of printing and distributing the journal, discussion turned to the possibility of producing the 2024 journal in a digital-only format. Karklins pointed out that in a survey conducted several years ago, the majority of the members preferred a hard copy of the journal. Whether this is still the case will be determined in a survey of the membership in the coming months. In that sales of past journal issues have been very low so far this year, unless things change, it is proposed that they no longer be offered after December of this year, with the exception of the special issue volume 23: The Beads of Gablonz.

**Bead Society of Greater Washington Grant**

The SBR recently received a grant from the Bead Society of Greater Washington (BSGW) in the amount of $1,750. Of this amount, $117.00 was used to purchase a portable scanner for the Editor. This was subsequently used to scan the texts of most of the 588 references listed in *A Bibliography of Glass Trade Beads in North America – First Supplement* (1987). The texts will be uploaded to the Trade Bead Bibliography Texts page on our website over the next couple of months as a supplement to the existing texts in the initial *Bibliography of Glass Trade Beads in North America*. The remaining grant monies will be added to the SBR's Student Conference Travel Award fund.

**Syracuse University Institutional Repository**

Almost all of the SBR journal volumes and newsletter issues have now been uploaded to Syracuse University's digital archive, SURFACE, making them available to all interested persons. PDFs for *Beads* volumes 23, 32, and 34 have not been uploaded as there are still hard copies in stock that need to be sold.

**Editor Position Up for Election**

Karlis Karklins' term as SBR Editor ends 31 December 2023. He has agreed to run for an additional three-year term (2024-2026). If you would like to nominate someone else, please contact Secretary-Treasurer Scherer. The nominee must be a member of the Society in good standing. Ballots will be mailed with the autumn issue of *The Bead Forum*.

— Respectfully submitted,

Alice Scherer, Secretary-Treasurer, 7 April 2023

**SBR Student Conference Travel Award**

Students who plan on presenting a paper on some aspect of bead research at a bona fide conference are reminded that the Society offers the Student Conference Travel Award. It is in the amount of $750 US. The deadline for applications is 31 May 2023. The applicant must be enrolled in a valid BA, MA, or PhD degree-granting program and also needs to be a current member of the Society of Bead Researchers. For details: https://beadresearch.org/student-conference-travel-award/

**Herewith We Express Our Gratitude**

A special thank you to those members who've helped ensure the financial well-being of the SBR through their Sustaining, Patron, or Benefactor membership monies. We are so grateful for your support. Our list below runs from 23 September 2022 through 11 April 2023.

**Sustaining ($45+)** Gretchen Stolte, Joy Brisighella, Jamey Allen, Ellynne Dec, Alan Curtis, Franco Salsilli, Kathy Anderson, Deborah Zinn, Farnosh Bolvardi, Jean Nicholls, Paul Johnson, and Giorgio Teruzzi.

**Patron ($75+)** Mark Kenoyer, Sindi Schloss, Joseph Mellin, and Lorann Pendleton Thomas.

**Benefactor ($150+)** Laure Dussubieux, Jeff Mitchem, Gretchen Frentzel Dunn, Harley Glesby, and Frank Ruggiero.

# SBR Treasurer's Summary Report for 2022

| | | |
|---|---|---|
| **OPENING BALANCE AS OF 1 JANUARY 2022** | | **$28,563.40** |
| **INCOME** | | **$11,287.12** |
| Annual Dues | | |
| Individual-North America | 3,090.00 | |
| Individual-Overseas | 1,110.00 | |
| Sustaining | 900.00 | |
| Patron | 1,125.00 | |
| Benefactor | 1,900.00 | 8,125.00 |
| Journal Sales | | 1,635.00 |
| Invetment Income | | 498.37 |
| Donations | | 388.00 |
| Miscellaneous: Prepaid Postage $615.75, Prepaid PayPal fees $25 | | 640.75 |
| **EXPENSES** | | **$10,120.83** |
| Journal Production (Volume #34) | | |
| Layout | 1,080.00 | |
| Printing | 4,308.80 | 5,388.80 |
| Newsletter Printing (Issues #80-81) | | 282.00 |
| Postage/Shipping | | |
| Journal (Annual Issue) (includes border fees, $6.50) | 1,772.05 | |
| Newsletter (Two Issues) | 134.38 | |
| General (Back Issues and Other) | 768.62 | 2,675.05 |
| Website (Domain Names, Web Hosting, Site Maintenance) | | 575.74 |
| Office Expenses (Stationery, Supplies, PO Box Rent) | | |
| Secretary-Treasurer | 359.10 | |
| Editor | 259.08 | 618.18 |
| Miscellaneous | | |
| Cost of Selling (eBay $32.96, PayPal $285.17) | 318.13 | |
| Bank fee | 26.00 | |
| Academia.edu Premium Fee (Editor) | 54.41 | |
| Oregon Corporation Filing Fees | 70.00 | |
| 2021 Expenses paid as part of 2022 reimbursement | 47.12 | |
| Thank you Gift | 65.40 | 581.06 |
| **Preliminary Closing Balance as of 31 December 2021** | | **$29,729.69** |
| Credits $29.91 plus Debits ($34.20) | | -4.29 |
| Reconciliation | | 19.77 |
| **FINAL CLOSING BALANCE AS OF 31 DECEMBER 2022** | | **$29,705.63** |

# SBR Proposed Budget for 2023

| | | | |
|---|---|---|---|
| **OPENING BALANCE AS OF 1 JANUARY 2023** | | | **$29,705.63** |
| **INCOME** | | | **$10,200.00** |
| Annual Dues | | | |
| Individual-North America | 3,100 | | |
| Individual-Overseas | 1,200 | | |
| Digital-Only Memberships | 200 | | |
| Sustaining | 900 | | |
| Patron | 900 | | |
| Benefactor | 1,200 | 7,500 | |
| Journal Sales | | 1,200 | |
| Investment Income | | 600 | |
| Donations | | 250 | |
| Prepaid Postage | | 650 | |
| **EXPENSES** | | | **$11,465.00** |
| Journal Production (Volume #35) | | | |
| Layout | 1,000 | | |
| Printing | 4,500 | 5,500 | |
| Postage/Shipping | | | |
| Journal | 1,900 | | |
| General | 850 | 2,750 | |
| Website (Domain Names, Web Hosting, Maintenance) | | 600 | |
| Office Expenses (Stationery, Supplies, PO Box Rent) | | | |
| Secretary/Treasurer | 350 | | |
| Editor | 260 | 610 | |
| Student Conference Travel Awards (2) | | 1,500 | |
| Miscellaneous | | | |
| Bank, PayPal and Square Charges | 325 | | |
| Cost of Selling | 50 | | |
| Academia.edu Premium Fee (Editor) | 191 | | |
| Oregon Corporation Filing Fees | 70 | 505 | |
| **PROJECTED CLOSING BALANCE AS OF 31 DECEMBER 2023** | | | **$28,309.63** |

— Respectfully submitted, Alice Scherer, Secretary-Treasurer (7 April 2023)

# Research Projects

**The Funerary Beads at Hepu, China**

The coastal site of Hepu in present-day Guangxi Province, China, is mentioned as a port city in a well-known passage of the *Han Shu* ("Book of Han"), which remarks on a trading mission to (possibly) India at the beginning of the first century BCE. To many scholars, Hepu thus played an important role in the early development of the so-called Maritime Silk Route. Over the past five decades, thousands of burials have been identified in and around the town of Hepu. Of these, approximately 500 dating to the Han period (206 BCE-220 CE) and Three Kingdoms period (220-280 CE) have been excavated and published. The structure and contents of the graves dated to these periods to a large extent parallel contemporary funerary practices in central and northern China.

Of particular interest are the many objects recovered from the burials at Hepu which indicate contact with maritime regions to China's south. Of these, beads stand out as the most abundant, with over 35,000 glass beads and about 1500 stone beads (including crystal, agate, carnelian, garnet, and amethyst) recovered from a few hundred graves of the Han and Three Kingdoms periods. Based on published data, I am presently completing a database which lists the time period, size, structural attributes, and contents by artifact category for each burial.

The bead data at Hepu are used to address two general issues: first, the role played by beads in socio-political processes at Hepu itself (such as conspicuous consumption and display); and two, their use in clarifying the nature and scale of local and interregional networks of interaction. To begin, even a quick look at the Hepu data allows for the identification of a clear temporal pattern, namely the arrival of beads from southern regions during the 1st century BCE, with a peak in burials dating to the period 30 BCE-25 CE. Crucially, other locations in the South China Sea region had access to traded beads (and other objects of non-local origin) hundreds of years before Hepu did, pointing to the late participation of China in maritime exchange networks.

The current project's objectives include, among others, the following:

1. Comparing the beads found at Hepu to those found at other locations in southeast Asia and India as a way of identifying similarities and differences in the bead assemblages;
2. Identifying associations between different types of beads and funerary variables, such as those indicating wealth and status;
3. Determining whether stone beads made of different materials arrived in Hepu at different times;
4. Comparing the beads found at Hepu to those recovered from contemporary burials at other locations in southeast China (including the regional capital of Panyu) and regions further north (e.g., Korea) as a way of better understanding the nature and extent of early trading networks.

One additional topic of interest revolves around the chemical composition of the glass beads and other glass objects found at Hepu. Although the limited number and specificity of relevant analyses encourages caution, they do point to the presence of potash glass, which in turn supports the view of some – but not all – scholars that these glass objects were produced "locally," i.e., in southeast China or northern Vietnam. Here again, the lack of evidence of primary or secondary glass production at Hepu underscores the need for further research. Still, the available compositional data do allow for some preliminary suggestions regarding the paths and timing of early trading networks that included Hepu as one of the participating ports.

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# Exhibitions

**White Heart**
**Allard Pierson**
**Oude Turfmarkt 127**
**Amsterdam, Netherlands**
**Until 30 June 2023**


This exhibition explores the present-day trade route of the distinctive White Heart beads from their origin in the Preciosa Ornela factory in Desná, Czechia, to Indigenous beadworkers in the northeastern United States.

In addition to displaying some interesting bead-related items such as Diderot's encyclopedia, bead sample cards, a map of New England and New Netherlands, and bead production materials, both modern and archaeological, the exhibit showcases the film *White Heart* (25 min.). The exhibit and the film are the collaborative effort of Christien Meindertsma, Elizabeth James-Perry, Tim van Gils, and Suzanne Hendriks.

The film begins with views of the massive sand mines at Hrdoňovice, the source of the basic raw material for beadmaking. It then moves to the nearby Preciosa factory where the process of producing white heart beads is revealed, step by step. Bead stringing is demonstrated by 95-year-old Jaroslava Marková who has been doing this job for 80 years. Once packaged, the beads are shipped worldwide, some ending up in the hands of Native American beadworkers.

Several segments are devoted to the modern production of wampum by Indigenous artist Elizabeth James-Perry of the Wampanoag tribe of Gay Head (Aquinnah) in Massachusetts.

**A World of Beads: Essential Elements**
**Mingei International Museum**
**Balboa Park**
**1439 El Prado, San Diego, CA**
**Until August 27, 2023**

*A World of Beads: Essential Elements* explores the different mediums used to create beads from varying time periods and cultures. By exploring the materials from which beads are made, *A World of Beads* covers the evolution and history of bead making as well as the economic and social influences beads have on societies. Ranging from plant and animal materials to fabricated metal and glass, objects in this exhibition cover a wide selection of beads and beaded objects.

This exhibition explores the materials from which beads are made. Throughout history, bead artisans utilized materials that were conveniently and abundantly available to them. The earliest civilizations used organic materials such as bone, shell, wood, and fiber to create elementary items of adornment, usually worn as singular elements around the neck or on the body. As knowledge and tools evolved, available materials expanded to include harder stones and minerals, while simple perforated forms gave way to more complicated spherical and ovoidal designs.

Over the past 48 years, Mingei International Museum has collected nearly 6700 items that are either beads, or adorned with beads, including rings, necklaces, textiles, containers, and clothing. Almost 6000 of these items were received from The Bead Museum, a globally recognized museum in Prescott, Arizona, which closed its doors in 2011. The transfer of this important collection allows Mingei to exhibit examples of beaded adornments, like the ones seen in this show, from all across the world.

# Recent Publications

**Babalola, Abidemi Babatunde and Boluwaji David Ajayi**

2022 Of Glass, Stone, Shell, and Metal: Ecologies of Beads in Medieval and Post-Medieval West Africa. *Postmedieval* 13:197-221; https://doi.org/10.1057/s41280-022-00231-5.

Focusing on archaeological material from across West Africa, this article highlights the various bead types, their manufacturing techniques, and their sources.

**Bârcă, Vitalie and Lavinia Grumeza**

2022 Clothes Make the Woman: The Beads Fashion in the Sarmatian Cemetery from Hunedoara Timişană. *Brief Communications of the Institute of Archaeology* 268:19-31; https://www.academia.edu/93600480/.

Beads fulfilled various functions among those buried in a cemetery in western Romania. They were part of necklaces, belts, earrings, and buttons, but most often sewn onto female garments. The custom of decorating garment hems with hundreds or even thousands of beads of various colors is recorded in the Sarmatian milieu of the Great Hungarian Plain as early as their settling of the area.


**Carter, Alison, Elliot H. Blair, Carla Klehm, and Lee M. Panich**

2022 Glass Beads and Human Pasts. In *The Elemental Analysis of Glass Beads: Technology, Chronology and Exchange*, edited by Laure Dussubieux and Heather Walder, pp. 37-53. Studies in Archaeological Sciences, Leuven University Press, Leuven; https://www.academia.edu/88248199/.

Reviews a variety of case studies that demonstrate how glass beads have been used to examine trade and economic systems, intercultural interactions and colonialism, social identity, and technological practices.

**Fang, Xiangming**

2022 *Fanshan Royal Cemetery: Pyramid of the East.* Springer Nature Singapore, Singapore, and Zhejiang University Press, Hangzhou; https://link.springer.com/book/10.1007/978-981-16-6569-1.

Elite burials of the Liangzhu Culture (3300-2300 BC) unearthed in east-central China were accompanied by a vast array of jade objects including beads, Huang pendants, and pipes which mostly comprised ear and head ornaments.

**Fenn, Thomas R., Laure Dussubieux, Heather Walder, and Douglas D. Anderson**

2022 Glass Beads and Evidence for Early "Pre-Contact" Trade in Northwestern Alaska. In *The Elemental Analysis of Glass Beads: Technology, Chronology and Exchange*, edited by Laure Dussubieux and Heather Walder, pp. 137-158. Studies in Archaeological Sciences, Leuven University Press, Leuven; https://doi.org/10.2307/j.ctv2z9fzr0.12.

Summarizes the results of compositional analysis of 13 glass beads recovered from the site of Igliqtiqsiuġvigruak near Kiana, northwestern Alaska, and places them within a historical context.

**Levin, Bettina**

2022 Beaded Bags from the Erzgebirge, Part 2: Beadweaving on Warp Threads. *Bead Society of Great Britain Journal* 14(1):10-14.

Covers the making of beaded handbags around the turn of the 20th century in the Erzgebirge Mountains of Germany using a Jacquard loom, a method of construction in which the beads which make up the design are strung on fine warp threads that are worked together with the thicker threads which provide the structure of the bag.

**Liu, Robert K.**

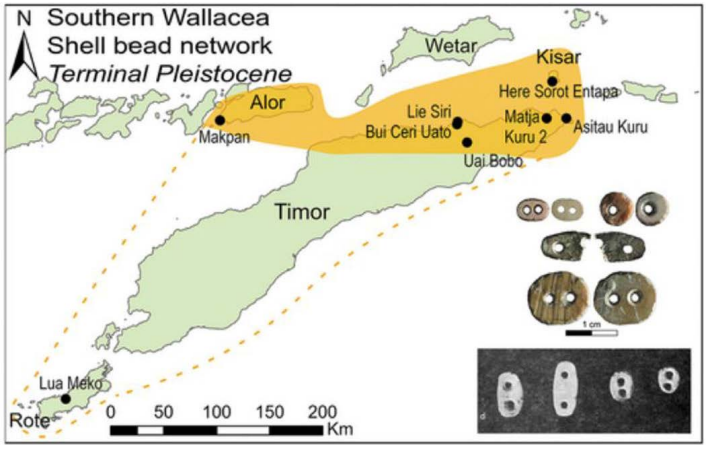
2022 Paiwan Beads from Taiwan: A Passion for Decoration. *Ornament* 43(2):56-59.

Covers the current Taiwanese industry that is replicating older styles of Paiwan beads, with a look at the workshops and the level of accuracy and quality of the products. Extensively illustrated.

**O'Connor, Sue, Shimona Kealy, Christian Reepmeyer, Sofia C. Samper Carro, and Ceri Shipton**

2023 Terminal Pleistocene Emergence of Maritime Interaction Networks across Wallacea. *World Archaeology*; https://doi.org/10.1080/00438243.2023.2172072.

Single- and double-holed beads made on tabs of *Nautilus* shell are new and distinctive forms of personal decoration that appear in the terminal Pleistocene assemblages of Alor, Timor, and Kisar in southern Wallacea.




**Opper, Marie-José**

2022 Bin-Bin, Dialdialy: ... and a Custom among the Laobé Women of Senegal. *Bead Society of Great Britain Journal* 14(1):21-23.

On the waist beads of the Laobé women of Senegal, illustrated with antique postcards and numerous examples, along with a discussion of scented paste beads.

**Sukau, Dana Marie**

2022 Dress and Identity: Using Sartorial Artifacts to Explore Identity at Fort Vancouver. M.A. thesis. Department of Anthropology, Portland State University, Portland; https://www.academia.edu/98039876/.

Investigates how the diverse populations at HBC Fort Vancouver, Washington, used dress as an expression of identity and tool for social mobility according to 19th-century British doxa. Beads enter into the discussion.

**Terlep, Michael L., Francis E. Smiley, and Randall Haas**

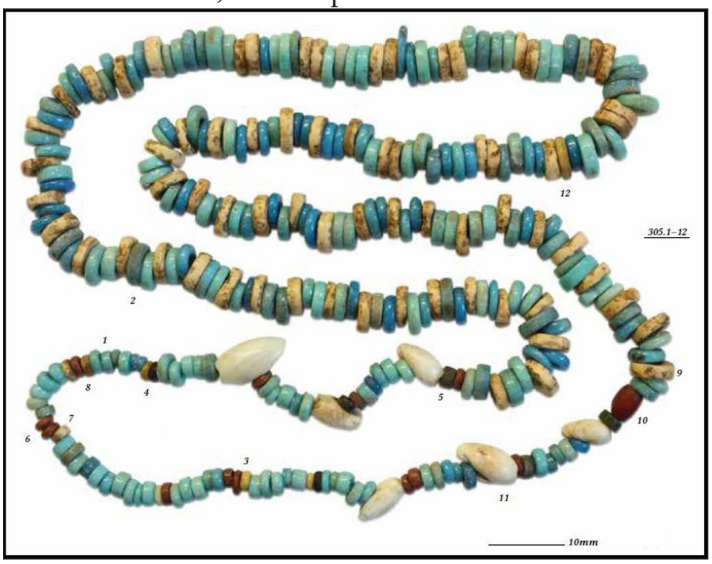
2023 Iridescent Beetle Adornments Suggest Incipient Status Competition among the Earliest Horticulturalists in Bears Ears National Monument. *American Antiquity* 88:2-19; https://www.academia.edu/96613918/.

Reports the discovery of two Basketmaker II period necklaces in southeastern Utah which are constructed of green iridescent scarab beetle femora, suggesting a homologous association between emergent agriculture and inequality.

**Then-Obłuska, Joanna**

2022 *Beads from Excavations at Qustul, Adindan, Serra East, Dorginarti, Ballana, and Kalabsha. Part 1: A-Group, Post-A-Group, C-Group, N-Type, P-Type, Pan Grave, Kerma, Middle Kingdom, and New Kingdom.* Oriental Institute Nubian Expedition 11; https://isac.uchicago.edu/research/publications/oine/ne-11-beads-excavations-qustul-adindan-serra-east-dorginarti-ballana-and.

This vast illustrated catalog organizes the finds first chronologically according to the main periods of Nubian history, then by cultural units, beginning with the A-Group and ending with modern times. An outline of the preserved beadwork and an anthropological analysis of the remains of the beads' owners, together with references to parallels known from relevant literature and museum research, are also provided.




**Walder, Heather**

2022 Seeking Indigenous Trade Networks of the Midcontinent through Glass Beads from *La Belle* (41 MG 86). In *Archaeologies of Indigenous Presence*, edited by Tsim D. Schneider and Lee M. Panich. University Press of Florida, Gainesville; https://www.academia.edu/70177157/.

Investigates Native American exchange relationships in North America's western Great Lakes region based on the composition of glass trade beads excavated from a French ship which sank off the coast of what is now Texas in 1686.

**Wiessner, Polly**

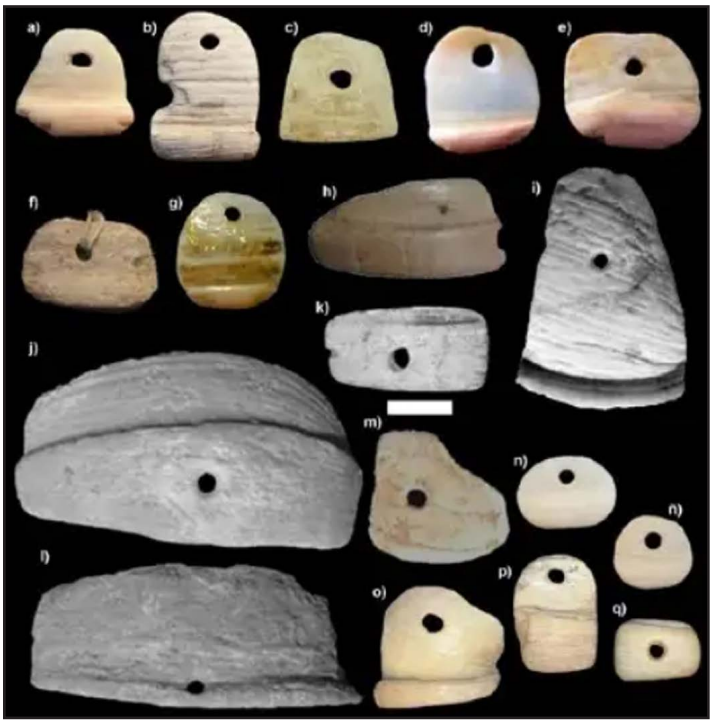
2022 Personal Adornment: Its Many Messages and Thoughts on How to Read Them. In *Adornment: Jewelry and Body Decoration in Prehistoric Times,* edited by Ahiad Ovadia, pp. 70-87. The Israel Museum, Jerusalem.

Provides a discourse on the "messages" embedded in the personal adornment of present-day hunter-gatherers and horticulturalists based on observations among the Ju/'hoansi Bushmen of northwestern Botswana and the Enga of highland Papua New Guinea, respectively.

**Zubimendi, Miguel Á. and Sandra Gordillo**

2022 Relaciones extrarregionales en Patagonia. Discusión a partir del análisis de artefactos foráneos elaborados sobre conchas del caracol terrestre *Megalobulimus*. *Comechingonia. Revista de Arqueología* 26(1):69-88; https://www.academia.edu/78861716/.

The presence of beads and pendants fashioned from the shell of *Megalobulimus* land snails in southern Argentina up to 2000 km from their probable source reveals the existence of extensive exchange networks in the region for almost 4000 years. English abstract.



# Who We Are

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

Contents of the newsletter include current research news, 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 for the next *Bead Forum* is 1 September 2023. 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/documents/SHAStyleGuide-Dec2011.pdf).

Send submissions to:

Michele Hoferitza
Newsletter Editor
beadforumnewsletter@gmail.com

**ISSN: 0829-8726 (Print) and ISSN: 2469-8555 (Online and Electronic)**

## Officers and Others



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