



THE BEAD FORUM

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A Glass-Beadmaking Furnace at Schwarzenberg in the Bohemian Forest, Upper Austria

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Translated by Karlis Karklins

The village of Schwarzenberg is located in the so-called Mühlviertel, an area of Upper Austria which geologically belongs to the Bohemian massif and is thus part of that large cross-border glassworks landscape that included the Bohemian Forest, the Bavarian Forest, the Mühlviertel, and the Waldviertel since the 14th century. The glassworks site discussed here is

located outside the village, directly in sight of the borders of Bavaria and Bohemia. Over the years, glass beads have been found repeatedly on the property south of the estate at Schwarzenberg 93, which led to a one-week archaeological excavation carried out in 2017 on the initiative of local historian Franz Haudum.

Two test units were opened. Unit 1 revealed

part of a glass oven which was attached to a massive, roughly circular, boulder over 3 m in diameter (Figure 1). The oven had a rounded end and the exposed portion was 3.8 m long. The masonry, of which only the lowest layer remained, consisted of irregular granite stones laid without mortar. The exterior wall was clearly defined and 0.7 m thick. As for the interior, at the present state of exposure, no clear distinction could be made between collapsed material and a possible building structure. Nevertheless, a transverse wall running approximately north-south was noted, which



Figure 1. Aerial view of the glass furnace in excavation Unit 1 (7 x 6.5 m) (photo: Siegfried Hoheneder, Schwarzenberg).



Figure 2. Aerial view of the stone feature in Unit 2 (3.8 x 3 m) (photo: Siegfried Hoheneder, Schwarzenberg).

possibly served as a partition wall for the fire box. The flat rock at the west edge of the pit is likely part of the work platform.

Unit 2 was situated ca. 15 m to the east (Figure 2). A fire layer was encountered beneath the humus and this overlay hewn and unhewn granite rocks and contained glass finds. A thin layer of ash covered the stony ground and probably represents the burned remains of another furnace which is likely under a nearby stone pile.

The extensive find material includes glass beads (Figure 3) and their production waste (Figure 4). The beads – whose colors include colorless to white opal, yellow or amber, blue, and emerald green – were formed by winding glass from the furnace onto a rod and subsequently shaping them by marvering on a flat surface, pressing with a paddle, or by clamping in a ribbed or knobbed mold. The following forms

have been recorded so far (Figure 3): spherical and oblate (WIb), oval (WIc), donut (WId), polyhedral (pentagonal faceted; WIIf), raspberry (WIId), ribbed (WIIe), and biconical (WIIk).

A large quantity of hollow and flat glass fragments was also encountered. The hollow glass spectrum includes Renaissance-period glass in the Venetian style (also known from the Glashütte Reichenau in Lower Austria; Tarcsay 2009), as well as Baroque, thick-walled white glass with varied decoration, which appeared during the 3rd quarter of the 17th century and was common until around 1700 or the early 18th century. The flat glass includes window panes in the form of bullseye

and flat glass. While some of this material may be cullet, there are clear indications that hollow and flat glass was produced on site. Among the other site-specific finds are fragments of various technical ceramics such as crucibles and annealing vessels, as well as furnace bricks.

Historical sources indicate that beadmaking at the site ceased in 1714. The historical identification of this hut remains uncertain since the well documented Glashütte Sonnenschlag was in operation at the same time (1638-1716) directly in Schwarzenberg, which was also occupied with bead production (Haudum 1980, 1986). It is possible that the two neighboring glassworks operated under a single name at the same time, or the hut originally located in the village was relocated in the final phase.

The production spectrum reveals that the Schwarzenberg glassworks belongs to the so-called *Patterlhütten* group, whose typical products were beads

for jewelry and rosaries (*Patterl* = bead). An inventory of these glassworks was compiled by Fröhlich (2015) based on archival accounts, archaeological research, and directories of glassworks. They are documented in various – including adjacent – parts of the Bohemian Forest, the Upper Palatinate Forest, the Bavarian Forest, the Mühlviertel, the Gratzener Mountains, and the Bohemian-Moravian highlands. Among these huts were those which produced only *Patterln*, but also those which manufactured several other products, as appears to have been the case at Schwarzenberg. Excavations have been conducted at individual beadmaking huts in the region, including the glassworks in Nová Ves at Božejov, Czech Republic, where beads similar to the types found at Schwarzenberg were produced from 1691 to 1721 (Hrubý et al. 2009). Karklins et al. (2016) attributed the production of furnace-wound beads such as those found at Schwarzenberg to the Fichtelgebirge region of northeastern Bavaria based on

local finds. It is now clear that they were made over a wide region of what is now Bavaria, Bohemia, and Upper Austria.

The Baroque bead types produced in this region were apparently destined mainly for overseas export. While they are absent among the finds excavated at local settlements – at least in Austria – numerous examples have been recovered from sites principally occupied between 1670 and 1780 on every continent except Australia and Antarctica. They are especially numerous in North America (Kidd types W1b-d and W11c-e; Karklins 2012).

Ultimately, the archeological excavations in Schwarzenberg have raised more questions than have been answered. The assumption that only a small *Patterlofen* was found next to the hut in the village must be abandoned in favor of a larger glassworks with varied production. It is hoped that the partially exposed furnace in Unit 1 can be completely excavated in the near future.

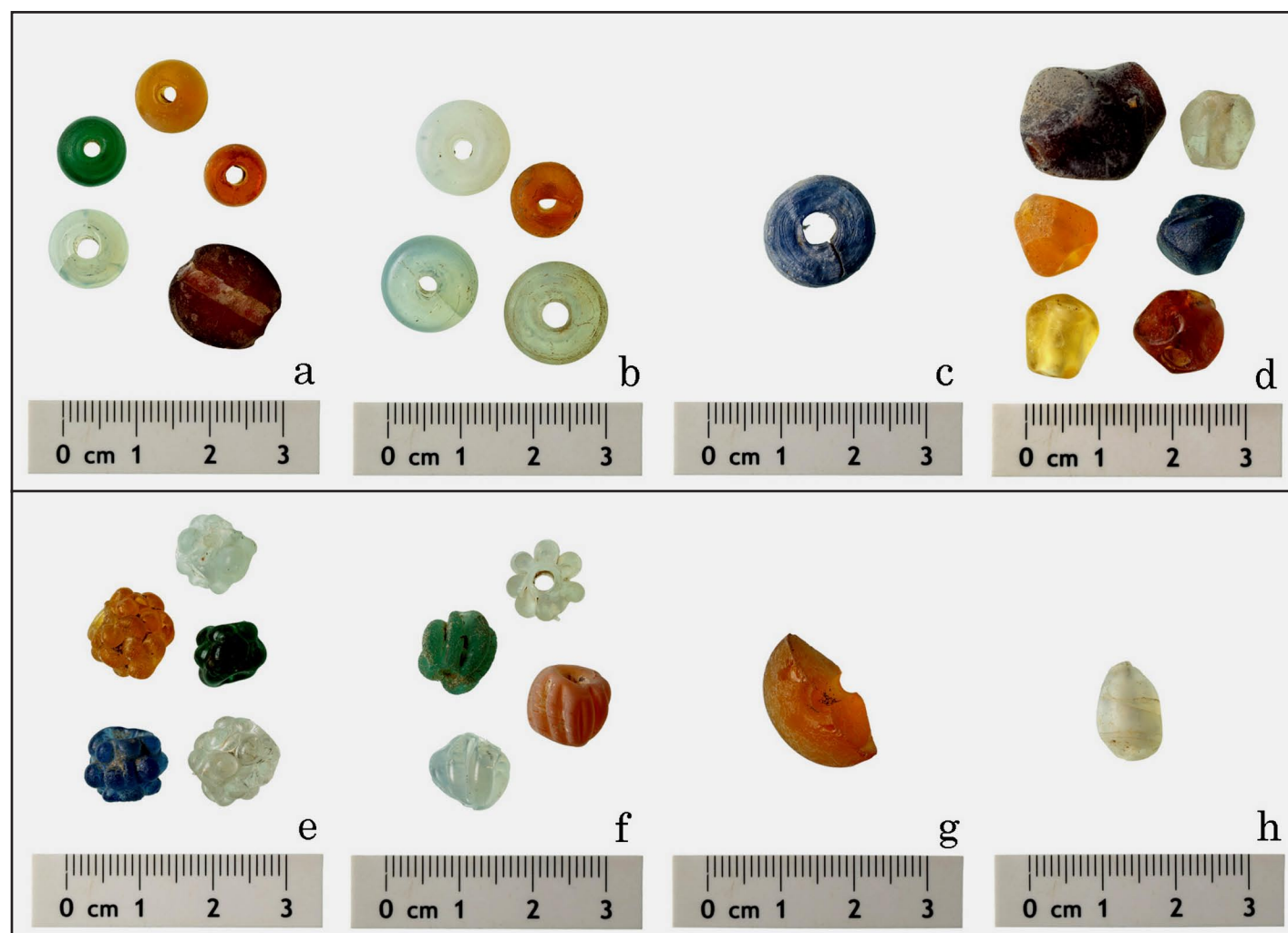


Figure 3. Examples of the Schwarzenberg bead types: a) spherical, b) oblate, c) donut, d) polyhedral (pentagonal faceted), e) raspberry, f) ribbed, g) biconical, and h) oval (photo: Alexandra Bruckböck, Oberösterreichisches Landesmuseum).



Figure 4. Examples of bead production waste (photo: Alexandra Bruckböck, Oberösterreichisches Landesmuseum).

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Society News

Student Conference Travel Award

Three applications were received for the first SBR Student Conference Travel Award. All were from students in the United States and, interestingly, all three dealt with the archaeometric analysis of glass beads. K. Pierce Wright, a graduate student in the Department of Anthropology at The University of Alabama, Tuscaloosa, was chosen as the recipient for his paper on "Beads and Bohr Models: Using XRF to Discuss Choctaw Identity Formation" to be presented at the 84th Annual Meeting of the Society for American Archaeology in Albuquerque, New Mexico, 10-14 April 2019.

Dues will be going up in 2019

In the Spring issue of *The Bead Forum*, we noted the upcoming vote on raising Individual dues from \$20 North America/\$30 Overseas to \$25 North America/\$35 Overseas. The rates for Sustaining (\$45), Patron (\$75), and Benefactor (\$150) would stay the

same. This summer we had that vote, by electronic mail. 81% of the members voted, all in favor, no one opposed. The motion passed.

The following missive from member Phil Fischman expressed the general attitude best:

Aloha Alice, Mark and Karlis,

THANK YOU for all the wonderful work you do and for sustaining this research and this organization.

We not only support the needed increase in dues we will be happy to upgrade our membership to support.

Not only have I been enamored with beads since the age of 15, my love and passion continues to grow a half century later.

In our shop we've dedicated space for a "Museum Room" filled with Native American, African and other tribal artifacts.

There's a local group from the YMCA where children do bead trading...often buying fun beads from our shop.

I like to gift each of them with an old trade bead, showing them on the History of Beads chart where and when it's traveled, to open their minds and expose another generation to these beautiful objects d'art.

Best to you all,

Phil Fischman

Secretary-Treasurer Election

The three year post (2019-2021) of Secretary/Treasurer is up for a vote. Current officer Alice Scherer is running unopposed. Paper ballots are supplied for mailed *Forums* and are sent with the electronic newsletter; responses may also be made via email, which is the preferred method. Write-in votes are allowed. Please respond by December 1, 2018 in order to be counted.



The "Museum Room" from Fischman's shop Beads, Crystals, and More in Encinitas, California.

*Visit us at
www.beadresearch.org
 to renew your
 membership for 2019*

Research Projects

Yazoo River Bead Project (Mississippi)

John Connaway and Marvin T. Smith are analyzing 18th-century bead collections from the upper Yazoo River in Mississippi. The goal is to date as accurately as possible a series of Native American villages in an attempt to understand settlement changes through time. The study will provide as complete an inventory as possible of the beads.

To right: some of the beads being analyzed by Connaway and Smith.



Exhibitions

Beadwork Adorns the World

Museum of International Folk Art
Santa Fe, New Mexico
April 22, 2018 - February 3, 2019

This exhibition cuts across geographic boundaries to examine a single art form – beadwork – as a doorway into the lives of many societies from a wide range

of continents and eras. Each of the 260 objects has a story to tell. Case studies – focusing on the Lakota Sioux nation of the U.S. Plains, to the Ndebele peoples of South Africa, to the Bedouin tribes of historic Palestine, to Iban brides from Borneo, and many more – are the heart of this exhibition. Profiles of living artists working worldwide remind that this art form is still very much alive.



Man's belt, 1881-1921, Romania. Leather, cotton, glass beads, metal. (34-13/16 x 3 15/16 in.; 88.5 x 10 cm.) Museum of International Folk Art; Gift of the Hendershott Family; A.2009.64.2 (photo: Blair Clark)

You can help keep *The Bead Forum* vital
by sending us your news items, short articles, and
interesting tales from the bead world.

Next Deadline: April 1, 2019

Recent Publications

Adams, Jenny L. and Mary F. Ownby

2018 The Manufacture and Burial of Hohokam Disk Beads in the Tucson Basin. *American Antiquity* 83(3):536-551.

Burials in the study area were accompanied by disk beads of stone, shell, and fired clay. This study considers why fired-clay beads were added to the mix and concludes that they were made as acceptable substitutes for stone beads, not for deceptive reasons concerning wealth or status, but rather in imitation of stone to honor a tradition that could not otherwise be efficiently met.

Babalola, Abidemi Babatunde, Thilo Rehren, Akinlolu Ige, and Susan McIntosh

2018 The Glass Making Crucibles from Ile-Ife, SW Nigeria. *Journal of African Archaeology* 16:1-29.

Provides an in-depth examination of numerous crucible fragments recovered from 11th-15th-century deposits in order to understand the quality of the crucibles, their typology, and their functions in glassworking/making. Compositional analysis of a sample of the thousands of glass beads from the excavations indicates that the crucibles were used to melt the glass used for the beads.

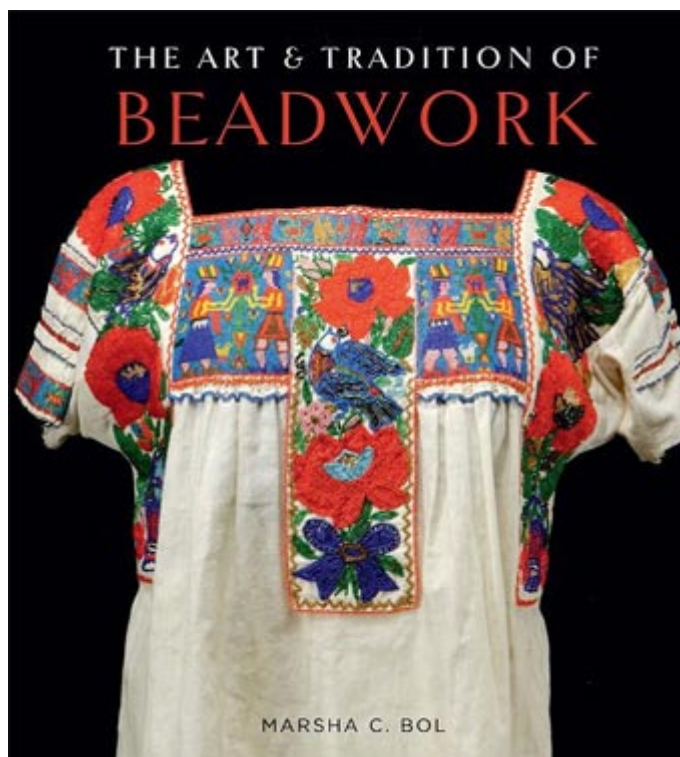
Bol, Marsha C.

2018 *The Art & Tradition of Beadwork*. Gibbs Smith, Layton, Utah.

The ten chapters in this book revolve around life stages and passages, such as birth, becoming an adult, marriage, and death; power, position, or status in the community; or communication with the spirits, drawing upon comparative examples around the world – from 104 different cultural traditions in 52 countries from the 19th-21st centuries.

Carter, Alison Kyra, Barbie Campbell Cole, Quentin Lemasson, and Willemijn van Noord

2018 Tracing the Trade of Heirloom Beads across Zomia: A Preliminary Analysis of Beads from the Upland Regions of Northeast India and Mainland Southeast Asia. In *The Archaeology of Portable Art: Southeast Asian, Pacific, and Australian Perspectives*, edited by Michelle Langley, Mirani Litster, Duncan Wright, and Sally K. May. Routledge, London.



Claassen, Cheryl

2018 The Beads of Indian Knoll. *Southeastern Archaeology*, <https://doi.org/10.1080/0734578X.2018.1471655>

Busyon discs, barrels, rings, and columellas, *Leptoxis* and *Prunum* shell beads, and stone and coal beads from the Webb and Moore excavations at Indian Knoll, Kentucky, are investigated to determine how they were deployed to convey social information during the Archaic period.

Hoffmann, Dirk, Diego E. Angelucci, Valentín Villaverde, Josefina Zapata, and João Zilhão

2018 Symbolic Use of Marine Shells and Mineral Pigments by Iberian Neandertals 115,000 Years Ago. *Science Advances* 4:eaar5255.

Cueva de los Aviones in southeastern Spain) has yielded ochred and perforated marine shells, red and yellow colorants, and shell containers that feature residues of complex pigmentary mixtures. Similar finds from the Middle Stone Age of South Africa have been widely accepted as archaeological proxies for symbolic behavior. It is, therefore, possible that the roots of symbolic material culture may be found among the com-

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mon ancestor of Neandertals and modern humans, more than half-a-million years ago.

Karklins, Karlis

2018 Les perles en verre. In *Guadeloupe, Capesterre-Belle-Eau, Parking de Roseau: Sainte-Marie avant l'arrivée de Christophe Colomb*, edited by Martijn van den Bel, pp. 189-190. Inrap Grand Sud-Ouest, Bègles, France. <https://www.academia.edu/36931240/>

A site on Guadeloupe yielded six glass beads that are attributed to the late 16th - early 17th centuries. The site also produced a cylindrical quartz bead (p. 320).

Keegan, William F., Betsy Carlson, Kelly M. Delancy, and David Hayes

2018 A Crab-Shell Dichotomy Encore: Visualizing Saladoid Shell Tools. *Journal of Caribbean Archaeology* 18:1-33.

Excavation of shell middens at the Main Street site, St. Thomas, U.S. Virgin Islands, uncovered a variety of shell beads and pendants dating to A.D. 300-500.



Langbroek, Mette

2018 Early Medieval Amber Beads in Northern Gaul. In *Rural Riches & Royal Rags? Studies on Medieval and Modern Archaeology, Presented to Frans Theuvs*, edited by Mirjam Kars, Roos van Oosten, Marcus A. Roxburgh, and Arno Verhoeven, pp. 105-109. SPA-Uitgevers, Zwolle.

Using amber beads from the Baltic as a case study, this article demonstrates that Merovingian beads are very useful in the study of early medieval exchange networks.

Martins Torres, Andreia

2018 As mulheres novo-hispanas do Convento da Encarnação (Cidade do México) por meio das suas contas de vidro / Women of New Spain from the Convento de la Encarnación (México

City) through their Glass Beads. *Boletim do Museu Paraense Emílio Goeldi. Ciências Humanas* 13(1):37-68.

On the symbolic significance of glass beads in New Spain based on the archaeological material from Convento de la Encarnación in Mexico City. Concentrates on the role of material culture in constructing the social body of a particular group of women who lived there from the 16th century until the beginning of the 19th century. The beads include gilded-molded varieties. In Spanish.



Ostapkowicz, Joanna

2018 New Wealth from the Old World: Glass, Jet and Mirrors in the Late Fifteenth to Early Sixteenth Century Indigenous Caribbean. In *Gifts, Goods and Money: Comparing Currency and Circulation Systems in Past Societies*, edited by Dirk Brandherm, Elon Heymans, and Daniela Hofmann, pp. 153-193. Archaeopress Publishing, Summertown, Oxford.

Two Taino cotton objects – a belt and a composite sculpture – offer a glimpse into how Old World exotics were reinterpreted and integrated into indigenous value systems during a period of cultural transition and change.



Closeup of Taino mask, from *New Wealth from the Old World*.

Perlès, Catherine

2018 *Ornaments and Other Ambiguous Artifacts from Franchthi: Volume 1, The Palaeolithic and the Mesolithic*. Indiana University Press, Bloomington.

The majority of ornaments recovered from Franchthi Cave in Greece were formed from shell and constitute one of the largest collections in Europe for the temporal periods involved. Analysis of the ornaments has revealed the complete production process. It also suggests that they mostly served for the production or rejuvenation of embroidered garments.

Rigaud, Solange, Claire Manen, and Iñigo García-Martínez de Lagrán

2018 Symbols in Motion: Flexible Cultural Boundaries and the Fast Spread of the Neolithic in the Western Mediterranean. *PLoS ONE* 13(5): e0196488; <https://doi.org/10.1371/journal.pone.0196488>

The analysis of two symbolic productions (pottery decorations and personal ornaments) shed light on the complex interactions developed by Early Neolithic farmers in the western Mediterranean area. Pottery decoration diversity correlates with local processes of

circulation and exchange, resulting in the emergence and the persistence of stylistic and symbolic boundaries between groups, while personal ornaments reflect extensive networks and the high level of mobility of Early Neolithic farmers.

Szabó, Katherine

2018 Enduring Value: Shell Ornaments in the Metal Age of Island Southeast Asia with a Focus on the Southwestern Philippines. In *The Archaeology of Portable Art: Southeast Asian, Pacific, and Australian Perspectives*, edited by Michelle Langley, Mirani Litster, Duncan Wright, and Sally K. May, pp. 37-48. Routledge, London.

Using the collection recovered from Ille Cave in Northern Palawan, the author investigates changes in shell ornament production from the Neolithic to the Metal Age as adornments of other materials – such as glass and metal – enter the region.

Tomlinson, Gary

2018 *Culture and the Course of Human Evolution*. University of Chicago Press, Chicago.

Offers a new model for understanding the emergence of modern Homo sapiens, one based on analysis of advancing human cultures in an evolution that was simultaneously cultural and biological – a biocultural evolution. Beads enter into the discussion.

Wygnańska, Zuzanna and Daniella E. Bar-Yosef Mayer

2018 14. Beads. In *Arcane Interregional. Artefacts*, edited by Marc Lebeau, pp. 283-294. Brepols, Turnhout, Belgium.

Using ARCAN database, this study aims to better our understanding of Early Bronze Age beads as artifacts of economic and exchange networks, technological advances, and symbolic values from a broad region of the Near East, western Iran included. The beads are discussed chronologically and include those of stone, frit/faience, metal, bone, and shell.

**To find other publications related to bead research,
visit the SBR's Researching the World's Beads Bibliography
(<https://beadresearch.org/resources/researching-the-worlds-beads-bibliography/>)**

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 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. Free PDF downloads of articles from Volume 28 of *Beads* are available at our Journal website www.beadresearchjournal.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 April 2019. 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/documents/SHAStyleGuide-Dec2011.pdf>).

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