Over several years working in a bead store, and more recently studying ancient beads from Southeast Asia, I frequently saw beads that had circular or half-moon-shaped marks on their surface (Figure 1). Most of the beads were old, fairly large, and spherical. The source and meaning of these marks have generally puzzled bead scholars. For example, on Kevin Ball’s (2014) website on dZi beads in northern South Asia, he calls them circular aging marks and hypothesizes that they may be due to water in the beads expanding and contracting as they are frozen and thawed while buried underground. In other discussions, I have heard scholars reference them as being related to the bead manufacturing process. The marks are prevalent enough on older or ancient beads so that they are being faked on new dZi beads to make them look aged and that this is done by “running the bead through a special roller” (Ball 2014).

These marks are found on both glass and stone beads, implying the marks are not related to manufacturing. Similar marks have also been reported on glass marbles. Daryl Wesley (2016: pers. comm.) also notes their presence on Australian contact-period flaked-glass artifacts. Furthermore, I’ve seen beads with these marks in Southeast Asia, a place where the beads could not have been frozen and thawed. This leaves a third possibility for the presence of these marks on beads: they are due to wear. It is likely that the marks are the result of someone wearing multiple strands of beads which, perhaps through running, dancing, or other vigorous movements, banged against each other, imparting these small fracture marks.

Upon inquiring at the University of Illinois Urbana-Champaign (UIUC), I asked about this possibility and was directed to Dallas Trinkle, Associate Professor of Materials Science and Engineering at UIUC. Dr. Trinkle replied that the
marks are most likely due to impact from beads hitting one another and that the circular or horseshoe-shaped marks are the result of a particular type of contact known as Hertzian contact. The marks seen on beads are known as Hertzian ring cracks and are produced at lower velocities as a precursor to a Hertzian cone fracture (Lawn 1993:253; see also examples in Ball and McKenzie 1994; Bergner et al. 2007:740; Smail et al. 2007). The Hertzian cone fracture is perhaps the best-known example of Hertzian contact, and is produced when a spherical object, like a pellet from a BB gun, hits a flat pane of glass. Hertzian cone fractures are also well known in the field of lithic analysis and flint knapping (see Andrefsky 2005:25-26).

As an experiment, I took a pair of relatively unblemished marbles and shook them in a small mesh bag for 10 minutes, which produced a few small circular and half-moon marks on the surface. Figure 2 shows an example of a Hertzian ring crack at several different magnifications. You can see the circular mark on the surface of the marble and a fracture that extends below it.

It is hoped that this research note will spur others to investigate this phenomenon further and perhaps perform additional experiments. At the very least, the identification of these marks as resulting from use-wear adds another layer of information to the study of beads in the past. Indeed, these marks may indicate that particular beads were cherished and frequently worn.

Endnote

1. Thanks to Hans van der Storm for providing a link to an example from a similar discussion on the BeadCollector.net discussion board.

References Cited


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Society News

A ballot accompanies this newsletter. Voting instructions are on the ballot. You may vote either by email or by regular mail, but ballots must be received by 1 November to count. Vote now so you don’t forget to do it!

Our New Website

Thanks to the concerted efforts of Media Enterprises of Anaheim, CA, and our indefatigable webmistress Alice Scherer, the new and improved SBR website is now up and running. It is more streamlined than the old site and definitely more eye-catching with the addition of colorful graphics (our gratitude to Thomas Stricker and Barbie Campbell-Cole for providing the images that adorn the page headers). It is hoped that it will attract new members and improve journal sales. Various features will greatly facilitate the payment of membership dues and the purchase of our publications. Give the new site (www.beadresearch.org/) a look and tell your bead-loving friends about it.

More Open Access Journal Articles

The articles from four more journal issues (vols. 14-17) were recently uploaded to the Academia.edu website (https://independent.academia.edu/Karlis-Karklins). This means that all articles from volumes 1-17 can now be accessed by anyone with a computer. Additional articles will be uploaded early in the new year. Volumes 1-6 are also available on the Syracuse University SURFACE site (http://surface.syr.edu/beads/) and many more will be added over the next few months. In addition, the articles in out-of-print vol. 27 are available on the SBR Journal site (http://www.beadresearchjournal.org/). Between these three sites, we are getting our articles out to researchers and

SBR Presidential Election

Stefáný Tomalin’s term as SBR president concludes at the end of December. As she has decided not to run for re-election, the Nominations and Elections Committee (Karklins, Scherer, and Tomalin) has been busy seeking a new candidate and is very happy to announce that Dr. J. Mark Kenoyer (above) of the Department of Anthropology, University of Wisconsin-Madison, has agreed to stand for election.

Dr. Kenoyer is widely known for his long-term interest in the archaeology of the Indus Civilization and has been involved in excavations at the ancient site of Harappa in Pakistan since 1986. He has also been involved in various projects in India and elsewhere. One of his principal interests is ancient bead technology and he has studied the beads, primarily of stone, produced at many sites in Asia, the Middle East, and Europe. He has authored a wealth of books and articles, including a children’s coloring book dealing with Indus cities. For additional information visit: <http://www.anthropology.wisc.edu/people/j-mark-kenoyer/>.
bead aficionados around the world. In return, we hope that this will spur researchers to submit articles for the journal, as well as the newsletter.

A Thank You to the Membership

This year marks the 35th anniversary of the Society of Bead Researchers. That we have made it this far is due in large part to the continuing support – both material and moral – of our members, some of whom have been with us since the beginning. Those listed below have formed the backbone of the Society for 20 or more years. Some missed a few years here and there but generally always got their dues paid on time. We thank them as well as all those who are new or relatively new members. Without their help, and all the individuals who submitted articles to our publications, we couldn’t have made it to 35 years.

Members for 30+ Years
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Gretchen E. Dunn
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Smithsonian Institution
Torben Sode
Marilee Wood

Another Thank You to Those Who Paid More for Their Membership This Year

As always, we are deeply grateful to our members who pay greater than required for their annual memberships. Those who gave more include Gretchen Dunn, Deborah Zinn, Laura Prusoff, the Bead Society of Greater Washington, Joan Eppen, Carrie Swerbinski, Michele Owsey, Hilary Whittaker, Harley Glesby, Pavanni Ratnagopal, Barbara Pringle, Sindi Schloss, Gregory Waselkov, Karen King, Penelope Drooker, Cynthia Hinds, and Kari Lucas. Thank you, one and all!

Two Unusual Drawn-Glass Bead Varieties from Quebec
Karlis Karklins, Érik Langevin, and Adelphine Bonneau

The archaeological excavation of two aboriginal sites in the vicinity of Lac Saint-Jean, Quebec, revealed two drawn glass bead varieties with unusual decoration – unusual in that the decorative elements are in the form of a glaze as opposed to glass appliques.

The first of these was found at site DbEl9b located on the north shore of the Saguenay River near Rivière-Sainte-Marguerite, ca. 160 km east-southeast of Lac Saint-Jean and 25 km west of Tadoussac. It consists of a round opaque black bead with an irregular white ring around the middle (Figures 1 and 2). The six recovered specimens are 4.3-6.1 mm long and 6.1-6.6 mm in diameter. The perforations are 1.1-1.5 mm in diameter. The beads were found with artifacts which appear to date from the late 17th and 18th centuries, though the site was utilized until the 19th century and there was some light disturbance to the site close to where the beads were found due to the presence of a sawmill (Langevin et al. 2002a, 2004b).
The second variety was encountered at site DeEp5b, also on the north shore of the Saguenay River, within the boundaries of Anse-à-la-Croix, ca. 100 km east-southeast of Lac Saint-Jean and 75 km west of Tadoussac. Represented by two specimens, it also has an opaque black body that is adorned with three irregular white dots around the middle (Figures 3 and 4). The beads are 5.5-6.4 mm long and 7.4-9.3 mm in diameter with perforations that are 1.6-2.4 mm in diameter. These beads were found with very early artifacts, possibly dating to the 16th century, as well as some lithic artifacts which suggest the presence of Algonkian people. An opal wound bead (Kidd variety W1c2/3) was found in association with them (Langevin et al. 2002b, 2004a).

Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS) analysis reveals the beads are composed of soda-lime glass. The black glass is colored with manganese; the white glaze is opacified with tin. While the black glass of the two types is essentially identical as far as the major constituents are concerned, they differ slightly in the concentrations of trace elements. This suggests that while the glass for the two bead varieties was produced using the same recipe, the components may have come from different sources or the two varieties were made at different times or in different workshops.

To create these varieties, drawn heat-rounded beads, likely strung on a wire, had a white glaze applied to them, apparently with a brush. They were then placed in a kiln or oven to fuse the glaze. This sort of glaze decoration has been noted on beads and buttons produced in the Fichtelgebirge region of Bavaria, centering on the 17th century (Karklins 2014: pers. obs.). There, however, the beads were furnace wound and not drawn.

A similar white glaze also occurs on so-called frit-core beads found at a number of archaeological sites in northeastern North America which were occupied during the latter part of the 16th and very early 17th centuries (Loewen 2016:275-277). These are believed to have been produced in France (Turgeon 2001:63), and it is quite possible that the Quebec specimens originated there as well as no other source has been found so far.

The only correlatives to these bead varieties so far were excavated at a Spanish Franciscan mission site on St. Catherines Island, Georgia, which was occupied during the late 16th and 17th centuries. The two recovered specimens (Type 59) are round and both have the white ring around the middle and are 6.6-6.9 mm in diameter and 6.2 mm in length. Like the Quebec specimens, they are colored with manganese (Blair, Pendleton, and Francis 2009:43).

Comparing the proposed occupation dates of the sites involved, it seems that these beads are attributable to the 16th-17th centuries. It is hoped that this range can be refined as more of these distinctive beads are recorded. If you have encountered these bead varieties in your excavations or know of sites that have anywhere in the world, please contact the senior author. Please
also contact him if you would like the compositional data from the LA-ICP-MS analysis of the beads.

Acknowledgements

We would like to thank Bernard Gratuze, Institut de Recherche sur les Archéomatériaux, Centre Ernest Babelon - UMR 5060, Orléans, France, for conducting the LA-ICP-MS analysis.

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Loewen, Brad

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The Earliest European Bead in North America

Karlis Karklins

Located at the tip of the Great Northern Peninsula of Newfoundland, the site of L’Anse aux Meadows represents the first European settlement in the New World. Occupied briefly during the 11th century, it served as a base where Norse ships were overhauled and repaired prior to returning to Iceland. Archaeological investigation in the 1960s and 1970s uncovered a number of Viking artifacts including a bronze ringed pin, a bone needle, a small whetstone, a soapstone spindle whorl, and numerous iron nails and rivets connected with boat building (Parks Canada 2015). Of the greatest interest to bead researchers, however, is the single glass bead that was found under the collapsed east wall of House D. Since it is now lost and the references to it are few and fairly obscure, it deserves to be resurrected.

It is described as a spherical, clear-glass bead 10 mm in diameter with a ca. 1.5 mm perforation (Lindsay 1975:27; Schonback 1974:3). Though not mentioned, the one existing photograph (Figure 1) suggests it is likely of wound manufacture. Lindsay (1975:27) goes on to say that “this bead is of a type common throughout the Viking period. Similar examples are known from Viking period graves in Scandinavia, e.g., Birká burial 854 (Arbman 1940, Plate 118).” The bead was “stratigraphically well associated with the Norse settlement and it would be hard to explain it as a trade bead of later date” (Schonback 1974:3).

Likely the property of one of the inhabitants rather than an item of trade, the Norse bead from L’Anse aux Meadows remains – unfortunately only in the form of some notes and a photograph – the earliest known bead of European origin in the New World.

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An Introduction to the Beijing Bead Museum and Library

The Beijing Bead Museum and Library (BBM) was founded early in 2015 by Mr. Walker Qin who has been collecting beads and conducting research on them for ten years. In his quest for knowledge, he has visited around 100 museums in more than 60 countries.

The BBM is the first such museum to be established in China and interprets ancient world cultures through a study of beads, as well as other ornaments and objects. The BBM holds about 4,000 beads from around the world and from various time periods (Figures 1-2). It also has a varied collection of ancient stamps and seals. The museum organizes periodic seminars and lectures to share knowledge with researchers and the interested public (Figure 3).

The library contains about 600 books and magazines that deal with beads of all forms and regions, as well as stamps and seals, ancient Chinese jade, glass, jewelry, coins, porcelain, religion, and myth. The li-
The Beijing Bead Museum and Library, 1-C-505, Beautiful Oriental Garden, No. 38, Songyu Nan Road, Chaoyang District, Beijing 100020, P.R. China.

Mr. Walker Qin
chunleiqin@hotmail.com

Figure 1. Part of the exhibit and lab space at the Beijing Bead Museum (photos: Walker Qin).

Library is one of the best in China as regards ancient art of different cultures.

Both researchers and amateurs are invited to visit the BBM and to become members and/or donors. The museum has about 40 paid and honorary members in a number of countries. Dr. Robert Liu is an honorable member and advisor. The BBM needs more members to help finance the museum and library. Donations of beads and other relevant items are also welcome.

Mystery Bead from the Historic Jamestown Settlement

Karlis Karklins and Merry Outlaw

Occasionally, one encounters a bead like no other. This is certainly the case with the unusual bead illustrated on the next page (Figure 1). It was excavated at historic Jamestown which was founded in 1607 on the James River in what is now eastern Virginia by Capt. John Smith. Unfortunately, it was recovered from soil disturbed by the construction of a Confederate earthworks in 1862, so it is not clear if the bead is associated with the historic occupation of the site or a later period.

The bead is oval in form and measures 20.7 mm x 13.8 mm. It is composed of black glass and appears to have had three longitudinal rows of small circular black glass discs applied to the core. White glass dots ring either end of the perforation and two rings of dots also appear to have encircled the body originally.

How (and why) this complicated bead was made remains a mystery. Researchers initially thought this might be a frit-core bead but it seems to lack the sintered core and the dots are white glass whereas typical frit-core beads are decorated with white glaze. Is this then a wound bead that has had rows of circular discs applied to its surface with the further addition of white glaze?
dots? This seems very labor-intensive for such a small product when there are easier ways of making black beads with white dots.

If anyone has encountered a similar bead or has thoughts about the technology involved in their production, please contact karlis4444@gmail.com.

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The Bead Forum

Recent Publications

Alarashi, Hala
The study of butterfly beads, which first appeared during the 10th millennium cal. B.C., covers an important span of the Neolithization process and gives new insights on the symbolic and socio-economic systems of the first farming communities in the Near East.

Carter, Alison Kyra, Shinu Anna Abraham, and Gwendolyn O. Kelly
Vol. 6 of *Archaeological Research in Asia* is a special issue focused on updating Peter Francis, Jr.’s, book *Asia’s Maritime Bead Trade*. It contains six papers that deal with Indo-Pacific beads in Central and Southeast Asia, Africa, the Middle East, and Europe. The introduction offers a brief background on Francis’ book and the motivation for putting together this special issue.

Coupland, Gary, David Bilton, Terence Clark, Jerome S. Cybulski, Gay Frederick, Alyson Holland, Bryn Letham, and Gretchen Williams
Argues that shell and stone disc beads constituted an important form of material wealth ca. 4000-3500 B.P., based on the amount of labor that would have been required to produce them and the capacity for beads to accrue in value after their production.

Dussubieux, Laure and Thomas Oliver Pryce
Presents a regionally-original combination of elemental and isotopic analyses from glass and copper-base metal grave goods (including glass beads) excavated at a series of Iron Age cemeteries in the Samon Valley of central Myanmar.

Gamble, Lynn H.
2016 The Entangled Life of Shell Beads in North America. In *The Archaeology of Money: Proceedings of the Workshop ‘Archaeology of Money’*, University of Tübingen, October 2013,
Autumn 2016

The manner in which shell beads in North America were used and their distribution provide important insights into exchange networks, the emergence of status and political complexity, symbolism, and culture contact.

Kabiru, Angela W.
An overview of the subject from the prehistoric period to the present day.

Koleini, Farahnaz, Linda C. Prinsloo, Wim M. Biemond, Philippe Colomban, Anh-Tu Ngo, Jan C.A. Boeyens, and Maria M. van der Ryst
2015 Towards Refining the Classification of Glass Trade Beads Imported into Southern Africa from the 8th to the 16th Century AD. *Journal of Cultural Heritage* 16(2):159-172.
Glass trade beads excavated at 11 sites along the upper reaches of the Limpopo River in Botswana are visually classified according to their morphological properties (color, size, etc.) and analyzed with Raman spectroscopy and portable X-ray fluorescence (XRF). Energy Dispersive Spectroscopy (EDS) of one bead shows that two types of glass were sintered together to form a recycled product.

Kostov, Ruslan I.
Discusses a possible prehistoric weight and length unit system for beads and other objects based on Fibonacci sequence numbers and/or common multiples.

Loewen, Brad and Claude Chapdelaine (eds.)
This volume deals with European/aboriginal contact, principally during the 16th century, in the vast Saint Lawrence watershed extending from Lake Ontario to the Atlantic. Eight of the 12 chapters deal with beads (glass, frit-cored/faience, jet, steatite, and shell) to some degree.

Then-Obłuska, Joanna and Laure Dussubieux
Reports on an interdisciplinary study of 35 beads found mostly at Quseir port sites in Egypt; Roman Myos Hormos (1st-3rd c. A.D.) and Late Ayyubid-Mamluk Quseir el-Qadim (13th-14th c. A.D.) periods.

Tuncer Manzakoğlu, Bilgen and Saliha Türkmenoğlu Berkan
Investigates the role of culture, geography, and history in the myth of the evil eye bead in Turkey.

Wright, Duncan, Michelle C. Langley, Sally K. May, Iain G. Johnston, and Lindy Allen
Detailed morphometric and use wear analysis is presented for a group of painted shark vertebrae beads, alongside Aboriginal oral traditions, and assessment of similar artifacts held in museum collections across Australia.

More recent publications may be found in *Researching the World’s Beads: An Annotated Bibliography* (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 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 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 27 of *Beads* are available at our Journal website www.beadresearchjournal.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 1 April 2017. 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).

Send electronic or paper submissions to the *Forum* editor:

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

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