AFRICA

This section of the bibliography encompasses the entire continent of Africa with the exception of Egypt which is included in the Middle East. Also included are islands off the east and west coast of Africa such as St. Helena and the Canary Islands. See also the two specialized theme bibliographies and the General/Miscellaneous bibliography as they also contain reports dealing with these countries.

Abungu, L.

Adeduntan, J.
1985 Early Glass Bead Technology of Ile-Ife. West African Journal of Archaeology 15: 165-171. Nineteen whole beads and twenty-eight fragments were collected from the Ayelabowo site near Ile-Ife, Nigeria. The beads are discussed insofar as they serve as a basis for reconstructing and dating glass bead technology at Ile-Ife.

Agorsah, E. Kofi

Ajetunmobi, R.O.


Alarashi, Hala
Discusses the recovered shell, stone, and ostrich-eggshell beads.

Allen, Jamey D.
Considers that some Kiffa beads, although made by different techniques, are virtual copies of prototypes ranging from ancient imports from the Near and Middle East to relatively modern trade beads.
Mauritania.

Alpern, Stanley
Presents an annotated list of European trade goods traded on the Guinea coast of West Africa from Portuguese times to the mid-19th century. Included is a section on Beads, Coral, and Cowries.

Ambrose, S.H.
The Enkapune Ya Muto rockshelter in the central Rift Valley of Kenya contains the oldest known archaeological horizons spanning the transition from the Middle to the Later Stone Age in East Africa. Evidence reveals that the Later Stone Age began substantially earlier than 46,000 years ago, and that ostrich eggshell beads were being made by 40,000 years ago. Early dates for the LSA and the beads may have implications for the origin and dispersal of modern human behaviour and modern humans out of Africa. Extensive bibliography.

Antonitesa, Alexander
Analysis of the Mutamba bead assemblage suggests that most of the beads form part of the late-12th- to mid-13th-century Mapungubwe Oblate Series.

Arnay de la Rosa, Matilde and Ana Rosa Pérez Álvarez

Assefa, Zelalem, Y. M. Lam, and Henk K. Mienis
Hundreds of opercula of the snail *Revoilia guillainopsis* have been found in the cave, each with a central perforation. Although they resemble disk beads, microscopic examination could not unequivocally confirm their use as such.

**Avotri, N.V.K.**
Assesses the role of beads in the contemporary social, cultural, religious, economic, and political life of the Krobo and the way forward for the bead culture and industry within the context of Globalization.

**Babalola, Abidemi Babatunde**
Describes the deposits (12th-15th centuries) and the recovered materials in significant detail, establishing a basic framework for future comparative and analytic research at the site. Using chemical and physical analyses of the glass beads and glass production debris, the competing hypotheses of local primary glass production or re-melting of imported glass to create beads are explored in detail.

Drawing from archaeological and historical evidence from Ile-Ife, in tandem with the result of compositional analysis, this article examines the first recognized indigenous Sub-Saharan African glass technology dated to early 2nd millennium AD or earlier.

**Babalola, Abidemi Babatunde, Susan Keech McIntosh, Laure Dussubieux, and Thilo Rehren**
The recovery of glass beads and associated production materials from a site in Nigeria has enabled compositional analysis of the artifacts and preliminary dating of the site, which puts the main timing of glassworking between the 11th and 15th centuries AD.

**Babalola, Abidemi and Thilo Rehren**
https://www.researchgate.net/publication/306017012
Presents the results of the classification, macro/microstructural, and compositional analyses carried out on glass-working and possibly glassmaking crucibles excavated at Igbo Olokun, Ile-Ife. Drawn-bead production waste was also recovered.

**Babalola, Abidemi Babatunde, Thilo Rehren, Akinlolu Ige, and Susan McIntosh**
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.
Bandama, Foreman

Despite the title, this thesis also deals with the beads of glass, mollusc shell, ostrich eggshell, and bone recovered from two sites: Rhenosterkloof 1 and Tembi 1. The glass specimens are attributed to the Khami Series (14th-17th centuries). Compositional analysis is included.

Bandama, Foreman, Shadreck Chirikure, Simon Hall, and Christel Tinguely

Reports on 25 glass beads dating to the 15th-19th centuries recovered from two sites (Smelterskop and Rhenosterkloof 1).

Bashir, Mahmoud S.

Beads of stone, faience, and glass were recovered from 14 tombs at a site in Nubia (Sudan). Included are gold-in-glass beads with a net pattern on one side and a figural motif of Hippocrates on the other.

Berthier, Sophie

Investigation of the settlement area at the medieval town of Koumbi Saleh, southeastern Mauritania, yielded stone and terracotta beads, as well as those of glass.

Beyin, Amanuel

Large quantities of lithic tools were found in association with mollusc shells and ostrich eggshell beads. It is unclear if all the tools were required for bead and mollusc shell processing, so microfracture damage traces were recorded in order to infer the use-material and the manner in which the artifacts were used.

Bicho, Nuno, João Cascalheira, Lino André, and Jonathan Haws

Two ostrich eggshell beads are the first of their type recovered from a Stone Age context in Mozambique.

Biginagwa, Thomas John
Discusses the glass and shell beads recovered from sites at Ngombezi, Old Korogwe, and Kwa Sigi.

Biittner, K.M., E.A. Sawchuk, J.M. Miller, J.J. Werner, P.M. Bushozi, and P.R. Willoughby  
Direct dates on *Achatina*-shell and ostrich-eggshell (OES) beads suggest that the earliest occupation levels excavated at Mlambalasi, which are associated with human burials, are terminal Pleistocene in age.

Biton, Marlene  
A discussion and analysis of the collection of African beads collected by E.G. Waterlot, now held by the Musée de l’Homme, Paris. Materials include glass, stone, ceramic, ivory, and lead.

Bocoum, H. and S.K. McIntosh  
2002 *Excavations at Sinçu Bara, Middle Senegal Valley (Senegal).* Institut Fondamental d’Afrique Noire, Dakar.  
Stone and terra cotta beads.

Bonneau, Adelphine  
Investigates the beads recovered from four pirate shipwrecks: the *Queen Anne’s Revenge* (North Carolina), the *Whydah Gally* (Massachusetts), the *Speaker* (Mauritius), and the *Fiery Dragon* (Madagascar).

Bonnet, C.  
Faience beads decorate a young Nubian archer’s loincloth, Sudan.

Botha, Rudolf  
It has been inferred that humans had “fully syntactical language” as early as 75,000 years ago based on the properties of a number of Middle Stone Age (MSA) shell beads excavated at Blombos Cave in South Africa. This article challenges some of the inferential steps that led to this conclusion.

The first appearance of explicitly symbolic objects in the archaeological record marks a fundamental stage in the emergence of modern social behavior in *Homo*. Ornaments such as shell beads represent some of the earliest objects of this kind. Examples of perforated *Nassarius gibbosulus* shell beads from Grotte des Pigeons (Tafaralt, Morocco) come from archaeological levels dated by luminescence and uranium-series techniques to \( \approx 82,000 \) years ago.

**Brakel, Koos van**


The J.F. Sick & Co. collection contains 197 sample cards displaying 22,000 beads as well as a 50-page color catalog. This book documents and illustrates the collection. The sample cards are assigned to four chronological groups: 1) 1910-1913 (cards 1-68); 2) 1920-1929 (cards 69-150); 3) 1930-1939 (cards 151-181); and 1948 onwards (cards 182-188). Some of these are illustrated in the book. The rest are on an accompanying DVD. They show the wide range of fancy and millefiori/mosaic glass beads that poured into West Africa during the first half of the 20th century, including various rosetta or chevron beads.

**Bredwah-Mensah, Yaw**


Describes the modern industry in greater detail than the 1945 article by Thurstan Shaw.

**Brent, Michel**


Reveals how European dealers and collectors continue to plunder the heritage (this includes ancient beads) of one of the world’s poorest nations. Irreplaceable archaeological information is being destroyed at an alarming rate.

**Buratti, Mathilde**


Centered on Cameroon, this thesis presents a three-part study of beads in Africa: history, uses, and symbolism.

**Busch, Jürgen**


Reports the sad news that the disastrous drought in West Africa has caused the cessation of Kiffa beadmaking in Mauritania.

**Bvoko, Godhi**


Examines archaeological ornaments as chronological indicators and communication devices. The period covered ranges from the 8th-18th centuries AD. In addition, the study attempts to contribute to filling the spatial gap between the well-researched areas of Mapungubwe to the south and Great Zimbabwe to the north of the Limpopo.
Calegari, Giulio
2011 Le perle preistoriche in calcedonio rosso e in quarzo da Taouardei, Mali.
On prehistoric beads of red chalcedony and of quartz recovered at Taouardei, Mali. Well illustrated in color.

Carey, Margret

See Opper and Opper (1991) for a review.


Chavane, Bruno A.
Archaeological research at the ancient villages of Tekrour, Senegal, yielded stone and terra cotta beads.
Chirapa, J.

Christie, Annalisa C., Alastair Grant, and Anne Haour
In order to accurately determine their significance in a regional and chronological framework, this article proposes a set of standardized criteria and a coding system for recording cowrie assemblages – in particular, species, size, condition, and state of modification.

Cissé, M., S.K. McIntosh, L. Dussubieux, T. Fenn, D., Gallagher, and A. Chipps Smith
This site in Mali yielded 800 glass beads, mainly from the 8th-10th centuries contexts, as well as what appears to be bead manufacturing debris. Several carnelian beads and cowries were also found. A discussion of the chemical composition of the glass specimens is provided.

Clist, Bernard, E. Cranshof, G.-M. de Schryver, D. Herremans, K. Karklins, I. Matonda, C. Polet, A. Sengelov, F. Steyaert, C. Verhaeghe, and K. Bostoen
At the burial site of Kindoki, linked with the former capital of Kongo’s Nsundi province, a great number of shell and glass beads were found together with symbols of power in tombs attributed to the first half of the 19th century. A more detailed description is presented in Verhaeghe (2014).

Cohen, David Reed
Addresses the cultural dynamics of contact and the changing social landscapes between San-speaking foragers and ancestral Bakgalagadi farmers who lived in the Metsemothlabo River valley of southeastern Botswana on the fringe of the Kgalagadi Desert, c. 500-200 years ago. Beads of glass and ostrich eggshell enter into the discussion.

Cole, Franca
Some of the burials were accompanied by beads of ostrich eggshell, stone, faience, and glass. Several cowries were also recovered. Libya.

Connah, Graham
A unique hoard of 622 carnelian and quartz beads believed to date to the 1st or 2nd millennium AD. which offers evidence for trading contacts between the Chad region and outside areas. It highlights the need for a corpus of firmly dated material in West African archaeology.
Cook, Gregory D.
Discusses the large number of glass beads recovered from the wreck of what appears to be a Dutch West India Company vessel that sank off Elmina in the mid-17th century. A thorough analysis is presented in Hopwood (2009).

Croucher, Sarah K.
Contains a section on Trade Beads (pp. 188-192).

Crowther, Alison, Mark Horton, Anna Kotarba-Morleya, Mary Prendergast, Eréndira Quintana Morales, Marilee Wood, Ceri Shipton, Dorian Q. Fuller, Ruth Tibesasa, William Mills, and Nicole Boivin
http://dx.doi.org/10.1080/0067270X.2013.878104
The recovered beads include those made of glass, shell, and stone.

Dapschauskas, Rimtautas
Discusses empirical evidence for the intentional use of personal ornaments by early Homo sapiens and interprets the finds in the context of theoretical reflections on symbolic communication. The analysis draws on a combination of theories, concluding that an expansion of human cognitive capacities to communicate symbolically probably occurred in Homo sapiens during the Middle Stone Age in Southern Africa, as well as the Middle Paleolithic of Northern Africa and the Levant.

Dayet, Laure, Rudolph Erasmus, Aurore Val, Léa Feyfant, Guillaume Porraz
The ostrich-eggshell, giant land-snail, and marine-shell beads recovered from the site were subjected to a technological and use-wear study with chemical analyses (SEM-EDS and Raman analyses) of the colored residues they bear.

DeCorse, Christopher R.
Drawing primarily on data obtained from excavations at Elmina, Ghana, this report examines the potential use of beads as temporal markers in West African archaeology.


Discusses the local production of shell, stone, gold, and glass beads (the latter being made from the early 18th century through the 19th century), as well as the polishing and modification of European glass beads (pp. 135-138). Ghana, West Africa.


**DeCorse, C.R., F.G. Richard, and I. Thiaw**
An analysis of 474 beads from 25 sites, all from the post-European contact period. Analytical descriptions are tabulated under 10 headings.

**Delarozière, Marie-Françoise**
Surveys the beads used in Mauritania and several other North African nations from the prehistoric period to the present day. Illustrated with color drawings and photographs. See Oppé (1994) for a review.

**Dempf, Martina**
Discusses the use of beads as adornment in East Africa with specific examples from the Toposa of the Southern Sudan, the Turkana of Kenya, and the Rashaida of Eritrea.

**Denbow, James, Carla Klehm, and Laure Dussubieux**
Using compositional analysis of glass beads from an Iron Age site in the central Kalahari Desert, Botswana, the authors argue that the site exemplifies the role of heterarchy and indigenous agency in the evolving political economy of the subcontinent.

**d’Errico, F. and L. Backwell**
An infant burial from Border Cave in northern KwaZulu-Natal, found with a, intentionally perforated *Conus* shell in a pit excavated in Howiesons Poort (HP) layers dated to 74 ± 4 BP, is considered the oldest instance of modern human burial in Africa, and the earliest example of a deceased human interred with a personal ornament.
d’Errico, Francesco, Lucinda Backwell, Paola Villa, Ilaria Degano, Jeannette J. Lucejko, Marion K. Bamford, Thomas F. G. Higham, Maria Perla Colombini, and Peter B. Beaumont
Ornaments include marine-shell beads and ostrich eggshell beads, directly dated to ~42,000 BP.

d’Errico, F., C. Henshilwood, M. Vanhaeren, and K. van Niekerk
Describes 41 marine tick shell beads recovered from Middle Stone Age and Later Stone Age levels at Blombos Cave and the Die Kelders site, South Africa. Morphometric, taphonomic, and microscopic analysis of modern assemblages of tick shell demonstrate that the presence of perforated N. kraussianus shells in the Blombos levels cannot be due to natural processes or accidental transport by humans.

Recent investigations into the origins of symbolism indicate that personal ornaments in the form of perforated marine-shell beads were used in the Near East, North Africa, and Sub-Saharan Africa at least 35 ka earlier than any personal ornaments in Europe. Together with other evidence, personal ornaments are used to support an early emergence of behavioral modernity in Africa, associated with the origin of our species and significantly predating the timing for its dispersal out of Africa.

d’Errico, Francesco, Marian Vanhaeren, and Lyn Wadley
Presents the archaeological context and taphonomic analysis of six Afrolittorina africana shells, three of which bear perforations, from the Still Bay and Howiesons Poort layers of this site. If confirmed by future discoveries, these shells would corroborate the use of personal ornaments by Still Bay populations.

Dewar, Genevieve I.
The beads recovered from nine open-air sites include those of marine shell and bone, but are predominantly made of ostrich eggshell.

Dewar, Genevieve I. and Brian A. Stewart
A Middle Stone Age site in Namaqualand yielded a a complete bone bead and two burned ostrich-eggshell bead preforms/rough outs.
**Donley-Reid, Linda W.**  
This ethno-archaeological case study presents an emic view of the meaning of Swahili artifacts, specifically porcelain, beads, and pottery.

**DuBroc, Beau Richard**  
Concentrates on the ostrich eggshell beads recovered in practically every level of this site occupied continuously for almost 1,000 years.

**Duhard, J.-P.**  
On the ancient stone beads found at Korogoussi, Nigeria.

**Edwards, David N.**  
Includes material on glass beads, including mosaic types.

**Ehrlich, Martha J.**  
Discusses and illustrates the gold beads and other ornaments of West African origin that were found on the wreck of the *Whydah*, a pirate ship that sank off Cape Cod, Massachusetts, in 1716.

**Eiwanger, Josef**  
Excavations, various periods, in the Rif region of Morocco. See p. 80, fig. 5, for ostrich eggshell disc beads of the 7th century BC.

**Eluyemi, Omotoso**  

Provides a partial inventory of the Olokun beads and discusses their composition and dating. The contemporary fabrication of drawn and rolled beads in Ille-Ife, Nigeria, which uses crushed glass, is also discussed.

**Euba, O.**  
Attempts to throw more light on the Ife connection in the kori (also known as akori and aggrey) trade by examining the origin, uses, manufacture, and trading of Yoruba sacred beads, thereby showing that the name kori almost certainly referred to particular varieties of glass beads made in Ife, Nigeria.

Falabella, Rosanna
This article delves into the early industrial history of phenol-formaldehyde thermosetting resins and their use in the production of imitation amber beads with emphasis on those traded into Africa.

Farcy, Henri
A general discussion of glass trade beads in Zanzibar and central Africa from around 1850 to 1925.

Faria, Rina
From preliminary analyses, it has been established that the earliest bead series belongs to the Leopard’s Kopje Phases I and II (1000-1200), followed by the Mapungubwe series (1240-1300).

Presents an analysis of the wound and drawn glass beads recovered from a site in South Africa, including comparisons with the beads from nearby contemporary sites.

Fernandez, V.M.
Beads from a ca. 18th-century-BC cemetery in Nubian Sudan (pp. 296, 313-315, 320, fig. 13). Summary in English.

Flexner, J.L., J.B. Fleisher, and A. LaViolette
Discarded potsherds or stone cobbles with long grooves abraded into their surfaces are some of the most common artifacts on late 1st-millennium AD coastal sites and are believed to have been utilized to form shell beads. Examination of a large assemblage of grinders from Tumbe suggests that production was unstandardized and decentralized, carried on in individual households.

Francis, Peter, Jr.
Principally about the Ghanian bead market in Accra run by and for women. Beads are ground to make them fit together more snugly or “cooked” to make them opaque.

Study of the origin, trade, and use of beads in Ghana, especially glass, with sections on powder-glass beadmaking and examinations of famous beads including the Aggrey and Bodom; 4 pages of color plates. See DeCorse (1993) for a review.

Describes the equipment and procedures necessary for the manufacture of bead-decorated glass armlets in Ghana in the late 19th century (extracted from Travels and Life in Ashanti and Jaman, 1898).

Reports on ostrich eggshell beads from an ancient fortress in northern Sudan which dates to the Napatan phase (ca. 750-350 BC) of the Kingdom of Kush.

Wide-ranging illustrated account of French field work in the Sudan. Beads mentioned passim, Neolithic to Meroitic.

At Juffure on the Gambia River, West Africa, bead attributes such as shape, color, and size inform the analyst of how change in the demand for and availability of beads was tied to changing local notions of taste and value.

Beads are mentioned throughout the report but the principal analysis occurs in Appendix G.
While detailed descriptions are lacking, basic information regarding the beads recovered from several Garamantian (ca. 500 BC-ca. AD 500) cemeteries in southwestern Libya is provided along with a few tantalizing images. Some of the beads comprised necklaces and belts.

Gott, Suzanne
The emblems are pectoral gold ornaments, of paired discs in the form of stylized breasts, hanging from a massive chain of gold ornaments, and Venetian and bodom beads. They are rare in museum collections, and were in use from the 17th century, worn by women in the royal court or royal family. Ghana, Ivory Coast.

Discusses the various beadmaking traditions in modern Ghana.

Graham, Lloyd D.
Presents a detailed discussion of a set of hollow bronze rhomboid objects that are likely fertility amulets generally attributable to the 17th-18th centuries.

Gratien, Brigitte
Strategically important site on a Nile island in the Sudan with beads of various materials and periods (pp. 367-376); analysis by x-ray diffraction (pp. 452-455).

Gronenborn, Detlef
Attempts to discern the source of the 14th-16th-centuries carnelian and glass beads found at the site.

Guerrero, Saul
The competition within the slave trade during the 18th century forced slave traders to search for an assortment of barter cargo that would attract the preferential attention of the African suppliers of slaves. An enterprising group of Liverpool slave traders that formed William Davenport & Co. rose to the occasion and in three years became the supplier of half of all the glass beads re-exported to Africa from England.
Gupta, Sunil

Gurstelle, Andrew W.
An archaeological survey of sites within the Shabe kingdom of the Republic of Bénin recovered relatively few beads. These are composed of coarse earthenware, stone, shell, ivory, and glass.

Gutherz, Xavier, Josephine Lesur, Jessie Cauliez, Vincent Charpentier, Amélie Diaz, Mohamed Omar Ismaël, Jean-Michel Pène, Dominique Sordoillet, and Antoine Zazzo
Numerous ornaments were surface-collected at the site including ostrich eggshell beads at different stages of production as well as shells from the Red Sea and the Indian Ocean with perforations that suggest use as pendants or beads.

Gutierrez, Manuel
The excavation of the necropolis of Kapanda in Angola produced cowries and glass beads (including ground chevrons).

Glass beads recovered from a grave in Caotinha, near the village of Caota, south of Benguela, Angola, produced examples of “Nueva Cadiz” glass beads.

Haigh, John
Presents a concise description of the production of powdered-glass beads in a number of villages to the northwest of Kumasi in south-central Ghana. The beadmakers are semi-independent craftsmen whose principal occupation is farming.

Abompe is the current bauxite beadmaking site in Ghana and the hills above the village are pocked with thousands of pits dug in search of the raw material. Pit counts by transect at Odumparara Bepo, the Abompe mining area, suggest the presence of possibly as many as 4,700 pits. These appear to have been created in the past 100 years.
**Hamela, Ato Hansemoo**

**Hansen, Ine Askevold**
Investigates whether the use of ochre is ritual or utilitarian or both in MSA African contexts. Beads colored with ochre, primarily from South African sites, enter into the equation.

**Harlow, M.**

**Harter, Pierre**
Reviews the various kinds of glass beads widely used in west-central Cameroon. Includes many examples of beadwork as well as beads.

**Heath, Barbara J.**
Explores the intersection of global systems of circulation with local consumer practices through the examination of cowries using three case studies in West Africa and North America.

**Helm, Richard, Alison Crowther, Ceri Shipton, Amini Tengeza, Dorian Fuller, and Nicole Boivin**
Three Later Stone Age and Early-Middle Iron Age sites produced a number of shell, bone, and limestone beads, as well as several glass beads of a later period.

**Henshilwood, Christopher S.**
Wearing personal ornaments such as beads implies a comprehension of self-awareness or self recognition, an important factor in cognitive evolution and that may have been selected for long before the introduction of beads.

The presence of marine-shell beads at Blombos Cave, South Africa, provides material evidence that by 75,000 BP human communication was mediated by symbolism, an unambiguous marker of modern human behavior.

Henshilwood, Christopher, Francesco d’Errico, Marian Vanhaeren, Karen van Niekerk, and Zenobia Jacobs
Discusses and illustrates 41 tick shell beads from Blombos Cave in South Africa. Their stratigraphic context indicates they are 75,000 years old.

Henshilwood, Christopher S. and Benoît Dubreuil
Based on finds in South Africa, the authors argue that the use of beads and body painting implies the presence of properties typical of modern cognition: high-level theory of mind and awareness of abstract social standards.

Henshilwood, Christopher S. and Marlize Lombard
Provides a summary of marine-shell and ostrich-eggshell beads recovered from early Sub-Saharan sites.

Holden, Constance
Discusses and illustrates the shell beads reported by Henshilwood et al. (2004), and also illustrates an ostrich eggshell bead (one of two) from Serengeti National Park in Tanzania. The Tanzanian beads have not yet been firmly dated, but could be as much as 110,000 years old.

Holl, A.
Discusses the production of and trade in carnelian beads in Chad.

Holloway, Joyce

Hopwood, Lisa E.
Presents a detailed account of the glass beads found on a shipwreck off the coast of Ghana. The bead assemblage consists mainly of monochrome seed beads. Several analytical approaches helped uncover data about these beads including a descriptive database, comparative and ethnohistorical research, and analysis of spatial patterns and anomalies in the wreck site. Initially attributed to the 19th-century, it now appears that the wreck dates to the mid-17th century (Cook 2012).
Horton, Mark
Contains a section on Beads and Bead-Making. Dating primarily to the 12th-13th centuries, the beads are of various materials, but especially shell, glass, and stone. Kenya.

Hurst, H.R. and S.P. Roskams
Beads of coral, bronze, bone, and glass were found in excavations at Carthage, Tunisia, North Africa.

Stone and glass beads were recovered from a number of sites in the Falémé Valley of Senegal.

Ige, O. Akin
Several types of glass beads are identified and characterized according to their unique production processes, chemical composition, and cultural uses. A preservation method adapted from ancient practices is being developed to prevent the deterioration of the beads.

Insoll, Timothy
Describes the destruction of archaeological sites near Gao for the antiquities market by looters.

Deals with the bead finds in the region of ancient Gao (pp. 67-69, 81-82, 104-105).

Reports surface evidence for the medieval or later manufacture of glass and carnelian beads at this important trading station on the Red Sea (pp. 46-47).

Discusses carnelian and glass beads in the western Sahel.

2015 Material Explorations in African Archaeology. Oxford University Press, Oxford. Section 2.3.3 discusses the use of beads and cowries to decorate and transform the body in Africa.

Insoll, Timothy, David A. Polya, Kuldeep Bhan, Duncan Irving, and Kym Jarvis
2004 Towards an Understanding of the Carnelian Bead Trade from Western India to Sub-Saharan Africa: The Application of UV-LA-ICP-MS to Carnelian from Gujarat, India, and West Africa. Journal of Archaeological Science 31:1161-1173. Outlines the results of chemical analysis and subsequent principal component analysis undertaken in an attempt to differentiate Gujarati and West African carnelian samples, and thus begins to allow inferences to be made regarding a possible trade in carnelian between these two regions primarily in the medieval period, based upon more objective data.

Insoll, Timothy and Thurstan Shaw
1997 Gao and Igbo-Ukwu: Beads, Interregional Trade, and Beyond. African Archaeological Review 14(1):9-23. Excavations at Gao in eastern Mali have uncovered a sizable assemblage of imported and locally produced beads which are similar in many ways to the beads excavated at the site of Igbo-Ukwu in Nigeria. The similarities between the two assemblages suggest interregional trade along the River Niger. As the likely source of many of the beads is Fustat in Egypt, Gao may well have been the middleman between Igbo-Ukwu and Fustat.

Jacobson, L.
1987 The Size Variability of Ostrich Eggshell Beads from Central Namibia and its Relevance as a Stylistic and Temporal Marker. The South African Archaeological Bulletin 42(145):55-58. The size distributions of ostrich eggshell beads from a number of central Namibian assemblages fall into three types characterized by the presence or absence of beads larger than 7.5 mm in maximum diameter and by the shape of the distribution.

1987 More on Ostrich Eggshell Bead Size Variability: The Geduld Early Herder Assemblage. The South African Archaeological Bulletin 42(146):174-175. A follow-up to the previous article which provides additional information on the eggshell beads from Geduld, an early herder site. The lower herder component, defined on the basis of pottery, dung horizons, and dates, stretches in time from just before 1980 BP to just after 1790 BP. It should be noted here that further work may revise these dates and descriptions somewhat, but not to any material extent.

Jerardino, Antonieta
1995 The Problem with Density Values in Archaeological Analysis: A Case Study from Tortoise Cave, Western Cape, South Africa. South African Archaeological Bulletin 50:21-27. It is suggested that, when evaluated interactively, three parameters (area of settlement, rates of accumulation of unfinished ostrich eggshell beads and finished beads and pendants, as well as rates of
accumulation of domestic debris) can provide useful insights as to how densities were generated in archaeological contexts.

**Juma, Abdurahman**  
Excavations at a farming community on Zanzibar, Tanzania, uncovered beads of shell, copper, and glass. These are attributed to the 6th-11th centuries.

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

**Kankam-Dwumfour, Eunice**  
Detailed study of modern powder-glass bead production in southern Ghana.

**Karklins, Karlis**  
On the local names and types of beads which poured into Africa, their many regional variants, and the historical documentation about them.

Presents detailed descriptions of the beads, all of wound construction and mostly fancy varieties, made by the acclaimed Venetian firm operated by the Giacomuzzi brothers during the 3rd quarter of the 19th century. Many of the beads were traded into Africa.

The Levin Catalogue is composed of two similar collections of glass and stone beads assembled by Moses Lewin Levin, a London bead merchant whose business operated from 1830 to 1913. A total of 621 beads of 128 different varieties makes up the collections which can be dated to the period 1851-1869. The beads are recorded as having been used in the African trade.

While countless tons of European glass beads flowed into West Africa over the centuries, there is still relatively little information concerning what specific nations were importing over time. This situation is somewhat alleviated by two collections of beads surface collected at the site of a British fort of coastal Sierra Leone. Although it is impossible to assign the beads to a specific period in the fort’s history, it is clear that they are of 18th-century origin and were part of the goods traded by the British.

Karklins, Karlis and Bernard Clist
Discusses the beads recovered from 21 sites in the Democratic Republic of Congo. Materials include glass, ceramic (Prosser molded), metal, stone, organic materials, and plastic. Contexts range from the 17th to the early 20th century.

Karklins, Karlis and Carmel Schrire
The site of a provisioning station operated by the Dutch East India Company near the Cape of Good Hope during the late 17th and early 18th centuries produced a variety of European beads of several materials. A "typical" Dutch bead assemblage of the period, it is significant because it comes from one of very few independently dated bead-producing sites in southern Africa.

Katsamudanga, Seke
Several sites produced beads: Gwenji II Hill site (a shell bead and an ostrich eggshell bead), Manjowe Rock Shelter (a blue glass bead); and Murahwa Hill (beads of glass, shell, copper, and brass, as well as cowrie shells). The material ranges from the Stone Age to the 16th-17th centuries for the glass beads.

Kelly, Kenneth G.
2001 Change and Continuity in Coastal Benin. In West Africa During the Atlantic Slave Trade, edited by Christopher R. DeCorse, pp. 81-?. Leicester University Press, Leicester.
Briefly describes and illustrates the beads of stone and clay recovered from Savi on the coast of Bénin.

Kennedy, Carolee G.
Describes how Zulu craftsmen made brass beads and other ornaments, and how they were used.

Killick, David
A survey and discussion of work on trade beads as a means of dating archaeological sites.

Kimura, Birgitta and Dinote Kusia Shenkere
The use of glass trade beads as archaeological chronological markers and indicators of trade is well-known, but what they mean to their users has been less studied. This paper explores the use and meaning of beads in contemporary Konso society. In addition, it reports the analysis of an excavated bead assemblage from the Karate region of Konso (ca. 19th-20th centuries). Personal ornaments among the Konso include metal bracelets, shells, and ostrich eggshell and glass beads.

Kinahan, Jill
2000  
*Cattle for Beads: The Archaeology of Historical Contact and Trade on the Namib Coast.* 
University of Uppsala, Department of Archaeology and Ancient History, Studies in African Archaeology 17.

Presents a detailed description and discussion of the very varied collection of European glass beads recovered from 19 sites of the !Khuiseb Delta, Namibia. The various types are attributed to one of three periods which roughly correspond to the 18th, 19th, and 20th centuries, respectively.

Kinahan, John
1995  

Differences of opinion regarding the pastoral sequence at Geduld in northwestern Namibia involve size differences in the ostrich eggshell beads found there.

1996  

Ostrich eggshell beads enter into the debate.

Klapwijk, Menno
1991  

Describes the discovery of very small glass beads which have not been reported before in South Africa. There is a strong possibility that more such beads exist in archaeological sites in this country, but they have probably not been recovered because of the size of the sieves used during excavation. Archaeologists are urged to attend to this problem.

Klehm, Carla
2014  
Trade Tales and Tiny Trails: Glass Beads in the Kalahari Desert. *The Appendix* 2(1). 

Discusses and illustrates the glass beads found at Khubu la Dintša in Botswana. The site is attributed to the period AD 1220-1420.

Klenkler, C.E.
1986  

Prehistoric beads, pendants, etc. (pp. 120-125).

Kobusiewicz, Michal, Jacek Kabaciński, Romuald Schild, Joel D. Irish, and Fred Wendorf
2009  
The site yielded abundant beads and pendants of carnelian, agate, chalcedony, diorite, gneiss, limestone, hematite, ostrich eggshell, petrified wood, burnt clay, shells of *Nerita* species, Nile bivalves, animal teeth, and bird bones.

**Koleini, Farahnaz, Philippe Colomban, Innocent Pikirayi, and Linda C. Prinsloo**


This review addresses the history of glass production, the methodology of identification (morphology, color, elemental composition, glass nanostructure, coloring and opacifying agents and secondary phases) by means of various laboratory-based instruments. Attention is paid to the problems neglected such as the heterogeneity of glass (recycled and locally reprocessed glass).

**Koleini, Farahnaz, Innocent Pikirayi, and Philippe Colomban**

2016  Raman (RS) and XRF Classification of Glass Trade Beads from Baranda (16-17th c. AD), Northern Zimbabwe. https://www.academia.edu/26869716/, accessed 8 August 2016.

A multi-analytical study of the beads reveals information about their composition, origin, and distribution.

**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.

**Kolosowska, Elżbieta and Mahmoud El-Tayeb**


The male individual in Grave HP45/1 at a Post-Meroitic cemetery in Sudan was accompanied by a diadem and necklace of faience beads. Similar items were found in Grave 47/3.

**Kumekpor, M.L., Y. Bredwa-Mensah, and J.E.J.M. van Landewijk**


**Lahitte, Miriam**


On ostrich eggshell beads from a fortress ruin in northern Sudan dating ca. 750-350 BC.

**Liu, Robert K.**

Not only discusses the iconography of the Nubian specimens uncovered at Kusk (Meroë) in Sudan, but also Roman face beads in general.

**Liu, Robert K., Peter M. Ahn, and Dudley Giberson**
Explores the history and much-debated technology of making these rare and controversial beads.

**Liu, Robert K., Sage Holland, and Tom Holland**
The study of several face beads from a site in Nubia presents a compelling case for the supposition that all forms of facial images for early face beads were derived from a Gorgon cane, adapted by beadmakers into Medusa and numerous other variations.

**Lizé, Patrick**
A cache of garnet, agate, and glass beads was found on the wreck of a ship which sank in 1702.

**Lohwasser, Angelika**
This site in northern Sudan yielded a wide variety of faience beads as well as those of stone and metal. Napatan Period.

A variety of beads, pendants, and amulets were recovered from the cemetery at Sanam in northern Sudan. It dates to the 8th-7th centuries BC.

2012 *Aspekte der napatanischen Gesellschaft*. Österreichische Akademie der Wissenschaften Denkschriften der Gesamtkademie LXVII.
Located in northern Sudan, the cemetery of Sanam, which dates to the 8th-7th centuries BC, yielded a variety of beads, pendants, and amulets.

**Longa, Anna**
In a complex of tumuli cemeteries dating to the first centuries AD in the region of the Fourth Nile Cataract, the bodies of the deceased were richly equipped with bracelets and finger rings, but primarily strings of beads wound around the necks and hips. The beads were made of a variety of materials: faience, various stones, glass, and ostrich eggshell.
Machiridza, Lesley H.

Presents an analysis of the glass (drawn and wound), metal (copper and bronze), and shell beads.

Magnavita, Sonja

Archaeological investigations on settlements and graveyards near the Mare de Kissi reveal human occupation at that location from at least the 4th century BC up to the 12th-13th centuries AD. About 5,000 beads of stone (mostly quartz), metal (mainly iron), and glass were recovered. The latter may have come from Byzantine North Africa.


Discusses the recovered beads of glass, stone, and baked clay, as well as cowries, dating to the 1st and early 2nd millennia AD. The chemical composition of the glass beads is also provided.

Malafouris, Lambros

Uses the example of the Blombos shell beads found in South Africa in order to explore the role of early body decoration in the emergence of human self awareness.

Manzo, Andrea

Two mosaic glass beads, most likely made in Egypt and datable to Late Hellenistic-early Roman times, were found in a Proto-Aksumite nobleman’s tomb in Ethiopia (p. 54, figs. 7-8). One is a face bead.


Site UA53 produced a single ostrich eggshell bead (p. 91) and several “cowrie-lip beads” (p. 95-96). These may date to the 2nd to early 1st millennia BC.

Marek, Tonia

The Dogon of Mali attribute power to a certain stone bead they call *magarra*.

Marshall, L. Wilson
Beads of glass, shell, and copper alloy were recovered from communities established by people escaping slavery in 19th-century Kenya.

Provides an analysis of 3,968 beads unearthed at Amwathoya, a late 19th-century Giriama homestead site. The typological analysis draws on both historical bead names from 19th-century Eastern Africa and broader classificatory schemes developed by archaeologists elsewhere in the world.

The inter-household distribution of European glass beads in two villages reflects considerable variation in the performance of female identity, suggesting varying norms of feminine adornment.

Martins Torres, Andreia
Describes the beads recovered from the wreck of the frigate *Sto. António de Tâna* which sank at Mombasa, Kenya, in 1697, and investigates their presence in the context of connections between India and Africa. Materials include stone, shell, jet, wood, seeds, and glass.

Mattingly, David, Marta Lahr, and Andrew Wilson
Bead materials at two monumental Garamantian cemeteries in southwestern Libya were predominantly carnelian and amazonite, glass, and ostrich eggshell. At TAG001, in two cases, two strands of beads were found twisted together and placed around the waist or hips of the body.

McCall, G.S., T.P. Marks, J.T. Thomas, M. Eller, S.W. Horn, R.A. Horowitz, K. Kettler, R. Taylor-Perrymen
Excavation revealed a large number of ostrich eggshell beads, as well as a few glass examples. All were found in Later Stone Age or mixed levels.

McIntosh, Susan K.
Describes the recovered stone and glass beads, including the results of chemical analysis of six of the glass specimens. The beads range in age from the last two centuries BC to ca. AD 1400.

Meuller, Margaret
Offers a thorough description of historical personal ornamentation within the context of Ethiopian history. The timeline of bead trade is reviewed with reference to archaeological evidence.
Although there are many references to beads in literature on the trans-Saharan trade (several of which the authors cite) very little is actually known about the beads, their place of manufacture, sources of material, or their age.

Miller, D.E. and J. Kinahan

Several beads from three site areas in Namibia were subjected to metallographic and chemical analysis. All appear to date to the 18th century.

Miller, Jennifer M.

As in southern Africa, there appears to be a steady change in external bead diameter over time in East Africa as well, and extends well into the Later Stone Age.

Miller, Jennifer M. and Elizabeth A. Sawchuk

Presents an expanded analysis of Holocene OES bead diameters from southern, and for the first time, eastern Africa. Results reveal distinct patterns in OES bead size over time, reflecting different local dynamics associated with the spread of herding.

Miller, Jennifer M., Elizabeth A. Sawchuk, Amy L.R. Reedman, and Pamela R. Willoughby

Collates data on land-snail shell beads found at over 80 archaeological sites in at least eight African countries, spanning the early Holocene to recent past. As LSS beads are often lumped with ostrich eggshell beads, the authors illustrate methods for identifying this raw material.

Miller, Jennifer M. and Pamela Rae Willoughby

Three of the samples date to the MSA, and represent the earliest directly radiocarbon dated OES beads currently known. This new data demonstrates that the tradition of OES beadmaking is not unique to the LSA, but began sometime during the terminal stages of the MSA.

Mitchell, P.J.
Discusses the trade of shells and ostrich eggshell including beads made from them and infers regional zones of social interaction.

**Mukhwana, Kufwafwa**
Glass, semi-precious stones, metal, ivory, teeth, bone, shell, coral, and terra cotta comprise the raw material of the recovered beads. The stratigraphic sequence seems to extend from ca. AD 950 to 1400.

**Munro-Hay, S.**
Presents an account of the late Neville Chittick’s work at Aksum in Ethiopia. It contains a chapter on beads by Mrs. Helen Morrison.

**Mupira, P.**
Describes the beads and cowrie shells recovered from the Murahwa Hill site. The beads were of glass, shell, copper, and brass. The material ranges from the Stone Age to the 16th-17th centuries for the glass beads.

**Näser, Claudia**
Excavations at this site in Sudan yielded a wide variety of beads, pendants, and amulets. Materials include glass, faience, carnelian, ostrich eggshell, gold, copper, and perforated cowries. Molds for the production of amulets and beads were also recovered.
An unusual tabular glass bead was found at a Meroitic temple complex in Sudan dating to the late 3rd or 2nd century BC. It consists of a perforated complex cane slice with a sun form in the center and encircled by a square-filled border (Figure 6). A detailed study is provided in Then-Obluska (2014).

**Nixon, Sam**
Presents a detailed discussion of the beads (including chemical analysis) excavated at a site in northern Mali that was occupied from ca. AD 750 to 1400. Glass beads predominate but there are also those made of stone, ostrich eggshell, ivory, and fossils.
Nourisson, Pascale
Beads serve as ornaments, currency, and symbols of wealth and prestige and are used occasionally in voodoo. The article covers the latter uses at greater length.

O'Hear, Ann
This article deals with red stone beads (called lantana by Hausa traders) that were produced in Ilorin, Nigeria, during the 19th and 20th centuries. Several color and b&w photographs.

Ohinata, Fumiko
Occupied at some time between the late 17th and late 19th centuries (Late Iron Age), the site produced both glass and ostrich eggshell bead which are described in Table 2.

Ogundiran, Akinwumi
Thorough discussion of the significance and use of cowries and glass beads in Yoruba culture, West Africa, over the centuries. Nigeria, Benin.

Discusses (pp. 47-48) the production of glass and stone beads at Ile-Ife, Old Oyo, and Oba Isin and their function as badges of high political office in the Yoruba-Edo region during the Classical Period (AD 1000-1400).

Ogundiran, Akinwumi and O. Akinlolu Ige
Compositional analysis of crucibles, glass cullet, and glass beads excavated at Osun Grove (Osogbo, Nigeria) reveals that the Yoruba of West Africa developed a unique glassmaking technology that lasted till the 17th century.

Opper, Howard and Marie-José Opper
On imitations of gneiss beads in Mali made from powdered glass and crumbs of Medieval Islamic glass beads.
Opper, Marie-José

Opper, Marie-José and Craig Eady
Among the ornaments produced by the Bapterosses factory in Briare, France, during the 19th and 20th centuries were beads and pendants imitating coral, pearls, stones, shells, and teeth.

Opper, Marie-José and Howard Opper
Describes the beads from Europe and elsewhere that were interred with the remains of the dead and places them into the perspective of Senegambian history from the 18th to mid-19th centuries.

An in-depth study of the subject, this 16-page pamphlet is illustrated with four color plates.

On a rapidly disappearing type of bead made from powdered glass and decorated with symbols; worn in women’s hair at weddings.

On highly prized green and blue beads used across Northern Africa from pre-dynastic Egypt to the present day.


Discusses the history, manufacture, and relevance to Mauritanian culture of Kiffa beads.

Orton, Jayson
Ostrich eggshell bead was produced at this site attributed to the Later Stone Age.

Osakue, Emmanuel Ehimen
Undertakes to present a comprehensive analysis of African and Borneo beads to unveil their various messages and roles in these two regions.
**Pallaver, Karin**


Glass beads of Venetian origin, among others, became one of the main means of payment and exchange along the central caravan road that connected Bagamoyo on the coast, to Tabora, in the Western region of Unyamwezi, to Ujiji, on the Eastern shores of Lake Tanganyika.

**Panini, Augusto**


A beautifully illustrated survey of ancient to modern glass beads collected in several West African countries, especially Mali.

**Pearson, A., B. Jeffs, A. Witkin, and H. MacQuarrie**


From 1840 to 1872, “liberated Africans” taken from slave ships by Royal Navy patrols were taken to camps on the remote South Atlantic island of St. Helena, about 1,000 miles off the west coast of Africa. Many died and were interred there with their meager personal possessions. These included a variety of glass beads and two cowries. The beads are thoroughly described and discussed.

**Peressinotto, D., A. Schmitt, Y. Lecointe, R. Pouriel, and F. Geus**


Forty-two Neolithic burials at El Multaga include 15 with beads among the grave goods: a string of 13 amazon stone beads found at a child’s neck, amazon stone beads scattered in another, and a single amazon stone bead at the neck of an adult. Three ivory rings, sheep teeth, and ostrich eggshell bead fragments were associated with some burials.

**Picard, John and Ruth Picard**


Presents 8 pages of excellent full-color images of a wide range of chevron beads. Each is described but no interpretive information. See DeCorse (1989) for a review.


Presents 4 pages of excellent full-color images of a wide range of tabular beads. Each is described but basically no interpretive information. See DeCorse (1989) for a review.


This 16-page booklet presents 4 pages of excellent full-color images of a wide range of fancy beads. No descriptions nor interpretive information. See DeCorse (1989) for a review.
**1988**  

This lavishly illustrated booklet contains 31 full-page color photographs of an inordinate variety of glass beads, many of which are dated through comparison with the sample cards of several European manufacturers and dealers. The text provides brief histories of two major bead exporters: the Societa Veneziana Conterie and J.F. Sick & Co. See DeCorse (1989) for a review.

**1989**  
*Russian Blues, Faceted and Fancy Beads from the West African Trade.* Beads from the West African Trade Series V. Picard African Imports, Carmel, CA.

This and the following volumes beautifully illustrate numerous beads in the categories represented. See Francis (1991) for a review.

**1991**  
*Millefiori Beads from the West African Trade.* Beads from the West African Trade Series VI. Picard African Imports, Carmel, CA.

See Francis (1991) for a review.

**1993**  
*Chevron and Nueva Cadiz Beads.* Beads from the West African Trade Series VII. Picard African Imports, Carmel, CA.

See Smith (1993) for a review.

**Pikirayi, Innocent**

1993  
*The Archaeological Identity of the Mutapa State: Towards an Historical Archaeology of Northern Zimbabwe.* University of Uppsala, Department of Archaeology and Ancient History, Studies in African Archaeology 6.

Analyzes the glass beads from several sites in the study area which are generally attributed to the 17th century. Shell and copper beads are also mentioned but not described.

**Poissonnier, Bertrand**

2012  

In Ethiopia, the disturbed tumulus yielded a green stone pendant, one carnelian and 75 glass beads.

**Poissonnier, Bertrand and B. Hirsch**

2012  

Attributed to the 15th century, Tumulus 2 at Meshalä Maryam, Ethiopia, yielded many glass beads.

**Radimilahy, Chantal**

1998  

Describes the recovered beads and proposes local production for the glass specimens.
Sodohomé, the most ancient grave site on the plateau of Abomey, Benin, produced a variety of glass beads attributed to the 17th century, as well as several bauxite specimens (pp. 99-104). Grave 1 at Kana-Damehouégbo (Mihonhikpota), yielded a belt composed of a number of cowrie shells, flat beads made of ostrich eggshell, nine European glass beads, and six other beads (one is likely a mollusc, five are stone) as well as a necklace of glass beads including a blue chevron bead (pp. 110-119). Graves at Doguème (Guédevi), Abomey, contained glass (including faceted chevrons), shell, stone, and bronze beads, as well as cowries (pp. 119-126). The finds are summarized on p. 130.

Rasoarifetra, Bako

Prese nts a typology for beads recovered from archaeological sites in northern Madagascar.

The funerary objects recovered from the necropolis of Vohemar, Madagascar, are largely composed of glass and stone (carnelian and rock crystal) beads. The archaeological contexts and chemical analysis of various samples reveal that the origin of these beads is closely linked to flourishing trade networks in the Indian Ocean from the first millennium AD.

Rehren, T. and S. Nixon
Analysis of the glass adhering to crucible fragments found in a goldsmith’s workshop and glass beads found in association suggests that the Tadmekka goldsmiths were processing gold using crushed glass beads as a flux, rather than working glass as a material in its own right.

Robbins, L.H.
Botswana, Namibia.

Robertshaw, Peter
Beads were found among the burials: iron, a few glass, and possible ivory (p. 14) dated to ca. AD 900-1200. Uganda.

Robertshaw, Peter and Marilee Wood
The cemetery at Ingombe Ilede has been dated to the 14th or early 15th century, just prior to Portuguese contact. Recent AMS dating, however, suggests that the real age of the cemetery falls between the late 15th and early 17th centuries, dating that is supported by the recovered glass beads.
Garumele, also known as Wudi, is reputed to have been a capital of the Kanem-Borno “empire,” but its date of settlement and occupation remain unclear. To help rectify this situation, a sample of 44 glass beads recovered during excavations were chemically analyzed using LA-ICP-MS. The results indicate that the beads are of European origin, probably Venetian and/or Dutch, and that most belong to the late 17th or 18th century.

A contribution to the study of beads of Mediterranean (Venetian) origin collected in Angola.

Micro-Raman spectroscopy and chemometrics on handheld XRF results were used to characterize beads found during archaeological excavations in the Congo. Metallic objects, organoogenic materials, and glass beads were studied. The glassy materials seem to be of European production.

Smith et al. (1991) saw the cultural distinction between Bushmen and Khoekhoe in ostrich eggshell bead diameters. This is not supported by the evidence from Kasteelberg on the southwest coast of South Africa.

Saitowitz, Sharma J.
Reviews the classification terms used to describe beads by North American bead researchers and suggests that these be used in future South African bead studies so that the data may be presented in a uniformly acceptable manner.

Presents a formal analysis of the beads recovered the two Zulu capitals of Mgungundlovu (1829-1838) and Ondini (1873-1879), South Africa.

Saitowitz, Sharma J., David L. Reid, and N.J. van der Merwe
Plasma mass spectrometry was used to determine the rare earth element contents of glass beads excavated in the former northern and eastern Transvaal. They were found to be identical with those of beads made in al-Fustat (Old Cairo), and document the existence of a trade link with the Mediterranean via the Red Sea 1,000 years ago.

Saitowitz, Sharma J. and C. Garth Sampson
Analyzes the beads (mostly dating to the first half of the 19th century) recovered from nine sites in the upper Seacow River valley of South Africa.

Schrire, Carmel and Janette Deacon
The artifacts recovered from a Dutch trading post in South Africa include ostrich eggshell beads. See Wilson et al. (1990) for comments on the beads.

Shoemaker, Anna
Beads are sporadically discussed in various sections but images of the glass, iron, and ostrich-eggshell beads and cowries found at several sites in Amboseli National Park, Kenya, are presented in Appendix 3, Special Finds.

Simak, Evelyn
This article bringing together what is known about these beads, and illustrates a range of the different forms and color combinations, giving interpretations of the colors and motifs used.

Simak, Evelyn and Carl Dreibelbis
This book is a magnificent showcase of African-made beads and is based on the authors’ extensive collections. The beads are from various sources and have been surface collected, recovered from archaeological sites, or attained through purchase. All materials are covered. The photographs are provided with informative captions and many are full-page views. See Hamela (2009) for a review.

Smith, Andrew B. and Leon Jacobson
Beads formed from shell, seeds, and ostrich eggshell were recovered from this site whose occupation began ca. 1800 BP. A detailed study of the eggshell beads is provided in an appendix by Royden Yates.

Smith, Andrew B., Karim Sadr, John Gribble, and Royden Yates

At several sites, small ostrich eggshell beads are associated with hunter-gatherers while large eggshell beads relate to herders.

Smith, Andrew B., Royden Yates and Leon Jacobson

A response to Kinahan (1995) which involves ostrich eggshell beads.

Smith, Marvin T.

Stahl, Ann B.

Stanfield, Kirk

Reviews the controversial subject of the large Bodom powder-glass beads, and how they may have been made. Stanfield concludes that the Krobo of Ghana are likely the original makers of these beads.

Steele, Teresa E., Esteban Álvarez-Fernández, and Emily Hallett-Desguez

Investigates probable shell beads from sites in north and south Africa and Israel.

Steinberg, Billy and Jamey Allen

This lavishly illustrated volume offers new insights into the art and technology of powder-glass beads (often referred to as Bodom or akoso) while also providing an extensive glossary of related bead history, manufacture, and classification. See Holloway (2017) for a review.

Steiner, C.

Beads once prized as “European” are now prized as “African” and sold to the New World and the Pacific, an anthropologically interesting trade shift.
Tapela, Milton C.  
Concludes that both hunters/gatherers and herders/farmers made their own beads, rather than the former trading them to the latter.

Teruzzi, Giorgio and Anna Alessandrello (eds.)  
2007  *Trade Beads: From Venice to the Gold Coast.* Centro Studi Archeologia Africana, Milano.  
This exhibition catalog provides a brief overview of the Venetian bead industry including well-illustrated descriptions of the two major glass beadmaking processes and the various styles/types of beads (some on sample cards) that were produced for trade in Africa as well as elsewhere.

Teske, Peter R., Isabelle Papadopoulos, Christopher D. McQuaid, Brent K. Newman, and Nigel P. Barke  
Beads made from *N. kraussianus* shells found at early sites in South Africa decrease in size from the Pleistocene to the Holocene. This is likely due to increased temperatures as a result of climate change at the beginning of the present interglacial period.

Then-Obluska, Joanna  
Outlines a major project intent on creating a catalog of Lower Nubian beads with interpretive data. Sudan.

Excavations at the Early Makurian burial site of El-Ar 1 in Ab Naqaqir (late 4th - early 5th century AD) uncovered an etched carnelian bead unique to Sudan. The broad cultural, geographical, and historical framework of etched beads is summarized here in an effort to contextualize the El-Ar bead.

Beads have always constituted a traditional element of personal adornment in Nubia and their production, use, and circulation did not cease despite religious, political and social changes in the medieval period. The beads and pendants found at the site are made of marine shells, ostrich eggshell, wood, bone, stone, seeds, clay, faience, and glass. They date to the 6th-17th centuries. Sudan.

Provides a detailed study of a tabular bead composed of a perforated cane slice with a flower-like design in the center and enclosed by a square-filled border. It was found at a Meroitic temple complex in Sudan dating to the late 3rd or 2nd century BC. Briefly described in Näser (2013).

Presents an overview of the 13,000 beads recovered from 73 burials at the fourth cataract of the Nile in Sudan. Materials include shell, ostrich eggshell, bone, semiprecious stones, metal, faience, and glass.


A stone anthropomorphic figure and a string of several hundred beads, including many eye beads, were found in a subsidiary pit associated with the burial of a woman dating to the Transitional Late Meroitic/Post Meroitic period. The eye beads are examined in detail to elucidate different aspects: the study of material and production techniques, as well as comparative and social analyses. Sudan.


Excavations conducted during the 2009-2014 seasons at the burial site of Sedeinga, Nubia, produced 3,400 beads and pendants of various materials which date to the Late Napatan and Meroitic periods, ca. 400 BC-AD 300. During a period dominated by faience and glass in bead production, the use of organics and stones indicates strong links with the neighboring Nubian deserts, an overland connection with the Red Sea coast, and, surprisingly, an interest in the resources of the Nile River.


Provides details about an exceptionally beautiful set of 22 glass beads with monochrome bodies decorated with mosaic eyes and criss-crossing gold-in-glass trails that was found in Meroe tomb Beg. N 15, Sudan.

2016  Early Makuria Research Project. Late Antique Beads and a Napatan Amulet from the Early Makuria Phase II Tumuli Cemetery at El-Detti (about AD 450-550), Season 2015. Der antike Sudan. Mitteilungen der Sudanarchäologischen Gesellschaft zu Berlin e.V. 27:139-144.

The beads and pendants from a site in Sudan are made of a variety of materials (ostrich eggshell, bone, stone, glazed com-position, glass, and metal-in-glass) using diverse techniques. The majority of items can be paralleled at contemporary post-Meroitic sites.


Provides a preliminary overview of beads and pendants found at three Meroitic cemeteries dating to the 1st-4th centuries AD. A wide variety of materials are represented including shell, stone, metal, faience, and glass.

The el-Zuma tumuli cemetery is dated to the Early Makuria Phase II (AD 450-550). Although the graves were heavily robbed, the recovered beads and pendants provide an overview of the materials (marine shell, coral, ostrich eggshell, stone, faience, and glass) and techniques used in their production.


2018 Beyond the Nubian Gold: Meroitic Beads between the Fifth and Sixth Nile Cataracts. *Beads: Journal of the Society of Bead Researchers* 30:31-43. Discusses the beads and pendants excavated from 16 graves at the Berber Meroitic cemetery in Sudan. Dated to between the 2nd century BC and the 3rd century AD, the graves yielded a wide range of beads made of various materials. Of note are a number of metal-in-glass specimens decorated with an impressed lozenge motif on one side and the figurative motif of Harpocrates on the other.


**Then-Obluska, Joanna and Barbara Wagner**


2018 Beads for Nubian Monks: An Interdisciplinary Assessment of a Ghazali Find. *Der Antike Sudan, Mitteilungen der Sudanarchäologischen Gesellschaft zu Berlin e.V* 29:65-70. Yellow and blue glass beads, as well as those of ostrich eggshell and stone, were found with a metal pendant and a fiber plaited case in a dormitory cell at Ghazaliu, Sudan. Parallels for the bead and pendant types can be traced in Medieval Nubia and allow to date the find to the 10th-12th centuries AD. Two samples were analyzed using LA-ICP-MS to investigate the origin of the beads.

**Then-Obluska, Joanna with Barbara Wagner**

2019 Glass Bead Trade in Northeast Africa: The Evidence from Meroitic and Post-Meroitic Nubia. PAM Monograph Series 10. Strings of colorful glass beads were a popular commodity traded throughout ancient Nubia during the first half of the 1st millennium AD. Combining macroscopic examination with laboratory analyses (LA-ICP-MS), the author breaks new ground in Nubian studies, establishing diagnostic markers for a study of trading markets and broader economic trends in Meroitic and post-Meroitic Nubia.
Then-Obluska, Joanna, Barbara Wagner, and Luiza Kępa-Linowska

Presents an in-depth examination of mosaic glass beads recovered from a child’s grave in the royal cemetery at Meroë (Bagrawiyah, Sudan). Their chemical composition reveals that the glass used in their manufacture was produced in Egypt.

Thiaw, Ibrahima

Artifacts recovered at Fort Senudebu, Senegal, include ceramic and copper beads, as well as a variety of European glass beads attributed to the 19th century. The beads are discussed in text with a more thorough analysis in Appendix D by C. DeCorse and F. Richard.

Thondhlana, Thomas Panganayi
2005  Style, Space and Time: A Critical Analysis of the Chronology and Spatial Distribution of Copper and Copper Alloy Beads from Zimbabwean Iron Age Sites. B.A. Special Honours Dissertation. Archaeology Unit, History Department, University of Zimbabwe, Harare.

Thondhlana, Thomas Panganayi and Marcos Martinón-Torres

This investigation introduces a new dimension to the previous typological analyses of the metal bead assemblages from Zimbabwean archaeological sites. It presents the microstructural and chemical characterization of 50 copper-based beads, most of them from Later Farming Community period sites in northern Zimbabwe (AD 1000-1900). The analytical study employed optical microscopy, ED-XRF, and SEM-EDS.

Thornton, Robert

Examines possible links between the southern African practices of “traditional healing” (*bungoma*) and the material culture that constitutes the tools of the healer. These tools include glass and metal beads.

Thorp, C.

Hlamba Mlonga Hill was occupied between the late 10th and 15th centuries AD. Evidence from glass beads, faunal remains, and remains of metallurgical activities shows that these past communities exploited local resources including wildlife and rich iron deposits in order to build wealth through trade with surrounding regions.
Togola, Téréba

Terra cotta and stone beads.

Trebbin, Cornelius

Describes and discusses agate bead and amulet production at the famed stone-working center of Idar-Oberstein, Germany, and their use in Africa.

Truffa Giachet, Miriam

Reports the findings of an archaeometric study of 954 glass beads recovered from 10 archaeological sites in Mali, Senegal, and Ghana, from contexts dated between the 7th-5th centuries BC and the 18th-20th centuries AD.

Tryon, Christian A., Jason E. Lewis, Kathryn L. Ranhorn, Amandus Kwekason, Bridget Alex, Myra F. Laird, Curtis W. Marean, Elizabeth Niespolo, Joelle Nivens, and Audax Z.P. Mabulla

Twenty-nine radiocarbon dates on ostrich eggshell carbonate make Kisese II one of the most robust chronological sequences for understanding archaeological change over the last 47,000 years in East Africa.

Van der Merwe, N.J., S.J. Saitowitz, J.F. Thackeray, M. Hall, and C. Poggenpoel

Large samples of glass beads from the two sites in South Africa have been examined using a standardized, internationally recognized classification scheme. Results of statistical analyses are presented to demonstrate variability in bead frequencies within and between the sites.

Vanacker, C.

On beads from a medieval site in Mauritania, probably produced by a technique still in use in the region.

Vanhaeren, M., F. d’Errico, K.L. van Niekerk, C.S. Henshilwood, and R.M. Erasmus

Reports on newly identified beads recovered from four Middle Stone Age levels at Blombos Cave and, in particular, a cluster of 24 perforated *Nassarius kraussianus* shells that probably originate from a single piece of beadwork.
Vanhaeren, M., F. d'Errico, C. Stringer, S.L. James, J.A. Todd, and H.K. Mienis
Perforated marine gastropod shells at the western Asian site of Skhul and the North African site of Oued Djebbana indicate the early use of beads by modern humans in these regions. Analyses of sediment matrix adhered to one *Nassarius gibbosulus* from Skhul indicate that the shell bead comes from a layer containing 10 human fossils and dating to 100,000 to 135,000 years ago, about 25,000 years earlier than previous evidence for personal decoration by modern humans in South Africa.

Vanhaeren, Marian, Lyn Wadley, and Francesco d’Errico
Sibudu has yielded 23 marine gastropods, 9 of which are perforated. The cluster may represent an area where the shells were processed or where apparel to which shells were attached was lost.

Verhaeghe, Charlotte
A great number of shell and glass beads were found together with symbols of power such as metal bracelets and weapons. Discusses the origin of the beads and how and why they were used in the Kongo Kingdom.

Verhaeghe, Charlotte, Bernard-Olivier Clist, Chantal Fontaine, Karlis Karklins, Koen Bostoen, and Wim de Clercq
At the burial site of Kindoki, linked with the former capital of Kongo’s Nsundi province, a great number of shell and glass beads were found together with symbols of power in tombs attributed to the first half of the 19th century.

Vibe, Ingrid
2007  San Personal Ornaments from the Later Stone Age at Blombos Cave and Blomboschfontein, Southern Cape, South Africa. M.A. thesis. Department of Archaeology, University of Bergen.
This study concentrates on beads made from ostrich eggshell and *Nassarius kraussianus* shells.

Vierke, Ulf
Explores the route of glass beads from their European production sites in Upper Franconia and Northern Bohemia to the Maasai in East Africa. But the beads themselves are not the center of the research but rather the actors dealing with them: the manufactures, the industrial producers, the merchants in Europe and Africa, the women crafting the beadwork, and the ones wearing the beadwork.
Beads of various kinds from the Christian period and the preceding “Ballana Phase” in Nubian Sudan (pp. 167-173).

Villa, Paola, Sylvain Soriano, Tsenka Tsanova, Ilaria Degano, Thomas F.G. Higham, Francesco d’Errico, Lucinda Backwell, Jeanette J. Lucejko, Maria Perla Colombini, and Peter B. Beaumont
Discusses implications of two South African assemblages that date to the beginning of the Later Stone Age. Artifacts include ostrich eggshell beads.

Walz, Jonathan R.
Investigation of a number of sites uncovered beads of various materials including glass (both European and Indo-Pacific), land and marine shell, ostrich eggshell, stone, ivory, bone, and metal (copper and iron). Unfortunately, detailed descriptions are lacking although some examples are shown in color photographs.

Walz, Jonathan R. and Laure Dussubieux
Comments on the beads of glass, stone, shell, copper, and ostrich eggshell recovered from contexts attributed to the period from the mid-8th to the mid-10th century.

Whitelaw, Gavin
Glass and copper beads were among the artifacts recovered from a structure probably built by labor tenants in the 1870s or 1880s and used until at least the early 1900s. South Africa.

William, Bruce B.
A variety of stone, faience, metal, and ostrich eggshell beads were recovered from ancient burials at this site in northern Sudan.

Williams, Sarah
On the social and ideological meanings of beads worn by the Turkana people of northern Kenya.
Wilmsen, Edwin N.
A survey of the European glass beads that have been excavated in the Angola-Botswana-Namibia region appears in the section on “Trade.”

Wilson, Alexandra (ed.)
Contains chapters on bead wearers; bead importers and traders; bead producers; beads in the archaeological record of Ghana; methods of manufacturing glass beads; and aggrey beads.

Wilson, M.L., W.J.J. van Rijssen, L. Jacobson, and H.D. Noli
Points out errors in the conclusions drawn regarding ostrich eggshell bead sizes in Schrire and Deacon (1989), with a response from the authors.

Wilson, Thomas H. and Athman Lali Omar
An early Swahili site in Kenya with bead grinders in levels 73-74 of period IA; no shell beads. The earliest shell beads are in the 11th-century deposits of period II. Green, black, yellow, and blue glass beads are in period II, red and white beads in period IV, and pink beads in period V. The 57 beads are mostly drawn round, but hexagonal and cylindrical forms also occur. Period III-V: AD 1150-1700.

Withers, Sara
Discusses the beads and bead sample cards that Arkell collected in the 1930s in what was then the Anglo Egyptian Sudan.

Wood, Marilee
Imported glass beads provide evidence of trade between the local inhabitants and the world beyond, beginning in at least the 10th century. In this region, four main series of glass beads have been identified. These series have the potential to be used to ascertain and fine-tune site chronology.

Discusses the beads recovered from the Kaole Ruins, Tanzania; 13th-18th centuries. They are mainly imported glass Indo-Pacific trade beads but some are from Europe, China, and possibly the Middle East; the rest are mainly of local shell. Color illustrations.
Nhaucati is a small site adjacent to Chibuene on the coast of southern Mozambique. The glass beads found there, which date from about the 8th to the mid-10th centuries AD, are described and placed in the context of Indian Ocean trade during that period.

During the Islamic period (8th-15th centuries) glass beads are the most abundant evidence of international trade in southern Africa. The author divides them into identifiable series that have temporal parameters. Once identified, the beads can help interpret site chronology as well as regional and international interaction. Glass beads are also useful in reconstructing trade patterns in the Indian Ocean.

An archaeological site on the Zambezi River in central Mozambique, Degue-Mufa was a trading station, or fair, that was important for conducting trade with the interior of Mozambique and Zimbabwe. Over a thousand glass beads, dating mainly to the 19th century AD, were found in the excavations. They are described and compared to other bead assemblages of this period in southern Africa.

Imported glass beads that were traded into the interior of southern Africa over the past 500 years have the potential to help interpret several aspects of archaeological sites where they are present. These include illuminating trade contacts and routes, determining cultural affiliations, and refining site chronology. This study includes a brief introduction about using beads in site interpretation and a discussion and interpretation of bead assemblages from four areas in the interior of southern Africa.

The glass beads excavated at a 10th-15th-century site in eastern Zimbabwe are cataloged and separated into bead series based on morphology. They are compared to closely related beads that occur in archaeological contexts of the same period in the Shashe-Limpopo basin and the Zimbabwe culture area.

Many tens of thousands of glass beads have been recovered from well-dated archaeological sites of the 8th-16th centuries in southern Africa, making it possible to develop a temporally sensitive bead sequence which is made up of seven series. The series were developed based on morphological characteristics and recent chemical analysis has confirmed those results.

Beads recovered from southern African archaeological sites are organized into series, based on morphology and chemical composition determined by LA-ICP-MS analysis. The results are used to
interpret the trade patterns and partners that linked eastern Africa to the rest of the Indian Ocean world, as well as interconnections between southern Africa and East Africa.


2016 Glass Beads from Pre-European Contact Sub-Saharan Africa: Peter Francis’s Work Revisited and Updated. Archaeological Research in Asia 6:65-80, doi:10.1016/j.ara.2016.02.007. Discusses a wide variety of glass beads from 7th-17th-century contexts in southern, eastern, and western Africa and results of chemical analysis of the glass used to make them. Beads from southern Africa are compared to those in East Africa, highlighting the probability that trading circuits to the two regions frequently differed.


Wood, M., L. Dussubieux, and P. Robertshaw
2012 Glass Finds from Chibuene, a 6th to 17th Century AD port in Southern Mozambique. South African Archaeological Bulletin 67(195):59-74. The investigators have identified a new glass bead series (the Chibuene series) that is distinct morphologically and chemically. These beads are drawn, mostly tubular, and have been heat rounded. This series may be earlier than the Zhizo series and, apart from Chibuene, has only been identified at Nqoma, in western Botswana. A Near Eastern origin for the glass is suspected.

Wood, M., L. Dussubieux, and L. Wadley
2009 A Cache of ~5000 Glass Beads from the Sibudu Cave Iron Age Occupation. South African Humanities 21:239-261. This site in South Africa produced strings of various colors of glass beads, some copper beads, and also two perforated Conus ebraeus shells. A necklace of shell disc-beads interspersed with blue glass beads was also present. Sixteen of the beads were analyzed chemically using LA-ICP-MS. The results indicate the beads originated in India.

Wood, Marilee, Serena Panighello, Emilio F. Orsega, Peter Robertshaw, Johannes T. van Elteren, Alison Crowther, Mark Horton, and Nicole Boivin
2017 Zanzibar and Indian Ocean Trade in the First Millennium CE: The Glass Bead Evidence. Archaeological and Anthropological Sciences 9(5):879-901; doi: 10.1007/s12520-015-0310-z. A sample of the beads recovered from the 7th-10th-century sites of Unguja Ukuu and Fukuchani on Zanzibar Island was analyzed by LA-ICP-MS to determine the origins of the glass, and potential trade relationships are considered.
Woodhouse, H.C.

Yates, Royden

Material dated to ca. 2000-1300 BP at a site in Namibia that initial changes in OES bead size are associated with the appearance of pottery and herding.

Zampetti, Daniela

Discusses the beads and pendants of various materials including stone, bone, ivory, ostrich eggshell, glass, and faience.

Zeebroek, Renaud

In the late 19th century, Luba Katanga (Democratic Republic of Congo) used European glass beads as currency. Separated into different categories, they were used for commercial exchanges, social (bridewealth), and decorative and symbolic uses.

Zerboni, Andrea, Sandro Salvatori, Pietro Vignola, and Abd el Rahman Ali Mohammed

Geochemical analyses of North and East African raw amazonite outcrops and artifacts found at the Neolithic cemetery of R12 in the Sudanese Nile Valley reveals southern Ethiopia as the source of the R12 amazonite.

Zerboni, Andrea and Pietro Vignola

The first scientific attempt to describe green stone beads from a Garamantian context and to verify some of the assumptions concerning the provenance and trading of the Garamantian emerald in ancient times. Includes chemical analysis.

Zerboni, Andrea, Pietro Vignola, Maria C. Gatto, Andrea Risplendente, and Lucia Mori

The composition of green-colored stone beads found at Fewet, a Garamantian site (2nd century BC - 1st century AD) in the Libyan Sahara reveals they consist of serpentinite and amazonite.

Zwan, Nelleke van der
Richly illustrated catalog of African beads and necklaces past and present with chapters on materials, glass trade beads, social role, and function. In Dutch with German translation.