CENTRAL AND SOUTH ASIA

The countries covered in this section include: Afghanistan, Bangladesh, Bhutan, India, Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan, and Uzbekistan. See also the two specialized theme bibliographies and the General/Miscellaneous bibliography as they also contain reports dealing with these countries.

Abraham, Shinu Anna
Concentrates on the beads recovered from Pattanam in southern India.

Reviews the available data for glass in pre-modern South India, including recently discovered sites in southern Andhra Pradesh, India, and considers strategies for reconstructing the broader socio-economic settings in which early South Indian Indo-Pacific bead manufacture took place.

Ahmed, Mukhtar
Chapter 19, Miscellaneous Crafts and Technologies, deals with stone beads.

Ajithprasad, P. and Marco Madella
Discusses the stone-bead industry at a site in west-central India including information about the sources of the raw material, drilling techniques, and trade.
Allen, Jamey D.
Discusses the “etched” stone beads so prevalent in India and Burma, and illustrates 40 decorative varieties from Mizoram, India.

Avanesova, N.A.
Spherical bronze beads and a lapis lazuli pendant were found in one grave within this 2nd-millennium BC cemetery in Southern Uzbekistan; beads of other materials are reported from Andronovo contexts.

Ayyar, Sulochana
Discusses the costumes and ornaments (including beads and pendants) of ancient India.

Barthélemy de Saizieu, B.
http://books.openedition.org/editionsmsh/8736
On hard-stone beads from Nausharo, a Harappan site in Pakistani Baluchistan which was occupied 2800-2000 BC.

Discusses the beads and pendants from the Pre-Ceramic Neolithic site of Mehrgarh in Pakistan.

Barthélemy de Saizieu, B. and A. Bouquillon
Stone beadmaking at Neolithic Mehrgarh, Pakistan.

Pakistan and India.

Barthélemy de Saizieu, B. and M. Casanova
On the production of stone beads at a 5th-2nd-century site in Kandahar, Afghanistan.

**Basa, Kishor K.**


**Bednarik, Robert G.**
A review is presented on the evidence for Late Pleistocene ostrich eggshell engraving and shaping in India. The engraved specimen from Patne, dated to c. 25,000 years ago, is considered authentic, as are some specimens of ostrich eggshell beads. All other examples of putative carving on ostrich eggshell from India are considered to be probably of natural origin.

1997  The Role of Pleistocene Beads in Documenting Hominid Cognition. *Rock Art Research* 14:27-43. The Upper Palaeolithic of India has yielded three ostrich eggshell beads, two from Bhimbetka III A-28 and one from Patne.

**Begley, V. and R.D. De Puma**

**Behera, Pradeep K. and Sakir Hussain**
2017  Early Historic Gemstone Bead Manufacturing Centre at Bhutiapali, the Middle Mahanadi Valley, Odisha. *Heritage: Journal of Multidisciplinary Studies in Archaeology* 5:269-282. Reports on the stone beads and production waste found at a site in east-central India attributed to the latter part of the 4th and 3rd centuries BC.
Bellina, Bérénice
Agate and carnelian beads are used to examine early exchange between India and Southeast Asia.

Bhan, Kuldeep K.
An overview of the bead industry at a site in west-central India with stress on the Harappan period.

Bhan, Kuldeep K., Jonathan Mark Kenoyer, and Massimo Vidale
Documents the existing traditional Khambhat stone-bead industry – the largest in the world – which is on the threshold of being transformed by modern technology and socio-economic change.

Bisht, R.S.
Relates the history of bead jewelry in India, emphasizing the Harappan Culture, using both literary and archaeological sources. The article also discusses the various stones and other materials utilized in bead production.

Bopearachchi, O.
Summary of five years research on trade ports on the south and west coast of Sri Lanka. See p. 16 and fig. 17 for beads of carnelian, lapis lazuli, amethyst, quartz, coral, glass, bone, and terra cotta from Ridiyagama and Giribawa amongst which glass dominates. Sodium, potassium, and mixed alkali glasses are all present.

Bopearachchi, O. And R.M. Wickremesinhe
Discusses glass and stone beads from several sites in Sri Lanka and South India with a catalog of representative types.

Bouquillon, A., B. Barthelemy de Saizieu, and A. Duval
Research reveals that the emergence of the first glazed beads goes back to the ancient Chalcolithic period (around 4000 BC) and that this use of glaze has undergone some changes during the following two millennia.

**Boussac, Marie-Françoise and M. Shafiqul Alam**


Excavations at the earliest urban center in Bengal, Bangladesh, yielded beads of glass and semi-precious stones.

**Boussac, Marie-Françoise and Jean-François Salles (eds.)**


See index for beads, glass bead manufacturing, and glass objects.

**Brunet, Olivier**


Using a technological and morphological approach, this study attempts to determine the origin of the beads and pendants found at two Bronze Age sites in Uzbekistan: Sapalli tepe and Dzharkutan. Materials include stone (agate, carnelian, jasper, lapis-lazuli, turquoise), synthetics (faience, frit), and metal (gold, copper).

2015  **Les perles en pierre de la péninsule omanaise du Néolithique et de l’âge du Bronze : approche synthétique. Les Nouvelles de l’archéologie 139:12-17.**

More than 100,000 stone beads (agate, carnelian, lapis lazuli, green softstone, etc.) recovered from a site in Oman occupied from the Neolithic to the Bronze Age are examined from a morphological, dimensional, and especially technological perspective.

**Campbell Cole, Barbie**

2008  **Heirloom Beads of the Kachin and Naga. Beads: Journal of the Society of Bead Researchers 20:3-25.**

The heirloom beads, known respectively as *khaji* and *deo moni*, are orange Indo-Pacific beads of a type traded from southeast India (probably Karaikadu) between 200 BC and AD 200. They were found by the Kachin and Naga in ancient graves. The trade that brought these beads to the region operated on a considerable scale. Ivory and fragrant oils destined for the Mediterranean world were exchanged for Indo-Pacific beads, cowries, chank shells, and carnelian beads, ornaments still worn by the Kachin and Naga today. India, Burma.


The Tani tribes wear various heirloom necklaces including those composed of highly distinctive melon-shaped beads of wound turquoise-blue glass. These are unique to central Arunachal and were already of
considerable age and very highly prized in the early 19th century. Their bubbly opaque blue glass and wound method of production suggest a Chinese origin.

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

Chakraborty, Sharmi
A site of the Early Historic Period (500 BC-AD 300) in West Bengal, India, yielded a wide variety of beads of terra cotta, stone, bone, faience, glass, and metal.

The bead assemblage was generally found to be quite homogenous throughout the study area with no strict regional patterning.

Charpentier, Vincent, Olivier Brunet, Sophie Méry, and Christian Velde
A section of the article is devoted to a discussion of the carnelian and agate beads in the region and how they may relate to the lithic deposits at Jebel al-Ma’taradh.

Chudjakov, Jurij S.
A Hunnish woman’s outfit includes chalcedony, glass, and coral beads of several shapes, probably imported from Central Asia or East Turkestan (p. 591, fig. 6).

Coningham, R.A.E.
A large tell at the early historic capital Anuradhapura in Sri Lanka has produced artifacts from the Balangoda Mesolithic to the 13th century AD. Numerous beads of glass and various other materials have been found.

As for Coningham (1990).

Dandwate, Pramod, Gurudas Shete, and Maya Patil
Excavations at Shiur in the Maharashtra state of India produced beads of glass, shell, and various stones, as well as areca-nut-shaped beads of terra cotta.

Dangi, Vivek

Artifacts recovered from an ancient site in northern India include beads of terra-cotta and semi-precious stones.

Dehigama, Kanchana
Summarizes what is known about the production of stone and glass beads in ancient Sri Lanka.

Deo, S.B.
2000 Indian Beads: A Cultural and Technological Study. Deccan College Postgraduate and Research Institute, Pune, India.

Presents the results of Prof. Deo’s extensive research on beads and pendants from archaeological sites and historical documents in India. See Kenoyer (2000-2001) for a review.

Derevyanko, A.P. and D. Dorj

Presents an overview of early cultures in Kazakhstan, southern Siberia, and Mongolia. Beads and pendants of shell, bone, perforated teeth, and ostrich eggshell from selected sites are discussed.

Deshpande-Mukherjee, Arati and Vasant Shinde

Beads of various shell species were found in Early Historic (1st century BCE to 1st century CE) and Harappan (3300 to 2000 BCE) contexts.

Durani, F.A, I. Ali, and G. Erdosy

Describes the material from this important Early Harappan urban site in the Gomal Plain, northwestern Pakistan.

Durante, Silvio

Shell beads from sites in Iran and Pakistan: the species used, manufacturing methods, and trade routes.
Beads of various materials from a Hellenistic settlement reflect links with East and West.

Francis, M.P.D.L. and P.G.R Dharmaratne
A deposit of abandoned beads, intaglios, glass, coins, etc., in the bund (retaining bank) of a disused reservoir. Many objects are of precious and semi-precious stones, some abandoned partly made.

Francis, Peter, Jr.
An exploration of the history and myth of the patron saint of the western Indian agate bead industry.

Discusses the stone beadmaking industries at the ancient sites of Kotalingala and Arikamedu in South India.

On Indo-Pacific beads and their manufacture.


A comparison of the amethyst and citrine beadmaking processes in South India at Kotalingala (Andhra Pradesh) and Arikamedu (Pondicherry) over the last four centuries BC.

Summary of beadmaking of various materials in India.

Southeastern India.

A survey of beads made in India in both ancient and modern times.

Important Sri Lankan emporium site of the 1st millennium AD. Discusses its bead trade connections from Rome to China, and manufacturing techniques of “Indo-Pacific” and other local types of bead.
Glass and stone bead production at ancient Arikamedu, India, and associated sites.

An account of Pumtek beads, their history and manufacture, including how to distinguish modern from ancient ones.


Describes the changes in conch bangle production, the modern bead industry of Gujarat, and the polishing methods used for stone beads in Khambat (Cambay), India.

The stone beadmaking industry of South India from ca. 1000 BC to the beginning of the 20th century.

Using ancient sources and more recent findings, Francis points out the importance of southern India as an area where stone beads were made, despite being overshadowed by the Cambay area.

2002 *Asia’s Maritime Bead Trade: 300 B.C. to the Present.* University of Hawai’i Press, Honolulu.
A book with a broad scope. In addition to the production, use, and provenance of beads involved in Asian maritime commerce, this book examines the importance of the bead trade for the economies of the countries involved and provides insights into the lives of its many participants: artisans, mariners, and merchants.

Summarizes the role of South India in the international trade in precious and semiprecious gem stones from early times.


Presents a very useful and impressive catalog of the beads recovered from this important Sri Lankan emporium site of the 1st millennium AD. See also Hannibal-Deraniyagala 2013.

**Francis, Peter, Jr. and G.L. Badam**  
Shell bead sources and production at a Chalcolithic village in Maharashtra, western India.

**Frenez, Dennys, Michele Degli Esposti, Sophie Méry, and J.M. Kenoyer**  
Discusses large fragments of three, almost identical, long biconical Indus-style beads made from a deep red-orange carnelian with notes on the drilling technique and origins.

**Gadzhiev, Magomed G., Philip L. Kohl, David Stronach, Ana María Arnanz, and Arturo Morales Muñiz**  
Carnelian disc beads and tubular “paste” beads with a Caspian shell ornament were found in an Early Bronze Age (Kura-Araxes) burned building (p. 148, fig. 7). Daghestan, Russia.

**Gaur, A.S., Sundaresh, and Vardhan Patankar**  
Beads were among the items produced at this site in northwestern India. $^{14}$C dates the material between 3470 ± 80 (cal. 3830–3640) and 1910 ± 80 (cal. 1950–1730) yrs BP.

**Ghilzai, Shazia Akbar and Asma Kanwal**  
Seeks to analyze the evil eye construct semiotically and its intricate relationship with fate and destiny within sociocultural value systems in Pakistan.

**Guillaume, O. and A. Rougeulle**  
Describes 43 beads in glass, resin, bronze, and many kinds of stone from a Hellenistic city in northern Afghanistan (pp. 56-58, pl.18, XV).

**Gupta, S.P., Tejas Garge, Sonali Gupta, and Anuja Geetali**  
Located in Gujarat State, India, the site yielded beads in a variety of materials including stone, terra cotta, glass, copper, and arecanuts. Cowries were also found, as was refuse from the production of stone beads.

**Hanlon, Julie A.**  
Occupied during the Chalcolithic and Early Historic periods, the ancient site of Gilund in the Mewar region of Rajasthan, India, yielded beads of terra cotta, shell, carnelian, and other semi-precious stones. Two bead polishers were also encountered.

Hannibal-Deraniyagala, Anne S.

Presents a summary of early glassmaking with descriptions of over 5,000 glass and 47 beads of rock crystal, amethyst, garnet, agate, and carnelian from Tissamaharama and the Akurugoda citadel site of an early historic Buddhist kingdom in southern Sri Lanka. Some beads made of shell and horn were also found.


Provides more bead data for this 1st-millennium site in Sri Lanka. See also Francis 2013.

Haque, Enamul (ed.)

Several articles mention beads of semi-precious stone and glass from this site in Bangladesh occupied from ca. 200 BC onward.

Heit, Ilia

The archaeological remains indicate production of a distinct type of disc bead from one species of the genus Didacna. They also allow a closer look at manufacturing techniques and raise questions about craft specialization as well as the presence of a long tradition of shell jewelry in the Circumcaspian region.

Herrmann, Georgina, K. Kurbanskhatov, and St John Simpson

A small number of carnelian, unidentified green and white stone beads, and a blue glass bead were recovered from 4th-5th-centuries Sasanian occupation contexts in Turkmenistan. Extensive sieving has failed to significantly affect bead recovery rates.

Hodjash, Svetlana
Some beads are included in this useful survey of surprisingly far-flung discoveries in Russia. Extensive bibliography.

**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.

**Isakov, A.I. and T.M. Potemkina**
Beads, probably 13th-11th centuries BC (figs. 4, 5, 8). In Russian with English summary.

**Jahan, Shahnaj Husne**
This site in Bangladesh was a production center for semi-precious stone beads as indicated by the recovery of a large quantity of core and waste materials such as stone blocks, flakes and chips, non-perforated, semi-perforated, and broken pieces of stone beads. The recovered beads are described briefly and include those of glass and terra cotta.

**Jamal Hasan, S.**
India.

**Jayakumar, P.**
South India.

**Kanungo, Alok Kumar**
Investigates traditional bead use among the Juang of Orissa State, going back 130 years, and examining the bead types and the changes in bead use.

Presents an overview of the history of glass in India and its origins, including Indo-Pacific bead production. Also provides a description of present-day bead production at Panaidupet, and the Bondo people of Orissa as bead-users.

The Bondo are a small isolated Austro-Asiatic linguistic group in Orissa, eastern India. Woven clothing is minimal but they wear abundant beads, mainly glass which are bought in weekly markets from itinerant traders. The beads themselves are for the most part made at Renigunta in Andhra Pradesh some 400 km to the south.

Glassmaking and bead production were small-scale industries in India, originating some time in the 1st millennium BC. Although evidence from 212 ancient sites, 36 of which are claimed to be manufacturing sites, provides some insight into the context and date of the industry, issues concerning manufacturing methods, function, and symbolic value seem only to be accessible through ethnographic analogy. This study combines both archaeological and ethnographic data, as well as literary evidence, to create a history of the bead industry in India.

An ancient and important technique of bead manufacture still used today is the “furnace-winding” method. Beads produced by this technique have been found in large numbers at various archaeological sites. This paper discusses the details of beads and bead waste produced by the technique and the specific criteria of production.

The Konyaks, one of the major Naga tribes in Nagaland, northeastern India, are one of the most complexly ornamented peoples in the world. Bead materials include glass, shell, stone, teeth and tusks, claws/horns, metal, bone, woods, seeds, hair, and fiber. Spacers are used such that all ornaments rest flat on the body. The spacer are predominantly made of bone, ivory, wood, bamboo, and recently also metal.

These beads each consist of 31 discoid, centrally punched palm leaflets, 29 of which are inscribed with Hindu religious texts. The author discusses four strings and one pendant composed of such beads, the texts found on them, their antiquity, the technique of making them, and their rosary-like function. India.

Despite intense cultural pressures from Sanskritization and Westernization, customs associated with death are extremely slow to change because death carries high emotional value and is tied to deeply held
afterlife beliefs. The study of death rituals, burial practices, and grave goods may identify persisting ancient traditions that might help determine the origins of the Naga, India.

Major report on the findings, including beads and pendants, at Kopia in Uttar Pradesh, a site that was occupied from the 8th century BC to the 4th century AD.

An updated Indian printing of *Glass Beads in Ancient India* (Kanungo 2004).

The only surviving traditional Indo-Pacific bead industry for at least the last two hundred years is at Papanaidupet, Andhra Pradesh, India. Having retained many traditional production methods, it has been crucial in answering many archaeological questions relating to glass in general and glass beads in particular.

Reports on the changes that have occurred in the Khambhat (Cambay) bead industry, with emphasis on the source of the raw material, technology, organization, and commerce.

**Kanungo, Alok Kumar (ed.)**
2017  *Stone Beads of South and Southeast Asia: Archaeology, Ethnography and Global Connections*. Indian Institute of Technology Gandhinagar.
This is the most comprehensive book on stone beads. With contributions from 25 leading scholars, the book dwells on related matter from ancient as well as modern India and other regions of Asia. The individual papers are listed elsewhere in this bibliography. Reviewed by Karklins (2018).

**Kanungo, A.K. and V.N. Misra**
Kopia is a pre-Indo-Roman contact glass manufacturing site in Uttar Pradesh, northern India. Relevant finds include 24 glass beads, tubes of Indo-Pacific glass, 2 glass collar beads, 1 millefiori bead, and 2 quartz, and 2 banded agate beads. Two crucibles and much glass waste, crucible fragments, and many lumps of glass all show that Kopia was a major glass-manufacturing site during the early historic Buddhist period.

**Kanungo, Alok Kumar, Varendra Nath Misra, and Vasant Shinde**
Discusses the beads recovered from a number of Chalcolithic sites in western India, with emphasis on the oldest village in India: Balathal. Materials include various crystalline and cryptocrystalline stones, glass, faience, bone, ivory, shell, coral, terra cotta, and steatite; 3rd-2nd millennia BC.
Karanth, R.V.

Discusses basic Cambay (India) stone beadmaking techniques with clear line drawings of the processes.

Karklins, Karlis

Kelly, Gwendolyn O.
Stone ornament production and trade in these objects were important aspects of economic life during the Early Historic period in South India (300 BCE-400 CE). This report focuses on the stone beads and bead blanks recovered from Pattanam. It appears that the local craftspeople focused on the production of carnelian and agate beads. To a lesser extent, they were also working locally available semi-precious stones such as quartz, citrine, and garnet.

Among the various crafts practiced at Kodumanal (400 BCE-400 CE) in South India was stone beadmaking. Numerous spindle whorls represent textile production.

An in-depth study of stone bead and ornament production and technology in South India.

Argues that trade during the Iron Age in South India was not systematic, but rather opportunistic and ad-hoc, primarily down-the-line trade, without regular access to specific non-local resources, with the possible exception of carnelian and steatite.

2016   Heterodoxy, Orthodoxy and Communities of Practice: Stone Bead and Ornament Production in Early Historic South India (c. 400 BCE–400 CE). *Archaeological Research in Asia* 6:30-50, doi:10.1016/j.ara.2016.03.001.
Argues that the South Indian producers of stone beads and ornaments should be considered as a single community of practice, not as distinct ethnic groups, as Francis (2002, 2004) suggested. The community
of practice in question, that of lapidary workers, was not homogeneous or rigidly bounded, but rather, was a community with members distributed across many sites in the region, connected by their shared practices and knowledge, and a heterodox acceptance of diverse ways of engaging in that practice.

**Kenoyer, J. Mark**

The production and use of marine shell objects during the Mature Indus Civilization (2500-1700 BC) are used as a framework within which to analyze developments in technology, regional variation, and the stratification of socio-economic systems.

On the materials, manufacture, mode of wearing, and social significance of beads from the Neolithic to the Harappan period. A major study, illustrated.

Various forms of beads and pendants are discussed.

Describes how the increased demand for antique beads has led to the wholesale destruction of ancient sites and is now seriously threatening the archaeological record of past cultures. The author considers replicas will satisfy the demand for antique-looking beads and provide income for traditional, non-mechanized, craftsmen. Describes and shows replica stone beads from India.

Extracts maximum information through the close study of beads from many angles (e.g., the perforations of long carnelian beads reveals drill types which may be evidence for Sumer-Indus links).


2003 Beads (pp. 54-55), Faience (p. 187), Bangles (pp. 51-52), Glass (pp. 251-252), Jewelry and Ornament (pp. 308-309), Material Culture (pp. 391-393), Metal and Metalworking (pp. 398-402), Pottery (pp. 481-483), Tiles and Tile making, Terra-Cotta (pp. 606-607). In *South Asian Folklore: An Encyclopedia – Afghanistan, Bangladesh, India, Nepal, Pakistan, Sri Lanka*, edited by Margaret A. Mills, Peter J. Claus, and Sarah Diamond. Routledge, New York.

Presents an excellent overview of the different materials and technologies used to produce beads of various materials at Harappa, Pakistan. Stone, shell, terra cotta, faience, glass, metal, and seeds are covered.


Focuses on the northwestern regions of the Indian subcontinent with special emphasis on the urban phase of the Indus Tradition. Basic technologies for the production of stone beads are presented with detailed discussions of shaping and drilling techniques. Pakistan.


Reviews some of the evidence for Indus internal and external trade and presents some new information based on comparative analysis of shell artifacts and beads from the Indus Valley and the Royal Cemetery at Ur.


Presents an overview of the types of artifacts that inform us about ancient Harappan measurement systems, in order to gain insight into their concepts of order and cosmology. Beads of terra-cotta and stone are discussed. Pakistan.


Provides an excellent overview of stone beadmaking with emphasis on the drilling aspect.


Presents a new approach to the identification, documentation, and interpretation of Harappan stone beads, and itemizes what information needs to be documented and how.

**Kenoyer, J.M. and K.K. Bhan**

Discusses the role of African Indians in the stone beadmaking industry.

Kenoyer, J.M., M. Vidale, and K.K. Bhan

Compares current beadmaking in Kambhat (Cambay) with Harappa, Pakistan, and other ancient sites.


Provides a brief overview of the beads recovered from this site in western India.

Khlopin, Igor N.
1997 *Eneolithic Period of South-Western Turkmenistan*. Russian Academy of Sciences, Institute of History and Material Culture, St. Petersburg.

Final report on the cemetery of Parkhai II in the Sumbar Valley. Copper, agate, calcite, carnelian, hematite, lapis lazuli, steatite, turquoise, “plaster” (gypsum?), mother-of-pearl, and bone beads are reported, many of which appear to have been worn as bracelets (pp. 135-136, 150, 162-163). Also drill fragments. Russian and English text.

Kock, Jan and Torben Sode
1995 *Glass, Glass Beads and Glassmakers in Northern India*. THOT, Vanlose, Denmark.

Presents a wealth of information on the modern glass bead and bangle industry of northern India. Numerous color photographs and b&w drawings. See Francis (1994) for a review.

Koiso, Manabu, Hitoshi Endo, and Ayumu Konasukawa

Provides ethnographic details about the beads and necklaces used by the Nagas of northeastern India.

Konasukawa, Ayumu, Hitoshi Endo, and Akinori Uesugi

The site yielded a wide variety of beads but especially those of terra cotta and various types of stone. They are attributed to the Harappan and Historical periods. Includes information regarding the drilling technology used based on silicone casts of the perforations.
New observations of steatite microbeads from Zhekhad in northern Gujarat, India, strongly suggest that Harappan craftspeople made the beads by cutting, drilling, and grinding solid steatite rock rather than by forming them from a ground steatite paste as was previously thought.

This study addresses antique stone beads made of agate, carnelian, turquoise, jasper, and lapis lazuli, and focuses on stylistic and morphological features as well as manufacturing techniques, specifically the nature of drilling used to perforate the beads.

Reconstructs the costume (dress, kaftan, and headdress) of a woman buried in an early Sarmatian burial ground in western Kazakhstan. Key decorative elements include small sewn-on metal badges, biconic metal beads, and pendant amulets of wolf fangs and teeth clad in gold. English abstract.

A history of pearl fishing in Sri Lanka and the associated pearl trade over the last 2,000 years, written from the Sri Lankan point of view.

On the discovery of perforated crocodile tooth ornaments among 41 drilled tooth artifacts belonging to eight vertebrate species uncovered during archeological excavations at the Jethawanarama monastic site, Anuradhapura.

A quantitative model has been designed based on Cambay data to ascertain an indication of annual Harappan bead production and the number of workers involved, based on the number of beads found at different sites.
Matveyeva, N.P.

A western Siberian site of the Sargat Culture, 1st-3rd centuries AD, yielded cylindrical beads of “white and blue opal glass or jet, gilded truncated biconical ones, flat and composite,” and a small green cylindrical (segmented?) type “imitating Egyptian faience.”

Maurya, Jyotsna
Examines the different types of ancient amulets and pendants excavated in Maharashtra in western India, the techniques used in making them, their parallels in literary and sculptural representations, and Buddhist influence on them. Giving insights into the sources of raw materials used in these charms, the author takes up in detail the trade relations of a specific site with other contemporary sites. A major focus is on the Mauryan (ca. 322-183 BC) and Satavahana (50 BC to AD 250) periods. See Kenoyer (2002) for a review.

Besides being used for decoration, distinctive beads also have religious, therapeutic, and superstitious reasons behind their use. Many of the beads under study have come from archaeological excavations.

Meadow, Richard H.
Steatite beads with trefoil decoration figure in a discussion of the foreign objects rarely found in Harappan contexts; early 2nd millennium (pp. 197-199, fig. 4). Pakistan.

Mei, J. and C. Shell
Agate, glass, and etched carnelian beads figure in the cultural attribution of a late-1st-millennium tomb (p. 218, fig. 14.5). Mentions stone, bone, and carnelian beads from a site in the Eastern Pamirs (p. 223) and a carnelian bead from a site in the northern foothills of the Tian Shan (p. 227, fig. 14.18).

Miller, Heather M.-L.
Concentrates on beads of the 3rd millenium BC. Pakistan.

Minyaev, S.S.
Glass and stone beads are mentioned among grave goods of pastoral tribes in Siberia, 3rd century BC onwards, which cast light on the Huns. The archaeological evidence so far does not agree with Chinese written sources.

Mohanty, Rabindra Kumar  
1999  
Significance of a Bead Manufacturing Centre at Mahurjhari, District Nagpur, Maharashtra, India.  

2008  

2017  
Covers the period from the earliest beadmakers to the Early Historic Period and the study area encompasses most of central and southern India.

Mohanty, R.K. and Tilok Thakuria  
2016  
Provides a detailed account of non-glass bead manufacture and trade in India from the upper paleolithic to early history. Includes information about manufacturing techniques, raw materials, and manufacturing centers in ancient India, as well as traditional bead manufacturing at Khambat, Gujarat.

Mouherat, Christophe, Margareta Tengberg, Jérôme-F. Haquet, and Benoît Mille  
2002  
Analysis of a copper bead from a Neolithic burial (6th millennium BC) at Mehrgarh allowed the recovery of several threads, preserved by mineralization. They were characterized according to new procedure, combining the use of a reflected-light microscope and a scanning electron microscope, and identified as cotton (*Gossypium* sp.). The Mehrgarh fibers constitute the earliest known example of cotton in the Old World and put the date of the first use of this textile plant back by more than a millennium.

Nath, Amarendra  
2014  
Thorough analysis of the recovered beads of stone, faience, bone, shell, metal, and terra cotta. Also includes a lengthy discussion of the Harappan stone bead industry.

Niharika  
1993  
*A Study of Stone Bead from Ancient India*. Bharatiya Kala Prakashan Prasad, New Delhi.

Paech, Hans-Jürgen  
1993  
Beads from an important ancient site in northern India.
Parmar, Narender
A village-to-village survey in the Bhiwani district of India located 66 sites, placing 40 of them on the archaeological map of India for the first time. The sites range in date from the early Harappan through the medieval period. Steatite, faience, and terracotta beads were recovered.

Peyronel, L.
Some remarks on Harappan etched carnelian and segmented faience beads (pp. 209f.), Pakistan.

Pongpanich, Bunchar
Briefly surveys beads recovered from sites in Southeast Asia, primarily in Thailand, and discusses the bead trade with India.

Prabhakar, V.N.
Reports on the microscopic and statistical analysis of the large number of Ernestite drills recovered from the Harappan site of Dholavira in Gujarat, India. This has led to a better understanding of the different drill types and sub-types, and their attributes.

Prabhakar, V.N., R.S. Bisht, R.W. Law, and J.M. Kenoyer
Analyzes a large collection of Ernestite drill bits associated with the beadmaking industry at Dholavira, a site of the Harappan Culture in Gujarat, India.

Prasad, Ravi, V.N. Prabhakar, and Vikrant Jain
Aims to assess the geological and chemical properties of the various types of stone used to manufacture beads at Dholavira, a Harappan Culture site in Gujarat state, India, with an eye to determining their origins. It also delves into how the different stones are affected by physical and chemical weathering.
Rahman, Shah Sufi Mostafizur
Discusses stone beads recovered from one of the earliest urban archaeological sites so far discovered in Bangladesh.

On the glass beads excavated at an early urban site in Bangladesh.

The beads date to the period from the 3rd century BC to the 3rd century AD. Discusses the role the site may have played in the long-distance maritime trade.

Rajagopalan, Ashvin and Darshini Sundar
Outlines a study that aims to understand the bead trade in Tamil Nadu, India, from 400 BCE to the present day.

Rajan, K.
Utilizes information gathered from present-day gem cutters in Kangayam, central India, to better understand the technology used to produce beads recovered from excavations at nearby Early-Historic Kodumanal.

Ratnagar, Shereen
Discusses possible Indian sources (pp. 57-58) of the carnelian used in the production of long beads and etched varieties by Harappan artisans.

Ray, Sikhasree, Tilok Thakuria, and Santanu Vaidya
Focuses on the beads found in excavations at two major sites in Odisha, India: Sisupalgarh and Manikpatna. Materials include semiprecious stones, terracotta, glass, and organic.
Rossi-Osmida, Gabriele (ed.)
A Bronze Age necropolis in Turkmenistan with some bead-rich burials.

Roux, Valentine (ed.)
Contains nine articles on various aspects of beadmaking technology in the Indus Valley of India and Pakistan, as well as related topics. The articles are listed individually in the respective sections of this bibliography.

Roux, V., B. Bril, and G. Dietrich
Skills involved in knapping Harappan long carnelian beads are studied based on present-day bead knapping in Khambhat in order to assess their value as well as the knappers’ socio-economic status.

Roux, Valentine and Pierre Matarasso
Presents ethno-archaeological data on Harappan carnelian beads in Pakistan and India.

Aims to characterize the organization of the Harappan carnelian beadmakers in order to examine the relationship between artisans and elite, and the destination of beads.

Roux, V, and J. Pelegrin
Preliminary results of a detailed study of Cambay beadmakers and their relative level of competence as may be expressed in archaeological contexts. India.

Ruikar, Tejal N., Prabodh Shirvalkar, Y.S. Rawat, and Satish Naik
This paper is intended to provide an insight into the economic condition of the people at a rural Harappan site in India based on the study of the beads. Materials include various stones, terra cotta, bone, shell, and faience.
Salvatori, S., M. Vidale, G. Guida, and E. Masioli
Surface finds include a number of copper beads as well as a silver example. Their production and composition are discussed.

Sarianidi, Viktor
1985 *L’or de la Bactriane: fouilles de la nécropole de Tillia-Tépé en Afghanistan septentrional.* Éditions d’art Aurora, Leningrad.
Sumptuously illustrated volume of treasures from a Bactrian cemetery in Afghanistan, including fine decorated gold beads and beads made from various stones.

Mentions flat plaster beads, 3rd millennium (pp. 161f., fig. 54); bicones with dot-in-circle decoration, 2nd millennium (fig. 55); gold with enamel, 1st century AD (fig. 169).

Graves at the Graeco-Bactrian site of Tillya Tepe, Afghanistan, yielded sumptuous gold jewelry including faceted and granulated gold beads.

Beads of many types and interesting shapes contribute to a picture of a high and distinctive culture in northern Afghanistan during the Bronze Age (2nd millennium). Some beads are hard to date and may be later (pp. 9-16, figs. 9-16).

Sedov, A.V.
Stone, bone, shell, coral, and glass paste beads of various shapes are illustrated; 4th-5th centuries AD. In Tadjikistan. In Russian with brief English summary.

Selvakumar, V.
Presents excerpts from early Tamil texts that mention beads and other ornaments; southern India.

Provides a detailed statistical report on the ornaments donated to the various deities as recorded in ancient temple engravings in southern India.
10 kg of mainly gold and silver jewelry were recovered from a looted hoard at Mandi, northern India. Two periods are represented at the site: Harappan (ca. 2000 BC) and Kushan (from AD 100). The hoard is thought to be Harappan. There are beads of gold, banded agate, onyx, copper, and many etched beads with trefoil and eye designs.

Excavations in the Junnar region of India yielded beads of semi-precious stone, faience, glass, gold, and terracotta, along with rings, bracelets, and other ornaments.

A 4th-century-BC grave with 30 or more partly mummified individuals. Necklaces of seeds, shell discs, carnelian, and also glass of several colors are present. Some bead types are among the indicators of contact with Central Asian steppe cultures (p. 390).

Burials in Chokhopani South Face localities were accompanied by small glass beads and tubes of brass and copper that either comprised necklaces or were braided onto garments. They date to the Licchavi or early Malla period.


Necklaces composed of glass, carnelian, shell, and seeds accompanied the individuals in Mebrak Collective Burial 63. Radiocarbon dating places the burials between 400 calBC-50 calAD.

Discusses the possible reasons for the survival and non-survival of several categories of small finds, including beads, at multi-period urban sites in Turkmenistan.
Singh, R. N.
The site is in the Benares (Varanasi) region of India, ca. 400-200 BC. In Russian.

Smagulov, E. A.
A woman’s burial in southern Kazakhstan included beads of carnelian, coral, glass, and amber, and bracelets of large amber beads, all described in some detail but not illustrated. Some perhaps came from Iran by trade or as booty.

Sode, Torben

Somadeva, Raj
Beads of clay, stone, bone, shell, metal, and glass were recovered from several sites occupied during the 1st millennium BCE and the 1st millennium CE.

Stern, E. Marianne
On drawn beadmaking at Papanaidupet, India.

Strickland, Keir Magalie
Discusses the stone and glass beads recovered from Anuradhapura, Sri Lanka’s first capital. The beads date from around the 4th century AD to the 11th century.

Tanabe, K., A. Hori et al.
Finds from the 6th-8th-centuries levels of the citadel in southern Uzbekistan include a single spherical etched carnelian bead and a small number of other beads (p. 114). In Japanese.

Thakuria, Tilok
2007 The Society and Economy During Early Iron Age and Early Historic Period in Deccan with Special Reference to Beads (1000 BC to 500 AD). Ph.D. dissertation. Deccan College Post Graduate and Research Institute, Pune, India.

Thakuria, T. and R.K. Mohanty  

Tissot, Francine  
A succinct yet rare attempt to link jewelry depicted in detail on Gandharan sculpture with excavated pieces, notably from contemporary sites in Uzbekistan and the Russian steppe. Pakistan, Afghanistan.

Uesugi, Akinori, Manmohan Kumar, and Vivek Dangi  
Presemts a thorough analysis of the stone beads recovered from two Urban Indus sites in northern India, including a reconstruction of the bead production process.

Uesugi, Akinori, Izumi Nakai, Manmohan Kumar, Kyoko Yamahana, Yoshinari Abe, Junko Shirataki, Kanae Toyama, and Vivek Dangi  
While no clear-cut variation was observed, the results of morphological and compositional studies reveal homogenous features in the styles and production of faience objects (including beads of several forms) that characterize the Urban and Post Urban Indus periods in the Ghaggar Valley of India.

Uesugi, Akinori and Wannaporn Kay Rienjang  
Silicone casts made of the perforations of stone beads recovered from an early 1st millennium site in northern Pakistan provide information concerning the various drilling techniques used.

Urazova, Dinara  
2014  2,000 Year Old Burials Discovered in South Kazakhstan. Archaeology News Network,  
Illustrates some of the stone beads found with the burial of a Sarmatian woman.

Vaidya, Shantanu and R.K. Mohanty  
Discusses the evidence for a small-scale beadmaking industry at a megalithic site in central India that utilized chalcedony, jasper, agate and carnelian as a raw material.
Vanzetti, A. and M. Vidale
Stone beadmaking at Neolithic Mehrgarh, Pakistan.

Vidale, Massimo
Reconstructs steatite beadmaking at the ancient Harappan site of Mohenjo Daro, Pakistan.


Carnelian beadmaking may have been segregated to control the production of status items. Pakistan.

Vidale, M., J.M. Kenoyer, and K.K. Bhan
On contemporary stone (agate) beadmaking at Khambhat (Cambay), India.

Vidale, Massimo, Maurizio Mariottini, Giancarlo Sidoti, and Muhammad Zahir
Deals with the archaeological material recovered from a Chalcolithic craft center. The emphasis is on lapis lazuli and chert drill heads.

Vidale, M. and Heather M.-L. Miller
“Indus technical virtuosity” refers to the distinctive Indus characteristic of inventing and diffusing complex techniques for the production of small, elegant objects such as beads. It is argued that such virtuosity had important implications for the social patterning of Indus period and later communities. The relationship between societal patterning and the types of objects valued over time, particularly rare exotic
materials vs. technologically complex materials, is also examined, both for the Indus case and as a general cross-cultural model.

**Vikrama, Bhuvan**


Concentrates on the beads recovered from the Painted Grey Ware levels at a site in northern India.

**Vinogradova, N.M. and G. Lombardo**


A detailed synthesis, with C14 dated chronology, of this region of ancient Bactria during the late 2nd millennium BC. Among the finds from cemeteries are beads of lapis lazuli, carnelian, and paste.

**Wagner, Mayke and Hermann Parzinger**


Late Bronze Age site in Chinese Central Asia: bone, stone, and turquoise beads.

**Yablonsky, Leonid T.**


Beads and other adornments of a variety of materials are included in the discussion. Kazakhstan, Uzbekistan, and Turkmenistan.

**Yam, Sheung Cheong**

2007 *The Mystery of Dzi, Book 1 and Book 2.*