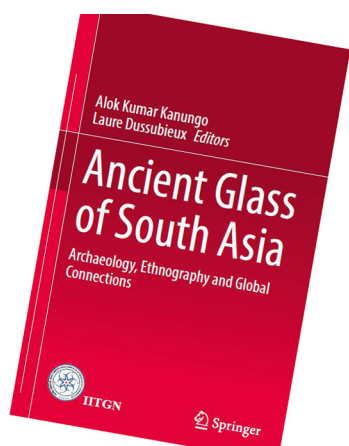


## BOOK REVIEW

*Ancient Glass of South Asia: Archaeology, Ethnography and Global Connections.*

**Alok Kumar Kanungo and Laure Dussubieux (eds.).**  
Springer Nature Singapore. 2021. 558 pp., 368 figs.  
\$119.00 (eBook); \$159.99 (paper).

*Ancient Glass of South Asia* is based on papers presented during a five-day conference on the “History, Science, and Technologies of Ancient Indian Glass” organized by the Archaeological Sciences Center at the Indian Institute of Technology, Gandhinagar, in January 2019. The 22 chapters are organized into five sections. The first section, **Glass Origin and Evolution**, begins with Thilo Rehren’s review of “The Origin of Glass and the First Glass Industries” in Mesopotamia and Egypt, followed by a discussion of “Glass



in the Middle East and Western Europe at the End of the First Millennium CE, Transition from Natron to Plant Ash Soda or Forest Glasses” by Bernard Gratuze, Nadine Schibille, and Inès Pactat. While neither of these chapters are directly related to bead study, both are fundamental in understanding the early history of glass production and exchange. In the third chapter, “Glazed Steatite and Faience Technology at Harappa, Pakistan (>3700-1900 BCE): Technological and Experimental Studies of Production and Variation,” Jonathan Mark Kenoyer presents a detailed review of glazed steatite and faience technology, along with the results of replication experiments, some done at the conference itself.

In the fourth and final chapter in this section, co-editor Alok Kumar Kanungo’s review of “Traditional Bead and Bangle Crafts in India” includes many excellent photographs from his own fieldwork. Taken together, these four chapters provide a strong background to glass study in general and to glassworking in India in particular.



Kanungo (p. 117).

The second section, **Scientific Study and Care of Glass**, begins with co-editor Laure Dussubieux’s excellent review of glass elemental compositions and recipes, showing how the various techniques of chemical analysis may help answer archaeological and technical questions where visual examination alone is not sufficient. The next chapter, “Isotope Analysis and its Applications to the Study of Ancient Indian Glass,” by Dussubieux, Christophe Cloquet, and T.O. Pryce, is clearly presented and shows how the isotopes of strontium, neodymium, and lead enhance and sometimes contradict observed similarities in chemical composition. Stephen P. Koob’s useful chapter on “The Conservation of Glass” answers many questions on how best to preserve and repair glass artifacts. The section ends with Joanna Then-Obluska’s “Typology of Glass Beads: Techniques, Shapes, Colours and Dimensions.” Even more than the previous chapters, this one is must-reading for anyone interested in glass beads and how they are made, and could easily serve as a stand-alone primer for bead study.

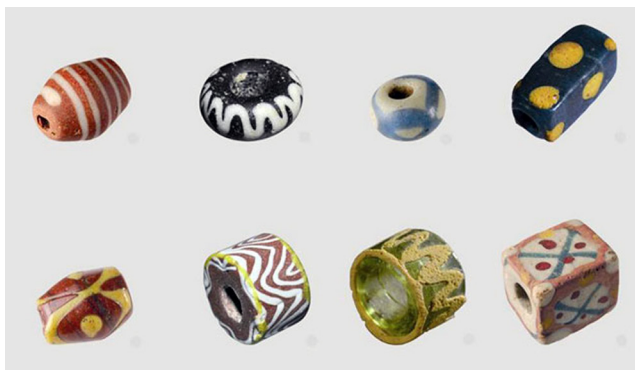


Then-Obluska (p. 214).

Section three, **Ethnography and Literature**, shifts the focus more directly to glass in India. It begins with Alok Kumar Kanungo's "Glass in Indian Archaeology, Ancient Literature, Historical Records, and Colonial Accounts." This valuable chapter presents the archaeological and historical background to the Indian glass industries discussed earlier by the same author, with detailed information on the evidence for glass and glass beads from the early Iron Age, ca. 1000 BCE, to the beginning of the 19th century CE. The second chapter in this section, Buhvan Vikrama's "Situating Harinagar Finds in Pre-Iron Age Glass Crafts," challenges our current understanding of the origins of glass in India by presenting photographic evidence for what appear to be layers of enamel or glazing on the surface of copper vessels from Harinagar that may date as early as 2300 BCE. If supported by further work, this early date could suggest that "Indian" glass developed in parallel with emerging glass technologies in Mesopotamia and Egypt. "The History of Glass Ornaments in Tamil Nadu, South India: Cultural

Perspectives," by Veerasamy Selvakumar, reviews glass finds, mostly beads, from early sites like Arikamedu and Kudikkadu up to more recent times. The parts on glass bangle production and use are particularly interesting and well illustrated. The final chapter in this section, by Jan Kock and Torben Sode, reviews "Traditional Glass Mirror Making in Kapadvanj, Gujarat, India." The many color photographs provide rich illustrations of the processes, products and people involved in this craft that dates back to the 16th century.

The fourth section, **Glass Products in South Asia**, begins with "Glass Beads of Eastern India (Early Historic Period)," by Sharmi Chakraborty. This excellent summary of the bead evidence links bead color, shape, and chronology to inland and coastal sites in this less studied region of the Indian subcontinent. Next, in "A Review of Selected Glass Bead Types from the 2007-2009 Seasons of Excavation at Pattanam, India," Shinu Anna Abraham tells us about the more than 100,000 glass beads found at Pattanam, including excellent photographs of the types of beads found at the site thought to be the remains of Muziris, the major early port on India's southwestern coast. The chapter is greatly enhanced by photographs of not only the small drawn, monochrome beads called Indo-Pacific by Peter Francis, but also the lesser known varieties so richly represented at Pattanam. Along with the prior chapter by Then-Obluska, Abraham's chapter on beads from Pattanam will be a particular delight for any student of beads and bead history. Mudit Trivedi's chapter "Glass Bangles in South Asia: Production, Variability, and Historicity" builds on the previous chapters by Kanungo and Selvakumar to provide detailed explanations of how both "seamless" and "seamed" Indian bangles were made, along with an archaeological history of the glass bangle in South Asia. "West Asian Glass in Early Medieval India as Seen from the Excavations of Sanjan," by Kurush F. Dalal and Rhea Mitra-Dalal, jumps us forward to Sanjan, Gujarat, in the 10th-12th centuries. There, at a community known for its large Zoroastrian population, local or regional glass beads contrast with imported West Asian glassware. While such Early Islamic period glass is relatively common in Malaysia and peninsular Thailand, glass vessels have been rare in India, perhaps, as the authors suggest, because of a taboo for using glass by the Hindu upper castes. The final chapter in this section is by Maninder Gill on "Interrelations in Glass and Glazing Technologies in Mughal Tilework." Applying art historical and laboratory investigation to the study of decorative tiles of the 16th-17th centuries, Gill uncovers two distinct techniques for glaze production, each linked to traditional glass manufacture. The chapter is enriched by clear explanations and beautiful photographs.



Gratuze, Pion, and Sode (p. 430).

The fifth and concluding section, **The Diffusion of South Asian Glass**, begins with a chapter by Bernard Gratuze, Constantin Pion, and Torben Sode on “Indian Glass Beads in Western and North Europe in Early Middle Age.” The authors tell the surprising story of two groups of beads, one very small (less than 1.5 mm diameter), predominantly opaque green and found in Merovingian (mid-5th to 6th centuries) graves in western and northwestern Europe, and the other much larger (10-12 mm diameter), either red or orange, from early-7th-century graves in northern Germany, Denmark, and Sweden. While most European beads from these periods were made from recycled Roman glass, these two groups show strong links to glass produced in South Asia. Next, Sunil Gupta’s chapter “Early Glass Trade Along the Maritime Silk Route (500 BCE-500 CE): An Archaeological Review” lays out the archaeological evidence for glass vessels and beads found from Arabia to China, Korea, and Japan, highlighting the expansion of trade during the first three centuries CE. In the third chapter, Laure Dussubieux summarizes current research on “Indian Glass in Southeast Asia.” The clear explanations of the various types and excellent photographs are highlights of this chapter, which concludes with a reconsideration of Peter Francis’ model for the expansion of South Asian glassmaking and beadmaking technology. One of the major advances in glass study in recent years has been our understanding of the early glass bead trade to eastern Africa. Laure Dussubieux and Marilee Wood have been key contributors to this knowledge, and in the next chapter, “Indian Glass: Chronology and Distribution in Eastern Africa,” they review the current evidence, mostly from the second millennium CE and based

on their own work plus that of others, for changes in both glass production in India and glass trade around the Indian Ocean. In the final chapter of the book, author Joanna Then-Obłuska returns to an earlier period to examine “Indian Glass Beads in Northeast Africa Between the First and Sixth Centuries CE.” While some Indian glass beads have been found at Red Sea ports dating to the early Roman period, the bulk of the imports found along the Red Sea coast and the interior of Northeast Africa are from the 4th-6th centuries CE. Then-Obłuska’s detailed review of beads from multiple sites, coupled with her characteristic excellent photographs, will interest most readers of *Beads*.

*Ancient Glass of South Asia* is an outstanding contribution to the study of glass in general and to the study of early glass beads in particular. The introductory chapters are superb reviews of the state of glass study today and will be valuable for any student of archaeology. I, for one, wish that such concise summaries had been available when I began to study archaeology 20 years ago. Likewise, the sections on the ethnography and archaeology of glass production and usage in India are excellent resources for understanding the sometimes-complex technologies involved. In addition, these chapters build on one another, so that what may not be completely clear in one chapter is filled out in another. Indian Ocean trade, the Maritime Silk Road, and proto-globalization are hot topics in archaeology today, and the several chapters on the diaspora of Indian glass beads to Southeast Asia, Europe, and Africa detail much of the evidence for early exchange, additionally highlighting the unexpected expansion of Indo-Mediterranean trade during the Late Antique period from the 4th-6th centuries. The many excellent photographs are a particular pleasure for the reader and fundamental to the value of the publication.

Congratulations to the organizers of the conference, the editors, and the individual authors for this excellent work that I’m sure will be enjoyed by many readers of *Beads*. The volume is up-to-date and should be a valuable resource for many years to come.

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