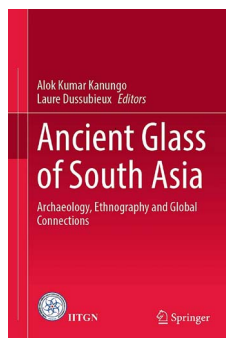




## Book Review

ALOK KUMAR KANUNGO & LAURE DUSSUBIEUX (ed.) 2021. *Ancient glass of South Asia. Archaeology, ethnography and global connections*. Singapore: Springer; 978-981-16-3655-4 hardback £119.99.



Our understanding of ancient glass in the Old World has predominantly centred on regions around ancient Egypt, Mesopotamia, the Mediterranean and Europe. Until recently, South Asian glass has been largely overlooked in the global scholarship on glass. There are several noteworthy aspects which make South Asian glass unique and important to the study of archaeological glass. Firstly, South Asia's glass industry stands out due to its unique recipes and production technology. Unlike regions such as the above mentioned, which primarily focused on glass 'vessels', South Asian glass production places a significant emphasis on crafting glass 'ornaments', as evidenced in both archaeological findings and ethnographic accounts.

Moreover, South Asia's strategic position at the crossroads of the maritime and overland 'Silk Roads', along with the widespread distribution of its glass products, underscores the region's pivotal role in these expansive exchange networks, revealing many details into ancient trade routes. This informative volume, which emerged from the 2019 Conference-cum-Workshop on Ancient Indian Glass in India, is the first comprehensive study of ancient South Asian glass in recent years.

The volume is structured into five parts. Part 1, 'Glass origin and evolution', comprises four chapters. The first chapter delves into the glass exchange networks and production organisation of ancient Egypt and Mesopotamia during the Late Bronze Age (mid-second millennium BC). The subsequent chapter shifts the focus to the changes in glass recipes and material circulation in the Middle East and Europe during the first millennium AD. While these two chapters do not directly pertain to South Asian glass, they offer a comparative study that facilitates an understanding of the similarities and differences between South Asian glass and its counterparts. The third chapter provides intricate insights into South Asian glazed steatite and faience technology, emphasising their local development, which diverges from contemporaneous West Asian and ancient Egyptian practices. Chapter 4 explores the production of glass beads and bangles, primarily through ethnographic records, thereby offering readers a glimpse into the craftsmanship of glass ornaments in South Asia.

Part 2, 'Scientific study and conservation of glass', encompasses four chapters. The first two chapters furnish a succinct introduction to the principles and analytical techniques employed in elemental and isotopic analysis of glass, complemented by specific case studies concerning potential South Asian glass beads found in Kish, Iraq and isotopic assessments of South and Southeast Asian glass, respectively. The third chapter provides a concise overview of ancient glass object preservation methods. The fourth chapter establishes a

classification framework for glass bead typology. These chapters serve not only as good resources for the study of South Asian glass but also cater as an entry lesson into the research of archaeological glass.

Part 3, 'Ethnography and literature', consists of four chapters, addressing a pervasive challenge in the study of ancient glass: the paucity of direct archaeological evidence concerning glass production. In most cases, researchers can only rely on indirect evidence such as object style and chemical composition to unravel aspects, for example raw materials, patterns of organisation, material exchange and consumption. Ancient literature and ethnographic data are therefore important references, facilitating parallel investigations that allow scholars to compare archaeological findings with historical and ethnographic records. Not all regions, however, yield abundant ethnographic records, rendering the ethnographic studies presented here invaluable contributions to the broader field of archaeological glass research. The first chapter offers an overview of archaeological glass finds in India, coupled with archaeological evidence of glass production and relevant historical records. The second chapter discusses the chronological issues of early glaze/enamel/glass craftsmanship in India, examining glassy surfaces on pre-Iron Age metal artefacts through visual observation. Although its placement in Part 1 following the chapter on glazed steatite technology could be considered more apt. Chapter 3 focuses on Tamil Nadu in southern India, delivering abundant ethnographic and literary data covering production, exchange and consumption. This chapter highlights interactions among producers, traders and consumers, and expands beyond the archaeological evidence. It further explores the evolution of cultural and social practices related to glass ornaments in response to socio-economic changes. The fourth chapter investigates the ethnography of a distinctive lead-coated glass mirror in western India, meticulously documenting the raw material procurement, furnace construction, production processes and consumption. The last two chapters stand as important references for the examination of organisation and craft technology in ancient glass.

Part 4, 'Glass production in South Asia', encompasses five chapters. Chapter one explores the regional distribution of glass beads in eastern India, focusing on bead styles, colours and limited elemental data. Variations in bead styles and colours between coastal and inland regions hint at potential connections to group aesthetics or material circulation networks. Chapter 2 shifts the focus to the Pattanam site in southwestern India, providing an initial description of various glass bead types found there, including the common 'Indo-Pacific monochrome drawn beads' and a diverse array of other bead varieties. Chapter 3 explores glass bangle production, presenting manufacturing methods through ethnographic accounts and an overview of the temporal and spatial distribution of glass bangle forms in archaeological records, including some chemical composition data. Given the limited research on South Asian glass bangles, this chapter lays the groundwork for future research, with potential for further analyses, including chemical analysis, to illuminate bangle production and its associated networks. Chapter 4 examines early medieval Western Asian glass artefacts unearthed in northwestern India. Here the presence of Western Asian glass has garnered less attention and data are scarce. The chapter chiefly identifies the origin of these artefacts in Western Asia through their typology, with prospects for future chemical analysis to enhance provenance determinations. Chapter 5 investigates glazed tileworks in the

Mughal period (1526–1767) and their connection to South Asian indigenous glass raw materials through scientific analysis. Two distinct technologies are identified, with one glaze recipe closely resembling traditional Indian mineral soda alumina glass. This discovery provides a foundation for future discussions on knowledge exchange between glaze and glass-making technologies.

Part 5, 'The diffusion of South Asian glass', comprises five chapters that expand the focus beyond South Asia, in researching glass beads and utilising chemical analysis to trace their South Asian origin. The first chapter informs readers that high alumina soda glass or glass beads from South Asia likely found their way to northern or western Europe by the seventh to eighth centuries BC, although the exchange mechanisms and routes remain unclear. The second chapter spans the period from 500 BC to AD 500 and examines the typology of glass artefacts across a vast geographical region from the Mediterranean to East Asia, shedding light on glass maritime trade and supply-demand networks within this extensive area. The third chapter shifts the gaze to Southeast Asia and the eastern flank of the Indian Ocean. Research conducted over recent decades has shown a close nexus between Southeast and South Asian glass exchange networks. Scientific analyses of South and Southeast Asian glass were undertaken and subsequently refining Peter Francis' (2002) initial model and unveiling a more intricate material circulation and knowledge exchange network. The fourth and fifth chapters concentrate on the western side of the Indian Ocean. Chapter 4 discusses the evolution of glass chemical compositions and bead typology between the tenth and seventeenth centuries. Various subgroups of high alumina soda glass can be discerned and likely stem from multiple glass production centres in South Asia. Chapter 5 addresses glass beads unearthed from archaeological sites along the Red Sea coast in Northeast Africa, dating from the first to the sixth centuries, suggesting a South Asian origin through bead typology, reinforced by some supporting chemical analysis. This chapter underscores that prior research in this region predominantly emphasised its connection with northern Mediterranean trade networks, while the linkage to the Indian Ocean remained underexplored, inviting further dialogue on the multifaceted trade interactions between the Red Sea coast and the Indian Ocean network.

This hefty volume is full of fruitful information but the early stage of research in several chapters, especially regarding the analysis of archaeological materials excavated from South Asia, is a drawback. The lack of more comprehensive studies, particularly in terms of scientific analysis, limits the depth of discussions. Several authors, however, express their intentions to conduct further research, offering prospects for the release of more extensive data in the future. Despite these limitations, the book's strengths outweigh its weaknesses. Collectively these chapters enhance the study of South Asian glass, providing multifaceted insights across archaeological, ethnographic, historical and analytical dimensions of glass materials and their significance in South Asia and beyond. South Asian glass research is effectively connected with the broader academic community focused on archaeological glass research, making it an excellent introductory resource for researchers, especially emerging scholars, interested in South Asian glass research. Moreover, it introduces fresh perspectives and insights, including South Asia's unique glass recipes and products, along with abundant ethnographic data.

These contributions advance our understanding of ancient glass production, organisation and dynamic exchange networks, thereby enriching the field of archaeological glass research with a wealth of new information.

## **Reference**

FRANCIS, P. 2002. *Asia's maritime bead trade: 300 B.C. to the present*. Honolulu: University of Hawai'i Press.

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