Brigitte Borell finds a most welcome English edition of a collection of papers presented at a series of symposiums and workshops in 2004 and 2005, previously published in Chinese. The 24 papers, each one a chapter in the book, are written by scholars from China, Japan, Korea, Uzbekistan, and the US, and they reflect the newest research in the field of scientific and archaeological studies on ancient glasses in Eastern Asia.

Brigitte Borell


THE MAJORİTY OF THE PAPERS in this volume originate from the field of archaeometry – the application of scientific techniques to the analysis of archaeological material, in this case ancient glasses. The compositions of glasses vary in terms of period and region and the study of their chemical compositions has proved to be an important and useful tool. The categorisation of ancient glass into different glass families or glass systems is based mainly on the intentional use of different fluxing agents in the primary process of making glass. These fluxes offer valuable information about the period and region in which a glass originated. They may also provide important conclusions about trade and trade routes. The basic distinction into glass families may be further refined through studies of trace elements, lead-isotope analysis and strontium-isotope analyses, which provide a valuable supplement for classifying glasses according to geographical origin (chapters 3 and 4 by Robert Brill).

Space does not allow a review of each of the contributions in detail. Where it seems appropriate, some of the chapters will be outlined together in a larger thematic context.

The first two, rather substantial, contributions by Gan Fuxi set the stage and together comprise almost a quarter of the book. In Chapter 1 Gan Fuxi gives an overview of the origins and development of ancient Chinese glass from ‘faience’ and frit beads (1100-800 BCE) and the earliest glasses (500-400 BCE) through the historic periods up to 1900. Chinese glass production relied mainly on two kinds of fluxing agents: lead and potash (sodium petrae was probably used for potash), producing different glass compositions in certain periods. Gan Fuxi’s timeline of Chinese glass distinguishes five different periods: (1) he suggests the few early finds of potassium alkaline glass (500-400 BCE) originate from central China. More detailed quantitative analysis would be welcome for future research in this regard. (2) The second or Han period (400 BCE -200 AD) reveals the characteristic Chinese lead-barium glass production generally thought to be located in the Yangzi River valleys and a potash glass which prevailed in the southern and southwestern regions during this period. (3) Post-Han period lead glasses (200-700 CE). (4) Potash lead glasses (600-1200 CE). (5) Potash lime glasses (1200-1300 CE).

In Chapter 2 Gan Fuxi presents an overview of the several routes subsumed under the term the Silk Road, presenting analyses of glass finds from the Warring States period to the Yuan Dynasty, the discussion focusing on the early periods and early trade connections. Four different Silk Roads are discussed together with the glass objects found in their areas. Firstly, glass finds in the area of the Northern (Steppe) Route show the widespread distribution of glasses made in inner China and in the West; a late highlight are the Islamic glass vessels from an early 11th century tomb. Secondly, along the Northernwestern (Qaidam) Silk Road glass finds from Korol, Xinjiang, dated to 1100-800 BCE, are considered to be local produced but with Western Asian glass technology. For others, more Han period, definite imports of Mediterranean and Western Asian glasses are documented, as well as the spread of Central Chinese lead-barium glass to the western part of Xinjiang. Later, Sasanian and Islamic glasses were imported along this route. Thirdly, the Southwestern (Buddhist) Silk Road; here the Sichuan-Yunnan-Varma-India route is represented by finds of lead-barium glass, potash glass, and a few finds of potash soda lime glass in Yunnan and Guizhou from the Warring States to the Six Dynasties periods. Finally, the section on the Southern (Sea) Silk Road deals with glasses found in Guangzhou and Guangdong. Heph in Guangzhou was the seat of the Heph commandary in the Han period and a flourishing starting point for the maritime Silk Road. Most of the Han period glasses unearthed in Guangzhou are potash glasses, many with characteristic Chinese shapes and therefore considered to be locally made, whereas those from Guangdong are mostly lead-barium glass. Both types of glass were probably also exported overseas through the ports of Guangdong and Guangzhou. From the Six Dynasties to the Tang period a number of imported glass vessels of Mediterranean and Western Asian origin attest to the activity of the ports of southern China, from where such imported glasses might also have been transported north into central China.

A large proportion of the other papers in this volume are devoted to detailed studies on glass finds along the Northern and Northern-western Silk Roads, and their chemical analyses. Chapters 3 and 4 by Robert Brill present finds from Afghanistan to Xinjiang with some Central Asian glass compositions of plant-ash soda lime or mixed-alkali glasses. Chapters 7 and 8 by Abudagani Abdurazakov focus on finds from Uzbekistan, which reveal a variety of Central Asian glass compositions from the ancient and mediaeval periods and later. Chapters 11, 13-18, by several Chinese scientists and archaeologists, present glass artefacts and their analyses found in northern provinces such as Xinjiang, Gansu, Shaanxi, Inner Mongolia etc., which allow interesting conclusions on early trade connections. Chapter 19 by An Jayao discusses the earliest blown Chinese glass vessels found in Northern Wei contexts of the 5th century CE. Referring to a passage in the Western Land in the Bei shi, he suggests that the technique of glassblowing was introduced to northern China by immigrant Central Asian craftsmen from Bactria (the country of the Dayakoi), who settled in the Datong area. Several papers deal with glass finds along the Southern Silk Road. Chapters 5 and 6 by Inouko Lee set the stage for the Silk Road’s sea with emphasis on the maritime trade.

By the late first millennium BCE, Southeast Asia was part of a world trade system linking the civilisations of the Mediterranean Basin with pre-Han China. The maritime network is seen as extending to Korea and Japan, where a similar diversity of glass compositions compared to those found in China occur. Chapter 9 by Koekana and Yamekula deals with early potash glasses in Japan dated to a period from the 3rd century BCE to the 3rd century CE. In Chapter 10 Akiko Heskia et al. investigate the glass refinery in the Tsubaki-ya in Nara, examined with a portable XRF spectrometer; the results suggest an Islamic plant ash glass. Chapter 20 by An Jayao presents new finds of Islamic glasses found in 10th century contexts in Guangzhou, presenting the most important of imports through the port of Guangzhou.

Chapter 21 (Li Qinghui et al.), 22 (Fe Xu & Fei Guo), and 23 (Ma Bo et al.) with numerous analyses of glass artefacts found in southern and southwestern China make an important contribution to our knowledge of the extent and frequency of distribution of potash glass and its coexistence with lead-barium glasses. Among Han period glasses from Heph in Guangzhou province, potash glass by far predominates (Chapter 21) indicating – in conjunction with statistical analysis on trace elements (Chapter 22) – the making of potash glass in the Guangzhou area. Findings on ornamental glass are the most interesting results of research. Since the discovery of the potash glass composition among glasses from southern China in the mid-1980s in the analyses by Shi Meiquang and those by Robert Brill, much more data is now available. However, the question of where the making of the potash glass originated is still unresolved, and it is touched upon also by some of the other papers (see below). It is also present in Japan, Korea, Thailand, Vietnam, Indonesia, and southern India. Different compositional groups can be distinguished within the potash glass family (Lankton and Dussubieux 2006), here indicated – in conjunction with statistical analysis on trace elements (Chapter 22) – the making of potash glass in the Guangzhou area. The Chinese-made glass objects are usually ornaments, a group of glasses vessels made of potash glass, found in Han period tombs in Guangzhou, is of particular interest. The potash glasses and their possible connections with the routes of the maritime Silk Road will certainly remain an interesting field for further studies.

In the last chapter 24, Gan Fuxi et al. present the earliest dated find of glass imported from the West to central China – eleven eye beads made of a soda-lime glass from a tomb in Xujialing, Henan, dated about 500 BCE. A few more such finds of Western glasses are known from the tomb of Marquis Yi, Huaihai, and two more tombs from Henan.

Rooted firmly in the field of archaeometry, the volume presents altogether more than 40 tables with chemical compositions of glasses found in China, derived from different analytical methods. The analysis is clearly divided into separate sections of early Chinese glass in the first millennium BCE and its first flourishing production in the Han period. The English edition will certainly be appreciated, and not only by specialists, as it facilitates access to recent results in a fascinating field of research. For the more generally interested reader a more careful proofread, in particular with regard to the rendering of geographical names, would have been helpful. These, however, are minor flaws. The volume will serve as a new compendium for studies on early Asian glasses, in the same way that, for almost the last two decades, the 1993 English publication of the Proceedings of the 1984 International Symposium on Glass, Beijing did.

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References