

SIX-LOBED TANG DYNASTY (AD 658) GLASS CUPS RECENTLY EXCAVATED IN CHINA

TAKASHI TANICHI

Guyuan, formerly named Yuangzhou, is located in the southern part of Ningxia Province. Since ancient times, it has been an important military and political city in northern China. The well-known Silk Road passed through it.

In August and September 1995, the Yuangzhou Joint Archaeological Expedition excavated the Tang-period tomb in Guyuan (Figs. 1 and 2).¹ The tomb was identified as belonging to Shi Daoluo (d. 655) and his wife, Kang (d. 646), both of whom are reported on the epitaph to have been

buried in 658.² The tomb contained two six-lobed glass cups (a: H. 19mm, D. 37mm; b: H. 21mm, D. 39mm, Th. 2–5mm). Weathering and other damage had turned the cups an opaque creamy white colour, but in a few places, the original clear green colour was still evident. The exterior of the cups, decorated with gilded bronze, is rusty, but again, there is some evidence of the original golden colour (Figs. 3 and 4).³

Other tombs of comparable date have yielded similar cups. Parallels include:

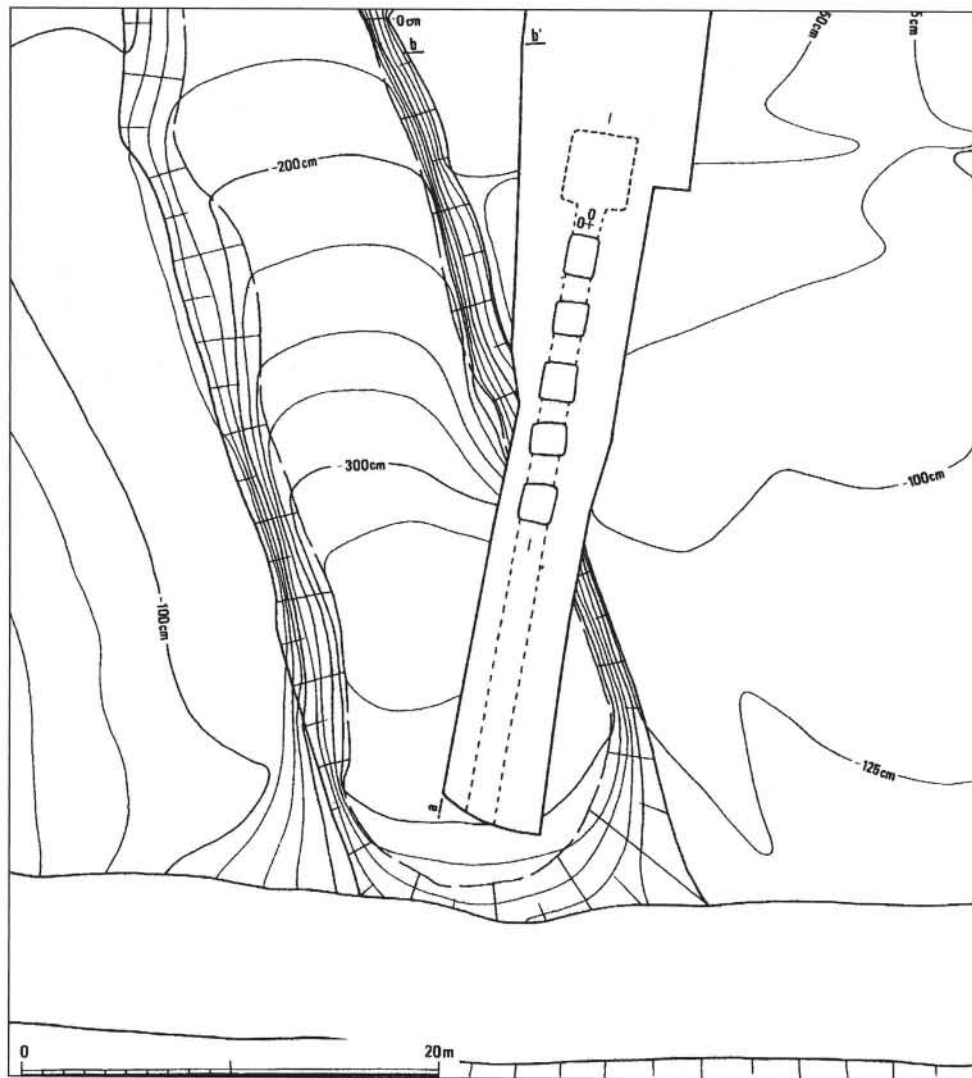


Fig. 1. Plan of the tomb of Shi Daoluo. From T. Taniichi *et al.* [note 2], 46

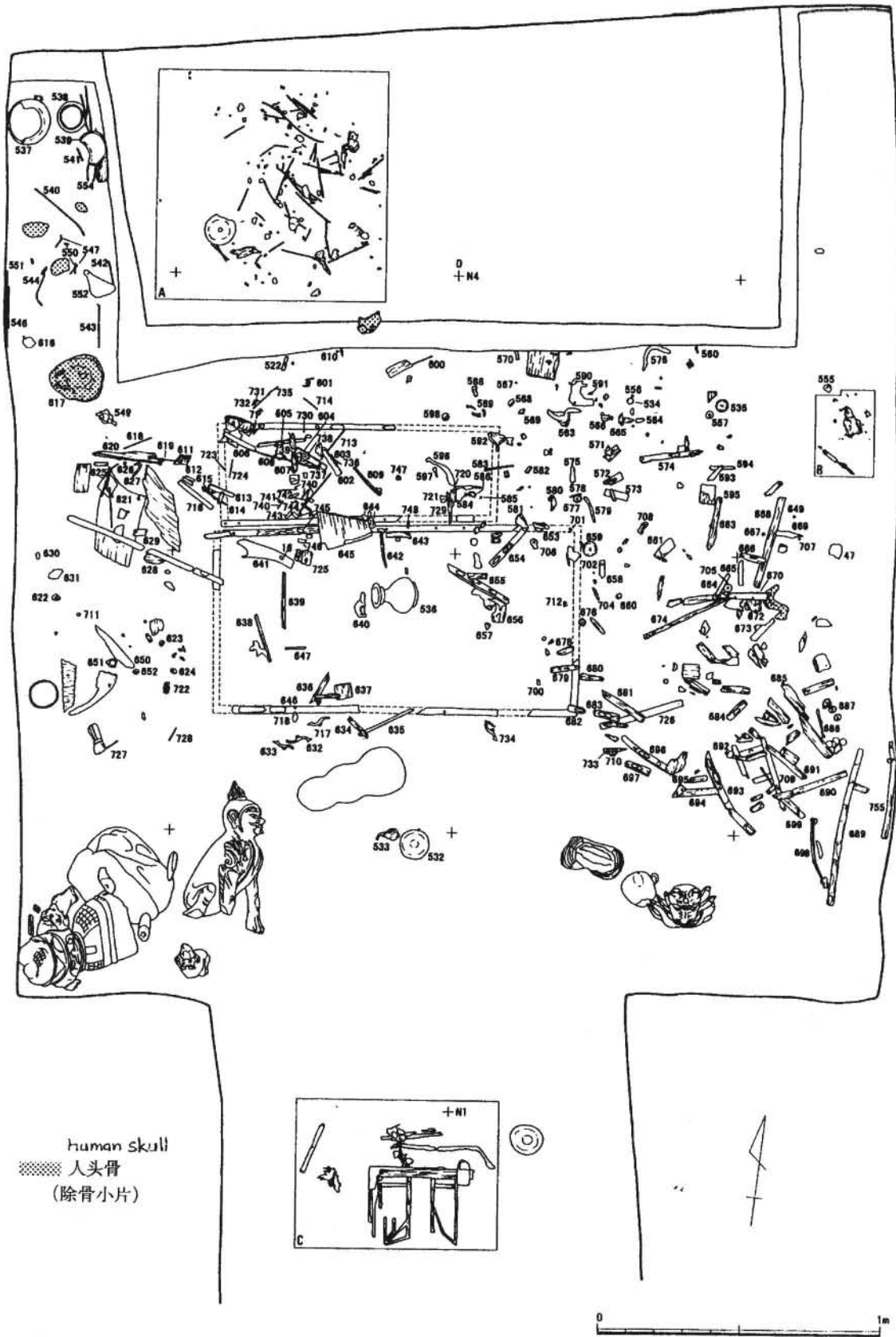


Fig. 2 Floor plan of tomb of Shi Daoluo and his wife, with objects *in situ*. The cup fragments are labelled 653 and 706 in the centre part of the tomb, and the other cup fragments were under the painted clay figure in the south-west part of the tomb (fragments not labelled). Flower petals and water drop decoration are labelled 555, 557, 564, 568, 569, 586, 591, 598 and 747 in the north part of the tomb. From T. Taniichi *et al.* [note 2], 77

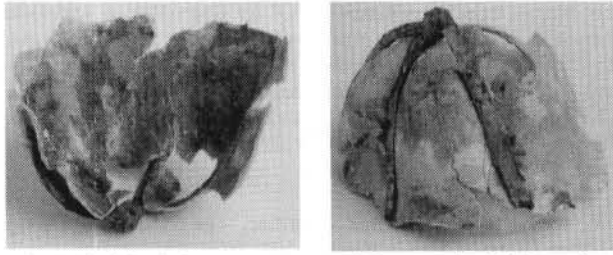


Fig. 3 Six-lobed glass cup excavated from tomb of Shi Daoluo; from T. Taniichi *et al.* [note 2], 29

- 1 Tomb of Li Shuang (buried in 668), which was excavated by the Xiaxi Civil Administration Committee in 1956. This cup was in the same condition as those found in the tomb of Shi Daoluo, and all three originally had the same clear green colour. The interior of this cup retains a red polishing sand that was made from garnet.⁴ This same sand was found in a twelve-lobed glass cup in the Shoso-in repository at the Todaiji Temple in Nara, Japan.⁵ Most lobed cups are believed to have been cast in a mould and polished with garnet sand.
- 2 Tomb of Shi Hedan (buried in 699), eldest brother of Shi Daoluo, which was found in southern Guyuan by excavators from the Ningxia Guyuan Archaeological Museum in 1986.⁶
- 3 Tomb of Shi Tiebang (buried in 670), Shi Daoluo's nephew, which was found in the same excavation as no. 2 above. The six-lobed glass cup in this tomb was heavily damaged.⁷

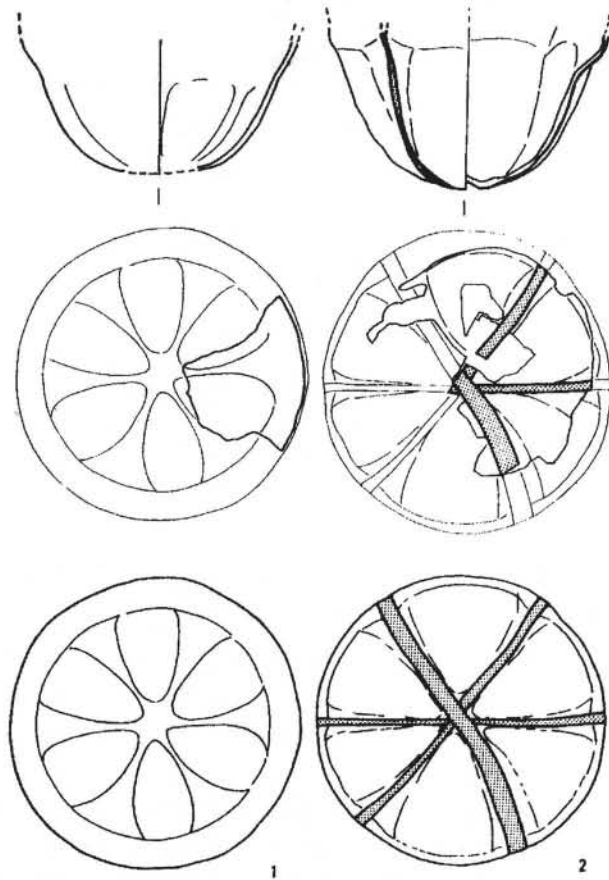


Fig. 4 Six-lobed glass cups excavated from tomb of Shi Daoluo; from T. Taniichi *et al.* [note 2], 174

Chemical analysis of fragments of the well preserved six-lobed glass cup found in the Shi Hedan tomb showed that the glass had a lead oxide content of 71.49%.⁸ Decorative motifs such as the flower petal and water drop were found on the glasses in the Shi family tombs. High percentages of lead oxide were noted here as well. The flower petal, for example, is 68.12% lead oxide.⁹ The making of green glass with a high lead oxide content was popular from the 2nd century BC to the 3rd century AD. This practice declined in the late 3rd century, but it was revived in the late 6th century (Sui dynasty). Between the Sui and Tang dynasties, Chinese glassmakers employed special materials and a unique formula for the making of high lead oxide glass.

The six-lobed glass cups and flower ornaments (Figs. 5 and 6) are believed to have been made in the mid 7th century near Xian. Eighth-century parallels include an eight-lobed glass cup in the Boston Museum of Fine Arts,¹⁰ which is reported to have been found in China. The twelve-lobed glass cup in the Shoso-in repository, which is reported to contain 55% lead oxide,¹¹ seems to have been made about the 10th century. An eight-lobed relief-cut glass bowl from the Near East, now in the collection of The Corning Museum of Glass,¹² contains 73.9% lead oxide¹³ and is almost of the same date. There is no doubt that this object is Islamic.

The form of the lobed cup is believed to have originated in the West. According to the Chinese document *Sui Shu*¹⁴ and the epitaph of Shi Daoluo, his grandfather was born in Shakhrisabz, near Samarkand in Sogdiana, central Asia, and his father emigrated to China during the Sui dynasty. Judging from the skull of Shi Daoluo, which was found in his tomb, he was considered to be Caucasoid, not Mongoloid or Chinese.¹⁵ The *Sui Shu* document reports that a craftsman from Sogdiana named He Chou used the traditional Chinese green glaze (which is believed to have been made of lead oxide) to create green glass vessels. The six-lobed glass cups are early examples of lead oxide glassmaking in China by immigrant craftsmen from central Asia.

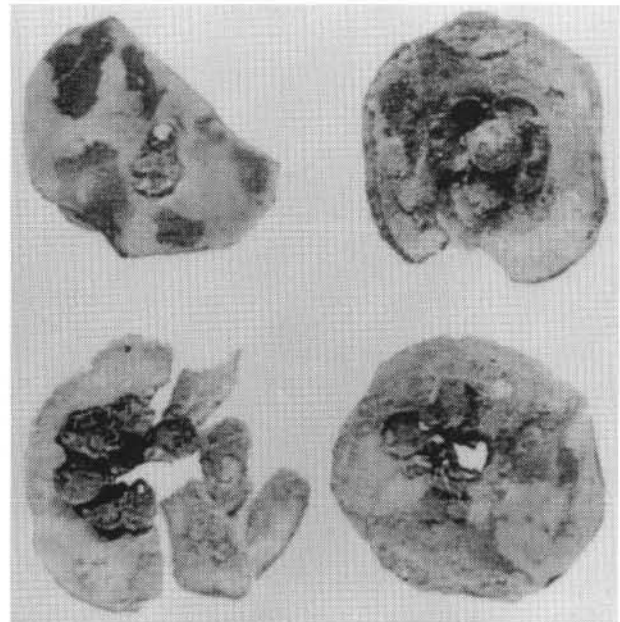


Fig. 5 Flower petal and water drop decoration (in gilded bronze) found on glasses excavated from tomb of Shi Daoluo; from T. Taniichi *et al.* [note 2], 29

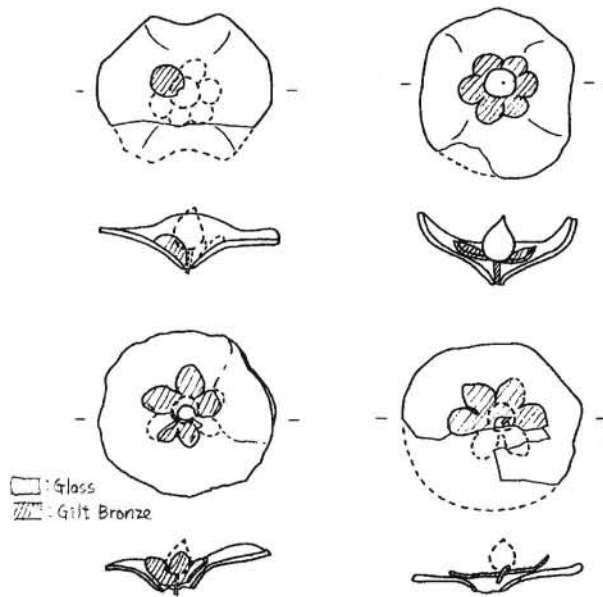


Fig. 6 Flower petal and water drop decoration (in gilded bronze) found on glasses excavated from tomb of Shi Daoluo; from T. Taniichi *et al.* [note 2], 163

ENDNOTES

¹The Yuangzhou Joint Archaeological Expedition in China, which was conducted from 1995 to 1999, was funded by the Japan

Ministry of Education Grant-in-Aid for International Scientific Research. The expedition was a joint project of Japan (Kyoritsu and Shiga Prefectural Universities) and China (Peking University and the Ningxia Guyuan Archaeological Museum).

²T. Taniichi *et al.*, *The Tomb of Shi Daoluo of Tang Dynasty, The Yuangzhou Archaeological Joint Excavation in 1995*, Tokyo: Bensei Publishing, 1999, 234–63.

³*Ibid.*, 29.

⁴Xiaxi Civil Administration Committee, 'The Tomb of Li Shuang of Tang Dynasty, Xian', *Wen Wu*, 103, 1959, 47.

⁵Y. Harada *et al.*, *Glass Objects in the Shosoin*, Tokyo: Nihon Keizai Shimbun Sha, 1965, 18.

⁶F. Luo, *Graveyard of Sui & Tang Dynasties in the South Suburbs of Guyuan*, Peking: Wen Wu Chubanshe, 1996, 61.

⁷*Ibid.*, 82.

⁸The analysis was performed by Dr. Shi Meiguang, chief researcher of the Construction Materials Research Centre in China.

⁹Luo [note 6], 236.

¹⁰T. Yoshimizu *et al.*, *The Survey of Glass in the World*, 4, Tokyo: Kyuryudo, 1992, 27.

¹¹Harada *et al.* [note 5], 20.

¹²S. Carboni and D. Whitehouse, *Glass of the Sultans*, New York: The Metropolitan Museum of Art in association with The Corning Museum of Glass, Benaki Museum, and Yale University Press, 2001, pl. 93.

¹³R. H. Brill, *Chemical Analyses of Early Glasses*, Corning: The Corning Museum of Glass, 1999, 1, 101, and 2, 204 (sample 5197, Pb-1138).

¹⁴Wei Zhi, *Sui Shu*, Peking: Xinhua Shudian, 1973, 6, 1596.

¹⁵This determination was made by Dr. Han Kangxin, researcher at the Institute of Archaeology, Chinese Academy of Social Sciences. See Taniichi *et al.* [note 2], 264–95.

TAKASHI TANIICHI
Kyoritsu University, Tokyo, Japan
E-mail: taniichi@s3.kyoritsu.ac.jp