Glass bangles of al-Shihr, Hadramawt (fourteenth-nineteenth centuries), a corpus of new data for the understanding of glass bangle manufacture in Yemen

Stéphanie Boulogne, Claire Hardy-Guilbert

To cite this version:
Orders for copies of this volume of the *Proceedings* and of all back numbers should be sent to Archaeopress, Gordon House, 276 Banbury Road, Oxford OX2 7ED, UK. 
Tel/Fax +44-(0)1865-311914. 
e-mail bar@archaeopress.com 
http://www.archaeopress.com 
For the availability of back issues see the Seminar’s web site: www.arabianseminar.org.uk

**Seminar for Arabian Studies**
c/o the Department of the Middle East, The British Museum
London, WC1B 3DG, United Kingdom
e-mail seminar.arab@durham.ac.uk

The Steering Committee of the Seminar for Arabian Studies is currently made up of 13 members. The Editorial Committee of the *Proceedings of the Seminar for Arabian Studies* includes 6 additional members as follows:

**STEERING COMMITTEE**
Dr Robert Carter (Chair)  
Dr Mark Beech  
Dr Nadia Durrani  
Dr Robert G. Hoyland  
Dr Derek Kennet  
Mr Michael C.A. Macdonald  
Dr Ardle MacMahon (Secretary)  
Dr Venetia Porter  
Dr St John Simpson  
Mrs Janet C.M. Starkey (Editor)  
Mr Andrew Thompson (Treasurer)  
Professor Janet Watson  
Dr Lloyd Weeks

**EDITORIAL COMMITTEE: ADDITIONAL MEMBERS**
Professor Alessandra Avanzini  
Dr Ricardo Eichmann  
Professor Clive Holes  
Professor Khaleel Al-Muaikel  
Professor Dan Potts  
Professor Christian Robin

**Opinions expressed in papers published in the *Proceedings* are those of the authors and are not necessarily shared by the Editorial Committee.**

Typesetting, Layout and Production: Dr David Milson

The *Proceedings* is produced in the Times Semitic New font, which was designed by Paul Bibire for the Seminar for Arabian Studies.

© 2010 Archaeopress, Oxford, UK. 
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior permission of the publisher. 
ISSN 0308-8421  
Glass bangles of al-Shihr, Ḥaḍramawt (fourteenth–nineteenth centuries), a corpus of new data for the understanding of glass bangle manufacture in Yemen

Stéphanie Boulogne & Claire Hardy-Guilbert

Summary
This article on glass bangles from al-Shihr, Ḥaḍramawt, presents a corpus of new data (fourteenth–nineteenth centuries) leading to an understanding of the manufacture of glass bangles in Yemen. The paper discusses the case for local production versus glass imports in south Yemen, using archaeological, textual, and ethnographic data to support the argument. This is the result of a glass study made in October 2007 at al-Shihr.

Keywords: glass bangles, al-Shihr, Ḥaḍramawt, imports, local manufacture

Introduction
Al-Shihr (Fig. 1) is mentioned as a well-known harbour of medieval and later Yemen in texts such as Sulaymān al-Mahrī b. Ahmad b. Sulaymān’s (1480–1550), Al-Kumdah al-mahriyyah fī ṭabt al-kulūm al-bahriyyah.

Investigations undertaken between 1995 and 2002, and in 2007, under the direction of C. Hardy-Guilbert (CNRS, Paris) (Hardy-Guilbert 2007), have produced an interesting corpus of ceramic and glass that mixes imports from Iran, Iraq, Asia, Africa, and India with local Yemeni manufactured material (Hardy-Guilbert 2002: 39–53). The investigations focused on material from Tell al-Qaryah, one of the ancient quarters of the city, 60 m from the shoreline. As a result, fifteen levels of occupation were defined, dating from c. AD 780 to 1996,1 which could be identified with ten phases.2 In the 2007 season, a full study of the large corpus of glass from the 1996–2002 excavations was made. We registered several samples of decorated vessels, as well as undecorated glass and many coloured bangles: a total of about 500 bangle fragments, from which we selected 185 in good condition for closer study. The corpus is generally later than the fourteenth century. Glass bangles have also been discovered in Kawd am-Saylā, around the seventeenth century in the Gulf of Aden, 600 km from al-Shihr (Monod 1978: 110–124), as well as in India, the Near East, and the Red Sea region.

This article intends to demonstrate how the study of al-Shihr bangles is important for the understanding of glass manufacture in Arabia. The paper is in three parts: the first is on the archaeological corpus; the second provides comparative data on styles and techniques; and the third focuses on the question of local production versus the importation of glass.

1 APIM (Atlas des Ports et Itinéraires Maritimes de l’Islam Médiéval) resources.
2 From Phase 1, the first occupation (to 4.30 m), to Phase 4, the fill of the last Abbāsīd structures (i.e. eighth century to the beginning of the thirteenth century), no glass bangle was recovered. Phase 5 is an open-air platform (from 6.30/6.50 to 7.00) on which huts were erected and numerous pits and ovens containing deposits of ash and fish bones were found. These structures are included inside a thick layer of ash (0.50 m thick) clearly visible throughout Tell al-Qaryah. Mustard ware and late sgraffiato associated with Longquan stoneware were found, datable to between the latter half of the thirteenth and the first half of the fourteenth century. Phase 6 (fifteenth century) is a domestic occupation of mud-brick and stone houses based on earthen floors (from 7.30 m) with other types of Tihāmah ceramics that replaced Mustard ware and with blue and white Chinese porcelain. During Phase 7 (sixteenth century) a level of mud-brick houses was built with wall foundations of stone. A glass workshop (from 7.90 m) with its hearth and crucibles (SHR 99 2345–2) belongs to this phase. In Phase 8 (seventeenth century) a part of the site was abandoned, but mud-brick dwelling rooms were built in the southern area associated with Ḥaysī ceramics and Persian cups in frit ware imitating Chinese porcelain. At the end of the eighteenth or in the nineteenth century, during Phase 9, stone houses stood on the top of the tell. They were already destroyed when the site was discovered in 1995; a surface deposit 1 m thick, cut into by rubbish pits down to the level of Phase 8, belongs to Phase 9. In Phase 10 (twentieth century) part of the site was covered by a platform for drying fish, made of a thick layer of mud and fish oil above a bed of pebbles (from 8.95/9.10 m).
This chapter introduces the contextual archaeological data and the material used to develop a classification.

Archaeological levels and the classification used (Figs 2 and 3)

Glass bangles were recovered only in the southern part of the tell (the site under investigation) and often from levels that also contained numerous ceramic sherds. The bangles were never found below 7.00 m, which is above the layer of ash that has been dated to the fourteenth century. The only exception was SHR 99 2301, which was found in the latest level (to 6.88/6.77 m) in test trench G52.

The classification that we used separates polychrome and monochrome bangles, as is normally done in the analysis of Indian bangles (see Sankalia & Dikshit 1952: 115–118; Dikshit 1969: 69–71) and sometimes of Near Eastern coloured bracelets (Shindo 1996; 2009). By using this methodology, polychrome (57%) and monochrome (43%) glass types were identified, among which were several sub-groups. Generally each sub-group includes many of the same type of bangles and some single unique specimens.

The polychrome bangles (Figs 4 & 5)

Polychrome bangles (105 samples) make up 57% of the finds. Of this group, 85% (ninety samples) can be grouped into six patterns with similar designs, while only 14% are of a unique pattern. They are nearly all made of light or dark patchy glass with a white ground, with a white or red core (fig. 2).

<table>
<thead>
<tr>
<th>Classification</th>
<th>Polychrome</th>
<th>Monochrome</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Monochrome and polychrome bangles</td>
<td>57%</td>
<td>43%</td>
</tr>
<tr>
<td>b. Polychrome bangles</td>
<td>In batches: plain green 89%</td>
<td>Others 11%</td>
</tr>
</tbody>
</table>

FIGURE 1. A map of the location of al-Shihr.

FIGURE 2. Classification table.
dark green paste. Of the bangles, 85% (Fig. 4) can be dated by their context to the sixteenth to seventeenth centuries (Phases 7 and 8), although a few were found in the levels of earlier Phases 5 to 6, and can be dated from the thirteenth to fourteenth centuries. Their diameters are between 0.5 cm and 0.9 cm, with one exception of 1.2 cm.

Two sub-groups are identified. Firstly, prunts (i.e. small blobs of glass that are fused to another piece of glass) on triangular-section bangles (sixty-six examples) (Fig. 4/a, b) have two variants: a single band of prunt on a triangular section and a “crumbly decoration” on a triangular section, both variants having mostly yellow, green, or red layers on each side.

Secondly, a bi-chrome decoration (twenty-five
**Figure 4.** Common polychrome bangles (sixteenth–seventeenth centuries).

a. SHR 99 2365-18: L 5.8 cm, W 0.8 cm; description as above: Fig. 3/f; b. SHR 99 2365-10: L 6.4 cm, W 0.4 cm; description as above: Fig. 3/g; c. SHR 97 2089: L 7.3 cm, W 0.6 cm; description as above: Fig. 3/h; d. SHR 99 2283-7: L 5.6 cm, W 0.4 cm; description as above: Fig. 3/i; e. SHR 97 2085: L 4.8 cm, W 1.3 cm; description as above: Fig. 3/j.

**Figure 5.** Single polychrome samples (sixteenth–seventeenth centuries).

a. SHR 99 2370-1: L 3.8 cm, W 0.9 cm; description as above: Fig. 3/c; b. SHR 97 2064-1: L 6.3 cm, W 1 cm; description as above: Fig. 3/d; c. SHR 99 2370-3: L 3.8 cm, W 0.9 cm; blue glass, white decoration, flat section; d. SHR 97 2079-1: L 2.7 cm, W 1 cm; description as above: Fig. 3/a; e. SHR 99 2353-12: L 6.3 cm, W 0.5 cm; description as above: Fig. 3/h; f. SHR 3029-1: L 6.3 cm, W 0.9 cm; blue glass, white decoration, flat section; g. SHR 99 2072: L 3.3 cm, W 0.5 cm; several prunts, flat section; h. SHR 99 2292-1: L 4.8 cm, W 0.5 cm; description as above: Fig. 3/j; i. SHR 99 2420: L 2.6 cm, W 2.5 cm; green glass, trip of glass applied, flat section; j. SHR 99 2375: L 3.1 cm, W 0.4 cm; description as above: Fig. 3/p.
examples) displaying at least three variants, with a range of colours between a green core and layers of yellow glass (Fig. 4/c–e), is found on a range of thick or thin bangles. They are flat and pointed, with a triangular section. Fifteen per cent (sixteen samples) (Fig. 5/a–c) of the polychrome bangles are what we call “single” types, i.e. unique, with no more than one example of each type. These can be dated to the sixteenth to nineteenth centuries (Phases 7 to 9). Five different patterns have been identified: first, with prunt decoration on a flat or triangular section, including variants such as crumbly or flower decoration (Fig. 5/c, d); second, marvered decoration (i.e. hot decoration caused by coloured glass threads/trails fused in glass) (Fig. 5/e, f); third, eye decoration (one sample); the fourth style has a band/strip of glass (Fig. 5/g, h) decoration; the fifth and last group consists of twisted bangles. The polychrome bangles are large, around 0.8 cm in diameter and 1.4 cm thick.

The monochrome bangles (42%, eighty samples) (Fig. 6)

The majority, 89% (seventy-one samples), are smooth, thick, plain green bangles, with a large triangular section of 0.9 cm (Fig. 6/a). They can generally be dated to the seventeenth century, although a few can be attributed, by their context, to the fourteenth century. We also found a group of eight very thin bangles (Fig. 6/b–i) some of which could be dated to the sixteenth century and the majority to the seventeenth to nineteenth centuries. One is dark blue with a round section, another turquoise with a flat section, a third is translucent brown with a half-rounded section, and five are of dark paste of which two show vertical ribs on the surface.

This corpus of bangles reflects different stylistic schools, but the various styles do not reflect different dates. This is clear in the examples (Fig. 7) for the finds from inventory groups 2370, 2292, and 2023, where we find...
different typological groups in the same archaeological context and levels.

Comparative data on style and technique

Some parallels may be established with bangles found in medieval and later levels of archaeological sites of Yemen and India, the Near East, and the Red Sea region that provide interesting comparative data.

Kawd am-SaylāΜ, al-Qarū (Abyan area oasis), Yemen, Gulf of Aden (seventeenth century) (Fig. 8)

Kawd am-SaylāΜ is located near Aden, between Shaykh ʿUthmān and Lāḥj. It has been the focus of many investigations since the 1940s: by A. Lane & R.B. Serjeant (1948: 108–133); D.B. Doe (1963: 150–162); T. Monod (1978: 110–124); D. Whitcomb (1988: fig. 21); and C. Hardy-Guilbert & A. Rougeulle (1997: 147–196). Much pottery and glass vessel sherds, as well as slag and glass bangles have been found. Monod registered 156 bangles and proposed a *terminus ad quem* of the seventeenth century, at the latest. The production is very similar to that identified at al-Shihr, especially the prunts, bi-chrome bangles, and the plain green collection (Fig. 8a–c), as well as single polychrome and dark monochrome smooth and ribbed bangles.

Kholāpur (fourteenth–seventeenth centuries)

Kholāpur is located in the western part of south India, near the sixteenth meridian. This site was investigated by H.D. Sankalia and M.B. Dikshit who published a report in 1952 with a small section on bangles (1952: 1–8, 115–121). Some of the items assigned to the Bahmani period (aka Bahmanid empire) (fourteenth–sixteenth centuries) are very similar to our corpus. The Bahmani empire was founded in 1347 by ʿAlāʾ al-Dīn Ḥasan, Bahman Shāh (Wolseley 1924: 73–80).

We can thus compare both corpuses for their prunts and coloured layers on both sides, and for the green and yellow bi-chrome examples, as well as the green monochrome bangles. All the Bahmani period bangles are said to be the work of Muslim Bahmani glassmakers,
and some remains of a workshop area were found (Sankalia & Dikshit 1952). The excavators explained that the techniques of superposed coloured glass layers were introduced by the Muslims (1952; Sankalia 1947: 252–259). This type was also found at Julfār, in the Emirates and has been attributed to India or Iran (Hardy-Guilbert 1991: 161–203; Hansman 1985: 76–83). Otherwise, items from Kholāpur (Brahmapuri) are described as different from other Indian bangles discovered, mainly because of the layer technique. Monochrome bracelets were excavated: dark coloured, light brown translucent; and turquoise bangles were registered. Such bangles are common in many levels in different Indian archaeological sites; we know, for example, of an interesting corpus from Kopia (Kanungo & Brill 2009: 11–25).

**Near East: Hubrās (Jordan), Beirut, and Damascus, late Ottoman period (eighteenth–nineteenth centuries)**

The same decorative technique of coloured layers on a triangular section bangle is found on one of ten bangles discovered at Ḫubrās, in northern Jordan (excavated by B. Walker, studied by S. Boulogne, 2007), that can be dated to late Ottoman times (Fig. 8/b). Other comparative data may be found for the marvered white and yellow bangle of triangular section in our assemblage (sample SHR 2353–12). An almost identical example was discovered in a trading area in the upper archaeological levels of the Ottoman sūq in the Beirut excavations (Curvurs & Stuart 1998–1999: 167–205 and unpublished material) (Fig. 8/f). From the same levels came some amber and translucent brown twisted glass bangles, smooth dark turquoise blue ones, and a ribbed example. Some turquoise and black examples were also found in the Damascus citadel (Boulogne 2008: 127–154) (excavation report by S. Berthier [in preparation]; study by S. Boulogne [2007; 2008], and in Masyāf castle in Syria, mainly of later date (Boulogne 2007; 2008); excavations under the direction of Hathan, Direction Générale des Antiquités et Musées syriens) (Fig. 9/b, c).

3 The Ḫubrās bangles are published by S. Boulogne (Walker et al. 2007: 429–470).
An interesting corpus of dark, smooth bangles was discovered in central Jordan, at Khirbat Fāris and at Tell Abū Sarbūt. Chemical analysis of these has revealed an interesting component that suggests an Indian or south-east Asian provenance, mixed with local elements (Boulogne & Henderson 2009: 53–75).

Red Sea region: al-Ṭūr, ʿAydāhāb, Qaṣāyr al-Qadīm, Mērgēbla, and Mekaʾīka (twelfth–eighteenth centuries)

A few parallels can be drawn to Red Sea region examples. A kind of bangle with a band of prunt is clearly identified in the finds from al-Ṭūr (Sinai) where a total of 3000 bangles were uncovered. These can be dated to the Mamlūk and Ottoman periods (Fig. 8/d) (Shindo 2001: 73–100; 2009: pl. 30). Others come from ʿAydāhāb, where sixty-two bangles were found (Shindo 1996), and Qaṣāyr al-Qadīm (Meyer 1983; 1992).

Similar samples to those of SHR 3029–1 (Fig. 5/f), dated to the thirteenth and fourteenth centuries were noted among the discoveries in Mērgēbla and Mekaʾīka near Assab in Eritrea; one is dated to the eighteenth century and from the Eritrean coast (Monod 1975: 703–718). Smooth, dark turquoise bangles were also found at al-Ṭūr.

The comparative data shows us that many of the al-Shihr bangles are similar to those from Kawd am-Saylāʾ (Yemen, seventeenth century), and both have a large group of decorative elements that are like those found at Kholāpur, India (fourteenth–sixteenth century). We also found some interesting comparisons with other decorative elements from the Bilād al-Shām, but very few with those from the Red Sea region.

The question of local production versus glass imports

Medieval textual sources and ethnographic data will be used to discuss the question of local production in Shihr and Kawd am-Saylāʾ versus imports from India, the Near East, and Europe, alongside previously outlined parallels, as mentioned above.

Local manufacturing at al-Shihr and Kawd am-Saylāʾ mixed with Indian imports from the thirteenth to seventeenth centuries (Fig. 10)

At Kawd am-Saylāʾ, the authors suggest that there was local glass-working. This was based on the discovery of slag and finds of glass vessels. There are numerous
parallels between the bangles from both sites (al-Shihr and Kawd am-Saylā'). As explained above, Monod’s investigations described the activity of workshops at Kawd am-Saylā'. In her work on Aden, and on the basis of the study of the thirteenth-century manuscripts of Ibn al-Mujāwir (ūr al-mustabsir i: 148) and of the sixteenth-century al-TaYYib Bā (Abū) Makhrama (ūr taghr ‘adan i: 21), R.E. Margariti explains (2007: 60–63) that al-Lakhaba, near Aden, had been the main location of glass production for a long time. She adds that, “Kawd Am Sayla lies about nine kilometres from Aden, a distance that roughly corresponds to Abu Makhrama’s 1.75 farsakh” (2007: 67). As for glass paste known as “Malipa”, it is mentioned in the thirteenth century in the Chu Fan Shi among the products from Ḥḍramawt (Chu Ju Kua 1912). At al-Shihr, a workshop was discovered in Phase 7 (sixteenth century), containing two samples of glass slag (Fig. 10/a, b) and numerous crucibles4 (Fig. 10/k) (SHR 99 2345–2; Hardy-Guilbert 2005: 71, 73; Hardy-Guilbert & Ducatez 2004: 128–130, 142). Another element which supports the hypothesis of a local production of glass bangles at al-Shihr is a rod of glass with the same patterns as a single polychrome bangle (Fig. 10/c, d; SHR 2420, 2292) discovered in Eritrea (Monod 1975). This kind of decorated glass rod was also found among the finds of Ḥubrās in Jordan (Fig. 10/h–j). This may suggest an itinerant secondary workshop or a trade in decorated rod glass, which would then be reworked and the object completed at

4 We would like to thank Aude Mongiatti, science curator at the British Museum, and Andrew Meek, scientist at the British Museum and PhD student under Professor J. Henderson at Nottingham University, for their interest in the scientific analyses of vitreous material from crucibles.
its destination. The use of the same green paste for bangles as for undecorated and decorated vessels may suggest a single provenance for all the al-Shihr material, either from the site of al-Qarū or of Kawd am-Saylā (Doe 1963; Lane & Serjeant 1948).

**Interpretation of parallels with India, imports or stylistic influences from the fourteenth to seventeenth centuries**

The exchanges between India and Yemen are verified by primary sources from the Ayyubid period (1171–1250). Beads are mentioned in export registers from Sind and Daybul stating that they were exported to al-Shihr (Smith 1995: 127–140; Fiorani Piacentini 2003: 95–97). However, we do not have any details about the bead quality and many scholars mention the export of glass from Yemen. In the twelfth century we know of a request for glass from Aden by someone on the Malabar Coast in India (Goitein 1974: 18–35). Our dating is rather later. With regard to closely dating and comparing the many similarities between the material from al-Shihr and Kholāpur, we should probably think in terms of more than just imports, and perhaps in terms of the movement of craftsmen. The caste of the Indian pedlar specialized in the sale of glass bangles, known from medieval times and mentioned in a thirteenth-century manuscript, may confirm this hypothesis.

**Near East and Europe: Venetian imports to Yemen from the fourteenth to nineteenth centuries**

The glass trade between Venice, Egypt, and the Syrian coast was very important from Ayyubid to late Ottoman times and included the raw material, vessels, and jewellery. The Portuguese presence in the Red Sea, from the beginning of the sixteenth century, should be highlighted (Chaudhuri 1985: 63–79) and may explain the presence of Venetian imports at al-Shihr. The white and yellow marvered example, with gold reflections found in an excavation in the Beirut suq may be related to the famous sixteenth-century gold paste mentioned by Tomé Pires: “…from Cairo ... the merchandise brought by the galleasses of Venice, to wit, many arms, scarlet-in-grain, coloured woollen cloths, coral, copper, quicksilver, vermilion, nails, silver, glass and other beads, and golden glassware” (1944: 269).

---

5 The bangles are known in India from thirteenth-century primary sources (1253): Somesvara, *Surathotsava* vi, verse 165, is mentioned by Dikshit (1969: 66).

**Origin of the Red Sea samples: Near East and African coast, thirteenth to nineteenth centuries**

The Red Sea bangles might come from the Near East especially from the al-Khalil (Hebron) workshops in Palestine, well known from the fourteenth century for glass bangles manufacturing, or from Fusāṭ in Egypt (Spaer 1992: 44–62; Boulogne 2008). The importance of commercial trade in the Gulf of Aden and the Red Sea from Ayyubid times is particularly well illustrated by the Karīmī merchants (Fishel 1958: 157–174). Furthermore, the connection between the harbour of al-Shihr and the east coast of Africa from the eleventh century is well known through archaeological material in the form of African pottery, and the site of al-Shihr is also mentioned in some manuscripts as being a transit port between Asia and Africa (Hardy-Guilbert 2002: 39–53). Tuchscherer (2004: 157–163) wrote: “À la fin du 17ème siècle, les pays riverains de l’ensemble mer Rouge-golfe d’Aden commençaient à être intégrés dans leurs profondeurs dans un système complexe d’échanges qui liaient entre elles non seulement les deux rives arabe et africaine, mais aussi celles-ci avec l’Inde et la Méditerranée.”

**Conclusion**

The main aim of this paper was to understand the manufacture of glass bangles in south Yemen through the study of a surprisingly large bangle corpus. South Yemen might well have been an important place for the manufacturing of glass and al-Shihr was certainly one of the centres of that manufacture. R.B. Serjeant wrote about glass bangles from al-Shihr in his article “The Ports of Aden and Shihir” (based on the study of the fifteenth-century primary source *Mulakkhaš al-fitan* by al-Husan b. ‘Alī al-Sharīf al-Husaynī): “glass, especially polychrome bangles was manufactured in some places on the Tihāmah coast but there seems to be no allusion to these factories in the *Mulakkhaš al-fitan* though one of them is quite near Aden” (1974: 207–224). The bangles from al-Shihr, like those from Kawd am-Saylā, were discovered with much blue and white Asian pottery and Chinese stoneware. Al-Shihr is located on the South Sea Silk Road, which remained one of the most-used trade routes for glass exchange from antiquity (Brill 1993: 70–79; 2009: 109–147; Glover 1996: 57–94). No data has been found to confirm that there were any imports from Asia, and only a few parallels have been drawn with dark bangles similar to those of central Jordan. Henderson’s analysis suggests that these contain some Indian and
south-east Asian components (Boulogne & Henderson 2009). Whatever else, it is clear that, with regard to glass bangles, the cultural link between south Yemen and India seems much stronger than with Bilād al-Shām or Egypt.

Some clues may lie in a study of the various colours: green in the case of glass from al-ShiΉr and Ḥaḍramawt indicates further clues as to the provenance. Connections between economic aspects and social practices are introduced: the meanings of the colours are really significant during Islamic times in the Maghreb and Near East especially in the context of textiles (Mansouri 2007).

Ongoing studies on Ḥaḍramawt by M. Rodionov (2007: 19–29, 98–101, 105–106, 126–134) propose that dress varies according to traditional social strata. Are there similar parallels in the colours used for glass?

In the case of the use of green glass from al-ShiΉr and in Ḥaḍramawt, can we speak of an attempt to imitate Chinese celadon, as it is often suggested, or is there a connection with Islamic rules and traditions? This topic is the focus of another article, Les bracelets de verre coloré d’Orient médiéval et tardif: modèles et couleurs, des marqueurs identitaires (Boulogne, in preparation).

Acknowledgements

We are grateful to the General Organization for Antiquities, Manuscripts and Museums of Yemen (GOAM) directed by Abdullah Mohammad Bawazir in Sanaa and by Dr ʿAbd al-ʿAziz b. ʿAql in Mukalla, and to the French Centre of Archaeological and Social Studies in Sanaa (CEFAS) directed by Drs F. Mermier, F. Burgat, and J. Lambert. The archaeological project of al-ShiΉr was supported by the French Ministry of Foreign Affairs and National Centre for Scientific Research (CNRS), UMR 8167, “Orient Méditerranéenne”, Islam médiéval. The authors thank the Committee of the Seminar for Arabian Studies for their invitation to the London Seminar and for the publication of this article. The seasons of excavations (1996–2002 and 2007) were carried out with the participation of K. Badhafari, I. Al-Amiri, B. Baharama, S. Muhammad ʿAli, A. Albari, A. al-K. al-Barakani (GOAM representatives); D. Parent, D. Guimard, and S. Dalle (topographers of AFAN [Association française d’archéologie nationale]); N. Férault de Falandre (architecte DPLG: diplômé par le gouvernement); P. Philippe, S. Eliës, and S. Vatteoni (draughtsmen); E. Allouin, S. Labroche, and V. Monaco (conservators); A. d’Arcangues (archivist); P. Baty (archaeologist of AFAN /INRAP [Institut National de recherche et d’archéologie préventive]); T. Creissen, N. Gilles, S. Guichou, R. Halaoui, A. Joyard, St. Le Maguer, A. Masson, H. Morel, G. Plisson, P. Siméon, and D. Willems (students in archaeology or history in the Universities of Nanterre, and Sorbonne (Paris I & Paris IV, and Aix-Marseille I). Dr S. Boulogne is grateful to IFPO (Institut Français du Proche-Orient), in particular to Dr F. Burgat; to ACOR (American Center of Oriental Research library in Amman); and to Dr. H. Amouric at Lamm (Laboratoire d’Archéologie Méditerranéenne Médievale, Aix-en-Provence). She would also like to extend her special thanks to her friends A. and K.H.

References


Glass bangles of al-Shihr, Ḥadramawt (fourteenth–nineteenth centuries)


Authors’ addresses

Stéphanie Boulogne, 1180 avenue de Beausoleil, 82000 Montauban, France.

*e-mail* stephaniekarine.boulogne@gmail.com

Claire Hardy-Guilbert, 157 Boulevard de Magenta, 75010 Paris, France.

*e-mail* claire.hardy-guilbert@wanadoo.fr