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# Moulded wares production in the Early Turkish/Beylik period in Western Anatolia: A case study from Ephesus and Miletus

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#### ABSTRACT

The beginning of the Turkish period in Western Anatolia initiates new ceramic types, related to the "Islamic" world, in the local pottery repertoire. To study this evolution from Byzantine to Turkish times, our paper focuses on one of these types, moulded wares, and on two sites, Miletus and Ephesus. At both sites, evidence of local production was found, which enabled us to define or re-define the corresponding chemical reference groups using WD-XRF. The identification of the origin of the finds, or their attribution to as yet unlocated workshops whose diffusion may be approached, provide solid grounds for discussing the introduction of moulded wares in Western Anatolia. SEM analyses give some preliminary insight into the emergence and development of new ceramic techniques in the region, whose "end-products" are represented by the well-known Iznik Ware. This paper constitutes a first step in research carried out in the framework of the POMEDOR project (People, Pottery and Food in the Medieval Eastern Mediterranean).

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#### 1. Introduction

Although long neglected, the Byzantine and Turkish archaeological contexts which precede the Ottoman period in Western Anatolia gradually tend to be both better documented, and better studied for their pottery (Spieser, 1996; Böhlendorf-Arslan, 2004; Vroom, 2005; Mania, 2006; Pfeiffer-Taş, 2010, 2011; Gök Gürhan, 2011; Doğer, 2013; Mercangöz, 2013; Ladstätter, 2015; Vroom, 2015; Vroom and Findik, 2015). In parallel, the development of archaeometric research has provided tools for more comprehensive approaches to production and diffusion of Western Anatolian ceramics in these periods (Scott and Kamilli, 1981; Waksman, 1995; Demirci et al., 1996; Okyar, 2010; Okyar et al., 2011; Kırmızı, 2012; Budak Ünaler, 2013; Özçatal et al., 2014), especially in recent years thanks to the specialized chemical database developed in Lyon (Waksman and François, 2004–2005; Sauer and Waksman, 2005; Waksman and Wartburg von, 2006; Waksman, 2015).

This paper focuses on a specific type of ceramics, moulded wares, which appear in Western Anatolia during the early Turkish period, and on two sites, Ephesus and Miletus (Fig. 1), where moulded wares found together with moulds provide evidence for local production

(Vroom, 2005; Böhlendorf-Arslan, 2008). Although moulded wares were already manufactured during the Hellenistic and Roman periods (Hochuli-Gysel, 1977), they appear in Western Turkey again much later, together with other types of pottery, such as turquoise glazed wares, which can be related to products from the Islamic world. They are dated there to the 14th c. AD, which closely follows the arrival of Turkish rulers and populations. The latter may have brought their pottery traditions and techniques, together with their dining habits and diet, taste and symbolic uses (Böhlendorf-Arslan, 2002; Dalaman, 2015; Vroom, 2015). Such issues are investigated in the larger framework of the POMEDOR project.<sup>1</sup>

In this paper, we focus on the introduction of moulded wares in the local pottery repertoire in Ephesus and Miletus, raising issues of provenance and technology, and attempting to contextualize this introduction. Provenances were investigated by chemical analysis using WD-XRF (CNRS UMR 5138), building on previous archaeometric research on Ephesus (Sauer and Waksman, 2005; Waksman, 2014, 2015) and taking the opportunity to update previous views. Technical traditions were studied under the SEM (CT $\mu$ , Lyon), with special interest in paste/slip/glaze associations.

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<sup>&</sup>lt;sup>1</sup> POMEDOR project "Population, Pottery and Food in the Medieval Eastern Mediterranean", http://www.pomedor.mom.fr.

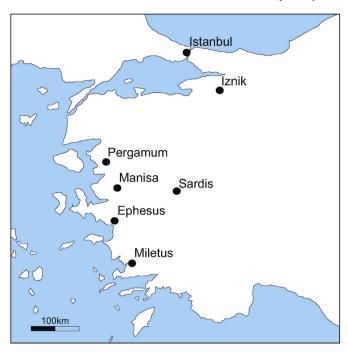


Fig. 1. Location of the sites mentioned in the text.

#### 2. Archaeological sites, contexts and sampling

#### 2.1. Sites and contexts

#### 2.1.1. Recent ceramic research on Medieval Ephesus

Ephesus is continuously inhabited from Hellenistic to Ottoman times. In its last occupation phases the centre of habitation extended from the ancient city (situated near the harbour) towards the Ayasoluk Hill. In fact, the Beylik and Ottoman influence on the city and the conquest of its lands in 1304 initiated a new period and added landmarks to the urban landscape that last to today.

The excavation of Ephesus by the Austrian Archaeological Institute has been ongoing since 1893, but interest in the late Byzantine to Ottoman periods has only lately been shown at the initiative of Ladstätter, the current director of the excavations. The current study, executed by Vroom and her team from Leiden University, focuses on finds from four sites in particular: the Artemis Temple (also known as "Artemision"), the Isa Bey Hamam, an anonymous Türbe and the so-called Tribune (e.g. Vroom, 2015). Recent excavations produced a considerable amount of material from these last three sites, which makes a *longue durée* research focus possible.

The excavation of an anonymous Türbe, a funerary monument south to the Artemis Temple, took place from 2009 to 2012 (Ladstätter, 2015). This Türbe dates from the early 15th century, and was erected cutting through several previous structures: a graveyard, a Byzantine wall of two phases and a pottery kiln (Parrer, 2015). The ceramic finds mostly range in date from Middle Byzantine to more recent times (circa 10th–early 20th centuries), with a few earlier exceptions. The typochronology as well as the provenance of the Türbe ceramic finds have been discussed, based on a simple functional ordering in glazed wares, unglazed wares and some potter's tools (Vroom and Findik, 2015; Waksman, 2015). The results eventually shed light on the production processes and trade relations of Medieval and Ottoman Ephesus (or "Ayasoluk") in general, and on the dating of the anonymous monument in particular.

Some hundred metres westwards from this Türbe lays the Tribune site. Here excavation from 2009 to 2011 revealed an additional motivation of continuous habitation based on the abundance and wealth of the Tribune's material record dating from Byzantine to Beylık and Ottoman

times. During that period the site seemed to have been used as some sort of residence or living quarters. Numerous fragments of tableware, glass vessels and metal objects were found in large quantities, often of high quality unrivalled for that era. Among the finds are fragments of blue-green Celadon bowls and plates from China, Islamic fritware with vegetal motives in blue paint, moulded jugs covered with a micaceous coating or a glaze, monochrome and polychrome Sgraffito Wares, unglazed amphorae and cooking pots. Most of the moulded fragments sampled for this article originate from Sondage 2, a large excavation trench situated along the western part of the monument. They can be generally dated in the 13th–14th c. and sometimes more specifically in the 2nd half of the 14th c.

The documentation of the material from the Türbe and the Isa Bey Hamam is nearly finished and awaits publication, while the study of the Tribune material is still ongoing. Besides basic analyses of the pottery, glass and small finds from the three sites to date the stratigraphy, the project aims to analyse and revalue the current knowledge of ceramic assemblages. This will include spatial analyses of the finds within the rooms (architectural units) of the sites displaying the function of the separate spaces through time. Finally, the study so far has shown new pottery types, new regional production sites and new patterns of trading networks (Vroom, 2015).

#### 2.1.2. Early Turkish Miletus

After the conquest of Miletus by the Turkish dynasty of Menteşeoğluları in 1261, life in the city continued without any interruption. Thereafter an increased construction activity began. The castle was renovated; now it served to secure the two ports that were also used for long distance trade with Venice. In that period a Venetian consulate, trading houses and a new church was constructed (Müller-Wiener, 1967, 288-90; Zachariadou, 1983).

In the 14th century a pottery workshop was operating in the remains of the so-called Bishop' Palace north of the Michael's church (Müller-Wiener et al., 1979, 170). More pottery workshops were probably located on the road west of the ancient bouleuterion (Sarre, 1935, 70; Wulzinger et al., 1935, 57). With the construction of visitor paths that lead from the Byzantine theatre castle hill to the Michael's Church and the ancient city centre, several older excavation rubble mounds were removed. The rubble may have been created during excavation of the workshop area. From these many tripods, misfired pottery and other ceramic finds originated (Böhlendorf-Arslan, 2008, 375: "STR", "WO" or "W"). Other ceramic finds are from surface cleaning of the theatre castle (Böhlendorf-Arslan, 2008: "TK" or "TO") or found during the renovation work in the theatre (Böhlendorf-Arslan, 2008: "T"). The excavations at the temple of Athena in the south of the city and the Michael's Church also provide Byzantine and early Ottoman material in the upper layers, which are not fully published yet (Böhlendorf-Arslan, 2008: "AT" or "MK").

Although these finds do not come from stratified contexts, they were of particular interest for our study as they include evidence of pottery production associated to pottery of the early Turkish period.

#### 2.2. Sampling

The sampling considered here<sup>2</sup> includes three categories of ceramics and clay objects, selected among a larger repertoire studied in the framework of the POMEDOR project:

<sup>&</sup>lt;sup>2</sup> Samples from Miletus in Böhlendorf-Arslan, 2008: BZY979 (Kat. 6, Abb. 4); BZY980 (Kat. 54, Abb. 14.54), BZY984 (Kat. 7, Abb. 5.7), BZY985 (Kat. 10, Abb. 5.10), BZY986 (Kat. 8, Abb. 5.8), BZY989 (Kat. 9, Abb. 5.9), BZY995 (Kat. 14, Abb. 6.14). Samples from Ephesus in Sauer and Waksman, 2005: BYZ439 (EPH-ART 17), BYZ440 (EPH-ART 18), BYZ441 (EPH-ART 19), BYZ442 (EPH-ART 20); in Waksman, 2015: BZY332, BZY333 (Fig. 2), BZY373 (Figs. 1 and 3); in Vroom and Findik, 2015: BZY332 (cat. 212), BZY373 (cat. 144); in Vroom, 2005: BZY966 (No. 32, Pl. 4, 11).

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