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The Dataset of the Geographical Dispersal of Islamic Cream Ware in Southern Bilad Al-Sham (8<sup>th</sup> to 11<sup>th</sup> Centuries)

# DATA PAPER

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# ABSTRACT

This dataset constitutes a comprehensive inventory of 125 excavated sites from the territory of southern Bilad al-Sham attesting the occurrence of the Islamic Cream Ware (ICW). It provides information on the typological variety, dating, and general contexts of appearance of this pottery class. In addition, it is supplemented by bibliographical references to all sites included in the database. In general, the following dataset can appear useful for scholars working on the various subjects related to Early and Middle Islamic pottery and settlement of southern Bilad al-Sham.

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#### **KEYWORDS:**

Islamic Cream Ware; Bilad al-Sham; Abbasid period; Fatimid period; open dataset

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# (1) OVERVIEW

## CONTEXT

The term "Islamic Cream Ware" (ICW) was introduced by Alan Walmsley [1] to describe a range of cream wares reflecting the evolving aesthetic taste of the Early Islamic society of southern Bilad al-Sham. It is commonly adapted in the scientific community, although one can observe that some scholars, especially those working on the territory of Israel, prefer to use more neutral label, that is "buff ware" (for notable examples see: [2], [3], [4]).

ICW is characterized by a semi-fine or fine sandy fabric, usually made from calcareous clay of cream, pale-yellow or more rarely pinkish brown color. In general, this group includes vessels characterized by a distinctive design of decorative motifs and well-executed, soft surfaces, which are usually powdery in touch. The functional repertoire is not particularly diverse, comprising various types of necked jars, pinched-spout jugs, and pilgrim flasks. Among the most frequent morphological solutions are the characteristic handles frequently decorated by the socalled applied turbans and neck filters. Open forms, like decorated basins and bowls, appear more sporadically and seem to be regionally varied. As a good example in that regard, it is important to mention the "Mahesh ware", which seems to constitute a local variant of ICW characteristic for the region of Ayla [5], Araba Valley [6] and the eastern part of the Negev desert [7].

Our current understanding of ICW chronology is based on the elaboration of well-stratified assemblages from Tabagat Fahl (Pella) [1, 8] and Tell Qamun (Yoqne'am) [2] as well as on the re-examinations of the material from early excavations at Khirbat al-Mafjar [9] and Capernaum [10]. ICW is particularly characteristic for the Abbasid and early Fatimid periods (mid-8<sup>th</sup>-11<sup>th</sup> centuries), although several types of this pottery class might have originated in the first half of the 8<sup>th</sup> century or even second half of 7<sup>th</sup> century, while the others certainly continued to be utilized even until the 13<sup>th</sup> century and beyond [11]. What seems important, thus, is that ICW should be considered as a transitional ware reflecting the gradual shift from the Early to Middle Islamic realms of material culture. In this context, it is necessary to mention the cream ware with relief-molded decoration from the Mamluk period. This class of pottery differs from its possible Abbasid and Fatimid prototypes due to its distinctive fabric, characterized by a greenish hue on the surface [12]. This study exclusively focuses on the period between the 8th and 11<sup>th</sup> centuries and does not encompass later types of cream ware.

Typologically, ICW can be divided into three main categories varying in terms of the quality of execution, technological characteristics, and appearance of decorative patterns [1]. The first one (ICW A) forms a particularly heterogeneous assemblage, expressing a high regional diversity. In general, it covers two substantial sub-groups: plain wares and wares with incised decoration (mostly combed wavy decorations). What differs ICW A from other types is a poorer quality of execution and coarser structure of fabrics. As the case of Beth Shean (Baysan) indicates [13], several types of plain cream wares appeared in the pottery repertoire of Bilad al-Sham already in the 8<sup>th</sup> century, if not earlier. It seems also that ICW A could have been manufactured independently at different production centres. Furthermore, unlike the other types of Islamic Cream Ware, ICW A might have also been more closely related to the earlier typological traditions.

The second category of Islamic Cream Ware (ICW B) contains several types of closed forms decorated by incising, gouging, hatching, stamping, barbotine application, or a combination of these. Patterns vary from abstract geometric and floral motifs to calligraphic and pseudo-calligraphic themes. Their design expresses some evident similarities to unglazed Early Islamic wares from Mesopotamia (for example see: [14]; for a wider discussion see: [11] with further references), as well as Iran (for some examples [15] and [16]). Fabrics are usually relatively fine, and its functional repertoire is definitely more standardized and generally limited to jars, jugs and pitchers.

Although quantitatively the least abundant, moulded ware (ICW C) constitutes the most widely discussed category of Islamic Cream Ware. It is often referred to as 'Mafjar ware' [17], as it was initially defined during the early excavations at the palace of Khirbat al-Mafjar. Importantly, this term cannot be considered a precise one, as some scholars use it to refer collectively to ICW B and C (for example: [7]). Furthermore, initially the incorrect understanding of the chronology of the stratigraphy at Khirbat al-Mafjar caused several interpretative misconceptions, leading to the common attribution of moulded wares to the Umayyad period (for example see: [18]).

The pattern of the geographical distribution of ICW visible on the accompanying maps (Figures 1–4) should be primarily understood as a reflection of the state of research on the Early and Middle Islamic periods. As a result, it can demonstrate the factual differentiation of ICW occurrence in the southern Bilad al-Sham only to a very limited extent. Browsing the published material, however, one can easily notice some significant regional tendencies.

In general, ICW is less abundant in the territory of Jordan than Palestine. One can even observe that it is virtually absent in some regions, even though the Abbasid occupation is there well-attested archaeologically. A good example is certainly the Madaba plain, where the Byzantine and Early Islamic periods seem to have been characterized by a very distinctive pottery tradition [19]. As map 1 (Figure 1) clearly shows, finds of ICW tend to be particularly abundant close to the potential production



Figure 1 The dispersal of the ICW in southern Bilad al-Sham (the potential production centres of ICW are marked by violet dots).

centers. A good example is certainly Tabariyya, where various types of buff/cream wares seem to be a significant, if not dominating, category of material culture during the Abbasid and Fatimid periods [3, 4, 20]. A similar situation can also be observed in the central coastal lowlands of Palestine. At Ramla, for instance, ICW constituted a substantial, but certainly not dominating, pottery class (for examples see: [21, 22, 23] among the others). It is most likely that this site functioned as the productional center of ICW, as indicated by the important find of a manufacturing mold from the excavations at the White Mosque [21]. This conviction is also strengthened by a petrographic study of pottery fragments from the Sinai

Peninsula [24]. Another production center of Islamic Cream Ware (ICW) was likely situated in the northern Negev desert, as suggested by archaeometric analyses conducted on isolated sherds from Abu Matar [25]. This hypothesis is additionally supported by a forthcoming study on the cream ware assemblage from Nahal Be'er Sheva [26]. This later research illustrates, moreover, the complex pattern of distribution and consumption of ICW involving the products of both urban and rural production centers.

In southern Jordan, ICW is generally considered a quantitatively insignificant pottery class. However, an exception is noted in the region of Ghor es-Safi, where



Figure 2 The dispersal of ICW A in southern Bilad al-Sham.

cream wares were likely produced alongside other pottery categories [27]. Furthermore, it is crucial to note that Mahesh Ware, a variant of ICW A, was almost certainly produced at Ayla and later widely distributed in its rural hinterlands.

Moving to northern Jordan, ICW is notably abundant, especially in urban areas [28], as demonstrated by recent excavations at Umm Qais [29] and Beit Ras [30], At this stage of research, it is rather difficult to speculate, however, whether this suggests that this region was a place of ICW production. Interestingly, Jerash constitutes an independent example of a pottery distribution pattern clearly dominated by locally produced wares [31]. Therefore, the lack of ICW in the well-defined strata from the Abbasid period is not particularly surprising.

What is striking is that, regardless of the typological attribution, ICW appears in both urban and rural contexts (Figure 5). Furthermore, especially in the territory of Israel-Palestine, it has frequently been found even in more ephemeral abandonment or reoccupation phases, usually being their main chronological marker. This suggests clearly that it was undoubtedly an easily accessible class of pottery for the Early Islamic society. Quite frequently all types of ICW appear simultaneously (47 sites). Interestingly, there are no striking differences in that regard between urban (15) and rural (17) sites.



Figure 3 The dispersal of ICW B in southern Bilad al-Sham.

ICW C usually appear alongside ICW B (55 out of 65 sites), strengthening the hypothesis of their mutual productional and distributional modes. Unsurprisingly, the lower variability of the ceramic repertoire can usually be observed in the countryside 20 out of 32 sites with only one category of ICW have been classified as rural.

The quantitative analysis suggests that there are no evident correlations between the particular categories of ICW and site types. All three clearly represent comparable distribution patterns in that regard. One can notice, however, that ICW A appears slightly less frequently at the urban sites (Figure 6), simultaneously being more frequent at the rural sites. ICW C, on the other side, is definitely more characteristic for urban sites. Furthermore, as map 4 indicates, most rural sites attesting the occurrence of ICW C are located in close proximity to the potential production centres. The dichotomy of the distribution of ICW C is clearly reflected in the juxtaposition of its occurrence at urban (66.67%) and rural (43.86%) sites. Even more striking is that of ICW B, which is attested at 91.67% of urban sites and only 66.67% of rural sites (Figure 7).

#### Spatial Coverage

The geographical boundaries of the query cover the territory of modern states of Israel (including the Palestinian Authority), and Jordan.



Figure 4 The dispersal of the ICW C in southern Bilad al-Sham.

Description: southern Bilad al-Sham (modern states of Israel and Jordan)

Geographic Coordinate System: World Geodetic System (WGS) 1984.

Datum: Northern boundary: 33.177164 Southern boundary: 29.531114 Eastern boundary: 34.432833 Western boundary: 36.369808

#### Temporal coverage

The dataset generally covers the timeline between the 8<sup>th</sup> and 11<sup>th</sup> centuries. In a few cases, however, the chronology

of ICW attestation begins before the 8<sup>th</sup> century or extends into the 12<sup>th</sup> century and beyond. It is important to also note that the vast majority of mentioned sites do not provide a clear stratigraphic context for the appearance of ICW. Frequently, ICW finds have been identified exclusively in the uppermost and intermixed units.

# (2) METHODS

#### STEPS

This dataset gathers 125 excavated sites from the territory of modern Israel and Jordan witnessing the appearance of







Figure 6 The share of different site types in the distribution of Islamic Cream Ware categories (P. Makowski).



Figure 7 The percent of sites in dataset attesting specific types of ICW (P. Makowski).

Islamic Cream Ware (ICW). It provides details on each site, including the name, the appearance of different types of ICW (categories A, B, and C), simplified dating information, references, remarks, site type, presence of potential production, information about any archaeometric analyses conducted, and coordinates of each site recorded in the World Geodetic System 1984 (WGS84) in decimal degrees (all attributes are detailed described below). A detailed list of 195 publications providing the references to the sites included in the dataset can be found in *ICW sources – Makowski and Chyla.docx*.

Following data compilation, the next step involved geovisualizing the dataset using Geographic Information System (GIS) technology. The locations of the archaeological sites were validated before conducting analyses to identify potential spatial distribution patterns and correlations between ICW categories and site types based on selected attributes (see maps 1–4) [32, 33].

#### Sampling strategy

The current study relies mostly on existing published materials and is additionally supplemented by unpublished data obtained through personal communication or indirect references in the available reports. It does not include the results of survey projects due to the methodological and practical obstacles resulting from the interpretation of a plethora of data, as well as chronological uncertainties. It is important to point out also that survey projects differ significantly in terms of approach to pottery elaboration and its further presentation in the published materials. As a consequence, the juxtaposition of the results of several "traditional" prospections with the pottery(object)oriented projects would have provided a very misleading picture. In general, moreover, one can easily notice that surveys cover more densely the territory of Israel than Jordan. This also applies to excavations and salvage projects, specifically.

#### Quality control

When possible, the chronology of the ICW appearance have been verified in the published materials. At any rate, the nature of the evidence and published materials from the excavation projects that comprise this dataset dictates the use of a relatively wide span of time. In some of the publications (especially those of an older date) the proposed time frames have been additionally corrected on the basis of more recent pottery typologies. To avoid mistakes during the transcription of the geographical coordinates, all the given coordinates of the records have been verified using GIS, and if needed, they were updated.

#### Constraints

Several aspects of Islamic archaeology affecting the spatial and temporal distribution of settlements recorded within the dataset need to be addressed here. Concerning the whole region, the intensity of research has changed over time, affecting the quality of data collection and the information available concerning the individual settlements. Due to the current political situation in Israel, our knowledge on the spatial spread of settlements in the West Bank is extremely limited. It is most certainly caused by a considerably lower intensity of research in the Palestinian Territories than in Israel.

Furthermore, it is only relatively recently that Islamic strata have been receiving adequate attention in scholarship. An overview of the scientific literature shows clearly, therefore, that ICW, as the other categories of Islamic pottery, is only sporadically discussed in the early reports. Another obstacle that significantly impedes the attempts of a more comprehensive presentation of the ICW geographical dispersal is the selectivity of publications, which usually only include discussions of certain types. When browsing the archaeological reports from various excavation projects, it becomes evident, for instance, that moulded and decorated wares appear much more frequently in published materials than do coarse plain wares. This tendency usually does not coincide with factual quantitative pottery-type distribution patterns but is usually a result of the arbitrary choices of scholars encouraged by the visual attractiveness of decorated wares. This issue has significantly impacted our understanding of the geographical and, to a certain extent, chronological dispersal of Islamic Cream Ware.

It is also important to note here that, to a degree, our deficient understanding of the geographical dispersal of ICW is affected by the notorious problems of identifying Early and Middle Islamic pottery classes and the inconsistent nomenclature used in the scientific literature. This obstacle is particularly apparent with regard to ICW A, which is stylistically less distinctive than the other types of Islamic Cream Ware.

# (3) DATASET DESCRIPTION

#### **OBJECT NAME**

ICW\_dataset.tab – comma-separated valuesfile containing the dataset.

ICW\_dataset.zip - shapefile containing the dataset.

ICW sources – Makowski and Chyla.docx – Word file containing the dataset bibliography.

The additional explanations for each attribute included in the dataset:

*Site name*: For the convenience of identification and further reuse, the sites are generally indicated by their contemporary names. In addition, in the case of some large and best-known sites the ancient names of these settlements are given in the brackets.

*ICW A*: This field indicates whether the site witnesses the presence of the ICW A.

*ICW B*: This field indicates whether the site witnesses the presence of the ICW B.

*ICW C*: This field indicates whether the site witnesses the presence of the ICW C.

Dating: To simplify further reuse, in this field the chronological span of ICW appearance is presented in a numerical order. It is important to note, however, that this division has, therefore, a very arbitrary and conventional character and for that reason should be treated with caution. Given the state of understanding of the Abbasid and Fatimid-period pottery, the rare utilization of instrumental dating methods and the general scarcity of coin and inscription finds, archaeological contexts featuring ICW can rarely be dated with a precision of one century. Usually, the character of stratification gives an opportunity only for separating phases covering the time spans of two or three centuries.

*References*: This field contains the information on the bibliographical references. It is limited to maximally four positions.

*Remarks*: This field provides some very brief comments on the nature of the publication or eventually the repertoire of ICW at the site.

Type of site: Sites included in the dataset have been generally divided into seven general categories. This allows us to briefly assess the social status of ICW during the Abbasid and Fatimid periods. The category "rural" covers not only small and middle-sized villages, but also hamlets, ephemeral sites, and isolated agrarian and productional installations. To cope with the interpretative difficulties related to the separation between the urban and rural settlements, the third category includes large villages (bigger than ca. 3 ha) and small towns. In addition, separate groups have been used for religious sites (mainly monasteries, pilgrimage places etc.), military sites, khans/road stations and isolated palaces. *Production*: This field indicates whether ICW could have been produced on the site or its direct surroundings.

Sampled for laboratory analyses: This field indicates whether finds of ICW from this site have been sampled for the various archaeometric analyses.

Coordinates: WGS84 coordinates in decimal degrees.

#### DATA TYPE

Secondary data, and processed data from publications and unpublished observations and oral communications.

#### FORMAT NAMES AND VERSIONS

.csv, .shp.

#### **CREATION DATES**

The dataset was created between 5/10/2021 and 28/02/2024.

#### DATASET CREATORS

Piotr Makowski and Julia M. Chyla

## LANGUAGE

English

## LICENSE

This dataset has been deposited and released under a Creative Commons Attribution 4.0 International license (CC-BY 4.0).

## **REPOSITORY LOCATION**

https://danebadawcze.uw.edu.pl/dataset.xhtml?persistent Id=doi:10.58132/Z8LR8I

#### **PUBLICATION DATE**

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# (4) REUSE POTENTIAL

The dataset can primary be useful for archaeologists working on the various subjects related to the pottery of southern Bilad al-Sham during the Early and Middle Islamic periods. While it provides information about the location and typological variety of ICW finds in Israel and Jordan as well as bibliographic references to all sites included in the dataset, it can be also used as supplementary material for researchers working on the pottery classes co-existing with ICW and comparative material for studies conducted on the related pottery classes from the other parts of the Islamic world. Furthermore, the dataset facilitates further study on the chrono-typological seriation of the ICW as well as its socio-cultural and economical significance within the material culture repertoire of the Abbasid and Fatimid periods. As research on the Islamic archaeology steadily progresses, it can be easily updated and supplemented by new records. It is important to note also that records in the dataset are saved in the.csv format, which should be useful for other scholars operating within similar datasets containing quantitative and qualitative information. In general, this format allows others to create their own databases by merging them with other datasets.

Considering that ICW is one of the most common and reliable chronological indicators of the period between the mid-8<sup>th</sup> and 11<sup>th</sup> centuries, additional works and/ or reuses of the dataset can provide a starting point for further and more extensive studies on settlement dynamics during the Abbasid and early Fatimid periods. One should remember, however, that in its current state the database is primarily a reflection of the state of research on the later phase of the Early Islamic and the beginning of the Middle Islamic period. To a certain extent, however, the maps illustrating the occurrence of ICW can reveal tangible differences in the distribution patterns of the Early and Middle Islamic pottery between various parts of southern Bilad al-Sham. For this reason, the dataset may be particularly useful for research discussing the overall nature of the Islamic pottery repertoire as well as for comparing the general characteristics of the material culture profiles of various regions.

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# **COMPETING INTERESTS**

The authors have no competing interests to declare.

# **AUTHOR CONTRIBUTIONS**

**Piotr Makowski** – Pottery specialist: interpretation of the dataset; collecting data, creating the dataset, collecting the bibliography.

**Julia M. Chyla** – Digital archaeologist: maps preparation, preparation of the dataset records.

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