Vessel Form and Paste Recipe: Ceramics from Castillejo del Bonete, Spain (2800-1800 BCE)

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Abstract

Castillejo del Bonete is a monumental ceremonial site dated between 2800 and 1800 BCE (Copper and Early Bronze Age) in the La Mancha region of central Spain. Archaeological research of this site began in 2003. The full range of activities that took place here is unclear and architecture of Castillejo del Bonete is unique. The burials found at the site indicate that it served as a home for the dead, and the orientation of its monumental corridors aligned to the solstices suggest important ritual practices. However, a wide array of ceramics found at the site, including storage vessels, suggests productive or storage activities may have also taken place. To better understand the nature of the site, characterizations of vessel forms and analyses of paste recipes for a sample of 63 ceramics collected by surface survey were undertaken. Paste recipes and inclusions were studied for variations both within and between identified vessel forms. These variations were used to explore functions, production methods, and possible source areas for the raw materials.

Figure 1: Castillejo del Bonete (Domínguez García et al. 2019, and "Yacimiento")

Geological Background

Castillejo del Bonete extends over an area of roughly 1000 m^2 and is situated at the southern edge of the Spanish Meseta. It is located at an elevation of 984 m asl and overlooks the Via Augusta, which forms a corridor between the Meseta and Andalucia and lies 100 meters below the plateau. Geologically, Castillejo del Bonete is located on Jurassic carbonates (Lías dolomites), below which the Triassic appears in Keuper facies, consisting of clays with gypsum and sandy intercalations with maximum thicknesses of 1.5 m. Its 7 km catchment comprises a range of geological substrates, which include the Jurassic dolomites to the north and east, Mesozoic pelites to the west and south, Mesozoic conglomerates, sandstones, and pelites, and Silurian slate to the south.

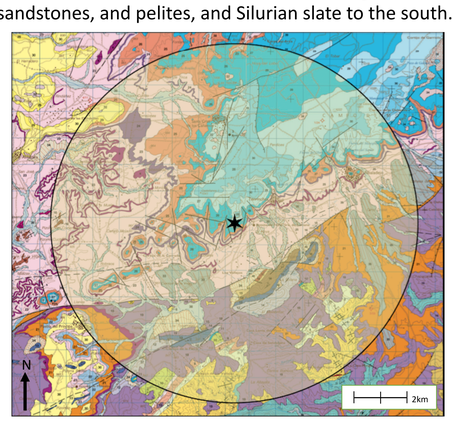


Figure 2: Geological Catchment Area (Matas)

Methodology

A sample of 63 ceramic sherds, variable in form and paste, were collected from a surface survey during fieldwork at the site of Castillejo del Bonete in the summer of 2019. All sherds were photographed and recorded for various attributes, including, size (max length, width, and thickness in cm), weight, sherd type (body, rim), vessel form, surface treatment or decoration, and a description of the paste and temper. Information regarding temper and paste was recorded using a Nikon SMZ645 stereo microscope. Sherds were grouped into 9 temper types that showcase different geological materials used to create these ceramics. These categories were also created with attention to paste color, temper color, temper size, temper shape, temper density, and the degree of temper sorting.

Results

Vessel Form

Due to the fragmented and degraded state of many of the sherds, the vessel form for 35% of the ceramics could not be determined. One sherd, shown in Figure 3, is unique in its form and can be classified as a *quesera*, a type of vessel often associated with cheese straining. The remaining sherds were determined to be either bowls or storage containers based on their morphology. The thickness of the sherds was found to be variable with sizes ranging from 0.4 cm to 2 cm and an average of 0.98 cm.

Surface Treatment

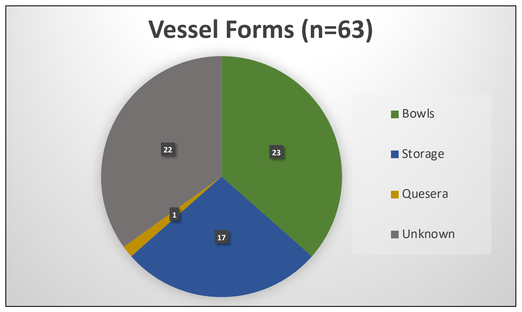
The majority of the shreds had no surface treatment or were deteriorated to the point where surface treatment was indiscernible. Some of the storage vessel sherds were smoothed or slipped/painted, but there was no evidence of burnishing or incised lines. Only bowl fragments showed burnishing and incised lines, in addition, to paint, slip, and smoothing. The three shreds with incised lines are consistent with the Dornajos style of the ceramics decorated on both sides and dated to around 2200- 1800 BCE. An example of one of the Dornajos style sherds can be seen in Figure 4.

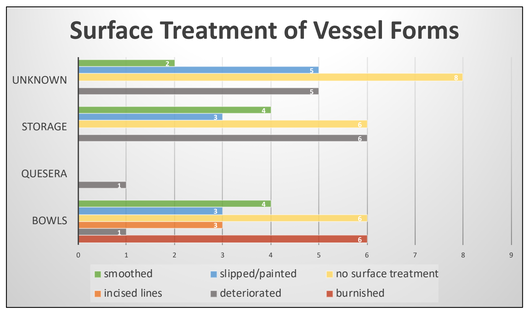
Temper and Paste Types

The most represented Temper Type in this sample was found to be Group 6, Mixed Sands (may include grog) with 27 sherds. Group 1, Sandy Fine Paste, and Group 3, Quartz, Mica, Feldspar, followed with 11 and 7 sherds respectively. The remaining groups contain 5 or fewer sherds.

Figure 3: Quesera

Figure 4: Dornajos Style





Paste and Temper Types

Group 1: Sandy Fine Paste – Dark grey paste color with a range of temper colors including light and dark greys and brownish beige. The main temper type for this group is fine sand although some sherds also present some feldspar, quartz, or other crushed rock fragments. The temper in this category ranges from well-sorted to moderately sorted with the majority of the temper very small in size and rounded in shape. Moderately sorted sherds also contain some elongated small to medium-sized temper as well. Temper density ranges between 5 – 15%.

Group 2: Calcite Limestone – Paste color is a medium to dark beige grey with white to dark grey temper. This temper includes calcite limestone along with some mica and sand as well. The temper for this group is mostly poorly sorted and ranges from very small to large in size. The larger temper is elongate and angular in shape while the smaller temper appears to be much more rounded. Temper density is between 20 – 30%.

Group 3: Quartz, Mica, Feldspar – Paste color for this group is reddish-brown or very dark grey with temper color varying widely including white, greys, and reddish-brown. The temper is a mix of quartz, mica, and feldspar with shreds also including some sands as well. The temper in this group is very poorly sorted with temper ranging in size from small to large. The majority of the temper is equant and very angular in shape. Temper density is around 20 – 50%.

Group 4: Slate – Paste color for this group is a dark brown with the temper color ranging from black to reddish browns to white and light grey. This temper type features very large black elongate and angular slate fragments along with additional mixed sands that are mostly equant and angular in shape. The temper is very poorly sorted and ranges from small to very large. The temper density is around 20%.

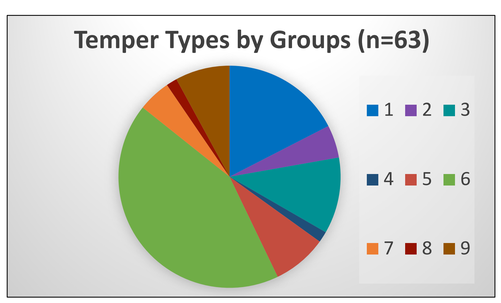
Group 5: Mixed Sands with Limestone – The paste color is dark grey or black with temper colors including white, light grey, and reddish browns. The temper for is group is comprised mostly of mixed sands, and sometime grog, but also features some larger limestone inclusions. The size of the temper ranges from small to large, however, the majority are medium in size and equant and angular in shape. The temper for this group is moderately to poorly sorted and ranges in density from 10 – 30%.

Group 6: Mixed Sands (may include grog) –The paste colors for this category range from dark grey to reddish-brown with a mix of temper colors including beige, greys, reds, and browns. The temper type is generally mixed sands but some also include grog, mica, and inclusions from sedimentary rocks. The temper is small to large in size and equant sub-angular or sub-rounded in shape. The temper is moderately to poorly sorted and ranges in density from 10 – 30%.

Group 7: Sandstone with Mixed Sands – The paste for this group is dark grey in color with beige and reddish-brown temper. The temper consists of small to medium-sized mixed sands and quartz as well as small to large sandstone. The inclusions are moderately sorted and equant and sub-angular in shape. The temper density is around 20 – 30%.

Group 8: Shell – The paste color for this group is a dark brown. The majority of the temper consists of white elongate and angular shell, ranging in size from small to large. There are also some small to medium-sized reddish-brown mixed sand inclusions as well that are equant and sub-angular in shape. The temper is poorly sorted and has a density of around 30%.

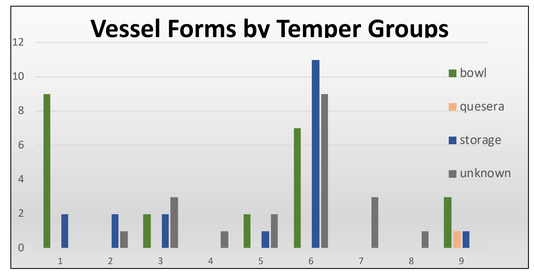
Group 9: Unique – Sherds in this category do not belong to any of the above groups and were unable to be typed, either due to their degraded state or because of their uniqueness.



Discussion

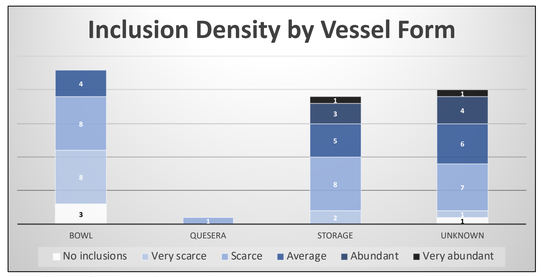
Form and Paste/Temper Groups

Vessel forms within each Paste and Temper Group were analyzed to explore any correlations between the type of vessel and the material used to make it. Only one paste and temper group, Group I, categorized by a Sandy Fine Paste, showed a trend in this regard. Although not all sherds in this category were classified as bowls, that vast majority were. None of the other Paste and Temper Groups appeared to correspond with any specific vessel form. Average sherd thickness for each Paste and Temper Group were also examined and no correlation was found.



Inclusion Density and Form

Inclusion density categorizations were used to correspond with a previous ceramic study at the site of Castillejo del Bonete undertaken in 2012 that found that bowls had smaller inclusion densities whereas pots had average or abundant densities (Fernandez Martin et. al, 2015). The inclusion densities of the sherds in this sample can be seen to generally reflect these same trends with bowl densities ranging from no inclusions to average. Although there is a great deal of overlap, no storage vessels were found to have no inclusions and unlike bowls reached abundant and very abundant densities.



Local Geology and Paste/Temper Groups

The geological materials found in the Paste and Temper compositions of the ceramic sherds in this sample appear to correspond with the geology found around Castillejo del Bonete within the 7 km upper limit for resource exploitation as proposed by Dean Arnold (1988). The vast majority of groups correspond to the dolomitic/limestone geology found in the immediate vicinity around the site, however, Group 4, containing only one sherd, stands out due to its large slate inclusions. The closest Silurian slate source can be found 3 km south of the site on the other side of the valley.

Conclusions

This surface sample shows a great deal of variability in the form and paste of the ceramics found at this site. The temper types in this sample reveal a wide range of geological components used in the creation of this pottery that reflects the variable landscape around the site. Decoration and finer pastes were most often found to correlate with bowls, coinciding with the earlier study by Fernandez Martin, et al. It appears that although some bowls were treated the same as, or similarly to other ceramic vessels, some bowls were treated differently with more consideration given to their make-up and appearance. The conclusions that can be drawn from this study are limited due to the small sample size, lack of context, and fragmented and deteriorated state of the ceramic sherds analyzed here. Future studies of the ceramics of this site would benefit from a larger contextualized sample to better explore ceramic function and use. A richer typology of the pottery types and styles for the Copper and Bronze Ages of La Mancha, Spain could also further the understand of the ceramics at Castillejo del Bonete.

References and Acknowledgements

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