

# Regional Variation in Colonoware Manufacture and Use

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Data collected on over 3,300 colonoware sherds from 11 sites in Virginia and South Carolina provide a compelling but complex picture of colonoware use and manufacture, one that has both regional and site-specific nuances. For this study, a number of sherd-level attributes were recorded, including:

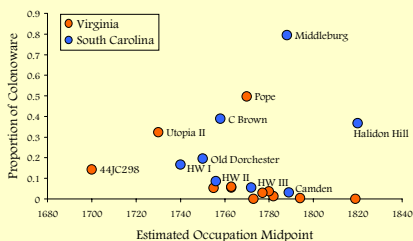
- Sherd thickness
- Tempering type and density
- Residue
- Surface treatment
- Decoration



We examine the results below.

For many of the South Carolina and Virginia sites, colonoware abundance decreases through time. But a number of sites in South Carolina, such as Middleburg and the Pope site in Virginia, do not fit the temporal trend in that these later sites have higher than expected abundances relative to other ceramics. What might these unusually high abundances tell us about use or manufacture?

## Relative Abundance of Colonoware

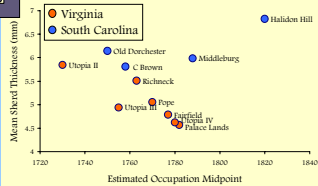


High abundance values can be influenced by any number of factors related to manufacture and use (Rice 1987). On-site manufacture can result in high values. Vessels requiring frequent replacement also will have higher discard rates, and, hence, higher abundance. Cooking pots, for example, have greater breakage rates than storage vessels due to thermal and mechanical stresses. Are these high-abundance outliers manufacturing colonoware, cooking with it, or both? We address this question first by examining additional evidence for cooking.



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## Mean Sherd Thickness

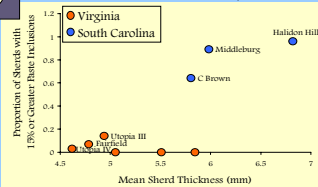


Among all Virginia sites and two of the four South Carolina sites, mean colonoware thickness decreases through time. Two outliers, Middleburg and Halidon Hill, have sherds that are thicker than would be expected given the noted temporal trend.

Vessel wall thickness is a performance characteristic of cooking pots that is related to thermal efficiency. Typically, thinner-walled vessels conduct heat faster than thicker-walled vessels. But, temper type can also affect cooking-pot performance.

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## Paste Inclusion Density



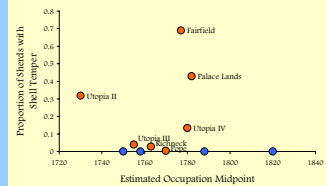
Most South Carolina colonoware contains quartz inclusions. Densities around 20% are optimal for increasing thermal shock resistance and toughness in low-fired, quartz-tempered vessels (Tite *et al.* 2001).

The trend toward thinner vessels among Virginia colonoware does not seem to be related to optimization of the cooking pot. If not cooking, perhaps Virginia trends are related to production of vessels for table use or for display.

Many Virginia vessels were also treated with a slip, visible only in sherd profile or in slip failure through flaking.



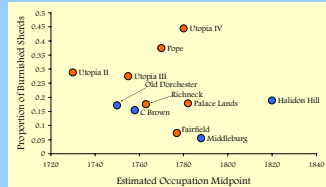
## Shell Tempering



Shell is an optimal tempering agent for cooking pots, given that it shares similar coefficients of thermal expansion with clay bodies (Rice 1987; Tite *et al.* 2001). Several Virginia sites have high proportions of shell-tempered colonoware.

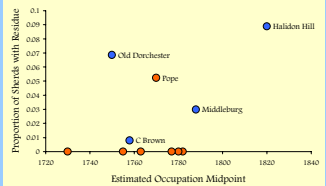
Following the reasoning that 1) higher abundances reflect local manufacture, 2) thinner-walled vessels make better cooking pots, and 3) shell tempering reduces thermal shock, we might falsely conclude that *more Virginia colonoware is used for cooking and more South Carolina colonoware is locally manufactured.*

## Surface Treatment



*Burnishing and decoration* on exterior surfaces represent increased time investment during vessel manufacture with little enhanced performance payoffs. In this case, decoration may be a proxy measure of competition with mass-produced tablewares.

## Food Residue



However, our most direct measure of cooking, food residue, is present on sherds from only one Virginia site, the Pope site, while *all* South Carolina sites examined have at least some food residue on interior sherd surfaces.

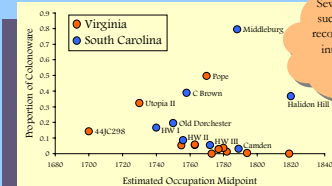
So...the story is not quite as simple as we thought: sites with thinner vessels and shell tempering, seemingly optimized for cooking, *lack* direct evidence of this use. Can other attributes shed light on the situation?

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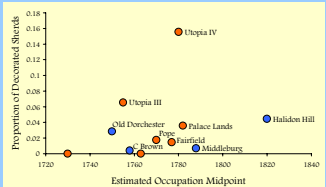
At the beginning, we suggested that high colonoware abundance might be associated with manufacturing or local production, but for production sites additional evidence, in the form of wasters, pottery-making tools, and kiln furniture, should also be expected. For the South Carolina sites examined here, however, we lack such supportive data. Given this and the direct evidence for cooking, we suggest that the high abundance of colonoware on some South Carolina sites is clearly related to cooking and not necessarily to local manufacture.

Pope is the only Virginia outlier in terms of its higher than expected colonoware abundance. The presence of food residue suggests at least some of this pottery was used in cooking. But, Pope is similar to other Virginia sites in mean sherd thickness and in proportions of decoration and surface burnishing. Could it be the case that some colonoware at Pope was produced for the table or display *and* some was used expediently for cooking? We think so.

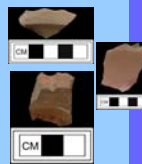


Several interesting objects, such as possible clay coils, recovered from Pope hint at intermediate steps in the process of pottery manufacture.

## Decoration



Because Virginia colonoware thickness decreases through time, and there are proportionately more burnished and decorated sherds than from South Carolina, we now wonder whether Virginia vessels were manufactured with larger market trends in mind, such as the rapidly increasing popularity and affordability of refined imported wares.



**References**  
 Coates, Brian (1995) *Colonoware and Grass Valley Pottery from Charleston, South Carolina and San Juan, Puerto Rico in Comparative Perspective*. PhD dissertation, University of Pennsylvania.  
 Lewis, K. E. (1976) *Camden: A Frontier Town*. Anthropological Studies 2, SCSIAA.  
 Rice, P. M. (1987) *Pottery Analysis: A Sourcebook*. University of Chicago Press.  
 Tite, M.S., V. Kilbuck, and G. Vekins (2001) Strength, Toughness and Thermal Shock Resistance of Ancient Ceramics, and Their Influence on Technological Choice. *Antiquity* 45(176):301-324.

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