Portable baking/firing chambers

Portable ceramic firing/baking chambers have been found on fifteen Iron Age and Roman sites in the northwest of the Iberian Peninsula. They are circular in plan with a diameter ranging from 55-65cm, and can be comprised of one piece (where only the grill is recovered) or two, consisting of a lower grill with various perforations into which a cover can fit. Until now various functions have been attributed to these objects, ranging from their use as pottery kilns, or their role in food preparation (e.g. domestic ovens, stoves, driers, smokers), with a third hypothesis proposing that they are connected with metallurgical activity.

Why look at the Castromao oven?

One of the most complete ovens found so far was recovered from the hillfort of Castromao, and dates to the Later Iron Age (4th–2nd century BC). It is the only decorated oven of the entire corpus of known examples. In comparison to the others, it has a carefully finished surface, which may indicate that it had a special use. Soot marks on the interior and exterior of the lower part of the oven disappear in the zones of direct contact with the fire around the perforations. The high degree of conservation of this oven has permitted the analysis and reproduction of its use marks, as well as the examination of the activities that may have created them.

The experiment

In order to try to explain the functionality of these ovens, a replica of the Castromao oven was produced for the experiment. A batch of pottery was first fired in the oven, and afterwards the oven was used in the preparation of various foodstuffs. By using the oven for these different processes, the project aimed to record the changes and use marks that each activity generated.

CASTROMAO OVEN

Analysis

Chemical and mineralogical analyses of the fabrics of the ovens of Castromao and Castrovile were undertaken (see map):

- The absence of kaolinite in the granitic substrate indicates that the analysed ovens reached temperatures greater than 550°C.
- The absence of neoformation elements and the reduced presence of muscovite mica in the grill shows that temperatures were less than 500°C, and that the grill was the area of the oven with the area of greatest heat intensity.

The results of phytolith analyses were negative. The absence of phytoliths could indicate that the oven was not used for the preparation of vegetable foodstuffs, or that it reached temperatures greater than 900°C which caused these remains to completely disintegrate. Analysis of X-ray diffraction and fluorescence to determine the components of adhering residues is still necessary, and analysis of the use of the oven is still necessary to complete the replica analysis of the materials that the oven may have contained.

Preliminary Conclusions

While this type of oven could have had various uses, the evidence suggests that the Castromao oven had a domestic function associated with food preparation. This conclusion is based on X-ray analysis, as well as the presence of decoration, and the quality of surface finish. To comprehensively determine the use of the oven it is still necessary to complete the analysis of the materials that the oven may have contained.

EXPERIMENTS WITH IRON AGE PORTABLE BAKING/FIRING CHAMBERS OF NW IBERIA

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