A TIME CAPSULE. SEEDS IN THE DITCH OF THE FIRST MEDIEVAL WALL OF SANTIAGO DE COMPOSTELA (NW IBERIA)

Introduction

The decrease in tree coverage registered in pollen analyses and the appearance of newly created population centres indicate that there was an intensification of agricultural pressure on the environment in Galicia (Northwest Iberia) during the Medieval Warm Period in the Early Middle Ages, which continued into the first centuries of the Later Middle Ages.

In comparison to other historic and prehistoric periods, archaeological investigations of the medieval period in the region are underdeveloped, with research focused primarily to the study of documentary sources, both ecclesiastical and archeological. It must also be noted that the scarcity of most taxa has been problematic for the conservation of organic remains. As such, the presence of archaeological contexts with a high degree of preservation of such evidence represents a great opportunity.

The discovery of waterlogged seeds from the ditch of the 10th century city wall (960-968) of Santiago de Compostela enables us to better understand medieval agrarian practices. Following the construction of a new city wall (1037-1056), the earlier enclosure fell into disuse, and as the ditch filled up these seeds were deposited from the 11th to 12th century. This represents a period which witnessed the growth of Santiago as a population centre, and its consolidation, with the help of the ruling monarchy, as a centre of European pilgrimage through the Camino de Santiago.

Results

A sample of 0.5 litres in volume was collected from a specific sample of a city wall (960-968) of Santiago de Compostela enabling us to better understand medieval agrarian practices. Following the construction of a new city wall (1037-1056), the earlier enclosure fell into disuse, and as the ditch filled up these seeds were deposited from the 11th to 12th century. This represents a period which witnessed the growth of Santiago as a population centre, and its consolidation, with the help of the ruling monarchy, as a centre of European pilgrimage through the Camino de Santiago.

Of particular interest among the seeds recovered from the ditch are those of fruit-bearing tree species (Prunus avium, Malus sp., Fraxinus carica, Carthamus salvia), and seeds indicative of the introduction of new plants during this period, such as the cucumber (Cucumis sativus). However, the most frequent remains were the large quantity of fragmented glumes, paleas, and lemmas of Panicum/Setaria, although seeds of these species were absent. In some cases it was possible to determine the taxon by the casings, with millet (Panicum miliaceum) and barnyard millet (Setaria italica) identified in this way.

The rest of the plants could have grown spontaneously in the site or have been transported. Some like Juncus sp. grow in humid environments and Urtica sp. in humanized areas. Species like cf. Pteridium aquilinum and Ulex sp. have traditionally been used as bedding for livestock, and others, like Avena sp., were cultivated at this time. However, the absence of diagnostic elements, as well as the limited representative nature of the plant remain, precludes confirmation of these exploitations.

Material and method

The sample, 0.5 litres in volume, was collected from a specific sample of a city wall (960-968) of Santiago de Compostela enabling us to better understand medieval agrarian practices. Following the construction of a new city wall (1037-1056), the earlier enclosure fell into disuse, and as the ditch filled up these seeds were deposited from the 11th to 12th century. This represents a period which witnessed the growth of Santiago as a population centre, and its consolidation, with the help of the ruling monarchy, as a centre of European pilgrimage through the Camino de Santiago.

Using 2, 1 and 0.5mm meshes the soil was wet sieved so as not to accelerate the dehusking of seeds of the millets. Sediment fragments from millets (Panicum/Setaria) were the large quantity of fragmented glumes, paleas, and lemmas of Panicum/Setaria, although seeds of these species were absent. In some cases it was possible to determine the taxon by the casings, with millet (Panicum miliaceum) and barnyard millet (Setaria italica) identified in this way.

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Discuss & conclusion

The sample from the ditch contains a representation of fruit tree species that are frequently referred to in medieval documents of Northwest Iberia, and in particular it has preserved a large and interesting quantity of fragmented remains of pears, almonds, and grapes of Punica granatum and Setaaria italica.

While the absence of seeds of both millet species could correspond to a degradation of the seeds in waterlogged environments, their fragmentary nature and high concentration suggests that another hypothesis is more likely. In ethnographic studies of the region, reported in a communication of this congress (Monroy-Lamardel et al., “Ethnography of millet cultivation in Northern Iberia”), numerous examples have been documented of the chaîne opératoire (technical operative chain) of millet processing, where the species have been used for both human consumption and as animal fodder. Among these it is possible to determine the dehusking of seeds of Panicum miliaceum to remove the inedible seed casings – a practice related to the processing of this species for human consumption.

What at first was originally treated as a specific sample has, due to its context and high degree of preservation, allowed the reconstruction of a concrete environment, in a particular moment in time (11th – 12th centuries). For an area where archaeological remains of medieval sites are frequent, and the relevant information primarily derived from written sources, the current analysis has enabled the verification of a number of species destined for consumption, as well as shedding light on parts of the chaîne opératoire of the millets.

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