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UNDER THE PATRONAGE OF



## Seeds/fruits data from the "Vasca Superiore di Noceto", an artificial mire of the Bronze Age in the Po Plain (N Italy)

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### Introduction

The Noceto wooden basin is an huge structure (12x7 m and about 3,5 m deep) situated in the central Po plain near Parma. Discovered in 2004 and it was studied through several archaeological fields from Soprintendenza dei Beni Archeologici dell'Emilia-Romagna with the collaboration of University of Milan (Bernabò Brea and Cremaschi 2009).

This basin was built from the *terramara's* inhabitants of Noceto during Middle Bronze Age (1650-1350 BC) and was originally filled with water. The waterlogged anoxic deposits and the fill characteristics preserved the structure and many wooden objects. Most remarkable are the remains of four ploughs deposited at the corners of the basin. Furthermore, more than 150 whole or fragmented ceramic vases were found, together with miniature vases and figurines. The position of the structure, the type of depositions and their distribution within the basin suggest ritual activities probably linked to agrarian and water cult (Bernabò Brea and Cremaschi 2009).

This condition allowed the good conservation of seeds and fruit remains.

### Materials and Methods

The layers considered have been: 5003, 13-66, 66-81, 31, 32A, 66, 66α and 138. The samples from two vases (R.594 and R.798) have been analysed (Rottoli and Castiglioni 2009; Proserpio 2017). Overall, c. 230 litres of sediment were floated.

The soil samples were floated and sieved with a 0.2 final mesh. The identification of seeds and fruit was made with identification keys, atlas and reference collection of the Laboratory of Palynology and Palaeobotany of the University of Modena e Reggio Emilia and the Laboratory of Archaeobiology of the Museums of Como.

### Results and Discussion

Overall, more than 60,000 seeds/fruits have been found.

The analysis showed that the Noceto wooden basin was an eutrophic pond. Indeed, there is the presence of *Lemna* sp., *Lycopus europaeus*, *Ranunculus* cf. *flammula* and *Potamogeton* sp.. Around the basin there was an open area of grassland and the high percentage (up to 58%) of ruderal species (*Urtica dioica*, *Rumex crispus/obtusifolius*, *Hypericum perforatum*) suggests the presence of human activities.

The cereal taxa recovered in the basin are frequent in the Middle Bronze Age deposits of the Terramaras: barley (*Hordeum vulgare*) hulled wheat (*Triticum monococcum*, *T. diccoccum*, *T.*

*timopheevii*) free-threshing wheat (*T. aestivum/durum*), rye (*Secale cereale*) and millet (*Panicum miliaceum*). The remains are all charred and there are more chaff remains than grains.

Only a charred pulse was recognised (*Vicia faba* var. *minor*), while 14 taxa of fruit were found, probably collected in the settlement surroundings (*Corylus avellana*, *Rubus fruticosus*, *Fragaria vesca/viridis*, *Sorbus* sp.). Remains of grape (*Vitis vinifera*) and cornelian cherry (*Cornus mas*) are both partially charred.

The concentration of seeds/fruits into the different layers is significant. The most high remain concentration (1752 c/l) and the most percentage of cereals (34%) and fruits (8%) is in layer 138. In layer 66 remain concentration is 557 c/l and in US 32A is 268 c/l, with low percentages of cereals (about 10%) and fruits (3%).

## Conclusions

Ritual practices from Noceto wooden basin are suggested from the different type of evidences recovered. Also, the offers of cereals and fruits were included in the cult activities and the presence of charred remains would indicate the use of fire. The copious amount of chaff remains would suggest deposition of whole spikelets of grain, instead of grains already threshed.

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