

The city of Parma (Emilia Romagna - Italy) in the Roman and Medieval Periods: seeds and fruits, pollen and parasite remains

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Garibaldi Square - Parma

Archaeobotanical analyses have been carried out on the site Piazza Garibaldi of Parma, a city located in the plain of Emilia Romagna, a region of Northern Italy. The studied layers were dated to the 4th - 2nd cent. BC, i.e. around the time of the Roman foundation, and to the 9th - 12th cent. AD. In Roman times the site was probably a sacral area, while in Medieval Ages it was a market square. Pollen and seeds/fruits data were useful for both palaeoenvironmental and palaeoethnobotanical reconstructions.



Oak woods and hygrophilous woods grew far from the site, while human activities highly influenced the environment in early times. Cereals, legumes and hemp were probably cultivated together with chestnut trees, fig trees, grapevines and Pomoideae. Moreover, a number of medicinal/vegetables/spices plants were present. *Papaver somniferum*, *Coriandrum sativum*, together with *Fragaria vesca*, were characteristic in the carpological record. Altogether, archaeobotanical data well correspond to votive offerings to several gods, and particularly some of them including opium poppy and cereals would have been offered to Demeter/Ceres, the goddess of crops and soil fertility.



Roman Period - *Papaver somniferum* (seed 0,9 mm)

Concerning Medieval Ages, the archaeological structures which were studied included four pits and one latrine. Analyses of plant and parasite remains have suggested that the infillings were made by waste, human and animal excrements, deteriorated vegetal food and marcs. In particular, human parasite remains (belonging to the genera *Ascaris* and *Trichuris*) were found in the latrine, while also parasites of animal (such as species of *Capillaria*, *Dicrocoelium dendriticum*, *Diphyllobothrium*) were present in pits. Pollen from entomophilous plants (such as *Digitalis purpurea* which lives wild today only in Sardinia) were common in the latrine, possibly also due to human consumption of honey. Cultivated fields of *Triticum aestivum/durum/turgidum*, *T.monococcum*, *T. dicoccum* and other cereals, together with legumes, grapevine and fruits trees, were grown in the area. Some olive trees were probably cultivated in the hills. Many wild species were found in the deposits, including *Agrostemma githago* and *Thymelaea passerina*. The archaeobotanical record from the Medieval Age revealed two main 'agro-ethno-botanical' features this city: a) a particular consideration for *Prunus spinosa* whose fruits are still today collected and prepared as an alcoholic drink ("Bagnolino"); b) a low consideration and importance of *Cucumis melo* in the economy of this area with respect to other areas of Emilia Romagna (e.g., provinces of Ferrara and Ravenna).



Seeds/fruits Medieval Period

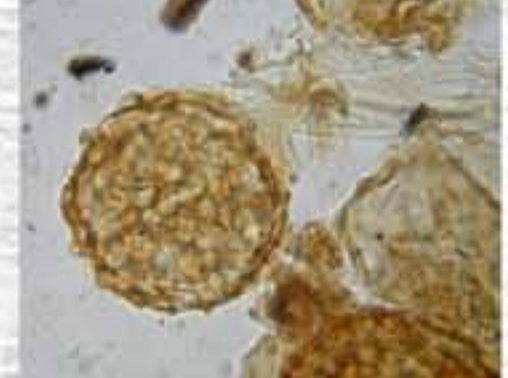
1. *Prunus avium* (endocarp - 8.8 mm)
2. *P. spinosa* (endocarp - 7.0 mm)
3. *Portulaca oleracea* (seeds - 0.9 mm)
4. *Vitis vinifera* subsp. *vinifera* (seed - 6.0 mm)
5. *Ficus carica* (achene - 1.2 mm)
6. *Fragaria vesca* (achene - 1.4 mm)
7. *Triticum aestivum/durum/turgidum* (caryopsis - 5.3 mm)
8. *T. dicoccum* (caryopsis - 5.7 mm)



Avena/Triticum type (65 µm)



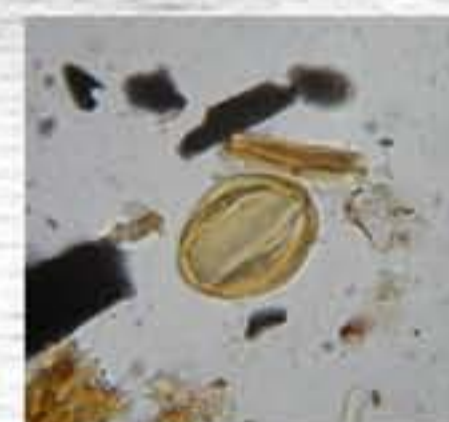
Juglans (51 µm)



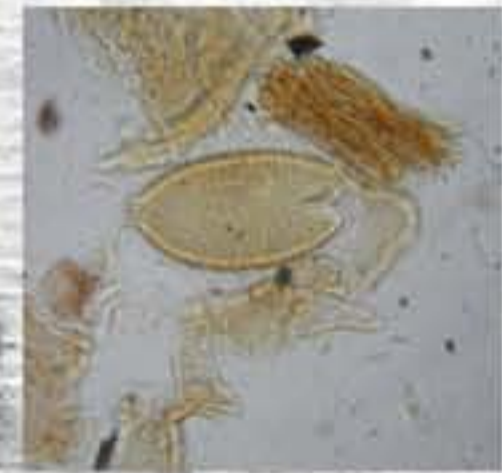
Ascaris (65 µm)



Poaceae (wild) (40 µm)



Vitis (27 µm)



Capillaria (55 µm)



Cichorioideae (30 µm)



Diphyllobothrium (47 µm)



Trichuris (46 µm)

Pollen and NPP Medieval Period