

Archaeobotanical remains and funerary rituals from the *agro Mutiniense* necropolis (1st-4th cent. AD)



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The research aims to study the archaeological and archaeobotanical remains from the *agro Mutinense* necropolis of *Mutina*, dated from the 1st to the 4th cent. AD. The purpose is to make a wider and complete framework of the deepen aspects concerning the after-death rituals, as inferred from graves contexts.



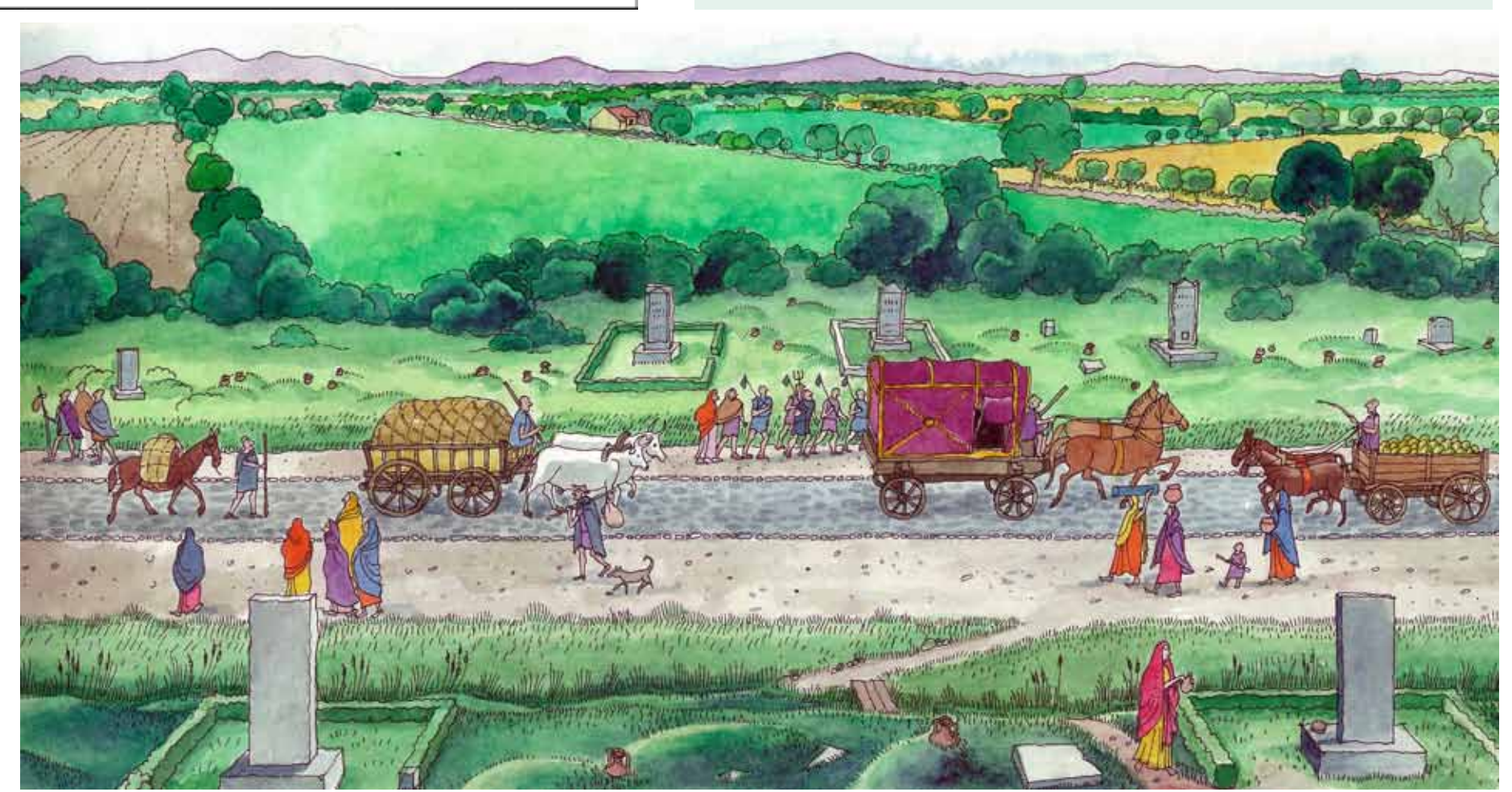
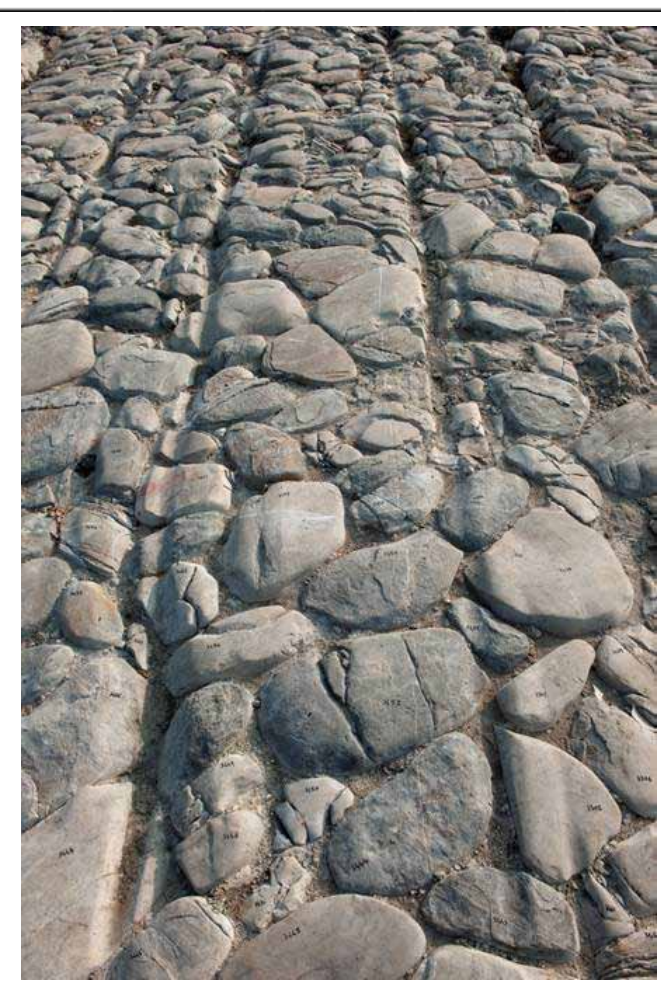
The research focuses on the foodstuffs and offers that were common during the Roman Age, the way of thinking they represent and the symbolism related to death in juxtaposition with life. How did they change in relation to individual, social and economic aspects? During Roman times, ritual offerings were widespread in graves, especially in three principal ceremonies: the libation, the funeral meal and the gift to the dead. Indeed, in these sites, the records of raw, cooked or burnt food in funerary contexts depends on human practices: different kind of objects and products can potentially provide more information about the deads, their beliefs and customs.



Grave goods of the Imperial Age burials (ex Novi Sad site): necklaces (glass), balsam containers, dice (bone), skein (gold thread), oil lamp (photos: Soprintendenza Archeologia Emilia-Romagna).

funerary context (graves and sites)	chronology (cent. AD)	Cicer arietinum	Cornus mas	Carylus avellana	Ficus carica	Foeniculum vulgare	Hordeum vulgare	Juglans regia	Lagenaria siceraria	Lens culinaris	Olea europaea	Phoenix dactylifera	Pisum sativum	Prunus persica	Prunus sp.	Pyrus/Malus	Quercus sp.	Triticum aestivum /durum	Triticum sp.	Vicia ervilla	Vicia faba var. minor	Vicia sativa	Vitis vinifera subsp. vinifera	?
36																								
45				X	X							X									X			
52					X																			
55					X																			
106					X																			
119					X													X			X			
124					X													X	X		X			
136					X																X			
137					X																			
138					X					X													X	
151							X								X						X			
152																								X
165																				X	X	X		
166												X												
189				X	X							X												
232				X	X							X									X			X
242				X	X							X												
340		X		X				X				X	X	X							X			
343				X								X		X							X			X
352				X								X									X			
362				X								X												
363				X								X									X			
365				X								X									X			
379				X								X									X			
ritual discharge				X			X					X						X	X		X		X	
libation				X	X	X	X					X									X		X	
221	1 st (?)			X	X	X	X					X									X			
346	1 st -2 nd			X	X							X									X			
104	4 th																							
105	4 th (?)								X															X
3														X										
23														X										
50														X										
ground														X										
4								X								X					X			X
7																					X			
8																					X			
9								X													X			
10				X	X			X			X					X					X			X
12				X	X			X			X					X					X			X
X	charred																							
X	no charred																							

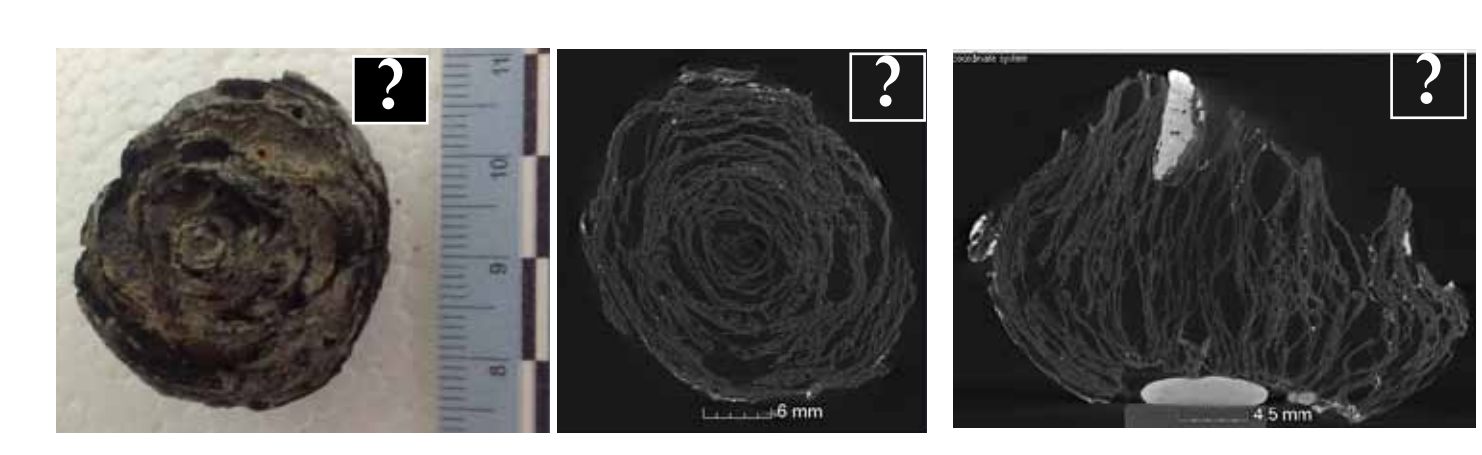
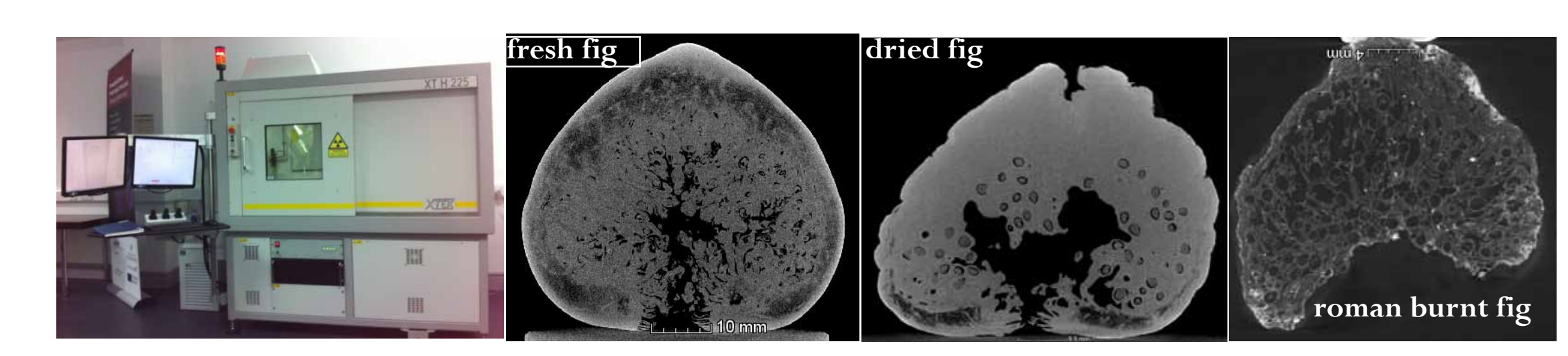
The "ex Novi Sad" (urban site) and "Marzaglia - *Corpus Domini*" (rural site) are providing hundreds graves, both of the cremation and inhumations type. The analysis of this necropolis shows that fruit records are the most common (grapes, dates, figs, peaches, walnuts, pinenuts, hazelnuts). Also cereals and pulses, among which is the fava bean, are important.



A - date (*Phoenix dactylifera* L. - fruits and endocarps); B - fava bean (*Vicia faba* L. var. *minor* - seeds); C - fig (*Ficus carica* L. - syconia) (site: ex Novi Sad - photos: R. Rinaldi, G. Bosi).

to the right: ex Novi Sad site - the way (of river stones) which connected Mutina with Mantua. By the roadside were located the graves (drawing: R. Merlo)

In addition to traditional methods, such as sieving and flotation, new advanced technologies helped to study offerings presence. For this reason, in order to visualize the internal structure of the burned archaeological samples using a non invasive technique, a CT-scan has been used in 3D reconstructions obtained from the archaeological samples. Archaeobotanical records have been compared with modern samples burned in anoxic conditions at 500 °C for two hours. In order to investigate the temperature of burning adepte in ancient practices, archaeological samples were analysed using a SAXS approach (200-900 °C).



left: finding unknown (*Lilium/Narcissus* bulbs?)