Palaeopathology and Urban Decline at Imperial Gabii (Italy)

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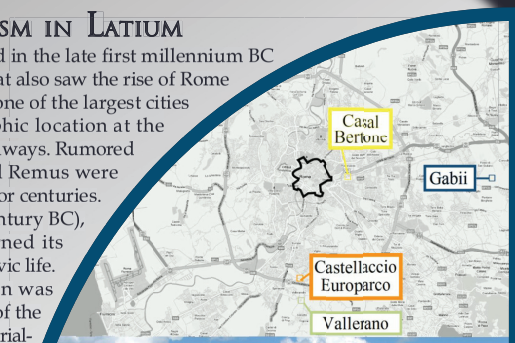
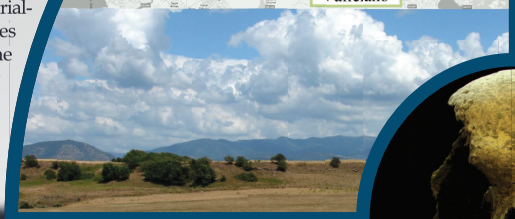
Background: Urbanism in Latium

The ancient city of Gabii emerged in the late first millennium BC during a wave of urban explosion that also saw the rise of Rome just 12 miles away.[1] Gabii grew to one of the largest cities in the area by virtue of its geographic location at the intersection of several important roadways. Rumored to be the place where Romulus and Remus were educated, Gabii was a cultural icon for centuries. By the late Republican period (1st century BC), literary references to Gabii concerned its depopulation and insignificance in civic life.

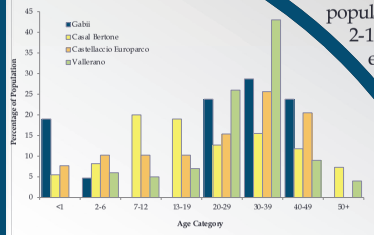
Little archaeological investigation was undertaken at Gabii until 2007. One of the surprising finds was a makeshift Imperial-era necropolis. Since Roman cemeteries were traditionally located outside the walls of a city,[2] one of the salient features of the collapse of Gabii as an urban center is the reuse of the city as a necropolis. The question remains: *Who was buried at Gabii?*





Pathological Conditions

Gabii can be directly compared with three other cemeteries in use during the 1st-3rd centuries AD: Casal Bertone, Castellaccio Europarco, and Vallerano.[5,6] Demographic data show that the Gabine burial population is quite different, however, with no subadults between 2-18 years of age. None of the five children examined had evidence of cribra orbitalia, compared to much higher crude prevalence rates at the other sites. Of the adults from Gabii, 14 presented teeth or jaws for analysis. The Gabine population had worse dental health in terms of true prevalence rates of caries, calculus, abscesses, and antemortem tooth loss than did the other three populations. In comparing these frequencies using Fisher's exact test, Gabii is statistically different ($p \leq .01$) than Casal Bertone and Vallerano in caries, abscesses, and AMTL, and different than Castellaccio Europarco in the latter two conditions. Gabii is similar to Casal Bertone and Castellaccio Europarco in frequency of degenerative joint disease: 67%, 76%, and 63% CPR, respectively.



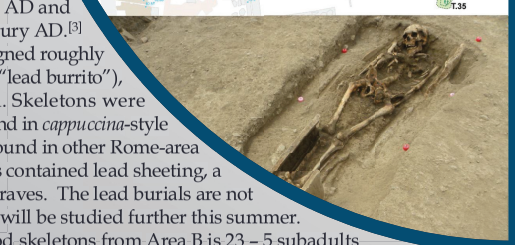
	Gabii	Casal Bertone	Castellaccio Europarco	Vallerano
Caries (TPR)	**10.0**	4.9	8.3	2.5
Calculus (TPR)	**80.0**	35.0	51.0	---
Abscesses (TPR)	**5.8**	1.5	2.0	1.1
AMTL (TPR)	**14.7**	4.6	5.3	3.4
CO (SA) (CPR)	0	37	29	**100**

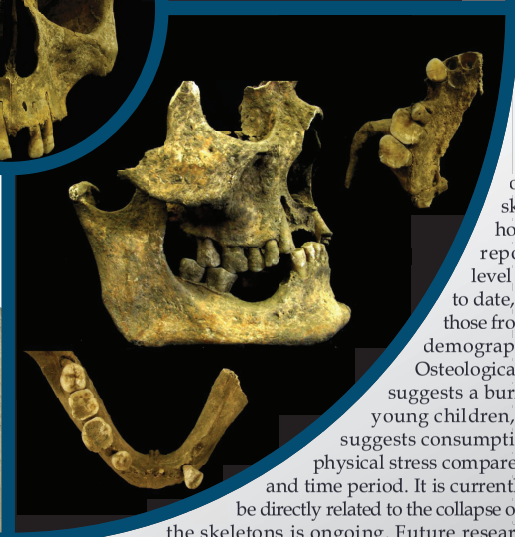
Gabii Cemetery

Area B at Gabii corresponds to a domestic structure dating to the mid-Republican period, followed in the early Imperial period by burials that were likely purposefully made within the abandoned structure. The sequence of burials in Area B has not been fully refined, but carbon dating of bones from three graves suggests the burial program began in the late 1st/early 2nd century AD and continued through at least the 3rd century AD.[3]

Most of the burials in Area B are aligned roughly east-west, but others, like Tomb 8 (the "lead burrito"), are more north-south in orientation. Skeletons were interred in simple pits, in amphorae, and in *cappuccina*-style graves, consistent with burial forms found in other Rome-area necropoleis.[4] However, three burials contained lead sheeting, a practice not well-attested in Roman graves. The lead burials are not included in this presentation, as they will be studied further this summer.

The total number of Imperial-period skeletons from Area B is 23 – 5 subadults under the age of two, 7 females, 8 males, and 3 adults of indeterminate sex.





Interpretation

The urban area of Rome boasted a very heterogeneous population during the Imperial period owing particularly to the importation of slaves from other areas of the Empire. Attempts to characterize the skeletal health of this disparate population, however, are only just beginning, and most reports do not list methods or individual-level data. Based on the information available to date, the Gabii skeletal series is different than those from other cemeteries near Rome in terms of demographics and frequencies of dental disease. Osteological investigation of the Gabine population suggests a burial program biased towards adults and young children, and palaeopathological investigation suggests consumption of different foodstuffs and/or more physical stress compared with other groups from the same area and time period. It is currently unclear whether these differences can be directly related to the collapse of the city of Gabii. Analysis of this site and the skeletons is ongoing. Future research will involve biochemical testing to investigate the diet and the geographical and biological backgrounds of the Gabines.

References

[1] J. Becker, M. Mogetta & N. Terrenato. 2009. A new plan for an ancient Italian city: Gabii revealed. *AJA* 113(4):629-42. [2] Cicero, *de Legibus* (ii, 23, 58). | J. Toynbee. 1971. *Death and Burial in the Roman World*. Johns Hopkins U Press. [3] J. Becker 2011. Gabi. *FASTI Online*. [4] S. Musco et al. 2008. Le complexe archéologique de Casal Bertone. *Les Dossiers d'Archéologie* 330:32-9. | A. Buccellato et al. 2008. La site et la nécropole de Castellaccio. *Les Dossiers d'Archéologie* 330:14-19. [5] K. Killgrove. 2010. *Migration and Mobility in Imperial Rome*. PhD dissertation, UNC Chapel Hill. [6] A. Cucina et al. 2006. The necropolis of Vallerano (Rome, 2nd-3rd century AD). *IJO* 16:104-117.

Acknowledgments

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