

## Quantifying Suburbanization: A Reexamination of Population in and Around Imperial Tibur

The *suburbium* of Rome is one of the most surveyed landscapes in the Roman world. These studies have demonstrated that, by the early empire, it was among the most densely inhabited regions in the Mediterranean. Within this zone were numerous urban centers which, to varying degrees, underwent a process of “suburbanization” between the late Republic and early empire. By this I mean a redefinition of urban identity generated by increasing social and economic integration with Rome (despite continued administrative autonomy), facilitated by villa culture, road, river, and aqueduct networks, and an ever-expanding built environment. Tibur (modern Tivoli), the third largest suburban city (after Ostia and Antium), is emblematic of these changes with its elite villas, travertine quarries, and nodal importance for several urban aqueducts. Quantifying the population of *suburbium*, which would further refine our understanding of these processes, has remained a source of contention, however.

In a seminal 2005 article, R. Witcher presented a preliminary demographic model for the Roman *suburbium* (i.e. extending 50 km from Rome) by extrapolating from survey data (revisited in Witcher 2008). Accordingly, he proposed a suburban population just under one-third of a million people (an estimate reckoned as an “order of magnitude” rather than a hard figure). Several subsequent studies (e.g. Fentress 2009; de Ligt 2011; Launaro 2012,) took a similar approach to population reconstruction, particularly as they relate to the “high” vs. “low” count debate for Roman Italy. Inadvertently, the author’s original intent for presenting such a model, namely, to call for a reevaluation of the urban-rural relationship in Rome’s hinterland in light of a large suburban population, was overlooked in these later studies.

I aim to refocus the discussion back onto the suburban population through a closer examination of the territory of Tibur. Although heavily impacted by modern development, the archaeological landscape of Tivoli was well-documented by four topographical surveys published between 1966 and 1991 (Giuliani 1966, 1970; Mari 1983, 1991). This kind of legacy data, however, collected over three decades and presented with no explanation of methodology, needs to be handled with caution, especially in comparison with more recent intensive field surveys in which collection practices are outlined in detail. Nonetheless, this data remains a point of departure for testing the parameters of Witcher's model, especially in light of newer surveys carried out elsewhere in the *suburbium* (e.g. Attema and de Haas 2011). Furthermore, a small-scale study permits more thorough consideration of the peculiarities of imperial Tibur's territory, such as Hadrian's villa, the preponderance of extremely large luxury villas, its mountainous interior, and the presence of the hot springs and travertine quarries of Aquae Albulae.

After digitization in GIS, a reexamination of this data in comparison with recent intensive archaeological re-surveys of other parts of the *suburbium* suggests some intriguing preliminary results. First is that the territory of Tibur was likely more populated on average than the whole of the *suburbium* as reconstructed in Witcher's model. Second, Witcher's overall model may have been too conservative, and there is good reason to believe the actual population of the early imperial *suburbium* was well above the "informed estimate" of one-third of a million people. Although never intended as an absolute quantification of the suburban population, this model continues to reaffirm the extraordinary status of Rome's *suburbium* as one of the most heavily occupied landscapes in the ancient Mediterranean, the full implications of which have yet to be completely explored.

## Bibliography

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