

Visualizing the City of the Dead: Viewshed Analysis of the Etruscan Necropolis
at San Giuliano, Italy

The necropolis at San Giuliano in central Italy is widely known for its hundreds of Etruscan rock-cut tombs, where inhabitants of the adjacent plateau buried their dead and practiced funerary rituals. Although the pairings of towns with surrounding necropolises are ubiquitous features of Etruscan society, little has been written about the relationship between the Etruscan ritual and domestic landscapes. This poster presents a model of intervisibility between the San Giuliano necropolis and its associated plateau to assess this relationship through use of Geographic Information Systems (ArcGIS). Drone photo documentation is used to conduct an aerial survey of the San Giuliano landscape and to create a digital elevation model (DEM) of the site. Viewshed analysis is applied to the DEM to ascertain the individual intervisibility of each tomb with the plateau, which is calculated in ArcGIS to display the cumulative intervisibility of all the tombs with the plateau. To reduce the propagation of error of the viewshed model, experimental and substantive concerns such as the DEM quality and changes in the environment over time are accounted for with a probabilistic model, which displays the average results after varying parameters in vegetation and observer heights. These models help to determine future areas for excavation on the San Giuliano plateau, as well as warrant an inter-site analysis of Etruscan tomb intervisibility that incorporates other Etruscan town-necropolis pairings in Etruria.