

# Agricultural Landscapes of the Nemencha (Algeria): BILNAS Project Report

Nichole Sheldrick

The *Agricultural Landscapes of the Nemencha* project was developed in collaboration with a team from Tufts University, directed by Prof. Bruce Hitchner. The project's aims are to use remote sensing methods to record and investigate the settlement, agricultural production, and environment in five study areas in the Nemencha region of

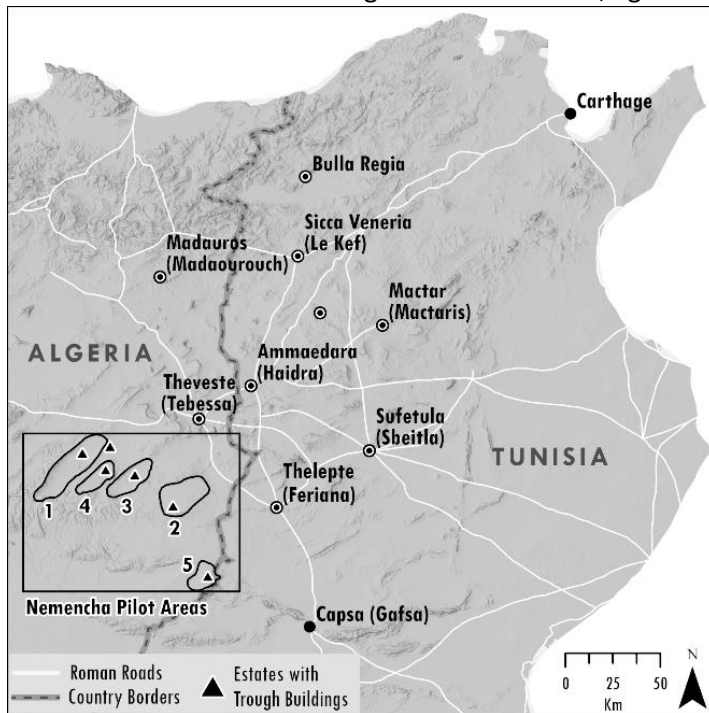


Figure 1: Map of the study area in Algeria

Algeria (ancient Numidia) during the Roman and Late Antique periods (1st-7th c. CE). The University of Leicester team, funded by BILNAS, undertook the detailed investigation of Area 5 (see Figure 1). The funding enabled the purchase of high-resolution, Pléiades NEO satellite imagery, and the employment of 2 student research assistants to work one day a week, for 12 weeks, to use the imagery to identify, record, and digitise visible features.

The Pléiades satellite imagery was first processed in multiple ways to take advantage of its spectral properties, creating true colour, false colour, and NDVI images, which helps to distinguish different types of features.

The approximate locations of known sites were established and confirmed using data from the *Atlas Archéologique de l'Algérie* (AAA). Seventeen AAA sites from Map Sheet 51 overlapped with Area 5 (Figure 2). This area is of great archaeological interest, as it is believed to be the area where the Albertini Tablets were first discovered. Although the approximate locations of the AAA sites had previously been digitised, detailed documentation of the individual sites has never been attempted before now. Over the course of 12 weeks, through detailed investigation of these sites, as well as the surrounding landscapes, over 900 individual features were recorded and digitised in a project GIS in Area 5.

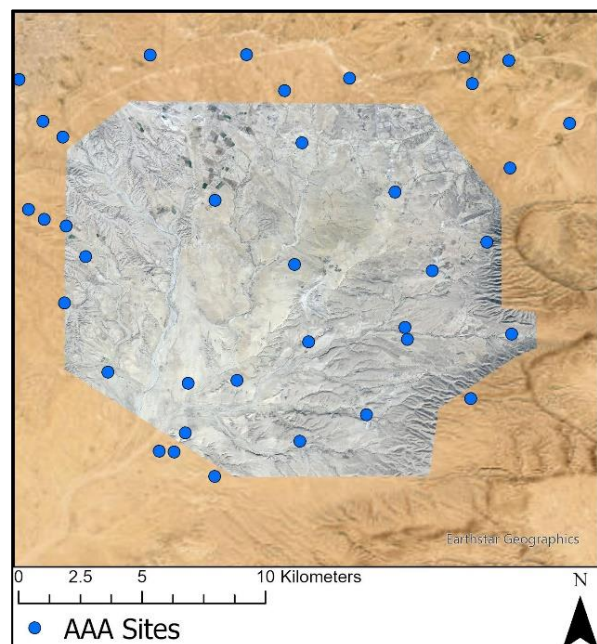


Figure 2: Extent of Area 5 with distribution of known sites from the AAA

By undertaking detailed digitisation of each site, we are able to assess their layout and extent, and for the first time, will be able to publish new site plans and propose more detailed interpretations of these sites, and explore their place in the wider landscape. To provide one example, the site shown in Figure 3, below (AAA 51.43), was described in the AAA only as ‘Roman ruins... cut stones, press, vats, troughs’. When we look at the satellite imagery, the walls of several rectilinear buildings are visible, along with several mounds, which probably represent further buried remains. Based on its size over 7 ha, and the mention of ‘troughs (or auges)’, which were used for Roman tax collection, we can suggest that this substantial site may actually have been the centre of a Roman agricultural estate. By considering these new data in the context of the whole study area, we will now be able to present a new and updated picture of the Roman agricultural landscape in this part of southern Numidia.

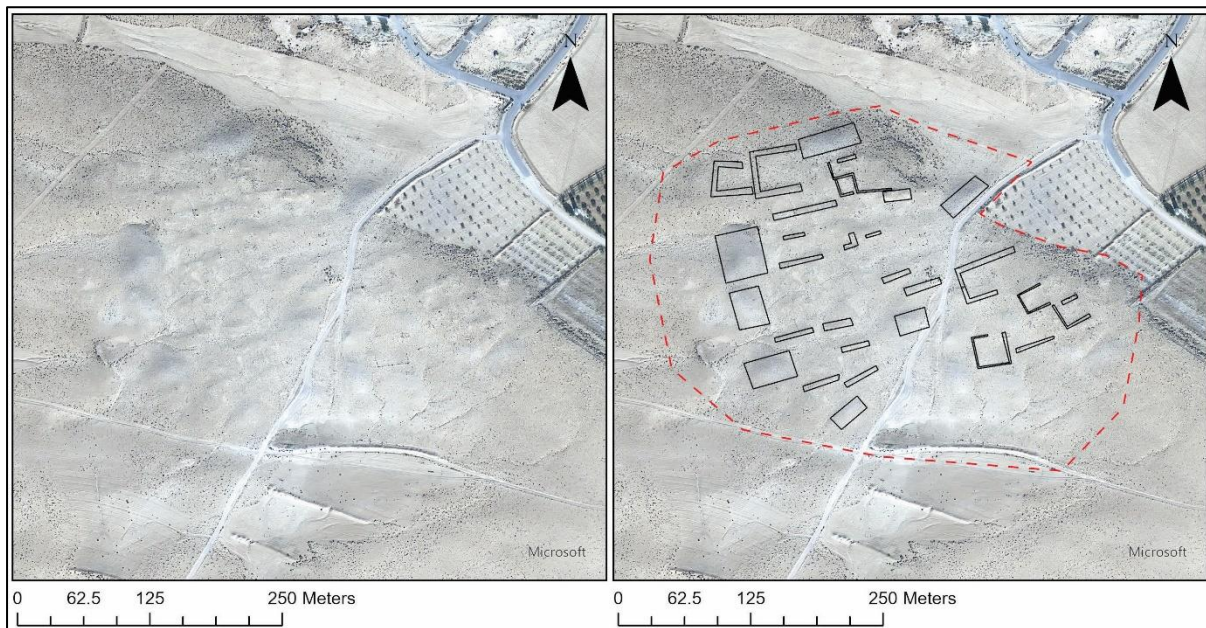


Figure 3: Site AAA 51.43 as seen in satellite imagery (left) and with digitised plan of visible features (right)

The work of incorporating these data into the wider project is now underway in collaboration with the Tufts University team, and the work programme will continue, building off of these initial results made possible by the BILNAS grant. Plans for one or more research publications based on these results are now in progress, at least one of which we hope to submit to *Libyan Studies*.