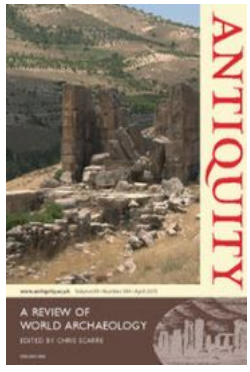

Seeing is believing: questions of archaeological visibility in the Mediterranean

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Seeing is believing: questions of archaeological visibility in the Mediterranean

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The Troina survey is investigating the past occupation of the highland environment of the Nebrodi mountains in north-central Sicily. It is part of a larger project directed by Drs Caroline Malone and Simon Stoddart (Malone & Stoddart 2000), which incorporates excavation, geophysics and geoarchaeological survey (FIGURE 1).

The initial season of survey was in 1997, concentrating on the preliminary sampling of the urban area of Troina and its surroundings along with the sampling of previously known sites. 1998 saw the continuation of the survey connecting the previous year's study area around the town with the outlying area and excavated site. In 1999 the survey was orchestrated as a component of the geomorphological investigation of the Fiume Sotto di Troina. As a direct response to the 1999 fieldwork, the 2000 field survey was carried out in the less eroded and better-preserved upper plateau to the south of the river (Ayala & Fitzjohn 2001) (FIGURE 2).

As a direct result of complex survey situations in this highly denuded territory we have become interested in understanding the relationship of erosion, site preservation and visibility. A multi-disciplinary methodology was applied to understand the archaeological record. Field survey was undertaken in parallel with a geomorphological investigation of the area. All discovered archaeological sites were gridded and systematically recorded so that the extent of the site and the densities of material across it could be quantified. Subsequently, site specific investigations were undertaken to investigate the effects of erosion on the archaeological record using a variety of different techniques.

Two sites from the 1999 field season are pertinent examples of the two main processes (burial and erosion) affecting the visibility of archaeological material in the area.

Site number 1024 is located to the south of the river that was heavily affected by erosion as a direct consequence of land use practices (FIGURE 3). The material from this 'site' was found within two refuse and manure heaps, which are in association with a modern farm house located on a river terrace at the bottom of the valley. The farmer, when interviewed, explained that the refuse heaps were created during renovation work on the foundations of the farmhouse. Results of an auger survey across the farmstead have shown that only 5–10 cm of soil remained on the terrace with the only significant stratigraphy being directly beneath the farmhouse. In this situation the construction of the farmhouse a little over 100 years ago preserved the archaeological material whilst the surrounding area was undergoing rapid and intensive erosion.

1134, instead, is an example of site that was discovered in a relatively well preserved environment (FIGURE 4). The material, however, became visible due to a recent change in land use through the unification of plots, the removal of trees and the commencement of deep ploughing. Following a programme of gridding and site recording further investigations were undertaken: an auger sample, geophysical and micro topographical survey which have shown that the actual site was preserved under about 60 cm of clay-rich soil up-slope from where the concentrations of material was found and recorded.

Moving from the site specific to a large-scale analysis of the Troina region we have adopted various approaches to the data using Geographical Information Systems (GIS) as our main analytical tool. The characteristics of GIS position it as an ideal tool for the analysis of physical landscapes and regional survey. However, there has been a tendency to utilize it to produce little more than distribution maps or to place emphasis on the primary relationship between physical features and archaeological material. Here we have been exploring how GIS can move beyond description towards providing an interpretative environment in which we can understand the presence of archaeological material.

We have adopted a methodology using ArcView a GIS software package to model patterns of erosion and stability. ArcView provides the ideal means to combine geological, pedological, geomorphological, topographical, hydrological, climate and landuse data to produce different maps and data of erosion and deposition across the region. These maps of erosion and deposition are then co-related with the locations of archaeological material as a means to investigate the presence or absence of archaeological sites.

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FIGURE 1. *Panorama of the study area showing high level of denudation of the landscape.*

The integration of site specific analysis and modelling of regional erosion patterns have shown the importance of determining the erosion and preservation of soils within a survey region for the interpretation of artefact distribution. It is also believed that these forms of modelling may ultimately provide archaeologists with an invaluable tool with which to undertake an assessment of the terrain of a region both prior to fieldwork and throughout the interpretation of their findings.

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FIGURE 3. *Site 1024.*

FIGURE 4. *Site 1134 with Troina in the background.*

FIGURE 2 (below). *Map of the archaeological survey.*