Patrizia Tartara

The territory of ancient Caere

Consiglio Nazionale delle Ricerche, Istituto di Analisi dei Sistemi e Informatica “Antonio Ruberti” (IASI), Roma
patrizia.tartara@cnr.it

Abstract

It has been possible to have a particular view on the territory of Caere with an analysis of a large number of IGM 1930 glass slide negatives and an accurate photointerpretation of cropmarks. The landscape was covered by a great number of tumuli and tombs (of different kind) able to give a very strong and impressive sensation of power and richness.

A wide topographical analysis of the territory by direct survey, check on site and revision of previous data and pertinent documentation (bibliography, archives, information in loco, etc.), examination and analysis of historical and recent aerial photographs from different archives and monitoring flights on risk areas, have been conducted by the writer. The aim: historical view of the territory as a contribution for knowledge and the subsequent protection of cultural heritage remains, need of knowledge for the establishment of a global Cultural Heritage Cadastre connected to studies for legal protection and a consequent enjoyment of great interest sites; not last: the correct territory planning.

Keywords: monitoring flights, aerial photographs, cartography, photogrammetric restitution, field survey.

1 Introduction

This report will seem a bit inapposite, but it wants to remember that all kind of technologies can be usefull for observation and knowledge. Aerial photographs, historical and recent, can still give many precise information that can be gathered with information from new sources. I want to focus the importance of integration of aerial photographs with satellite imagery, geophysical prospections (as magnetometry, etc.), Lidar, survey, etc. and we have to manage in a way that the previous technologies are not excluded by the last one: the integration of all of them will give a more complete information.

The research, still in progress, has been dedicated to the topographical definition and the correct geographical positioning of every archaeological cropmarks of the territory of the ancient city of Caere, from the hills to the sea coast, and initially involved the two plateaux of Banditaccia and Monte Abbadone. Subsequently it was extended in the direction of the coast, SSE and NNW as far as Pyrgi Port and Sanctuary (today Castle of Santa Severa) (Tartara 2003; Tartara 2008). The maps used were those best suited for geographical positioning (in particular, those for the Regione Lazio, at 1:10,000 scale). The maps of the Comune di Cerveteri, which are on the same scale but more accurate, have been also used.

In order to locate and establish the geographical positioning of the evidence, a detailed review of the historical and recent aerial photographic documentation to be found in the national public archives and in those belonging to private companies have been done. Cropmarks of tumuli and ‘a dado’ tombs have been read in different flight shots and each evidence has been
progressively registered and mapped. This has been achieved both by means of analytical photogrammetry and by applying sophisticated software for geographical positioning (depending upon the images’ technical and geometrical characteristics).

2 Section

The images used for the case study, that constitute the first example of photogrammetric survey for cadastral purposes, were shot with the ‘new Santoni double chamber ‘ camera. They consist of series of couples of negative glass plates (13 x 18cm) shot in 1930 and they are still preserved and available, on demand, in the Istituto Geografico Militare of Florence (IGM). These glass plates are laterally superimposable only for a few millimeters and do not exist printed copies of the images, that would have been easier to consult. These images are of the greatest importance since they document a situation that cannot be seen in later photographs. As an example, the 1943 RAF (British Royal Air Force) photographs published by J. Bradford (Bradford 1947), though of especial interest, do not reach a similar level because of the quality of their definition, scale and kind of emulsion.

The IGM 1930 photographs, taken from airplanes that yet lacked the requisite stability, do not obviously attain the geometrical characteristics of modern photogrammetric surveys. Frequently these images were distorted along their long sides and/or with reflection caused by the sun’s rays striking the camera’s lenses. In many cases, as a result of the airplanes’ abrupt changes in altitude and a lack of stability, irregular sequences occur and sometimes the images cannot be superimposed.

Although the difficulties were of several kind, the restitution of the traces has been made with a very good precision and with geographical positioning on cartography. The geographical positioning has been realized on many single portions of each glass slide, because it wasn’t possible to apply it on the entire glass slide (the problem was a lack of precision).

The final and complete restitution of the traces (comprehensive of hundreds of tumuli different in size, a few ‘a dado’ tombs, other burial zone, the road network etc.), today still in progress, will use other air photograph strips as the shots of 1955, 1958, 1960, and 1968 (plenty of traces) and other strips specially commissioned for the restitution. To be added to the cropmarks that are visible in the planimetric aerial photographs, are those visible in the hundreds of oblique images that were shot during the monitoring activities conducted (by the writer) in collaboration with the Carabinieri Helicopter Group of Pratica di Mare coordinated by the Nucleo Tutela Patrimonio Culturale dei Carabinieri (TPC). It is important to remember that, unfortunately, there is an extremely high number of clandestine excavations.

In the meantime it has been realized a three dimensional map of the three plateaux : Banditaccia, ancient city, Monte Abbadone. The 3D map will try to give an idea of the immense and well visible necropolis was existing in the past in the case study area. This ensemble is in contrast with the limited view that a visitor today has of the monumental necropolis of Banditaccia that lies in front of the modern settlement and the medieval borgo on the acropolis (the actual archaeological area for public fruition of Cerveteri consists of a short portion of the necropolis on the Banditaccia tufa plateau, protected by a fence). In the last months the Superintendence of Lazio, which is the supervision organ in charge of protection of Cultural Heritage, began some excavations and some actions of cleanliness of some portions of the Banditaccia plateau, just in front of the archaeological area, with the intent of enlarging the area of public fruition. It is correct to remember that, this area has been listed for some years now amongst UNESCO sites.

Nowadays, in the plain portion of the research area territory, much of the evidences have been obliterated by urban development, and the density of construction has destroyed any possibility of
the “appreciation” of the surviving monuments. Even in this instance, a good knowledge and a
detailed census of the archaeological heritage would have permitted a more rational and correct
urban planning.

References


Figure 1 - Cerveteri. Cartographic restitution of traces (in red) from the ancient city to the coast, read on IGM 1930 glass slides. (From Tartara 2003)
A) Cerveteri. Photographic mosaic of the Monte Abbadone plateau, made from 1930 IGM glass plates. The outlines of hundreds of tumuli aligned with the service roads of the necropolis are clearly visible. Even in this instance the tumuli
vary in dimension. The outlines of other tumuli, with the same density, are also discernible in the marginal plains. Facing the aerial photograph is the restitution of the outlines in the map of the Comune.

-B) Cerveteri. Detail of a 1930 glass plate, showing the central portion of the Monte Abbadone plateau: the outlines of hundreds of tumuli are clearly visible. Varying in size, they are aligned with the minor roads that run parallel to the main thoroughfares of the necropolis. The dark trace of a *dromos* is visible for each of the tumuli. In some cases, plowing has reached and completely obliterated even their roofs, making them visible through the humidity that highlights their perimeter.

-C) Detail of a 1930 IGM glass plate, showing the SW portion of the same plateau. Aside from the large tumulus, which is known and has been excavated (tumuluo Campana along the W edge), there is readily visible a large tumulus in the S part of the image. Also to be seen are at least two medium-sized tumuli at the centre, many tumuli of various dimensions, and a series of square structures that have been excavated in the tufa and look out onto the road-network of the necropolis.
A) Cerveteri and the layout of the territory, with the new centres of urbanization (Cerveteri, Cerenova / Campo di Mare, Ladispoli, Valcanneto), in 2001.

-B) Cerveteri. Monte Abbadone: oblique photograph taken in 2006 of a sector of the plateau. The initial growth of crops highlights the elevated density of tumuli. In some cases, there is also the trace of a dromos.

A) The medieval settlement of Cerveteri and the circuit of walls, on the plateau of the ancient city. On the left side the Banditaccia plateau.  

B) The settlement of Pyrgi, actually Castle of S. Severa.
A) Cerveteri – Traces of *tumulus* tombs in aerial photograph taken during a monitoring flight with the Carabinieri Helicopter Group of Pratica di Mare.

B) Cerveteri - Traces of *tumulus* tombs just in front of the actual archaeological area for public fruition.