

ROKSANA CHOWANIEC

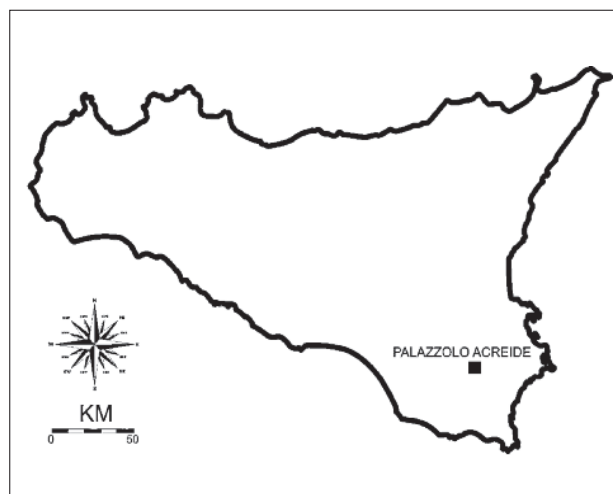
PALAZZOLO ACREIDE, ANCIENT *ACRAE*, SICILY, ITALY, 2009–2010
(PLS. 186–187)

In 2009 the team from the Institute of Archaeology of the University of Warsaw in cooperation with Soprintendenza dei Beni Culturali e Ambientali di Siracusa, began the archaeological investigation at the site of *Akrai*. This first season lasted from September 28 till October 30.

The ancient town of *Akrai* (Greek Ἀκραι, Latin *Acrae*, *Agris*, *Acrenses*) is located to the west of the modern town of Palazzolo Acreide, in south-eastern Sicily, the province of Siracusa. Prof. Aleksander Bursche, Miron Bogacki MA, Marta Fituła MA, Jakub Kaniszewski MA, Wiesław Małkowski MA, Marcin Matera MA, Prof. Krzysztof Misiewicz, Tomasz Więcek MA, Piotr Zakrzewski and eight students of the Institute of Archaeology of the University of Warsaw participated in the research. The partnership between the University of Warsaw and Soprintendenza dei Beni Culturali e Ambientali di Siracusa has been initiated by A. Bursche and R. Chowaniec, with the strong support from M. Fituła (member of the Society Sicilia Antica in Noto). The first seasons of research have been possible thanks to the grant of the Rectors of the University of Warsaw, Prof. Katarzyna Chałasińska-Macukow and Prof. Włodzimierz Lengauer, as well as private sponsors.

Akrai was founded in 664/663 BC, on Acremonte, one of the hilltops of the Hyblean Mountains, 770 m a.s.l., located between the rivers: Anapo (*Anapus*) and Tellaro (*Helorus*). The town developed mostly during the 3rd c. BC. Later, after the conquest of Sicily by the Romans in 241 BC, the foundation of the first province in 227 BC, and the defeat of Hiero II and the fall of the kingdom of Syracuse in 211 BC, *Acrae* is counted on the list of *stipendiariae civitates*. This suggests that the town was inhabited and functioned in the new Roman political situation. The archaeological site was “discovered” in 1558 and research has taken place there since the 1st half of the 19th c.

In 2009, the University of Warsaw carried out the first series of non-destructive fieldwork: measurements with the use of the Total Station and GPS RTK systems, a master topographic map of the site, aerial photography, geophysical survey, photographic documentation and



measurements to create 3D models and analyses of satellite images. Based on these data it was possible to create a numerical model/geospatial base of the archaeological site.

Planigraphic documentation was prepared in several stages. Archaeological squares were laid out and a grid was created to record archaeological plans and sections. Next, visible features and structures were documented. Moreover, a GPS RTK was used to create the master topographic map of the site and its surrounding area. The use of this equipment allowed to correlate measurements with the aerial photographs and satellite photography, and thus made it easier to interpret measurements, compare the surfaces of buildings, the angles and distances between archaeological structures (MAŁKOWSKI 2008: 498–504).

The second step was to take a series of kite photos. The result of this work was a sequence of vertical and oblique photographs, which were calibrated through the so-called photo-points, and then transformed into 3D models of the terrain of the site and visible archaeological relics (BOGACKI, MAŁKOWSKI, MISIEWICZ 2008: 329–333) (Fig. 1).

The most important point was the geophysical survey, made in the area of c. 3.5 ha in the central part of

¹ For the complete history of the town and the history of researches see: CHOWANIEC, MISIEWICZ 2010.

the plateau (Fig. 2). The whole area of investigation was divided by former field frontiers (marked by walls of stones), in most cases overgrown by natural hedges. In the eastern and central parts of the explored area traces of previous archaeological trenches were visible (also with remains of architecture). Unfortunately, during the survey period, part of the area was under tall vegetation which disturbed the proper work of magnetometers. Finally, during the geophysical survey numerous ancient structures were registered (CHOWANIEC, MISIEWICZ 2010).

The collected data from all kinds of mentioned research were used as input to create a 3D visualisation of the site – DTM (Digital Terrain Model) – containing maps, photographs and databases with information about the structures and their chronological phases (BOGACKI, MAŁKOWSKI, MISIEWICZ 2008: 117–119). The numerical model is a set of data, which has been calibrated and properly interlinked. This allows to analyse the collected data at different levels and helps to interpret them.

Also a preliminary 3D reconstruction of the theatre at *Akrai* has been done. Traditional methods of reconstruction (drawings, plans, models) give a possibility to present only a general, artistic view of a building. On the other hand, 3D techniques give an opportunity to present different variants of reconstruction of ancient architecture. This is an important technical aspect of interpretation of archaeological and architectural evidence (for more information cf. CHOWANIEC, MAŁKOWSKI, MISIEWICZ 2010).

It is well known that in the Greek period the town of *Akrai* fulfilled political and commercial functions, and protected the access to Syracuse and to the south-eastern part of the island as well. The archaeological evidence which confirms the functioning of *Acrae* during the time of the Roman Republic and the Roman Empire is limited. To improve the information about the town in these periods, in October 2010 a field survey in the territory of the town of *Acrae*, between the Anapo, Tellaro and Cassibile Rivers was done (Fig. 3). This research was aimed at locating new archaeological sites in *territorio acrense*. The range of the survey became much wider than only the urban and rural territory of *Akrai* (so called Greek *χώρα*). A complete survey of this territory should help answer questions related to the chora of *Akrai*, as well to describe the relations of this ancient town with other settlements in the region. During the survey 48 new archaeological sites were located. New sites were marked on the satellite map of this region with the use of GPS. Preliminary dating of pottery finds allowed to date eleven of them to the 1st c. BC – the 1st c. AD, the next eight to the 1st – the 3rd c. AD and eight to the late Roman period. Other sites could be dated to the Hellenistic period or to medieval and modern times.

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ROKSANA CHOWANIEC

PALAZZOLO ACREIDE, STAROŻYTNE *ACRAE*, SYCYLIA, WŁOCHY, 2009–2010

W 2009 roku ekspedycja Instytutu Archeologii Uniwersytetu Warszawskiego rozpoczęła pierwsze, wstępne badania na stanowisku archeologicznym *Akraï* (obecnie Palazzolo Acreide, prov. Siracusa), na Sycylii. W trakcie sezonu przeprowadzono wstępne badania nieinwazyjne (m.in. pomiary total station oraz GPS RTK, fotografia lotnicza, badania geofizyczne). Zebrane dane posłużyły do

stworzenia wielowarstwowej mapy numerycznej stanowiska, która może być uzupełniana na bieżąco.

W 2010 roku przeprowadzono badania powierzchniowe na obszarze pomiędzy dolinami rzek Anapo, Tellaro and Cassibile. Efektem prac było odkrycie 48 nowych stanowisk archeologicznych, dokładne namierzenie ich za pomocą GPS oraz zaznaczenie na mapie satelitarnej regionu.



Fig. 1. 3D model of archaeological relics and topography (by M. Bogacki).

Ryc. 1. Trójwymiarowy model terenu i pozostałości archeologicznych.



Fig. 2. Geophysical survey (Photo J. Kaniszewski).

Ryc. 2. Badania geofizyczne.



Fig. 3. Field survey in 2010 (Photo K. Belicki).

Ryc. 3. Badania powierzchniowe w 2010 r.