

PUBLIC REPORT

Regarding the implementation of PCE 2011-3-652 Project „*Die römische Grenze im Osten der Provinz Dakien*” in the period between December 2013 – November 2014

This research project is supported by a grant of the Romanian National Authority for Scientific Research, CNCS – UEFISCDI, project number PN-II-ID-PCE-2011-3-0652, contract nr. 339/5.10.2011.

The Project’s activities planned to be undertaken during its implementation were based on the three fundamental principles recommended by the National Scientific Research Council at the moment the contract was signed. These were: *integration, dissemination, excellence*.

The *integration* of the project director into the Romanian academic environment and the project’s hosting organization were successfully undertaken, without any limitations. Still, the Romanian Ministry of Education did not recognise and validate the project director’s habilitation (Habilitation) which he obtained in Germany.

The local, national and international *dissemination* of the project was one of the main concerns of all the research team members. We consider the objective based on this principle achieved.

The *excellence* of researches undertaken so far is well expressed through:

- the international recognition of the project’s research results, the novelty and innovativeness of the research method used and the concern for its permanent improvement shown by the project team;
- the national and international partnerships and agreements signed for implementing the research method in other similar researches in Romania and beyond its borders;
- the in-depth collaboration with colleagues leading other CNCS projects (PCE-2012-4-0490, PCE-2011-3-0054, PCE-2011-3-0610 – all undertaken by the Iași Archaeology Institute) that allow the use of the synergy of multi-project collaboration;
- the unlimited possibilities of multilateral use of the project’s results in related fields, such as the management of archaeological heritage, as well as and in education.

The project’s activities were organised following the initial work breakdown structure presented by the project director in the grant application form. This work-plan was modified once the budget was cut in years 2013 and 2014.

In year 2014 the financial allowance for scientific research was under 50% of the amount initially programmed for this period, when the contract was signed. Acting accordingly to the given situation, upon which I was informed on the 20th February 2014 and signed an annual granting contract based on this new amount at the beginning of March 2014, I had to reconsider the project's activities. Thus, the objectives set for 2014 were to interpret the functionality of the archaeological complexes identified through magnetometric research, through mapping the phosphorus and other microelements of the soil samples collected in the archaeological sites found on the eastern Limes of Roman Dacia in south-east Transylvania.

Accordingly, in the reported period I undertook activities such as preparing the soil samples, measuring the quantity of phosphorus and other microelements using the x-ray spectrometer, and scientific exploitation of the results.

I used the mobile spectrometer with tube to analyse the samples. The equipment has an x-ray tube with a silver anode, reaching a tension of maximum 50kV. I calibrated the equipment, setting it up for different types of samples and I recalculated a “correction parameter” with the help of my colleague Dr. Markus Helfert from the “Johan Wolfgang Goethe” University, Frankfurt/Main.

The strategy of our research explicitly prefigures the fact that the main goal of these analyses is rather a qualitative than a quantitative one. To better answer the questions raised by the archaeological research, we can allow ourselves to determine not the absolute value of the concentration of microelements, but rather the differences of this concentration between two or more neighbouring samples. In my opinion, under these circumstances, we may set aside some technical issues of these *in situ* analyses, such as the lack of the homogeneity of the samples' structures or the differences in humidity. The simplified question faced by archaeology, regarding whether human activities inside a roman auxiliary camp could be recognised based on the distribution in space of microelements or phosphorus found in the soil, seems to receive a positive answer when using a XRF portable spectrometer. The outstanding value of this way of organising the research consists of the possibility given to combine non-destructive procedures with the determination of the structure and functionality of separate archaeological structures, or even entire sites. Even if, for the moment, our researches have only a qualitative character and cannot offer the possibility to compare two or more archaeological sites, the data acquired through this research method are of outstanding

scientific value that can be transferred towards the field of archaeological heritage management.

Together with these activities during year 2014 we completed some of those activities that were not finalized in the preceding years. Thus, we continued documenting the materials found in the archives and heritage storages of the National Szeckler Museum, related to the Comălău/Reci roman and late-roman archaeological site. These materials were not accessible for us before. In the same time we were granted the access, inside the same museum, to the archaeological materials resulted from the diggings undertaken in the area of the roman Camp from Olteni and the written site-research documentation of Székely Zoltán.

Another important moment consisted of continuing the activities of magnetometric prospections of the sites listed in the project. Due to the lack of our own magnetometer, that couldn't be bought because of the budget cuts in year 2013, the magnetometric prospections were delayed and couldn't be undertaken as initially foreseen. Nevertheless, with the support of our partners from Germany and the Republic of Moldova we tried to set at rest this delay and we even managed to exceed the results planned for year 2014 regarding magnetometric prospections. Thus, we insisted more in the area of the roman baths found near the Camp from Brețcu and we also prospected large areas outside the camp.

A significant progress was registered in the case of the Comălău site (Reci commune), known so far in the specialised literature as a “roman camp”. The members of the research team were able to scan with the magnetometer the entire accessible surface of this site. The first conclusion that can be depicted without any doubt based on the results of this research, contradicts what we have known so far. The internal structure of this fortification, found on the promontory outside Reci village, is not typical for what we would call a roman-provincial stereotype of a roman camp. Future researches will prove us right or wrong regarding this conclusion. Unfortunately this year proved to be as poor as the previous one regarding the funding of the project in order to buy the necessary magnetometric equipment, as agreed upon in the initial granting contract. Thus the project's team members worked with equipment borrowed from the German partners and other Romanian research institutes.

In my opinion the project that I am honoured to lead represents an easily observable and outstanding progress in the process of better knowing the history and archaeology of the roman Period in south-eastern Transylvania.

Project director, dr. habil. Alexandru Popa