Abstract: The article presents a new online application that is gathering, mapping and developing a database focused on the topic how the hoards’ hiding can represent moments of violence in ancient times. In the case of this work, the geographic and chronological segments are targeting the Roman provinces from the Middle and Lower Danube during the 2nd–3rd centuries AD. The work also presents the numerous advantages of the applications (e.g. the possibility to enlarge the geographic and chronological criteria; to apply the program to any category of artefacts no matter the space and historical time), as well as the limits of it.

Keywords: coin hoards, database, mapping, invasions, Roman Middle and Lower Danube

One of the most interesting as well as an intriguing aspect about coin hoards is to what level they can be regarded as indexes for patterns of violence – people burying their wealth/savings and never had the chance to recover it – except for the cases of religious offerings.

In the historiography on the subject there were, and still are, the two antagonistic opinions: those who support the idea of hoards as markers for important historical events and those against who consider hoards as cause of individual tragedies or, at least, not necessary connected to major events.

In some cases, in fortunate situations, the analyze of archaeological context may offer hints on what led to the buried/loss of a coin hoard or coin deposit. However, the large majority of coin hoards are found by chance in isolate locations. To complete the picture, apart from being found in such locations other adjacent aspects comes to make the research work more difficult: hoards are only partially recovered or, worse, we just heard about the discovery of a hoard; approximately location of findspot; in case of old discoveries the name of the findspot could even disappeared (in some cases the entire locality) or changed its name.

In order to find a solution to the debated aspect whether the coin hoards tell us about episodes of violence on large scale or they should be consider individual tragedies not linked to historical events, one author of this article has gathered a large number of Roman coin hoards from the area of the Middle and Lower Danube in the 2nd–3rd centuries AD. Apart from following

1 This study was elaborated and finalised owing to the research projects PN-II-ID-PCE-2012–4-0210 and PN-II-RU-TE 2012–3-0216.

2 For a collection of bibliography on both theories, see VARBANOV 2012, 289–291.
the ‘traditional’ statistic and graphic analyses of these hoards the author has mapped – on paper – these hoards organized by chronological criteria of the last issuer within the hoard. His main conclusion was that major historical events (e.g. Carpic war of Philippus I in AD 246–247; Gothic invasion in AD 251; usurpers’ war in AD 260) are clearly represented by series of hoards buried at that moment on the territories under disturbances. Practically, one could speak about wartime hoards and peacetime hoards (individual tragedies: robbery, fire, etc.).

However, despite the mapping of a high number of hoards on a relatively wide geographical area and large chronological segment there were some limits imposed by the technical aspects of a printed work: the database, the geographic area, the chronologic segment are all fixed with no possibility to be enlarged or improved except for new studies. If one will take this task in the same way he will have to copy and insert again all those hoards due the mapping again plus adding the new ones. Quite a sisyphean task!

Therefore, we present here a new approach that will avoid such a tremendous effort and time consuming. It must be mention here that this enterprise has been established as a database in 2012 within one of the authors research project at the Institute of Archaeology and Art History from Cluj-Napoca: “Coin hoards between important historical events, individual tragedies and daily life from Augustus to Diocletian (27 BC – AD 305)”

Following, the trend of applying IT technology in the research of Ancient History, we created this online database and application, RoTez (Romanian application on coin hoards), that works thanks to the magnificent application Google Maps – http://tezauremonetare.ro/.

The application is created in Ruby on Rails, an open source web application framework, that uses ruby programming language. The framework allows creating pages and web applications, to make queries into the database making it easy to use.

Like other frameworks, Ruby on Rails uses the Model-View-Controller pattern. The Model is usually mapping a table from the database and is describing the structure of the application. The View is an .erb file converted to html that renders the data to the user. The Controller is responsible for the control of the application, processing the requests from clients, making the changes in the models, deciding which view file to render.

The Ruby on Rails application uses MySql database, an open source relational database management system, one of the most popular in the world. For web server uses Apache connected to the Ruby on Rails application by the Phusion Passenger module.

The application uses RubyGems package manager that distributes ruby programs and libraries, called “gems”, easy to install in a form that contains the code, documentation and the gemspec file with the information about the gem.

For making possible the connection to Google Maps the application uses one of this gems called gmaps4rails. The gem is developed to implement google maps in ruby applications. It is easy to use and it can be modified to reach the desire of the user.

For the search conditions another gem is used “ransack”. Ransack enables the creation of search forms and generate queries very easy to use by the user.

It is a simple and friendly to use application that tries to fulfill the main aim of our research: coin hoards and historical events – general and individual moments of violence.

The application gives the user the possibility to search for a specific target by selecting one or more of the filters:

a). a specific hoard by introducing the hoard’s name;

**Hoard**

- Location: 
- Latest issuer: 
- Province: 
- Near the roman road
- Isolated

Search

b). selecting a Roman province;

**Hoard**

- Location: 
- Latest issuer: 
- Province: Dacia
- Near the roman road
- Isolated

Search
c). by the last issuer;

d). in the vicinity of a Roman road (or within an archaeological site);
At the same, by clicking on a hoard on a map you will have a brief explanatory note on that hoard: hoard’s name after the locality where it was found; in brackets, the initial number of coins; the known number of coins and metal: the number of coins by denominations; the first and the last issuer (e.g. Napoca, 1270 AV/AR/AE: 1 piece AV, 1251 D, 9 Ant, 1 Dr, 7 D (p), 1 AE prov.; M. Antony – Severus Alexander.

An unique aspect of this application comes from the technology used by Google Maps application that allows the user to also use satellite maps. This possibility permits RoTez application to map the hoard – when we have a detailed description of the findspot – more precisely on the ground. For instance, according the archaeological observations and the stratigraphic spectrum the hoard “Napoca Deleu” (in the
locality of Cluj-Napoca, Romania) was discovered on Deleu street, beneath the floor of the second stone phase of the building C2. Following the satellite version of Google maps the RoTez application offer the following screen image:

At the same time, on the opposite direction, one can easily found out the total number of hoards recorded for a province, region or even the whole area by simply zooming out until you will see the number popping out.

At the moment, we inserted 302 hoards from the already known database. If one wants to see what are the number and location of hoards when an invasion took place all he need is to select the issuer in the time when that invasion took place (e.g. for Carpic war insert Philippus I).

The advantages of this application are:

a) it can be extended to a wider geographic area and a larger chronological segment;

b) owing to the Google Maps application the mapping is more accurate;

c) the old names of localities – even those that do not exist anymore – were checked based on old sources;

d) it can be permanently update it;

e) it can be worldwide accessed at any time and any place with network access (except for ‘normal’ temporary technical difficulties –sic!)

f) it is a free access application

g) it will established a network of authorized users that will be able to upload hoards not listed in the present database.

And, an extremely useful advantage of this application is the fact that it can be used for any type of artefacts not only for coin hoards as well as for any territory in the world on any chronological segments. All you need to do is to insert your terms/keywords in the panels.

Certainly, due to the main aim of this application, there are also some limits of it: the hoards are not presented by their structure; the coins are not identified piece by piece; Google Maps does not always give the coordinates for former localities, thus, we must use other sources (e.g. old publications, gazetteers, etc.)


6 GĂZDAC 2010, catalogue hoards (on CD).
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