

UNIVERSITY OF SZEGED
DOCTORAL SCHOOL OF EARTH SCIENCES
THESIS BOOK

THE ROLE AND SIGNIFICANCE OF THE MATY CREEK
AND THE CONNECTED HYDROLOGICAL SYSTEM IN
THE SETTLEMENT HISTORY OF THE VICINITY OF
SZEGED

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SZEGED 2014

Introduction, aims

The history of Szeged and the neighbouring settlements belongs to the well-studied areas in Hungary, as evidenced by the monograph on the history of the city. These studies were always based on a geographic review, followed by thorough archaeological and historical research. However, the known elements of hydrology and topography were never organically embedded into the archaeological and historical research on the region. The aim of this thesis is to reinterpret the history of Szeged and its vicinity with the help of a method previously not used at all or not with any consistency.

My aim was to survey the possible locations of occupation as determined by the elements of the landscape and to interpret the history of the city and its vicinity against this background. This seemed necessary for two reasons (besides the lack of such research). Based on the location of Szeged at the confluence of two rivers and its undisturbed medieval development we could assume that this central position and its potential energy would be reflected in prehistoric occupation as well. This is, however, not the case. Only very few authenticated archaeological sites are known from the territory of the city from before the Middle Ages, which indicates that it was not a favoured location for occupation in all

archaeological periods. The other reason is that only 8-10 km from the city of Szeged the number of occupations from archaeological periods is very high. My aim was to find an explanation for this dual character of the area.

Research methods and study area

The administrative territory of Szeged and Algyő was chosen as study area, but it was not delimited along the older or current administrative borders, but based on its hydrological features.

The area is enclosed by the Tisza River in the east and south, by the Maty Creek in the west, and the Fehértó (White Lake) and Fertő-lápos (Fertő Marsh) in the north.

- In the thesis I examined in detail those elements of the landscape that had had the largest impact on human occupation, primarily hydrology and elevation before the river and water regulations. Beside the professional literature, I collected and used early maps of the area from before the 19th century in Hungarian collections.
- I also collected those written sources on the study area that contained information on the landscape. This included the review of documents and other sources in the County Archives.

- The analysis of the landscape was carried out with the help of GIS, and I also made use of the sources of modern cartography and remote sensing.
- Finally, I used the registry of the archaeological sites of the region.

With the complementary and complex analysis of these sources I interpreted the hydrological and topographical characteristics of the region and – with more emphasis – the city of Szeged in order to provide a framework for the settlement history of the archaeological periods. I tried to locate especially those areas that were most certainly exempt from the regular floods of the Tisza River.

Results

Based on the detailed analysis of the hydrological factors I reached the following conclusions:

1. A hermetically closed water ring, 10 km in diameter enclosed the city of Szeged, whose main elements are the Maty Creek, the Fehértó, the Fertó-láposa and the Tisza River and its connected elements. Their basins were always in connection with each other and in fact created a completely contiguous water surface.

2. The water ring is 200-400 m wide along the Maty Creek, 1 km wide in the north, and 1.5 km in the east; it is hard to overview and even harder to cross, thus the enclosed area is almost inaccessible.
3. Based on the analysis of flood hazard I established that the area can be divided into two parts with different characteristics. The eastern half of the area is dominated by the dynamic hydrology of the Tisza and its connected hydrological system. Here most of the area is inundated throughout the year due to the two or three floods per year. The extent of flooding is exacerbated by the fact that most of the area is a basin without runoff, thus it dries up only after long days.
4. The other half of the area is more static and balanced, without significant flood hazard. The Maty Creek and the Fehértó collect and store water from the watercourses from the neighbouring Homokhátság (Sand Ridge), and their movement is not extreme enough to create floods. It is also important that the ridges along the shores of these basins are high enough to prevent floods.
5. The flow direction of the dynamic hydrological elements is N-S and it crosses the N, NE area of modern Szeged. The Szillér, Annus-ér and other creeks flow through the medieval Felsőváros (Upper Town) towards the Tisza and practically

encircled its smaller islands, significantly diminishing the extent of exploitable areas.

6. A significant part of the inhabited area of Szeged in the 19th century was temporarily or permanently covered by water, and regularly inundated due to its low latitude. Only those three small islands rose from the environment that became the three core areas of the medieval city: the City (Palánk), Felsőváros (Upper Town) and Alsóváros (Lower Town). In case of larger floods, however, these could not provide protection either.
7. Due to flooding half of the study area was regularly inundated and consequently unsuitable for human occupation.
8. There are six points along the water ring encircling the study area where the ring could be crossed with terrestrial transport as well. These points are the strategically important points of access to Szeged, where ancient roads crossed and provided connection to the outside world.
9. These crossings have been so far unknown to research, and no-one has yet recognized their function as such. I present the details of three such routes, which could also be identified archaeologically.

During the analysis of the topographical features it was established that due to the low altitude of the region there are very few places that provided protection from the Tisza through their altitude. These are the following:

10. On the ridges along the shores of the Maty Creek, the Fehértó and the Fertő-láposa, where surface waters are static and there is good arable land along the ridges;
11. on the so-called vine hills surrounding the city, which, however, do not have a significant connection with living waters, and are less suitable for human settlement;
12. on a few ridges along creeks in the low floodplain of the Tisza, which were, however, regularly isolated during floods, and had a small size and little arable land;
13. in the inhabited areas of Szeged, on the small islands of the city quarters. These are, however, too small for subsistence economy, thus their capacity to support people is limited. Floods and seasonal or permanent surface waters impeded not only subsistence economy, but access to the area as well.

To sum up, based on the hydrological and topographical characteristics it could be established that the inhabited areas of medieval Szeged were hardly suitable for long-term occupation, which is the reason for the lack of archaeological sites here. The

available small islands provided little defence against floods, and had limited subsistence capacities.

Through the analysis of the same characteristics it was possible to identify areas that provided favourable geographic conditions for the communities that wanted to settle there. Based on the stillness of the surface waters, the size of the ridges along the water and of the nearby arable land, and the runoff of the surface waters such an area was a ca. 500-1000 m wide band along the Maty Creek, and a similar band along the southern shore of the Fehértó and Fertő-láposa.

Among these areas I have to stress those that are located along the routes leading out through the crossings. It could be demonstrated with a large amount of data and the analysis of written sources what great importance the previous road system and the existing river crossings had in civilian and military transport before the Modern Era. As a consequence of these limitations it was concluded that all terrestrial travel towards the confluence of the Tisza and the Maros had to pass through these crossings across the water system. Thus these points were of strategic importance both in a military and civilian sense.

Since the area around confluence of the Maros, the area of medieval Szeged was hardly suitable for long-term occupation,

control over the confluence could be exerted through the control over the routes and the above-mentioned crossings leading to it; there was no need to settle down immediately on the banks of the Tisza.

This hypothesis was confirmed by the detailed statistical analysis of the Avar Period cemeteries in the study region, and a similar conclusion could be drawn based on Conquest Period sites as well.

The currently inhabited parts of Szeged were probably mostly uninhabited before the Middle Ages. The population of the area and the emergence of the city started when due to the salt trade from Transylvania it became necessary to have a permanent population near the port on the Tisza River. It was probably the people carrying out this and other connected industrial and other activities who settled down here permanently for the first time in large numbers and became the founders of the future development of the city.

This was probably complemented by the climatic optimum as well, which – through its drier climate – must have diminished flood hazard and the water coverage of the settled areas and their environment.

Although conditions deteriorated again due to a wetter climate, but the city and its population, by that time economically, structurally and organizationally strengthened, defeated it through

their fight against the floods every year, and secured the undiminished development of Szeged.

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