

Aerial studies of the early medieval settlement in Czerwno

Secrets of the Czerwień Towns



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In a village near the border of Poland and Ukraine, a PAS archaeologist has used aerial photography to discover and study a medieval stronghold which may turn out to have been the administrative center of the legendary Czerwień Towns

The issue of Czerwień Towns and their capital Czerwień has been troubling researchers for many years. The area features in the *Primary Chronicle* under the entry for 1018, when “Bolesław (...) gathered plenty of people with him and took the Czerwień Towns for himself,” as well as under 1031, when “Jarosław and Mścisław (...) attacked the Lechs and occupied the Czerwień Towns once again”; those mentions, and the name of the capital, Czerwień, cropping up several times, have been interpreted by historians and archaeologists in numerous ways. For some

View over one of the suburbs, featuring traces of terraced housing



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scholars, the legendary capital is Czerwno in the northern region of the Czerwień Towns, for others it is Przemyśl by the river San, Czerwonogród by the Dniester, or Peremil' in Volhynia. Locations were frequently chosen not just on their scholarly merits, but also for political reasons, as they were meant to indicate who were the “rightful” owners of the territories. However, we will still have to wait a bit longer for a conclusive answer to the conundrum of the Czerwień Towns, as new studies are now under way.

Bird's eye view

Thanks to the development and easy accessibility of new technologies, we are now able to unravel the history of many archaeological sites faster, more accurately, over a greater area, and – an important consideration today – more cheaply. One such example is the use of aerial investigations in the search for Czerwień, the putative administrative center of the Czerwień Towns.

Aerial studies of the early medieval settlement in Czerwno – which could plausibly turn out to be Czerwień – were conducted by the present author in spring 2010 and again in winter and spring 2011. The favorable environmental conditions made it possible to note plenty of evidence for human activity, as well as effects of wide-ranging natural processes. The author took photos documenting various construction principles, research sites, mining excavations (peat extraction, drainage ditches), and natural processes.

It should be remembered that aerial photography shows the effects of both human and natural activity. Over hundreds of years both have left behind numerous overlapping traces that continue to be shaped to the present day.

The author discovered moats and ditches, systems for defending the town – structures which should not have existed, according to researchers studying this archaeological site. It was previously believed that



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the marshlands around the Huczwa and Sieniocha rivers provided the settlement with sufficient protection. In fact, however, the Czerwno settlement turns out to have had a complex system of trenches and canals supplying it with water. Moats surrounded the entire stronghold and its suburbs. Depending on location they were between 4 and 6 meters wide and 2 meters deep. They are most visible in the eastern and southern parts of the settlement, since they were dug by the early medieval builders some considerable distance from the walls, which therefore did not obscure them as a result of inexorable erosion. To the east there was also a moat with a dyke adjacent on the settlement side. In later periods a significant part of the moat was likely to have been connected to a harbor. From the east the moat was supplied with water fed through three canals running from the harbor under the dyke. The moats were one of the town's main defensive systems.

The photos also depict a ditch at the base of the external part of the wall, around 2 meters wide, most clearly visible from the east – yet another element of the defensive system of the early medieval settlement discovered during one of the author's aerial expeditions.

The harbor was a construction element in the old settlement, formed as an elongated rectangle, just behind the moat on the eastern side. It was around 150 meters long and

40 meters wide, and it was separated from the river Huczwa by a long, narrow headland about 10 meters wide.

The harbor was separated from the moat and walls by the dyke. The excavated soil created a location for the safe mooring of boats and rafts. The northern part of the ancient harbor was intersected by a drainage ditch dug during the 1970s. The photos show that the excavated soil was accumulated on the southern side of the ditch. This has caused the harbor to be less saturated with water on the shorter side, giving it a markedly different hue from the remaining larger part.

Previous excavation work failed to yield much information on the settlement's buildings and their distribution. However, this aerial investigation revealed the location of several individual features.

Stronghold, moats, temple

The first feature was identified in the northeastern part of the settlement. The traces of the building, around 4 meters by 8 meters, show that it was oriented with its shorter side facing the north. Is it a vestige of an early medieval temple or a house belonging to a high-born dweller, or perhaps the building performed a different function altogether? We will only have the answer after conducting detailed excavations of the site. It is worth adding that "(...)" in the northeastern section, near the presumed gates, during a potato dig, remains

**View over Czerwień
from the northeast**

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of brick foundations were found at a depth of approx. 40-50 cm (...).” These words from an article by the acclaimed archaeologist Konrad Jazdżewski are confirmed by the author’s aerial observations. An outline of a second feature, with a circular layout and a diameter of around 10 meters, was revealed in the central section. Perhaps it is a trace of the settlement’s main building. According to local tradition, the location was also once the site of a well. It is likely that the remains of residential and commercial buildings will be found in the southwestern part of the stronghold’s main square. This is suggested by the visible dark tracks and a high density of mole trails (which the author considers a common sign of archaeological sites and river palaeochannels).

The early medieval settlement in Czermno included several suburban hamlets, although not all have preserved traces of the old buildings. The author was only able to detect a set of terraced buildings along the western suburb, shaped like an elongated headland. The buildings were relatively large (around 6x8 meters).

In total over a dozen large features are visible. There are likely to be more, although unfortunately the outlines of several of them have merged, forming larger, blurry shapes with no discernable borders. It can be preliminarily stated that this part of the suburb featured terraced buildings. A large number of early medieval features are also visible in the northern suburb. They are most likely outlines of various types of buildings, storage pit-houses and similar features. In those cases definitive identification is not possible.

In spring 2010 the author was able to capture another substantial feature, although it is not as clear as those from the western suburb. This distinctive trace, reminiscent of a quatrefoil, may reveal a religious purpose for the building (perhaps a Catholic or Orthodox church?). However, only detailed geomagnetic and excavation studies will dispel any doubts.

Archaeologists’ own telltale signs

Surface observations and excavations have shown that the inhabitants of the early medieval town built wooden gangways up to 4 meters wide, although there were also dirt tracks. The settlement site features the outlines of several such roads and gangways. A road leading from the northern suburbs along the harbor seems to be the most clearly visible. On the east it is

adjacent to a ditch running in parallel. One of the gangways leads from the settlement’s main gate as far as the base of the headland. Its visible length is around 170 m. The gangway used to lead to the other side of the Huczwa, to an elevation known by the locals before the war as Ostrów. Unfortunately the adjustment of the riverbed in 1936 partially destroyed the early medieval remains of the gangway by the river. The roads were likely connected by dykes and wooden gangways, which formed a sort of extension to them.

The author was able to discover a road/gangway leading from an ancient monastery on the other side of the Huczwa towards the neighboring village of Turkowice, which was the likely source of the attack by the Tatars that destroyed the stronghold.

Aerial prospecting also resulted in the localization of several archaeological excavations. The photos show a 10x5 m excavation from August and September 1952, located in the southeastern section of the settlement. Excavations from 1976-1979 are also visible in the eastern part. The excavations extended from the centre of the main square, over the walls, finishing along its eastern edge. The photographs also show the location used for storing the excavated soil.



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Further research

Such non-invasive aerial investigation, repeated under varying natural conditions, can allow us to discover numerous features of both natural and anthropogenic origin. These types of studies also make it pos-



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Spatial arrangement of the discovered features:

- 1 - headland
- 2 - harbor
- 3 - palaeochannel of the Sieniocha river
- 4 - dyke
- 5 - canals supplying the moat with water
- 6 - moat
- 7 - archaeological excavation
- 8 - defense wall
- 9 - stronghold walls

sible to prepare detailed plans for further research. Aerial prospecting may also help create preliminary reconstructions of the settlement.

In summary, it is fair to say that aerial photography offers great opportunities for learning about a given archaeological site and the surrounding terrain. The results described here show the need for regular visits, repeated as often as possible. Only by increasing the frequency of flights will we be able to discover features as incredible as those in Czermno. Each archaeological feature has its own whims, and they often refuse to reveal their secrets. Aerial discoveries should be treated as a starting point leading to further studies of the early medieval settlement in Czermno. The features identified are now undergoing terrestrial verification studies. After they are analyzed in depth, we will be able to discover the story of the early medieval stronghold of Czerwień. ■

Further reading:

- Florek M. (2009). Topografia plemienna Międzyrzecza Wieprza i Bugu na przełomie I i II tysiąclecia i zagadnienie „Grodów Czerwieńskich” w świetle źródeł pisanych i archeologicznych [The tribal topography between the Wieprz and Bug Rivers at the turn of the second millennium and the issue of the „Czerwień Towns” in the light of written and archeological sources]. In: *Pogranicze polsko-ruskie we wczesnym średniowieczu na Lubelszczyźnie [The Polish-Ruthenian borderland in the early medieval period in the Lublin region]*. Lublin, pp. 23-34.
- Jażdżewski K. (1959). Ogólne wiadomości o Czermnie-Czerwieńiu [General report on Czermno-Czerwień]. In: *Archeologia Polski* vol. IV. Warsaw-Wrocław, pp. 67-88.
- Kobyliński Z. (2005). *Archeologia lotnicza w Polsce. Osiem dekad wzlotów i upadków [Aerial archaeology in Poland - Eight decades of rises and falls]*. Warsaw.
- Kuśnierz J. (2003). Historia i stan badań latopisowych grodów Czerwień i Wołyń oraz ich okolic [History and state of research on the chronicle-mentioned strongholds of Czerwień and Volhynia and their vicinity]. In: *Zamojsko-Wołyńskie Zeszyty Muzealne*, Zamość, pp. 9-22.

Stages of verification of aerial observations.

Localizing and identifying the remains of an early medieval gangway.

Green dots - identified oak piles supporting the early medieval gangway

Red dots - main measurement grid with points spaced every 10 m