

Cartographic Heritage of the Valpovo Estate

Very valuable cartographic materials are an integral part of the units of documentary heritage from the late-feudal estates in Slavonia, Baranja, and Syrmia, or later post-feudal private large estates. It was mostly created as a supplement to documentation related to various administrative work, mostly those activities related to property ownership, and it is mostly related to the period from the first half of the 18th century to the middle of the 20th century. The historical significance of those maps is manifold, and partly arises from the fact that they are mostly unique, hand-written items, made by local surveyors, i.e. cadastral surveyors, on the basis of field measurements. Therefore, these are credible and precise sources of information, which are difficult to find otherwise in the preserved documents, from the, for example, central or regional state administration institutions of the period. Their important place in the total body of Croatian cartographic heritage is indisputable, since they greatly complement the information recorded in contemporary civilian and military topographical maps and cadastral designs, mostly specific for estate maps. Also, some, primarily older, copies stand out because of their craftsmanship and rich equipment and visual art elements, which includes luxuriously painted cartouches, wind roses, landowners' coats of arms, and illustrations with allegorical scenes or scenes of everyday life at the estate. That is why we cannot estimate the value of such maps only on the basis of the cartographic information they provide, but also as a layered document, reflecting the social and economic status of the local landowners, often some of the highest ranking nobility in Europe, with the entirety of their content.

The estates in Slavonia, Baranja, and Syrmia were founded at the same time as the great changes in the cartographic representation of our area.

Namely, the first half of the 18th century is when modern maps were created, in large scales, rich in details, and technically highly precise. Up to that point, there were only imprecise maps of wider geographical areas, in smaller scales, with modestly represented natural elements, and those maps were abundant due to the appearance and development of woodcut and copper-plate etching, i.e. the appearance of commercial, printed cartography, back in the 16th century.¹ Those maps were created in western European countries, where their authors used informers for the areas that were not available to them. This is the basic reason why our area under the Ottoman rule was incorrectly shown, with only several basic toponyms. From the period and from the area under the Ottoman rule, we found nothing similar to maps or sketches of our areas of eastern origin, so we can talk about a complete stop in the development of cartography, at least regarding the area of Slavonia and Syrmia. Modern surveying and cartography was brought to this area by the military engineers who arrived with the Habsburg military.² That is when the first modern plans of larger settlements in the liberated area were created, including one of Valpovo, or more specifically the castle in Valpovo, the plan of which was made between 1687 and 1690 by a French engineer in service of the Habsburg military.³ Once the noble family Hillebrand von Prandau got a large piece of land in Slavonia as permanent property, in 1721, a private estate along the Drava called Valpovo Estate was created (*Dominium Hillebrandianum, Valpoer Herrschaft* or *Herrschaft Valpo*). Considering that the owner wanted to have a full overview of the structure of the land he acquired, he had to hire an engineer, i.e. a geodetic surveyor, who would measure it and make a cartographic representation,⁴ and something like that could only

be paid by an exceptionally rich and influential member of high nobility. During that period, the first military engineers who received academic education in the Habsburg Monarchy⁵ started appearing, so one of them, called Sebastian Freudhofer, was hired by the Valpovo Estate. Information about his work as an architect in charge of building a bridge, a mill, a school building, a canal, an inn, repairing a crack on the castle, etc.⁶ or as the administrator of the estate has been preserved in the archives of the Valpovo Estate from the first half of the 18th century, and some of it has already been investigated.⁷ However, there is almost no information on surveying or cartography, aside from the cartographic materials. Baron Petar II Antun Hillebrand von Prandau hired him in 1724 for the work of construction and design of specific buildings that had to be made during the reconstruction of the newly acquired estate, and paid him an annual wage, and from 1736 all the way to 1763, Freudhofer took over all the work regarding the organisation of the estate as the administrator.

The imperial academic engineer Freudhofer was the student of the first generation that graduated from the Military Engineering Academy, enrolled at the academy in 1718, and there is a note next to his name on the list of students saying that he attended classes very irregularly. It appears that he surveyed and made maps of the entire Valpovo Estate, most of which were preserved.⁸ The maps are from 1730, which means that the survey was done one or two years earlier and that it was almost finished by the middle of 1729.⁹ Freudhofer signed his work on the maps with *delineavit* (drawn, outlined), which, all things considered, probably means that he did not participate in the survey of the estate itself. The account book of the Valpovo administrator for 1728 briefly mentions two more engineers, Johann Bernd and Mathias Jung.¹⁰ Bernd was in the same class as Freudhofer at the academy, so it is possible that him and Jung were in charge of the surveying and that Freudhofer made the maps.¹¹ His work is therefore the first cartographically realistic representation of an estate in Croatia. It can be said that these unique, hand coloured maps were the first modern topographic maps in our area, made to scale, and not on the basis of estimated distances and in the form of a sketch, hand-made, but without artistic impressions, with almost all the display elements and the

work methods as in the first (topographic) land survey (1763 – 1787). The basic purpose of these maps was obvious – determine the borders and gain insight about the topographic facts, with all the large and small forests, roads, watercourses, etc., but without measuring the surface area of individual plots. The representation of the village Šaptinovci is done in this manner, it shows the red dashed border line, only drawn toward the neighbouring estate. The village is fully surrounded by forest, shown with drawings of small trees, fully coloured in green – which is, along with the rest of the colours used, an important advancement in cartographic semantics.¹²

Considering that the forest was the largest source of income for the estate at the time, through the exploitation of wood for heating and construction, quality maps were the most important part of the estate documents. Uncontrolled logging and the lack of knowledge regarding the forest resources at estates was also a problem, even for the forest-rich Valpovo Estate. In time, Freudhofer's maps became insufficient, because they did not display the size of forest areas, which is evident from the official statement of the estate management from 1776, that there is no adequate documentation regarding these (...*Geometras Realis Fundorum et Sylvarum Dimensio*...) and other surfaces.¹³ In that regard, the cartographic work at the estate continued for as long as the estate existed, because the condition of forests and other areas changed continuously. Freudhofer's work is the best indicator of the influence of military cartography on the overall development of cartography, especially civilian cartography, which became a common activity in the second half of the 18th century. During that period, due to the advancement in the profession and the activities of the newly-established civil institutions for the education of professionals, there is a significant increase in the number of cartographers at all Slavonian and Syrmian estates, according to the preserved maps.¹⁴

When we are talking about the maps in the holdings of the State Archives in Osijek, they mostly represent the integral part of the Valpovo Estate fonds, and they are separated as special series titled Land Maps.¹⁵ The total of 127 maps were preserved, and they were created in the period

5 They were educated at the Military Engineering Academy in Vienna founded in late 1717 on the initiative of Eugene of Savoy, who was very interested in engineering and technology. Subdirector of the Academy, Giovanni Giacomo Marinoni, court mathematician and mathematics and astronomy teacher of the future Empress Maria Theresa, educated the first modern surveyors (geodetic surveyors) and cartographers, two of whom completed a civilian survey of a large land area in Slavonia and Syrmia, i.e. for the first time in Croatia, in a large scale, in a fully modern and scientific way, which was created by him personally. These are the first cartographers of the Valpovo and Vukovar estates.

6 State Archives in Osijek, fonds 476 - Valpovačko vlastelinstvo (hereinafter: HR-DAOS-476), book 2, fol. 108. r., 116. r., 135. r., 119. r., 289. r., 337. r.

7 More on the topic: Perić, Lj. Inventar valpovačkog dvorca iz kolovoza 1736. Osječki zbornik 29(2010), Osijek, p. 203–214; Perić, Lj. Valpovačka župna crkva i dvorska kapelica između 1722. i 1736. Scrinia Slavonica 9(2009), Slavonski Brod, p. 99–124; Sutić, M. Sebastian Freudhofer – čovjek od povjerenja baruna Prandaua. Godišnjak Njemačke narodnosne zajednice 23(2016), Osijek, p. 127–140; Horvat-Levai, K.; Turjak Podmanicki, M. Župna crkva Bezgrešnog začetca Blažene Djevice Marije u Valpovu : podrijetlo arhitektonskog tipa i kontekst. Radovi Instituta za povijest umjetnosti 35(2011), Zagreb, p. 157–176.

8 The Cartography Collection of the Croatian State Archives in Zagreb keeps the following maps by Sebastian Freudhofer from 1730: Plan of the Valpovo District with Adjoining Villages (HR-HDA-902, sig. M74, card number 3588), Plan of the City of Valpovo and the Surrounding Area (HR-HDA-902, sig. M75, card number 3601), Plan of the Petrijević District with Adjoining Villages (HR-HDA-902, sig. M74, card number 3592), Plan of the Petrijević Property with the Surrounding Area (HR-HDA-902, sig. M74, card number 3595), Plan of the properties Brodanci and Hlabjanci (HR-HDA-902, sig. M74, card number 3593), Plan of the Brodanci Property (HR-HDA-902, sig. M74, card number 3589), Plan of the Budnici Property with the Surrounding Area (sig. M74, card number 3591), Plan of the Bizovac, Ivanovci, Ladimirovci, Marjančaci and Zatići Properties (HR-HDA-902, sig. M74, card number 3590), and in the Museum of Slavonia (Cartography Collection, inv. no. 321) Plan of the Šaptinovići Village with the Surrounding Area. Considering the method by which the maps were made, the plan of the third, Miholječki District, is missing, as well as the plans of the remaining villages in the same scale as the preserved ones. Most of the preserved maps are in poor condition.

9 At least according to one order (15/6/1729) of materials from Vienna that was to be sent to Valpovo (Štückl Leimbath zur Mappo). HR-DAOS-476, book 2, fol. 165. v.

10 Perić, Lj. mentioned work, 2009, p. 107.

11 Field surveys were usually done during the part of the year with clear weather, and the maps were drawn during the winter months, so that could be the case here as well.

12 Grubišić, A. mentioned work, 2017, p. 155–156 and note 72. An even greater advancement in the cartography of our area, mostly regarding quality, was made by the surveyor and cartographer of the Vukovar Estate, Johann Philipp Fraz, the imperial academic engineer, who surveyed and drawn each individual plot in the Vukovar Estate in 1733. He is also the former student of the Military Engineering Academy, where he was accepted in 1719.

13 Karaman, I. Valpovačko vlastelinstvo : ekonomsko-historijska analiza. Zagreb : Jugoslavenska akademija znanosti i umjetnosti, 1962, p. 35–36.

14 Cartographic materials from the first half of the 18th century have been preserved only from the Valpovo and Vukovar estates, and the other estates probably did not even have maps from that period. Overall, most of the maps are from the Belje, Vukovar and Valpovo estates. The economy part of the archives from the Đakovo Estate was destroyed after World War II, and we could not obtain the part of the information from the Ilok Estate, which is kept in Rome. Many small estates probably did not have any maps in the early period, and those from the later period are very rare, almost non-existent.

15 The call number is from the series HR-DAOS-476.C. After the review of the cartographic materials from 2001, an information aid, i.e. an analytical inventory, was made for this series, in which the maps were listed individually, 127 in total, and the inventory was made by the archivist Vilim Matic. See: Matic, V. Obavijesno pomagalo (analitički inventar) : Valpovačko vlastelinstvo : 1721. – 1945. : Serija C : Zemljišne karte : 1773. – 1928. Osijek : Džavni arhiv u Osijeku, 2001. It is interesting that Karaman, in his economic and historical study of the Valpovo Estate from 1962, in the chapter on the estate archives, does not mention cartographic documents. However, it is clear that he used the maps during his work on the book. See: Karaman, I. mentioned work, 1962, p. 7–12–16. Namely, at the time the fonds was located in the State Archives of the People's Republic of Croatia (currently the Croatian State Archives), and there is no information that the fonds was organised before its transfer to the Osijek archives. Therefore, the reason why Karaman has not mentioned the full cartographic materials within the fonds is probably because

1 The best example are the maps by Lazarus Secretarius and Wolfgang Lazius, two 16th century cartographers, whose maps were used to make many similar ones and slightly updated ones. The maps by Lazarus and Lazius are the pinnacle of cartographic knowledge about the area of eastern Slavonia and Syrmia, and from the later period, "the century of the atlas" (1570 – 1670), we can mention only one map, which is the famous map *Illyricum hodiernum*, printed by Johannes (Joan) Blaeu in Amsterdam, according to the instructions by Ivan Lučić, near the end of the "century". Grubišić, A. Šume vukovarskog vlastelinstva u 18. st. prema kartografskim izvorima. In: Slavonske žmice kroz povijest : zbornik radova znanstvenog skupa s međunarodnim sudjelovanjem održanog u Slavonskom Brodu 1. – 2. listopada 2015. Zupan, D., Skenderović, R. (ed.). Slavonski Brod : Hrvatski institut za povijest, Podružnica za povijest Slavonije, Srijema i Baranje, 2017, p. 143–144.

2 Modern military cartography was developed within the French military, which had the most advanced military engineering in the second half of the 17th century and it was used as a model for Habsburg military engineering, which had no institutionalised military education at the time. There were very few domestic military cartographers (better called mathematicians) who arrived at the end of the 17th century from various institutes or mathematical schools. Regarding such a situation during the first years of the Great Vienna War, when there was great need for military engineers in newly liberated areas, it is not surprising that some of the first plans of our liberated cities were made by military engineers who arrived from all sides (French, Italian, and Spanish) to the Habsburg military. Surveying and map making were just some of the skills and duties of a military engineer at the time. During the liberation of our area from the Ottomans, every military engineer not only had to know how to destroy a fort or build one, bridge a river or mine the moats, but also draw a plan of a settlement, a plan of a military camp, a plan of a battlefield, or a map of the area – with all the paths, watercourses, ponds, mills, elevations, forests, etc. They were always drawn in duplicate, and one was supposed to be sent to the Court War Council (HoFkriegrath) as soon as possible. Thanks to the duplicates, many plans have been preserved until today in various institutions. Grubišić, A. mentioned work, 2017, p. 148.

3 The plan is located in the *Budisches Generalandeschich* in Karlsruhe. Ksani, B. G. Karlsruhe térképek a török háborúk korából = Kriegskarten und Pläne aus der Türkenszeit in den Karlsruher Sammlungen. Budapest : independent edition, 2000, p. 170, 512.

4 In order to set taxes, censuses of the population and lists of assets had to be made, for each village independently. These lists would provide a good overview of the amount of arable land (in sessions) for every household and the number of cattle, which enabled the setting of mandatory labour and the possible income. However, the owner did not actually know the amount or the quality of the land, especially regarding the non-arable areas like forests. With those lists, and without knowledge about the size of each individual plot, it was impossible to properly organise and plan the agricultural production. The only way to fully review the structure of the land, its limits, and possibly plan improvements in agriculture, was to have high quality maps of the property. But that was not easy to accomplish for large land owners anywhere in the Monarchy. Surveying and map making were not only expensive, but there were not enough educated surveyors, even for the needs of the military, which is where most cartographic activities were conducted at the time. The existing schools for the education of military engineers, in Brussels and Innsbruck, seemed to be insufficient regarding the number of educated individuals and their skills at the beginning of their careers, and the high civilian schools in Vienna and Linz, that taught "engineering arts" were also insufficient. Grubišić, A. mentioned work, 2017, p. 154.

from 1773 to 1928. Their type and some of the features of their content are primarily dependant on their basic purpose. Generally, as a part of the administrative documents of the estate, they are mostly documents indicating the position, type, and use of the estate land, with any existing buildings, or documents regarding specific property-legal or construction activities. As such, they can be divided into several groups. The scale 1:14400 or smaller was used for making so-called overview maps. They are general maps of the entire estate or one of its parts. They show the most important components of the area, forests, bodies of water, arable land, and settlements, sometimes showing the position of houses and the infrastructure. Aside from topographic information, they also contain interesting toponymic information, like the names of pastures or areas of undeveloped land.

The so-called land maps are much more common than overview maps, they are made in larger scales, usually 1:7200, and they would show an area of a single village municipality or a part of it. Most of the land maps were made before the publication of the so-called Franciscan Cadastral Survey in the Drava region of Slavonia, so they are regularly based on the so-called Jozefinski Cadastre. The basic purpose of these older maps, created during the operation of late-feudal estates, was to show the basic landscape components in specific village municipalities, the position of houses in a settlement, as well as other structures, like watermills or estate buildings, infrastructure and the sizes of plots worked by the villagers, types of land, and similar. In view of the fact that the settlements and arable land were fully owned by the estate at the time and that the estate managed the work in the field, the land maps would contain information on crop rotation, which was displayed with the division of the village land in three fields for the purpose of crop rotation. These land maps were not created independently, they were originally supplements to other land records of the estate administration, primarily land registers (Libri Funduales) and urbarial books. Therefore, the full land registry information for each settlement can only be obtained after the maps have been paired with the appropriate written documents. Maps from the second half of the 19th and the first half of the 20th century are based on modern cadastral surveys and subsequent revisions. They look like modern cadastral plans, but they were usually made in smaller scales. The information registered in those are no longer related to estate land records, but to public, land registry and cadastral records. Of the remaining maps, only several copies related to infrastructure work were preserved, more accurately, related to road construction and the regulation of the Drava river. However, it is unusual that no forestry maps, created as part of the documents of the estate forestry offices, were preserved. This indicates that they were separated before the fonds reached the archives, and that their final location is unknown. Apart from the maps, it is also necessary to mention their authors. As mentioned earlier, they were local surveyors, estate or county officials.

They conducted field surveys, made maps, as well as any additional written documents. Since some of the maps from the Valpovo Estate fonds were probably uncertified working copies or unfinished copies, we probably do not have the information on all the surveyors who conducted surveys on behalf of the estate or public administration in the area of the estate. In the period from the end of the 18th to the beginning of the 20th century, the total of 21 surveyors have been recorded, mostly their full first and last names, and there are abbreviated first names or just last names for some.¹⁶ The earliest records about a surveyor, more accurately his signature, is on a map from 1773 and they are for Carl Leopold Kovács (Kováts). This map is also the only one from this series signed by him. In the second half of the 18th century, most of the maps are signed by the surveyor Franciscus Kremniczky. In the period of the first half of the 19th century, most maps were made by Karl Baky, and the two most represented surveyors in general are Laurenz Nadoba, who was active in the middle of the 19th century, and Vincenz Beer, the surveyor from the second half of the 19th century.¹⁷

Along with the maps created through the work of the Valpovo Estate administration, other relevant cartographic documents in other archival fonds and collections should also be mentioned. This includes a few maps from the fonds Urbarial Court in Osijek and the land registry supplements from the Cadastre Collection.¹⁸ The first are from the second half of the 19th century and they have been attached to the cases related to land property and the relationships between the estate and the other properties in the Valpovo region. The Cadastre Collection holds the plans that were made as supplements to some land registry cases from the first half of the 20th century, when Count Rudolf Joseph von Normann-Ehrenfels divided a part of the estate lands into plots and sold them. These plans complete the cartographic materials unit related to the Valpovo Estate at the State Archives in Osijek.

The selection of the maps for the exhibition was still aimed at providing a representative overview, including both the type and content. The holdings of the State Archives in Osijek are represented with 12 maps from the estate fonds. The first two maps are related to the wider area of the market town Valpovo itself. The older one, signed by Franciscus Kremniczky, is from 1786 and it shows the estate allodium, which included arable land and forests, as well as the vivarium, or the menagerie.¹⁹ The same author made two more maps in the exhibition. The first map shows the properties Bokšić and Saptinovci from 1787 and the route of the new state road from Kravica to Bizovac.²⁰ One of the maps that was used more frequently was the map of the wider area of Valpovo by Karl Baky from 1816.²¹ It shows the castle and the market town Valpovo, with the positions of streets and houses, undeveloped land in the area, including the location Staro Valpovo with the cemetery, then the vivarium, economy buildings, paths and roads, the watercourses of Drava and Karašica, canals, channels, and other. It is followed by a series

of typical land maps from the first half of the 19th century, displaying plots according to crop rotation. Another item that differs from these is the plan of the Poganovci Municipality from 1824 by Mihael Danilović, the content of which more closely matches a general geographical map in a larger scale.²² The only map in the exhibition from the second half of the 19th century is the plan of the Bistrinci property by Laurenz Nadoba from 1857.²³ It shows the entire municipality with indicated plots and areas of undeveloped land, but without the indication of fields for crop rotation, which reflects the condition of the land after feudalism was abolished. There are several plans of the same type from the same year, so they are obviously supplements to the new land registers and tax records. Another two water engineering maps should also be mentioned. The first one is the drainage plan for Bizarevača and Orešanska pond at the Selce property from 1829, by an unknown author.²⁴ It shows the plan of the Selce property and the cross sections of those two ponds. The other one was created as one of the documents for the larger water engineering intervention of the watercourse of the river Drava. The map is from 1849 and it was probably made by Johann Danhelovsky.²⁵ Aside from the canal through the meanders of Drava, the map also shows the new border between the Miholjac property and the Baranja County.

Considering their condition and historical value, the maps of the Valpovo Estate are definitely some of the more significant units within the total mentioned Croatian cartographic heritage. This unit is not gathered within the holdings of a single heritage institution though, instead, due to historical circumstances, it remained dispersed. Therefore, the originals of the mentioned maps are mostly kept in the State Archives in Osijek today, while some of them are kept in the Museum of Slavonia in Osijek, Croatian State Archives, and the Valpovo Regional Museum. Some of the mentioned materials are familiar to the professional and wider public because it was displayed before in exhibits, and published in various publications. Nevertheless, it is a smaller number of, mostly, more representative maps. Systematic research, in which the Valpovo land property maps would be a source for studies in the area of economic history, historical geography, historical demography, ecological history, microhistory, etc. has not been implemented, even though they are an extremely important source for the study of changes in the environment primarily, but also for the history of cartography itself. That is why we can safely say that the potential of the mentioned materials has not been fully utilised and that it must be comprehensively evaluated in the future, which, ultimately, includes all of the archival, library, and art heritage of the Valpovo Estate.

the cartographic series was established only after it was organised in the Historical Archives in Osijek (currently the State Archives in Osijek), and before that it was located in various locations as attachments to various documents.

¹⁶ See the list of surveyors in: Matić V. mentioned work, 2001, p. 6. Further research of the archival fonds from the estate or public administration at the Croatian State Archives and the State Archives in Osijek would probably provide information on the first and last names of all, or at least most, of the surveyors who were active in this area during the mentioned period.

¹⁷ Matić V. mentioned work 2001, passim.

¹⁸ Call numbers: HR-DAOS-122 and HR-DAOS-1009.

¹⁹ Call number: HR-DAOS-476.C.31/5.

²⁰ Call numbers: HR-DAOS-476.C.28/1, HR-DAOS-476.C.24/2.

²¹ Call number: HR-DAOS-476.C.31/3.

²² Call number: HR-DAOS-476.C.22/1.

²³ Call number: HR-DAOS-476.C.1/2.

²⁴ Call number: HR-DAOS-476.C.24/3.

²⁵ Call number: HR-DAOS-476.C.35/4.