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A Database of Early Modern Tax Registers of the White Forest (Central Poland)

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Abstract

This article presents a database focusing on settlement patterns, demographics, and economic transformations within one of the largest forested areas of early modern Poland, the White Forest, situated at the confluence of two significant rivers, the Narew and Bug. These waterways historically facilitated the export of grain and forest products from eastern Poland and certain regions of the Grand Duchy of Lithuania. This database was compiled according to the guidelines established by the "Historical Atlas of Poland" which gathers spatially-oriented data pertinent to the historical geography of Polish lands. The database pertains to a region that was somewhat peripheral in terms of the overall national development, rendering it suitable for comparative analysis with other European regions that exhibit similar trends—intensive settlement expansion, environmental pressure in the early modern era, and a degree of distance from contemporary political and economic hubs.

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Keywords

Poland – Mazovia – White Forest – bishopric of Płock – modern period – tax registers – settlement structures – historical demographics

– Related data set "Database of Early Modern Tax Registers of the White Forest (Central Poland)" with DOI www.doi.org/10.5281/zenodo.14164775 in repository "Zenodo"

1. Introduction

In the late Middle Ages and the early modern period, numerous European states—mainly because of new military needs—faced the need for an unprecedented change in the way they raised funds for the state's treasury and organized their administration (Boroda & Guzowski, 2016; Guzowski et al., 2022). Following the still useful model created a century ago by Joseph Schumpeter, the most significant changes to mention in the transition from 'domain state' to 'tax state' are the imposition of new taxes (or modification of the tax rate and tax base of the old ones) and the installation of a clerical system efficient enough to collect them, as well as the resulting development of representative assemblies wanting to participate in the process of redistribution or to oversee it (Bonney, 1999). The Polish (and after 1569 the Polish–Lithuanian) state is not an exception in this respect. After the great concessions to the nobility and the clergy made by Louis the Great (1370–1382), throughout almost two centuries the Jagiellon dynasty continuously sought to expand its fiscal capacity and struggled to do so due to strong resistance of the privileged groups. Since the rulers were unable to impose any permanent tax that could meet the demand of state maintenance and the urgent military needs, they had to be satisfied with the frequent imposition of extraordinary taxes, which—apart from the crownlands and the salt mines—constituted a substantial part of the annual revenue of the treasury during the late medieval and modern period (Guzowski & Sowina, 2023). The land remained the main basis for taxation for most of the modern era, however, the end of the 15th and 16th centuries witnessed the first applications of the poll tax (Weymann 1956).

2. Tax Registers as a Source for Historical Research: From Pawiński's Legacy to a Digital Future

- **Database of Early Modern Tax Registers of the White Forest (Central Poland) deposited at Zenodo—DOI:** www.doi.org/10.5281/zenodo.14164775
- **Temporal coverage:** 16th century-end of 18th century

Since the late 19th century, tax registers were used as a direct source for economic, settlement, and demographic research. A significant contribution in this field was made by Adolf Pawiński, who published a separate tax register for each of the smallest administrative units in Poland at the end of the 16th century. This series, titled "Źródła dziejowe" ("Historical Sources"), was published from 1883 to the early 20th century (Pawiński, 1883). Pawiński's research laid the foundation for further work on historical atlases showcasing administrative, settlement, property, and demographic divisions in historical Poland (Smolka, 2013). A groundbreaking moment arrived a few years ago with the launch of "AtlasFontium.pl", a website that gathers historical and geographical data for the entire territory of present-day Poland. This was followed by the completion of the "Historical Atlas of Poland. The Detailed Maps of the 16th Century" series (for download as PDF: https://rcin.org.pl/ihpan/dlibra/publication/269259/edition/233781/content?&meta-lang=en). These developments represent a significant leap forward in exploiting tax registers as a source for historical research (Szady, 2016).

Our *Database of Early Modern Tax Registers of the White Forest* (*Central Poland*) continues on this path. Hence, we present here a series of tax data from the 16th to the end of the 18th century covering the area of the White Forest, which in this period was situated within the limits of the Nur Land, the administrative unit of the Polish Crown divided into three counties: the Counties of Kamieniec, Ostrowia, and Nur. Our database contains 8,051 records with varying degrees of detail depending on the source material. The data compiled in the database provides a coherent and comparable picture of the social, economic, and settlement transformations occurring in the region between the Bug and Narew rivers. It allows us to capture the changes in the colonization of forest areas, particularly in the 16th and 18th centuries, when successive waves of settlers reached different parts of this territory. The database highlights the significance of private church estates in the process of taming the former wilderness, as most of the White Forest area was under the direct rule of the bishops of Płock from the Middle Ages to the early 19th century. The data we gathered portrays all types of property ownership (noble, royal, and ecclesiastical) that existed within the White Forest.

Despite being located at the fork of the two major rivers, the Bug and the Narew, the region of White Forest was considered peripheral not only from a Western European but even from the Polish perspective. Not the most fertile soil, numerous swamps and marshes, as well as the frequent raids of the Lithuanians in the 14th century—all this contributed to the fact that even though the considerable part of the forest belonged to the bishopric of Płock since the early Middle Ages, it was settled relatively late. Only at the turn of the Middle Ages did the settlements establish there, which gradually contributed to the intensive clearing of the forest, and to producing valuable grain. All these goods were rafted to Gdańsk and traded there to the countries of Western Europe (North, 2015). In addition, an intensive increase in settlement can be observed in the 18th century, which was associated with the further clearing of the forest and the direct involvement of the bishops of Płock in the timber trade. The White Forest area is therefore valuable, especially in terms of economic, demographic, and social analyses, to understand the long-term transformation of peripheries into centers.

3. Methods, Sources and Data Consistency

The primary sources for our database (see Table 1) were the twelve surviving tax registers from the 16th and 17th centuries (1538, 1542, 1552, 1563, 1564, 1567, 1576, 1577, 1578, 1579, 1580, and 1673–1674) currently stored in the Central Archives of Historical Records (Pol. Archiwum Główne Akt Dawnych—abbreviation: AGAD) and the content of two tax registers of 1789 and 1790 preserved as an extract from the original eighteenth-century source destroyed in the fire of the Central Archives during the Warsaw Uprising in 1944. This extract, the so-called Karol Buczek Cartulary, is stored in the Institute of History of the Polish Academy of Sciences.

The data collected refer to three types of tax registers. The first and the most represented type in our database is the Extraordinary Tax Register (EOTR, see Figure 1) from the 16th century; its general characteristics and form did not change during the time period (1538–1580). It registers above all the collection of *mansus* tax (Pol. *łanowe*), so it always includes at least: 1) the name of the parish within which the settlement lies; 2) information about the type of settlement (*villa* or *oppidum*); 3) information about the owner (king, Catholic Church, or nobility); 4) a specified tax rate; 5) a list of settlements; 6) a tax base, which in this case is (except for one register) the cultivated area measured in lans (Pol. *łany*; Lat. *mansi*). A considerable part of our EOTR s also includes the name of the person who delivers the tax to the collector's office. 16th-century

TABLE 1 Tax registers incorporated into the Database of Early Modern Tax Registers of the White Forest

Year	Reference code	Storage location	Pages	Type of register	Number of records	Level of observation	Notes
1538	1/7/0/3/38	AGAD	74–121v	EOTR	1,365	household/ individual	
1542	1/7/0/3/38	AGAD	163–178	EOTR	398	village	
1552	1/7/0/3/38	AGAD	297–309	EOTR	492	village	
1563	1/7/0/3/38	AGAD	321–358v; 380–409	EOTR	560	village	
1564	1/7/0/3/38	AGAD	467–513v	EOTR	466	village	
1567	1/7/0/3/38	AGAD	539v–587	EOTR	584	village	
1576	1/7/0/3/38	AGAD	660–690	EOTR	287	village	Only for the Counties of Kamieniec and Ostrowia
1577	1/7/0/3/38	AGAD	695–717v	EOTR	256	village	Only for the Counties of Ostrowia and Nur
1578	1/7/0/3/38	AGAD	749–785	EOTR	506	village	
1579	1/7/0/3/38	AGAD	788–820v	EOTR	506	village	
1580	1/7/0/3/38	AGAD	821–851v	EOTR	487	village	
1673	1/7/0/3/66	AGAD	890–970v	PTR	582	village	
1674	1/7/0/3/66	AGAD	971–1064v	PTR	566	village	

TABLE 1 Tax registers incorporated into the Database of Early Modern Tax Registers of the White Forest (*cont.*)

Year	Reference code	Storage location	Pages	Type of register	Number of records	Level of observation	Notes
1789	–	Institute of History of the Polish Academy of Sciences	–	HTR	288	village	Only for the County of Kamieniec
1790	–	Institute of History of the Polish Academy of Sciences	–	HTR	708	village	

Note: There are three types of tax registers: EOTR (Extraordinary Tax Register), PTR (Poll Tax Register), and HTR (Hearth Tax Register).
SOURCE: ONLINE ACCESS TO THE TAX REGISTERS VIA www.szukajwarchiwach.gov.pl/en/jednostka/-/jednostka/17711579 (FOR THE YEARS 1538 TO 1580) AND www.szukajwarchiwach.gov.pl/en/jednostka/-/jednostka/17711610 (FOR THE YEARS 1673–1674).

registers are not uniform. The data in the early period mainly concern the number of cultivated and empty lans and basic economic facilities such as mills and windmills. Over time, the number of taxed categories expanded to include various occupational groups living in villages and towns, but also new industrial facilities (Boroda, 2007). While the form has been gradually but largely standardized from 1563 onwards (the registers from 1576–1580 can even be perceived as a kind of series), the earlier registers are structured differently. Apart from the mansus tax the EOTRs contain information about levying two other types of taxes, i.e. the extraordinary tax collected among the townspeople (Pol. *szos*), and a liquor tax (Pol. *czopowe*; Lat. *ducilla*).

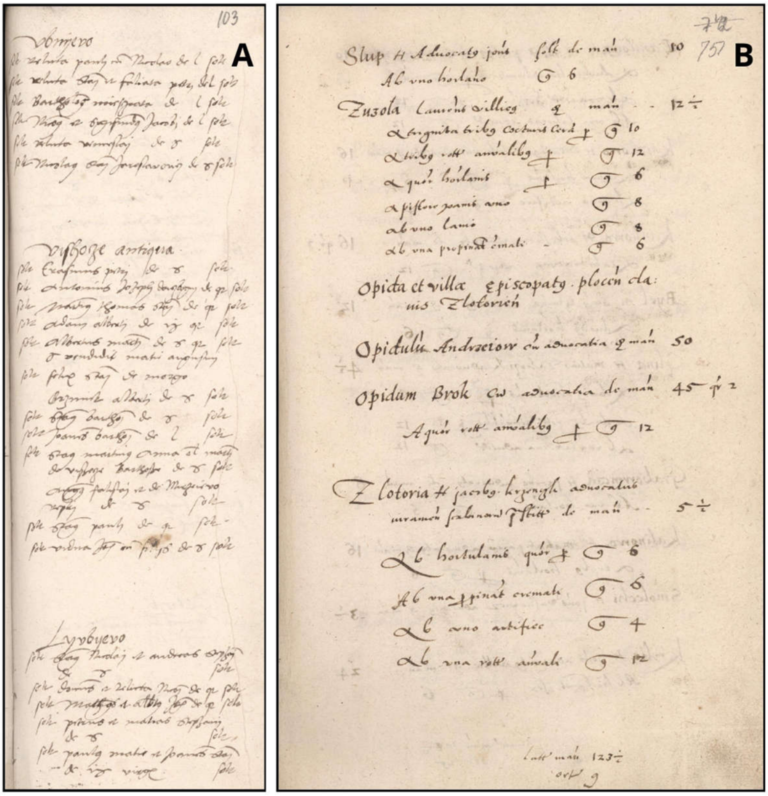

FIGURE 1 Examples of EOTRs: A = register of 1538, page 103r; B = register of 1578, page 751r

The second type is the Poll Tax Register (PTR, see Figure 2, panel C) (Pol. *pogłówne*). For the area we are interested in, only one register has survived, covering two years (1673 and 1674) and recording not only the settlement network of the time but also the prevailing family and occupational model in the region in question. The form varies throughout the register depending on the collector's diligence, but never does it fail to provide the name of the settlement, the list of its inhabitants (the tax base) and their number split into two columns (*nobiles* and *plebei*) as well as the sum of the tax collected.

The third type is the Hearth Tax Register (HTR, see Figure 2, panel D) (Pol. podymne). For the reasons described above, it is not possible now to know what was the specific form of this register, however judging from the data gathered by Karol Buczek—the names of the parishes, the names of the settlements, the ownership type and the hearth numbers—we can trust that it did not deviate much from the aforementioned registers.

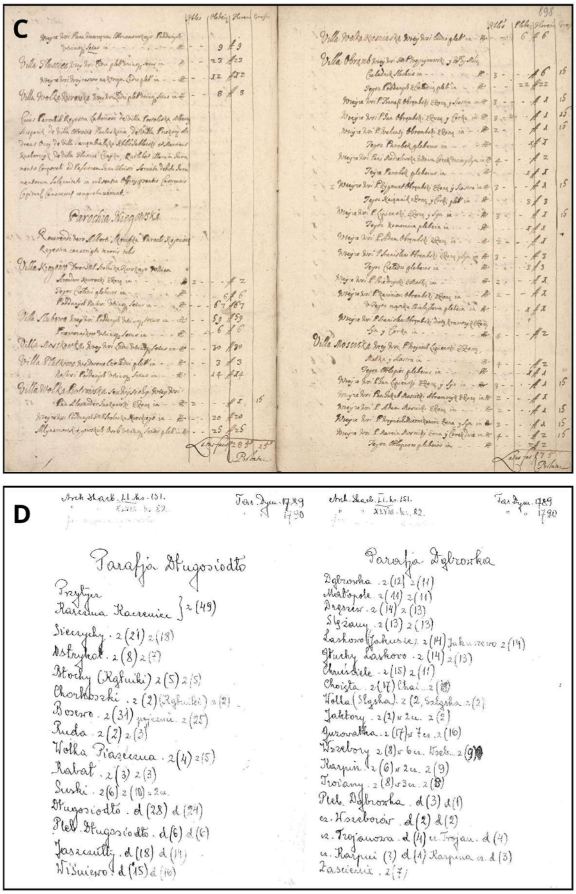

FIGURE 2 Examples of PTRs and HTRs: C = the PTR-register of 1673, pages 897v–898r; D = one of the pages of Buczek's Cartulary

The data was prepared according to the methodology developed for the publication of other 16th-century tax registers on https://atlasfontium.pl/rejestry-poborowe-poznanskie/zasady-edycji-pzn. This method enables the preparation of quantitative data and their linking employing a unique spatial identifier in the database. Each of these spatial identifiers is comprised of three components, the first being the name of the settlement, the second the name of the county and the third the name of the province. For example, if we consider the village Płatkownica, its identifier will be Platkownica_kam_maz, because it is located in the County of Kamieniec which is, in its turn, a part of a bigger administrative unit: Mazovian Voivodship. Starting with this identifier we built a record which should be understood as a single unit of information about the settlement in each year. Hence, using the identifier allows one to easily browse the database for any settlement throughout the period covered. This method of arranging the information has two main advantages. On the one hand, it tries to pursue the line of thought and the logic of work of the tax collector; on the other hand, it complies with the research hitherto conducted, in particular with the data from the project "Historical Atlas of Poland. Detailed maps of the 16th century" (Słoń & Słomska-Przech, 2021).

During more than a century of scientific research based on the tax registers, Polish historiography has developed many methods of specific source criticism (Chłapowski, 2021; Humnicki & Pacuski, 2021), which we used to analyze and interpret our own sources.

Naturally, when analyzing data from any kind of tax register, one must bear in mind numerous issues that arise for various reasons: the condition of a manuscript, the mannerisms of scribes and tax collectors, their occasional carelessness and inconsistency, in short, things that are perfectly understandable with such a large source base. The first and so far most important problem is the way of recording the settlements, which differed depending on the tax collector. The most accurate (i.e., the most convenient for a present-day historian) way was to note the name of a village and assign all the tax subjects to it, especially the acreage, but also the mills, taverns, propination rights, and so forth. This type of entry is the most common in our database. However, it is also common for all of the above-mentioned information to be assigned not just to one village, but to two or even more villages. Although this does not fit well with our modern, 'pin-on-the-map-oriented' way of thinking, it can sometimes be seen as an advantage, as the registers reflect the ownership status of land in a given year quite accurately (for example, the estates of the Komorowski family in the County of Ostrowia recorded in the registers of 1576–1580). On the other hand, in some cases, it can be an obstacle that is very difficult or even impossible to overcome. The best illustration of this problem is the group of villages in the parish of Czerwino, also in the County of Ostrowia, namely Chrośnice, Damiany, Gocły, Skarżyno, and Suchcice. These villages are listed in almost every register differently, sometimes separately, sometimes together in different combinations. The register of 1563, for example, lists "Gocły Damiany", "Skarżyno Damiany", "Gocły Suchcice", "Gocły Chrośnice et Skarżyno". It is not easy to assign a correct identifier, let alone to trace the development of the cultivated land belonging to the respective settlements over a certain period of time.

The next challenge is the inconsistency in recording the names of parishes, the names of the settlements, and the ownership of certain settlements, such as the property of the bishopric of Płock or the King of Poland. This can be observed in the register of 1538, where the name of the parish of Andrzejewo is replaced by the earlier name "Wronie", or in the case of the parish of Postoliska, which appears in the register of 1552, then does not appear in any of 1560s registers—which seems particularly strange if we take into account the otherwise perfect structure of the register of 1563 and the extraordinary meticulousness of its author—, only to reappear in the register of 1576. There are more examples of such 'disappearing' parishes and settlements. Against the background of the rather chaotic records, the register of 1563 stands out significantly with its clear structure of headings. We are aware that, despite our efforts to make the database as intuitive to operate as possible, navigating through the material can still prove complicated. We therefore strongly recommend using the maps available on the website https://atlas.ihpan.edu.pl/rejestry-poborowe/?lon=21.849825&lat=52.688698&z=9.8&l=rejestry:1|rejestry_woj_mazowieckiego:1|nurska_1578:1|pokrycie_terenu:1|lasy:1|bagna:1|rzeki:1|akweny:1|drogi:1|panstwowe_granice_administracyjne:1|powiaty:1|ziemie:1|koscielne_granice_administracyjne:1|parafie:1.

The poll tax and the hearth tax have their own limitations and present different challenges. In the case of the former, it is primarily how the author recorded the number of *nobiles* and *plebei* in the County of Nur in 1673: he had listed them, but he did not assign them to one of the categories; unfortunately, it is not always obvious to which category they should be assigned. We did our best to do this ourselves, however, we feel obliged to point out to the reader that although the aforementioned numbers do come from the original source, they may not be as precise as the rest of the data.

The most crucial issue with the 18th-century hearth tax is, of course, that we lack access to the manuscript. Furthermore, the range of the parishes, the number of settlements, their size, ownership and economic importance changed over two centuries, so the data can be confusing, especially when compared to that on https://data.atlasfontium.pl/maps, which covers the

16th-century only. In this case, early 19th-century maps may certainly be a much more helpful point of reference.

4. Critical Reflections and Conclusion

The discussion about the limitations of our database has to begin with the fact that the 16th-century EOTRs are not only disproportionately represented, but also relatively evenly distributed over 40 years (1538–1580), which provides the opportunity to observe the dynamics of agricultural, demographic, and economic change. There is unfortunately no such an opportunity when it comes to the data from the subsequent centuries, PTRs (1673–1674) and HTRs (1789–1790) being rather the isolated 'islands' of information. The conclusions made based on the EOTRs will then be without doubt more precise and more certain compared to those drawn from the PTRs and HTRs. By no means does that make the latter useless; however, one should be aware of the multitude of political and socio-economic changes during these two century-long gaps in order to interpret the data correctly.

Almost every register contains some information that is unique within the series. The register of 1538 for example—although it is undoubtedly not as rich in economic information as the following ones—is the only one that records the payment dates of two tax instalments, that is information that can be used to reconstruct the praxis of tax collection, the mobility of taxpayers, and the work of the tax collector and his chancellery (cf. with Związek, 2022). It is also the only one that emphasizes the division of land within settlements, an issue particularly important in the eastern parts of Nur Land, which was predominantly inhabited by petty nobility. The data offers then an exceptional insight into the financial situation of this particular social group—a poor noble family—in this time period.

The register of 1552 can be in turn used as a demographic tool. Unlikely the rest of the 16th-century registers, this one establishes the number of peasants cultivating the landowner's fields as the tax base. By combining the number of peasants with the acreage from the prior and posterior registers, it is possible—with the necessary premises—to create a demographic conversion factor for the Nur Land, which could represent an important contribution to the ongoing discussion on Polish demography in the early modern period (Boroda, 2015).

A considerable part of the settlements represented in our database was owned by the diocese of Płock (in fact, the estates clustered around the two major settlements, Wyszkowo and Złotoria, made up a considerable part of its entire domain), so the registers provide a good insight into the economic basis of this prominent Polish bishopric, into the administration of the property hitherto owned and possible directions for expansion. One can also observe a gradual growth of the cultivated area, especially when it comes to the property of the lesser nobility who farmed themselves without using the peasants' labor. This is not the place to go into detail, suffice it to say that it seems to confirm on the microscale the conclusions of Boroda (2016), who, based on the summaries compiled for the central treasury offices between 1533 and 1569, found that the area under cultivation in the region of eastern Mazovia doubled in the period in question. In addition to the standard information, in some registers, for example, that of 1567, we find detailed records of the rafting of grain on the Bug River or honey hefting.

The PTR data, especially when compared to the EOTR, could be used to analyze the extent of the changes and socio-economic phenomena that took place in the area in question. Unfortunately, we were not able to extract the personal data—as this task would have gone far beyond our time limits—thus the poll tax register remains the only one of the entire set presented that has not been fully exploited. Nevertheless, the information in our database is useful for demographic research, for it provides the number of taxpayers belonging to privileged (*nobiles*) and unprivileged (*plebei*) estates in each settlement.

For the Polish lands, this is the first set of tax data from the rural areas consisting of the content of every preserved tax source in the time period, hence it can be used in future research in various branches of economic and environmental history. Tax data not only allow us to study the history of the treasury but are also an excellent basis for economic and demographic analyses: since we have no data from church records for the pre-Tridentine period, it is practically invaluable (Gieysztorowa & Żaboklicka, 1955). Furthermore, our dataset has the potential to be expanded by the content of preserved 17th- and 18th-century parochial registers recording the baptisms, the marriages and the burials.

Our dataset allows us to quantify and thus make perceptible the growing human pressure in the past. In this matter, it goes beyond the existing database which was used to create a map of Poland in the 16th century and was based only on the 1578 EOTR (https://data.atlasfontium.pl/maps/new?layer=geonode:nurska&view=True%23/). Scientists from the "Historical Atlas of Poland" project managed to capture a point in time for every single settlement from this area. Relying on their work, we wanted to go one step further and present not only a single point but also a process. For instance, our dataset provides a possibility for research on settlement continuity as illustrated by Table 2. Due to the ownership structure, that is, a relatively large proportion of settlements belonging to the bishopric of Płock and a small proportion of

TABLE 2 Settlements selected from the database with number of occurrences in tax registers

Selected settlement ID	The number of occurrences in the tax registers														
	1538	1542	1552	1563	1564	1567	1576	1577	1578	1579	1580	1673	1674	1789	1790	Total
Andrzejow_nur_maz				1	2	2		2	2	1	1	2	1		2	16
Arciechowo_kam_maz	1	1	1	1	1		1		1	1	1	1	1			11
Baczki_kam_maz	1	1	1	1	1	1	1		1	1	1	1	1	1	1	14
Barchowo_kam_maz	1	1	1	1	1	1	1		1	1	1	1	1	1	1	14
Barcice_kam_maz	2	1	1		1	2	2		1	1	1	1	1	2	2	18
Bartki_nur_maz		1														1
Bartodzieje_kam_maz	2	1	1	1	1	1	1		1	1	1	1	1	1	1	15
Biala_Dabrowa_kam_maz	1	1	1	1	1	1	1		1	1	1	1	1	1	1	14
Biale_Andrzejewice_nur_maz												1	1			2
Biale_Bloto_kam_maz			1												1	2
Biale_Chorosze_nur_maz													1		1	2
Biale_Figle_nur_maz												1	1		1	3
Biale_Kwaczoly_nur_maz								1	1	1	1	1	1		1	7
Biale_Misztale_nur_maz			1									1	1		1	4
Biale_Paleki_nur_maz												1	1		1	3

TABLE 2 Settlements selected from the database with number of occurrences in tax registers (*cont.*)

Selected settlement ID	The number of occurrences in the tax registers															
	1538	1542	1552	1563	1564	1567	1576	1577	1578	1579	1580	1673	1674	1789	1790	Total
Biale_Papieze_nur_maz													1		1	**2**
Biale_Pieczonki_nur_maz		1	1	1	1	1		1	1	1	1	1	1		1	**12**
Biale_Pienki_nur_maz						1										**1**

SOURCE: OWN COMPILATION BASED ON DATABASE DATA.

noble and royal property, we managed to acquire a fairly standardized material for a specific closed area. We hope our database will prove to be a useful point of reference for everyone who studies the processes of transformation from peripheries to centers or the resistance and resilience of preindustrial societies to climate and/or landscape changes (cf. with Ljungqvist & al., 2023, and Słowiński & al., 2024), not only in the Central European context but also in every other region considered to be peripheral all over Europe.

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