## Towards a Common Language: the Plan to Standardise Symbols on Archaeological Maps in 19th-century Europe

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Abstract: The development of archaeology in 19th-century Europe resulted in more and more precise archaeological maps comprising the data that researchers had gathered in their studies and excavations. In the mid 19th century, Polish scholars linked to the Cracow Learned Society proposed a new method of improving the archaeological documentation, namely devising a common system of cartographic symbols. The project, presented to the European forum of anthropologists and archaeologists, aroused much interest, was discussed and subsequently endorsed as one of the not so many issues that the international congresses of anthropology and archaeology settled quickly and explicitly. The project, first reported to the congresses by Count Aleksander Przezdziecki, was completed after his death by Ernest Chantre from France. The very idea and its elaboration, however, came from the Polish environment and were intended to overcome the borders and particularisms of 19th-century Europe with the use of a common scientific language.

Keywords: Archaeological maps, International Congresses of Anthropology and Prehistoric Archaeology, 19th century, Cracow

In the 19th century, scholars interested in prehistory appreciated the importance of cartography in the presentation of archaeological findings. Archaeological maps drawn up in various countries covered different areas and showed the distribution of features and artefacts from the Stone Ages to modern times. They were used in publications and discussed at anthropological and archaeological meetings, including those at an international level.

In the mid 19th century, scientific circles in Cracow put forward a new proposal concerning archaeological cartography, namely to create a system of symbols, a kind of common code, which would help standardise archaeological maps throughout Europe. The plan was presented at the International Congress of Anthropology and Prehistoric Archaeology in Bologna in 1871, where it attracted much attention. Participants in the congress appointed a committee to assess the project. Somewhat modified, the system of symbols denoting archaeological finds, their dating and state of preservation, was approved already at the next international congress, organised in Stockholm in 1874. The innovation was intended to make the maps intelligible to all prehistorians, regardless of their native tongue, and to contribute to a synthesis of European prehistory. By separating prehistoric finds from historic objects of art and architecture, the project fell within positivist archaeology, developing rapidly at that time, which assumed that prehistory and art history would be viewed as separate disciplines. That plan of thus reforming archaeological cartography had been devised within the Cracow Learned Society by Józef Łepkowski (1826-1894), a heritage conservation



Fig. 1. Professor Józef Łepkowski (1826–1894) in 1881. Photo from the collection of the Scientific Library of the Polish Academy of Sciences and Polish Academy of Arts and Sciences in Cracow.

officer in Cracow and later the first Polish professor of archaeology (Fig. 1).

This paper is aimed at presenting the circumstances of that project, at introducing its author, and explaining the novel system of symbols which reflected the 19thcentury knowledge of prehistoric archaeology. The Cracow Learned Society was founded in 1815 and remained linked closely to the Jagiellonian University for a long time. In the first half of the 19th century, it had no unit concerned with prehistory, and prehistoric issues were seldom discussed at its meetings. However, after receiving its new statute in 1848, the society set up the Department of Fine Arts and – at the suggestion of Karol Kremer (1812-1860), an architect and heritage conservation officer and a member of that department appointed the Archaeological Committee (Kremer 1849: 546-560) in 1850 to carry out three tasks: to organise the Archaeological Museum, to procure the collections, and to preserve the finds<sup>2</sup> (Dużyk and Treiderowa 1957: 206-207, 229-231; Małkiewicz 2016: 201-202; Woźny 2016: 214-217).

The changes in the Cracow Learned Society coincided with a valuable discovery. In 1848, the Zbruch river, a tributary of the Dniester in present-day western Ukraine, yielded a stone statue of the Slavic deity Svetovid. The idol, donated later to the society by Mieczysław Potocki (1810-1878), a landowner and heritage conservation officer, was brought to Cracow and made available to the public, attracting much attention among Polish and foreign scholars. The find determined the high position of the Cracow archaeological collections from their very beginning (Zaitz 2001). The event coincided with a deepening interest in archaeology throughout Europe in the mid 19th century. Within a few years, Polish scholars founded institutions which collected, researched, exhibited and published archaeological finds (with the term being broadly understood at that time). With its Jagiellonian University and the Learned Society (later renamed the Academy of Arts and Sciences), Cracow was the most important Polish centre of archaeology in the second half of the 19th century (see Abramowicz 1991: 30-45; Kaczmarek 1996: 36-82, 2004: 129-154; Wawrzykowska 2002: 34-42; Małecka-Kukawka and Wawrzykowska 2004: 103-128; Woźny 2009: 34-36, 2016). In that period, the city belonged to the region of Galicia, the part of Poland which had been annexed by

the Austrian Empire (later Austria-Hungary) in the late

<sup>18</sup>th century.3 In 1850, the Archaeological Committee within the Cracow Learned Society was renamed the Department of Archaeology and Fine Arts. Its members gathered data on archaeological sites, carried out field work and discussed their research at the meetings (Dużyk and Treiderowa 1957: 220-221; Woźny 2016). The department published two issues of its yearbook (Rocznik... 1851, 1852), as well as a text addressed to the public, The Appeal of the Cracow Learned Society, attached to the Jagiellonian University, on the subject of archaeological surveys, together with Recommendation useful as a guide in surveys of that kind (Odezwa 1851). Archaeology at that time was closer to antiquarianism than to a scientific discipline; archaeological studies proper were introduced into universities only fifty years later (see Lech 1992; Trigger 2006: 80-165). The authors of the appeal, therefore, were interested both in 'finds from the pagan times' and 'finds from the Christian times', including churches and monasteries with their interiors, castles, pictures, polychrome, sculptures, seals, weapons, archive records and antique books. While writing on prehistoric finds, the authors mentioned information that could be gathered from marking such objects on the maps, e.g. charted barrows were supposed to help identify former communication routes along which, as the scholars believed, those features were built (Odezwa 1851: 131). Józef Łepkowski, who first proposed standardising the symbols on archaeological maps, was a member of the Department of Archaeology and Fine Arts since 1851, and he soon became a member of the Cracow Learned Society. In the late 1840s, he went on field trips to inventory archaeological finds and he contributed reports on materials gathered from those trips to the society's publications. He coorganised two archaeological exhibitions in Cracow in 1858/59 and 1872. His activities in the society included arranging and inventorying the collections of the Archaeological Museum and he also suggested writing a monograph on important archaeological locations near Cracow. He carried out excavations on behalf of the society, and their results were presented to international congresses of anthropologists and archaeologists by Count Aleksander Przezdziecki (1814– 1871; Fig. 2), a historian, writer and editor of historical sources (see Przezdziecki 1873; 1875). Later, Łepkowski went on expeditions to Pomerania, Lithuania and the part of Poland occupied by Russia. From 1863, he lectured on archaeology and the history of medieval art at the Jagiellonian University. He founded the first

<sup>&</sup>lt;sup>1</sup> The Cracow Learned Society included Polish and foreign scholars engaged in various disciplines; results of their research were published in its regularly issued yearbook. In 1872, the society was transformed into the Academy of Arts and Sciences, renamed the Polish Academy of Arts and Sciences after Poland regained independence in 1918 (Rederowa 1998; Wyrozumski (ed.) 2016).

 $<sup>^2</sup>$  From the minutes of the meeting of the Archaeological Committee on 3 January 1850; the archive of the Polish Academy of Sciences and the Polish Academy of Arts and Sciences in Cracow, catalogue no TNK-73, k, 3.

<sup>&</sup>lt;sup>3</sup> The Spring of Nations and the events that soon followed brought significant changes also to Poles in the Habsburg Monarchy. After Austria was defeated by Prussia in 1866, dualistic Austria-Hungary was created on the strength of the December Constitution of 1867. Galicia, like the other countries of the monarchy, received considerable concessions at that time: the Polish language became its official language in 1866, and science, culture and national traditions could be cultivated freely (Buszko 1985: 89–95; Wereszycki 1990: 21–51, Grodziski 1994: 18, 22–30).



Fig. 2. Count Aleksander Przezdziecki (1814–1871) in 1860. Photograph from the collection of the National Library of Poland.

archaeology department in Poland (at the Jagiellonian University) and organised a university Room of Archaeology. From 1875, he was an Austro-Hungarian heritage conservation officer and subsequently became head of the Heritage Conservation Officers in Western Galicia (Bąk-Koczarska 1973; Gedl 2000).

At a meeting of the Department of Archaeology and Fine Arts in 1851, when Łepkowski reported on his archaeological trip to the area near Nowy Sącz in the Carpathians, he pointed out the need to mark archaeological features on maps. He also proposed designing a system of symbols and colours to denote various categories of finds as well as their chronology. The report, published by the department in 1852, mentioned the map Łepkowski was drawing (Łepkowski 1852: 242–243; Majer 1852: 145–146). The map differed from those he made later in that it showed other

objects apart from prehistoric finds. In his excursions, Łepkowski mostly explored historical buildings and works of art, in accordance with the romantic interpretation of archaeology which was accepted in that period. As he explained, 'The archaeological map I am preparing at present is going to include appropriate symbols and colours to denote the time and range of settlement, the time when the temples were founded, the embankments, castles and other finds, their age being described with appropriate symbols' (Łepkowski 1852: 242-243). Łepkowski asked members of the Cracow Learned Society to assess the system of symbols he had devised and to make necessary corrections. He expressed his belief that such a system, when endorsed by an esteemed scientific institution, could be universally used. The members took much interest in his project and appointed a special committee to draw up the symbols in cooperation with Łepkowski. The commission included Karol Kremer and Teofil Żebrawski (1800-1887), a mathematician, architect, cartographer and archaeologist (Łepkowski 1852: 243; see Schnaydrowa 1980: 192-195; Czochański 1981: 175; Blombergowa 1992: 164-165).5 Soon afterwards, however, the project was interrupted. In 1852, the Emperor of Austria issued a directive regulating the activity of associations within the Habsburg Monarchy. The Cracow Learned Society was summoned to present its statute to the authorities in Vienna and to suspend its functions until the statute was approved. In December 1855, Franz Joseph I consented to the society resuming its activities and granted it the honourable title of an Austro-Hungarian institution. He also separated the Cracow Learned Society from the Jagiellonian University. The new statute was approved by Vienna in May 1856 (Rederowa 1998: 105-113; Hübner 2002: 232-233; Biliński 2016), and the society's tasks were taken up in the same year. The Department of Archaeology and Fine Arts soon issued another appeal concerning the preservation of monuments of the past (Odezwa 1857). The text, addressed to enthusiasts for archaeological research, included a plate of drawings: *Urns* and vessels recovered from tombs: Extraordinary shapes by Józef Łepkowski (Kostrzewski 1949: 42; Zaitz 1981: 16). The society returned to the project of archaeological maps supplemented with special symbols soon after it resumed its activities. In 1857, while drawing up the second appeal, Łepkowski called on the Department of Archaeology and Fine Arts to take up the task. The planned maps showing not only archaeological finds, but also architecture and works of art, were discussed at the department several times more (Schnaydrowa 1980: 193-195). In late 1869, the idea was presented to the International

 $<sup>^4</sup>$  The meeting of the Department of Archaeology and Fine Arts on 20 December 1851; the archive of the Polish Academy of Sciences and the Polish Academy of Arts and Sciences in Cracow, catalogue no TNK-73, k. 36–36'.

<sup>&</sup>lt;sup>5</sup> The meeting of the Department of Archaeology and Fine Arts on 20 January 1852, the archive of the Polish Academy of Sciences and the Polish Academy of Arts and Sciences in Cracow, catalogue no TNK-73, k. 38.

Congress of Anthropology and Prehistoric Archaeology in Copenhagen. Those congresses played a significant role in the development of archaeology in Europe, since they provided an opportunity to share opinions and discuss recent archaeological or anthropological findings. They were attended by archaeologists linked to the Cracow Learned Society as well (see Abramowicz 1991: 57-61; Kaeser 2009; Szczerba 2015).6 A report on the Copenhagen congress given by Count Aleksander Przezdziecki at the Department of Archaeology and Fine Arts (Schnaydrowa 1980: 195-196; Blombergowa 1992: 166) inspired the Cracow Learned Society to appoint a new committee to design the symbols for various categories of finds shown on the maps. The committee consisted of Aleksander Przezdziecki as its chairman, Józef Łepkowski, Władysław Łuszczkiewicz (1828–1900) – a painter, art historian, later a professor and head of the Cracow Academy of Fine Arts – and Jan Marceli Jawornicki (1813-1895), a social and economic activist. The results of their work were discussed at the department three months later (Wiadomości... 1870: 157; see Schnaydrowa 1980: 196).7 It was decided that the system of symbols would be presented to the Fifth International Congress of Anthropology and Prehistoric Archaeology in Bologna in 1871. The congress was attended by about 240 scholars, including Italians, French, Danes, Swedes, Belgians, Swiss, Spaniards, Dutch, Germans and Poles (registered as citizens of Germany or Russia). It was accompanied by an exhibition and the participants also visited excavations in the field (Congrès... 1873; see Mortillet 1871: 240-243; Przezdziecki 1872: 150-156).

Bologna, Aleksander Przezdziecki described archaeological discoveries on Polish territory (Przezdziecki 1872: 146-148, 158-165) and presented the system of cartographical symbols devised at the Department of Archaeology and Fine Arts of the Cracow Learned Society. He pointed out that the archaeological maps prepared until then had two flaws: a complex set of signs marking prehistoric or historic features, and their application limited to particular areas. The count said: 'The archaeological congresses have long been engaged in drawing up archaeological maps of all countries. One excellent example is the archaeological map of the island of Rügen, copied at a large scale, another is the map of Belgium made by Mr Vander Maelen. The great inconvenience in using them both,

however, is the unclear nature of the complicated symbols intended to represent archaeological finds' (Przezdziecki 1872: 166; see Sklenář 1983: 112). In his view, the complication resulted from charting prehistoric finds side by side with historic features or even with modern buildings. Moreover, the symbols were used interchangeably with letters of the alphabet referring to their categories and they had no universal character, since the finds were named differently in different languages. The scholars from Cracow decided to separate the prehistoric and historic periods. Przezdziecki explained that according to their system, the prehistoric times in each country lasted until writing had begun to replace oral tradition; in northern and eastern Europe that process coincided with the conversion to Christianity (Przezdziecki 1872: 166-167). The system proposed by the Cracow Learned Society covered only prehistoric finds. The symbols, called mnemonic signs, were intended to be as simple as possible; they differed clearly from one another and their shapes were supposed to resemble specific objects. The project also helped determine the chronology of the finds. It divided prehistory into three ages: the Stone Age, with the Palaeolithic shown in brown and the Neolithic in yellow; the Bronze Age indicated in green; and the Iron Age, its 'period of wrought iron' marked with violet and its 'period of carved iron' marked with blue. Imported artefacts were to be marked with red. The scholars from Cracow suggested that cartographers should be equipped with stamps depicting the symbols and with sets of inks in various colours to be able to make every archaeological map intelligible to researchers from various countries. Przezdziecki even showed some such stamps and inks, provided by the lithographer Edward Sieber from Vienna, to the participants of the congress in Bologna (Przezdziecki 1872: 169). The project also included a list of 22 archaeological features with their corresponding symbols (Fig. 3). Thus, caves with bone remains were to be denoted with a symbol of bones in a cave; shell middens – with a shell; pile dwellings – with a house on stilts; dolmens – with a dolmen; burial chambers – with a mound; barrows - with a barrow; cemeteries - with a cinerary urn; rune stones - with a rune stone; fortified settlements - with a fence; former places of worship with an altar; pagan idols - with a four-faced statue; stone buildings - with an apse; human bones - with a human skull; animal bones - with a reindeer antler; unpolished stone tools - with a wedge; polished stone tools - with a hammer; bronze tools - with a cutting edge; 'wrought' iron tools - with an arrowhead; 'carved' iron tools - with a key; numismatic finds - with a coin; imports - with a Roman eagle;8 battlefields - with two crossed swords. Moreover, each map was planned to

<sup>&</sup>lt;sup>6</sup> Count Aleksander Przezdziecki was the first representative of the Cracow Learned Society to participate in those international congresses in 1867–1869 (Antwerp 1867; Bonn 1868; Copenhagen 1869). The subsequent conventions: Bologna 1871, Brussels 1872, Stockholm 1876 and Pest 1876, were also attended by other scholars from the Cracow Learned Society (later the Academy of Arts and Sciences).

<sup>&</sup>lt;sup>7</sup> From the minutes of the meetings of the Department of Archaeology and Fine Arts on 30 December 1869 and 26 March 1870; the archive of the Polish Academy of Sciences and the Polish Academy of Arts and Sciences in Cracow, catalogue no TNK-75, k. 85' and 86'.

The authors thought in terms of Polish lands which had been situated in the area of Roman influences but without forming part of the Roman Empire in antiquity.



Fig. 3. Table of 22 archaeological features with their corresponding symbols proposed by the Cracow Learned Society in Bologna (Cartes... 1873).

give an alphabetical list of archaeological locations with their precise description (Przezdziecki 1872: 157, 166–171; Cartes... 1873: 364–368). Przezdziecki also brought two maps to Bologna. He said: 'I have the honour to present the congress with a map of the lands which had made up Poland. The map, covering the main rivers, mountains and major cities, has served us as an example of the planned archaeological maps. The names of places known for excavations have been added here in ink; the excavations themselves have been marked with the mnemonic signs in colours corresponding to the periods which the archaeological finds belong to'9 (Przezdziecki 1872: 170–171; see Cartes... 1873: 368). The second map had been drawn by

Stanisław Staszic (1755–1826), a Polish Enlightenment activist, politician, writer and scholar. It showed the geology of Poland, including the places where prehistoric animal remains had been discovered (Przezdziecki 1872: 170-171; Cartes... 1873: 368). The participants of the Bologna congress took an interest in Przezdziecki's presentation and appointed a special committee to work on the project, with Przezdziecki as its chairman, with Émile Carthailhac (1845–1921) from France, Hans Olof Hildebrand (1842–1913) from Sweden and several other European researchers (Cartes... 1873: 369). After Przezdziecki died in December 1871, his position in the committee was taken over by Ernest Chantre (1843-1924), a French archaeologist and anthropologist. Chantre introduced some changes and additions to the system devised by the scholars in Cracow. He considered their symbols as too complex, for they often resembled specific objects too closely, and their list as incomplete, because it did not cover several categories of finds from western Europe. He suggested that three types of symbols should be used: general, specific (to clarify the data) and those denoting the period, number and state of preservation of the objects; the symbols could be combined with one another, so as to provide as much information as possible. The general symbols referred to such features as caves, menhirs, dolmens, mounds, graves, fortified settlements, palafittes, accidental finds and mines or stone quarries. Each of those finds was further specified by symbols of the second type; for example, a fortified settlement could be denoted as a fortified settlement alone, a settlement with a tomb or a moat, as remnants of walls, embankments or trenches; a grave could be specified as an inhumation burial, a cremation burial or as a particular kind of cemetery. Symbols of the third type described the state of preservation of the features, their number (several, many or a specific number) and dating. The chronology was to be denoted with symbols or colours, though Chantre agreed with the Polish scholars that it was easier to spot finds from the same period when they were marked with one colour on the map. The symbols he proposed were approved at the International Congress of Anthropology and Prehistoric Archaeology in Stockholm in 1874 (La Légende Internationale... 1874; Sadowski 1877: VII-XIII; see Abramowicz 1991: 59-60; Blombergowa 1992: 168; Szczerba 2014: 241). Meanwhile, in the early 1870s, the Cracow scientific circles underwent some important transformations. In 1872, the Cracow Learned Society changed into the Academy of Arts and Sciences. The tasks of the Department of Archaeology and Fine Arts, where the system of the standardised symbols had been drawn up, were taken over by the Committee for Art History, the Archaeological Committee and the Anthropological Committee of the new academy. Józef Łepkowski, who had been a professor of the Jagiellonian University for a few years at that time, chaired the

<sup>&</sup>lt;sup>9</sup> The map has not survived.

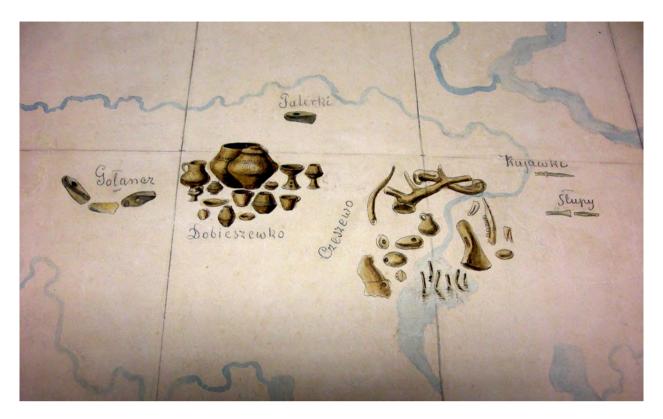


Fig. 4. Fragment of a map of the Vistula Basin (with miniatures of archaeological artefacts and sites) presented at the International Congress of Anthropology and Prehistoric Archaeology in Pest in September 1876. Collection of the Archive of the Archaeological Museum in Cracow.

Archaeological Committee since 1873. Right after its appointment, the committee decided to make an archaeological map of the Polish territory as one of its main assignments,10 and Łepkowski carried it out in person. The work resulted in a map of the Vistula Basin (Fig. 4) – an outcome, so to speak, of the research done at the Department of Archaeology and Fine Arts of the Learned Society (Schnaydrowa Blombergowa 1992: 164–169; Tunia 1997: 57–58) – which was presented to the International Congress of Anthropology and Prehistoric Archaeology in Pest in September 1876. After the congress, the map was returned to Cracow and kept at the Room of Archaeology of the Jagiellonian University (Kronika... 1881: 158).11 Later on it was displayed at the International Congress of Anthropology and Prehistoric Archaeology in Lisbon in 1881 (Pawiński 1881: 138), together with archaeological maps drawn up by Polish archaeologist Gotfryd Ossowski (1835–1897; Communications... 1880: 98; see Blombergowa 1992: 153, 169-170). In the following years, Polish scholars did not abandon the idea of archaeological cartography based on the

accepted models. The Academy of Arts and Sciences in Cracow intended to use that method to chart the entire Polish territory, its publications describing the river basins. The plan, however, was executed only to a small extent. In 1877, the Archaeological Committee issued Porzecza Warty i Baryczy [The Warta and the Barycz River Basins] (Sadowski 1877) by Jan Nepomucen Sadowski (1814–1897), the first title in the planned series Wydawnictwo Komisji Archeologicznej Akademii Umiejętności w Krakowie. Wykaz zabytków przedhistorycznych [Publications of the Archaeological Committee of the Academy of Arts and Sciences in Cracow: A list of prehistoric finds], ultimately limited to that one volume (Nosek 1967: 64). In 1879, the committee published Zabytki przedhistoryczne ziem polskich, Seria I, Prusy Królewskie [Prehistoric finds of the Polish lands, Series I, Royal Prussia] by Gotfryd Ossowski (Ossowski 1879–1888). The monograph, acclaimed not only by Polish researchers, was likewise intended as the first title in the series Monumenta Poloniae Praehistorica, which was to present prehistoric materials recovered from various Polish regions, but which finally consisted only of four volumes (Kutrzeba 1939: 15; Lech 2002: 25). In 1881, Ossowski's Mapa archeologiczna Prus Zachodnich (dawniej Królewskich) z przyległymi częściami W. Ks. Poznanskiego tekst objaśniający [Elucidation of the archaeological map of the Province of West Prussia

 $<sup>^{\</sup>rm 10}$  From the minutes of the meeting of the Archaeological Committee of the Academy of Arts and Sciences in Cracow on 24 April 1873; the archive of the Polish Academy of Sciences and the Polish Academy of Arts and Sciences in Cracow, catalogue no PAU W II-51, k. 1'.

The map is now kept in the Archive of the Archaeological Museum in Cracow.

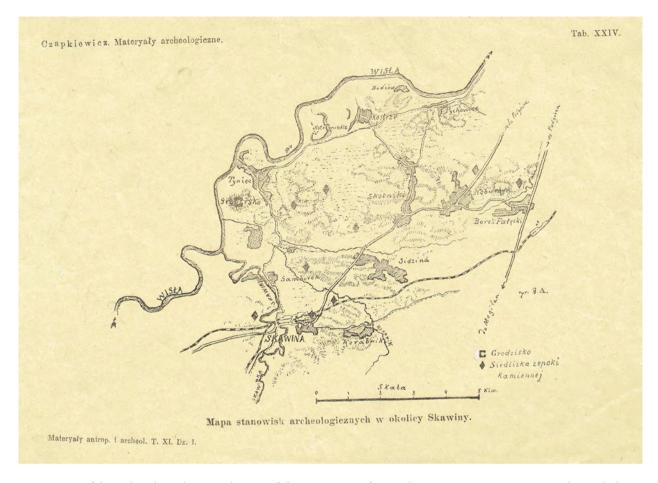


Fig. 5. Map of the archaeological sites in the area of Skawina, Cracow dist., with 'mnemonic signs'. 1910. Its author, Bolesław Czapkiewicz (1873–1942) was associated with the Academy of Arts and Sciences in Cracow.

(formerly Royal Prussia) with the adjacent area of the Grand Duchy of Posen] (Ossowski 1881) was published in Cracow under the imprint of Zygmunt Działowski (1843–1878), the founder of the Torun Learned Society, or rather through the efforts of his sister. The map itself, financed by the Działowskis, came out in Paris, but without the symbols approved at the international congresses of anthropology and archaeology. At the turn of the 19th and 20th centuries, archaeologists published papers complementing the information needed for the future archaeological map of the Polish territory. With time, however, the symbols endorsed in Stockholm were used less and less frequently. The idea may gradually have become outdated when the methods of research and its presentation improved. Nevertheless, simplified types of those symbols were still popular among the next generations of scholars linked to the Cracow centre (Fig. 5).

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