Discovery of Neolithic striped flint mines in Krzemionki

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Jan Samsonowicz

wg G.J. Aberoni, W.M. Feldera; https://medievalheritage.eu

KRZEMIONKI

unesco
World Heritage Site

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Discovery of flint mines by Jan Samsonowicz on July 19, 1922

Route by Jan Samsonowicz on July 19, 1922 currently indicated on the 1927 topographic map of Poland, scale 1:1,000,000 (*J. Bąbel, 1999)*

During fieldwork related to the preparation of the Opatów geological map, scale 1:100,000, on July 19, 1922, Jan Samsonowicz embarked on a trip to the area of Magonie-Krzemionki. The region was characterized by numerous land depressions and pits, where local people found horn tools and flint pieces.

A detailed description of the discovery of mines in Krzemionki is found in his field notebook (no. 0/1922). Based on it, it was possible to reconstruct the route that J. Samsonowicz traveled on foot that day.

In Magonie/Magoń, J. Samsonowicz observed destroyed Neolithic mining works in the form of shallower, bowl-shaped depressions, and deeper vertical shafts. He examined underground passages, with the longest one reaching 10 meters, measured the depth and diameter of the shafts, as well as the height and width of the passages and pillars, collected horn tools and stone hammers. He also noticed charcoal remains, which were the remnants of torches used by ancient miners to illuminate the passages.

A fragment of the prehistoric mining field discovered by J. Samsonowicz in 1922. Photo was taken in the first years following the discovery.

The prehistoric mining field destroyed by limestone exploitation during the interwar period. Photo taken in the 70s of the last century.

(Photos from Polish Archeological Museum's collection, published by D. Piotrowska, 2014)

Discovery of flint mines by Jan Samsonowicz on July 19, 1922 - continuation

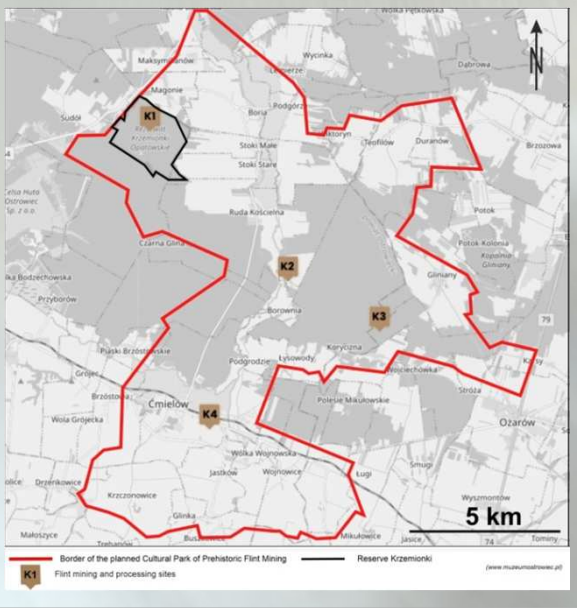
Based on findings of unfinished axes, he dated the artefacts to the campaign (early Bronze Age).

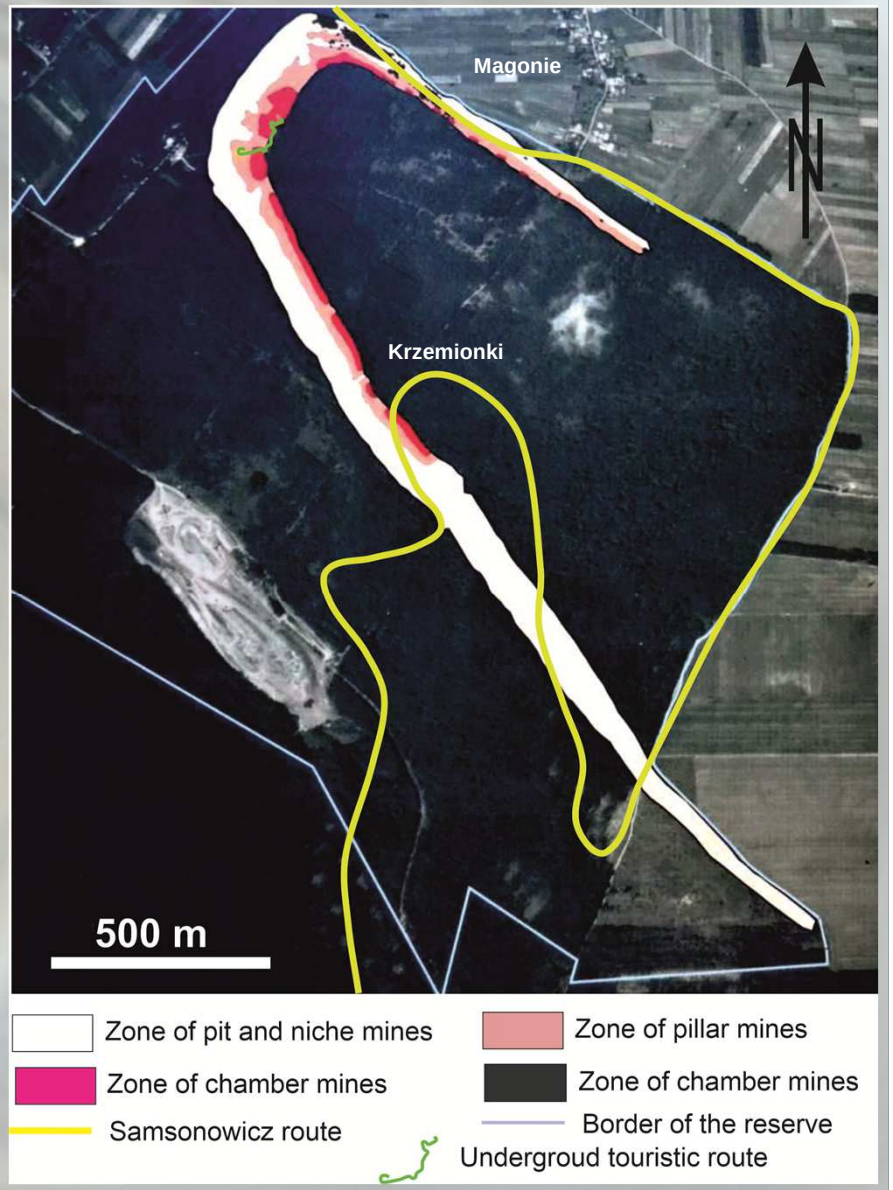
From the southern part of the current reserve, he described abandoned limestone quarries, with walls reaching up to 15 meters in height, where the traces of old mining were visible. He noted that flints occur within the Astartian (Upper Oxfordian) limestones, which forms the axial part of the syncline (presently named Magoń – Folwarczysko Syncline).

The land depressions, which he had previously observed in the area of Borownia, located to the east of Krzemionki, he also interpreted as prehistoric shaft mines.

J. Samsonowicz published the results of research in the Krzemionki area in the *Archeological Review* in 1923.

He also informed about this discovery his friend Stefan Krukowski – a prominent archaeologist, who, during the interwar period, conducted extensive research on flint resources and prehistoric flint mining in Poland. Earlier, in 1921, both scientists had discovered prehistoric mines in Ruda Kościelna.





Map of prehistoric exploitation field in the reserve „Krzemionki”
(https://muzeumostrowiec.pl)

The road to the world career of the reserve Krzemionki

Stefan Krukowski began the archeological research of Krzemionki in 1923. They were continued by Tadeusz Żurowski, Zdzisław Krzak, Jerzy Bąbel and other archeologists. Their crowning was Inscription of the Krzemionki Flint Mining Region on the UNESCO World Heritage List.

1926 - Establishment of the Krzemionki Opatowskie Archaeological Reserve. The State Archaeological Museum (PMA) in Warsaw was responsible for the site's care

Gradual acquisition of the lands, completed in the 1960s, with the entire village of Krzemionki being relocated

The second half of the **1960**s - Construction of two exhibition and storage pavilions

1968 - Creation of a one-person branch of the PMA in Krzemionki Opatowskie

1978 - Transfer of Krzemionki to the Regional Museum in Ostrowiec Świętokrzyski (since 1986 - Historical-Archaeological Museum)

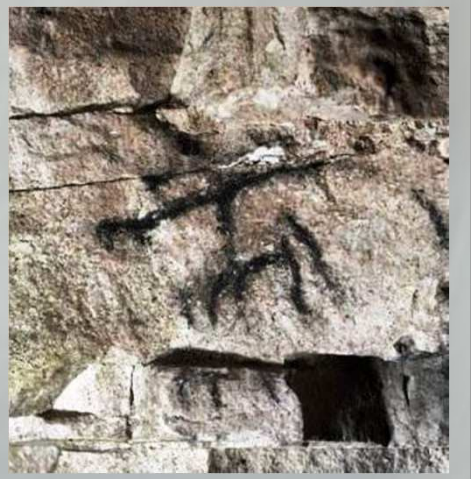
1985 - Opening of the first section of the underground tourist route.

1994 – Recognition on of Krzemionki as a Monument of Polish History.

1995 - Establishment of the Krzemionki Opatowskie Nature Reserve (378 hectares).

2012 - Completion of the construction of the Archaeological Museum's headquarters.

2019 - Inscription of the Krzemionki Flint Mining Region on the UNESCO World Heritage List.

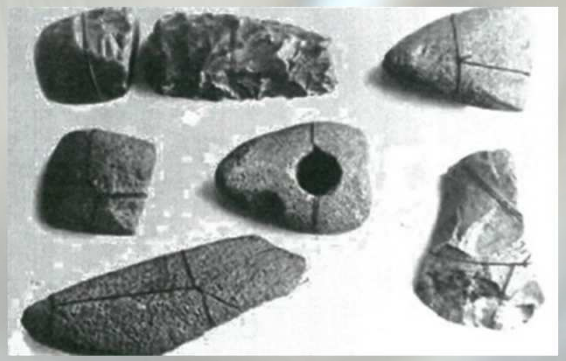


Symbol of reserve – the Great Mother giving birth

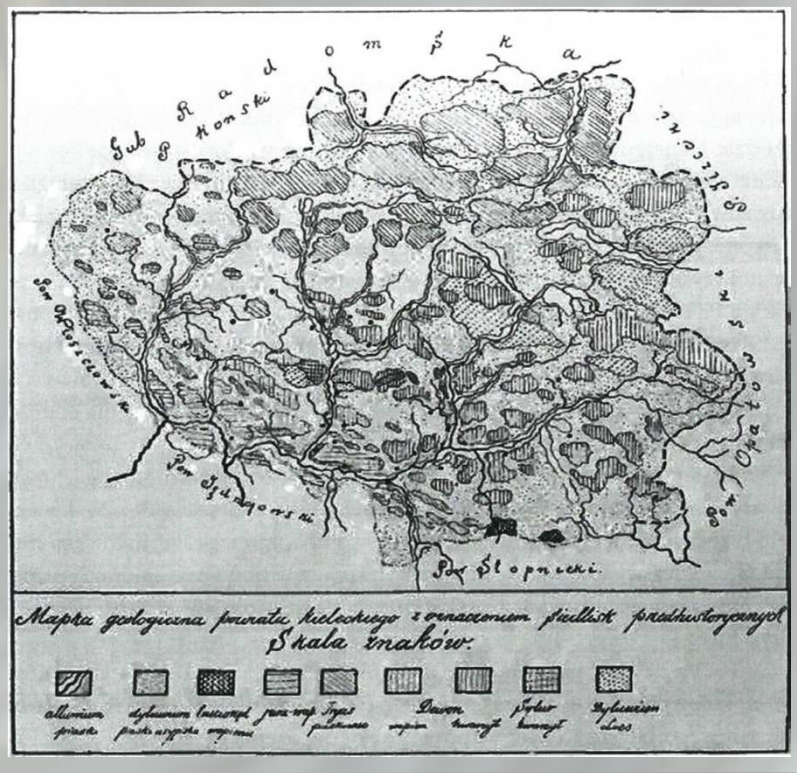
Geological and archeological passions of Jan Samsonowicz

Members of the natural science club of the Municipal Commercial School in Kielce *("For Ourselves and for the School". A Memoir published by the first graduates of the Municipal Commercial School in Kielce" in 1909).*

Jan Samsonowicz was born on **September 14, 1888** in Klimczaków, near Ostrowiec Świętokrzyski. He attended high school in Kielce, where he met Jan Czarnocki, with whom he shared common interests. Their joint geological and archaeological excursions in the Świętokrzyski region in years **1908-1909** resulted in the collection of mineralogical, paleontological, and archaeological specimens, as well as the identification of 34 prehistoric sites. The collection, consisting of several hundred artefacts, was cataloged and donated to the Museum of the Polish Touring Society in Kielce.



Artefacts - stone tools and ceramics - collected by J. Samsonowicz and J. Czarnocki, along with a geological map of the Kielce County and archaeological sites, included in the memoir "*For Ourselves and for the School".*



Period of study and professional work of Jan Samsonowicz preceding the discovery of Krzemionki

Institute of Mining w Sankt Petersburg (wikimedia.org)

University of Warsaw, where Department of Geology was located (uw.edu.pl)

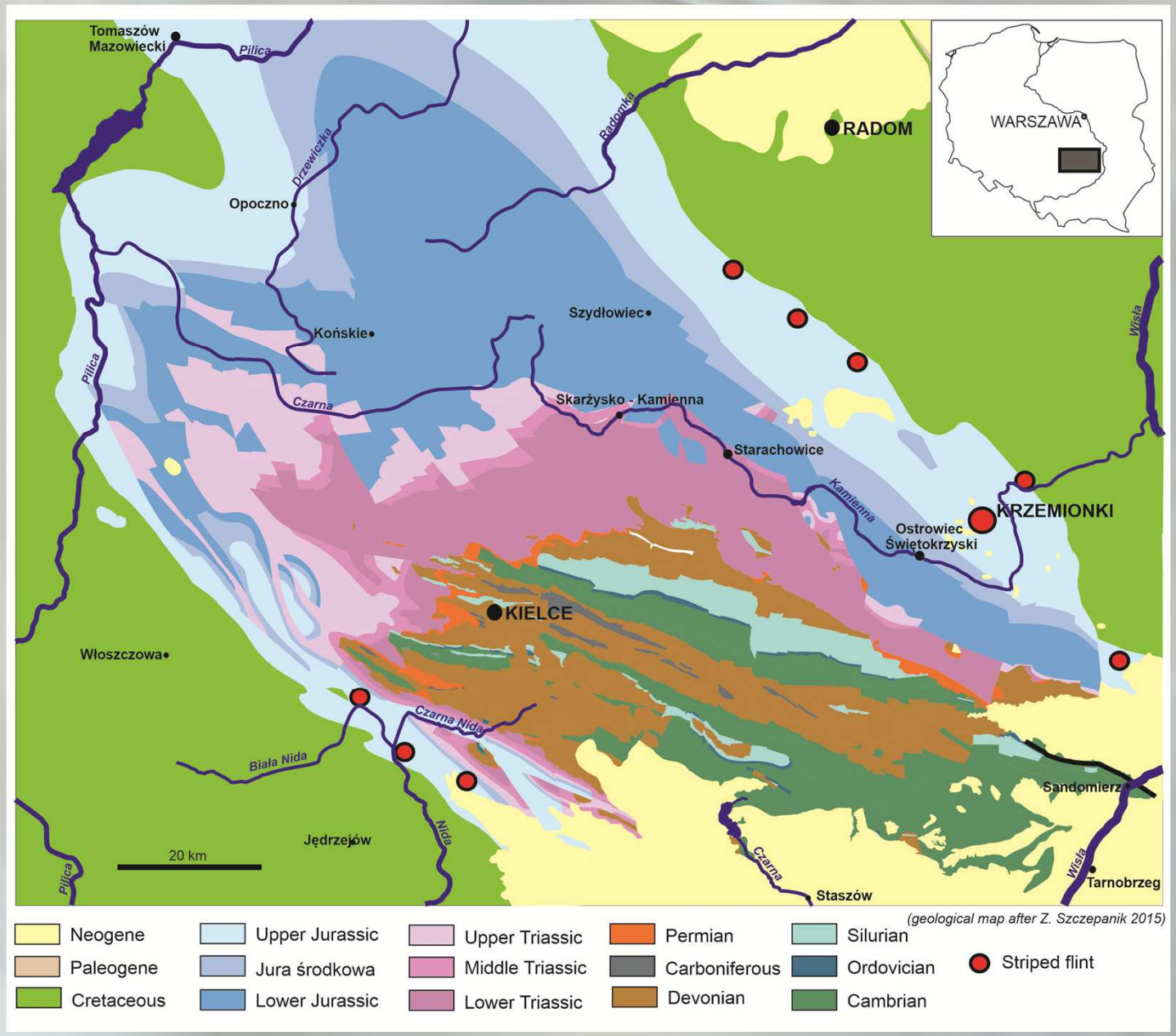
Staszicowski Palace in Warsaw, the first seat of the Polish Geological Institute, established in 1919 *(pl. wkipedia.org)*

From **1910 to 1914**, J. Samsonowicz resided in St. Petersburg, where he passed the government matriculation exam, completed his studies at the Faculty of Mathematics and Natural Sciences at the local university, and worked at the Geological Committee in the Institute of Mining. He obtained a first-degree diploma equivalent to a doctorate. Concurrently, he continued geological research on the Paleozoic era of the Świętokrzyskie Mountains with J. Czarnocki. Their paleontological collections, being processed at the Mineralogical Cabinet of the Warsaw Polytechnic Institute, were transported to Russia during World War I and are currently housed in the Moscow Institute of Paleontology.

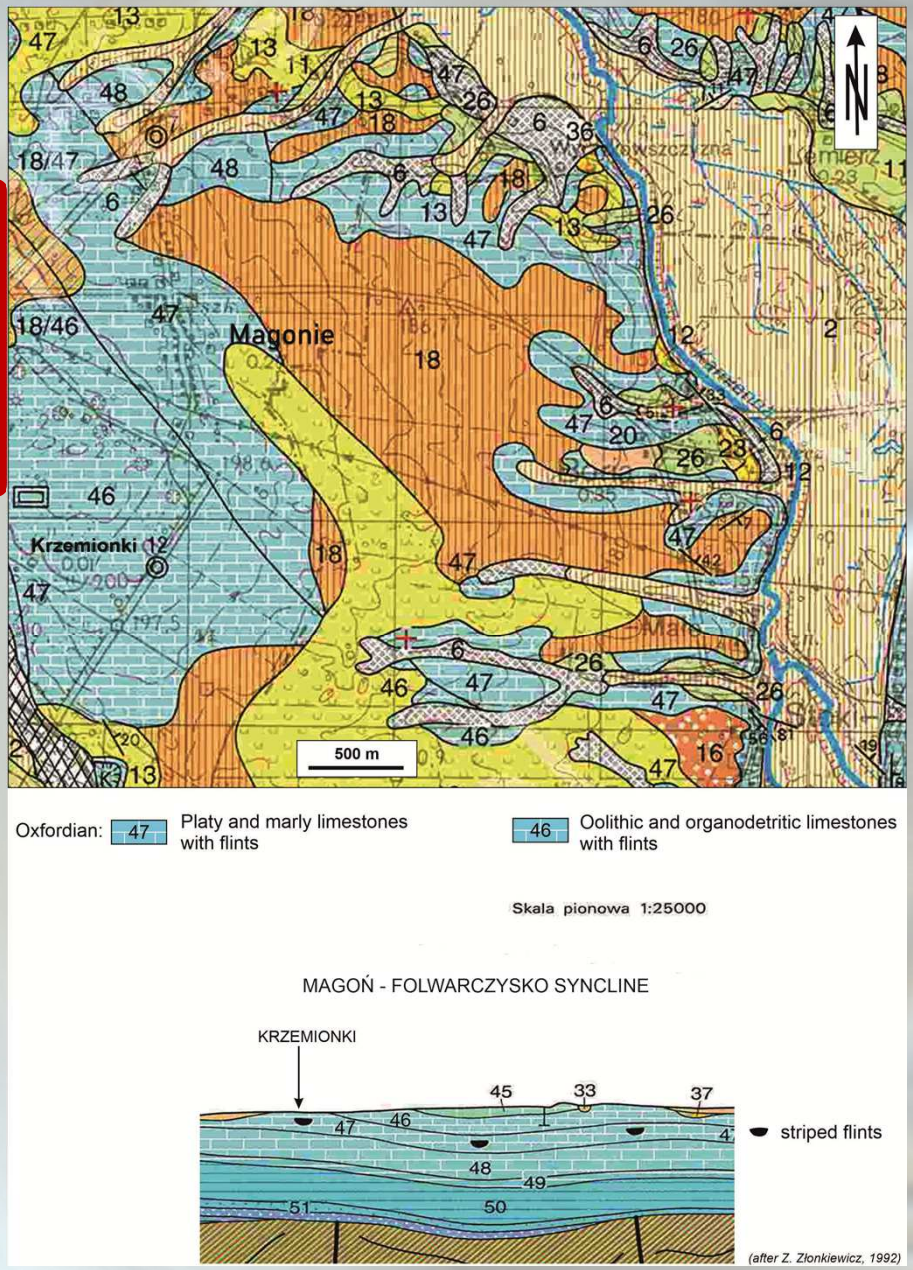
In **1915**, J. Samsonowicz returned to Warsaw and took up a position as a senior assistant at the Department of Geology of the newly established University of Warsaw. He was a member of the Warsaw Scientific Society and taught at the Free Polish University. The most significant scientific discovery by J. Samsonowicz during this period was the identification of the Lower Cambrian in the eastern part of the Świętokrzyskie Mountains (1918).

In **1919**, J. Samsonowicz moved to the newly established State Geological Institute, where he became a geologist and the chief editor of the institute's publications. He also made research on the Opatów sheet of the Geological Map of Poland 1:100,000, which was published in 1934.

Occurrence of striped flint in the Świętokrzyskie Mountains



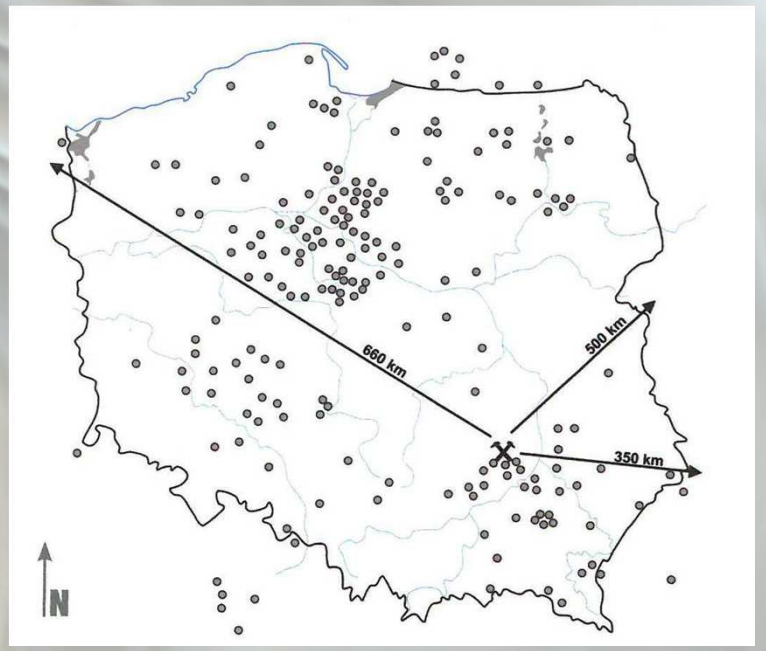
Occurrence of striped flint in the Krzemionki area



Geological map of the Krzemionki area 1:50 000 and geological section through the Magoń-Folwarczysko Syncline

Cultural significance of striped flint from the Krzemionki area

Dissemination of products made of striped flint during the Funnel Beaker culture (ca. 4300-2600 BC) (J. Gągorowska-Chudobska, 2009)



Striped flint was mainly suitable for making axes and chisels but appeared less useful for the production of other tools due to abnormal cleavage resulting from its heterogeneity. However, due to its decorative qualities and high hardness, products made of it were very desirable, we can say even fashionable, especially in the funnel-beaker culture, when tools made of striped flint were the most widespread, far beyond the present borders of Poland, to Lithuania, to NE Germany, Bohemia and Moravia.

Despite the passage of time, striped flint still inspires artists and is used in jewelry as one of the most recognizable decorative stones in Poland.

And partly we owe it to Jan Samsonowicz

Materhood – sculpture by a local artist Sławomir Micek (S. Micek, 2009)

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Thank you for your attention

A sandstone block commemorating Jan Samsonowicz in the Krzemionki reserve

Participation in the conference was organized as part of the task: Disseminating knowledge in the field of geology and promoting the activities of the geological survey and was financed by the National Fund for Environmental Protection and Water Management

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