

Anniversaries

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IGNOTAS HORODECKIS (1776–1824): METEORITE STUDIES BY A LITHUANIAN MINERALOGIST

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Ignotas Horodeckis (1776–1824) was born in 1776 in Lithuania. He was from a noble family that had lived in the northern part of the Vilnius district for many generations. In 1796 after graduating from the highschool in Postavy (now the Republic of Belarus), he began his studies at the Schola Princeps Magni Ducatus Lithuaniae: Principal School of the Grand Duchy of Lithuania (now called Vilnius University). He studied elocution, general and natural history, physics, astronomy and chemistry with Jozef Mickevičius (1774–1817), Stanislaw Jundzilas (1761–1847) and Andrius Sniadeckis (1768–1838) among others. Horodeckis was particularly interested in physics, chemistry and mineralogy. In 1799, he obtained the position as teacher of physics and natural history at Vilnius secondary school. Alongside his teaching duties, he applied to the Rector of Vilnius University for admission to sit the doctoral examination. Jozef Mickevičius, then professor of physics, was appointed as the chairman of the commission that conducted this examination in 1800.

While Horodeckis continued in his position as a secondary school teacher, he also maintained relations with the Imperial University of Vilnius (this name was instituted in 1803), and in 1811 became the assistant of professor Andrius Sniadeckis within the chemistry laboratory.

In 1814 he became an assistant professor in the chemistry department resigning from his post at the high school. At that time, the head of the department of mineralogy was Feliksas Dževinskis (1788–1850), however, in 1817 the latter went to study in Paris and Horodeckis was entrusted with giving lectures in mineralogy.



Fig. 1. The building that housed the Department of Mineralogy where Horodeckis gave lectures.

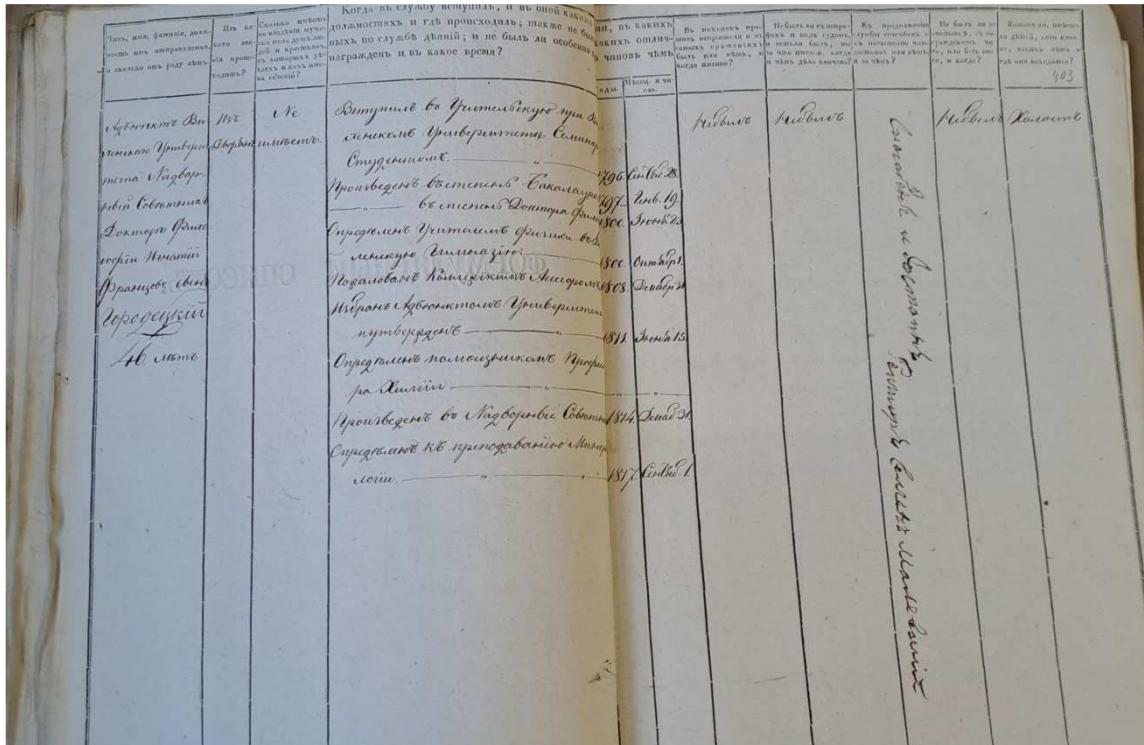


Figure 2. Personal file of 46-year-old Horodeckis at Vilnius University.
All former positions are listed. Marital status - single. VUB: RS, F2-KC135, P.401-403.

In 1822 the University Council appointed Ignotas Horodeckis as Full Professor. In addition to lectures, Horodeckis led practical exercises in geology, organized many fieldtrips with students in the surroundings of Vilnius. He also conducted geological research, and was particularly interested in the fossil fauna of Volhynia and Lithuania from the Cretaceous and Tertiary (Paleogene) periods. He also analyzed the chemical composition of minerals and put together a collection of rocks.

Horodeckis was a highly valued teacher. He was also progressive in his ideas and often upset conservative professors in his support of university reforms. During the years from 1817 to 1824 he taught mineralogy at Vilnius University, having among his students Ignotas Domeika (1802–1889) who would later rise to fame as a geologist/mineralogist in South America, Ignotas Jakovickis (1794–1847), Ignacijus Fonbergas (1801–1891), N. A. Kumelskis (1802–1853), Tomas Zanas (1796–1855), and many others. In 1823-1824, up to 170 students gathered to listen to his lectures on mineralogy each year.

Horodeckis was an advanced scientist who connected theory with practice in nature. He was aware of the latest theories (including about meteorites) and taught them to his students. Proof of the latter may be found in the questions students were asked during exams. For example: Ignotas Domeika had to answer: 1. Identify the given example from the collection (answer: *it was an iron meteorite*). 2. Discuss meteorite stones in general. 3. Discuss their formation and elements of composition.

The first known letter by Ignotas Horodeckis addressed to Alexandre Brongniart (1770–1847) about meteorites, is dated "Vilnius, September 1818 [...] I have the honour to send you half of the iron, which was separated for me from a large single specimen found in the sand in the Minsk and Minsk provinces, in the Mozyr district, on the lands of Count Rokicki...."

The scientists Ignotas Horodeckis and Alexandre Brongniart not only corresponded about meteorites, but also studied the specimens. Horodeckis collected information about each one and sent fragments of specimens to Paris. On the other hand, Brongniart combined the data sent

by Horodeckis and the results of the chemical composition studies carried out by one of the most prominent French chemists and meteorite researchers of the time, André Laugier (1770–1832), to whom he gave the samples obtained from Vilnius. These results were presented by Brongniart at the meetings of the Royal Academy of Sciences in Paris and were also published (Laugier 1823a; Laugier 1823b; Laugier 1824).

Horodeckis sent to Brongniart samples of the following meteorites:

Lixna, which is also called: Daugarvpils (From MetBase), Daugavpils, Dünaburg, Lasdany, Liksen, Liksna, Adhesive, Lixsna, Uszwalda – (all in NHM Cat.), **Zaborzika**, which is also called: Czartorya, Saboriza, Saboryzy, Zaboritsa, Zaboritza, Zaborzyca – (all in NHM Cat), **Brahin**, also called: Bragin, Komarinsky, Kruki, Krukov, Minsk, Rocicky, Rokicky, Rokitskii – (all in NHM Cat).



Figure 3. Brahin meteorite (pallasite) (VU, Museum of Geology)

Andrius Sniadeckis had studied those meteorites in Vilnius (where Horodeckis also worked in the laboratory). Apparently, because parcels took a long time to reach their destination in those days, Sniadeckis published the results of the Bragin meteorite research a year earlier than the French scientists (Śniadecki J. 1822). There is a detailed article by P. Daszkiewicz and R. Tarkowski about this correspondence and research¹.

Ignotas Horodeckis died suddenly 200 years ago in 1824, on March 27, at the age of 48. His scientific ideas were not implemented, his scientific research remained unfinished.

He is buried in the Bernardine cemetery, Užupis, 3 Žvirgždyno Street, Vilnius, 01205, Lithuania. His memorial stone has not survived and the exact location of his grave is unknown, nor has a portrait of him been identified.

Abbreviations used: NHM Cat. - Natural History Museum, London; MetBase - Meteorite Information Database.

¹ P. Daszkiewicz and R. Tarkowski. Les meteorites de Vilnius, cespierres qui ont change l’histoire des sciences. *Cahiers Litvaniens*. 2006, 7, p.15-22

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