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WILHELM FRIEDBERG AND HIS SCIENTIFIC LEGACY AT THE NATURAL HISTORY MUSEUM IN LVIV

Wilhelm Friedberg was an eminent naturalist whose scientific interests scoped on Miocene geology and palaeontology of Poland and Western Ukraine. He left behind a significant scientific legacy: several scientific publications and a wealth of collections. The most outstanding work of W. Friedberg was a large two-volume monograph, the first part of which was devoted to Miocene gastropods and the second – to bivalves. In this comprehensive work, he described more than 700 taxa of molluscs, from which 85 are new. In a result of a study on Cretaceous foraminifera, W. Friedberg described 194 taxa, from which 8 were new to science. Furthermore, the work on foraminifers has been translated into English to provide broader accessibility and disseminate his research to the wider international scientific community. In addition to paleontological contributions, W. Friedberg authored geological articles, a textbook on geology, as well as a number of popular scientific publications.

Wilhelm Friedberg's scientific endeavours were intricately linked to the Dzieduszycki Family Natural History Museum in Lviv (now the State Museum of Natural History of National Academy of Sciences of Ukraine). This collaboration is substantiated by numerous entries in the museum's records and letters stored in the library archive. These documents reveal that the scientist delved in the literature from the museum's extensive library, which, during that era, ranked as one of the largest natural literature collections in Europe, and regularly contributed copies of his articles to it. W. Friedberg extensively studied the museum's collections and also enriched them with specimens from his own materials what is documented both in the museum's chronicle and in the inscriptions on the specimens' labels.

Today, the State Museum of Natural History in Lviv houses two distinct monographic collections of this outstanding researcher: a complete collection of Cretaceous foraminifera from the vicinity of Rzeszów and a portion of Miocene mollusc collection from Poland and Western Ukraine. The collection of foraminifera consists of 733 small glass vials, each of which contains microfossils. The collection is accompanied by a notebook with a list of specimens, meticulously handwritten by Friedberg himself. The collection is well-organized, but there might be a need for their comprehensive review due to potential shifts in the contents of the vials, the overall condition of the material, as well as for taxonomic revision. The collection of Miocene molluscs contains 27 specimens described by W. Friedberg as new. The entire collection is well organized and the preservation of the shells remained good.

Keywords: *Miocene, Cretaceous, molluscs, foraminifera, museum collection.*

Natural history museums often serve as repositories for various natural history collections, as well as places where the memory of those who created and studied them is preserved. Each collection often reflects not only the richness of the natural world, but also history of the efforts of scientists and collectors who invested time and effort in its creation and research. Such materials may include records, correspondence, field journals, and other documents, from which we can learn about the interaction of scholars with various institutions and individuals involved in the collections. Commemorating collectors and scientists is important because it helps maintain and popularize their legacy and contribution to science and society. Additionally, it provides museum visitors with an opportunity to deepen their understanding of the processes of creating scientific collections and the importance of scientific research.



Fig. 1. Wilhelm Friedberg
(1873-1941)

Wilhelm Friedberg (Fig. 1) was one of the extraordinary figures who contributed to replenishing the collections of the State Museum of Natural History of National Sciences of Ukraine (Dzieduszycki Family Natural History Museum in Lviv at that time) and their scientific study. The main research interests of this renowned scientist were focused on the Miocene deposits, their fauna, and the stratigraphy of Poland and Western Ukraine. The most outstanding work of Wilhelm Friedberg was a large two-volume monograph, the first part of which was devoted to Miocene gastropods (Friedberg, 1911-1928), and the second – to bivalves (Friedberg, 1934-1936). Decades of research on the Miocene epoch and its molluscs established Friedberg as one of the foremost experts on the Miocene geology and paleomalacologist of his times.

Friedberg's research was not limited to the study of Miocene molluscs – he began his scientific activity by studying Cretaceous foraminifera (Friedberg 1897, 1901). His scholarly output also includes geological articles, popular science works, and a textbook on geology. In total, the researcher published approximately 100 scientific and popularization works, nearly all of which are individual publications. Friedberg's scientific pathway was thoroughly documented by F. Bieda and W. Krach during the meeting of the Polish Geological Society in Kraków in 1947 dedicated to his memory, and subsequently published (Bieda, 1949, Krach, 1949).

Biography

Wilhelm Franciszek Friedberg was born on January 29, 1873, in Boryslaw of Ostgalizien – now Boryslav, a town in the Lviv region, which was at that time a well-known industrial centre for the extraction and processing of oil, ozokerite, and gas. He came from a family that migrated to Galicia from Czechia at the beginning of the 19th century. He was the son of Józef, a mine superintendent, and Teresa née Sabatowicz. Friedberg's academic journey included graduation from gymnasiums in Krakow (St. Anne's) and Drohobycz (until 1891), followed by studies in zoology and geology at Lviv University (1891-1896). He later supplemented his education with studies in Vienna, Bordeaux, Lyon, and Turin (1905-1906).

Wilhelm Friedberg commenced his scientific activity as a gymnasium professor. In 1897, he published his first work on Cretaceous foraminifera in Lviv marl (Friedberg, 1897), followed by research on foraminifera from Inoceramus layers in the vicinity of Rzeszów (Friedberg, 1901). He earned his Doctor of Philosophy degree in 1899 from Franciscan University of Lviv (now Lviv University). In 1902, he contributed in the preparation of a detailed geological map of the "Geological Atlas of Galicia" (Friedberg, 1903). In 1904, he taught natural science at high school named after Stanisław Konarski in Rzeszów, among whose students at that time was Władysław Szafer – a Polish botanist, professor, and long-

term director of the Institute of Botany of the Jagiellonian University. It was on Friedberg's advice that Szafer began to study botany at the University of Vienna and became a prominent botanist in his own right.

In 1906-1907, Friedberg served as a professor at the 4th Gymnasium in Lviv, as documented in the museum's chronicle. However, the exact period of his tenure remains unknown due to limited records covering the specified years.

In 1907, W. Friedberg received a postdoctoral degree and the title of associate professor at the Lviv Polytechnic. The period before the First World War is not documented in the



Fig. 2. Group photograph of an unknown event from the early years of the 20th century. The location is also unidentified. From left to right in the top row: Wilhelm Friedberg, an unknown person, Słomnicki, Glinkiewicz; and in the bottom row: Łazowski, Stupnicki, Rakowski. The surnames were identified due to handwriting on the photograph's margin.

scientist's biography. It is known that the war interrupted his scientific activities, as he was drafted into the army. Following his military service, he briefly worked as a senior geologist at the State Geological Institute in Kraków. Since 1919, after Poland regained independence,

III. Dziat mineralogiczny-geologiczny:

Wziar olowiany Andryd z ok. Surow, g. 1881 i 12. Jemna i Soltas	ok. M. Lomnicki
Wziar trawny mamuta	Walawa (Vnemy)
Belumitella sp. z otaz	Poduryca (oklas)
Wziar trawny	" "
Wziar szamueli sylurski	Uruska (pru. Hrad)
Nawetowa Ramiensis	oklas Praseru
Wziar mioceni z szamueli ggal.	" "
Wziar odwrotni kisi mioceni w b. 750 ok.	Surow
Wziar trawny mioceni z ggal.	Lyskova (ok. Vot)
Wziar gal. w piask. Karpulcin	ok. Nowego Sazca
Wziar szamueli mioc. i kred.	Kumany, Lipsica
Wziar gmal. szamueli z kred. gal. sylur.	Podole Gal.
Wziar szamueli sylurski	Elisa Triska z Jentana
<u>IV. Dziat paleontologiczny:</u>	
Skalka z rogu jeleniego	Drabimianka (Pawin)

Fig. 3. Proceedings of the Museum for 1906 indicate records of donated material by Dr. W. Friedberg.

III. Dziat geologiczny:

Gips z Krasnolazy	Ponciwka	Dr. F. Chlapant
Kreda z Ramiensku	Urov	ok. J. Jemnicki
Gurty	Poduryca	ok. J. Jemnicki
Delatymit	Delatyn	ok. Dr. J. Nivinski
Pluronic mioceni	Urov	ok. J. Jemnicki
" "	Surow	ok. M. Lomnicki
Kilka mal z Slank auste	Slank	ok. M. Lomnicki
Abotiler capathicus	Stravica	ok. E. Szajovsk
Wziar olowiany	Jaerya	ok. Dr. W. Friedberg
Prum. z ok. w. 1881	Katun	ok. Dr. J. Jemnicki

Fig. 4. Proceedings of the Museum for 1911 indicate records of foraminifera collection donated by Dr. W. Friedberg.

W. Friedberg was appointed as a professor of geology and paleontology at the University of Poznań, where he worked during 10 years and established the first paleontological institute at the university with well-organized collections and a library. Additionally, for a some period of time, he held the position of a dean of the Faculty of Mathematics and Natural Sciences and vice-rector.

In 1929, the researcher relocated to Kraków and assumed leadership of the Department of Paleontology at the Jagiellonian University, succeeding Jan Nowak. In 1930, he was appointed as a corresponding member of the Polish Academy of Arts and Sciences.

In 1933, he retired and returned to Lviv, the city to which he felt a deep connection. Following the death of his wife, he relocated back to Kraków in 1938, where he organized a workshop at the natural history museum. According to contemporaries, the outbreak of the Second World War greatly affected Friedberg. Unable to pursue his scientific research, which had been the meaning of his life, his health began to deteriorate. Wilhelm Friedberg passed away on June 10, 1941, and was laid to rest at the Rakowicki Cemetery in Krakow.

Collaboration with the State Natural History Museum in Lviv

Wilhelm Friedberg's scientific endeavours were intricately linked to the Dzieduszycki Family Natural History Museum in Lviv (now the State Museum of Natural History of National Academy of Sciences of Ukraine). This connection is substantiated by numerous entries in the museum's records and letters. These documents reveal that the scientist delved in the literature from the museum's extensive library, which, during that era, ranked as one of the largest natural literature collections in Europe. W. Friedberg extensively studied the museum's collections and also enriched them with specimens from his own materials what is documented in the museum's chronicle. In the annual report for 1906, the museum curator Marian Łomnicki made a notes about Friedberg's donations in the section listing the proceedings of the museum's mineralogical-geological division, such as an erratic stone from the vicinity of Rzeszów, and prehistoric division, such as a deer horn axe from Drabinianka (Rzeszów) (Fig. 3). In the annual report for 1911 there is a record of a donation of a collection of foraminifera from Galicia to the geological division of the Museum (Fig. 4).

An archive preserved in the museum's library contains Friedberg's correspondence with the museum's publishing committee, primarily regarding the publication of his two-volume monograph. The archive comprises approximately twenty letters, revealing the various challenges the author faced during the preparation of the monograph, predominantly of organizational and financial nature. In one of them (Fig. 5) it reads (translation from Polish):

*To the Honorable Committee of the Dzieduszycki Museum Publishing House
(to the Deputy Chairman of the Committee, Honorable Sir M. Łomnicki) in Lviv*

In response to the letter from the Honorable Committee dated December 30, 1909, I have the honor to inform, that the first issue of my publication entitled "Miocene molluscs of Poland" will include the following genera: Conus, Terebra, Columbella, Buccinum, Nassa and Ancillaria. Concurrently, I am submitting the manuscript, which will undergo review following verification of identifications at the Imperial Court Museum in Vienna. The first issue will include, in addition to the descriptions, 4 tables.

*Lviv January 14, 1910
Dr. Wilhelm Friedberg*

L^o
 Szanownego Komitetu
 Wydawców Muzeum imienia Dieciusetylekich
 (na ręce Jastopy Przewodniczącego H. Pawła Rady M. Lwowskiego,
 we
 Lwowie.
 Odpowiadając na pismo Szanownego Komitetu z dnia 30 grudnia 1909
 mam zaszczyt donieść, że piórnymy zaszytym publikacji mej p. t. *Miocen-
 ne mioceniście Polski* będzie zawierał rodzaje: *Comus*, *Terebra*, *Leban-
 bella*, *Buccinum*, *Nassa* i *Succinea*. Równocześnie przedkładałam mamu-
 skrypt, który będzie przeznaczony do kontroli w celu sprawdzenia i cesarst.
 Muzeum we Wiedniu. Zaszyt piórnymy opisać typy w tekście
 zajmie 4 tablice.
 Lwów 14-go stycznia 1910.
 Dr. Wilhelm Friedberg

Fig. 5. Letter from W. Friedberg to the publishing committee of the Museum.

Collections

A portion of the materials that Friedberg worked on has been published and is currently preserved in a separate monographic section of the museum's collections, where described and type specimens are stored – so called “monograph collections”. In addition to the type materials, the museum collection also stores the specimens that Friedberg personally collected and contributed to the museum, as well as those that he identified or re-identified while systematically examining the Neogene collections. These identifications are evidenced by the entries placed in Friedberg's own handwriting on the museum labels.

The Lviv Museum houses two distinct monographic collections processed by Wilhelm Friedberg: a complete collection of foraminifera and a segment of the collection of Miocene molluscs.

Collection of Cretaceous Foraminifera

The collection of foraminifera originates from the Inoceramus beds of Rzeszów and its vicinity and was a subject of the research which resulted in a publication in 1901 (Friedberg, 1901) and later translated into English (Friedberg, 1994). This collection consists of 733 small glass vials, closed by a small cork stopper with a catalogue numbers on it (Figs 6, 7). The collection is accompanied by a notebook with a list of specimens, meticulously handwritten by Friedberg himself. Cretaceous foraminifera from the same region were

described prior to Friedberg by A. Alth, A. Reuss, S. Olszewski, E. Dunikowsky, and J. Niedzwiedski. Concurrently, Friedberg described 28 previously unknown foraminifera species from the Cretaceous sediments, including eight species that were new to science. It is worth noting that while the collection is well-organized, there might be a need for their comprehensive review due to potential shifts in the contents of the vials and the overall condition of the material.

Collection of Neogene Mollusca

The descriptions of the collection of Miocene molluscs were published in parts during 25 years. In the article about the genus *Turritella*, Friedberg (1909) provided descriptions for 13 new taxa, primarily at the variety level. Among these, specimens of five taxa are housed in the museum's collection.

In a two-volume monograph Friedberg (1911-1928, 1934-1936) described more than 700 taxa of molluscs, from which 85 are new, and 27 are kept in the museum (Tab. 1). The entire collection is well organized, and the preservation of the shells remains good. Each unit of the storage may contain more than one shell, so the number of specimens in the monograph collection is more than 27. When examining the labels for each specimen, it was found that most of the described material was collected by various researchers, and only a few, mainly



Fig. 6. Friedberg's collection of Cretaceous foraminifera and the plate I with drawings of described taxa (Friedberg, 1901).



Fig. 7. Close view of the vials from Friedberg's collection with the first page of his notebook.

from Korytnica (in south-central Poland), were collected by Friedberg himself. Separate labels in units contain identification of specimen made by Friedberg written in his own hand. Shells of small sizes are stored mostly in vials sealed with cork. To each described specimen, drawings as in published paper are added (Fig. 8).

Table 1

Type specimens of the Wilhelm Friedberg's mollusc collection

Species name in the collection of W. Friedberg	Reference	Accepted species name	Inventory number	
			Old	Current*
<i>Cerithium volhynicum</i> sp. n.	Friedberg, 1911-1928: p. 269, pl. 16, fig. 17.	<i>Lampanella volhynica</i> (Friedberg, 1914)	8663	N-3659
<i>Columbella curta</i> Duj. var. <i>convexa</i> sp. n.	Friedberg, 1911: p. 35, pl. 2, fig. 2.	<i>Mitrella convexa</i> (Friedberg, 1911)	8214a	N-3527
<i>Columbella (Anachis) subnassoides</i> sp. n.	Friedberg, 1911: p. 40, pl. 2, fig. 6.	<i>Mitrella fallax</i> (R. Hoernes & Auinger, 1880)	8215	N-3530
<i>Dorsanum duplicatum</i> Sow. var. <i>major</i> var. n.	Friedberg, 1911: p. 100, pl. 5, figs 18-19.	<i>Dorsanum duplicatum</i> (Sowerby, 1829)	8689 8574	N-3564, N-3565

<i>Euthria Zejszneri</i> sp. n.	Friedberg, 1912: p. 154, pl. 8, fig. 13.	<i>Euthria puschiei</i> (Andrzejowski, 1830)	8233	N-3598
<i>Mangilia perpulchra</i> sp. n.	Friedberg, 1912: p. 230, pl. 14, fig. 13.	<i>Mangilia perpulchra</i> (Wood, 1848)	8786	N-3639
<i>Merica fenestrata</i> Eichwald var. <i>ratundata</i> var. n.	Friedberg, 1914: p. 242, pl. 15, fig. 4.	<i>Cancellaria (Merica) fenestrata</i> Eichwald, 1853	8410 10076	N-3615, N-3646
<i>Murex confluens</i> Eichwald var. <i>convexus</i> var. n.	Friedberg, 1912: p. 167, pl. 10, fig. 8.	<i>Ocinebrina confluens</i> (Eichwald, 1853)	8798	N-3610
<i>Murex holubicensis</i> sp. n.	Friedberg, 1912: p. 172, pl. 11, fig. 4	<i>Murex holubicensis</i> Friedberg, 1912	10201	N-3608
<i>Murex holubicensis</i> Friedberg var. <i>subcarinata</i> var. n.	Friedberg, 1912: p. 173, pl. 11, fig. 5.	<i>Murex holubicensis</i> Friedberg, 1912	10202	N-3607
<i>Murex Tarnopolensis</i> sp. n.	Friedberg, 1912: p. 170, pl. 11, fig. 2.	<i>Muricopsis (Muricopsis) moravica</i> (Hoernes et Auinger, 1885)	11097	SMNH-N-712
<i>Nassa coarctata</i> Eichwald var. <i>elongata</i> var. n.	Friedberg, 1911: p. 72, Text-fig. 21.	<i>Nassarius volhynicus</i> (Andrzejowski, 1830)	9557	N-3542
<i>Nassa coarctata</i> Eichwald var. <i>Zborowiensis</i> var. n.	Friedberg, 1911: p. 72, pl. 4, figs 6-8.	<i>Nassarius volhynicus</i> (Andrzejowski, 1830)	8756 8754	N-3549, N-3550
<i>Nassa Dujardini</i> Desh. var. <i>maior</i> var. n.	Friedberg, 1911: p. 77, pl. 4, figs 14-15.	<i>Sphaeronassa dujardini</i> (Deshayes, 1844)	8205	N-3543
<i>Nassa Eichwaldi</i> sp. n.	Friedberg, 1911: p. 96, pl. 5, fig. 17.	<i>Nassarius eichwaldi</i> (Friedberg, 1911)	8758	N-3567
<i>Pleurotoma Annae</i> R. Hoernes i Auinger var. <i>applanata</i> var. n.	Friedberg, 1912: p. 205, pl. 13, fig. 6.	<i>Gemmula annae</i> (Hoernes & Auinger, 1891)	8410	N-3615
<i>Pollia volhynica</i> sp. n.	Friedberg, 1912: p. 185, pl. 11, fig. 19.	<i>Aplous volhynicus</i> (Friedberg, 1912)	10632	N-92
<i>Potamides Zboroviensis</i> sp. n.	Friedberg, 1914: p. 294, pl. 18, fig. 4.	<i>Theodisca biseriata</i> (Friedberg, 1914)	10313	N-3673
<i>Raphitoma Zejszneri</i> sp. n.	Friedberg, 1912: p. 234, pl. 14, fig. 17.	<i>Raphitoma plicatella</i> Jan, 1847	11211 9568	N-3640, N-3643
<i>Raphitoma holubicensis</i> sp. n.	Friedberg, 1912: p. 236, pl. 14, fig. 19.	<i>Bela jeffreysi</i> (Bellardi, 1877)	9569	N-3642
<i>Surcula (Clinura) subtrochlearis</i> sp. n.	Friedberg, 1912: p. 210, pl. 13, fig. 11.	<i>Surcula (Clinura) subtrochlearis</i> Friedberg, 1912	8322	N-3624
<i>Turricula recticosta</i> Bell. var. <i>brevior</i> var. n.	Friedberg, 1911: p. 24, pl. 1, fig. 17.	<i>Vexillum brevior</i> (Friedberg, 1911)	9550	N-3518
<i>Turritella holubicensis</i> sp. n.	Friedberg, 1909: p. 261, pl. 3, fig. 13.	<i>Archimediella indigena</i> (Eichwald, 1830)	9507	N-3495
<i>Turritella Pythagoraica</i> Hilber var. <i>irregullaris</i> var. n.	Friedberg, 1909: p. 258, pl. 2, figs 17-18.	<i>Archimediella indigena</i> (Eichwald, 1830)	9032	N-3498

<i>Turritella subangulata</i> Brocc. var. <i>polonica</i> var. n.	Friedberg, 1909: p. 262, pl. 3, figs 25- 26.	<i>Oligodia spirata</i> (Brocchi, 1814)	9028	N-3492
<i>Turritella turris</i> Basterot var. <i>oligocincta</i> var. n.	Friedberg, 1909: p. 255, pl. 2, figs 6-7.	<i>Ptychidia vindobonensis</i> (Handmann, 1882)	8191	N-3506
<i>Turritella turris</i> Basterot var. <i>sexcincta</i> var. n.	Friedberg, 1909: p. 255, pl. 2, fig. 5.	<i>Ptychidia vindobonensis</i> (Handmann, 1882)	8198	N-3504

*the current inventory numbers, except the given in the table with prefix N- meaning Neogene, have museum's acronym SMNH and the prefix PZ, which places them in the Paleontological (Paleozoological) Collection.

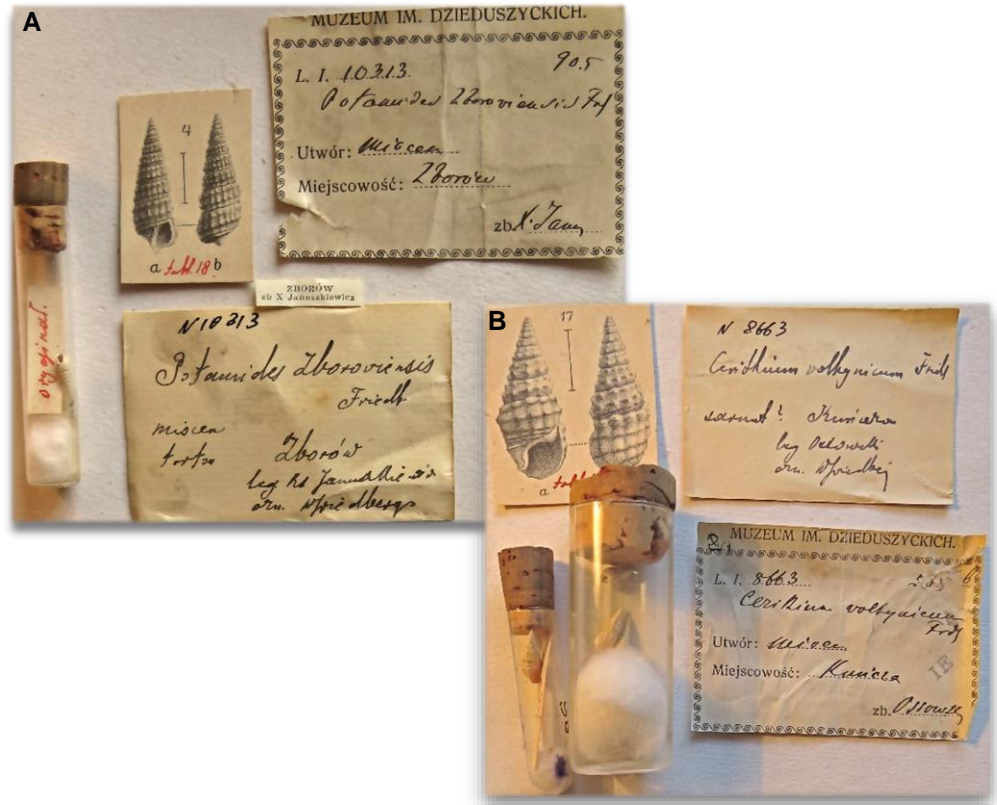


Fig. 8. Type specimens from the Friedberg's collection: **A** – *Theodisca biseriata* (Friedberg, 1914) from Zboriv, Ternopil region, Ukraine; SMNH-PZ-N-3673. **B** – *Lampanella volhynica* (Friedberg, 1914) from Kuncha, Khmelnytskyi region, Ukraine; SMNH-PZ-N-3659.

Miocene molluscs are continuously studied up today, and Friedberg's works are still robustly referenced by researchers (e.g., Harzhauser & Landau, 2019, 2023, 2024, etc.). Thus,

the scientific processing of collections and type material for the verification of identifications not only allows us to confirm or refute previously made conclusions but also improves our understanding of evolutionary processes. Preservation of paleontological collections and their analysis also enables researchers to discover new taxa, contributing to the identification of patterns of species distribution in space and time and the reconstruction of the environments in which these organisms have existed.

Thanks to the efforts of the museum staff, these valuable collections have been preserved and properly organized. They now serve not only as the historical heritage of the museum, but also as an important resource for the modern global scientific community engaged in the study of Neogene molluscs and sediments. These collections represent an outstanding contribution to the broader scientific knowledge and heritage, facilitating research and discoveries for generations to come.

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Вільгельм Фрідберг та його наукова спадщина в Державному природознавчому музеї у Львові

Вільгельм Фрідберг був видатним натуралістом, чії наукові інтереси охоплювали геологію та палеонтологію міоцену Польщі та заходу України. Він залишив по собі значну наукову спадщину із багатьох наукових публікацій та великих колекцій. Найвидатнішою працею В. Фрідберга стала велика двотомна монографія, перша частина якої була присвячена міоценовим червононогим молюскам, а друга – двостулковим. В ній автор описав понад 700 таксонів молюсків, 85 з яких були новими для науки. У результаті вивчення крейдових форамініфер В. Фрідберг описав 194 таксони, з яких 8 були новими для науки. Крім того, роботу з описами форамініфер було перекладено англійською мовою для поширення результатів дослідження серед ширшого кола міжнародної наукової спільноти. Окрім палеонтологічних робіт, В. Фрідберг є автором геологічних статей, підручника з геології, а також низки науково-популярних публікацій.

Наукова діяльність Вільгельма Фрідберга була тісно пов'язана з Природничим музеєм ім. Дідушицьких у Львові (нині – Державний природознавчий музей НАН України). Ця співпраця підтверджується численними записами в тогочасних музейних звітах та листами, які зберігаються в бібліотечному архіві. Згідно з цими записами, дослідник користувався бібліотекою музею, яка в ті часи вважалася однією з найбільших колекцій природничої літератури в Європі, та регулярно передавав до неї копії своїх статей. В. Фрідберг також активно вивчав музейні колекції викопної фауни та збагатив їх власними зразками, що задокументовано як в хроніці музею, так і підписами на етикетках до зразків.

Нині у природознавчому музеї зберігаються дві монографічні колекції цього видатного дослідника: повна колекція крейдових форамініфер з околиць Жешува та частина колекції міоценових молюсків з Польщі та Західної України. Колекція форамініфер складається з 733 пробірок, в кожній з яких зберігаються мікрорештки. До колекції доданий зошит із списком зразків, ретельно написаний від руки самим автором. Колекція є добре впорядкованою проте може виникнути потреба в її комплексному перегляді через можливі зміни у вмісті пробірок, загальному стані матеріалу, а також для таксономічної ревізії. В колекції міоценових молюсків зберігається 27 зразків, описаних В. Фрідбергом як нові. Колекція є впорядкованою, а черепашки добре збереженими.

Завдяки зусиллям працівників музею, обидві колекції збережені та добре впорядковані. Нині вони є не лише національним надбанням, а й важливою основою для наукового вивчення неогенових молюсків і вміщуючих їх відкладів, сприяючи майбутнім дослідженням і відкриттям.

Ключові слова: міоцен, крейда, молюски, форамініфери, музейна колекція.