

The History of the Museum and Institute of Zoology, PAS¹

Abstract. The article presents the history of the Warsaw Zoological Collection as well as institutions connected with it. The beginning of this collection stretches down to 1819 - the year in which a collection of ca 20.000 specimens of animals, mainly birds, was bought for the Zoological Cabinet of the Royal University of Warsaw. The Cabinet, together with the library, was organized and for 43 years managed by Feliks Paweł Jarocki. The finest period in the history of the Cabinet was in the 3rd quarter of XIX century under Władysław Taczanowski's guidance, when many Polish zoologists from the country and from abroad enriched it with their own collections. In 1887 a private Zoological Museum was created by the Branicki family with a rich collection of various vertebrates, mainly birds. After the I World War, in Independent Poland, both Zoological Cabinet and Branickis' Museum were joined together into the National Museum of Natural History, Section of Zoology, renamed State Zoological Museum in 1928. Between World War I and II the Museum was modernized, new collections were added and publishing activity started. The exhibition, shown for 116 years from the establishment of the Institute, was closed in 1935 after the Institute moved to a new location. During World War II the Museum suffered the loss of several members of its staff and part of the collection (almost all insects). After the War efforts of many scientists, especially Stanisław Feliksiak and Tadeusz Jaczewski led to the reconstruction of the Museum, completion of the collection and employment of a new generation of zoologists. In 1953 the Museum, transformed to the Institute of Zoology, was incorporated into the newly-created Polish Academy of Sciences. This new situation gave an opportunity to carry out more extensive research on native fauna and the fauna of various parts of the world, to develop the publishing activity and to enrich the library. After some time the Institute resumed its exhibition activities. Since 1992, the name of the institution has been the Museum and Institute of Zoology, PAS. The staff embraces 74 persons, including 13 professor and 16 doctors. The collection comprises about 4.500.000 specimens, the library over 230.000 volumes.

Key words: history, Warsaw Zoological Collection, Zoological Cabinet, Branickis' Museum, State Zoological Museum, Institute of Zoology, Museum and Institute of Zoology.

The origins of the Museum and Institute date back to the 19th c. After purchasing in 1818 the zoological collection of the baron Sylwiusz Minckwitz from Gronowice in Silesia, the Commission of Religion and Public Education of the Polish Kingdom created in 1819 the Zoological Cabinet at the Chair of Zoology of the Royal University of Warsaw. The Cabinet was initially housed in the Casimirus Palace, its first curator

being Doctor of Liberal Arts and Philosophy, Feliks Paweł Jarocki, soon nominated also an "adopted professor" and the head of the Chair of Zoology.

Minckwitz's collection included about 20,000 specimens. The bird collection was especially valuable, and contained several types and many voucher specimens of bird species recorded from Silesia for the first time. A part of the collection has been preserved till now in the Museum's collection. In the following years Jarocki increased the collections of Zoological Cabinet through purchases, and also as a result of his scientific trips in the eastern parts of Poland and in Ukraine. The Cabinet was available to the public which

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could thus get acquainted with the native and foreign fauna.

After becoming head of the Zoological Cabinet and of the Chair of Zoology, Paweł Jarocki started accumulating a library indispensable for collection curating and lecturing. Due to his efforts, many valuable volumes could be obtained, which made it possible to him and his successors to curate the materials preserved in the Cabinet. The following volumes can be mentioned here: P. A. Latreille (1802–1805) "Histoire naturelle generale et particuliere des Crustaces et des Insectes" (14 volumes), G. W. F. Panzer (1793–1813) "Faunae Insectorum Germanicae initia oder Deutschlands Insekten" (109 volumes), "Faunae Insectorum Americanes Borealis Prodrromus" (1794), or J. W. Meigen (1818–1838) "Systematische Beschreibung der bekannten europaischen zwieflugeligen Insecten" (7 volumes).

In 1831 the existence of the Zoological Cabinet became threatened². As one of the restrictions that followed the fall of the November Uprising, the Russian authorities closed the Royal University of Warsaw, and its property was sent to Petersburg. However, Jarocki managed to arrange an exemption of the Zoological Cabinet, as well as its

²Historical note

Poland appeared as a state associated with Western European civilization in the 10th c. and developed as a kingdom till the 18th c. At the end of the 18th c., as a result of a deep political crisis, Poland lost its independence, and its territory was divided between Russia, Germany (Prussia) and Austria. Warsaw, with the central and eastern part of the country, became a part of Russia. The Polish society did not accept the loss of statehood, hence numerous wars and uprisings during the 19th c., all directed against the occupants. The most important were: November Uprising (1830–1831) and January Uprising (1863–1864). Culture and science played a very important role in maintaining national consciousness and spirit of the Poles, and cultural activists and scientists took an active part in the fight for independence. Following the fall of independence efforts it was mostly they who were prosecuted, punished with exile (mostly to Siberia) and forced to emigrate (among others to South America). The January Uprising evoked also an intensification of russification processes in the areas under Russian occupation; this involved also scientific and cultural centres (e.g. Warsaw University, etc.).

As a result of World War I, in 1918 Poland regained its independence and started to reconstruct institutions that were necessary in a modern state. Twenty one years later it became victim to World War II and its tragic consequences.

library and two other zoological collections, from this decision.

These collections passed under administration of the Curator of the Warsaw School District, and Jarocki remained their head. During all the years of his activity, he tried to increase both the collection and the library. When he retired in 1862, and transferred the Zoological Cabinet to the Main School, the then "inheritor" of the Royal University of Warsaw, the zoological collection included 65,690 specimens, and the library counted 291 volumes.

Jarocki's scientific production was not very big; first of all he was a deft negotiator and a good organizer. During his tenure of office, in 1855 Władysław Taczanowski obtained a curatorial position in the Cabinet and gradually transformed it from a teaching institution into a scientific centre.

However, significant changes in the Zoological Cabinet were to come only as late as 1862, when it became a part of the Main School. Taczanowski became new head of the Cabinet. At the same time Benedykt Dybowski was nominated head of the Chair of Zoology and Comparative Anatomy of the Main School, to which the Cabinet was submitted. He was an ardent proponent and popularizer of Darwin's theory and introduced a creative ferment in Warsaw community of naturalists; he also evoked an interest of the society in natural sciences.

In this new atmosphere, in a short time Władysław Taczanowski managed to gather around the Zoological Cabinet a large group of co-workers – both naturalists from various institutions, and amateurs interested in nature. During that period the Cabinet was among Warsaw's intellectual centres, closely associated with national independence activity.

Scientists from other departments of the University – August Wrzeźniowski, Antoni Ślósarski, Antoni Wałęcki, employees of other institutions – Ludwik Hildt, coleopterologist, zoology department curator at the Museum of Industry and Agriculture, Jan Sztolcman – ornithologist, Taczanowski's pupil and later head of the Branickis' Museum, Antoni Waga, entomologist, teacher-

naturalist and an excellent humanist, Jan Sznabl and Henryk Dziedzicki, both dipterologists and physicians by education, and amateurs: Kazimierz Stronczyński, entomologist and theriologist, author of, among others "Rozrywki entomologiczne dla młodzieży" (1835) [Entomological diversions for youngsters], and later the most prominent Polish numismatist of the 19th c., called also "father of Polish numismatics", and others, also co-operated with the Zoological Cabinet.

Taczanowski, along with Waga, succeeded in gaining patrons for the Zoological Cabinet: these were Konstanty Branicki and Aleksander Branicki, and later Władysław Branicki and Konstanty Branicki, who in 1863–74 organized three hunting expeditions to north Africa (Algeria, Egypt, Nubia), with such participants as A. Waga, W. Taczanowski and H. Dziedzicki. Materials accumulated during the expeditions were transferred to the Zoological Cabinet. The Branicki brothers also covered the costs of the expedition and natural history studies of Jan Sztolcman in Peru and Ecuador (1875–81, 1882–84) and financially supported Konstanty Jelski's studies in Guiana and Peru (1866–75). Very valuable collections accumulated by those investigators were initially transferred to the Zoological Cabinet and later to the Branickis' Museum.

These collections formed a basis of numerous scientific publications of many native and foreign investigators. Birds were studied by W. Taczanowski, and his "Ornithologie du Perou" (3 volumes), published in 1884–86 in France, was the first bird monograph of South America, at present still of primary importance for the entire South American ornithology. The Branicki brothers bought several individual zoological collections for the Zoological Cabinet.

A great merit of the Branicki brothers was financial support they lent to publications of Polish zoologists. Thanks to their help among others the monograph of the Baikal gammarids by B. Dybowski and the above-mentioned "Ornithologie du Perou" by W. Taczanowski were published.

Władysław Lubomirski and Jan T. Lubomirski also co-operated with the Zoological Cabinet and

supported it financially. The journal "Wiadomości z nauk Przyrodniczych" [Natural History News] started to be published due to their help.

During the January Uprising (1863–1864) Dybowski, a member of the representation of the National Government for Lithuania, used the Zoological Cabinet building as a meeting place of the Commission Members and storage place for documents. After the fall of the uprising, in 1863–1877, it lent support to Polish naturalists – political exiles in Siberia. Benedykt Dybowski, Wiktor Godlewski, and Michał Jankowski, when in exile, could study the fauna of the Lake Baikal and other regions of eastern Siberia to a large extent thanks to the help of the Zoological Cabinet. They sent their materials to the Cabinet, and Taczanowski mediated sale of a part of the materials to the museums of Western Europe. The funds obtained in this way, together with donations from the Branicki brothers, made it possible for the exiles to survive and continue their studies.

W. Taczanowski cooperated also with Polish naturalists working in various parts of the world (among others Ludwik Młokosiewicz – forester and naturalist from the Caucasus, Jan Kubary – explorer of Oceania, Konstanty Jelski during his stay in Guiana and Peru), who enriched the Zoological Cabinet with valuable specimens.

In 1862–90 the Zoological Cabinet was an important European scientific institution housing a zoological collection and library which were very rich for contemporary possibilities of the country. The staff and co-workers of the Cabinet conducted wide-ranging studies on the systematics and distribution of the native and foreign fauna. Many animal groups, both from the area of Poland and from eastern Siberia, South America, Central Asia, Transcaucasia and other areas, were studied. Hundreds of new animal genera and species were described. Many publications had a pioneer character (e.g. studies on the fauna of the Lake Baikal carried out by Dybowski, or investigations on the spiders and birds of South America by Taczanowski). They have gained a permanent place in scientific literature and form a part of the world's scientific achievements.

During that period the Zoological Cabinet played an important role in the cultural development of the Warsaw centre, through scientific studies on a very high level and popularization of the latest achievements of natural sciences, which at that time had a great influence on the society.

In 1869 the Main School was closed and replaced by the Emperor's Warsaw University, with Russian as the official language. Initially the University employed some of the Polish scientific workers of the Main School, including A. Wrześniowski and W. Taczanowski. However, the growing russification pressure increasingly limited activities of the Polish staff of the Zoological Cabinet. At the same time the Branicki brothers, fearing that the collections might be sent to Russia, which possibility was more and more often discussed, stopped transferring materials they accumulated to the Cabinet and, upon advice from Taczanowski, established a private Zoological Museum.

After A. Wrześniowski's early retirement (1889) and W. Taczanowski's death (1890), N. W. Nasonov (1890–1906) and later J. T. Ščelkanovcev (1906–1915) were nominated heads of the Chair of Zoology and Zoological Cabinet. During that period the activity of the Zoological Cabinet was completely subordinated to the didactic needs of the Chair of Zoology, and as a result it ceased to be important as scientific institution. In 1915–1919 the Zoological Cabinet was administrated by consecutive heads of the Chair of Zoology of the Warsaw University.

The Branickis' Museum, established in 1887, was housed in the palace of Ksawery Branicki in Frascati Gardens (at present the Museum of the Earth, Polish Academy of Sciences is situated there). Its first head was W. Taczanowski's pupil, an outstanding ornithologist and explorer – Jan Sztolcman. The Branicki brothers kept sponsoring scientific expeditions: in 1883–85 Jan Kalinowski's expedition to Ussuri Territory and to the lake Chanka, in 1885–88 his expedition to Korea and Japan, in 1889–1902 to Peru. They bought collections from Polish collectors working in various regions of the world, e.g. from Tomasz Breja from Central Asia, L. Młokosiewicz from the Caucasus

and M. Jankowski from Eastern Siberia. The Branicki brothers accumulated a very rich library, containing mostly ornithological works.

During World War I a part of the Zoological Cabinet, including some types (e.g. *Dinomys branickii* from South America), was sent to Russia, to Rostov on the Don River. They were burnt at the beginning of the 20s, after the Russian authorities formally agreed to return them to Poland.

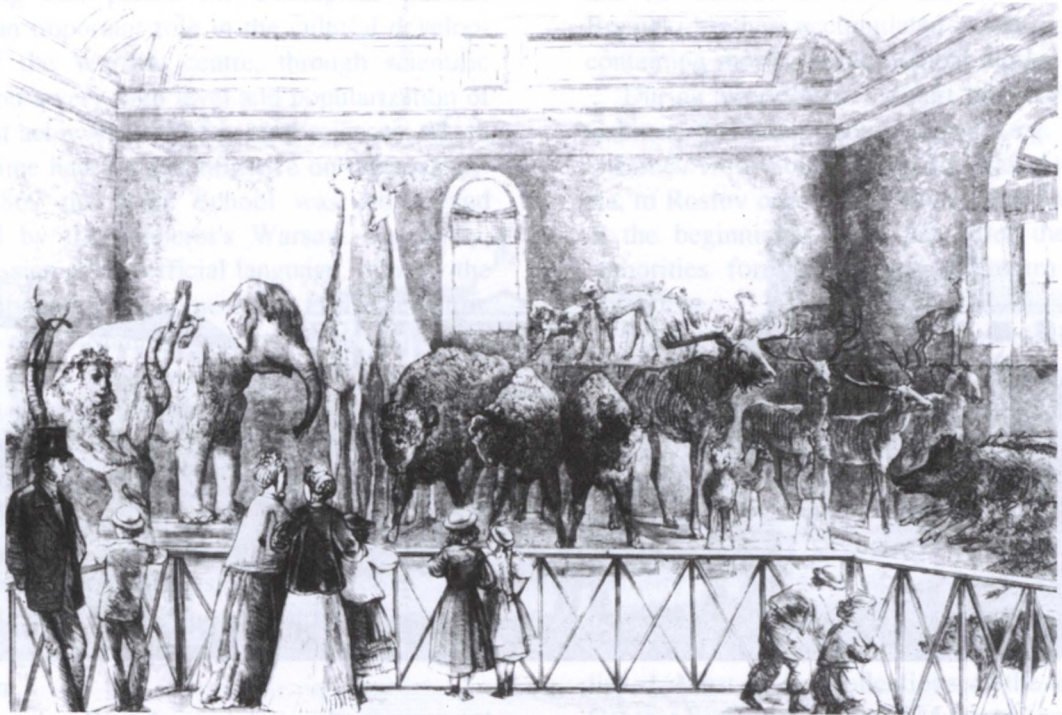
In 1919, with the restoration of the Polish State, a new stage in the development of the Museum started. On the initiative of the curator of the Zoological Cabinet at the Warsaw University – ornithologist Janusz Domaniewski – supported by professors Benedykt Dybowski and Michał Siedlecki, on the strength of the decree of the Ministry of Religion and Public Education of September 24th 1919, National Museum of Natural History – Zoological Department was established. Most of the collections of the Zoological Cabinet became part of the Museum (another part of the collections and the library were kept by the Department of Zoology of the University), as well as the library of the Branickis' Zoological Museum, donated to the Polish state by Ksawery Branicki. The Museum was still housed in the "museum" building at the University.

The first director of the Museum was a well-known malacologist, by profession army surgeon, Lieutenant-Colonel Antoni Józef Wagner. Till his demobilization the director's duties were fulfilled by the head of the Chair of Zoology of the University, Konstanty Janicki, with Jan Sztolcman as vice-director. In 1921 the name was changed to the Polish State Museum of Natural History – Zoological Department. The status of the Museum was finally established in 1928, on the strength of the decree of the President of Polish Republic, the new name being State Zoological Museum.

Between the Wars the institution developed significantly. The number of employees increased slowly but constantly, and in 1939 the staff comprised 31 persons. The Museum collection grew considerably. In 1921 A. J. Wagner donated to the Museum his snail collection, comprising several hundred thousand specimens, including several



Figs 1-2. Fig. 1 – Casimirus Palace in 1824, the first seat of Zoological Cabinet (1819-1823); lithography after drawing of J. F. Piwarski. Courtesy of Museum of Warsaw University. Fig. 2 – The building of the University in which Zoological Cabinet and later the State Zoological Museum was situated in 1823-1935. Drawing of J. Ryszkiewicz from 1882.



Figs. 3–4. Fig. 3 – Exposition of mammals. Gerson's drawing from *Tygodnik Ilustrowany*, ser 2, t. 3, 1859. Fig. 4 – Collection of birds, in the back the room of mammals (1888). Courtesy of Museum of Warsaw University.

hundred type specimens, and a very rich malacological library. Inheritors of Władysław Lubomirski donated in 1922 a very rich conchological collection, comprising over 8000 mollusc species, and a very valuable library. In 1929 Arkadiusz Kreczmer transferred to the Museum Jan Sznabel's collection of diperans of the families Anthomyidae and Muscidae. The collection included the fauna of nearly all Palaearctic, with types of over 90 species described by J. Sznabel. In the 30s Leon Retowski donated to the Museum a rich malacological collection accumulated by his father Otto von Retowski, who worked in Crimea on the turn of 19/20th c. One of the most valuable world's spider collections of Władysław Jan Kulczyński, including numerous types, together with the library, was purchased in that period.

The Museum collection was enriched with materials collected and studied by the Museum staff during their research in the country and abroad, in many European countries.

In 1919–1939 the Museum organized numerous scientific expeditions overseas. The first one, in 1921, to Brasil, was led by Tadeusz Chrostowski, head of the Neotropical Bird Department; he died in Brasil in 1923. Another member of the expedition, Tadeusz Jaczewski, brought it to completion and returned in March 1924, bringing very valuable and rich scientific collection – not only zoological, but also botanical, geological and ethnographic. He brought also a collection of Brazilian insects (30,000 specimens, including 10,000 butterflies), donated to the Museum by J. Czacki.

In that period also zoological expeditions to Mexico were organized (T. Jaczewski and T. Wolski – 1929), as well as to Egypt (Roszkowski 1930–1931), and three cruises of "Dar Pomorza" in the Atlantic Ocean (1931–32, 1933–34, 1938). During these expeditions members of the Museum staff: S. Feliksiak, T. Jaczewski, J. Nast and W. Roszkowski collected valuable zoological material of both marine and terrestrial fauna. Zoological materials were collected also on other occasions. Bogdan Kreczmer (son of the above-mentioned Arkadiusz Kreczmer), as a member of the museum staff, joined the expedition to Madagascar, organized by the famous writer Arkady Fiedler

(1938–1939) and brought c. 300,000 specimens of Madagascan insects, considerably enriching the entomological collection.

A very significant event in the development of the Museum was establishing its own publishing office, organized mainly by A. J. Wagner, W. Poliński and T. Jaczewski. In 1921 the first issue of the [Zoological Works of the Polish State Museum of Natural History] – *Annales Zoologici Musei Polonici Historiae Naturalis* – appeared. In 1930 *Fragmenta Faunistica* were published for the first time, and in 1933 – *Acta Ornithologica*. On the initiative of two staff members: T. Jaczewski and T. Wolski – the first Polish serial zoological publication was established: *Freshwater Fauna of Poland*. The journals and series published papers by the museum staff, by Polish zoologists from other institutions, and by foreign authors. The level of the publications and the editorial level were high, and the Museum journals were highly valued in the world, due to which the exchange grew rapidly and soon formed a basis for the development of the Museum library. All these journals are still published at present.

After establishing Museum in 1919, the Library received numerous donations which formed its basis. First of all there was the very rich library of the Branickis' Zoological Museum, including over 3,400 volumes, mainly ornithological. Individual libraries were also donated by: A. J. Wagner – 1176 volumes, J. Sztolcman – 670, J. Domaniewski – 1360, W. Lubomirski's inheritors – 305 volumes; also libraries of H. Dziedzicki and J. Sznabel, of several hundred volumes each, were incorporated into the Museum library.

In the period between the wars several valuable libraries of individual scientists were purchased after their death. The first to be mentioned is W. Kulczyński's library, including valuable volumes and reprints of arachnological papers. Also current literature – books and journals – was regularly bought, but the basis for the development of the library was exchange of publications. The exchange developed very rapidly. In the first year (1921) exchange with 12 institutions was started, in the next year – with 91, and in 1938 publications from 695 institutions were obtained through

exchange. In 1939 the Museum library comprised c. 60,000 volumes.

In 1935 a fire broke out in the Museum building, situated at the Warsaw University, but fortunately it caused no greater material losses. However, as a result of a serious damage to the building, the Museum had to find a new home. Due to the efforts of Janusz W. Domaniewski, then in capacity of the head of the Museum, it found a "temporary" housing in a building at Wilcza 64, where it is situated now. The new Museum building was larger, but had no exhibition halls where the collection could be displayed. A project of a new, proper Museum building was prepared at the beginning of 1939, and the construction was to start in the spring 1940.

In the 30s the State Zoological Museum was a well-developing institution, of its own range of research and an established position both in the structure of Polish science and internationally. Preparations for exhibition activity were also under way.

World War II caused serious losses for the Museum. Many members of the staff died or were scattered in the world during the war; out of 31 in 1939, only 19 employees resumed their work in 1945. Already in the first days of Warsaw siege in 1939 the Museum building was hit by several artillery projectiles, causing serious damage and destroying a part of the collection. After Warsaw siege the then head of the Museum, Tadeusz Jaczewski, with all the staff members who reported to work, secured the building, covering the damaged roof with linoleum from the floors, and protecting the broken windows with wooden planks. The German occupation authorities showed no interest in the Museum, the staff received no salary, and most of them had finally to look for another employment. On November 8th and 9th 1939, SS officers with workers appeared at the Museum. They selected and removed an array of valuable zoological specimens, c. 250 library volumes, and a part of equipment and furniture. At the beginning of winter the German occupation authorities employed a caretaker to guard the Museum and forbade the staff to enter the building. Only in the spring 1940 the Liquidation

Committee of the Ministry of Religion and Public Education granted several positions necessary to employ some staff who was to take care of the Museum property. The head was Kazimierz Tarwid.

During the War, the staff who reported to work and volunteers (among others Roman Kuntze, shot in 1944, students of the clandestine Warsaw University) arranged and catalogued zoological collection and library. Seizing the opportunity provided by the lack of interest of the German occupation authorities, the staff members who were active in resistance movement kept at the Museum underground press, armaments and explosives.

During the Warsaw Uprising (August-September 1944) the Museum building was not damaged, but the German army set fire to it, as a part of the total destruction of Warsaw after the fall of the uprising. The two topmost floors (IV and V) were then completely burnt. After the uprising the Museum staff members who were not deported to Germany, tried to secure the collection. In October 1944 Stanisław Feliksiak managed to include the Zoological Museum in the action of protecting cultural values by the Committee of Evacuation of Cultural Values in Warsaw. However, only as late as November 3rd 1944 S. Feliksiak and Stanisław Adamczewski entered the Museum for the first time. They found that the building was partly burnt. They extinguished the fire that still smouldered in some places, and started to secure the collection. From November 3rd till January 15th 1945 they managed to secure all the zoological collection that had remained, and the library. The losses resulting from the fire in the building were very serious. The entomological collection was almost completely damaged, as well as the unique skull of the extinct sea cow (*Rhytina stelleri*), donated by B. Dybowski and hidden from the occupants among entomological cabinets; c. 1,700 library volumes were burnt, and the entire archive containing many valuable documents from the beginning of 19th c.

The most valuable alcohol and osteological specimens, buried during the uprising in the Museum yard, were saved. Of more valuable

collections, the following were saved: ornithological, malacological, and arachnological, and collection of insects from Madagascar – all of them were kept in the taxidermic laboratory in the Museum cellar.

During the War an array of natural history collections and libraries from other institutions found their home in the Museum building and were saved: e.g. a part of the zoological collection and library of the Department of Zoology, Warsaw University, evacuated from the University building, herbarium of T. Wiśniewski's from the Botanical Department of the University, library of B. Hryniewiecki – head of the Botanical Department of the University, and library of R. Kobendza – head of the Chair of Dendrology, Warsaw Agricultural University.

After liberation of Warsaw, on January 19th 1945, the first staff members appeared in the partly damaged Museum building. Stanisław Feliksiak was nominated head of the Museum. The staff immediately started securing the building and the collections. After the most urgent work was completed, based on the authorization issued by the Ministry of Education, Ministry of Administration and the Chief Commanding Staff of the Polish Army, the Museum employees undertook a search for and securing of collections and libraries of the former German institutions, and those abandoned by private amateur-collectors. The collections, in spite of very difficult working conditions, were secured and brought to the Museum. The most important were: the remaining part of the collection of the Natural History Museum in Szczecin, collection of hummingbirds and butterflies from the Museum in Cieplice, F. Kessel's beetle collection comprising c. 150,000 specimens, including a very rich Brazilian weevil collection, and O. Karl's dipteran collection.

When military operations in Europe had ceased, from December 1945 till November 1946, the former head of the Museum – Tadeusz Jaczewski, as a reclaim liaison officer at the Polish Revindication Commission, searched for and secured Polish zoological collections and libraries plundered by the Germans during the war. As a result

most of the deported collections returned to the Museum.

The end of the War and the return of the country to its normal functioning was a difficult period for the State Zoological Museum. Only 18 members of the staff resumed their duties, and the building was seriously damaged. However, thanks to the energy of the Museum's director – Stanisław Feliksiak – and the commitment of all the staff, as early as in 1948 renovation of the building was completed, as well as a preliminary arrangement of the Museum's own collections and the secured German collections. In 1947–50 several new staff members were employed, most of whom were zoology students of the Warsaw University (Regina Bańkowska, Ryszard Bielawski, Kazimierz Galewski, Maciej Mroczkowski, Bohdan Pisarski, Adolf Riedel, Zbigniew Świrski, Przemysław Trojan). Collecting material and research abroad – in Albania, Yugoslavia, Bulgaria and Caucasus – were continued. In 1947 publication of the Museum's journals was resumed, as well as exchange.

In that period the Museum collection increased considerably also due to numerous private donations. Szymon Tenenbaum's wife donated to the Museum his rich collection of beetles from all over the world (c. 250,000 specimens), together with the library (both preserved in the cellar of the administration building of the Warsaw Zoological Garden) (S. Tenenbaum, dead from typhus in the Warsaw Ghetto in 1942, was a friend of the Zoo director Jan Żabiński). The collections of butterflies and birds of Ludwik and Marian Masłowski were donated to the Museum by their brother Władysław Masłowski. G. Heinrich donated his pre-war ichneumonid collection, comprising several hundred types.

The Museum Library also received numerous donations, both from private persons, and from native and foreign institutions. The latter were e.g. Inter Allied Book Center in London, American Book Center for War Devastated Libraries in Washington (417 volumes), Naturhistoriska Museet in Gothenburg (290 vols), British Council in Warsaw (284 vols).

In 1947–52 the Museum obtained considerable subventions for purchase of books and journals,

which made it possible not only to subscribe to many foreign journals, but also to purchase several dozen journals (complete sets), previously unavailable in the country. These comprised such important journals as *Annals of the Entomological Society of America* (vols. 1–41) of 1908–1948, or *Zoologische Jahrbücher* – a total of 191 volumes of 1886–1950.

In 1946 a small zoological exhibition was organized, destined mainly for school children.

A next stage in the development of the Museum started in 1952. With the establishment of the Polish Academy of Sciences, the Zoological Institute of the Academy was founded. The State Zoological Museum in Warsaw and the Natural History Museum in Łódź formed a part of the Institute. Tadeusz Jaczewski was director of the Institute. In 1964 two museums: Natural History Museum in Poznań and Natural History Museum, PAU in Cracow were incorporated in the Institute, and the Department of Mammalian Research was established in Białowieża. In 1958 the Bird Ringing Station, established already between the wars and forming a part of the State Zoological Museum, was moved to Górkki Wschodnie near Gdańsk, where, preserving its former function, it was changed into a Field Ornithological Station.

Establishing the Zoological Institute within the Polish Academy of Sciences brought a financial improvement, which made it possible to employ more staff, both scientific, technical and librarians, and purchase of new research equipment. The range of field studies in the country increased considerably.

Thanks to international agreements of the PAS with academies of other countries the Institute employees could make scientific visits and have access to collections of such institutions as Zoological Institute in Leningrad (Sankt Petersburg), Natural History Museum in Budapest, or Natural History Museum at Humboldt University in Berlin. Abroad field research was carried out mainly in countries of south-eastern Europe (Bulgaria, Greece, Yugoslavia, Romania, Hungary) and in Georgia; expeditions to SE Asian countries were also organized (Indonesia, Vietnam, China, Korea, Mongolia), as well as to Cuba. The trips enriched

the Institute collection with hundreds thousands specimens of several thousand species earlier not represented in the collection, hundreds of new species and their types. The wide research possibilities brought about a considerable increase in the range of research, both systematic and faunistic. The number of monographs of the fauna of large geographic areas increased considerably.

Within the publishing activities of the Institute, publishing of the three already existing journals was continued, and new journals and series were established in Warsaw: *Memorabilia Zoologica*, *Catalogue of the Fauna of Poland*, *Fauna of Poland and Identification Keys to Polish Invertebrates*; in Cracow: *Acta Zoologica Cracoviensia*; and in Białowieża: *Acta Theriologica*. On the initiative of T. Jaczewskia a serial publication *Identification Keys to the Insects of Poland* was started, the "owner" being the Polish Entomological Society, and the editorial board was at the Institute.

The rank of the Library was also elevated; it was regarded as a central zoological library, of nation-wide function. This resulted in increased purchases, from c. 4,000–5,000 volumes in 1951–55 to c. 7,000 in 1956.

In 1960 the hitherto exhibition was replaced with a new zoological exhibition in the halls of the PKiN (Palace of Culture and Sciences). It was not large but made it possible to display at least a part of the Institute's collection. Due to modern solutions, co-operation with artists the exhibition was then one of the most interesting zoological exhibitions in Europe. It included two permanent exhibitions: "Review of invertebrates (systematically arranged)" and "Vertebrate evolution"; besides, one hall was devoted to selected zoogeographic problems, and was sometimes replaced by temporary exhibitions.

The development of the Institute was inhibited at the beginning of the 60s, when the number of positions, as well as funds, started being constantly decreased. For some time the effects were not visible, since the scientific staff of the Institute was young and raised its qualifications each year; as a result both the quality and the quantity of

publications kept raising, counterbalancing the decreasing number of employees.

At that time also departments of the Institute became independent. In 1957 the Department of Mammalian Research in Białowieża separated, in 1962 the Cracow Department transformed into an independent Department of Systematic and Experimental Zoology, Polish Academy of Sciences (at present Institute of Animal Systematics and Evolution, PAS), the department in Łódź as a Museum was incorporated in the Chair of Evolutionary Science of the Łódź University; in 1975 the department in Poznań, after its fusion with the Field Station of the Institute of Ecology, PAS, in Turew, formed a Department of Agricultural Biology. Because the departments of the Institute in Łódź and Poznań conducted research on aquatic fauna, their transfer to other institutions resulted in a change of research profile of the Institute, where the aquatic studies and theriology were now neglected.

In that period the Institute was refused further funds for zoological exhibition, which in 1976 passed under the administration of the Botanical Garden, PAS, as a germ of the so called Evolution Museum. The Museum never came into existence as planned, but a part of zoological specimens were preserved at the exhibition "Evolution on land" organized by Zofia Kielan-Jaworowska of the Palaeobiology Department (at present Institute of Palaeobiology, PAS).

At that time, because of the necessity of taking the strain off the floors of the 80 year old building of the Institute at Wilcza street, and the necessity to separate laboratories from collections, a temporary storehouse for collections and a small laboratory building were erected in Łomna-Las, c. 30 km from Warsaw.

In the 70s, in order to increase the engagement of science in economic problems, a system of objective financing of science was introduced. A plan of basic research, associated with current directions of the country's development, was then prepared at the Zoological Institute.

The main attention was paid to the native fauna, both environmentally and regionally. In both these directions the Institute played a role of

organizer of scientific teams and coordinator of research in the entire country. Studies on the fauna of typical habitats in Poland, carried out with quantitative methods, had a zoocenological character. They resulted in a picture of the main types of land habitats in the Polish Lowlands, considering the effect of human economic activities. During the studies, the fauna of city parks, riverine forests, wet meadows, sparse oak forests and pine forests was studied. Studies on the city fauna, started in 1974 and then of a pioneer character, proved to be especially interesting. Their results were applied during designing an "ecological district" Białoleka Dworska in Warsaw, which unfortunately was never constructed. Regional faunistic studies were also of complex and collective character. They included Bieszczady Mts (1967–1970), Pieniny Mts (1971–1974), Świętokrzyskie Mts (1982–1985) and Roztocze (1986–1990). In these studies, coordinated by the Institute, numerous zoologists took part, from many scientific institutions in Poland.

Studies on social insects, mainly ants and on their role in forest protection, were also conducted.

Systematic and zoogeographic research was continued and coordinated on a whole-state scale; it resulted in numerous zoological monographs, determination keys, catalogues of the Polish fauna and volumes of the Fauna of Poland. Unfortunately, the funding system introduced in 1971, did not favour the museum activities of the Institute and these were removed to the background.

At that period the Institute obtained funding not only from the Central Programmes of Basic Research organized by PAS, but also from other sources, which enabled the development of staff and purchase of equipment, as well as necessary renovations and modernizations of the building at Wilcza street.

At the end of 1990 organizing and financing great research programmes was abandoned, and funds obtained from the State Committee for Scientific Research and individual grants received by the staff formed a basis for the activities of the Institute. The economic situation of the country and the changed financing system resulted in insufficient funds. The Institute was forced to limit

its activities and decrease the staff; a considerable re-orientation of the institution took place. The Ornithological Station in Górkki Wschodnie was transferred to the Institute of Ecology, PAS, by the authorities of the Polish Academy of Sciences.

At half of 1992 the Institute changed its name to the Museum and Institute of Zoology. The new name better reflected the present functions and referred to the tradition. Exhibition activities were resumed, the first exhibition being "Animals of South America in the Collection of the Museum and Institute of Zoology PAS", opened on February 14th 1994 at the Museum of Evolution in the Palace of Culture and Science in Warsaw. In the same year, and in subsequent years several exhibitions were organized; because of the lack of own exhibition halls they were housed in various museums in Warsaw and other cities in Poland.

At the same time intense scientific research is conducted at the Museum and Institute of Zoology PAS, concentrating on the following topics: systematics of invertebrates, mainly insects; faunistics with special reference to regions and typical habitats of Poland; ant sociobiology and mechanisms of animal evolution. Work on the preparation of identification keys and catalogues of the Polish fauna is also carried out. Data bases on the species diversity of the Polish fauna are created. The Museum of Zoology maintains and makes accessible its zoological collections.

The Museum and Institute of Zoology publishes four periodicals: *Annales Zoologici*, *Acta Ornithologica*, *Fragmenta Faunistica* and *Memora-*

bilia Zoologica, and three serial publications: *Catalogue of the Fauna of Poland*, *Fauna of Poland* and *Identification Keys to Polish Invertebrates*. The Library comprises over 230,000 volumes and 5,378 archival items. The exchange involves over 770 foreign and 21 native contracting parties; besides the institution sells its publications.

At present the institution employs 74 staff members, including 13 professors and associate professors and 16 doctors.

On March 1st 1995 a ceremonial session of the Scientific Council was held at the Museum and Institute of Zoology, devoted to the 175 anniversary of the Zoological Collections and the 75 anniversary of the Museum of Zoology in Warsaw. The President of the Polish Academy of Sciences, Prof. dr hab. Leszek Kuźnicki, attending the session, in his speech drew attention to the significance of the institution for the development of science and culture in our country, and stressed that despite all the obstacles, it basically preserved its continuity. During the session it was also stated that the institution in the future should be an important research institute, where, based on the accumulated collections, research is conducted on the diversity of animal world in Poland and all the world, the systematics of animal world, and a museum institution organizing exhibitions and didactic activities for the society, so much needed at the time of common threat to the environment (see quarterly journal of Polish Academy of Sciences "Nauka", 1995, No 3, 169–213).