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The Fate of the Brazilian Collection of the State Zoological Museum in Warsaw Before and During the Second World War (1939–1945)¹

Summary: Before the Second World War, the State Zoological Museum in Warsaw was a dynamically functioning research institution, characterised by its rapidly growing collections of contemporary animals for scientific, educational and exhibition purposes. The specimens were mainly collected during expeditions organised by the museum's staff. One of the explorers was Tadeusz Chrostowski (1878–1923), an ornithologist and head of the Neotropical Birds Department of the Museum. The naturalist organised three expeditions to Brazil in 1910–1911, 1913–1915 and 1921–1923. He explored areas of the state of Paraná that were considered the least explored. Chrostowski's last journey, known as the Polish Zoological Expedition, received the most attention in scientific and social circles. It was the leading overseas scientific expedition organised by the newly revived Polish

¹ We wish to express our gratitude to Maria Kościeszka and Maria Główna (Museum and Institute of Zoology Polish Academy of Science, Warsaw) for supplying information and their valuable comments and remarks that have influenced the work as a whole.

state. In addition to Chrostowski, the research team included the entomologist Tadeusz Jaczewski (1899–1974) and the taxidermist Stanisław Borecki (1888–1968). The team aimed to study the fauna of southern and central Paraná, specifically in areas with araucaria humid forests inhabited by Polish colonies, subtropical forests, and along the rivers Ivaí, Paraná and Iguaçu. A collection of over 22,000 zoological specimens was one of the outcomes of the fieldwork. The material included many species of birds first found in the Paraná. The collection was taken to Warsaw in 1924 and was available to researchers in the museum until 1939. The Second World War was a tragic event in the history of the institution. Not only did it interrupt scientific and research activities, but it also contributed to the loss of part of the collection. Among the museum's war losses were more than 2 million animal specimens, including more than 20,000 of Chrostowski's specimens. The collections were destroyed, confiscated and exported and many were dispersed. Research into the history of Chrostowski's collection aims to reconstruct and describe it, as well as to spread knowledge of the wartime losses suffered by the State Zoological Museum during the Second World War.

Keywords: State Zoological Museum, scientific expeditions, fauna of Brazil, natural history collections, World War II, wartime losses

Introduction

The National Museum of Natural History was established in Warsaw in 1919. It incorporated the animal collections of the Gabinet Zoologiczny w Warszawie (Zoological Cabinet of the University of Warsaw), established in 1818 and the Muzeum Zoologiczne Branickich (Branicki Zoological Museum), established in 1887. From 1921, the institution operated under the name of the Polish State Museum of Natural History and from 1928 as the State Zoological Museum.² The ornithologist Jan Sztolcman (1854–1928) was appointed the museum's first deputy director in 1919. He was succeeded in 1921 by the malacologist Antoni Wagner (1860–1928), who assumed the position of director. During these times, the Museum had three curators, who were responsible for the following departments: invertebrates (except insects) — malacologist Władysław Poliński (1885–1930), insects — entomologist Jan Prüffer (1890–1959) and neotropical birds — ornithologist Tadeusz Chrostowski (1878–1923), who had been employed since 1919 (Fig. 1). Between 1919 and 1939, in addition to the above-mentioned specialists, about 15 other zoologists worked at the Museum on a larger or smaller time dimension.

2 See: Kazubski L. 1996, 7–19; Iwan D., Mierzwa-Szymkowiak D., Wawer W. 2021, 241–254; Daszkiewicz P., Iwan D. 2020, 77–87.

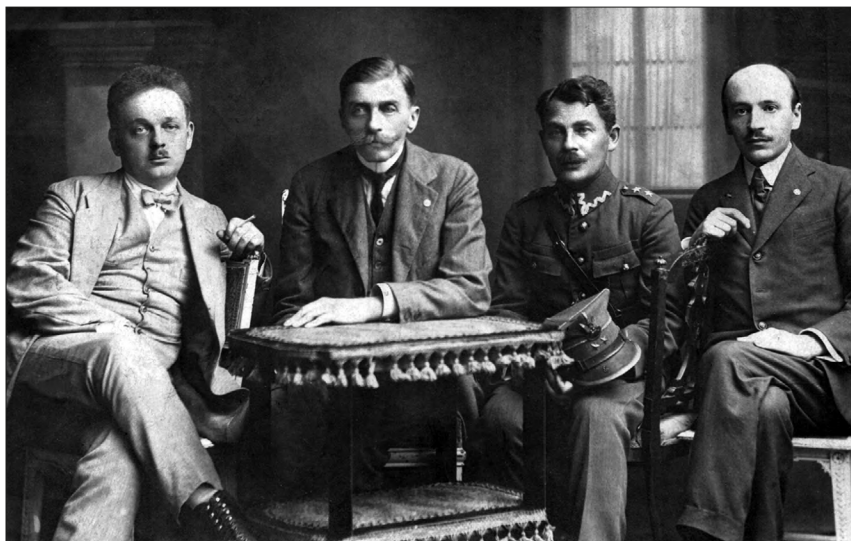


Fig. 1. Naturalists associated with the State Zoological Museum: ornithologists Janusz Domaniewski (1891–1954), Jan Sztolcman, Tadeusz Chrostowski, initiator of the Polish Zoological Expedition and malacologist Władysław Poliński (Source: AMIZPAN, sign. KEF160)

The main tasks of the institution were: researching and compiling scientific information on local and global fauna; collecting, storing, cataloguing, describing and providing access to the collection; organising expeditions both domestically and abroad to expand the collection; and disseminating natural knowledge to the public. The scientific results were documented in publications, primarily focusing on the animals of Europe, South America and Africa.³ Thanks to numerous gifts, purchases and exchanges, the museum's zoological collection developed rapidly. It became one of the largest collections in Poland and is scientifically significant in Europe. The number of specimens totalled about 4 million by the late 1930s. The collection was famous for its material (especially birds) collected in South America, which included many species new to science. South American birds collected before 1919 (before the establishment of the National Museum of Natural History) came from the explorers Konstanty Jelski (1837–1896) and Jan Sztolcman. These two naturalists worked largely on behalf of the patrons of the Zoological Cabinet — Counts Aleksander Branicki (1821–1877) and Konstanty Branicki (1824–1884). Jelski collected material in French Guiana between 1866 and 1869, and in Peru from 1869 to 1873, while Sztolcman conducted fieldwork in Peru from 1875 to 1881, and in Ecuador between 1882 and 1884.⁴

³ AMIZPAN, sign. 1/99 (2256), 1.

⁴ Piechnik Ł., Kurek P. 2016, 63.

In 1919, Jelski's and Sztolcman's collections became part of the National Museum of Natural History's holdings, where they were curated by Chrostowski. By that time, this ambitious ornithologist, with considerable collecting experience and extensive knowledge of ornithology, had undertaken two trips to Brazil (1910–1911, 1913–1915) and was preparing for a third (1921–1924). It is worth noting that the earlier expeditions of Chrostowski and his predecessors, Jelski and Sztolcman, were undertaken during the period of partitions and the absence of Polish statehood. Chrostowski's third overseas expedition, conducted after the re-establishment of the Polish state, was therefore a significant event that was highly regarded within scientific and social circles. The initiative aimed to reaffirm the importance and contributions of Polish scientists and explorers to the advancement of biological sciences worldwide. The material collected during the expedition documented natural discoveries and verified the presence of Polish naturalists in a specific region at a particular time. This was especially important given the pioneering nature of the research undertaken. Undoubtedly, Chrostowski inspired other naturalists at the Museum to embark on scientific and exploratory expeditions. Before the Second World War, expeditions were organised by Tadeusz Jaczewski (1899–1974) and Tadeusz Wolski (1890–1959) to Mexico (1929); Waław Roszkowski (1886–1944) and Stanisław Felisiak (1906–1992) to Brazil and Martinique (1931–1932); Roszkowski and Janusz Nast (1908–1991) to Brazil (1933–1934); and Jaczewski and Felisiak to Nova Scotia, Newfoundland, and the French islands of Saint Pierre and Miquelon (1938).⁵

Written sources on the wartime fate of the State Zoological Museum and its losses during the war are scarce. Many archives were lost at that time. This makes it difficult to conduct research to trace the history of natural materials from the collected to the present. Documents from the post-war period are often general and refer approximately to what the museum had and lost during the war. This article presents data from literature and archives, as well as the results of a museum search, in order to approximately estimate the extent of losses in one of Poland's most important zoological collections. A collection of Brazilian animals collected by Chrostowski, which is scientifically unique, was analysed.

Chrostowski's expeditions to Brazil

Chrostowski made three trips to the State of Paraná (Southern Brazil), each in a different political context, both in Brazil and in Poland. The first expedition happened in the years 1910–1911. Chrostowski left as a settler, like thousands of other Poles who

5 See: Wąsowska M., Winiszewska-Ślipińska G. 1996, 29–34. AMIZPAN, sign. 1/360 (5591), 5.

emigrated for economic reasons to Brazil. At that time, Poles formed the majority of farmers in Paraná. Their agricultural products were of high quality and commanded high prices. European settlers (mainly of Polish, Ukrainian, German and Italian origin) contributed to the ethnic and cultural diversity that exists in Paraná today.⁶

Initially, Chrostowski intended a permanent residence in Paraná. However, the enormous living and financial difficulties he encountered forced him to abandon his plan. As a settler, he was required to dedicate almost all of his time to agricultural practices. In the background were his scientific research and collecting birds, which he cared about the most. On this first expedition, Chrostowski lived mainly in a small settlement called Vera Guarani, close to the Iguaçu River. Sometimes he visited some Polish immigrant colonies (e.g. Rio Claro, Mallet, Irati), and also the sources of the Ivai River.⁷ The geographical area covered included large extensions of the Araucaria Forest and campos (fields) in the central and southern portions of Paraná. Chrostowski planned research in even more distant places. He had hope that one day, under better conditions, he would return to Paraná to complete his work.

Upon returning to Poland, he continued his studies on South American avifauna, maintaining close contact with Brazilian ornithological centres (São Paulo, Belém, Rio de Janeiro), European centres (England, Germany, France, Russia) and especially with Carl Eduard Hellmayr (1878–1944) (Germany). At that time, Hellmayr was not only an expert on neotropical birds but also the director of the Zoological Museum in Munich. He provided a subsidy that enabled Chrostowski to go on another trip to Brazil. In return for the assistance he received, Chrostowski undertook to send duplicates of the collected birds to the museum in Munich.⁸ The second trip (1913–1915) took place in a wartime setting. It coincided with the First World War and also with a civil war that was happening in Paraná, called *Revolta do Contestado* (1912–1916). For this expedition, Chrostowski repeated the procedure of the previous trip. This time he settled in Antonio Olinto (where he worked as a Polish language teacher) and visited several nearby places (e.g. Afonso Pena, Curitiba, Rio Negro, São Mateus do Sul), to enrich the representation of his collections. Chrostowski wanted to collect as many species as possible.⁹ He would also realise his intention during a third expedition.

In 1921, Chrostowski initiated a new trip to Brazil. The Polish Zoological Expedition was one of the first nature expeditions in the newly reborn Polish state. The entomologist Tadeusz Jaczewski (1922–1924), also came on this trip¹⁰ and the taxidermist

6 See: Straube F.C., Urben-Filho A., Kopij G. 2007, 87–116; Ziomek K. 2018, 145–186.

7 Straube F.C. 2016, 20–58.

8 Jaczewski T. 1923, 4.

9 Straube F.C. 2016, 58–140.

10 See: Straube F.C. 2016, 152–154.



Fig. 2. Tadeusz Jaczewski, member of the Polish Zoological Expedition (Source: AMIZPAN, sign. KEF648)

Stanisław Borecki (1888–1968)¹¹ (Fig. 2–3). The team's goal was to explore and describe the fauna of an unexplored area of Paraná, which had never been visited by any naturalist. Their route was a very long one, starting in Mallet (central Paraná) and, from there, covering the entire territorial extension of the state. For their objectives, they visited small villages (e.g. Guarapuava, Cândido de Abreu, Guaíra), farms and settlements (e.g. Rio Claro) of Polish immigrants and then sailed the Ivaí River (using rustic solid wood canoes) and, later, the river Paraná, until arrival in Foz do Iguaçu.¹²

It was during this last trip that, on April 4, 1923, Chrostowski died at the age of 44, due to a health complication (pneumonia) resulting from malaria acquired in Porto Mendes.¹³ He was buried in a cemetery that today belongs to the Iguaçu National Park. There since 2023, is a monument celebrating his impressive contribution to Natural History in Southern Brazil. With the death of his chief, Jaczewski completed the work after heading east to Curitiba and, finally, arriving at the port of Paranaguá, from where he returned alone to Poland.

During the entire time dedicated to the expedition, the group covered around 2,000 km, visiting Araucaria forests, campos (open fields) and the luxuriant semi-deciduous forests of the western region of Paraná. This was the largest ornithological expedition ever conducted in Paraná.

11 Stanisław Borecki (1888–1968) was born in Sudova Vyshnia (now Ukraine). He was the son of Andrzej Borecki and Malwina Borecka, née Hukiewicz. He graduated from a teacher's seminary in his hometown in 1911. He was a commander of rifle teams. In 1912, Borecki went to Brazil, where he worked as a teacher. He became one of the first members of the Polish Rifle Association in South America. He returned to the country with the Polish Army in France, formed during the First World War. In 1921–1922, he was a member of the Polish Zoological Expedition initiated by Chrostowski. The invitation to Borecki to join the expedition was based on his previous stay in Brazil and his skills. Borecki was a hunter and preparator who specialised in ornithology. He was renowned for his knowledge of the birds of Paraná. He left the expedition in mid-1922 and decided to stay in Brazil permanently. He lived for many years in Cândido de Abreu. Borecki was active in education, teaching children of four nationalities: Polish, Russian, German and Brazilian. He was also involved in horticulture, cultivating European and South American fruit trees. He developed the cultivation of mulberry trees for the breeding of silkworms. He collaborated with the Butantan Institute in São Paulo in the acquisition of venomous reptile species for serum research. Stanisław Borecki died in Linha Ivaí in southern Brazil. PAHB. Birth Certificate of Stanisław Borecki; Zieliński S. 1932, 37; Jaczewski T. 1972, 93. Isaakowa M. 2011, 121–125.

12 Straube F.C. 2016, 140–245.

13 Gajl K. 1923, 631–632; Jaczewski T. 1925, 349–350.



Fig. 3. Stanisław Borecki, member of the Polish Zoological Expedition with his pupils (Source: PAHB)

Chrostowski's contribution to the state of knowledge of Brazil's nature

During his first trip to Brazil, Chrostowski collected more than 150 bird specimens belonging to about 100 species.¹⁴ Almost half of the species were discovered for the first time in Paraná. Chrostowski donated all the collection to the Polish Tourist Society, and a smaller part was subsequently transferred to the Branicki Zoological Museum.¹⁵ The material from the second voyage, comprising about 500 specimens, including rare and new species, was incorporated into the collection of the State Zoological Museum.¹⁶ The most varied and numerous material was collected by Chrostowski together with Jaczewski and Borecki during their third trip to Brazil. Although they concentrated on collecting birds, they also amassed a large number of specimens from other animal groups. During the expedition, they stored their collections in the Consulate of the Republic of Poland in Curitiba. By 1923, the material assembled there, packed into twelve boxes, included: 6,011 beetles, 2,550 other insects (including beetles and dragonflies), 20 test tubes of dragonflies, approximately 500 molluscs, 40 test tubes of myriapods, 62 test tubes of internal and external parasites (including bird parasites), 10 amphibians, 900 birds, 21 bird skulls and 14 mammals.¹⁷ The museum's activity report for 1924

14 See: Chrostowski T. 1912, 452–490.

15 Chrostowski T. 1912, 458.

16 Chrostowski T. 1921, 31–40; Wagner A. 1926, 280.

17 Poliński W. 1923, 119; Sztolcman J. 1923, 227; Jaczewski T. 1972, 94.

mentions an acquisition of animals collected in Brazil by Chrostowski's team. The material included approximately 20,000 insects, more than 300 molluscs, about 100 myriapods, more than 1,200 birds (about 260 species), as well as specimens of arachnids, worms, amphibians, reptiles and mammals.¹⁸ Despite the discrepancies in the number and type of specimens, the two descriptions (the consulate's boxes and the Museum's acquisition report) confirm the size of the collection amassed in Brazil and brought to Warsaw for scientific purposes. The material found by Chrostowski and his collaborators was one of the first collections to come from the Paraná region, which was characterised by a high species diversity and number of specimens (Fig. 4). Its importance was, and still is (despite war losses), all the greater when one considers that many species can no longer be observed in southern Brazil. This is due to the massive environmental destruction that has taken place since the 1950s. At present, these materials are used in documenting biodiversity as well as the geographical distribution of animals. They provide materials for different research in systematics as well as anatomy, ecology and genetics.

Chrostowski's zoological research in Paraná was pioneering. His main aim was to study and describe the avifauna of Paraná, which had only been visited by a few naturalists, such as the Austrian ornithologist Johann Natterer (1787–1843) between 1820 and 1821, or collectors like Ernst Garbe (1853–1925), who gathered material for the Museu Paulista in São Paulo between 1901 and 1902.¹⁹ Chrostowski mainly acquired specimens representing rare species (with a narrow or wide distribution range in Brazil), unavailable in European museums, e.g. in Berlin, Paris and London, not previously found in Paraná, or known from single specimens collected 100 years earlier by Natterer.²⁰ Therefore, the collection work of Chrostowski was not intended to reach large numbers of specimens, but rather representatives of species that could in themselves illustrate the avifauna of Paraná. Chrostowski was an accomplished collector and a keen observer. He connected systematic and field ornithology. Therefore, he can be considered one of the precursors of the so-called New Ornithology (Stresemann revolution). This meant that the variations of museum specimens were less important for him, and he was more focused on the natural history of the birds in their environmental context. As one of the first ornithologists, he observed in detail the habits of birds exclusive to the southern part of the Atlantic Forest which were previously unknown. The examples of such species are the Canebrake Groundcreeper (*Clibanornis dendrocolaptoides*), Araucaria Tit-Spinetail (*Leptasthenura setaria*), Mottled Piculet (*Picumnus nebulosus*), the Three-toed Jacamar (*Jacamaralcyon tridactyla*), Brazilian Merganser (*Mergus octosetaceus*) and even a species extinct in the wild at present, the Purple-winged Ground Dove (*Paraclaravis geoffroyi*). The great importance

18 Wagner A. 1926a, 270.

19 Chrostowski T. 1912, 456.

20 Sztolcman J. 1925, 107–196; Straube F.C., Urben-Filho A., Kopij G. 2003, 226; Mlíkovský J. 2009, 17–180.

of Chrostowski's work was also its geographic originality. Although other naturalists had already travelled to some regions of Paraná, he was the first to dedicate himself entirely to that State and, in addition, he was also the first to venture into the interior. Furthermore, he was a pioneer in publishing a study exclusively on the birds of Paraná, which earned him the title of Patron of Ornithology of Paraná.²¹



Fig. 4. The specimens of Brazilian birds from Chrostowski's collection
(Photo: D. Mierzwa-Szymkowiak)

21 See: Chrostowski T. 1912, 452–500.

The fate of the State Zoological Museum and its collections during the war

The Second World War was a tragic chapter in the history of the State Zoological Museum. During the German attack on Warsaw in 1939, the museum building sustained artillery damage. The destruction was compounded by looting conducted by an SS unit, the Sonderkommando Paulsen. The unit arrived at the Museum in November 1939 and transported four lorry-loads of animal specimens, books and optical equipment to Salzburg, Austria.²² At the turn of 1939 and 1940, the German administration, known as the Liquidation Commission of the Ministry of Religious Denominations and Public Enlightenment, began to oversee the museum. The Commission initially banned staff from entering the museum and from undertaking scholarly work. It later relaxed the restrictions by agreeing to allow a small group of staff to conserve the collection.²³

The outbreak of the Warsaw Uprising in 1944 was another test for the Museum and its staff. The Museum's material losses during the uprising included bullet-shattered display cases and specimens of animals kept in preservatives.²⁴ The drama began after the collapse of the Uprising, when the Germans launched a campaign to destroy Warsaw. During this time, the Museum was left unattended, its collections at risk of arson and looting. The mission to save the Museum and the collection was undertaken by a small group of staff who, with the support of the Committee for the Evacuation of Cultural Property²⁵ from Warsaw, participated in illegal trips to the city. In early November 1944, the staff managed to reach the museum. They found smoking ruins on the first, second and third floors, which housed archives and library materials, and on the fourth and fifth floors, where insect collections were kept. Staff launched an operation to secure the materials and remove them from the museum. As part of the campaign to evacuate cultural artefacts from Warsaw, many museum and library materials were transported by train to Piotrków Trybunalski. These included more than 1200 boxes of skins of domestic and foreign birds (including Brazilian birds from Chrostowski's collection), 21 boxes of about 50,000 shells and 40 bags of books, manuscripts and catalogues.²⁶

In December 1944, staff dug three pits in the frozen ground in the museum's courtyard (Fig. 5). They hid some 6000 glass jars containing specimens of invertebrates

22 Zabłocki W. 2020, 83.

23 Daszkiewicz P. et al. 2016, 40; Daszkiewicz P., Iwan D. 2016, 435–436.

24 Zabłocki W. 2020, 84.

25 The Committee for the Evacuation of Cultural Property was established in Pruszków in 1944. Its chairman was Eugeniusz Łopuszański, and its member was Stanisław Feliksiak, who was appointed to organize the rescue of the State Zoological Museum's assets. See: Daszkiewicz P. et al. 2016, 41.

26 Daszkiewicz P., Iwan D. 2016, 436; Daszkiewicz P. et al. 2016, 41–43.

(including molluscs and echinoderms) and vertebrates (including fish, amphibians and reptiles) in fluid preservatives. Workers were aware that so-called wet specimens could be damaged in transit. In turn, leaving the glasses unprotected in the museum exposed them to destruction. Ten crates of stuffed animals and bird skins, four crates of mammals and skulls, over a million mollusc shells and 221 sacks of books were also placed in the pits. In January 1945, the museum staff prepared a fourth pit. More than 800 wet specimens, 53 boxes of bird and mammal specimens and 195 sacks of books were buried there.²⁷ The sudden offensive of Soviet and Polish troops in early 1945 saved the collection from deportation or destruction. However, the museum building was already badly damaged, and the rooms were destroyed (Fig. 6).

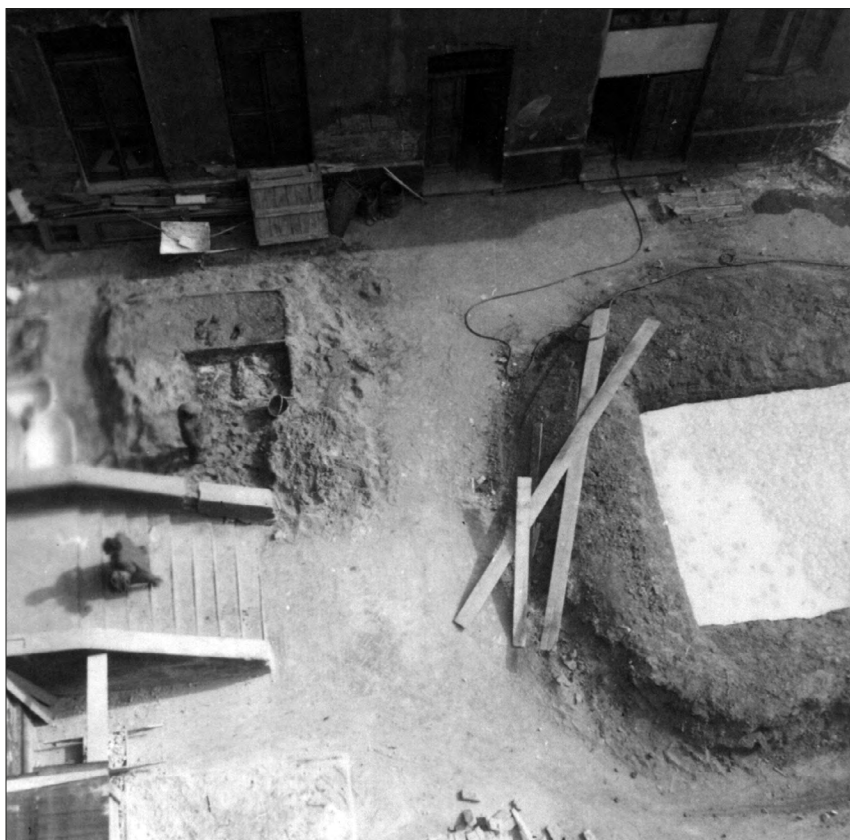


Fig. 5. A holes dug in the ground in the courtyard of the State Zoological Museum during the war (Source: AMIZPAN. Photo, no sign.)

27 Daszkiewicz P. et al. 2016, 42.



Fig. 6. Interiors of the State Zoological Museum. Photo from the period 1945–1949
(Source: AMIZPAN. Photo, no sign.)

Losses in Chrostowski's collection

Despite sacrificial rescue efforts, the losses suffered by the State Zoological Museum during the Second World War were very high. The destruction of property was estimated at 50%, and of the scientific collections at 43%. Equipment in all the studios and archives was burned. A collection of insects from around the world, estimated at around 2 million specimens, was lost. This collection included more than 20,000 insects (including bugs, beetles and dragonflies) collected in Brazil by the Polish Zoological Expedition.²⁸ It can be assumed that the war also contributed to the destruction, confiscation and/or loss of other collections of invertebrates collected by the

²⁸ Daszkiewicz P., Iwan D. 2020, 437–438.

expedition at the same time as the insects. These included losses of some 450 molluscs, about 100 myriapods, more than 60 specimens with internal and external parasites, and unquantified arachnids. Presumably, a similar fate befell the vertebrate collections, including amphibians, reptiles and mammals.²⁹ In the case of the vertebrates, it appears that some of the material, e.g. reptiles (as well as arachnids among the invertebrates), was not estimated in terms of the number of specimens before the war.³⁰ It is therefore difficult at present to assess the extent of the losses. The problem is exacerbated by the fact that during the war, the Museum lost documentation of the provenance of the specimens, including the labels attached to the specimens. Among the vertebrates, it is estimated that about 10 amphibians, all reptiles, about 10 mammals and 15 mammal skulls were destroyed. The “Kurier Codzienny”, a newspaper, published an account by Stanisław Felisiak (1906–1992), a museum employee, of one of the reasons for the loss of the collection during the looting of the building in 1944:

After the [Warsaw] Uprising, I managed to get to Warsaw many times [...]. With a pained heart, I watched as drunken soldiers threw jars of valuable specimens out of windows and smashed cabinets [...]. Invaluable specimens of Brazilian snakes, turtles, vipers, fish, etc., were destroyed in a barbaric manner.³¹

Of all Chrostowski's collections, the birds survived the war in the greatest numbers. Nearly 100 specimens survived from the first expedition (about 50 specimens lost), approximately 400 from the second (losses included about 100 specimens) and more than 950 from the third (about 250 specimens lost).³² The scientific materials looted from the museum in 1939 by Paulsen Sonderkommando included Chrostowski's specimens. Among them were four mammal skulls from Rio Ivahy obtained during the third expedition to Brazil and the *Aramides saracura* bird from Vera Guarani from the first expedition. The looted materials went to the Haus der Natur Museum in Salzburg. After the war, the specimens were identified and returned to the museum in Warsaw. In 1946, skulls from Brazil, bird and mammal specimens of other Polish collectors were returned, together with books.³³ In 2022, an *A. saracura* bird from Brazil was returned with bone materials, reptile and bird specimens collected by other naturalists and books.³⁴

29 It can be assumed that in 1935, during a fire in the museum, some part of Chrostowski's collection was destroyed. Daszkiewicz P. et al. 2016, 35–38.

30 Wagner A. 1926a, 270.

31 AMIZPAN, sign. 1/75 (111/I), 29.

32 Chrostowski T. 1912, 452–490; Poliński W. 1923, 119; Sztolcman J. 1923, 227; Wagner A. 1926a, 270; Wagner A. 1926b, 280.

33 Daszkiewicz P., et al. 2016, 91–98.

34 See: *The catalogue...*

Wartime Losses

The war was a period of stagnation in the functioning of the State Zoological Museum in Warsaw. Academic research, teaching, exhibition and publishing activities were curtailed.³⁵ Scientific work on the collection and its popularisation became impossible. International cooperation and the circulation of materials in Poland and abroad were suspended. Access to the specimens was difficult, while loans and possible exchanges were halted. The museum's staff was severely depleted. Many workers and collaborators (27% of the workforce) lost their lives during the war.³⁶ The museum lacked specialists in ornithology and entomology, among others, who could potentially take over the description of the collection. The staff who managed to work at the museum at various times did not have the opportunity for professional development, experience, networking and knowledge sharing. They had to concentrate on securing and evacuating the specimens. Rescuing and protecting the collection was done at the risk of life. Tasks such as organising, cataloguing, labelling and scientifically processing the materials were abandoned.

During the war, the collection was subject to destruction, robbery and loss. The illegal transportation of specimens, books and research tools by the Paulsen Sonderkommando was risky as the cargo could be lost in transit before reaching its destination. The fate of the material left in the museum was also uncertain. The collections in the damaged building, which was unheated or poorly heated in winter, did not have adequate humidity and thermal conditions. Dry specimens were damaged, destroyed or soiled by mould, pests, moisture, dust and dirt. Wet specimens were susceptible to decomposition and desiccation due to a lack of preservative fluids. Liquids evaporated rapidly from the damaged containers in the high indoor summer temperatures.

During the war period, the museum lost its archives, making it difficult to conduct provenance research on the collection. This type of research aims to trace the history of specimens from their acquisition to the present day. This research proved extremely important in the post-war period. It made it possible to reconstruct the history and preserve the memory of collections that were temporarily or irretrievably lost during the war. This type of research is based on archives such as museum activity reports, on the organisation of the collection, the division of specimens and the systems in place for labelling them. Books of acquisitions (books of gifts), inventories of collections and exhibition catalogues containing descriptions, engravings and/or photographs of specimens are important. Much of the data on collections is provided by reports on the national and international movement of specimens, indicating their

35 See: Iwan D., Daszkiewicz P. 2021, 51–59.

36 Daszkiewicz P., Iwan D. 2016, 433; Brzęk G. 1997, 173–197.

temporary storage locations and confirming their return to the museum. Collections data is also contained in staff records, including notes, correspondence, reports and summaries. Many of these archives in the museum were burned during the war. The problem of researching the provenance of the collection in the post-war period was compounded by the fact that many exhibits lost their information carriers, such as plinths. The carriers contained data of the following types: taxonomic name, place and year of collection, name of the collector, acquisition number (gift number), catalogue number with institution acronym, identifiers and ownership marks. The loss of the storage carriers not only deprived the specimens of basic data but also diminished their scientific value.

The lack of pre-war documentation for the collection makes it challenging to compile a complete list of museum materials before 1939. It is also hard to establish how many specimens were lost during the war. Consequently, the history of the collection requires investigative work to locate and merge information from various sources.

Conclusion

Tadeusz Chrostowski and his collaborators enriched the collection of the State Zoological Museum with numerous animal specimens gathered during three expeditions to Brazil in the first half of the 20th century. More than 20,000 of Chrostowski's specimens were destroyed during the Second World War and the loss of the collection was one of the greatest material losses suffered by the museum in its section of neotropical animals. The museum also experienced intangible losses including the interruption of the continuity of conservation and scientific work on the collection, the hindrance of its development with new materials and the decline of its scientific standing internationally.

References

Archival sources

- AMIZPAN. Sign. 1/75 (111/I) — Archiwum Muzeum i Instytutu Zoologii Polskiej Akademii Nauk w Warszawie. Państwowe Muzeum Zoologiczne w Warszawie. Państwowe Muzeum Zoologiczne – wycinki prasowe (1928–1953): W krainie baśni świata zwierzęcego. Muzeum zoologiczne wznowia swą działalność, “Kurier Codzienny” 1947, 3(7).
- AMIZPAN. Sign. 1/99 (2256) — Archiwum Muzeum i Instytutu Zoologii Polskiej Akademii Nauk w Warszawie. Dokumenty dotyczące organizacji pracy Państwowego Muzeum Zoologicznego w okresie okupacji (1939–1945).
- AMIZPAN. Sign. 1/360 (5591) — Archiwum Muzeum i Instytutu Zoologii Polskiej Akademii Nauk w Warszawie. Państwowe Muzeum Zoologiczne w Warszawie. S. Feliksiak, Kilka słów o stratach Państwowego Muzeum Zoologicznego w czasie wojny (1952).

- AMIZPAN. Sign. KEF648 — Archiwum Muzeum i Instytutu Zoologii Polskiej Akademii Nauk w Warszawie. Tadeusz Jaczewski.
- AMIZPAN. Sign. KEF160 — Archiwum Muzeum i Instytutu Zoologii Polskiej Akademii Nauk w Warszawie. Pierwsi pracownicy Muzeum 1920: J. Domaniewski, J. Sztolcman, T. Chrostowski, W. Poliński (photo from the J. Domaniewski Collection).
- AMIZPAN. Photo — Archiwum Muzeum i Instytutu Zoologii Polskiej Akademii Nauk w Warszawie. (Photos of Państwowe Muzeum Zoologiczne 1945–1949).
- PAHB – Private archive of Higor Gabriel Borecki in Cândido de Abreu. Birth Certificate of Stanisław Borecki dated December 16, 2020, issued by the Central State Historical Archive in Lviv.

Published works

- Brzęk G. 1997. *Straty wśród zoologów polskich w następstwie II wojny światowej*. “Annalecta. Studia i Materiały z Dziejów Nauki” 6(2), 173–197.
- The Catalogue of Wartime Losses of the Ministry of Culture and National Heritage*. <http://www.dzielautracone.gov.pl/katalog-strat-wojennych/wyszukiwanie-zaawansowane?s=okaz+przyrodniczy>. Available on-line: 25 September 2024.
- Chrostowski T. 1912. *Kolekcja ornitologiczna ptaków parańskich*. Warszawa.
- Chrostowski T. 1921. *On Some Rare or Little Known Species of South-American Birds*. “Annales Zoologici Musei Polonici Historiae Naturalis” 1(1), 31–40.
- Daszkiewicz P., Iwan D. 2016. *Straty wojenne Państwowego Muzeum Zoologicznego – raport Stanisława Feliksiaka (1906–1922)*. “Pamięć i Sprawiedliwość” 27, 431–439.
- Daszkiewicz P., Iwan D. 2020. *Co wiemy o Muzeum Branickich? Listy Jana Sztolcmana do Benedykta Dybrowskiego ze zbiorów poznańskiego oddziału Archiwum PAN – interesujący przyczynek dla historii zbiorów przyrodniczych w Polsce*. “Kwartalnik Historii Nauki i Techniki” 65(2), 77–87.
- Daszkiewicz P., Iwan D., Kowalski H., Mierzwa-Szymkowiak D., Zaborowski R. 2016. *150-lecie Gabinetu Zoologicznego w Warszawie (1818–1968)*. “Memorabilia Zoologica” NS 1, 1–202.
- Gajl K. 1923. *Wspomnienia o śp. Tad. Chrostowskim*. “Przyroda i Technika” 10(2), 630–632.
- Isaakowa M. 2011. *Polka w puszczech Parany*. Warszawa.
- Iwan D., Daszkiewicz P. 2021. *Koncepcja organizacji pracy w instytucji naukowej – ankiety i opracowania z okresu okupacji (1941–1942) w Państwowym Muzeum Zoologicznym w Warszawie*. “Kwartalnik Historii Nauki i Techniki” 66(3), 51–59.
- Iwan D., Mierzwa-Szymkowiak D., Wawer W. 2021. *Zbiory przyrodnicze Muzeum i Instytutu Zoologii PAN – świadectwo polskiego wkładu w rozwój światowych badań bioróżnorodności prowadzonych od początku XIX wieku*. “Kosmos” 70(2), 241–254.
- Jaczewski T. 1923. *Pamięci Tadeusza Chrostowskiego*. Curitiba.
- Jaczewski T. 1925. *The Polish Zoological Expedition to Brazil in the years 1921–1924. Itinerary and brief report*. “Annales Zoologici Musei Polonici Historiae Naturalis” 4(4), 326–351.
- Jaczewski T. 1972. *Przed pół wiekiem*. “Przegląd Zoologiczny” 16(1), 93–94.
- Kazubski L. 1996. *History of the Museum and Institute of Zoology, PAS*. “Bulletin of the Museum and Institute of Zoology PAS” 1, 7–19.
- Mierzwa-Szymkowiak D., Bunalski M. 2013. *Tadeusz Franciszek Antoni Jaczewski (1899–1974)*. In: M. Bunalski, J. Nowacki, P. Sienkiewicz (eds), *Księga Jubileuszowa na 100-lecie Polskiego Towarzystwa Entomologicznego*. Poznań, 152–154.

- Mlíkovský J. 2009. *Types of birds in the collections of the Museum and Institute of Zoology, Polish Academy of Sciences, Warszawa, Poland. Part. 3. South American birds.* "Journal of the National Museum (Prague), Natural History Series" 178(5), 17–180.
- Piechnik Ł., Kurek P. 2016. *Ssaki neotropików odkryte przez polskich naturalistów.* Kraków.
- Poliński W. 1923. *Polska wyprawa zoologiczna do Brazylii.* "Przyroda i Technika" 2, 117–119.
- Straube F.C. 2016. *Ruínas e urubus: História da Ornitologia no Paraná. Período de Chrostowski 2 (1910).* Curitiba.
- Straube F.C., Urben-Filho A., Kopij G. 2003. *Cartas comentadas de Tadeusz Chrostowski, 1.* "Boletim do Instituto Histórico e Geográfico do Paraná" 54, 225–233.
- Straube F.C., Urben-Filho A., Kopij G. 2007. *A imigração polonesa e suas colônias no Paraná, segundo Tadeusz Chrostowski.* "Boletim do Instituto Histórico e Geográfico do Paraná" 68, 87–116.
- Sztolcman J. 1923. *Tadeusz Chrostowski.* "Przegląd Geograficzny" 4, 223–231.
- Sztolcman J. 1925. *Ptaki zebrane w Paranie. (Z wyników naukowych Polskiej Wyprawy Zoologicznej do Brazylii w latach 1921–1924).* "Annales Zoologici Musei Polonici Historiae Naturalis" 5(3), 107–196.
- W krainie baśni świata zwierzęcego. Muzeum zoologiczne wznawia swą działalność.* 1947. "Kurier Codzienny" 3(7), 6.
- Wagner A. 1926a. *Sprawozdanie dyrektora za r. 1924.* "Prace Zoologiczne Państwowego Muzeum Przyrodniczego" 5(4), 267–273.
- Wagner A. 1926b. *Sprawozdanie dyrektora za r. 1926.* "Prace Zoologiczne Państwowego Muzeum Przyrodniczego" 5(4), 278–284.
- Wąsowska M., Winiszewska-Ślipińska G. 1996. *The history of the collection of neotropical fauna in the Museum and Institute of Zoology PAS. Until 1939.* "Bulletin of the Museum and Institute of Zoology PAS" 1, 29–34.
- Zabłocki W. 2020. *Państwowe Muzeum Zoologiczne wobec powstania Polskiej Akademii Nauk: droga do powołania Instytutu Zoologicznego PAN.* "Kwartalnik Historii Nauki i Techniki" 65(4), 81–98.
- Zieliński S. 1932. *Borecki Stanisław.* In: S. Zieliński (ed.), *Mały słownik pionierów polskich, kolonialnych i morskich. Podróżnicy, odkrywcy, zdobywcy, badacze, działacze i pisarze migracyjni.* Warszawa, 37.
- Ziomek K. 2018. *Obraz masowego wychodźstwa z ziem polskich do Brazylii w latach 1890–1897 na łamach ówczesnej prasy i literatury – zarys problematyki.* "Zeszyty Naukowe Towarzystwa Doktorantów UJ" 23, 145–186.