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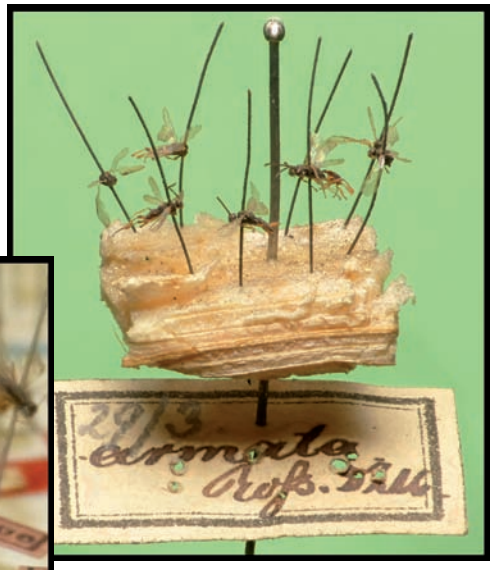

Two Centuries of the Museum of Natural History, University of Wrocław, and Its Entomological Collections

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# Two Centuries of the Museum of Natural History, University of Wrocław, and Its Entomological Collections

EDITORIAL

# Two centuries of insect collections in the Museum of Natural History in Wrocław

In 1814 Johann Gravenhorst (1777-1857), a renowned entomologist and the first professor in zoology at the University of Wrocław, was appointed as the first director of the newly established natural history museum. Two centuries later, the Museum of Natural History (MNHW) is still a part of the University of Wrocław, and despite its turbulent history and severe war losses, its collections are counted among the largest and most valuable in Poland. The Museum occupies a special place in the history of the University - four out of its five pre-war directors were also rectors of the University of Wrocław. Some of them were pioneers in academic didactic methods - Adolf Grube (1857-1880) for the first time introduced practical laboratory courses in animal anatomy, previously taught only in the form of lectures; Anton Schneider (1881-1890) equipped a Museum teaching room with microscopes that for the first time could be used by a group of students during practical classes; Willy Kükenthal (1898-1917) added field trips to the natural history courses; and Ferdinand Pax jr. (1917-1945) organized short internships at the biological field station in Rovigno (now Croatia).

The Museum's holdings during Gravenhorst's times included nearly 45 000 insect specimens. Despite the fact that professor Gravenhorst was the only researcher entomologist working at the Museum until the onset of World War II, the insect collections were steadily growing due to donations and acquisitions, mainly from amateur naturalists. The current number of approximately 2-2.5 million specimens is a result of collecting activities, expeditions, passion and knowledge of several generations of naturalists, who entrusted their collections to the University. This special volume of The Genus is intended to provide an overview of selected insect collections deposited in the Museum, carefully curated and made available to scholars. An effort was made to present not only the most valuable historical collections (those of Johann Gravenhorst, Friedrich Wilhelm Niepelt, Wilhelm Kolbe, Richard Scholz, Georg Polentz) and younger, yet already post-war repositories (Coll. Jan Noskiewicz), but also most recent acquisitions (collections of Jadwiga Złotorzycka, Aleksander Wróblewski, Janusz Pluciński, Paweł Stachowiak), all being sources of invaluable taxonomic and faunistic data cited in hundreds of scientific publications, all still in focus of ongoing studies. It should be kept in mind, however, that this selection covers only a fraction of the MNHW insect collections, and scholars mentioned in this series of articles are not the only ones worth remembering. The historical pre-war collections include also, among others, Hemiptera and Diptera of Heinrich Scholz; Lepidoptera of Max Wiskott, Paul Nagel, Adolf Streckfuss, Alwin Gärtner, Alfred Bannier, Theodor Goetschmann; Hymenoptera of Rudolf Dittrich and Wilhelm Goetsch. An example of a recent acquisition is a large Andrzej Gruszka collection of Coleoptera entrusted to

the MNHW in 2012. The Museum's holdings comprise also Eocene amber inclusions (approximately 200 amber pieces, provisionally identified by the late Jan Koteja), deep-frozen beetle collections suitable for genetic studies (thousands of specimens), countless microscope slides and a rich entomological library.

The Museum (and the University), an important centre of biological studies, was fortunate to employ or closely cooperate with a number of naturalists, who carried out their studies, enlarged and curated the MNHW collections, taught students and participated in multiple academic duties. In the post-war history of the Museum's Entomology Department, several persons contributed to successful development of collections or gained a position of distinguished specialists. Jan Kinel, the first insect curator after World War II, coordinated the rescue operation to retrieve the collections evacuated to various localities, estimate war losses and protect the surviving specimens from further damage. Mieczysław Kak (1928-2008) was a curator for 30 years, until his retirement in 1993 and later for fifteen years as a volunteer; he initiated and almost completed the process of integrating numerous Lepidoptera materials into one organized collection. He was also a *spiritus movens* of the first permanent insect exhibition opened in 1974 and maintained, after modernisation, till today. Wojciech Puławski and Jan Klimaszewski, former researchers at the Museum, became renowned specialists on sphecid Hymenoptera and staphylinid beetles, respectively, both working abroad since early 1980s. Puławski, a successor of Jan Noskiewicz, working in the Museum in 1963-1983, had significant influence on systematic entomology in Poland, for years being an editor-in-chief of the Polskie Pismo Entomologiczne (Polish Journal of Entomology), a major Polish scientific periodical focused on insects. He is also author or co-author of several volumes of the Keys for Identification of the Insects of Poland, covering various families of Aculeata (Hymenoptera).

Current efforts of the present Entomology Department staff are focused on protecting, organizing and data-basing of the existing collections, acquiring new specimens and attracting specialists to explore the Museum's resources. Together with scientists and curators representing other disciplines - ornithologists, ichthyologists, malacologists, botanists and a mycologist - we join forces to fulfil the role museums play in modern scientific studies and popularization of natural history - teaching by exhibitions, workshops, courses and lectures, documenting biodiversity and its changes over centuries (a task especially important in the times of rapid species extinction), conducting cooperative and often interdisciplinary collection-based research, and protecting the legacy of our predecessors.

Paweł Jałoszyński, Guest Editor

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# Museum of Natural History, University of Wrocław - 200 years of history in two countries

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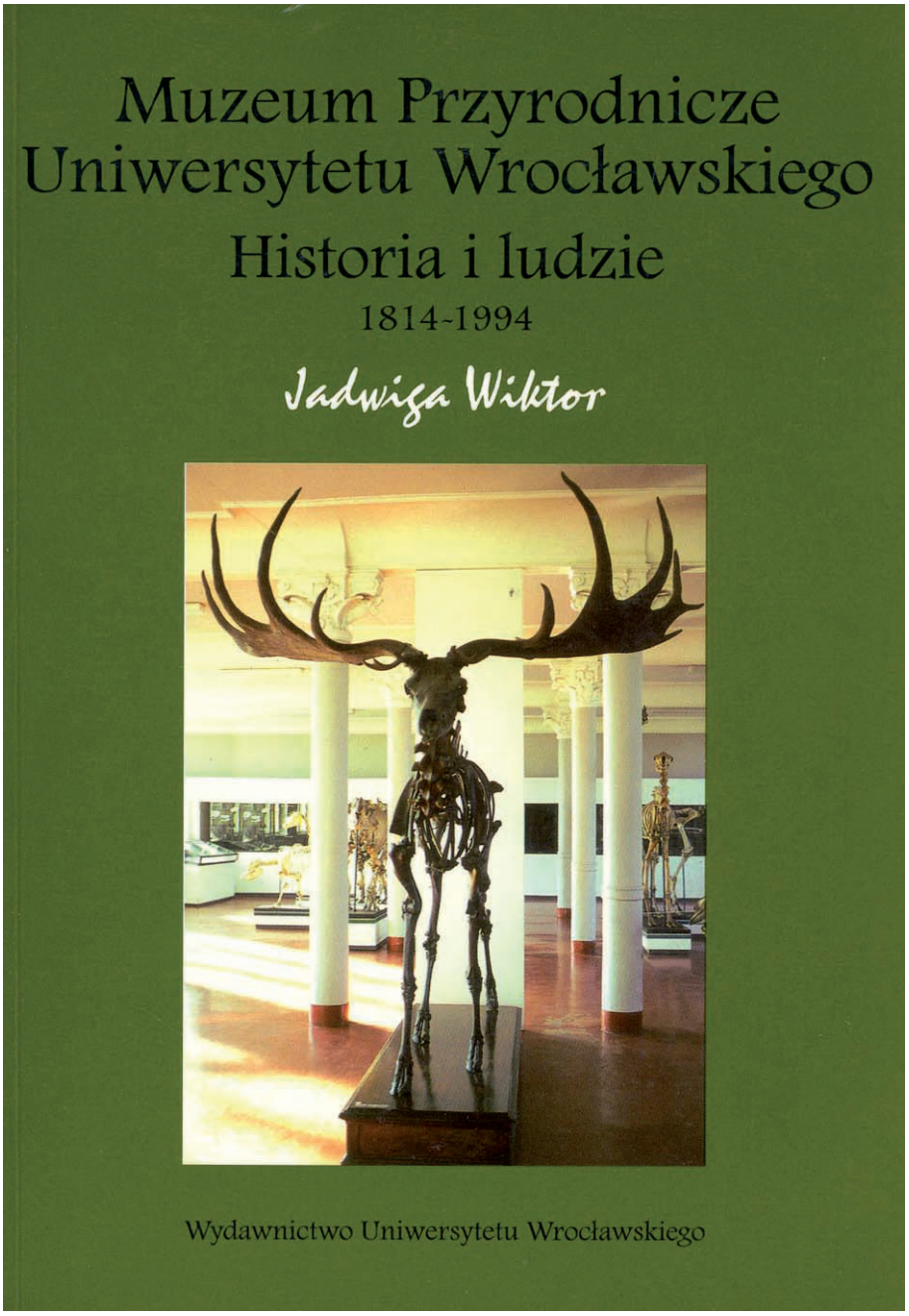
Abstract. The Władysław Rydzewski Museum of Natural History, University of Wrocław (MNHW) is among the oldest museums of its kind in Poland and the largest such museum being part of university in our country. It was established in 1814 as the University's Zoological Museum on the initiative of J. L. C. Gravenhorst, the first zoology professor in Wrocław. 2014 is the Museum's 200. anniversary. During almost half of its history it was located in the halls of the University's Main Building. Since 1904, it occupied its present location at 21 Sienkiewicza street, and additionally, since 2004 it acquired a new Herbarium building where also the entomological collections were transferred. The Museum's biological collections, which were among the richest in Europe, suffered greatly during World War II; in all, half of the zoological collections and nearly two thirds of the herbarium were lost. Despite the losses, the collection is the second largest in Poland. After the war, under the Polish government, the Museum remained part of the University and its significance increased. In 1974 it became the present-day Museum of Natural History, of a rank of research institute. Two years later, having fused with the Herbarium and the former Botanical Museum, and having taken over the old and valuable plant collections, the Museum acquired its present structure and status. The main *spiritus movens* of the organisation changes and post-war scientific development was the Museum's director of 1963-1980, professor W. Rydzewski. In recognition of his merits, since 1985 the Museum bears his name.

Key words: University of Wrocław, Museum of Natural History, MNHW, origin, history, structure.

Poland is one of the few European countries without a national natural history museum. The reasons for the situation are numerous, most probably mainly the lack of own statehood in the 19th c., when such museums were established in other countries and additionally, and maybe first of all, because of the lack of possibility to accumulate important natural history collections from the then researched and explored tropics. For the same reasons, the Polish systematic zoology at that time could not be ranked among




1. Cover of the monograph of the history of the Wrocław Museum of Natural History by J. Wiktor (1997). Polish edition

the world's leaders within the discipline. Consequently, after regaining independence by Poland, there was no great incentive to establish such a national museum. Even if there was any, the period between the wars was too short and too tempestuous for such an enterprise to come into being. Thus, after World War II Poland entered the communist epoch with three leading institutions which kept natural history collections: in Warsaw, Wrocław and Kraków. The situation remained unchanged during the next half century, despite the early post-war attempts at centralising zoological data in Warsaw. These attempts finally resulted, and from the present-day perspective we think in a way which was beneficial to the scientific community, in establishing one of the best zoological libraries in Europe, in the present-day Museum and Institute of Zoology, Polish Academy of Sciences. The centralisation of zoological collections never came true and also at present it is not a likely prospect, not only because of the high cost of the enterprise, but also because of the lack of favourable atmosphere and support at various decisive levels – both among the scientists and among the politicians. Now, after so many years of independent functioning of such institutions, it would be difficult to see possible advantages to such a solution. Each such museum has more than 150-200 years of its own, specific history resulting from its regional appurtenance, different organisation character and the nature of collections. Each is an efficient research centre and doing well in the present-day reality of financing scientific studies. It appears that in the 21st c. we should accept the state of affairs and learn to take advantage of the large number of natural history museums of international significance in our country.

The Museum of Natural History, University of Wrocław (international acronym: MNHW), at present bearing the name of its post-war director of long standing, professor Władysław Rydzewski, had certainly the most complex though not the longest history among the Polish natural history museums (the Kraków Zoological Museum, Jagiellonian University, originating from the Natural History Cabinet appointed by the Commission of National Education at the end of the 18th c. has somewhat deeper roots). This resulted, among other things, from the administrative appurtenance to a sequence of countries and political systems, and from the relatively recent merging of zoological and botanical collections and institutions, each with a different history. Another, no less important difference, resided in the organisation status of the Wrocław Museum, which had been part of the University "for ever", practically from the beginnings of the University's existence. The 200. anniversary of founding of the Museum, in 2014, is a good opportunity to recall its complex fates and the names of the people who played important parts in its history. It would not be possible without the long-term, Benedictine project of the late Jadwiga Wiktor who collected all the fragmentary archival data on the fates of our institutions and published a historic monograph (Wiktor 1997, 2002) (Fig.1). It is also an opportunity to reflect on the situation and significance of this and other natural history museums in the world of science of the 21st c.

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The founder of the Zoological Museum in Wrocław was Johann Ludwig Christian Gravenhorst (1777-1857), the first zoology professor at the University (Fig. 2).

Quite rightly regarding collections as indispensable when educating students, three years after taking over the chair in Wrocław he established the Zoological Museum located in the University's huge main building, in today's Uniwersytecki Square. Its holdings initially included the collection of the Leopoldine Natural History Cabinet (Naturwissenschaftlicher Kabinett der Leopoldiner), University in Frankfurt an der Oder (Viadrina), and most of all professor GRAVENHORST's own zoological collection which he had accumulated since his student times and then increased considerably due to purchase of specimens and whole collections from collectors. The collection was then purchased by the University for a lifetime annual pension. Besides the zoological specimens, professor GRAVENHORST transferred to the Museum and University his huge natural history library with numerous, now priceless volumes dealing with early development of systematic zoology. He also bequeathed a considerable sum to the University in his will, for further development of the zoological collections and the library. The first preserved information on the holdings of the then Museum dates from 1832 when it had more than 55 000 exhibits.

After the death of professor GRAVENHORST who had been the Museum's director for more than 40 years, his successors till World War II were professors Adolf GRUBE (1857-1880), Anton SCHNEIDER (1881-1890), Carl CHUN (1891-1898), Willy KÜKENTHAL (1898-1917) and Ferdinand PAX jr. (1917-1945). Except for A. SCHNEIDER, who hampered the Museum's development and neglected the collection, allocating most of the Museum's funds to teaching and equipping teaching rooms, all the directors contributed greatly to the enlargement of the collections and the organisation development of the Museum. Already at the time of A. GRUBE, the Museum's collections were among the richest in Central Europe, and became enriched, among others, due to the numerous expeditions to the Mediterranean region. Also during that period Benedykt DYBOWSKI cooperated with the Museum; one of the most outstanding Polish zoologist, professor GRUBE's student, he participated in one of GRUBE's expeditions in search of marine fauna in Croatia, and after his death sentence for his participation in the January Uprising he owned his salvation indirectly to GRUBE's pleading. An even greater development of the Museum's collections fell on the end of the 19$^{th}$ c. when the Museum's director was C. CHUN who had come from Königsberg. Being a specialist in marine fauna, he organised Museum expeditions in order to acquire specimens from the Mediterranean Sea and the Atlantic (region of the Canary Islands), and – most of all - in 1898-1899 took part in the famous German expedition "Deutsche Tiefsee-Expedition" on the ship Valdivia, in order to explore and acquire countless specimens of deep sea and pelagic fauna of the Atlantic and Indian Oceans. During his directorship the Museum started regular cooperation with the Wrocław Zoological Garden from where it bought dead animals; skeletons and histological slides were also acquired. It was then that, among other exhibits, a complete skeleton of the fossil giant deer *Megaloceros giganteus* (BLUMENBACH) was purchased. In 1898 professor CHUN transferred to Leipzig, to be replaced by an outstanding scientist from Jena - W. KÜKENTHAL, phylogeny specialist and Ernst HAECKEL's student. Soon he turned out to be a very able organiser who succeeded in erecting the new, spectacular building for the Museum, at the present 21 Sienkiewicza street (Fig. 8). The building started to be used in 1904; besides two exhibition halls, it

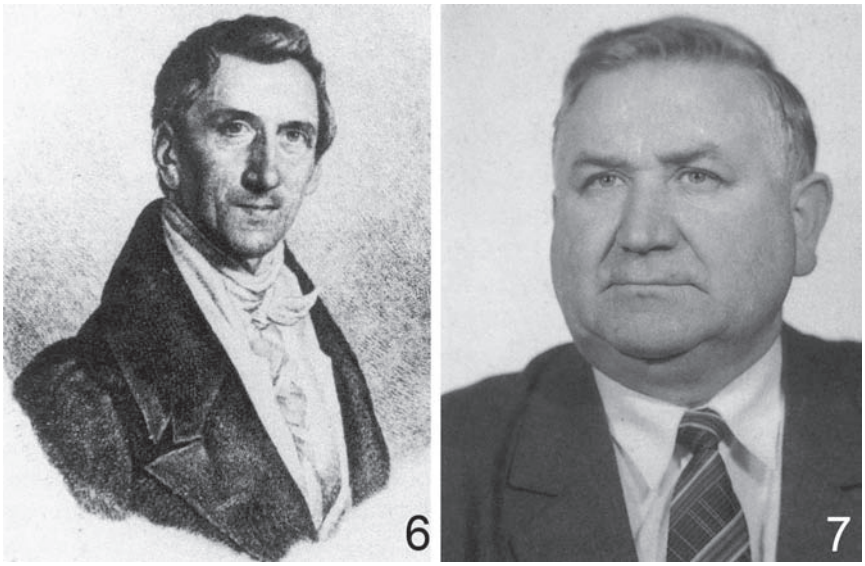

2-5. Participants of the history of the Wrocław Museum of Natural History: 2 – professor Johann Ludwig Christian Gravenhorst (1777-1857), the founder and first director of the Zoological Museum; 3 – professor Ferdinand Pax jr. (1885-1964), Museum's director before and during World War II; 4 – doc. Jan Kinel (1886-1950), the first post-war curator of the Museum; 5 – professor Władysław Rydzewski (1911-1980), the Museum post-war director of long standing; now the Museum's patron

housed numerous laboratories, library, lecture halls and four large storage rooms for scientific collections which occupied most of the building's right wing. The Museum collections were divided into three parts, besides the exhibits in the permanent exhibitions and the largest scientific collection; the collection for teaching purposes was also kept separately. The division into exhibition and scientific materials was also practiced in the invertebrate, and especially insect, collection. This had a negative effect on the scientific value of the "exhibition" specimens which, as a rule, lacked precise information on their origin. At that time the Museum was practically self-sufficient with respect to preservation of specimens (including large vertebrates) and preparing exhibitions; it had its own metal worker's shop, tannery, maceration shop and carpentry shop. It also had a marine aquarium with the necessary equipment, housed in a separate extension. With respect to technical equipment, the whole building was very modern, with electric lighting, central heating, lifts, and even automatically blinded windows in the exhibition halls. From the very start the Museum shared the new building with the Zoological Institute which was established at roughly the same time, also on the initiative of professor Kükenthal, who was director of both these institutions till 1917, when he transferred to Berlin to become director of the Humboldt Museum. His successor was F. Pax jr. (Fig. 3) who had worked at the Museum since 1908, and had been curator since 1912; he held the position till the end of World War II. During his directorship the Museum enriched its holdings, among other things, with the valuable collection of exotic butterflies of W. Niepelt; it also employed more researchers.

The end of World War II was a very dramatic event in the Museum's history, and was fraught with consequences. Especially the defence of Festung Breslau in 1945 was a great catastrophe: the building itself, hit by a bomb (Fig. 9), and the zoological collections and exhibitions contained in it, became destroyed. The damage was contributed to by the German soldiers who threw a part of the specimens out of the windows when organising their defence positions, and later by the Soviet soldiers who looted the collection in search of alcohol-preserved specimens. Great losses were caused by explosions of aerial bombs and the ammunition stores located in the nearby Botanic Garden; they caused breaking of windows and glass panes in the cabinets, specimen jars and even blown bird eggs. Many collections suffered also later, under the effect of atmospheric conditions before they could be protected; a part may have been lost as a result of looting. Before the expected arrival of the Red Army, a part of valuable collections, mainly entomological, was evacuated to nearby villages and hidden in attics and cellars of offices and schools on the order of the German civil defence administrators. In the war conditions the process was not well planned and chaotic and, as indicated by later accounts of professor Pax (1949), executed without consulting the Museum's authorities. Not all of those valuable insect collections could be retrieved later; among others, a part of Gravenhorst's collection became irretrievably lost, including all of his beetle collection and a quarter of the collection of parasitic hymenopterans with hundreds of types, a part of Polentz's beetle collection and possibly a part of Niepelt's butterfly collection. Those fortunately re-found, for example in Kąty Wrocławskie, such as the major part of Gravenhorst's ichneumonid collection, Dittrich's hymenopteran collection or most of Polentz's collection of Silesian beetles, had been kept in inadequate

conditions and partly damaged by pests. Some were found after the War by pure accident, for example nearly 300 valuable bird skins of Otto Nathorp, found by professor K. Szarski in one of Wrocław pet shops and retrieved with the aid of militia. It is very difficult to assess the scale of global losses to the Museum collections as a result of military operations of 1945, most of all because of the lack of reference pint. As a result of these operations neither the Museum nor the University's central archives held up-to-date inventories from before the war, or any other significant documentation of the Museum's history between the wars. In this respect we can only base our conclusions on the necessarily superficial estimates of professor Pax, who had the opportunity to have a short and cursory glimpse of the destroyed Museum after his return to Wrocław from the field station Hofeberg in the Sudetes, after the city had been occupied by the Red Army (Pax 1949), and on the report of the first Polish collection curator, doc. dr. Jan Kinel (Kinel 1957) who arrived in 1946 from the Dzieduszycki Museum in Lviv. Their accounts differ slightly in the details and fates of individual collections, but both indicate that the losses in the zoological scientific collections were at least 50%, and the losses in the exhibitions were much larger, even up to 90% (Wiktor 1997).

The post-war years were difficult for the Museum, as they were for the whole country which was busy trying to deal with the war damage. Despite the staff's care and devotion, ensuring adequate housing for the collections took a few years which resulted in further damage to some collections. Reconstruction of the building's left wing, completely destroyed as a result of bombing (Fig. 10), took even longer, and




6-7. Participants of the history of the Wrocław Museum of Natural History: 6 – professor Ludolph Christian Treviranus (1779-1864), the first director of the Wrocław Botanic Garden and the Herbarium's founder; 7 – professor Krzysztof Rostański (1930-2012), the Herbarium's post-war curator and restorer. All photos from J. Wiktor's monograph (1997, 2002)

was ultimately completed in 1957. Also from organisation point of view, in the post-war conditions the Museum had to start almost from scratch, being incorporated in the Chair of General Zoology, Zoological Institute and thus becoming in a sense provider of teaching materials. After doc. J. Kinel's, entomologist and experienced curator who had been head of the Museum since 1946, premature death, the care of the collections was entrusted for a few months to an ichthyologist, doc. dr. hab. Zofia Kozikowska, and then in 1951-1962 – to a parasitologist professor Janina Janiszewska. In that period the initially very small staff was increased with 7 persons. After professor Janiszewska left in 1962 for the Department of Parasitology established by her, and the few months period during which the Museum's head was the arachnologist doc. S. Pilawski, in 1963 professor Władysław Rydzewski took over; he had been head of the Department of Ornithology for three years, after his return from England. Due to his efforts and organisation skills, the status of the Zoological Museum within the structure of the Faculty and University changed radically. Already in 1963 the Museum became an independent structure within the Zoological Institute, with its own budget and staff. On the strength of a decree of the Minister of Science, Technique and Higher Education of September 9th 1974, the Museum of Natural History was appointed as a separate unit of institute rank within the then Faculty of Natural Sciences.

The history of the Herbarium and Botanical Museum, University of Wrocław is even more complex and nearly as long; after the war it was described for the first time by professor Krzysztof Rostański (1963). Their founder was professor Ludolph Christian Treviranus, in 1815-1830 director of the University Botanic Garden (Fig. 6). The Herbarium Horti Botanici Universitatis Wratislaviensis was initially to document vascular plants imported and cultivated in the Garden; it developed gradually thanks to donations and purchases, to achieve the number of 26 different collections of higher and lower plants and fungi in 1884. Also subsequent directors of the Botanic Garden were at the same time Herbarium directors. L. C. Treviranus' successors were professors Christian Gottfried Daniel Ness von Essenbeck (1830-1850) and Heinrich Robert Göppert (1850-1884). The latter extended the range of accumulated specimens to include, among other things, fruits, seeds, trunk sections, roots, resins and other materials of plant origin. Based mainly on those, he established two museums: in 1853 the Botanical Museum located in the Auditorium Chemicum of the University, and in 1878 the Museum of the Botanic Garden, enriched among others with a collection of amber and palaeobotanical exhibits, such as fossil trunks of sigillariae and calamites. After his death the two museums started to live "their own lives" and even compete in acquiring new collections; they were headed by professors Heinrich Engler (Museum of Botanic Garden and Herbarium) and Ferdinand Cohn (Botanical Museum). They joined forces and in 1888 succeeded in erecting the building which till recently was the Institute of Plant Biology (Kanonia str. 6/8), where all the botanical collections were moved, but preserving the division into two museums. The collections were merged into one Botanical Museum by professor Ferdinand Pax sr., who became its head in 1893. He held the post during 33 years, and achieved a considerable development of the collection due to the rich materials from German expeditions to Africa and south-eastern Asia, exchange, donations and purchases. During his directorship

the Botanical Museum's holdings became doubled, to reach 540 000 herbarium sheets in 1914. Just before the war, in 1938, the Museum was bequeathed the most valuable botanical collection of Karl Lauterbach of 50 000 sheets, from south-eastern Asia, with numerous types.

Till the end of World War II the so called Silesian Herbarium (Herbarium Silesiacum) functioned independently. It was established in the first half of the 19th c. by the Silesian Society of Native Culture (Schlesische Gesellschaft für vaterländische Kultur), associated with the University, on the initiative of the Society's secretaries: dr. Friedrich Wimmer and dr. Henryk Grabowski. During all the period of the activity of the Society and Silesian Herbarium its seat was one of the university buildings on the Tamka, an island on the Odra near the University's main building. Among successive curators of the Silesian Herbarium were, among others, university professors such as F. Cohn (1858-1864) or F. Pax sr. (1886-1890). The collections of the Silesian flora came mainly from donations of members and sympathizers of the Society and were often older and more valuable than the collection of the Botanic Garden Herbarium. Besides the herbaria of H. G. Mattuschka and A. J. Krocker from the 18th c., professor A. Henschel's donation was especially noteworthy. The Herbarium Henschelianum, donated to the Society in 1858, included more than 90 000 sheets with both European and tropical plants (according to the owner's index more than 46 000 plant taxa!). Henschel's herbarium, valuable but containing a small number of plants from Silesia, was later, on the initiative of professor F. Pax, exchanged with the University Botanical Museum for the typically Silesian herbarium of R. von Uechtritz. Another unique acquisition of the Society was Silvio Boccone's bound herbarium, dated 1674. Special merits for the development and curating of the Silesian Herbarium, and the knowledge of Silesian flora in general, were due to the many-years curator and teacher in one of the Wrocław gymnasia, Theodor Schube. Due to his work and the extensive network of provincial collaborators who sent in materials, the holdings became almost doubled during his term (1890-1929). His work was successfully continued by Emil Schalow, curator of the Silesian Herbarium till World War II.

As in the case of the Zoological Museum, there is almost no record of the holdings and acquisitions of the Botanical Museum between the wars, and it is difficult to estimate the size of the collections before World War II. Rostański (1963) estimated it as 600 000 herbarium sheets, excluding other botanical exhibits of which there were certainly thousands. Unlike the zoological collections which were mostly left in the Zoological Museum building, the Germans removed all the botanical collections from Wrocław in the autumn of 1944. As a result, the partial destruction of the Botanical Institute building at Kanonia 6/8 during bombing (both buildings are located within the Botanic Garden, less than 100 m apart) caused no damage to the collections. On the other hand, the Silesian Herbarium which then included more than 80 000 sheets, was moved and placed without any safety precautions in the attic of one of the schools in the southern part of Wrocław. Regretfully, as it turned out later, the evacuation failed to prevent losses in the botanical collections. On the contrary, the losses were proportionally greater than in the case of the zoological collections. Despite the efforts and the search supervised by professor Stanisław Tołpa, the collections were found only

after 1-2 years and only in a small part. A large part was burnt with the garrison church in Oleśnica where they were kept. The retrieved parts included a considerable fraction of the main university herbarium (castle in Piotrowice near Kąty Wrocławskie), LAUTERBACH's herbarium (Siedlęcin near Jelenia Góra), and also, after 3 years, the Silesian Herbarium which then became the University's property and was merged with the remaining surviving botanical collections. Following reconstruction of the building at Kanonia 6/8, in 1950, the botanical collections returned to their original location and could be properly curated. The work was started by mgr Józef PANEK, acting curator of the Herbarium in 1950-1956. His work was continued by the late professor K. ROSTAŃSKI (Fig. 7), since 1971 staff member and then head of the Chair

8. Museum building in 1904 (photo L. POHL)

of Systematic Botany, Silesian University. He was the first to assess more precisely the size of war losses to the Wrocław herbarium collections (Rostański 1963). The total of about 200 000 sheets retrieved after the war constitutes only one third of the original University collection; one small bit of luck was only the saving of the whole of the most valuable Lauterbach's herbarium. Likewise, 60% of the Silesian Herbarium were destroyed and only 30 000 sheets remained. Regretfully, these did not include the oldest Silesian collections of Mattuschka and Krocker, but Boccone's valuable herbarium was saved.

Establishing of the University Natural History Museum in 1974, and the indifference of the then authorities of the Botanical Institute to the collection and disastrous housing situation of the Herbarium which was crammed into one tall room, filled to the ceiling with shelves of collection boxes, quickly brought about natural fusion of the two institutions. The Botanical Department of the Museum of Natural History was established in 1976, next to the departments of Invertebrates, Insects, Lower Vertebrates, Higher Vertebrates and Exhibitions established one year earlier based on the former Zoological Museum. The Herbarium's collections and staff as a whole became part of the Botanical Department whose head, after K. Rostański's transfer to Katowice, became a slime-mould specialist dr. Wanda Stojanowska. After establishing the Museum Library in 1975, and inclusion of the Herbarium, the staff of the Museum headed by professor Rydzewski included 22 persons, 9 of them being research workers. Five years after professor Rydzewski's death, in recognition of his merit in organising the Museum and restoring its rank, in 1985 the Museum was officially named in his honour. He was succeeded by professor Andrzej Wiktor, who was the Museum's director during subsequent 22 years. His most important task was to solve the problem of lack of adequate housing for the scientific collections, especially the herbarium specimens, which after the organisation changes were still kept at the Institute of Botany, at Kanonia 6/8. The insect collection was then kept in a room partitioned off one of the exhibition halls, with no possibility of further development. Due to the efforts of professor Wiktor and the then head of the Botanical Department, professor Jerzy Hrynkiewicz-Sudnik, greatly supported by the University authorities, funds for a new Herbarium building were obtained from the Ministry of Science and Higher Education. The new building was to be built on a University plot at Sienkiewicza str. 5, less than 150 m from the Museum's main building (Fig. 11). The building was constructed not without difficulties (argument with the city architect about the rather ultramodern design, unstable soil and, finally, the famous bankruptcy of the building company) in 2003, already during the directorship of professor Tadeusz Stawarczyk. Next year all the botanical and entomological collections were gradually moved to it. This made it possible to reorganise and enlarge those collections and free potential area for further development of exhibitions. Gradually even the slow general renovation of the Museum's main building, more than 100 years old, housing the exhibitions and laboratories, and of some other buildings of the Faculty of Biological Sciences, was completed (Fig. 12).

9. Museum building in 1945 – left wing destroyed by aerial bomb (photo E. Zubik)

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Apart from organising exhibitions which is their obvious and well known function, and thereby contributing to public education within natural history, natural history museums play another very important role. They keep and maintain collections of zoological and botanical specimens which are not destined for public display, but which provide the basis for studying biodiversity. This is especially important at present, when a part of this biodiversity has already gone extinct while another part is endangered. They are repositories of data, in the form of preserved biological specimens, and thus the source of information about life's diversity and evolution. A very good example is the use of museum specimens for extracting DNA for phylogenetic studies done with recently invented techniques. The collections kept at the museums are essential to studying the diversity and history of life on earth, and to planning its conservation.

The present staff of the MNHW includes 22 people, and the number, despite some fluctuations in the intervening period, is the same as it was in 1975, when the Museum gained its present organisational form. The Museum has its own library, at present comprising 6500 books and over 11700 volumes of journals, including a permanent deposit of ornithological literature of the Polish Zoological Society. Half of the staff are research workers who are subject to the same legal regulations and obligations as all academic teachers, only with didactic duties largely replaced with work in the collections and exhibitions. For a long time the research staff has included ornitho-

10. Museum building in 1948 – left wing with top floor exhibition halls devoid of walls (photo S. Bednarz)

logists, ichthyologists, malacologists, entomologists, botanists and a mycologist, all conducting their own research and participating in scientific projects of their respective specialities. In all, the topical scope of studies conducted at the MNHW is very wide and comprises, among others, systematics, biology and biogeography of beetles (Staphylinoidea, Curculionoidea) and terrestrial gastropods, ecology and ethology of birds, fish ecology and systematics, faunistics of various groups of animals and floristics of Poland, phytosociology, taxonomic and ecological studies on Macromycetes, and nature conservation problems. The staff members participate in the University's teaching; the Museum offers courses, among others, in entomology, malacology, ornithology and fish biology. However, the primary duty implied in employment at any natural history museum is collection curating: our staff is responsible for the second largest biological collection in Poland which now contains ca. 2.5 mln of zoological specimens and 0.5 mln herbarium sheets, and for organising exhibitions. The collections are being gradually catalogued and digitised, and the data are made available in the internet. Animal (especially invertebrate) and plant specimens are regularly loaned for examination to specialists worldwide. For a long time the MNHW has been a member of the KSIB (Krajowa Sieć Informacji o Bioróżnorodności – Polish Biodiversity Information Network) and made the information about its collections available through the GBIF (Global Biodiversity Information Facility) portal. In the

11. Herbarium building completed in 2004

21st c. the Museum resumed the tradition of organising field expeditions to the parts of the world with little known invertebrate fauna. The expeditions are aimed at collecting specimens for research, describing new taxa and enriching the collections. Since 2004 eight such expeditions have been organised, among other places to New Caledonia, Australia and RSA, and the resulting material is in total ca. 100 000 specimens of insects, mostly beetles, representing hundreds of species new to science. Each year taxonomic publications based on this material appear all over the world. Likewise, as a result of malacological expeditions to the Caucasus, Crimea, Australia, Atlantic Islands and Eastern Carpathians, about 70 thousand snail and slug specimens have been added to the collections, and several papers published. Following contemporary trends in taxonomy and biodiversity studies, the MNHW develops also the collection of frozen specimens preserved suitably for DNA sequencing.

Since 1820 the Museum had permanent zoological exhibitions open to the public. Before World War II they were housed in two exhibition halls: a smaller one to show Silesian fauna and a large three-level hall where world animals and many biological problems were displayed and explained. Regretfully it was the large hall that was completely ruined in 1945 as a result of bomb explosion. After a long break and war damage the Museum resumed organising exhibitions already in the 1960s. The first to open, in 1965, was a small exhibition presenting animals in various habitats; it was kept till 1986. Further permanent exhibitions were opened in 1974 (Insects and Man), 1979 (Vertebrate Skeletal System) and 1985 (Animal World). The latter is the largest, located

12. Museum of Natural History, University of Wrocław – main building today, after façade renovation

in a two-level hall, with a complete skeleton of the blue whale *Balaenoptera musculus* (Linnaeus) in the centre. It is one of only few such exhibits in European museums and the only such an exemplar in Poland, brought to Wrocław by W. Kükenthal from one of his marine expeditions on whaling ships. In 1992 the traditionally zoological exhibitions were extended to include plants and fungi – the exhibition Plant World. These four exhibitions are open in the Museum until today, with the total area of ca. 1000 m$^2$, and the total number of exhibits of 3740 (3140 zoological, 600 botanical), which makes it the largest natural history exhibition in Poland. All the exhibitions were modernised in the meantime (the insect exhibition, the last to be modernised, in 2014). More details about our exhibitions can be found at the MNHW home page (http://www.muzeum-przyrodnicze.uni.wroc.pl/en/index.php?go=exhibitions). As a kind of extension of the exhibitions we offer practical workshops and lectures to school parties who visit the Museum. They can not only see our exhibitions but also learn to identify insect, gastropod and fish species, or get to know the problems of international nature conservation activities.

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Museums with long and rich traditions should be provided with adequate means to play the part of repositories of all biological collections, including those of amateurs, from all over the country. Especially in the case of invertebrates, amateurs' collections are often the source of very valuable scientific data. In many natural history museums of the world, also those which are the oldest and the largest, such as the Natural History Museums in London, Paris or Washington, some of the amateurs' collections are among the most valuable. Even some of the articles in this celebratory issue of the Genus, dedicated to the MNHW, convey the message that during the nearly 250 years of history of natural sciences since the times of Linnaeus, the passion and observation abilities of the researcher were much more important than his profession. Natural history collections are part of the national heritage of Poland, equal to the testimony of our national history, development of civilisation or works of art, and as such deserve exactly the same care and attention.

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# Johann Ludwig Christian Gravenhorst, the first director of the Museum of Natural History, University of Wrocław, and his collection of Ichneumonidae

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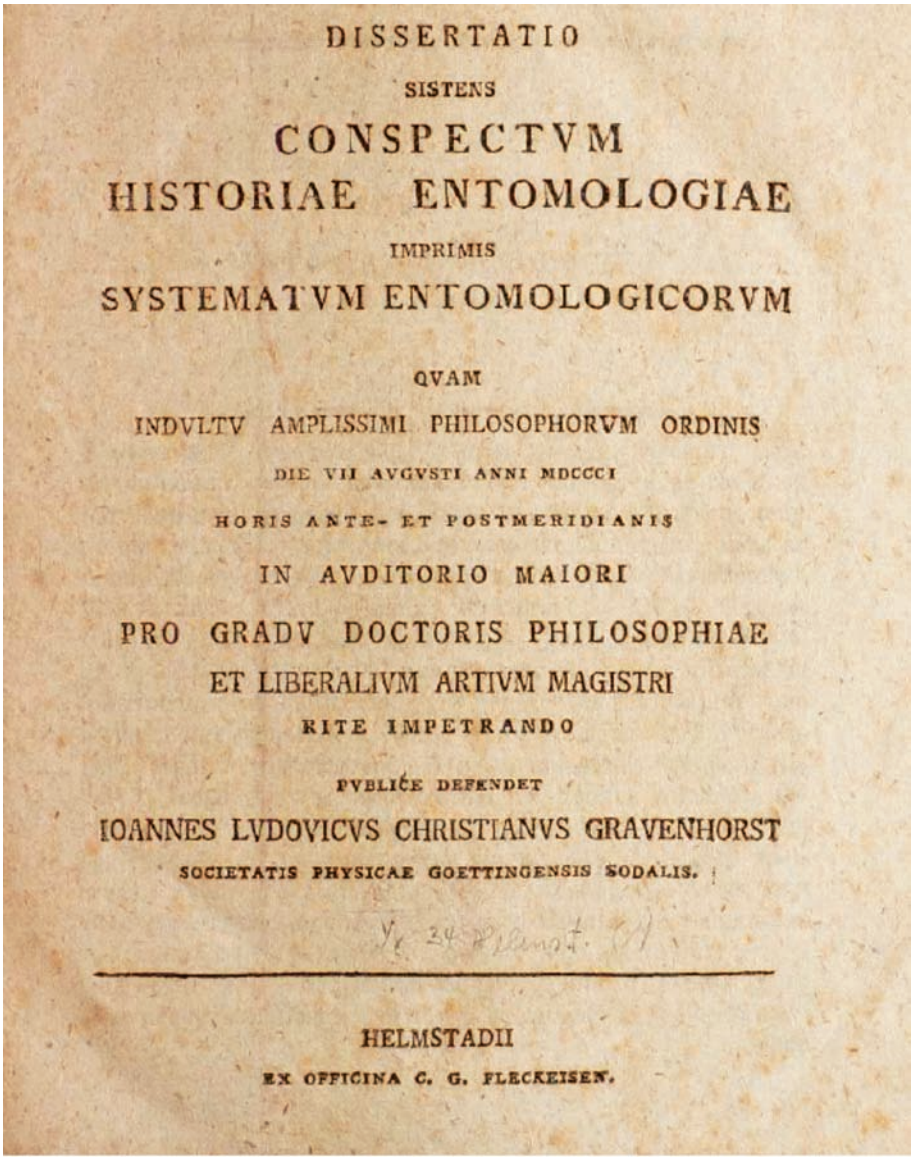
Abstract. Johann Gravenhorst (1777-1857) was the first director of the Museum of Natural History, rector of the University of Wrocław and an outstanding zoologist with a broad scope of scientific interests, from protists to vertebrates. His publications on insects, and among them on the hymenopteran family Ichneumonidae, are especially valued. Gravenhorst's private collection was once the core of the Museum's educational and scientific collections; now it represents only a fraction of ca. 2.5 million specimens preserved in this institution. The original Gravenhorst Collection of Ichneumonidae is among the most valuable entomological treasures of the Polish museums. At present, it comprises 4743 dry-mounted specimens. Of this number, 674 specimens of 229 nominal species, among them 645 type specimens and two possible type specimens, have been so far catalogued and their details are available from the electronic MNHW databases.

Key words: Gravenhorst, Insecta, Hymenoptera, Ichneumonidae, type collection, Wrocław University, Poland.

## INTRODUCTION

Many distinguished naturalists, most notably zoologists, have worked at the Museum of Natural History over the past two hundred years, but Johann Ludwig Christian Gravenhorst, the first director of the Museum, rector of the University of Wrocław, and an outstanding entomologist, deserves a special place in the scientific hall of fame. Although seriously depleted during WWII, Gravenhorst's specimens can still be found in the Museum, and even if this is only a fraction of what was once one of the most remarkable natural history collections in Germany, the several thousand of ichneumon wasps are subject to our special care.

The Royal Privy Councillor, professor of natural history, Johann Ludwig Gravenhorst was born on the 14th of November 1777 in Brunswick. His father, a wealthy brewer, died when Johann Ludwig was 10 years old, and his mother re-married two years later. Gravenhorst received his basic school education in the Katharinen-Gymnasium. Already then, in the first grade, his passion to the entomology was inspired by



DISSERTATIO

SISTENS

CONSPECTVM

HISTORIAE ENTOMOLOGIAE

IMPRIMIS

SYSTEMATVM ENTOMOLOGICORVM

QVAM

INDVLTV AMPLISSIMI PHILOSOPHORVM ORDINIS

DIE VII AVGVSTI ANNI MDCCCI

HORIS ANTE- ET POSTMERIDIANIS

IN AVDITORIO MAIORI

PRO GRADV DOCTORIS PHILOSOPHIAE

ET LIBERALIVM ARTIVM MAGISTRI

RITE IMPETRANDO

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IOANNES LVDOVICVS CHRISTIANVS GRAVENHORST

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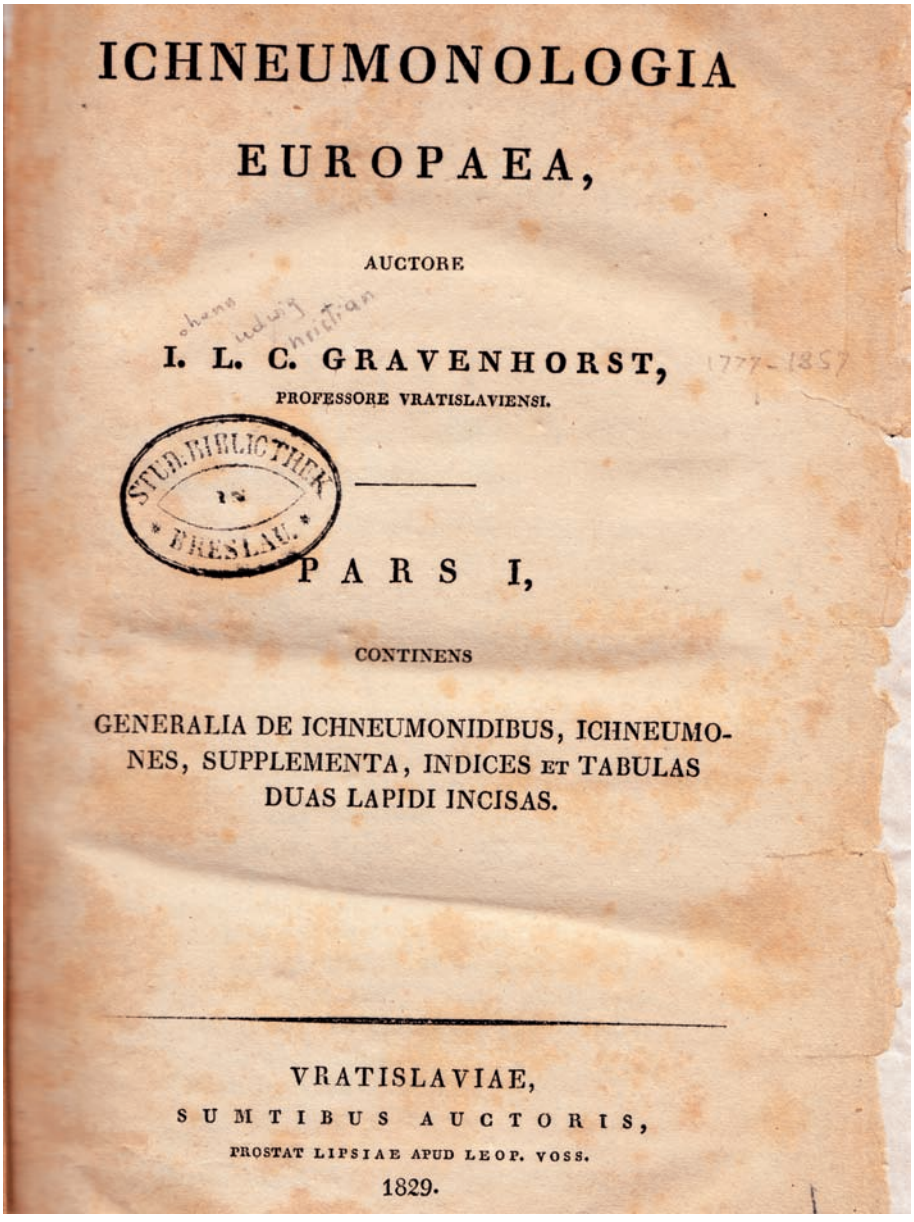
HELMSTADII

EX OFFICINA C. G. FLECKEISEN.

1. The title page of Gravenhorst's doctoral dissertation

teachings of Johann Christian Ludwig Hellwig, who helped to identify insects collected by his student and introduced him to the classification system of Fabricius. In 1795 Gravenhorst entered the Collegium Carolinum (presently University of Brunswick – Institute of Technology), where one of his teachers was professor August Wilhelm



ICHNEUMONOLOGIA

EUROPAEA,

AUCTORE

I. L. C. GRAVENHORST,

PROFESSORE VRATISLAVIENSI.



PARS I,

CONTINENS

GENERALIA DE ICHNEUMONIDIBUS, ICHNEUMONES, SUPPLEMENTA, INDICES ET TABULAS DUAS LAPIDI INCISAS.

VRATISLAVIAE,
SUMTIBUS AUCTORIS,
PROSTAT LIPSIAE APUD LEOP. VOSS.
1829.

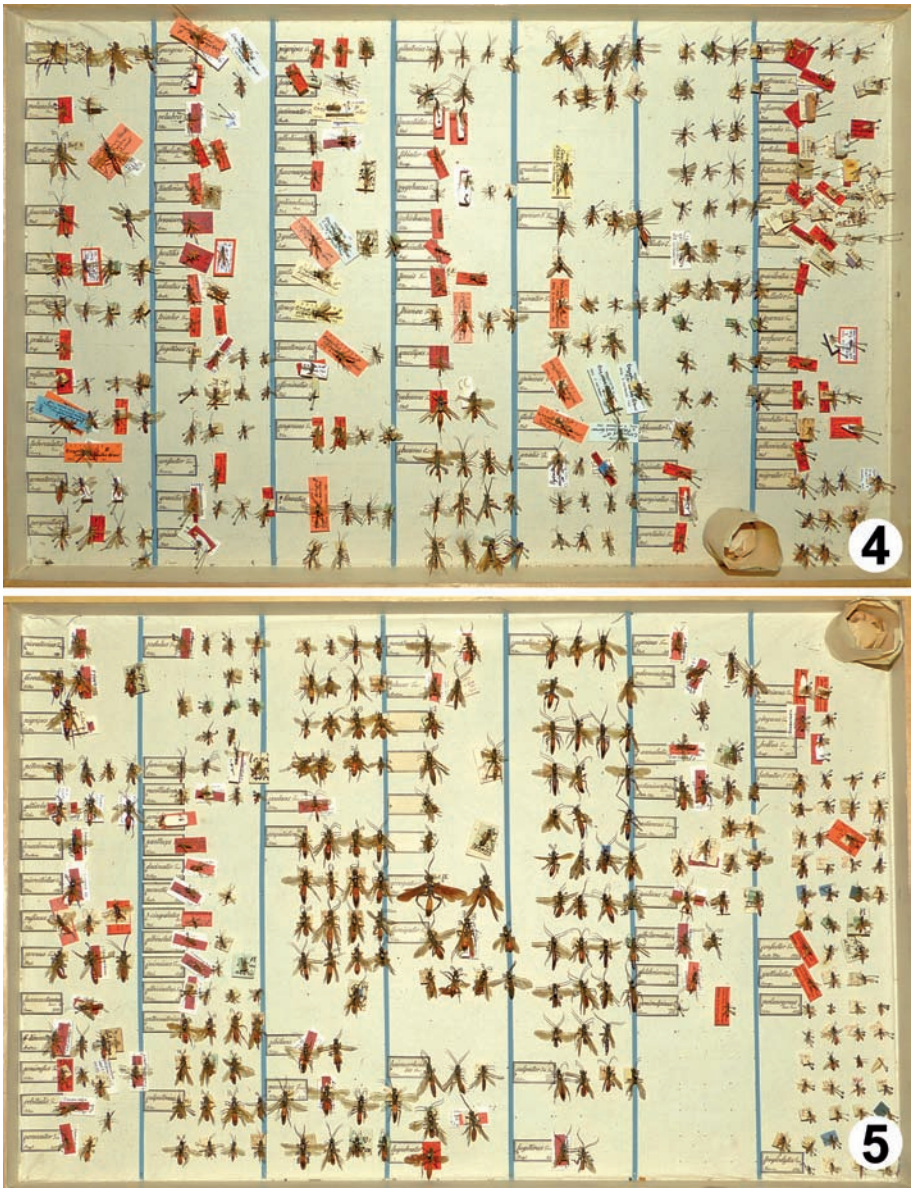
2. The title page of Gravenhorst's opus magnum, *Ichneumonologia Europaea*

KNOCH, a renowned entomologist and author of the three-volume *Beiträge zur Insektengeschichte*. Thus GRAVENHORST's education was under a continuous influence of the most famous specialists in insect systematics. However, although interested in natural history, young GRAVENHORST was rather inclined to become a lawyer and in 1797 with such an intention he entered the University of Helmstedt (Academia Julia). Spending his spare time exploring the surrounding nature and attending additional lectures in physics and natural history, his zoological interests soon came to the fore. Numerous field trips helped improving his previously unsteady health, and the inherited fortune ensured him a high position in the society, without a necessity of taking a job. Therefore, in 1799 GRAVENHORST decided to move to Göttingen, then a renowned centre of natural history. His teachers were such brilliant scientists as Johann Friedrich BLUMENBACH (physician, naturalist, physiologist and anthropologist) or Heinrich Adolf SCHRADER (botanist and mycologist), and he soon came to be on close terms with Johann Karl Wilhelm ILLIGER.

In Göttingen GRAVENHORST studied not only zoology, but also botany and mineralogy, and soon became a member of the Göttingen Physical Society, at that time headed by the famous naturalist Johann Friedrich GMELIN. In 1801 GRAVENHORST returned to Helmstedt, where he submitted his dissertation *Conspectus historiae entomologiae, imprimis systematum entomologicorum* (Fig. 1), passed the doctoral exam and was awarded a degree of *doctor philosophiae et artium liberalium magister*. Settled down

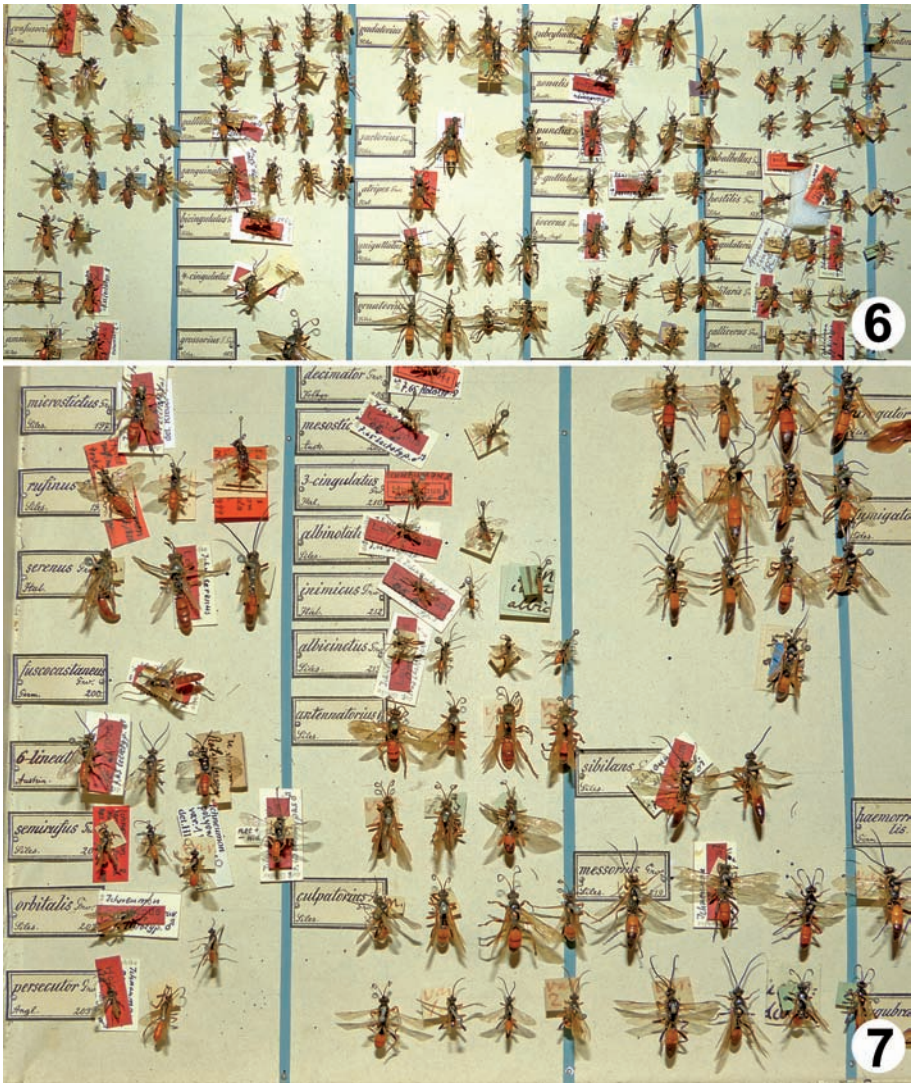
3. *Xorides gravenhorstii* (CURTIS), an ichneumon wasp species dedicated to GRAVENHORST (fot. J. HILSZCZAŃSKI)

in Brunswick again, GRAVENHORST focused on the large family of rove beetles (Staphylinidae). He studied collections of HELLWIG, KNOCH, VON HOFFMANNSEGG, ILLIGER and ZINKEN and in 1802 published the first of his remarkable contributions to entomology, *Coleoptera microptera Brunsvicensia* (GRAVENHORST 1802). In the same year GRAVENHORST visited Paris, where he had an opportunity to study museum collections and met



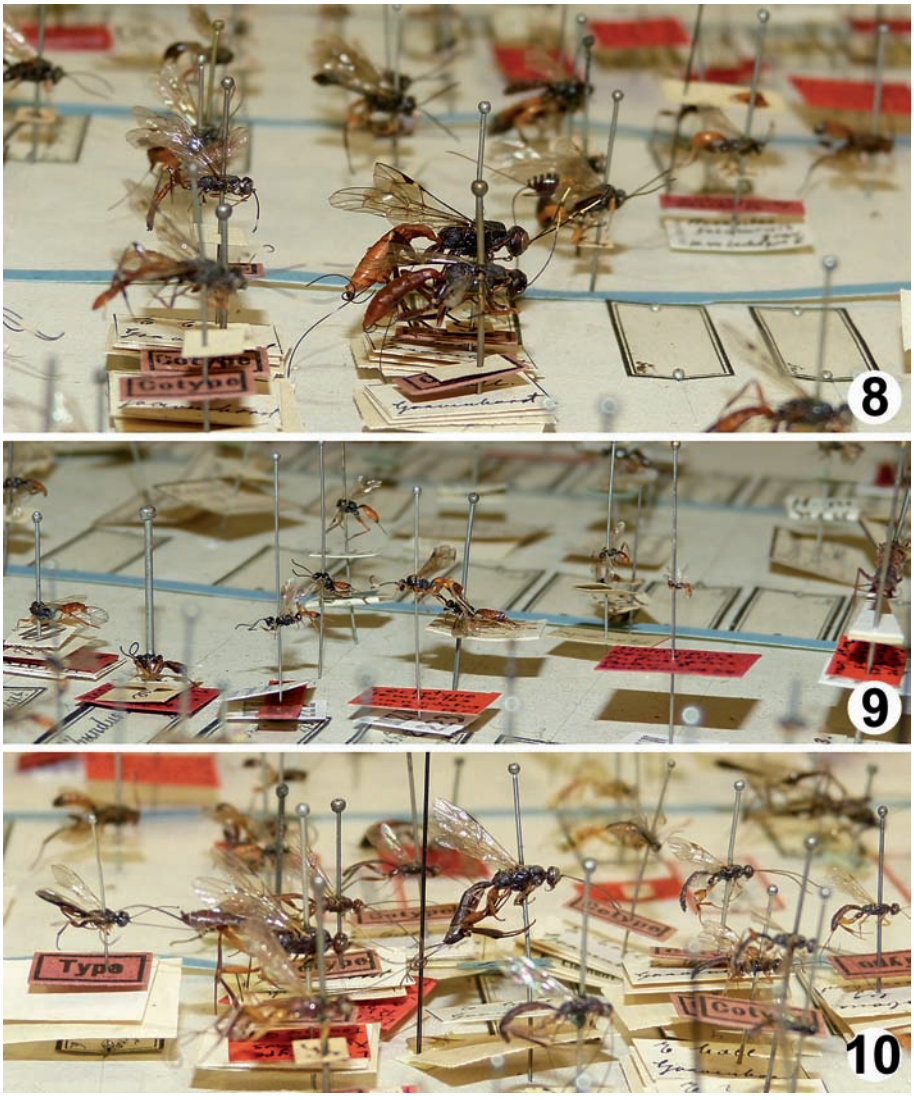

4-5. General view of two drawers from the GRAVENHORST Collection

Georges Cuvier, Guillaume-Antoine Olivier, Pierre André Latreille, Louis Augustin Guillaume Bosc, Alexandre Brongniart and Anselme Gaëtan Desmarest. After returning to Brunswick, Gravenhorst published *System der Natur*, a textbook for students attending his lectures (Gravenhorst 1804). Being rather well-off, Gravenhorst could afford to enlarge his collection by buying numerous specimens. His acquisitions included the insect and bird collection of Mauerhoff (some of his specimens were previously described by Fabricius) and Lampe's large collection of reptiles, fishes and shells.



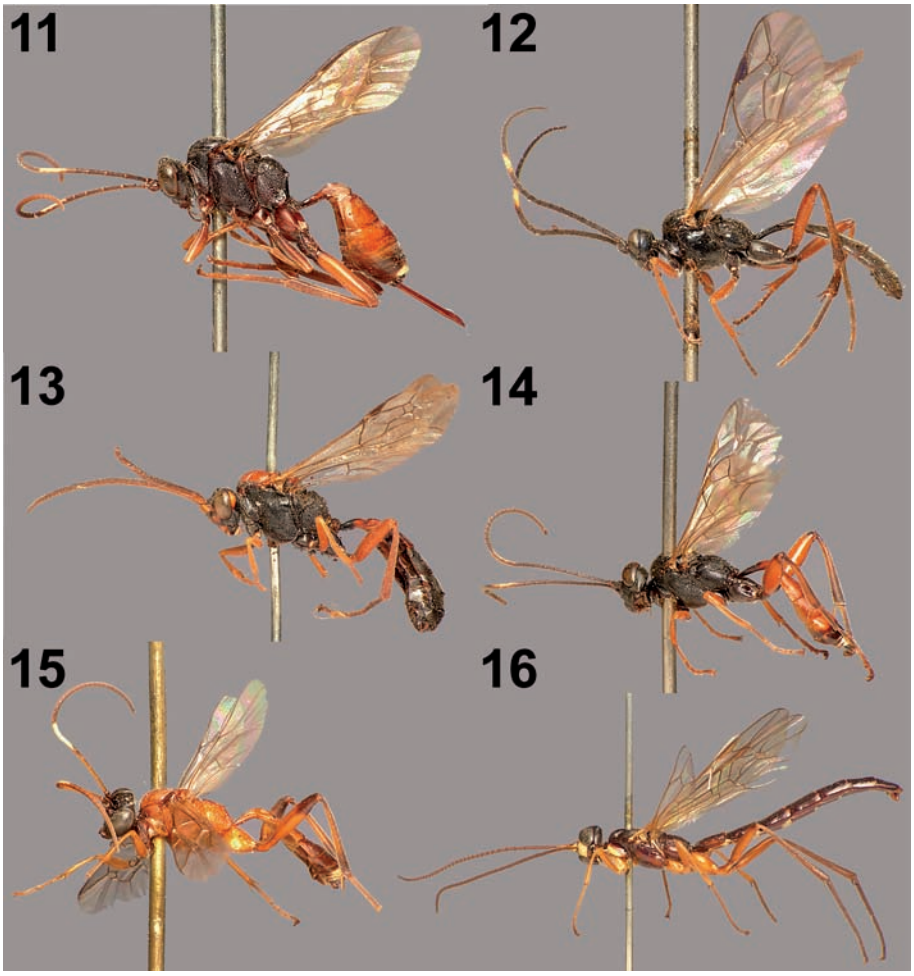

6-7. Specimens of Ichneumonidae from the Gravenhorst Collection

In 1805, GRAVENHORST received habilitation degree at the Göttingen University, where he moved from Brunswick. Here he published another large study, the famous *Monographia coleopterorum micropterorum* (GRAVENHORST 1806), where he treated nearly 400 species of Staphylinidae. This monograph, dedicated to KNOCH, confirmed his entomological talents. He continued working on a new, enlarged edition of this book for many years, until 1839-40, when ERICHSON's opus magnum *Genera et species Staphylinorum* appeared and with its broader and overlapping scope forced GRAVEN-

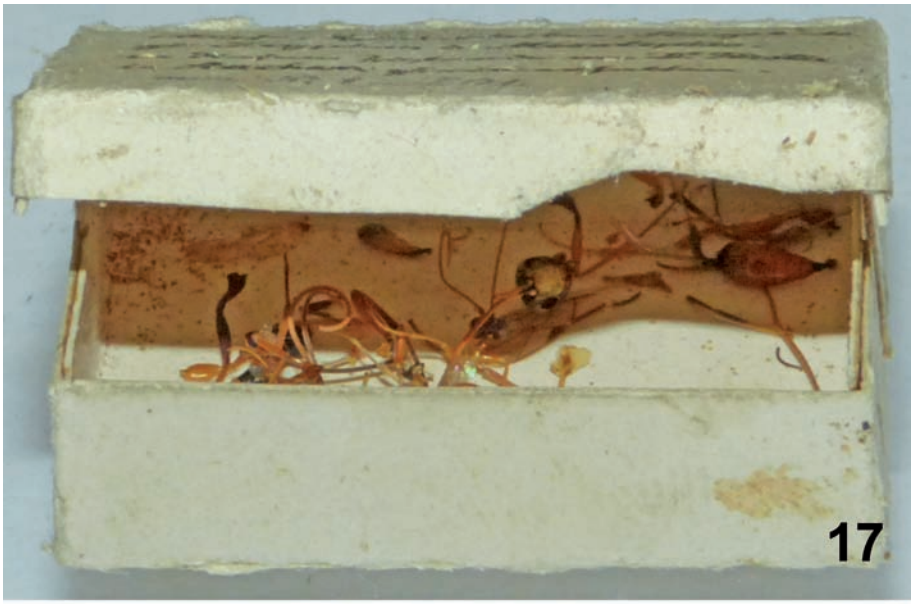


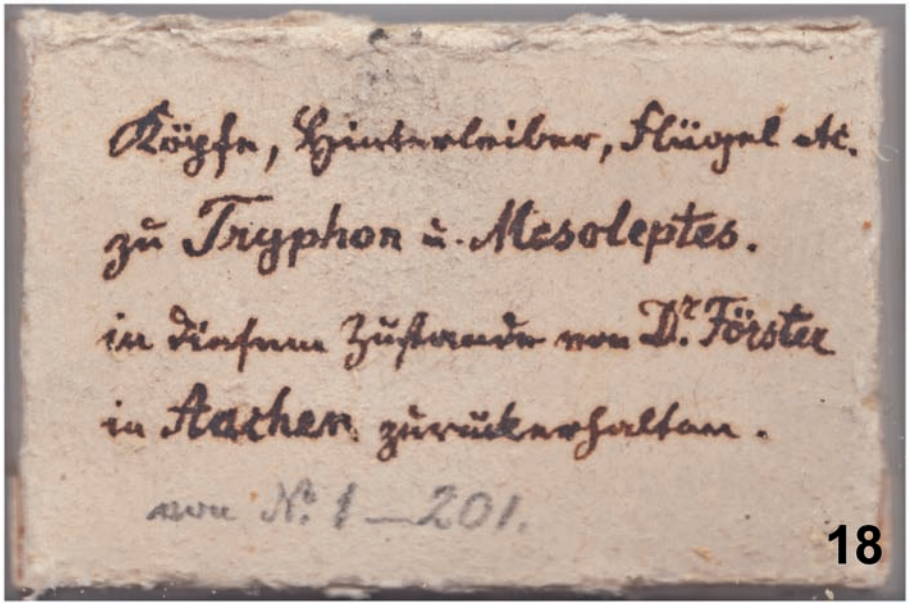

8-10. Specimens of Ichneumonidae from the GRAVENHORST Collection

HORST to abandon his long-term project. In 1809 GRAVENHORST was nominated associate professor of the Göttingen University, but instead decided to accept full professorship in natural history in Frankfurt (Oder), where he also became director of the botanical garden and lecturer in botany and mineralogy. In 1811 he married Charlotte ELSNER, a daughter of a theology professor. In the same year the Frankfurt University, Alma Mater Viadrina, was closed. Its assets were divided between two newly founded universities: the Frederick William University of Berlin (presently HUMBOLDT University) and the Silesian Frederick William University in Breslau (presently University of Wrocław). GRAVENHORST moved to Wrocław.

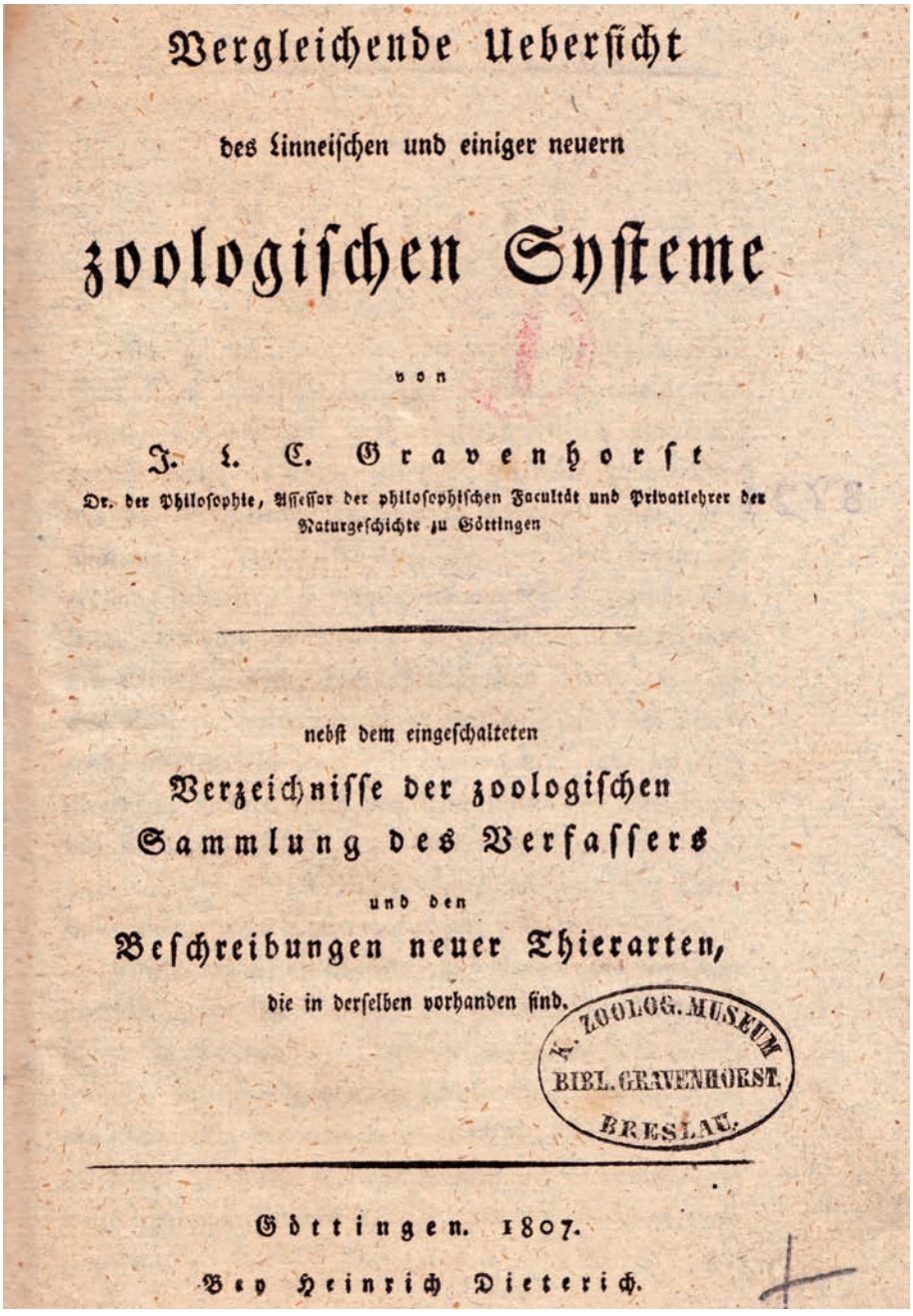



11-16. Specimens of Ichneumonidae from the GRAVENHORST Collection. *Cryptus adustus* GRAVENHORST, holotype (11), *Cryptus grisescens* GRAVENHORST, lectotype (12), *Cryptus sanguinolentus* GRAVENHORST, holotype (13), *Hoplismenus albinus* GRAVENHORST, holotype (14), *Hoplismenus dimidiatus* GRAVENHORST, lectotype (15), *Xorides collaris* GRAVENHORST, lectotype (16)




17-18. Box with remains of various Ichneumonidae from the Gravenhorst Collection (17) and the annotation on its lid (18) reading "Köpfe, Hinterleiber, Flügel etc. zu *Tryphon* u. *Mesoleptes* in diesem Zustande von Dr. Förster in Aachen zurückerhalten" ("Heads, abdomina, wings etc. of *Tryphon* and *Mesoleptes* in this condition received back from Dr. Förster in Aachen")



Vergleichende Ueberſicht

des Linneiſchen und einiger neuern

zoologiſchen Syſteme

von

J. L. C. Gravenhorſt

Dr. der Philoſophie, Aſſeſſor der philoſophiſchen Facultät und Privatlehrer der Naturgeſchichte zu Göttingen

nebſt dem eingeſchalteten

Verzeichniſſe der zoologiſchen Sammlung des Verfaſſers

und den

Beſchreibungen neuer Thierarten,

die in derſelben vorhanden ſind.

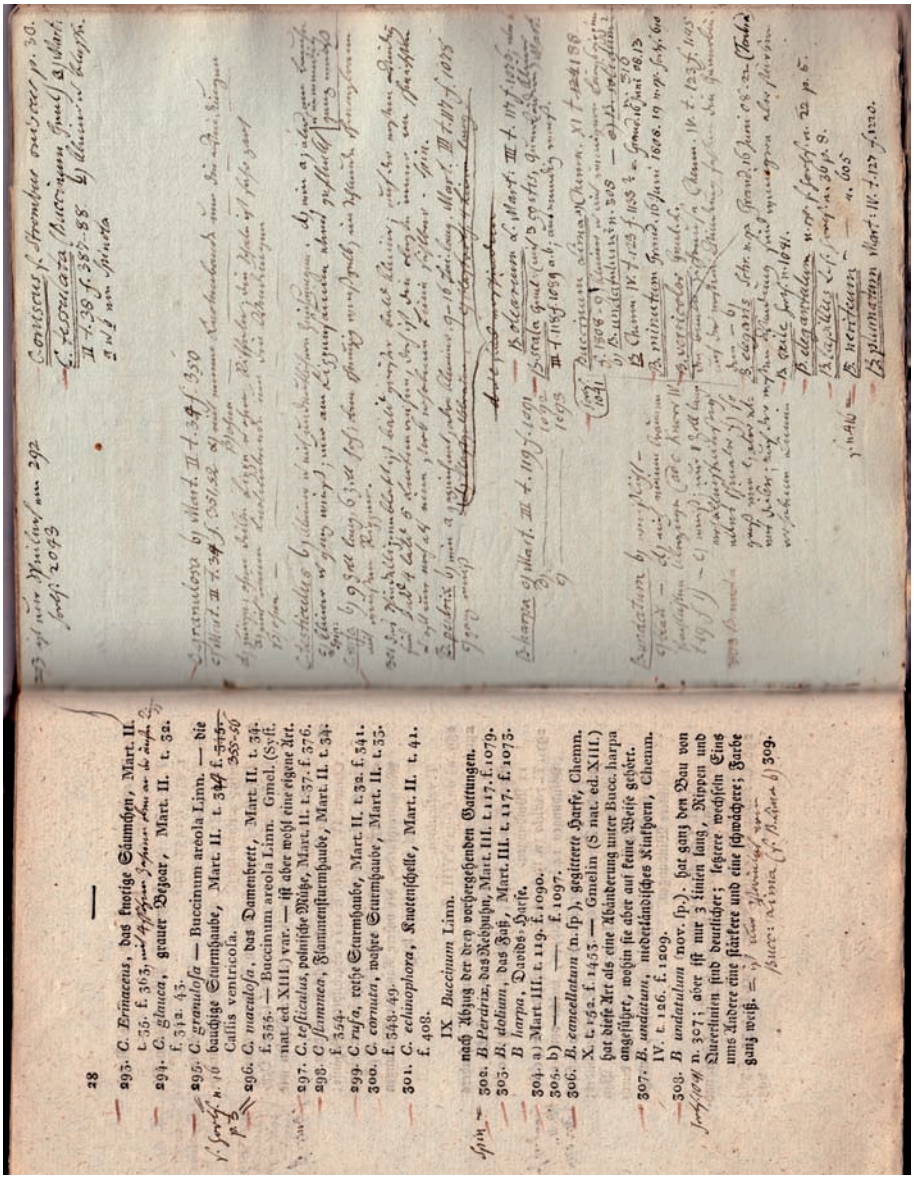


Göttingen. 1807.

Bey Heinrich Dieterich.

19. The front page of GRAVENHORST's book *Vergleichende Übersicht des Linnéischen und einiger neuern zoologischen Systeme...*, coming from the library GRAVENHORST donated to the MNHW

In Wrocław professor GRAVENHORST was a teacher of a three-year zoology course which covered all animals except lower invertebrates and fishes, which he found unattractive to study. In 1814 he donated a major part of his collection to the university, for a lifelong pension of 150 thalers. This is the date of establishing the institution



20. Pages from the GRAVENHORST's book *Vergleichende Übersicht des Linnéischen und einiger neuern zoologischen Systeme...*, with his own handwritten notes

that has survived 200 years of various turns of history and is presently known as the Museum of Natural History of the University of Wrocław. GRAVENHORST became its first director. His efforts to organise a remarkable museum were so successful that Karl LETZNER, one of the most eminent Silesian naturalists of 19th c. wrote in 1857 that "es jetzt zu den bedeutendsten Sammlungen Deutschlands gehört" (it now belongs to the most important collections in Germany).

The new environment suited GRAVENHORST well and in Wrocław his scientific activity reached its peak. There he published many valuable volumes, including a textbook (GRAVENHORST 1817) and a series of fundamental studies on the hymenopteran family Ichneumonidae, among others *Monographia Ichneumonum pedestrium* (GRAVENHORST 1815), *Conspectus generum et familiarum Ichneumonidae* (GRAVENHORST 1819), *Monographia Ichneumonum Pedemontanae regionis* (GRAVENHORST 1820) and *Ichneumonologia europaea* (GRAVENHORST 1829) (Fig. 2). However, his research interests comprised a number of various topics and during his work as museum director GRAVENHORST published articles on amphibians, reptiles, several groups of marine invertebrates, spiders, staphylinid and tortoise beetles, chalcidoid wasps and protists.

In 1823 the previously retained doublet specimens from his private collection were also donated to the Museum of Natural History, and for this GRAVENHORST received a salary supplement of 100 thalers.

GRAVENHORST suffered from a severe facial neuralgia and in 1825-26 was forced to make two visits to the seaside resort Bad Doberan. The therapy apparently gave expected results, as for the next few years GRAVENHORST with his usual enthusiasm worked on various entomological projects and in 1828-1829 was even appointed rector (German and Polish equivalent of chancellor) of the University of Wrocław. Unfortunately, the pain returned during his 1830 trip to Prague, Vienna and Trieste. Bathing in the sea relieved the symptoms, and GRAVENHORST took the opportunity to do observations of marine invertebrates. The study *Tergestina, oder Beobachtungen und Untersuchungen über einige bei Triest in Meere lebende Arten der Gattung Octopus, Doris, Pinna, Ascida, Serpula, Echinus, Asterias, Ophiura, Holothuria, Actinia, Caryophyllia, Actinotus* (GRAVENHORST 1831) was in fact a result of his health-restoring sea baths.

GRAVENHORST's health deteriorated further and in the winters 1840/41 and 1841/42 he spent a long time bedridden. This illness affected also his mental powers and he never fully recovered. Fortunately, shortly before that GRAVENHORST managed to complete several important studies and even ill, he was able to edit seven more papers. Still able to give lectures in the forties and early fifties, in 1853 GRAVENHORST was already too weak to continue his teaching duties. The bath therapy in Salzbrunn in 1854 and 1855 did not improve his health and in April 1856, on his own request, professor GRAVENHORST retired. However, during short periods of health improvement, he still occasionally gave lectures in zoology in the summer that year. Johann GRAVENHORST died on the 14th of January 1857 of a pulmonary failure.

In acknowledgement of GRAVENHORST's scientific achievements and his role as the organiser and the first director of the Museum of Natural History, in 1830 he was awarded a title of the Prussian Royal Privy Councillor and in 1846 the 4th class Order of the Red Eagle. The 50th anniversary of receiving his PhD (1851) was honoured

by a presentation of the honorary doctorate of the Faculty of Medicine, University of Wrocław and the 3rd class Order of the Red Eagle with bow. GRAVENHORST was a member of 21 scientific societies, including eight honorary memberships. In his testament, he donated his large library and 12000 thalers to the Museum of Natural History, and a part of this sum was to be used to fund a stipend for a zoology student. Many taxon names were dedicated to GRAVENHORST by various authors, including insects and reptiles, e.g. ichneumonid wasps *Gravenhorstia* BOIE, *Xorides gravenhorstii* (CURTIS) (Fig. 3), *Stibeutes gravenhorstii* FÖRSTER; braconid wasp *Microchelonus gravenhorstii* NEES; iguanian lizard *Liolaemus gravenhorstii* (GRAY), scincid lizard *Trachylepis gravenhorstii* (DUMÉRIL & BIBRON) and others.

This biography, largely based on LETZNER (1857), presents GRAVENHORST as a brilliant scientist, skilled organiser and dutiful lecturer. It should be added, however, that Karl LETZNER, a vice-secretary of the entomology section of the Silesian Society for National Culture (Schlesische Gesellschaft für Vaterländische Kultur), also recalled GRAVENHORST as a modest, quiet and friendly man with a soft spot for poetry and singing.

GRAVENHORST's collection, or what remained from his large and diverse original collection, is preserved in the Museum of Natural History, University of Wrocław (MNHW). Nearly two centuries of turbulent history, among others the cataclysm of WWII, reduced this once remarkable collection to merely 19 drawers containing less than 5 thousand ichneumon wasps (Figs 4-16). If any other specimens from the GRAVENHORST Collection survived, their origin would now be impossible to identify because of the missing documentation. Half of the scientific collections and nearly the entire museum archives have been destroyed or lost during the war. Even a story of a parcel containing type specimens from the GRAVENHORST Collection and burned during transport is kept in the museum's records. The remaining material is all the more valuable today.

Among the lost GRAVENHORSTS's collections are the staphylinids, a reference material for two early monographs (GRAVENHORST 1802, 1806), all other insects and remaining animals, including types of numerous species described in *Vergleichende Übersicht des Linnéischen und einiger neuern zoologischen Systeme, nebst dem eingeschalteten Verzeichnisse der zoologischen Sammlung des Verfassers und den Beschreibungen neuer Thierarten, die in derselben vorhanden sind* (GRAVENHORST 1807), published during his stay in Göttingen. MNHW is in possession of a unique exemplar of this book with extensive handwritten notes made by GRAVENHORST himself (Figs 19-20), a volume invaluable as a source of data to clarify status of many taxa presently treated as *nomina dubia* because of missing type specimens.

Even the ichneumonid collection is incomplete. During WWII some of the MNHW treasures were transported to safe locations outside Wrocław, but not all of them were retrieved after the war. Six GRAVENHORSTS's drawers of ichneumon wasps were missing when the collection was luckily discovered in Kąty Wrocławskie in 1948. All drawers were numbered and the specimens organized as they appear in *Ichneumonologia Europaea*, and therefore it was possible to identify exactly which part of the collection was lost (TOWNES 1959).

The Gravenhorst ichneumonid collection is a major challenge for scholars who attempt to identify true type specimens. Most specimen labels were removed already in the 19th c., the collection was rearranged, new specimens (*e.g.*, from Arnold Förster) were added and some were sent in exchange to museums in Leiden and Copenhagen around 1840.

Townes (1965) made efforts to clarify these problems during his two visits to MNHW in 1958 and 1964, when he examined the entire collection. He managed to partly reconstruct the pre-war state of the collection by gathering information directly from the last German MNHW curator Karl Hedwig and from John Frederick Perkins, a renowned British specialist on parasitic wasps, who studied the Gravenhorst Collection in 1936. Townes (1965) concluded that the labels were removed already in 19th c., possibly before Gravenhorst's death, because even early authors who studied the collection, as Wesmael (1859) and Taschenberg (1865), did not cite any label data. Townes (1965) analysed labels from the Gravenhorst Collection and was able to identify those originally associated with type specimens collected before 1829. He also found and described several reliable indicators related to pin brands or methods of mounting that can be used to identify type specimens coming from other sources, as those from Italian collectors, from coll. Manger (Silesian "Warmbrunn") or from coll. Hope (England). This careful and detailed investigation also enabled Townes to identify recent re-mountings of several type specimens.

The Gravenhorst Collection of Ichneumonidae comprises currently 4743 dry-mounted specimens. Although this material has been partly revised by numerous specialists, the exact number of species remains unknown. Jacques Aubert (1958, 1960, 1968; Aubert & Jourdheuil 1958), Franco Frilli (1965, 1974, 1978), Klaus Horstmann (1968, 1974, 1976, 1992, 2001, 2005), Geoffrey Kerrich (1942), Joachim Oehlke (1966), Gerard van Rossem (1969a, b, 1974), Janusz Sawoniewicz (1984, 1986, 1988, 1989, 1990, 2003; Sawoniewicz & Wanat 2003), Martin Schwarz (2005, 2007) and Henry Townes (1958, 1963; Townes & Gupta 1962; Townes & Townes 1962; Townes, Momoi & Townes 1965) and others, used Gravenhorst's specimens for taxonomic revisions and designated lectotypes or neotypes, but their studies covered only selected taxa and still numerous specimens require examination to verify their status (type specimen? holotype? syntype? identity?). Also traces of much earlier entomologists working on the specimens can be found in the collection, e.g., a small cardboard box containing damaged remains of specimens is pinned inside one of the drawers, with a note "Köpfe, Hinterleiber, Flügel etc. zu *Tryphon* u. *Mesoleptes* in diesem Zustande von Dr. Förster in Aachen zurückerhalten" ("Heads, abdomens, wings etc. of *Tryphon* and *Mesoleptes* in this condition received back from Dr. Förster in Aachen") (Figs 17-18). Apparently, already the author of *Synopsis der Familien und Gattungen der Ichneumonen* (Förster 1869) used Gravenhorst's material for his work (and already then the process of specimen damage had begun).

Most of the specimens in the Gravenhorst Collection are pinned, only some are glued on plastic or cardboard mounting cards. The collection is in a relatively good condition, with the majority of specimens well-preserved and identifiable, although some of them are incomplete to various extent. Specimens studied by Gravenhorst

and later never dissected (Figs 11-16) are usually in a good condition, while too many revisions took their toll on those studied and re-mounted several times by various entomologists. The specimens and taxa that have been used in the published taxonomic works of the above-mentioned specialists are all catalogued and their details can be found in the MNHW electronic databases. The catalogue presently comprises 674 specimens of 229 nominal species, among them 645 type specimens and two possible type specimens. Ninety of them are holotypes, 131 lectotypes, two either syntypes or holotypes, 6 neotypes, and 57 paralectotypes. A large part of the MNHW catalogue was published (Sawoniewicz & Wanat 2003) with database entry numbers, specimen details and even the condition of each primary type specimen, and therefore such a list is not presented here. The remaining, not catalogued and largely unrevised part of the collection, awaits specialists willing to explore this nearly two-century old legacy of their predecessor, professor Johann Ludwig Christian Gravenhorst.

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# The Lepidoptera collection of Friedrich Wilhelm Niepelt in the Museum of Natural History, University of Wrocław

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Abstract. Friedrich Wilhelm Niepelt's Lepidoptera collection preserved in the Museum of Natural History, University of Wrocław, Wrocław, Poland is summarised. The bulk of the collection, donated to the Museum about eighty years ago, comprises 3905 specimens of exotic butterflies and moths representing 2388 species and subspecies of 389 genera of Castnidae, Nymphalidae, Papilionidae and Pieridae. A small collection of type specimens representing thirteen species and subspecies is kept separately; this collection is characterised in detail, with photographic documentation of specimens and their labels.

Key words: Niepelt, Insecta, Lepidoptera, type collection, Wrocław University, Poland.

## INTRODUCTION

Friedrich Wilhelm Niepelt (1862-1936) was a renowned dealer of natural history specimens and a devoted lepidopterist based in Lower Silesia. Born in Strzegom (= Strigau), Niepelt spent his youth in Świebodzice (= Freiburg) as a son of a tavern owner. There he received his basic school education and at the age of merely 14 became a bookbinder apprentice. Four years later Niepelt travelled across Germany to settle down in Kassel for a short period of time, and eventually enlisted in the army. The end of his military service and return to Świebodzice-Ciernie (= Zirlau) mark the beginning of the entomological chapter in Niepelt's life. He then managed to raise funds for a trip to the Caribbean Islands, and the money obtained by selling the collected insects enabled him to establish an apparently prosperous business as a dealer in entomological equipment and natural history specimens. Niepelt collected various animals during several further tropical expeditions and traded specimens with many contemporary dealers and naturalists. He became a dedicated collector of butterflies and moths, and published numerous descriptions of new species and subspecies. Moreover, specimens from his

collection were made available to other taxonomists, most notably to Embrik Strand and Hans Fruhstorfer, who also described many new taxa. Niepelt's achievements in lepidopterology were honoured by several authors who dedicated new taxa to him, for example *Morpho niepelti* Röber (Fig. 1), *Dismorphia niepelti* Weymer, *Dalaca niepelti* Fietzner, *Delias niepelti* Ribbe or *Deudorix niepelti* Joicey & Talbot. More detailed data on the life and publications of F. W. Niepelt can be found in Berner (1996), Calliess (1932), Heikertinger (1937), Röber (1932) or Strand (1932).

The Niepelt Collection, housed in the Museum of Natural History, University of Wrocław (MNHW), has been briefly characterised by González et al. (2013). It currently consists of a large non-type specimen collection kept in separate cabinets and type specimens incorporated into the general type specimen MNHW collection. The specimens were most probably donated to the Museum by Niepelt himself between 1932 and 1936, shortly before his death, although the circumstances and details remain unknown. The structure and contents of the collection strongly suggest that the specimens are all doublets from a larger Niepelt's private collection (discussed by González et al. 2013). Jan Kinel (1957), the first Polish post-war MNHW curator, found the Niepelt Collection provisionally ordered in the museum drawers and cabinets immediately after WWII. This seems to indicate more than one donation, as a single large donation of systematically or geographically organised material would have been most likely retained in original Niepelt's boxes or drawers and kept without transferring the specimens to the standard museum drawers. The last pre-war German MNHW director,


1. *Morpho niepelti* Röber, an example of a butterfly species dedicated to F.W. Niepelt (photo J. Masłowski)

Ferdinand Pax Jr. (1949) lists the Niepelt Collection among those found undamaged after WWII, when he visited the Museum at the end of 1945. However, only Kinel (1957) gives some basic details in his report prepared shortly before his death in 1950. Jan Kinel moved to Wrocław in May 1946 from the Dzieduszycki Museum in Lviv, to


2. One of cabinets containing the Niepelt Collection

curate the MNHW collections. He counted 240 drawers, most with a glass bottom, with exotic butterflies, and contained in four remarkably large cabinets. Additionally, about twenty drawers contained moths. In this form, the collection was kept until recently, virtually untouched but well-protected against pests under proper storage conditions.


3,4. Examples of Pieridae (3) and Danaidae (4) from the Niepelt Collection

After the MNHW entomology department moved to a new building in 2003, the Niepelt Collection was rearranged and catalogued. Presently the collection occupies 192 numbered drawers (10 standard cabinets) (Figs 2-5). The electronic MNHW database entries comprise data that allow locating every taxon in a respective drawer and valid combinations for each nominal species and subspecies.

The main MNHW Niepelt Collection (Table 1) comprises 3905 specimens of Lepidoptera representing 2388 species and subspecies classified in 389 genera. Only Castnidae, Nymphalidae, Papilionidae and Pieridae are present in this collection. Nymphalidae are most numerous, both in terms of taxa and specimens, and make up nearly 70% of the collection. The smallest part, the Castnidae, with only 31 specimens, has been summarised in a recent publication (González et al. 2013). Most of the taxa


5. Examples of Nymphalidae from the Niepelt Collection

are Neotropical (over 40%), followed by Oriental (over 25%), Afrotropical (ca. 15%) and Australian (ca. 11%), the small remaining fraction comes from Nearctic and Palaearctic (mostly the Himalayas). The specimens are generally in good condition (Figs 3-5), mostly with appropriate collecting data, although frequently restricted to the locality only.

There are also several drawers kept separately, containing mixed butterflies and moths, some of them bearing identification labels identifiable as handwritten by NIEPELT, but they consistently miss any locality labels. This problematic collection has not been catalogued and the specimens are not included in Table 1.

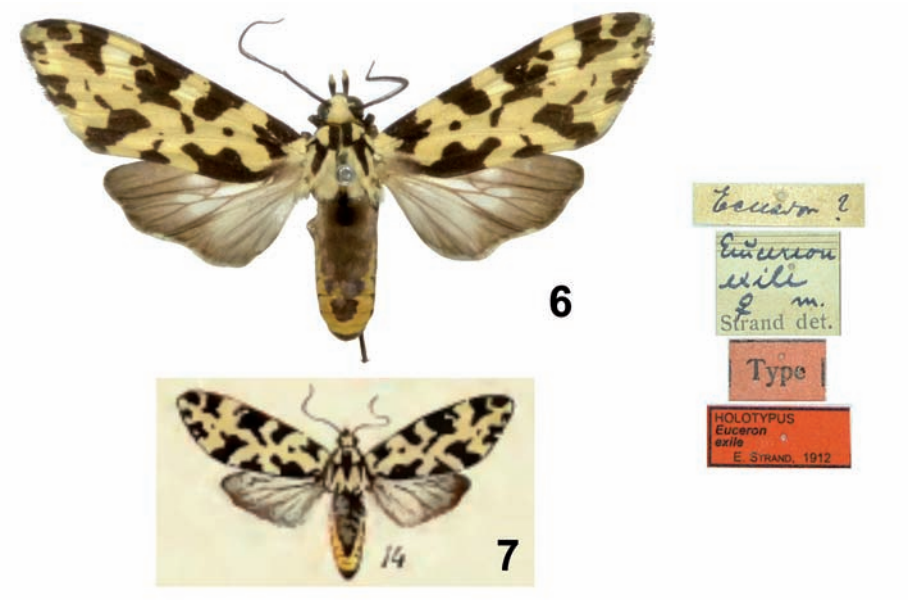
The type specimens from the NIEPELT Collection are kept separately, as a part of the Lepidoptera type specimen MNHW collection. Only fourteen type specimens of thirteen species and subspecies have been identified, and their details are presented below, in alphabetical order (f - female, m - male).

Checklist of the Lepidoptera type specimens in the NIEPELT collection

**Family Arctiidae**

***Euceron exile*** STRAND, 1912: 146; holotype [f]; Ecuador; MNHW No 1038 Fig. 6).

***Hyalurga cinctella*** STRAND, 1911a: 42; holotype [f]; Ecuador, Sarayaku; MNHW No 1036 (Fig. 8).




6,7. *Euceron exile* STRAND, holotype female (6) with its labels and illustration of the same specimen reproduced from STRAND (1912) (7)

**Family Lasiocampidae**

***Claphe macasibia*** STRAND, 1912: 154; holotype [m]; Ecuador, Macas; MNHW No 1040 (Fig. 9).

**Family Noctuidae**

***Sypna hieroglyphigera*** STRAND, 1911b: 101; holotype [f]; Ecuador, Macas; MNHW No 1041; current status: *Lichnoptera hieroglyphigera* (STRAND, 1912) (Fig. 10).

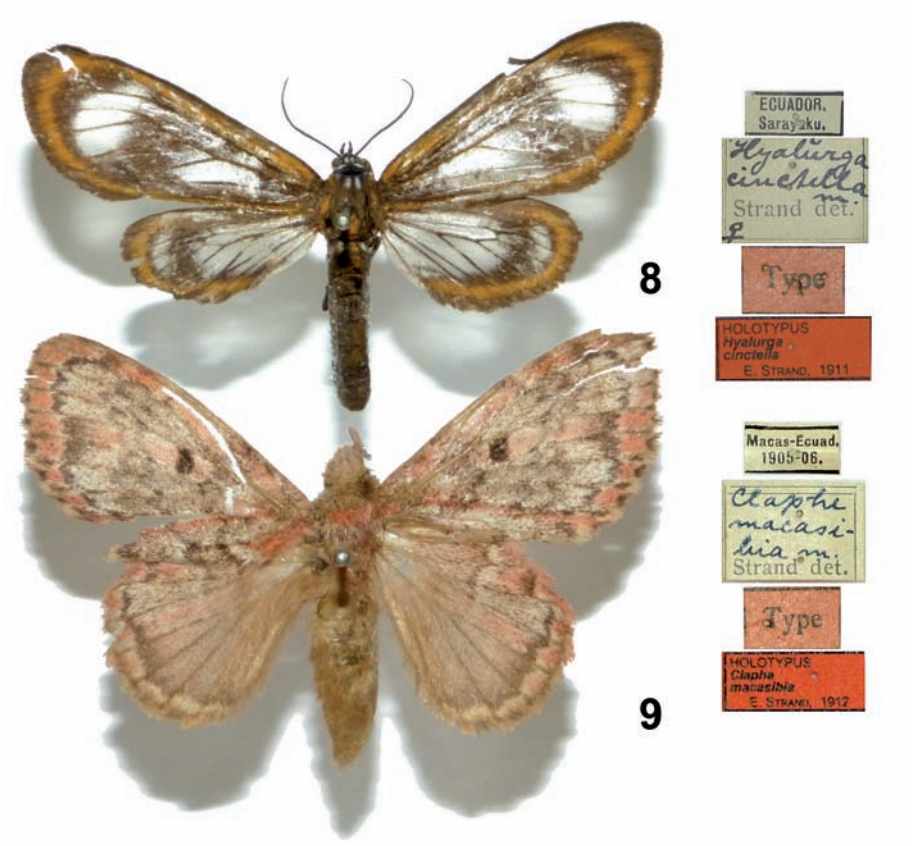
**Family Notodontidae**

***Hemiceras dyari*** STRAND, 1911a: 41; holotype [m]; Ecuador, Sarayaku; MNHW No 1035 (Fig. 11).

**Family Nymphalidae**

***Euphaedra medon neustetteri*** NIEPELT, 1915: 58; syntype [m]; Kongo, Kasai Riv.; MNHW No 1129 (Fig. 13).

***Pyrameis dejeani sambaluna*** FRUHSTORFER, 1898a: 150; syntype [m]; Indonesia, Lombok Is.; MNHW No 1127; current status: *Vanessa dejeani* GODART, 1824 (Fig. 14).

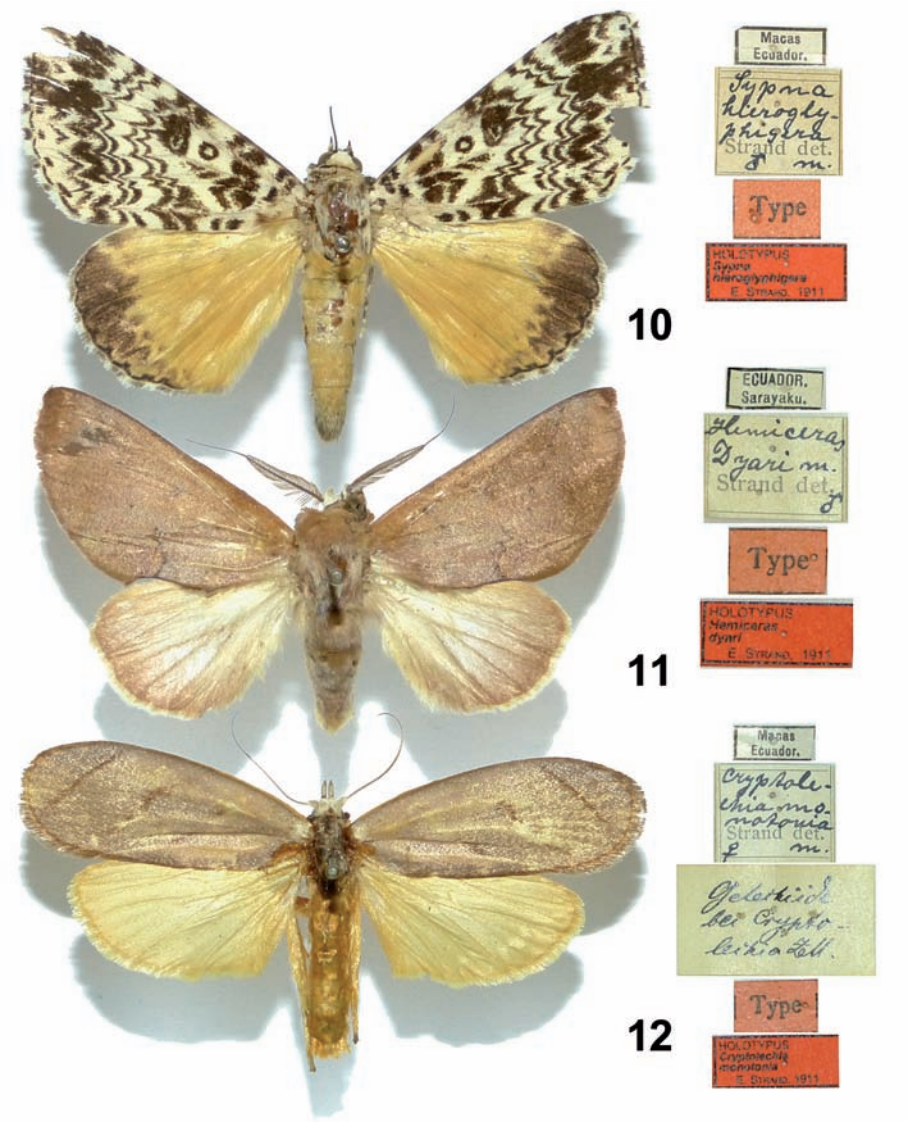



8,9. *Hyalurga cinctella* STRAND, holotype female (8) and *Claphe macasibia* STRAND, holotype male (9), with corresponding labels

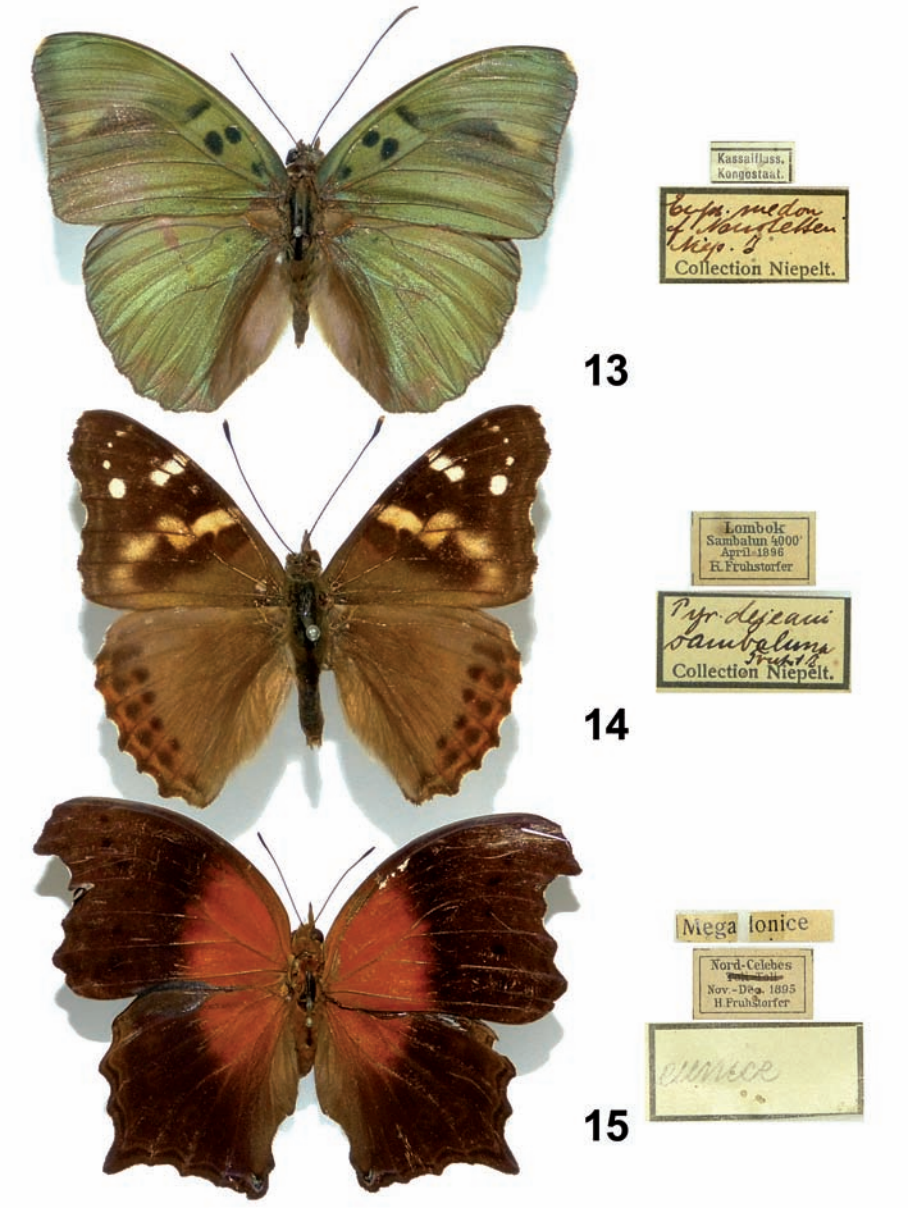
***Rhinopalpa megalonice eunice*** FRUHSTORFER, 1898b: 331; syntype [f]; Indonesia, Sulawesi; MNHW No 1128; current status: *Rhinopalpa polynice megalonice* (FELDER, 1867) (Fig. 15).

**Family Oecophoridae**

***Cryptolechia monotonia*** STRAND, 1911c: 151; holotype [f]; Ecuador, Macas; MNHW No 1037; current status: *Timocratica monotonia* (STRAND, 1911) (Fig. 12).




10-12. *Sypna hieroglyphigera* STRAND, holotype female (10), *Hemiceras dyari* STRAND, holotype male (11), and *Cryptolechia monotonia* STRAND, holotype female (12), with corresponding labels




13-15. *Euphaedra medon neustetteri* Niepelt, syntype male (13), *Pyrameis dejeani sambaluna* Fruhstorfer, syntype male (14), and *Rhinopalpa megalonice eunice* Fruhstorfer, syntype female (15), with corresponding labels

**Family Papilionidae**

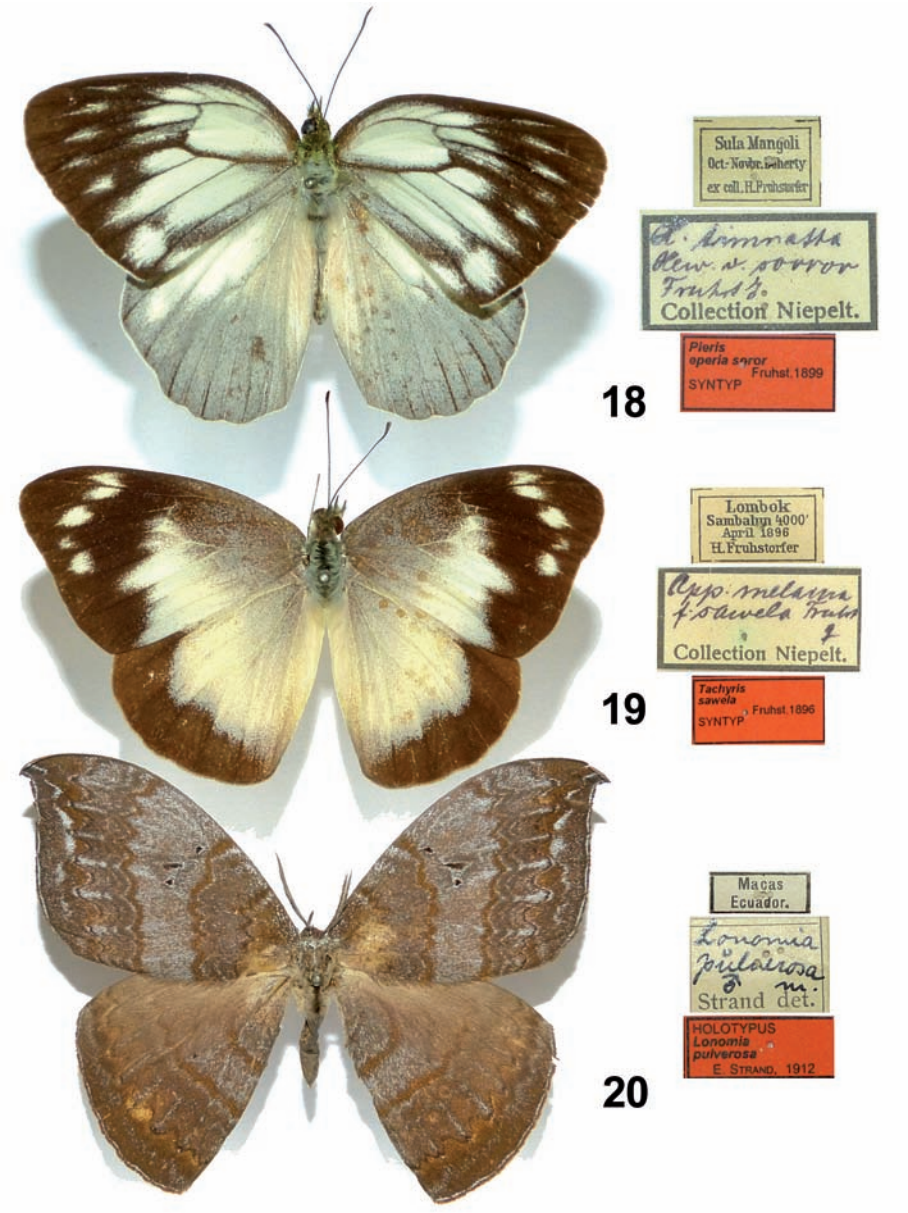
***Ornithoptera joiceyi*** NOAKES & TALBOT, 1915: 59 (in JOICEY & TALBOT 1915); 2 syntypes [mf]; Papua New Guinea, Arfak Mts.; MNHW No 1049; current status: *Troides goliath samson* (NIEPELT, 1913) (Figs 16-17).

**Family Pieridae**

***Pieris eperia soror*** FRUHSTORFER, 1899: 10; syntype [m]; Indonesia, Mangoli; MNHW No 1122 (Fig. 18).


16,17. *Ornithoptera joiceyi* NOAKES & TALBOT, syntypes male (16) and female (17) with corresponding labels

***Tachyris sawela*** FRUHSTORFER, 1896: 115; syntype [f]; Indonesia, Lombok Is.; MNHW No 1121 (Fig. 19).




18-20. *Pieris eperia soror* FRUHSTORFER, syntype male (18), *Tachyris sawela* FRUHSTORFER, syntype female (19), and *Lonomia pulverosa* STRAND, holotype male (20), with corresponding labels

**Family Saturnidae**

***Lonomia pulverosa*** STRAND, 1912: 150; holotype [m]; Ecuador, Macas; MNHW No 1039 (Fig. 20).

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**Table 1.** Summary of non-type specimens in the main MNHW Niepelt Collection.

| | | | genera | species & subspecies | specimens |
|---|---|---|---|---|---|
| **Lepidoptera** | | | **389** | **2388** | **3905** |
| **Castnidae** | | | 13 | 19 | 31 |
| | Castninae | | 13 | 19 | 31 |
| | | Castniini | 11 | 17 | 29 |
| | | Gazerini | 2 | 2 | 2 |
| **Nymphalidae** | | | 293 | 1657 | 2600 |
| | Apaturinae | | 11 | 25 | 34 |
| | Biblidinae | Biblidini | 35 | 173 | 260 |
| | Charaxinae | | 14 | 96 | 142 |
| | | Anaeini | 5 | 8 | 9 |
| | | Charaxini | 2 | 64 | 93 |
| | | Euxanthini | 1 | 3 | 5 |
| | | Pallini | 1 | 2 | 2 |
| | | Preponini | 4 | 13 | 19 |
| | | Prothoini | 1 | 6 | 14 |
| | Cyrestinae | | 7 | 61 | 93 |
| | | Cyrestini | 3 | 49 | 78 |
| | | Pseudergolini | 4 | 12 | 15 |
| | Danainae | | 40 | 287 | 453 |
| | | Danaini | 8 | 128 | 218 |
| | | Ithomiini | 32 | 159 | 235 |
| | Heliconiinae | | 32 | 246 | 401 |
| | | Acraeini | 4 | 88 | 139 |
| | | Argynnini | 9 | 26 | 50 |
| | | Heliconiini | 10 | 86 | 140 |
| | | Vagrantini | 9 | 46 | 72 |
| | Limenitidinae | | 39 | 267 | 407 |
| | | Adoliadini | 18 | 117 | 189 |
| | | Limenitidini | 12 | 72 | 108 |
| | | Neptini | 7 | 66 | 91 |
| | | Parthenini | 2 | 12 | 19 |
| | Morphinae | | 26 | 129 | 206 |
| | | Amathusiini | 11 | 40 | 77 |
| | | Brassolini | 12 | 61 | 90 |
| | | Morphini | 3 | 28 | 39 |
| | Nymphalinae | | 34 | 196 | 369 |
| | | Coeini | 2 | 2 | 2 |
| | | Junoniini | 5 | 80 | 169 |
| | | Kallimini | 3 | 13 | 25 |
| | | Melitaeini | 11 | 45 | 74 |
| | | Nymphalini | 7 | 37 | 72 |
| | | Victorini | 4 | 14 | 18 |
| | | incertae sedis | 2 | 5 | 9 |

| | | | | | |
|---|---|---|---|---|---|
| | Satyrinae | | 55 | 177 | 235 |
| | | Elymniini | 16 | 85 | 121 |
| | | Eritini | 2 | 3 | 3 |
| | | Haeterini | 3 | 10 | 15 |
| | | Melanitini | 3 | 13 | 19 |
| | | Satyrini | 31 | 66 | 77 |
| **Papilionidae** | | | 19 | 354 | 625 |
| | Papilioninae | | 15 | 346 | 615 |
| | | Baroniini | 1 | 1 | 1 |
| | | Leptocircini | 8 | 96 | 151 |
| | | Papilionini | 1 | 147 | 269 |
| | | Troidini | 6 | 103 | 195 |
| | Parnassiinae | | 3 | 7 | 9 |
| | | Parnassini | 1 | 5 | 7 |
| | | Zerynthini | 2 | 2 | 2 |
| **Pieridae** | | | 64 | 358 | 649 |
| | Coliadinae | | 16 | 87 | 216 |
| | Dismorphiinae | | 6 | 35 | 60 |
| | Pierinae | | 42 | 236 | 373 |
| | | Anthocharidini | 5 | 17 | 30 |
| | | Colotini | 5 | 28 | 39 |
| | | Pierini | 32 | 191 | 304 |

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|---|---|---|

# Coleoptera collections of Wilhelm Kolbe, Richard Scholz and Georg Polentz in the Museum of Natural History, University of Wrocław

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Abstract. Among historical beetle collections preserved at the Museum of Natural History, University of Wrocław, three deserve special attention. They belonged to famous pioneers of Silesian coleopterology, school teachers and amateur naturalists: Wilhelm Kolbe (1852-1929), Richard Scholz (1866-1935) and Georg Polentz (1879-1965). Voucher specimens from these collections have been used in numerous faunistic papers, which are still frequently cited by modern entomologists, and they represent invaluable documentation of beetle diversity of pre-war Silesia, Sudety Mts and adjacent areas. Contributions of these early authors to the knowledge of beetles and their collections are summarised, with a brief biographical note on each of them.

Key words: Insecta, Coleoptera, collection, Wrocław University, Poland, Silesia, types.

## INTRODUCTION

Within the present territory of Poland, the south-western region of Silesia has a particularly long and rich tradition of coleopterological studies. Natural sciences, among them entomology, attracted special attention in the second half of 19th c., when several prominent coleopterists initiated systematic faunistic studies focused on Silesian beetles. The first and most important pioneer was Karl Letzner (1812-1889, see Jałoszyński & Ruta 2012), whose work was continued by Julius Gerhardt (1827-1912). Their contributions were supplemented by numerous findings and publications of their followers: Wilhelm Kolbe (1852-1929), Richard Scholz (1866-1935) and Georg Polentz (1879-1965). Each of them published, on a regular basis, faunistic summaries focused on new distributional data of beetles occurring in Silesia. These three scholars

have been exchanging specimens and possibly cooperating in their mutual studies; yet their collections, preserved in the Museum of Natural History, University of Wrocław (MNHW), show different characteristics, reflecting different research focus, methods and favourite collecting sites of each of their original owners. The collections comprise well over 10 000 species, subspecies and varieties represented by approximately 233 000 specimens (Tables 1, 2), thus being probably the largest existing collections of Silesian Coleoptera.

**Wilhelm Kolbe** (Fig. 1) was born on the 9th of October 1852 in a village Rosochata (= Seiffersdorf) near Legnica (= Liegnitz). In 1870 Kolbe participated in the Franco-Prussian War, after which he settled down in Legnica. In this town he became a school teacher (in 1875), then a director of the Hedwigschule (1883-1918, Hinke 1919), and there he died in 1929.

Since 1888 Kolbe was a member of the Silesian Society for Insect Science (Schlesische Verein für Insektenkunde). He closely cooperated with Gerhardt, who was a teacher at the same school. When Gerhardt retired, it was Kolbe who urged the authorities of Legnica to buy Gerhardt's beetle collection (which, unfortunately, has not survived the World War II). Kolbe's collecting activities were restricted mainly to areas adjacent to Legnica. In a short obituary published after his death (Anonym 1929), Kolbe was recalled as a representative of the good old school of faunistics, a continuator of studies initiated by Letzner and Gerhardt.

Kolbe's contribution to the knowledge of insect fauna comprises 35 articles focused on beetles. Eighteen of them form a cycle „Beiträge zur schlesischen Käferfauna" (Contributions to the Beetle Fauna of Silesia) published from 1899 to 1932 in the journal Zeitschrift für Entomologie (in 1908-1924 as Jahresheft des Vereins für schlesische Insektenkunde zu Breslau). One of his first papers was devoted to beetles inhabiting mosses (Kolbe 1892). Kolbe's research on beetle larvae, life cycles and biology deserves a special mention (Kolbe 1893, 1894, 1895, 1896, 1899, 1900, 1902);


1-3. W. Kolbe (1), R. Scholz (2, reproduced from Anonym 1935) and G. Polentz (3)

he belonged to very few contemporary Silesian entomologists interested in this field of study. One of his faunistic studies was focused on beetles of a small swamp forest near Pątnów Legnicki (= Panthen) (KOLBE 1897), which later became a nature reserve, until 1945 known as Verlorene Wasser, and in 2001 again recognized as a valuable area worth protecting and appointed as a Nature Reserve Ponikwa. KOLBE's contributions to entomology were broadly recognized and honoured by several authors by dedicating him species names, *e.g.*, *Stenus kolbei* GERHARDT, 1893, *Lamprosoma kolbei* R. SCHOLZ, 1926 (junior synonym of *Oomorphus concolor* (STURM, 1807)), and *Enicmus kolbei* WANKA, 1929 (junior synonym of *Latridius gemellatus* (MANNERHEIM, 1844)).


4-5. General view of drawers from the KOLBE Collection

The Coleoptera collection of KOLBE (Figs 4-7) is the largest of historical beetle collections deposited at MNHW. It consists of over 131 000 specimens representing 6 513 species, subspecies and varieties (Table 1) kept in 217 drawers. Most of the beetles come from Silesia, collected mainly in Legnica and neighbouring areas (towns and villages Dunino, Malczyce, Pątnów Legnicki, Zimna Woda, *etc*.), in Żagań and Polkowice; a small fraction is from Karkonosze Mts and Izerskie Mts. This is also the most difficult of all MNHW historical beetle collections to deal with. KOLBE has mounted small specimens on points of minute triangular cards, and often a single pin bears more than ten such specimens coming from 2-3 different collecting sites, interspaced with locality labels (Fig. 6). The labels bear rudimentary data, usually a printed abbreviation of a locality, less frequently also a handwritten date added on the reverse side. It is possible to assign specimens to certain collecting sites, and the KOLBE Collection is still very useful in modern faunistic studies (*e.g.*, KUBISZ *et al.* 2010, RUTA *et al.* 2010, WANAT & BOROWSKI 2013).

**Richard SCHOLZ** (Fig. 2) was born on the 25th of October 1866 in Legnica (= Liegnitz), where he studied didactics to become a school teacher. He worked at a school in Marciszów (= Nieder-Wernersdorf), but after passing exams required to become


6-7. Specimens of Staphylinidae (6) and Tenebrionidae (7) from the KOLBE Collection

a secondary school teacher and a rector he returned to Legnica. There SCHOLZ was a rector of a Lutheran school, retired in 1932, and died three years later.

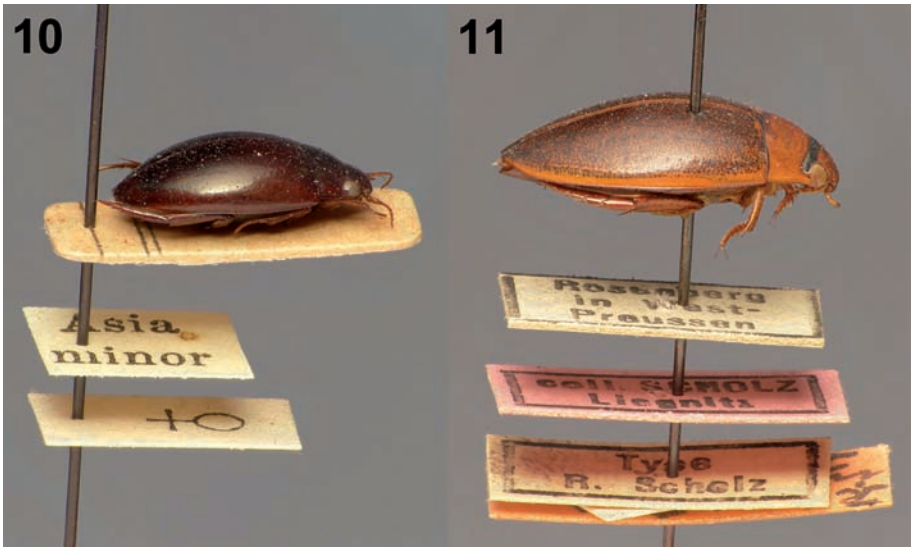
SCHOLZ was a student of Julius GERHARDT, and met W. KOLBE for the first time in 1881 (SCHOLZ 1931). His entomological interests were focused on Coleoptera and Hemiptera (according to HORN *at al*. (1990) his collection of bugs was transferred to the Phyletisches Museum in Jena before WWII, soon after SCHOLZ's death). He was especially fond of water beetles belonging to the suborder Adephaga. SCHOLZ cooperated with other contemporary specialists; for instance many of his determinations were verified by Edmund REITTER (SCHOLZ 1916a). Since 1893 he belonged to the Schlesische Verein für Insektenkunde. One of the prominent German natural history societies, Verein für naturwissenschaftliche Heimatforschung in Hamburg, awarded SCHOLZ in 1930 a title of a corresponding member.

In 1900-1935 SCHOLZ published over 150 papers focused mainly on beetles. Most of them are short faunistic records of interesting beetle species discovered in Silesia,


8-9. A drawer and specimens of Dytiscidae from the SCHOLZ Collection

initially (1900-1905) published in the journal Insekten-Börse (Leipzig), and later (since 1911) in Entomologische Blätter (Berlin). Among his larger papers is a synoptic work on beetles of Legnica and surrounding areas, where he gives distributional data on 87 species (Scholz 1927a), and a cooperative study on nidicolous species, in which the authors present an ecological classification of beetles living in nests of birds and mammals and original observations from Lower Silesia (Scholz & Hinke 1919). In his early papers Scholz dealt also with morphological problems, *e.g.*, teratology (Scholz 1900) and stridulating organs in Cerambycidae and Scolytinae (Scholz 1904, 1905b). Occasionally, he also studied preimaginal stages (Scholz 1926) and biology of beetles (Scholz 1905a, 1927b). His most valued studies are those focused on distributions of Palaearctic Dytiscidae and Haliplidae (*e.g.*, Scholz 1916b, 1923, 1927c, 1929a, 1932) and his identification key to the Haliplidae of Europe (Scholz 1929b).

The beetle collection belonging to Scholz (Table 1) originally comprised 12 000 species (Anonym 1935). At present, the main Scholz Collection preserved at MNHW contains nearly 57 000 specimens representing slightly less than 10 000 species and subspecies (Figs 8-11), kept in 92 drawers. This is the most species-rich of the three historical Coleoptera collections characterised in this paper. Scholz's water beetle specimens have been originally kept as a separate collection (in 15 boxes) and they have retained this special status till present. This part of the Scholz Collection (Table 2) comprises nearly 6 000 specimens representing 592 species and infraspecific taxa. The Scholz's water beetles are of special value, as they come not only from Silesia and surrounding areas, but from a large part of Europe and Asia, with several syntypes of species described by Scholz himself (Figs 10-11), which are currently kept in the main type specimen MNHW collection and were used in recent taxonomic studies on




10-11. Type specimens of Dytiscidae from the Scholz Collection. Syntype of *Agabus zimmermanni* Scholz (10); syntype of *Rhantus incognitus* Scholz (11)

Hydradephaga (*e.g.* FERY 1992). SCHOLZ extensively collected in the same area as KOLBE and many of his specimens come from Legnica and surrounding townships (Dunino, Malczyce, Zimna Woda).

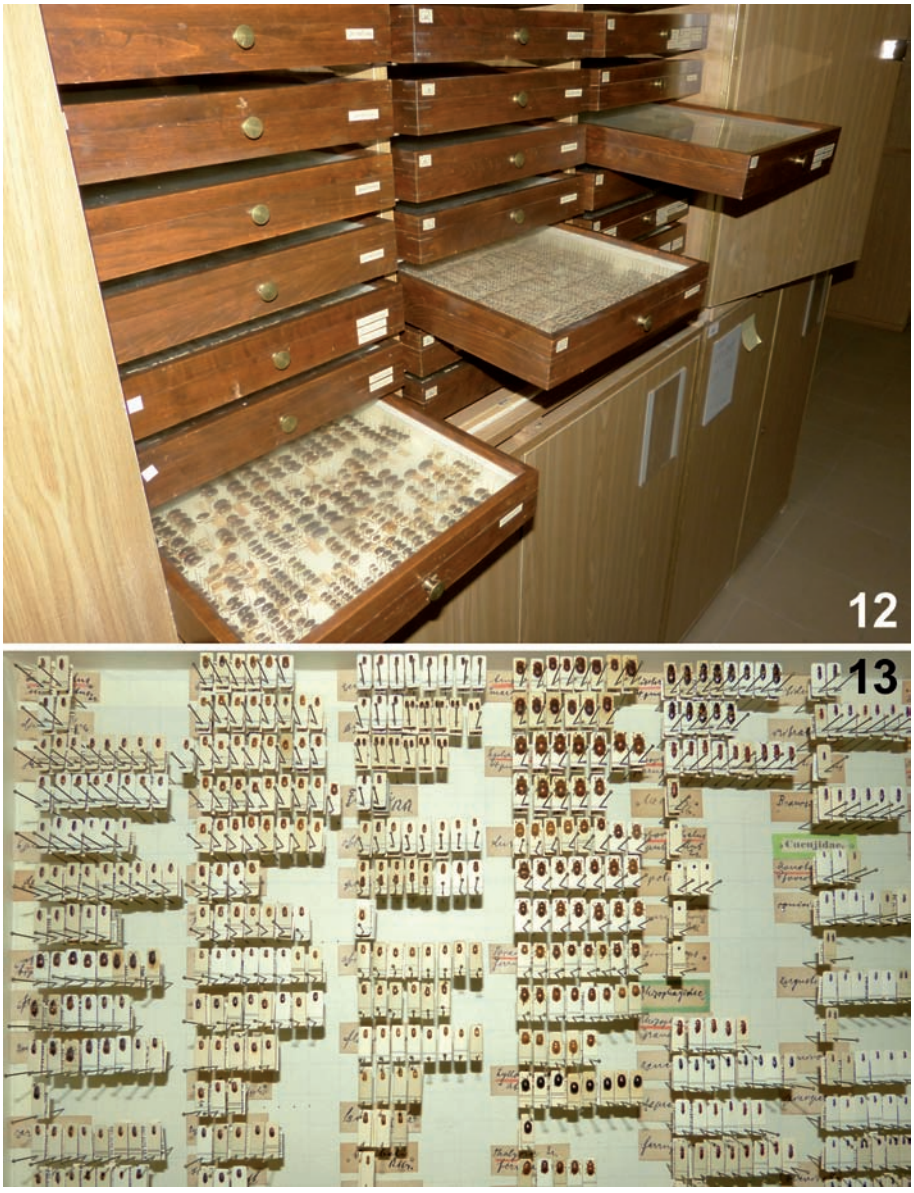
**Georg POLENTZ** (Fig. 3) was born on the 28th of December 1879 in Wrocław. Young Georg inherited his vivid interest in natural history from his father, a merchant who collected butterflies and reared caterpillars. His son started collecting beetles already as a schoolboy. After graduating from a gymnasium, POLENTZ served as a public officer at the municipal council of Wrocław, and later became a merchant. After WWII POLENTZ settled down in Gernrode in Harz, where he was a teacher of biology, chemistry and physics, and where he died in 1965.

POLENTZ was a member of the Schlesische Verein für Insektenkunde since 1901, and since 1928 he cooperated with the Zoological Museum of the University of Wrocław (present-day MNHW). This cooperation gave him an access to a large library and collections of ANSORGE, DIETL, FUISTING, MATUSCHKA, KOLBE and SCHOLZ (PAX 1960). In 1940s POLENTZ was inspired by A. LANZKE to start working also on Hemiptera, and this topic of his research was continued, in addition to beetles, also after WWII. Identifications made by POLENTZ were respected by contemporary entomologists as most reliable and his knowledge of Silesian beetle fauna was so outstanding that in some volumes of Adolf HORION's „Faunistik der Mitteleuropäischen Käfer" POLENTZ was listed as a contributor (*e.g.*, HORION 1953).

POLENTZ has published more than 60 papers on beetles. Most of them are short faunistic records published in the journal Zeitschrift für Entomologie (Breslau). In 1932-1949 he published a series of papers entitled Beiträge zur schlesischen Käferfauna, composed of 13 parts in various journals, one part prepared together with Hans NOWOTNY (NOWOTNY & POLENTZ 1933). POLENTZ also published articles on beetle conservation problems (POLENTZ 1928), interesting beetle species occurring in Wrocław (POLENTZ 1929), and beetles collected from nests of the European mole around Kłodzko and Wrocław (POLENTZ 1936). The latter study was based on an impressive number of 1500 nests. POLENTZ also described a new ground beetle species of the genus *Dromius*, dedicated to an Upper Silesian entomologist K. KUNTZE (POLENTZ 1939).

In summer 1944, when the Soviet army was approaching Wrocław, POLENTZ's collections of Coleoptera and Hemiptera were transported together with several other valuable insect collections to a safe location in Kąty Wrocławskie, where they remained hidden until 1948 (PAX 1949, KINEL 1957). The major part of the POLENTZ's beetle collection that has survived and has been successfully retrieved, is currently preserved at MNHW (Figs 12-13). It comprises nearly 39 000 specimens representing nearly 7 000 species (Table 1) and kept in 56 drawers. Specimens collected by POLENTZ himself come from Wrocław and surrounding areas, from the Trzebnickie Hills (Oborniki Śląskie, Trzebnica), but also from Legnica, Mt. Śnieżnik Kłodzki (Sudety Mts) and localities outside Silesia, as Wałcz in Western Pomerania. Some specimens have been acquired from other coleopterists, as K. KUNTZE, H. LGOCKI, H. NOWOTNY, J. ROUBAL, Sz. TENENBAUM, and species belonging to difficult groups have been identified by E. REITTER, Th. WANKA or V. MACHULKA. The POLENTZ Collection is an invaluable documentation of the

beetle fauna of Wrocław and neighbouring areas, but when used in modern faunistic revisions a special care must be taken to distinguish between specimens truly coming from this region and those only bearing a label "POLENTZ / Breslau". This often means not a collecting site but simply the locality or ownership of the collection, and only patient and careful comparisons with data originally published by POLENTZ allow to made such a distinction.




12-13. General view of the POLENTZ Collection (12) and contents of Nitidulidae drawer (13)

## HISTORICAL BEETLE COLLECTIONS AFTER 1945

The beetles of KOLBE, SCHOLZ and POLENTZ after WWII have been permanently incorporated into vast MNHW Coleoptera collections. For their historical value, they are kept separately and in original drawers (Figs 4, 5, 8, 12), in standard museum cabinets. The collections are not complete, judging from gaps in continuous numbering of drawers. During WWII or after the war drawers containing some Carabidae, Hydrophilidae, Chrysomelidae and Cerambycidae have been lost (4 drawers of the KOLBE Collection, 8 drawers of the SCHOLZ Collection and 12 drawers of the POLENTZ Collection). It is only known that the Chrysomelidae part of each collection has been seriously depleted after the war but before the early eighties of 20th c., in unclear circumstances. The remaining specimens are in good condition, but they are not catalogued.

Initially private collections used mainly in the publications of their owners, in MNHW they were made available for specialists from Poland and abroad, and were used in a great number of faunistic and taxonomic studies. These three collections have been extensively studied by many authors, whose focus was primarily on faunistic revisions and identification keys to the insects of Poland. Most monographic reviews of beetles of Poland contain data based on these collections, and the specimens together with bibliographic references to original papers of KOLBE, SCHOLZ and POLENTZ were cited hundreds of times in the fundamental publication series on the beetle fauna of Poland, the Katalog Fauny Polski (Catalogue of the Fauna of Poland) by BURAKOWSKI *et al.* (1971-2000), comprising over 6 500 pages in 22 volumes. Verification of old determinations yielded discoveries of rare and previously overlooked species in Western Poland (*e.g.*, WANAT & BOROWSKI 2013), and large monographs focused on Polish representatives of selected beetle groups were partly based on these specimens (*e.g.*, PAWŁOWSKI 1975, KUŚKA 1995, KUBISZ 2006). Most recently, this material was used in the faunistic revisions of the families Corylophidae (RUTA *et al*. 2010), Melandryidae and Tetratomidae (KUBISZ *et al*. 2010) and Aderidae (JAŁOSZYŃSKI *et al*. 2013) of Poland. Many taxonomic studies were also based on the collections of KOLBE, SCHOLZ or POLENTZ, most notably on weevils (*e.g.*, CALDARA 1979, CALDARA & O'BRIEN 1998, KOŠTÁL & HOLECOVÁ 2001, WANAT & COLONNELLI 2004, OSELLA & BELLO 2010).

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**Table 1.** Summary of Coleoptera in W. KOLBE, R. SCHOLZ and G. POLENTZ Collections (arranged alphabetically; taxa include varieties).

| | KOLBE | | SCHOLZ | | POLENTZ | |
|---|---|---|---|---|---|---|
| **family** | **species & subspecies** | **specimens** | **species & subspecies** | **specimens** | **species & subspecies** | **specimens** |
| Aderidae | 4 | 58 | 5 | 23 | 4 | 17 |
| Agyrtidae | 3 | 98 | 3 | 24 | 4 | 24 |
| Alexiidae | 8 | 36 | 20 | 40 | 13 | 49 |
| Anobiidae | 76 | 1147 | 124 | 555 | 99 | 543 |
| Anommatidae | 1 | 3 | 5 | 12 | 0 | 0 |
| Anthicidae | 45 | 542 | 79 | 286 | 42 | 205 |
| Anthribidae | 21 | 379 | 21 | 145 | 25 | 138 |
| Apionidae | 114 | 3931 | 274 | 1790 | 141 | 841 |
| Attelabidae | 3 | 46 | 5 | 29 | 37 | 195 |
| Biphyllidae | 1 | 4 | 2 | 9 | 3 | 11 |
| Bolboceratidae | 1 | 1 | 2 | 5 | 0 | 0 |
| Bostrichidae | 14 | 95 | 18 | 66 | 15 | 77 |
| Bothrideridae | 3 | 7 | 2 | 5 | 0 | 0 |
| Brentidae | 4 | 13 | 1 | 2 | 1 | 1 |
| Buprestidae | 92 | 728 | 183 | 664 | 162 | 671 |
| Byrrhidae | 28 | 451 | 42 | 203 | 31 | 197 |
| Byturidae | 2 | 93 | 3 | 26 | 3 | 22 |
| Cantharidae | 18 | 256 | 134 | 581 | 92 | 487 |
| Carabidae | 809 | 9354 | 1371 | 6398 | 981 | 4557 |
| Cerambycidae | 246 | 2008 | 462 | 1593 | 293 | 1187 |
| Cerophytidae | 0 | 0 | 1 | 4 | 1 | 2 |
| Cerylonidae | 5 | 249 | 8 | 85 | 6 | 53 |
| Chrysomelidae | 334 | 8272 | 334 | 2438 | 240 | 1286 |
| Ciidae | 25 | 856 | 32 | 464 | 32 | 128 |
| Clambidae | 6 | 320 | 7 | 59 | 8 | 53 |
| Cleridae | 30 | 272 | 36 | 125 | 32 | 184 |
| Coccinellidae | 70 | 4856 | 143 | 844 | 86 | 925 |
| Corylophidae | 16 | 402 | 22 | 114 | 13 | 70 |
| Cryptophagidae | 82 | 3271 | 113 | 860 | 116 | 851 |
| Cucujidae | 4 | 8 | 4 | 11 | 5 | 28 |
| Curculionidae | 990 | 17694 | 1430 | 8862 | 886 | 3987 |
| Dascillidae | 1 | 17 | 2 | 15 | 2 | 14 |
| Dasytidae | 75 | 651 | 106 | 279 | 61 | 174 |
| Dermestidae | 47 | 800 | 79 | 339 | 47 | 286 |
| Derodontidae | 2 | 22 | 2 | 10 | 2 | 12 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Drilidae | 2 | 12 | 2 | 2 | 3 | 7 |
| Dryopidae | 10 | 90 | 14 | 102 | 16 | 110 |
| Dytiscidae | 188 | 3039 | 153 | 572 | 155 | 1166 |
| Elateridae | 142 | 2493 | 243 | 1334 | 163 | 1104 |
| Elmidae | 16 | 402 | 27 | 148 | 22 | 127 |
| Endecatomidae | 1 | 2 | 0 | 0 | 0 | 0 |
| Endomychidae | 12 | 278 | 17 | 81 | 17 | 95 |
| Erotylidae | 22 | 92 | 26 | 120 | 21 | 114 |
| Eucinetidae | 1 | 25 | 2 | 6 | 1 | 7 |
| Eucnemidae | 8 | 31 | 9 | 27 | 11 | 46 |
| Georissidae | 3 | 18 | 4 | 17 | 3 | 8 |
| Geotrupidae | 19 | 140 | 30 | 96 | 0 | 0 |
| Glaphyridae | 18 | 92 | 32 | 58 | 24 | 70 |
| Gyrinidae | 12 | 286 | 12 | 40 | 16 | 149 |
| Haliplidae | 18 | 469 | 21 | 109 | 21 | 269 |
| Helophoridae | 29 | 930 | 45 | 617 | 27 | 203 |
| Heteroceridae | 14 | 227 | 25 | 146 | 19 | 98 |
| Histeridae | 90 | 2039 | 144 | 825 | 102 | 562 |
| Hybosoridae | 2 | 3 | 1 | 2 | 1 | 5 |
| Hydraenidae | 50 | 1564 | 85 | 869 | 42 | 292 |
| Hydrochidae | 4 | 116 | 6 | 9 | 4 | 56 |
| Hydrophilidae | 70 | 2581 | 104 | 1410 | 9 | 63 |
| Hydroscaphidae | 1 | 3 | 1 | 3 | 0 | 0 |
| Hygrobiidae | 1 | 2 | 1 | 1 | 1 | 6 |
| Kateretidae | 15 | 333 | 25 | 225 | 18 | 137 |
| Laemophloeidae | 17 | 89 | 23 | 68 | 17 | 99 |
| Lampyridae | 9 | 87 | 14 | 53 | 12 | 51 |
| Latridiidae | 48 | 2006 | 94 | 819 | 83 | 481 |
| Leiodidae | 127 | 2093 | 204 | 1162 | 186 | 995 |
| Limnichidae | 3 | 45 | 7 | 27 | 5 | 27 |
| Lucanidae | 9 | 78 | 22 | 78 | 0 | 0 |
| Lycidae | 4 | 78 | 6 | 24 | 6 | 29 |
| Lymexylonidae | 2 | 23 | 5 | 21 | 3 | 39 |
| Malachiidae | 64 | 604 | 106 | 276 | 47 | 196 |
| Melandryidae | 26 | 239 | 29 | 136 | 31 | 201 |
| Meloidae | 51 | 250 | 87 | 229 | 62 | 206 |
| Melyridae | 3 | 5 | 4 | 4 | 1 | 1 |
| Mordellidae | 22 | 411 | 25 | 114 | 28 | 151 |
| Mycetophagidae | 11 | 397 | 24 | 133 | 18 | 119 |
| Mycteriidae | 3 | 19 | 4 | 20 | 3 | 14 |
| Nanophyidae | 9 | 223 | 24 | 88 | 0 | 0 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Nemonychidae | 3 | 46 | 3 | 13 | 3 | 15 |
| Nitidulidae | 72 | 2519 | 156 | 1377 | 136 | 1065 |
| Nosodendridae | 1 | 17 | 1 | 17 | 1 | 9 |
| Noteridae | 2 | 77 | 2 | 47 | 3 | 31 |
| Ochodeidae | 1 | 2 | 2 | 6 | 2 | 12 |
| Oedemeridae | 31 | 269 | 37 | 143 | 30 | 222 |
| Omalisidae | 1 | 28 | 2 | 8 | 1 | 13 |
| Orsodacnidae | 1 | 99 | 0 | 0 | 0 | 0 |
| Passalidae | 6 | 20 | 2 | 3 | 0 | 0 |
| Phalacridae | 24 | 758 | 37 | 311 | 27 | 226 |
| Phloeophilidae | 1 | 2 | 0 | 0 | 1 | 1 |
| Phloeostichidae | 1 | 35 | 1 | 14 | 1 | 9 |
| Prostomidae | 1 | 15 | 1 | 11 | 1 | 14 |
| Psephenidae | 1 | 3 | 1 | 4 | 1 | 5 |
| Ptiliidae | 41 | 3299 | 52 | 479 | 42 | 308 |
| Pyrochroidae | 3 | 40 | 4 | 27 | 4 | 22 |
| Pythidae | 1 | 6 | 2 | 7 | 1 | 8 |
| Rhipiphoridae | 3 | 21 | 8 | 14 | 4 | 25 |
| Rhizophagidae | 21 | 970 | 25 | 333 | 9 | 85 |
| Rhynchitidae | 27 | 559 | 36 | 229 | 14 | 111 |
| Rhysodidae | 2 | 5 | 4 | 21 | 3 | 12 |
| Salpingidae | 14 | 223 | 17 | 114 | 15 | 85 |
| Scarabaeidae | 300 | 3023 | 466 | 1668 | 108 | 737 |
| Scirtidae | 14 | 618 | 15 | 103 | 14 | 113 |
| Scraptiidae | 24 | 755 | 33 | 117 | 23 | 120 |
| Silphidae | 31 | 423 | 50 | 228 | 10 | 63 |
| Silvanidae | 9 | 303 | 16 | 101 | 15 | 88 |
| Spercheidae | 1 | 18 | 1 | 9 | 1 | 14 |
| Sphaeritidae | 1 | 14 | 1 | 11 | 1 | 8 |
| Sphaeriusidae | 1 | 18 | 1 | 9 | 1 | 7 |
| Sphindidae | 3 | 93 | 4 | 21 | 3 | 22 |
| Staphylinidae | 1154 | 35814 | 1562 | 12431 | 1469 | 9604 |
| Tenebrionidae | 331 | 1775 | 547 | 1693 | 224 | 630 |
| Tetratomidae | 6 | 124 | 7 | 65 | 6 | 36 |
| Throscidae | 7 | 153 | 9 | 47 | 6 | 39 |
| Trogidae | 6 | 74 | 10 | 39 | 8 | 49 |
| Trogossitidae | 8 | 47 | 12 | 44 | 9 | 55 |
| Zopheridae | 23 | 139 | 43 | 179 | 35 | 197 |
| **total** | **6513** | **131258** | **9952** | **56979** | **6913** | **38638** |

**Table 2.** Summary of Coleoptera aquatica (Hydradephaga), a separate SCHOLZ Collection (arranged alphabetically; taxa include varieties).

| **family** | **species & subspecies** | **specimens** |
|---|---|---|
| Dytiscidae | 483 | 4839 |
| Gyrinidae | 53 | 359 |
| Haliplidae | 40 | 649 |
| Hygrobiidae | 1 | 10 |
| Noteridae | 15 | 121 |
| **total** | **592** | **5978** |

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|---|---|---|

# The Hymenoptera: Apidae collection of Jan Noskiewicz in the Museum of Natural History, University of Wrocław

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Abstract. The Apidae collection of Jan Noskiewicz preserved at the Museum of Natural History, University of Wrocław, Wrocław, Poland is summarised. The entire Hymenoptera collection consists of many families of Aculeata, but the bees represent the most valuable part, with nearly 1000 identified species and subspecies, and over 11500 specimens of predominantly Old World geographical range. A brief biographical note on Jan Noskiewicz, the late professor of the University of Wrocław and a renowned specialist on Apidae, is given. The type specimens of 75 bee species and subspecies from the Noskiewicz Collection are listed with respective details and bibliographic data.

Key words: Noskiewicz, Insecta, Hymenoptera, Apidae, type collection, Wrocław University, Poland.

## INTRODUCTION

Jan Noskiewicz (1890-1963) was a distinguished Polish zoologist and zoogeographer. Born in Sanok, he attended a school in Jarosław where his teacher, Kazimierz Piątkowski, inspired him to focus his interests on the world of insects. For one year a student of the Jagiellonian University, Noskiewicz later moved to the Lviv University to complete his zoological studies. In 1913-1920 he worked as a secondary school teacher in Lviv and then for two years as a senior assistant of professor Jan Hirschler, a zoologist and comparative anatomist. In 1922-39 Noskiewicz was a researcher and librarian of the famous Dzieduszycki Museum of Natural History. In 1927 he got his PhD; his dissertation was "A polyembryony in the reproduction of *Halictoxenos simplicis* Nosk.". Ten years later he obtained habilitation degree for a pioneer study of the faunistic regions of Poland.

During WWII Noskiewicz was a lecturer at the Lviv University and a researcher of the Dzieduszycki Museum. Together with Jan Kinel, he managed to protect the invaluable museum collections from war damage. Harsh conditions during the city's occupation forced Noskiewicz to hire as a lice feeder for the epidemic typhus vaccine project at the Rudolf Weigl Institute. This allowed him to earn his living and avoid repressions from the Germans. Near the end of WWII, in 1944, Noskiewicz was appointed Chair of Invertebrate Zoology of the Lviv University, and at the same time continued his work for the Dzieduszycki Museum. In 1946, when Lviv was excluded from the territory of Poland, Noskiewicz was repatriated to Wrocław and took position of the Chair of Animal Systematics and Zoogeography, University of Wrocław. There he received full professorship (1954) and retired in 1961. In 1955/56 he was dean of the Natural History Faculty. During his scientific career he was also a founding member of the Polish Entomological Society, an editor-in-chief of the Polish Entomological Journal, and head of the Polish Zoological Society and the Polish Naturalist's Society. Additional biographical data can be found in Brzęk (1994, 2007), Feliksiak (1987), and primarily in a detailed obituary by Smreczyński (1964) containing also a complete Noskiewicz's bibliography compiled by Żak-Ogaza (1964).

Noskiewicz was a renowned specialist on Hymenoptera, especially Aculeata. He published his first faunistic notes on hymenopterans yet before his employment at the Dzieduszycki Muzeum (*e.g.*, Noskiewicz 1918). In his further work Noskiewicz focused on the taxonomy of bees and described numerous new taxa, most notably those of the ground-nesting bees of the diverse genus *Colletes* Latreille. His comprehensive studies of this genus conducted in Lviv resulted in a taxonomic revision of 125 Palaearctic species, including 61 new to science (Noskiewicz 1936a). This outstanding monograph was later supplemented with several further contributions after WWII (*e.g.*, Noskiewicz 1958ab, 1959ab, 1962a). Like many other contemporary entomologists, he was also interested in faunistic studies, with special focus on xerothermophilous insects of Podolia and Lower Silesia. Noskiewicz's studies significantly contributed to the knowledge of zoogeography and entomofaunistics of Podolia (especially his 18-year cooperative study with another famous Polish zoologist, Roman Kuntze), Silesia, Western Pomerania and the Karkonosze Mountains. Together with Gustaw Poluszyński, Noskiewicz discovered and characterised the phenomenon of polyembryony in Strepsiptera, rare and poorly studied parasites of Hymenoptera. Their collaborative work resulted in a large monograph on the embryonic development of Strepsiptera (Noskiewicz & Poluszyński 1928, 1935), an important contribution to the knowledge of this enigmatic order. They also described several new species of Strepsiptera (Noskiewicz & Poluszyński 1924). After moving to Wrocław, Noskiewicz extended his study to other groups of Hymenoptera and selected families of Diptera, particularly Asilidae (*e.g.*, Noskiewicz 1953). His remarkable contribution to zoology was honoured by several taxonomists who dedicated new species to him, for example *Otiorhynchus noskiewiczi* Smreczyński, *Nomada noskiewiczi* Schwarz or *Colletes noskiewiczi* Cockerell (Fig. 1).

The Hymenoptera collection of Jan Noskiewicz is preserved at the Museum of Natural History, University of Wrocław (MNHW). It includes 88 original drawers contained in three cabinets. One of the drawers contains Diptera, while in 87 there are

Hymenoptera. The bees form the bulk of this collection, with 995 identified species and subspecies represented by over 7500 specimens, including many primary types. Together with a material of approximately 4000 unidentified specimens from Podolia and various regions of Poland, this is one of the most important repositories of Apidae in Polish museums. The NOSKIEWICZ Collection contains also Sphecidae, Pompilidae, Ichneumonidae, Braconidae, Gasteruptiidae, Chrysididae, Vespidae, Ibalidae, Aulacidae, Tiphiidae, and a small number of Chalcidoidea; two drawers are occupied by Symphyta. All these groups are only partially or not identified to species.

Since Apidae was the main research focus of NOSKIEWICZ, this part of his collection is best studied and various taxonomic groups have been later revised by other specialists (e.g., WARNCKE 1978, KUHLMANN 2000). However, there are still numerous specimens awaiting identification. The collection has been properly curated and the specimens are generally in good condition, pinned, labelled and the identified material is arranged systematically (Figs. 2-6). The geographical scope of the collection is mainly within xerothermic areas of the Old World, with a strong representation of the Mediterranean basin and southern Europe, and especially eastern Europe (Ukraine), northern Africa (Tunisia, Algeria, Morocco) and Asia (Turkey, Iran, Kazakhstan, Turkmenistan, Azerbaijan, Uzbekistan, Mongolia, east China, Japan).

All the type specimens of taxa described by NOSKIEWICZ (Figs 7-12) are kept in two separate drawers. Type specimens of 77 species and subspecies are present in this


1. *Colletes noskiewiczi* COCKERELL, an example of a bee species dedicated to Jan NOSKIEWICZ

material. The identity of each specimen has been confirmed by comparing the label data with the original description. All the type specimens have been catalogued, and identification numbers have been assigned: all syntypes of one species; holotype + all paratypes; and lectotype + all paralectotypes bear one MNHW catalogue / electronic database number. The checklist below comprises all these taxa and specimen details in alphabetical order (f - female, m - male, nd - not determined).

CHECKLIST OF THE APIDAE TYPE SPECIMENS IN THE MNHW NOSKIEWICZ COLLECTION

***Andrena nanaeformis*** Noskiewicz, 1925: 138; holotype [f]; MNHW No 947; Ukraine, Lesienice, leg. Noskiewicz.

***Andrena paula*** Noskiewicz, 1939: 251; syntype [f]; MNHW No 948; Hungary, Vas-Kóll. Current status: *Andrena impunctata* Perez, 1895.

***Andrena pillichi*** Noskiewicz, 1939: 241; 5 syntypes [mf]; MNHW No 949; Hungary, Simontornya, leg. Pillich. Current status: *Andrena alfkenella* Perkins, 1914.

***Andrena simontornyella*** Noskiewicz, 1939: 246; 4 syntypes [mf]; MNHW No 950; Hungary, Simontornya, leg. Pillich.

***Andrena subsquamularis*** Noskiewicz, 1960: 85; holotype [f], MNHW No 951; Bulgaria, Sandansky Prov., Blagoievgrad, leg. Puławski; 1 paratype [f]; Bulgaria, Warna, leg. Puławski. Current status: *Andrena colletiformis* Morawitz, 1874.

***Camptopoeum verhoeffi*** Noskiewicz, 1962b: 1; 7 paratypes [mf]; MNHW No 952; Tunisia, Djerba, leg. Verhoeff.

***Colletes acutiformis*** Noskiewicz, 1936a: 382; 2 syntypes [mf]; MNHW No 891; Algeria, Laghouat, leg. Meyer (m), Algeria, Ain Sefra, leg. Chobaut (f).

***Colletes albescens*** Noskiewicz, 1936a: 330; 3 syntypes [mf]; MNHW No 892; Spain, Los Molinos, leg. Mercet (m), Spain, Canizares, leg. Selgas (f), Spain, Sierra de Guadarrama, leg. Dusmet (f). Current status: *Colletes noskiewiczi* Cockerell, 1942.

***Colletes alfkeni*** Noskiewicz, 1958b: 512; holotype [m]; MNHW No 893; Israel, Nahalal, leg. Palmoni.

***Colletes alicularis*** Noskiewicz, 1936a: 260; 7 paralectotypes [mf]; MNHW No 894; Aral Sea, Syr-Darin ob., leg. Popov ( 2 m), Kazakhstan, Baygakum ad Dzhulek, leg. Wollman (4 exx.), Turkmenistan, Repetek, leg. Paramonow (1 m).

***Colletes anchusae*** Noskiewicz, 1924a: 118; 5 syntypes [mf]; MNHW No 895; Ukraine, Łysa Góra ad Złoczów (= Lysa Hora ad Zolochiv), leg. Noskiewicz (2 exx.), Ukraine, Góra Żulica (?= Zhulici), leg. Noskiewicz (3 exx.).

***Colletes bidentulus*** Noskiewicz, 1936a: 129; 2 paratypes [mf]; MNHW No 896; Azerbaijan, Helenendorf (currently Khanlar), (m), Turkmenistan, Ashkhabad, (f).

***Colletes bytinskii*** Noskiewicz, 1955: 81; 5 syntypes [mf]; MNHW No 897; Israel, Bat-Jam, leg. Bytinski-Salz.

***Colletes cariniger graecus*** Noskiewicz, 1959b: 515; holotype [f], allotype [m], paratype [m]; MNHW No 898; Greece, Mt. Penteli. Current status: *Colletes cariniger* Pérez, 1903.

***Colletes conradti*** Noskiewicz, 1936a: 459; 6 syntypes [mf]; MNHW No 899; Kazakhstan, Ber Tschogur, Mugodjar Mts., leg. Wollmann (1 m), China (Xinjiang),

King-Ssai, Jarkand, leg. Conradt (1 m), China (Xinjiang), Tschakar ad Polu, leg. Conradt (1 f), Aral Sea, Syr-Darin, leg. Popov (1 m), Mongolia, Chott, Gobi, leg. Kozłow (1 m), "Din-junan- in s. Atanan", leg. Kozłow (1 f).

***Colletes coriandri judaicus*** Noskiewicz, 1955: 89; 2 syntypes [mf]; MNHW No 919; Israel, Ein Gev, leg. Bytinski-Salz. Current status: *Colletes judaicus* Noskiewicz, 1955.

***Colletes creticus*** Noskiewicz, 1936a: 123; allotype [f], 1 paratype [m]; MNHW No 900; Greece, Crete, Amari, leg. Biró (allotype), Greece, Crete, Piskokephalon, leg. Schulz (paratype).

***Colletes cyprius*** Noskiewicz, 1936a: 118; 2 syntypes [nd]; MNHW No 901; Cyprus, Limassol.

***Colletes dubitatus*** Noskiewicz, 1936a: 241; 2 syntypes [m]; MNHW No 902; Turkmenistan, Merw (1 m), Kazakhstan, Tartugay, leg. Szestakow (1 m).

***Colletes elegans*** Noskiewicz, 1936a: 217; holotype [m]; MNHW No 903; Algeria, Ghardaia.

***Colletes emaceatus*** Noskiewicz, 1936a: 264; lectotype [m], paralectotype [f]; MNHW No 904; design. Kuhlmann, 2000; Kazakhstan, Mujun-Kum, Karaken, leg. Lebedew (lectotype), Turkmenistan, Baýramaly (paralectotype).

***Colletes escalerai*** Noskiewicz, 1936a: 361; 8 syntypes [mf]; MNHW No 905; Morocco, Mogador, leg. Escalera.

***Colletes flavescens*** Noskiewicz, 1936a: 106; 2 syntypes [mf]; MNHW No 906; Morocco, Mogador, leg. Escalera. Current status: *Colletes nigricans* Gistel, 1857.

***Colletes fodiens hispanicus*** Noskiewicz, 1936a: 303; 16 syntypes [mf]; MNHW No 907; Spain, Sierra de Guadarrama, leg. Dusmet (10 exx.), Spain, Bajona, leg. Dusmet (2 exx.), Spain, El Pardo, leg. Dusmet (2 exx.), Spain, Escorial, leg. Dusmet (1 ex.), Spain, Los Molinos, leg. Mercet (1 ex.). Current status: *Colletes fodiens* (Fourcroy, 1785).

***Colletes fraterculus*** Noskiewicz, 1936a: 526; holotype [f]; MNHW No 908; "Kojpjas-tau bl. Kabadiana", leg. Gussakowskij.

***Colletes fulvicornis*** Noskiewicz, 1936a: 416; 2 paralectotypes [mf]; MNHW No 909; Mongolia, Gobi, Cholt, leg. Kozłow.

***Colletes fuscicornis*** Noskiewicz, 1936a: 284; 2 paratypes [m]; MNHW No 910; Egypt, Gabal Elba.

***Colletes grisescens*** Noskiewicz, 1936a: 442; 1 paratype [m]; MNHW No 911; Erdschias, leg. Penther. Current status: *Colletes asiaticus* Kuhlmann, 1999.

***Colletes gussakowskii*** Noskiewicz, 1936a: 528; holotype [f]; MNHW No 912; "Koi-pjas-tau bl. Kabadiana".

***Colletes ibericus*** Noskiewicz, 1936a: 471; 11 syntypes [mf]; MNHW No 913; Spain, El Pardo, leg. Dusmet (9 exx.), Spain, Valencia, leg. Moroder (2 exx.). Current status: *Colletes pulchellus* Perez, 1903.

***Collletes illyricus*** Noskiewicz, 1936a: 120; 10 syntypes [mf]; MNHW No. 914; Croatia, Dalmatia (1 m), Croatia, Ragusa, (6 exx.), Montenegro, Herceg Novi, (2 m), Italy?, Lesina, leg. Keller (1 m). Current status: *Colletes eous* Morice, 1904.

***Colletes inexpectatus*** Noskiewicz, 1936a: 325; 15 syntypes [mf]; MNHW No 915; Ukraine, Łyczaków (6 exx.), Ukraine, Wężowa Dolina, (2 m), Ukraine, Kręciłów (= Krutiliv), (1 m), Ukraine, Sinków (= Syn'kiv), (3 exx), Ukraine, Krzemieniec (= Kremenec), (3 f).


2. One of drawers with the Noskiewicz Collection

***Colletes integer*** Noskiewicz, 1936a: 427; holotype [f]; MNHW No 916; ?Uzbekistan, Alatau, Syrdarinskaya ob.

***Colletes iranicus*** Noskiewicz, 1962a: 51; 2 paratypes [f]; MNHW No 917; Iran, Rayne, (Teheran), leg. Schmid.

***Colletes jejunus*** Noskiewicz, 1936a: 231; lectotype [m]; MNHW No 918; design. Kuhlmann (2000); Egypt, Gabal Elba, leg. Aldeh.

***Colletes maidli*** Noskiewicz, 1936a: 166; syntype [f]; MNHW No 920; Italy, Venezia-Lignano, leg. Zerny.

***Colletes merceti*** Noskiewicz, 1936a: 223; 5 paratypes [mf]; MNHW No 921; Spain, Alicante, leg. Mercet.

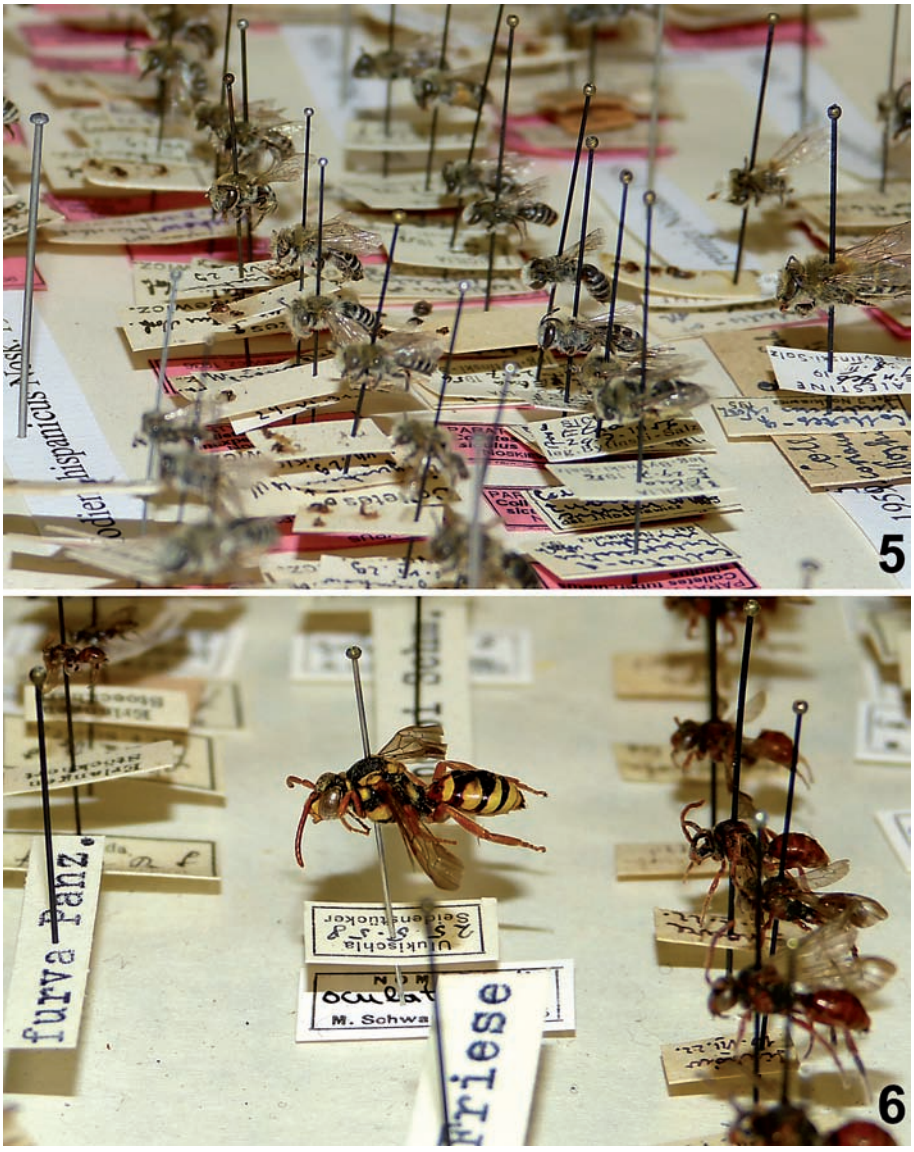
***Colletes meyeri*** Noskiewicz, 1936a: 401; 2 syntypes [mf]; MNHW No 922; Croatia, Split, leg. Mann (m), Croatia, Dubrovnik, leg. Meyer (f).

***Colletes nanaeformis*** Noskiewicz, 1959a: 35; holotype [m], 2 paratypes [m]; MNHW No 923; Egypt, Tell-el-Amarna, leg. Puławski.


3-4. Examples of *Thyreus* Panzer (3) and *Colletes* Latreille (4) from the non-type part of the Noskiewicz Collection

***Colletes ottomanus*** Noskiewicz, 1958a: 5; 3 paratypes [mf]; MNHW No 924; Turkey, Konia, leg. Bytinski-Salz.

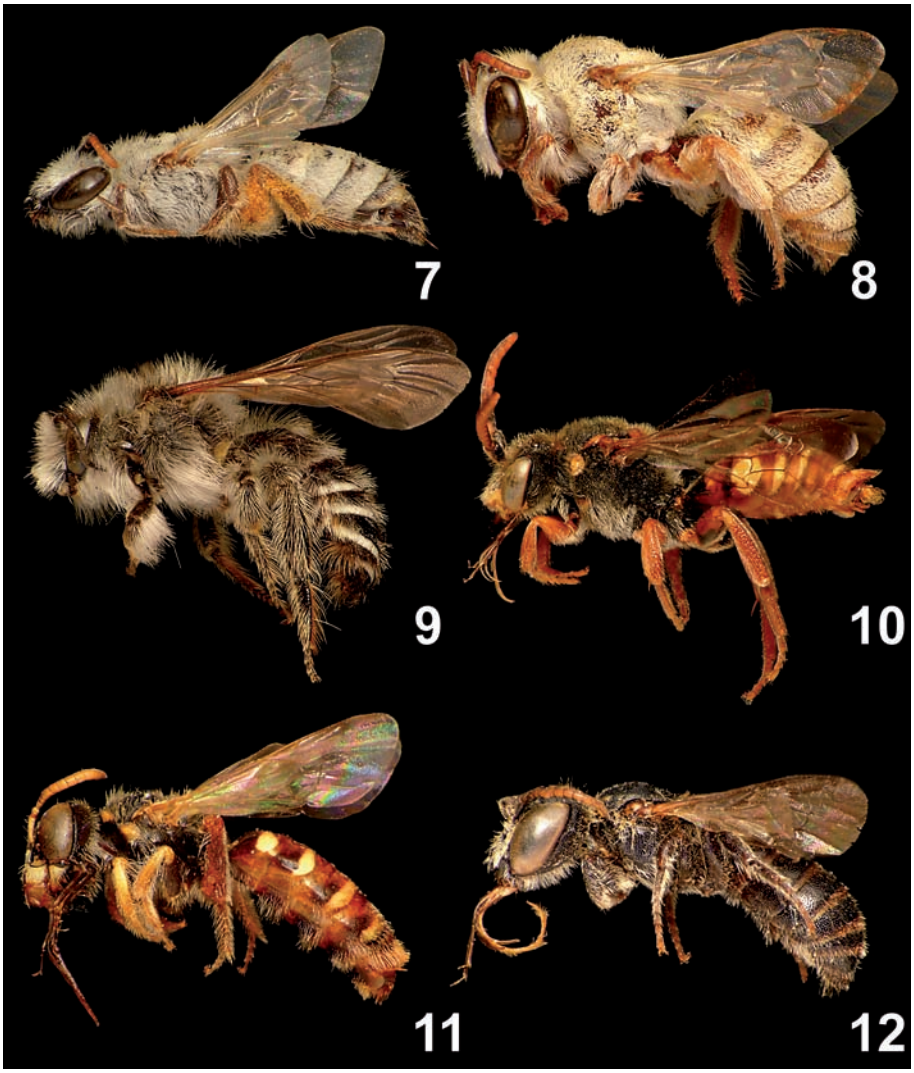
***Colletes pallescens*** Noskiewicz, 1936a: 468; 31 syntypes [mf]; MNHW No 925; Kazakhstan, Ber Tschogur, Mugodjar Mts., leg. Bubyr (2 m), Kazakhstan, Ber Tschogur, Mugodjar Mts., leg. Androssow (1 m), Kazakhstan, Uralsk, leg. Bartel (18 m),




5-6. Examples of type specimens of *Colletes* Latreille (5) and non-type *Nomada* Scopoli (6) from the Noskiewicz Collection

Mongolia, Taga-Ursa, leg. Kozłow (2 exx.), Ukraine, Crimea (1 f), Balchash Mts., "balchashsk exped" (1 m), Sarepta, Russia, leg. Becker (2 m), Sarepta, Russia, (4 m). Current status: *Colletes chengtehensis* Yasumatsu, 1935.

***Colletes pallipes*** Noskiewicz, 1936a: 274; paratype [f]; MNHW No 926; Syr-Daria, leg. Bodemeyer.




7-12. Examples of species described by Jan Noskiewicz. *Colletes bytinskii* Noskiewicz, syntype (7); *Colletes fraterculus* Noskiewicz, holotype (8); *Dasypoda niveocincta* Noskiewicz, paratype (9); *Nomada dzieduszyckii* Noskiewicz, syntype (10); *Camptopoeum verhoeffi* Noskiewicz, paratype (11); *Osmia illyrica* Noskiewicz, syntype (12)

***Colletes plumulosus*** Noskiewicz, 1936a: 267; 3 paralectotypes [mf]; MNHW No 927; Kazakhstan, Baygakum bei Dzhulek, leg. Wollmann; males labeled as *Colletes plumosus* Nosk.

***Colletes pollinarius*** Noskiewicz, 1936a: 224; lectotype [m], 1 paralectotype [f]; MNHW No 928; design. Kuhlmann (2000); Transcaspia, Uzun-Ada, leg. Varencov (lectotype), Transcaspia, Uzun-Ada, (paralectotype).

***Colletes popovi*** Noskiewicz, 1936a: 271; 3 paralectotypes [m]; MNHW No 929; Kazakhstan, Ber Tschogur, Mugodjar Mts., leg. Bubyr (1 ex.), Kazakhstan, Karatau Mts., ad Dzhulek, leg. Wollmann (2 exx.).

***Colletes pseudocinerascens*** Noskiewicz, 1936a: 424; 2 paralectotypes [mf]; MNHW No 930; Russia, Jakutsk, leg. Moskwin.

***Colletes pseudojejunus*** Noskiewicz, 1959a: 47; holotype [m], allotype [f]; MNHW No 931; Israel, Dead Sea, South End, leg. Bytinski-Salz.

***Colletes radoszkowskii*** Noskiewicz, 1936a: 452; 2 paralectotypes [mf]; MNHW No 932; ?Iran, Kheyrabad, Kopet-dag, leg. Golbek (f), ?Iran, Chorasan, leg. Zarubnyj (m).

***Colletes reinigi*** Noskiewicz, 1936a: 372; paratypes [mf] 2; MNHW No 933; West Pamir, leg. Reinig (f), Kuku-nor-Geb, (Kuku-nor Lake, China, Qinghai?), leg. Tancré (m).

***Colletes rubripes*** Noskiewicz, 1936a: 205; 2 paralectotypes [mf]; MNHW No 934; Turkmenistan, Repetek, leg. Hussakowskij (f), Turkmenistan, Farab, leg. Kuleszow (m).

***Colletes schmidi*** Noskiewicz, 1962a: 49; 5 paratypes [f]; MNHW No 935; Spain, Sierra Nevada, Laguna de Yeguas, leg. Schmid.

***Colletes siciliensis*** Noskiewicz, 1959a: 50; allotype [f], 4 paratypes [m]; MNHW No 936; Italy, Sicily, Catania Plaja, leg. Bytinski-Salz. Current status: *Colletes nigricans* Gistel, 1857.

***Colletes skorikovi*** Noskiewicz, 1936a: 209; 4 paralectotypes [mf]; MNHW No 937; Transkaspia, Uzun-Ada, (3 exx.), Turkmenistan, Molla-Kara Lake (1 ex.).

***Colletes squamulosus*** Noskiewicz, 1936a: 191; paralectotype [m]; MNHW No 938; "Araxesthal, Caucaus" (= Armenia, Araxes Valley), leg. Reitter.

***Colletes stachi*** Noskiewicz, 1958b: 509; holotype [m], allotype [f]; MNHW No 939; Tajikistan, Djili-Kul, leg. Fursov.

***Colletes tarsalis*** Noskiewicz, 1936a: 140; paratype [m]; MNHW No 940; Spain, Pater Muedra ad Orihuela. Current status: *Colletes canescens* Smith, 1853.

***Colletes tuberculatus anatolicus*** Noskiewicz, 1959b: 513; allotype [m], 2 paratypes [f]; MNHW No 941; Turkey, Ankara, leg. Bytinski-Salz (allotype), Turkey, Nigda, leg. Bytinski-Salz (1 paratype), Turkey, Ugrüp, leg. Bytinski-Salz (1 paratype). Current status: *Colletes tuberculatus* Morawitz, 1894.

***Colletes tuberculatus siculus*** Noskiewicz, 1959b: 511; 8 paratypes [mf]; MNHW No 942; Italy, Sicily, Etna, leg. Bytinski-Salz. Current status: *Colletes tuberculatus* Morawitz, 1894.

***Colletes tuberculiger*** Noskiewicz, 1936a: 333; 2 paratypes [mf]; MNHW No 943; Spain, Poveda, leg. Dusmet (f), Spain, Arajunez, leg. Dusmet (m).

***Colletes wahrmani*** Noskiewicz, 1959a: 43; 3 paratypes [m]; MNHW No 944; Turkey, Beysehir, leg. Wahrman.

***Colletes wollmanni*** Noskiewicz, 1936a: 188; 6 syntypes [mf]; MNHW No 945; Turkmenistan, Farab, leg. Szestakow (2 m), Kazakhstan, Tartugay, leg. Szestakow (2 exx.), Kazakhstan, Baygakum ad Dzhulek, leg. Wollmann (2 m).

***Colletes yemensis*** Noskiewicz, 1929: 211; lectotype [m], paralectotype [f]; MNHW No 946; design. Kuhlmann (2000); Yemen, Sanaa.

***Dasypoda niveocincta*** Noskiewicz, 1959c: 431; 1 paratype [m]; MNHW No 967; France, St. Cyr. Current status: *Dasypoda dusmeti* Quilis, 1928.

***Dioxys kuntzei*** Noskiewicz, 1948: 99; 2 syntypes [mf]; MNHW No 953; Ukraine, Zaleszczyki (= Zaliszcziki), leg. Noskiewicz (f), Ukraine, Trójca n/Zbruczem (*i.e.*, Okopy Św. Trójcy; = Forteca Sviatoj Trijcy), leg. Noskiewicz (m). Current status: *Aglaoapis tridentata* (Nylander, 1848).

***Eucera vittulata*** Noskiewicz, 1936b: 175; 3 syntypes [mf]; MNHW No 954; Ukraine, Krzywcze (= Krivcze), leg. Noskiewicz (f), Ukraine, Ostrowiec (= Ostrivec), leg. Noskiewicz (2 m).

***Halictus fudakowskii*** Noskiewicz, 1926: 232; 2 syntypes [f] (one labelled as lectotype by Pesenko in 1998, unpublished); MNHW No 955; Croatia, Lussingrande, leg. Fudakowski. Current status: *Lasioglossum nitidulum* (Fabricius, 1804).

***Halictus lissonotus*** Noskiewicz, 1926: 233; 1 syntype [f] (labelled as lectotype by Pesenko in 1998, unpublished), Herzegovina, Mostar; 1 syntype [f] Montenegro, Herceg Novi; MNHW No 956. Current status: *Lasioglossum lissonotum* (Noskiewicz, 1926).

***Halictus podolicus*** Noskiewicz, 1925: 144; 1 syntype [f] (labelled as lectotype by Pesenko in 1998, unpublished), Ukraine, Sinków (= Syn'kiv), leg. Noskiewicz; 3 syntypes [mf], Ukraine, Mielnica (=Melnicia), leg. Noskiewicz (f), Ukraine, Dolina n./Donem, leg. Noskiewicz (mf); MNHW No 957. Current status: *Lasioglossum podolicum* (Noskiewicz, 1925).

***Nomada alfkeni*** Noskiewicz, 1939: 257; 4 syntypes [mf]; MNHW No 958; Hungary, Simontornya, leg. Pillich. Current status: *Nomada noskiewiczi* Schwarz, 1966 (replacement name).

***Nomada dzieduszyckii*** Noskiewicz, 1924b: 34; 4 syntypes [mf]; MNHW No 959; Ukraine; Hołosko Wielkie (= Holosko). Current status: *Nomada striata* (Fabricius, 1793).

***Nomada minuscula*** Noskiewicz, 1930: 260; syntype [f]; MNHW No 960; Ukraine, Zaleszczyki (= Zaliszcziki), leg. Noskiewicz. Current status: *Nomada sheppardana* (Kirby, 1802).

***Nomada mixtella*** Noskiewicz, 1959d: 131; holotype [f], 1 paratype [f]; MNHW No 961; Ukraine, Łysa Góra ad Złoczów (= Lysa Hora ad Zolochiv), leg. Noskiewicz (holotype), Ukraine, Lviv, leg. Noskiewicz (paratype). Current status: *Nomada posthuma* Bluethgen, 1949.

***Osmia illyrica*** Noskiewicz, 1926: 234; 3 paralectotypes [mf]; MNHW No 962; Montenegro, Herceg Novi. Current status: *Hoplitis illyrica* (Noskiewicz 1926). Lectotype designated and described by Tkalců (1974), but not returned to MNHW.

***Stelis odontopyga*** Noskiewicz, 1926: 230; syntype [d]; MNHW No 965; Ukraine, Niżniów (= Nyzhniv).

***Stelis ornatula*** var. ***immaculata*** Noskiewicz, 1926: 231; holotype [f]; MNHW No 966; Montenegro, Herceg Novi.

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# Type specimens of Phthiraptera in the collection of Jadwiga Złotorzycka preserved in the Museum of Natural History, University of Wrocław

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Abstract. The Phthiraptera type specimen collection of Jadwiga Złotorzycka preserved in the Museum of Natural History, University of Wrocław, consists of 88 holotypes, one neotype and 628 paratypes (total 717 specimens) of 124 species and subspecies of Amblycera and Ischnocera. Details of each taxon and type specimen are listed, including the original combination and current status, museum catalogue number and collecting localities. The contribution of Złotorzycka to the knowledge of Phthiraptera is discussed.

Key words: Złotorzycka, Insecta, Phthiraptera, Mallophaga, type collection, Wrocław University, Poland.

## INTRODUCTION

Jadwiga Złotorzycka (1926–2002) was born in Warsaw, but her family soon moved to Lviv, and in 1945 Złotorzycka returned to Poland to study biology in the University of Wrocław. Already during her student years she assisted Jan Kinel in the restoration of what remained of the collections of the Zoological Museum (currently Museum of Natural History, University of Wrocław (MNHW)), damaged or scattered during WWII. Her MSc thesis was focused on cuckoo wasps (Hymenoptera: Chrysididae) and was supervised by Jan Noskiewicz. In 1950 Złotorzycka was employed in the Museum, at that time headed by prof. Janina Janiszewska, a renowned parasitologist. It was apparently Janiszewska's influence that decided about the future scientific career of Złotorzycka. She changed her research focus from Hymenoptera to chewing lice (at that time a separate order Mallophaga) and this group became the subject of

her PhD thesis. Złotorzycka soon became a specialist in taxonomy, morphology and ecology of mallophagan lice. She has been working in MNHW for 10 years, and in 1960, together with prof. Janiszewska, moved to a newly established Department of General Parasitology, which she headed from 1972.

In 1956–2001 Złotorzycka published 99 papers on Mallophaga. Among others, mainly taxonomic works, one can find important contributions to the fauna of Poland. She published a series of identification keys to the Mallophaga of Poland (Złotorzycka 1972bc, 1976, 1977, 1978, 1980), a catalogue (Złotorzycka & Modrzejewska 1988) and a monograph (Złotorzycka 1994, 1997, Złotorzycka & Modrzejewska 2001), all written in Polish and therefore little known worldwide. Her bibliography and further details of academic and scientific career can be found in Lonc (1998), and complete biography in Okulewicz (2003).

The contributions of Jadwiga Złotorzycka to phthirapteran study are substantial, but of varying quality. A considerable portion of her work was devoted to two closely related aspects: large-scale revisions of complicated groups of lice (particularly those on songbirds (Złotorzycka 1964a–c, 1965) and shorebirds (Złotorzycka 1967)), and research into the relationships between hosts as revealed by the distribution and relationships of lice. While some of her early papers (*e.g.,* Złotorzycka 1968bc) show an earnest desire to untangle some of the more complicated matters in louse research, her study was hampered by lack of material, particularly from outside of Central Europe. This naturally limited the scope of her conclusions. In addition, her cooperation with Wolfdietrich Eichler in East Germany meant that his sometimes rigid adherence to Fahrenholz' rule (see Klassen (1982) for an introduction to this rule) influenced her taxonomic contributions. Following Eichler, Złotorzycka's species are typically described mainly on the basis of host relationships, and references to morphological characters are usually vague or hard to assess. Most of her descriptions are short and uninformative, often based on only a few individuals. This may become problematic as in small samples individual variation sometimes becomes dominant, while having little taxonomic value. As a result, the characters she used to differentiate her taxa are often vague and inadequate, her illustrations are typically schematic, and can seldom be used to identify species without reference to the type slides. Today, many of the species names she established are considered junior synonyms or, at least, the species are treated as impossible to differentiate based solely on original descriptions (Price *et al*. 2003, and see below). The well-preserved collection of Złotorzycka is all the more valuable today and especially the numerous type specimens, recently organized, catalogued and made available for specialists, await proper examination.

The Phthiraptera collection of Złotorzycka is preserved in MNHW. It comprises a large and still only preliminarily surveyed non-type specimen collection and a separate type specimen collection. The microscope slides of the type collection (Fig. 1), originally kept on cardboard trays (Fig. 2), have been transferred to plastic slide boxes and all specimens with respective label and bibliographic data are now included in the MNHW electronic databases. The type collection consists of 88 holotypes, one neotype and 628 paratypes (total 717 specimens) of 124 species and subspecies of Mallophaga (54 species of Amblycera and 70 Ischnocera). Most of the species were described by


1. Examples of microscope slides in the Złotorzycka Collection of type specimens

Złotorzycka or Eichler & Złotorzycka (Figs 3-12), but some specimens come from collections of Lucińska, Mey, Carriker Jr., Eichler, Price and Emerson.

The type specimens listed in this catalogue were identified on the basis of the microscope slide label data and confirmed by comparing with slide numbers and additional data published in original descriptions. The species are listed in an alphabetical order (in each family), and the following data, when available, are given: the species name as it appears on the microscope slide, author of the name and the page on which it has been described; the status of type specimens (holotype, neotype, allotype, paratype) and their sex or developmental stage (male - [m], female - [f], larva - [l]); the microscope slide (MS) number as it appears on the slide; collecting locality/circumstances, including the host; the MNHW database number (MNHW No); the valid combination currently accepted for this species (if different from the name used in the slide label, following Price *et al*. (2003)); optionally additional remarks.

## CHECKLIST OF THE TYPE SPECIMENS OF MALLOPHAGA IN THE ZŁOTORZYCKA COLLECTION

**Suborder Amblycera**

**Family Gyropidae**

***Abrocomophaga chilensis*** Emerson & Price, 1976: 426; 2 paratypes [mf]; Santiago, Chile; ex *Abrocoma benetti* Waterhouse; MNHW No 708.

***Gliricola venezuelanus*** Emerson & Price 1975: 18; 2 paratypes [mf]; Capibara, Venezuela; ex *Proechimys semispinosus* Tomes; MNHW No 755.

**Family Laemobothriidae**

***Laemobothrion vulturis daneckii*** Złotorzycka, 1969: 125; holotype MS No 28/xx/152 [m], 67 paratypes [mf]; Wrocław, Poland, leg. Danecki; ex *Gypaetus barbatus* (L.); MNHW No 767; current status: *Laemobothrion vulturis* (Fabricius, 1775).

**Family Menoponidae**

***Aegypiphilus contrastus*** Eichler & Złotorzycka, 1963a: 216; holotype MS No 29/F/26 [f], 1 paratype [f]; 20 km N Meiktila, Burma; ex *Pseudogyps bengalensis* (Gm.) (museum skin specimen); MNHW No 709; current status: *Cuculiphilus* (*Aegypiphilus*) *gypsis* (Eichler, 1944).

***Aegypiphilus secundus*** Eichler & Złotorzycka, 1963a: 217; holotype MS No 29/H/10 [m]; Ndjiri, Africa, leg. Schillings; ex *Gyps rueppelli* (Brehm) (museum skin specimen); MNHW No 710; current status: *Cuculiphilus* (*Aegypiphilus*) *gypsis* (Eichler, 1944).

***Allocolpocephalum laniidorum*** Złotorzycka, 1964a: 188; holotype MS No 15/d/4-4 [f], 2 paratypes [f]; Wrocław, Poland, leg. Złotorzycka; ex *Lanius excubior* L.; MNHW No 712; current status: *Colpocephalum fregili* Denny, 1842.

***Amyrsidea obstinata*** Złotorzycka, 1972a: 583; holotype MS No 32/e/23-1 [m], 42 paratypes [mf]; Wizna, Łomża, Poland, leg. Noskiewicz (holotype, 15 paratypes), Bychawa, Poland, leg. Deryło (6 paratypes), Kraśnik, Poland, leg. Deryło (7 paratypes), Janów Lubelski, Poland, leg. Deryło (2 paratypes), Lubelskie Voivodship, Poland, leg. Deryło (12 paratypes); ex *Lyrurus tetrix* (L.); MNHW No 713; current status: *Amyrsidea lagopi* (Grube, 1851).

***Austromenopon caspiae*** ZŁOTORZYCKA, 1968a: 311; holotype MS No 43/e/73 [m], 12 paratypes [mf]; Hodonin, Czech Republic, leg. BALÁT (holotype and 7 paratypes), Mikoszewo, Poland, leg. ZAJĄC (5 paratypes); ex *Hydropogne caspia* (PALL.); MNHW No 720; current status: *Austromenopon atrofulvum* (PIAGET, 1880).

2. An original tray with microscope slides in the ZŁOTORZYCKA Collection (all slides have been recently transferred to plastic boxes)

***Austromenopon decorosum decorosum*** ZŁOTORZYCKA, 1968a: 323; holotype MS No 42/p/5 [m], 9 paratypes [mf]; Mikoszewo, Poland, leg. ZAJĄC; ex *Tringa totanus* (L); MNHW No 721.

***Austromenopon decorosum finitimum*** ZŁOTORZYCKA, 1968a: 325; holotype MS No 42/r/7-2 [f], 1 paratype [f]; Sominy, Poland, leg. ZŁOTORZYCKA; ex *Tringa erythropus* (PALL.); MNHW No 722; current status: *Austromenopon decorosum* ZŁOTORZYCKA, 1968.

***Austromenopon erilis*** ZŁOTORZYCKA, 1968a: 325; holotype MS No 42/ab/61 [m], 2 paratypes [f]; Górki Wschodnie, Poland, leg. ZAJĄC; ex *Calidris maritima* (BRÜNN.); MNHW No 723; current status: *Austromenopon erilis* ZŁOTORZYCKA, 1968.

***Austromenopon hystriculum*** ZŁOTORZYCKA, 1968a: 326; holotype MS No 42/w/45 [f]; Mikoszewo, Poland, leg. ZAJĄC; ex *Tringa hypoleucos* L.; MNHW No 724.

***Austromenopon icterum*** **(**BURMEISTER, 1838: 440); neotype MS No 42/j/1-1 [m]; designated by ZŁOTORZYCKA, 1968a: 331; Kotowice, Poland, leg. ZŁOTORZYCKA; ex *Scolopax rusticola* (L.); MNHW No 725.

***Austromenopon nigropleurum volucer*** ZŁOTORZYCKA, 1968a: 318; holotype MS No 50/F/1 [m]; Bear Island (Bjřrnřya), Norway, leg. ZŁOTORZYCKA (museum skin specimen); ex *Uria troille* (L.); MNHW No 726; current status: *Austromenopon nigropleurum* (DENNY, 1842).

***Austromenopon putum*** ZŁOTORZYCKA, 1968a: 312; holotype MS No 43/a/15 [f]; Sominy, Poland, leg. ZŁOTORZYCKA; ex *Chlidonias nigra* (L.); MNHW No 727; current status: *Austromenopon atrofulvum* (PIAGET, 1880).

***Austromenopon sternophilum paucum*** ZŁOTORZYCKA, 1968a: 314; holotype MS No 43/g/12-1 [m], 28 paratypes [mf]; Sominy, Poland, leg. ZŁOTORZYCKA (holotype and 27 paratypes), Mikoszewo, Poland, leg. ZŁOTORZYCKA (1 paratype); ex *Sterna albifrons* PALL.; MNHW No 728; current status: *Austromenopon atrofulvum* (PIAGET, 1880).

***Austromenopon sternophilum piageti*** ZŁOTORZYCKA, 1968a: 315; holotype MS No 43/f/8 [m], 7 paratypes [f]; Mikoszewo, Poland, leg. ZAJĄC (1 paratype), Mikoszewo, Poland, leg. ZŁOTORZYCKA (5 paratypes), Mikołajki, Poland, leg. DĄBROWSKI (holotype and 3 paratypes); ex *Sterna hirundo* L.; MNHW No 729; current status: *Austromenopon atrofulvum* (PIAGET, 1880).

***Austromenopon transversum circulor*** ZŁOTORZYCKA, 1968a: 306; holotype MS No 43/l/22 [f], 2 paratypes [f]; Górki Wschodnie, Poland, leg. ZAJĄC (holotype), Wrocław, Poland, leg. ZŁOTORZYCKA ( 1 paratype), Dąbie ad Szczecin, Poland, leg. NOSKIEWICZ (1 paratype); ex *Larus canus* L. MNHW No 730; current status: *Austromenopon transversum* (DENNY, 1842).

***Austromenopon transversum comitor*** ZŁOTORZYCKA, 1968a: 306; holotype MS No 43/O/78 [f]; Pohorelice, Czech Republic, leg. BALÁT; ex *Larus marinus* L.; MNHW No 731; current status: *Austromenopon transversum* (DENNY, 1842).

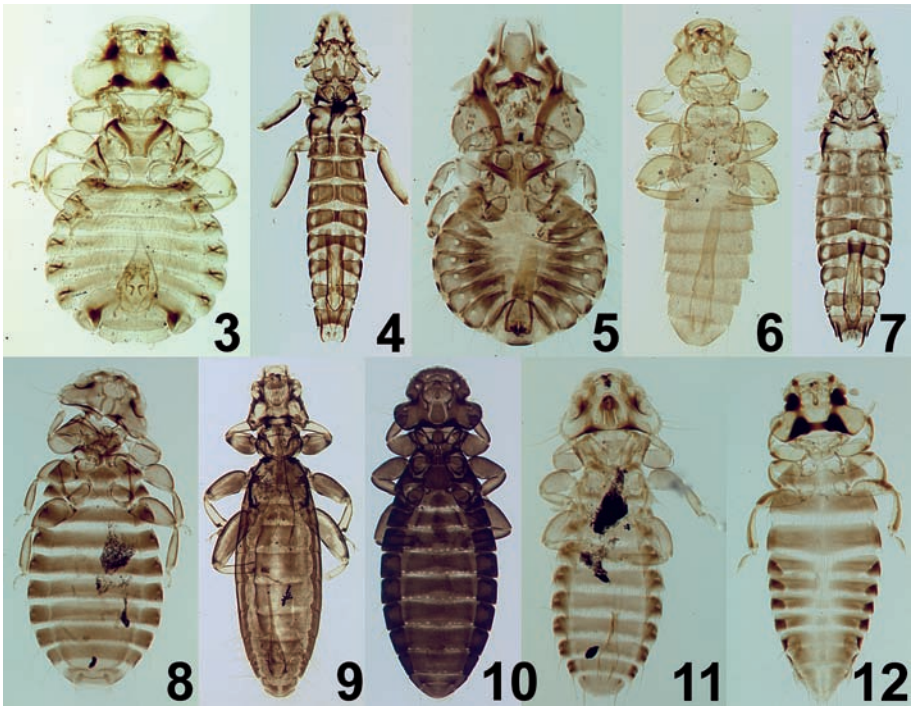
***Austromenopon vanelli*** ZŁOTORZYCKA, 1968a: 320; holotype MS No 42/a/30 [m], 1 paratype [f]; Czech Republic, leg. BALÁT (holotype), Górki Wschodnie, Poland, leg. ZŁOTORZYCKA (paratype); ex *Vanellus vanellus* L.; MNHW No 732; current status: *Austromenopon aegialitidis* (DURRANT, 1906).

***Cavifera abdita*** CLAY & PRICE, 1970: 337; paratype; Indonesia (New Guinea), Archbold Lake; ex *Otidiphaps nobilis* GOULD; MNHW No 1173.

***Ctenigogus erinaceimorphus*** EICHLER & ZŁOTORZYCKA, 1963b: 40; holotype MS No 29/F/1 [m], allotype [f], 2 paratypes [fl]; Manila, Philippines; ex *Pseudogyps bengalensis* (GM.) (museum skin specimen); MNHW No 738.

***Ctenigogus secundarius*** EICHLER & ZŁOTORZYCKA, 1963a: 203; holotype MS No 29/G/5 [f]; Dönje Erok, Tanzania, leg. SCHILLINGS; ex *Torgos tracheliotus tracheliotus* (FOSTER) (museum skin specimen); MNHW No 739.

***Eichlerinopon celeripes*** ZŁOTORZYCKA, 1964a: 181; holotype MS No 1/c/40-33 [m], 3 paratypes [mf]; Wrocław, Poland, leg. ZŁOTORZYCKA; ex *Corvus frugilegus frugilegus* L.; MNHW No 747; current status: unidentifiable (see CLAY 1966).




3-12. Examples of type specimens in the ZŁOTORZYCKA Collection. *Aegypiphilus secundus* EICHLER & ZŁOTORZYCKA, holotype (= *Cuculiphilus* (*Aegypiphilus*) *gypsis* (EICHLER)) (3), *Falcolipeurus jaczewskii* ZŁOTORZYCKA, holotype (= *Falcolipeurus quadripustulatus* (BURMEISTER)) (4), *Craspedorrhynchus fraterculus* EICHLER & ZŁOTORZYCKA, holotype (5), *Ctenigogus erinaceimorphus* EICHLER & ZŁOTORZYCKA, holotype (6), *Falcolipeurus laboriosus* ZŁOTORZYCKA, holotype (= *Falcolipeurus lineatus* BEDFORD) (7), *Austromenopon putum* ZŁOTORZYCKA, holotype (= *Austromenopon atrofulvum* (PIAGET)) (8), *Laemobothrion vulturis daneckii* ZŁOTORZYCKA, holotype (= *Laemobothrion vulturis* (FABRICIUS) (9), *Larithophilus negroidalis* ZŁOTORZYCKA, holotype (= *Actornithophilus piceus piceus* (DENNY)) (10), *Pseudomenopon zlotorzyckae* LUCIŃSKA, paratypes (= *Pseudomenopon pilosum* (SCOPOLI)) (11), *Vulturigogus femellus* EICHLER & ZŁOTORZYCKA, holotype (= *Colpocephalum turbinatum* DENNY)) (12)

***Gypsigogus novoannus*** EICHLER & ZŁOTORZYCKA, 1963a: 213; holotype MS No 29/D/19 [f], allotype [m]; "Rüttwasteppe", East Africa; ex *Trigonoceps occipitalis* (BURCH.) (museum skin specimen); MNHW No 756; current status: *Colpocephalum subzebra* BEDFORD, 1939.

***Hirundoecus clayae*** BALÁT, 1966: 20; allotype [m], 1 paratype [f]; Lednice, Czech Republic; ex *Riparia riparia* (L.); MNHW No 772; current status: *Machaerilaemus clayae* (BALÁT, 1966).

***Lanicanthus aequalis*** ZŁOTORZYCKA, 1965: 57; holotype MS No 15/a/20, 15 paratypes [mfl]; Górki Wschodnie, Poland, leg. ZŁOTORZYCKA (holotype, 2 paratypes), Pasłęka, Poland, leg. BUSSE (13 paratypes); ex *Lanius collurio* L.; MNHW No 1165; current status: *Menacanthus camelinus* (NITZSCH in GIEBEL (1874)).

***Lanimenopon abhorrens*** ZŁOTORZYCKA, 1964a: 177; holotype MS No 15/d/12-1 [m], 3 paratypes [fl]; Wrocław, Poland, leg. ZŁOTORZYCKA; ex *Lanius excubitor excubitor* L.; MNHW No 768; current status: *Myrsidea abhorrens* (ZŁOTORZYCKA, 1964). Remarks: in the original description the holotype is mentioned under the specimen number MS No 15/d/2-1.

***Larithophilus negroidalis*** ZŁOTORZYCKA, 1963a: 226; holotype MS No 43/f/47 [f], 1 paratype [l]; Mikoszewo, Poland, leg. ZŁOTORZYCKA; ex *Sterna hirundo hirundo* L.; MNHW No 769; current status: *Actornithophilus piceus piceus* (DENNY, 1842).

***Larithophilus sperabilis*** ZŁOTORZYCKA, 1963a: 227; holotype MS No 43/g/14 [m]; Sominy, Poland; ex *Sterna albifrons* PALL.; MNHW No 770; current status: *Actornithophilus piceus piceus* (DENNY, 1842).

***Liquidea proterva*** ZŁOTORZYCKA, 1964a: 174; holotype MS No 16/a/6 [f]; Żelistrzewo, Poland, leg. GROMADZKI; ex *Muscicapa striata striata* (PALL.); MNHW No 771; current status: *Myrsidea proterva* (ZŁOTORZYCKA, 1964).

***Menacanthus pius*** EICHLER & ZŁOTORZYCKA, 1963c: 369; holotype MS No 14/11-3 [f], 33 paratypes [fl]; Wrocław, Poland, leg. ZŁOTORZYCKA; ex *Turdus merula* L.; MNHW No 773; current status: *Menacanthus eurysternus* (BURMEISTER, 1838). Remarks: in the original description the holotype is mentioned under the specimen number MS No 14/e/11-1.

***Menacanthus polonicus*** EICHLER & ZŁOTORZYCKA, 1963c: 371; 1 paratype [l]; Wrocław-Opatowice, Poland, leg. ZŁOTORZYCKA; ex *Turdus pilaris* L.; MNHW No 774; current status: *Menacanthus eurysternus* (BURMEISTER, 1838).

***Menacanthus trivialis*** ZŁOTORZYCKA, 1973: 455; holotype [m] MS No 6/a/2, 2 paratypes [f]; Kuřim, Czech Republic,leg. BALÁT; ex *Anthus trivialis* (L.); MNHW No 775; current status: *Menacanthus pusillus* (NITZSCH, 1866).

***Menacanthus verecundus*** ZŁOTORZYCKA, 1965: 54; holotype [f]; Hel, Poland, leg. Busse; ex *Sylvia atricapilla* (L.); MNHW No 1135; current status: *Menacanthus curuccae* (SCHRANK, 1776).

***Menacanthus vistulanus*** EICHLER & ZŁOTORZYCKA, 1963c: 372; holotype MS No 8/a/2 [f]; Skowronki, Poland, leg. ZŁOTORZYCKA; ex *Sylvia borin* (BODD.); MNHW No 776; current status: *Menacanthus curuccae* (SCHRANK, 1776).

***Menacanthus wipszyckii*** EICHLER & ZŁOTORZYCKA, 1963c: 373; holotype MS No 4/h/4 [f]; Wrocław, Poland, leg. ZŁOTORZYCKA; ex *Chloris chloris* L.; MNHW No 777; current status: *Menacanthus eurysternus* (BURMEISTER, 1838).

***Menopon deryloi*** Złotorzycka, 1972a: 580; holotype MS No 103-3 [m], 5 paratypes [mf]; Makoszka ad Parczew, Poland, leg. Deryło; ex *Lyrurus tetrix* (L.); MNHW No 778.

***Myrsidea clayae birmensis*** Klockenhoff, 1969: 397; paratypes [f] 3; Songkhla Muang, Thailand; ex *Corvus macrorhynchos levaillantii* Lesson; MNHW No 780; current status: *Myrsidea birmensis* Klockenhoff, 1969.

***Neocolpocephalum gypsi*** Eichler & Złotorzycka, 1971: 26; 1 paratype [f]; Czechoslovakia, leg. Balát; ex *Gyps fulvus* (Habl.); MNHW No 781; current status: *Colpocephalum gypsi* (Eichler & Złotorzycka, 1971).

***Neocolpocephalum polonum*** Eichler & Złotorzycka, 1971: 26; holotype MS No 782 [f]; Ruda Sułowska, Poland, leg. Złotorzycka; ex *Accipiter gentilis* (L.); MNHW No 782; current status: *Colpocephalum polonum* (Eichler & Złotorzycka, 1971).

***Neomyrsidella usitata*** Złotorzycka, 1964a: 184; 12 paratypes [mf]; Wrocław, Poland, leg. Złotorzycka; ex *Corvus monedula* (L.); MNHW No 785; current status: *Myrsidea anathorax* (Nitzsch,1866).

***Pseudomenopon janiszewskae*** Lucińska, 1969: 365; holotype MS No 48/d/4 [f], 1 paratype [f]; Potasznia, Milicz, Poland, leg. Jurczyk; ex *Podiceps auritus* (L.); MNHW No 795; current status: *Pseudomenopon dolium* (Rudow, 1869).

***Pseudomenopon stuchlyi*** Lucińska, 1969: 364; holotype MS No 48/b/7 [m], 1 paratype [m]; Radziądz, Poland, leg. Złotorzycka; ex *Podiceps griseigena* (Bodd.); MNHW No 796; current status: *Pseudomenopon dolium* (Rudow, 1869).

***Pseudomenopon zlotorzyckae*** Lucińska, 1969: 359; 5 paratypes [mf]; Wrocław-Opatowice, Poland, leg. Złotorzycka (2 paratypes), Radziądz, Poland, leg. Złotorzycka (2 paratypes), Lednice, Czech Republic, leg. Balát (1 paratype); ex *Gallinula chloropus* (L.); MNHW No 797; current status: *Pseudomenopon pilosum* (Scopoli, 1763).

***Uchida phasiani*** Modrzejewska & Złotorzycka, 1977: 340; 2 paratypes [mf]; Oława ad Wrocław, Poland, leg. Modrzejewska; ex *Phasianus colchicus* L.; MNHW No 806; current status: *Menacanthus phasiani* (Modrzejewska & Złotorzycka, 1977).

***Vulturigogus eugenii*** Eichler & Złotorzycka, 1963a: 207; holotype MS No 29/F/10 [m], allotype [f], Manila, Philippines (holotype), 20 km N Meiktila, Myanmar (allotype); ex *Pseudogyps bengalensis* (Gm.) (museum skin specimens); MNHW No 807; current status: *Colpocephalum turbinatum* Denny, 1842.

***Vulturigogus femellus*** Eichler & Złotorzycka, 1963a: 209; holotype MS No 29/H/18 [f]; Ethiopia; ex *Gyps rueppelli rueppelli* (Brehm) (museum skin specimen); MNHW No 808; current status: *Colpocephalum turbinatum* Denny, 1842.

**Family Ricinidae**

***Ricinus fringillae aureolae*** Mey, 1982: 163; 1 paratype [f]; Tereldsh, Mongolia, leg. E. Mey; ex *Emberiza aureola* (Pall.); MNHW No 1147; current status: *Ricinus fringillae* De Geer, 1778.

***Ricinus fringillae flavirostris*** Mey, 1982: 164; 2 paratypes [mf]; 10 km W. Mjangad, Aimak Chovd, Mongolia, leg. Stubbe (1 paratype), Jolyn am Gobi-Altai Mongolia, leg. E. Mey (1 paratype); ex *Carduelis flavirostris altaica* (Sush.); MNHW No 1148; current status: *Ricinus fringillae* De Geer, 1778.

***Ricinus japonicus rheinwaldi*** MEY, 1982: 166; 1 paratype [f]; Jolyn, Gobi-Altai, Mongolia, leg. E. MEY; ex *Anthus spinoletta coutelii* AUD.; MNHW No 1149; current status: *Ricinus fringillae* DE GEER, 1778.

***Ricinus piechockii*** MEY, 1984: 243; 1 paratype [f]; La Mayagna-Guanahacabibes, Cuba; ex *Melopyrrha nigra* (L.); MNHW No 1150.

***Ricinus uragi*** MEY, 1982: 165; 1 paratype [f]; Tereldsh, Mongolia, leg. E. MEY; ex *Uragus sibiricus* (PALL.); MNHW No 1151.

***Trochiloecetes naevius*** ONIKI & EMERSON 1982; 85, 1 paratype [f]; Seta Barras, Brazil; ex *Ramphodon naevius*; MNHW No 803.

**Suborder Ischnocera**

**Family Philopteridae**

***Allobrueelia abluda*** ZŁOTORZYCKA, 1964b: 265; holotype MS No 14/a/22 [f], 1 paratype [l]; Hel, Poland, leg. BUSSE; ex *Turdus philomelos* BREHM; MNHW No 711; current status: *Brueelia turdinulae* ANSARI, 1956.

***Anatoecus dentatus castaneus*** ZŁOTORZYCKA, 1970: 24; holotype MS No 44/o/18, 12 paratypes [mf]; Krośnice, Poland, leg. ZŁOTORZYCKA (holotype, 4 paratypes), Wrocław, Poland, leg. ZŁOTORZYCKA (8 paratypes); ex *Anas querquedula* L.; MNHW No 1157; current status: *Anatoecus dentatus* (SCOPOLI, 1763).

***Anatoecus dentatus cognatus*** ZŁOTORZYCKA, 1970: 17; holotype MS No 44/ład/6 [f], 1 paratype [f]; Świdnica, Poland; ex *Anas platyrhynchos domestica* L. (museum skin specimen); MNHW No 714; current status: *Anatoecus dentatus* (SCOPOLI, 1763).

***Anatoecus dentatus complicatus*** ZŁOTORZYCKA, 1970: 21; holotype MS No 44/n/10 [f], 2 paratypes [mf]; Józefów ad Warszawa, leg. ŚWIRSKI (holotype, 1 paratype), Nysa, Poland (1 paratype) (museum skin specimens); ex *Anas penelope* L.; MNHW No 1155; current status: *Anatoecus dentatus* (SCOPOLI, 1763).

***Anatoecus dentatus gratus*** ZŁOTORZYCKA, 1970: 35; holotype MS No 44/u/2 [f], 1 paratype [f]; Kukle, Poland, leg. ZŁOTORZYCKA (holotype), Górki Wschodnie, Poland, leg. ZAJĄC (paratype); ex *Bucephala clangula* (L.); MNHW No 1161; current status: *Anatoecus dentatus* (SCOPOLI, 1763).

***Anatoecus dentatus longicephalus*** ZŁOTORZYCKA, 1970: 19; holotype MS No 44/m/9, 1 paratype [f]; Przemków, Poland; ex *Anas strepera* L. (museum skin specimen); MNHW No 1153; current status: *Anatoecus dentatus* (SCOPOLI, 1763).

***Anatoecus dentatus magnicornutus*** ZŁOTORZYCKA, 1970: 52; holotype MS No 44/a/1, 19 paratypes [mf]; Kołczewo, Poland, leg. WOŁK; ex *Cygnus olor* (GM.); MNHW No 715; current status: *Anatoecus dentatus* (SCOPOLI, 1763).

***Anatoecus dentatus prehensus*** ZŁOTORZYCKA, 1970: 27; holotype MS No 44/ó/5 [m], 2 paratypes [mf]; Zawiercie, Poland, leg. DĄBROWSKI; ex *Anas cracca* L.; MNHW No 1158; current status: *Anatoecus dentatus* (SCOPOLI, 1763).

***Anatoecus icterodes discludus*** ZŁOTORZYCKA, 1970: 15; 6 paratypes [f]; Świdnica, Poland; ex *Anas platyrhynchos domestica* L. (museum skin specimen); MNHW No 716; current status: *Anatoecus icterodes* (NITZSCH, 1818).

***Anatoecus icterodes dissensus*** ZŁOTORZYCKA, 1970: 33; holotype MS No 44/u/9 [m], 9 paratypes [mf]; Górki Wschodnie, Poland, leg. ZAJĄC (holotype), Kukle, Poland, leg. Złotorzycka (paratypes); ex *Bucephala clangula* (L.); MNHW No 1160; current status: *Anatoecus icterodes* (NITZSCH, 1818).

***Anatoecus icterodes eichleri*** Złotorzycka, 1970: 25; holotype MS No 44/ó/10 [m], 28 paratypes [mf]; Zawiercie, Poland, leg. Dąbrowski, Wroclaw-Opatowice, Poland, leg. Złotorzycka; ex *Anas crecca* L.; MNHW No 717; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes islandicus*** Złotorzycka, 1970: 35; holotype MS No 44/Ua/2 [m], 1 paratype [m]; North Iceland; ex *Bucephala islandica* Gm. (museum skin specimen); MNHW No 718; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes oloris*** Złotorzycka, 1970: 50; holotype MS No 44/a/26 [m], 39 paratypes [mf]; Kołczewo, Poland, leg. Wołk; ex *Cygnus olor* (Gm.); MNHW No 719; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes parvus*** Złotorzycka, 1970: 22; holotype MS No 44/o/10, 16 paratypes [mf]; Wrocław, Poland, leg. Złotorzycka; ex *Anas querquedula* L.; MNHW No 1156; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes pustulosus*** Złotorzycka, 1970: 29; holotype MS No 44/t/1 [m]; Lednice, Czech Republic, leg. Balát; ex *Netta rufina* (Pall.); MNHW No 1159; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes simplicatus*** Złotorzycka, 1970: 20; holotype MS No 44/n/18 [m], 2 paratypes [f]; Nysa, Poland (museum skin specimen) (holotype), Józefów ad Warszawa, Poland, leg. Świrski (paratypes); ex *Anas penelope* L.; MNHW No 1154; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes solivagus*** Złotorzycka, 1970: 18; holotype MS No 44/m/2 [f]; Sominy, Poland, leg. Złotorzycka; ex *Anas strepera* L.; MNHW No 1152; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes tadornae*** Złotorzycka, 1970: 48; 2 paratypes [f]; Rogów ad Grodków, Poland; ex *Tadorna tadorna* (L.) (museum skin specimen); MNHW No 1163; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Anatoecus icterodes tergalis*** Złotorzycka, 1970: 44; holotype MS No 44/e/1-1 [m], 11 paratypes [mf]; Lublin ad, Poland, leg. Wipszycki (holotype, 9 paratypes), Jursky Šůr, Czech Republic, leg. Balát; ex *Anser fabalis* (Lath.); MNHW No 1162; current status: *Anatoecus icterodes* (Nitzsch, 1818).

***Brueelia glizi*** Balát 1955; 509; 2 paratypes [mf]; Hodonin, Czech Republic, leg. Balát; ex *Fringilla montifringilla* L.; MNHW No 734; current status: *Brueelia glizi* Balát, 1955.

***Corvonirmus perforatus*** Złotorzycka, 1964b: 244; holotype MS No 1/c/26-1 [m], 8 paratypes [mfl]; Wrocław-Opatowice, Poland, leg. Złotorzycka; ex *Corvus frugilegus frugilegus* L.; MNHW No 735; current status: *Brueelia perforata* (Złotorzycka, 1964).

***Cotingacola rupicolae colombiana*** Carriker Jr., 1956: 369; 1 paratype [m]; Moscopan, Cauca, Colombia; ex *Rupicola peruvianus aecuatorialis*; MNHW No 736; current status: *Cotingacola rupicolae* (Carriker Jr., 1956).

***Craspedorrhynchus fraterculus*** Eichler & Złotorzycka 1975: 155; holotype MS No 28/b/3 [m], allotype [f]; Lednice, Czech Republic, leg. Balát; ex *Aquila heliaca*; MNHW No 737.

***Docophorulus capillatus*** ZŁOTORZYCKA, 1964c: 408; holotype MS No 16/b/4 [m], 2 paratypes [mf]; Skowronki, Poland (holotype, 1 paratype) leg. ZŁOTORZYCKA, Hel, Poland (1 paratype) leg. BUSSE; ex *Muscicapa hypoleuca hypoleuca* (PALL.); MNHW No 740; current status: *Philopterus capillatus* (ZŁOTORZYCKA, 1964).

***Docophorulus cumulatus*** ZŁOTORZYCKA, 1964c: 410; holotype MS No 4/y/2-1 [m], 43 paratypes [mf]; Jordanów, Poland, leg. ZŁOTORZYCKA (holotype, 24 paratypes), Wrocław, Poland, leg. ZŁOTORZYCKA (19 paratypes); ex *Emberiza calandra calandra* L.; MNHW No 741; current status: *Philopterus cumulatus* (ZŁOTORZYCKA, 1964).

***Docophorulus desertus*** ZŁOTORZYCKA, 1964c: 412; holotype MS No 16/a/3 [f], 2 paratypes [f,l]; Skowronki, Poland (holotype, 1 paratype), leg. ZŁOTORZYCKA, Zawiercie, Poland (1 paratype), leg. DĄBROWSKI; ex *Muscicapa striata striata* (PALL.); MNHW No 742; current status: *Philopterus desertus* (ZŁOTORZYCKA, 1964).

***Docophorulus fortunatus*** ZŁOTORZYCKA, 1964c: 413; holotype MS No 4/p/6-2 [m], 18 paratypes [f]; Kiełpino, Poland (holotype, 6 paratypes), Wrocław-Opatowice, Poland, leg. ZŁOTORZYCKA (12 paratypes); ex *Fringilla coelebs coelebs* L.; MNHW No 743; current status: *Philopterus fortunatus* (ZŁOTORZYCKA, 1964).

***Docophorulus rapax*** ZŁOTORZYCKA, 1964c: 421; holotype MS No 4/q/1 [m], 3 paratypes [mf]; Hel, Poland, leg. BUSSE; ex *Fringilla montifringilla* L.; MNHW No 744; current status: *Philopterus rapax* (ZŁOTORZYCKA, 1964).

***Docophorulus residuus*** ZŁOTORZYCKA, 1964c: 422; holotype MS No 4/z/1 [f], 1 paratype [l]; Nowa Pasłęka, Braniewo, Poland, leg. BUSSE; ex *Emberiza schoeniclus schoeniclus* (L.); MNHW No 745; current status: *Philopterus residuus* (ZŁOTORZYCKA, 1964).

***Docophorulus vernus*** ZŁOTORZYCKA, 1964c: 424; holotype MS No 14/c/4, 24 paratypes [mf]; Wrocław-Opatowice, Poland, leg. ZŁOTORZYCKA; ex *Turdus viscivorus viscivorus* L.; MNHW No 746; current status: *Philopterus vernus* (ZŁOTORZYCKA, 1964).

***Eustrigiphilus speotyto*** EICHLER, 1954; holotype MS No 3907b [m], allotype [f]; La Cumbre, Peru; ex *Speotyto cunicularia juninensis* BERL. & STOLZ.; MNHW No 748; current status: *Strigiphilus desertae* CARRIKER Jr., 1966.

***Falcolipeurus jaczewskii*** ZŁOTORZYCKA, 1963c: 154; holotype MS No 29/G/1 [m], 1 paratype [l]; "Damara", leg. LÜBERT (holotype), Dönje Erok, Tanzania (paratype); ex *Torgos tracheliotus tracheliotus* (FORST) (museum skin specimen); MNHW No 749; current status: *Falcolipeurus quadripustulatus* (BURMEISTER, 1838).

***Falcolipeurus janiszewskaae*** ZŁOTORZYCKA, 1963c: 156; holotype MS No 29/D/1 [m], allotype [f], 11 paratypes [mfl]; "Scetel", Africa (holotype, allotype, 6 paratypes); "Rüttwasteppe", Africa (3 paratypes), Dire-Daua, Ethiopia (2 paratypes); ex *Trigonoceps occipitalis* (BURCH.) (museum skin specimens); MNHW No 750; current status: *Falcolipeurus suturalis* (RUDOW, 1869).

***Falcolipeurus laboriosus*** ZŁOTORZYCKA, 1963c: 158; holotype MS No 29/H/1 [m], 12 paratypes [mfl]; "Ndjiri", Africa (holotype, 7 paratypes), Jama, Ethiopia ( 2 paratypes), Danoa, Ethiopia (3 paratypes); ex *Gyps rueppelli rueppelli* (BREHM) (museum skin specimens); MNHW No 751; current status: *Falcolipeurus lineatus* BEDFORD, 1931.

***Falcolipeurus longiphallus*** Złotorzycka, 1963c: 159; holotype MS No 29/F/14 [m], allotype [f], 10 paratypes [mfl]; 20 km North Meiktila, Myanmar (holotype, allotype, 7 paratypes), Manila, Philippines (2 paratypes), Nuddeah, ?Bengal (1 paratype); ex *Pseudogyps bengalensis* (Gm.) (museum skin specimens); MNHW No 752.

***Furnaricola acutifrons subsimilis*** Carriker Jr., 1944a: 87; 2 paratypes [mf]; Fundacion Magdalena, Colombia, leg. Carriker Jr.; ex *Certhiaxis cinnamomeus* (Gm.); MNHW No 753; current status: *Rallicola acutifrons* (Carriker Jr, 1944).

***Hypocrypturellus coniceps boucardi*** Carriker Jr., 1944b: 226; 4 paratypes [mf]; Cerro Tuxtla, Mexico, leg. Carriker; ex *Crypturellus boucardi boucardi* Sclater; MNHW No 757; current status: *Kellogia boucardi* (Carriker Jr., 1944).

***Kelloggia brevipes mexicanus*** Carriker Jr., 1944b: 218; 4 paratypes [mf]; Tres Zapotes, Veracruz, Mexico, leg. Carriker; ex *Tinamus major percautus* van Tyne; MNHW No 758; current status: *Kelloggia mexicanus* Carriker, Jr., 1944.

***Koeniginirmus caspius certus*** Złotorzycka, 1967: 757; holotype MS No 43/n/91 [m]; Mikoszewo, Poland, leg. Zając; ex *Larus fuscus* L.; MNHW No 759; current status: *Quadraceps caspius* (Giebel, 1874).

***Koeniginirmus ornatus alius*** Złotorzycka, 1967: 763; holotype MS No 43/m/12 [m], 4 paratypes [mf]; Międzyzdroje, Poland, leg. Wołk; ex *Larus argentatus* Pont. MNHW No 760; current status: *Quadraceps orantus striolatus* (Nitzsch in Giebel (1866)).

***Koeniginirmus ornatus benignus*** Złotorzycka, 1967: 764; holotype MS No 43/o/76 [m], 3 paratypes [f]; Pohořelice, Czech Republic, leg. Balát (holotype, 1 paratypes), Mikoszewo, Poland, leg. Zając (2 paratypes); ex *Larus marinus* Pall.; MNHW No 761; current status: *Quadraceps orantus striolatus* (Nitzsch in Giebel (1866)).

***Koeniginirmus punctatus ancillaris*** Złotorzycka, 1967: 751; holotype MS No 43/l/10-1 [m], 1 paratype [f]; Krynica Morska, Poland, leg. Dąbrowski; ex *Larus canus* L.; MNHW No 762; current status: *Quadraceps punctatus regressus* Timmermann, 1952.

***Koeniginirmus punctatus auctosus*** Złotorzycka, 1967: 751; holotype MS No 43/n/92 [m], 2 paratypes [f]; Mikoszewo, Poland, leg. Zając; ex *Larus fuscus* L.; MNHW No 763; current status: *Quadraceps punctatus regressus* Timmermann, 1952).

***Koeniginirmus punctatus balticus*** Złotorzycka, 1967: 752; holotype MS No 43/e/91 [m], 1 paratype [m]; Mikoszewo, Poland, leg. Zając; ex *Hydropogne caspia* (Pall.); MNHW No 764; current status: *Quadraceps punctatus regressus* Timmermann, 1952).

***Koeniginirmus punctatus ceterus*** Złotorzycka, 1967: 752; holotype MS No 43/i/34 [m], 1 paratype [f]; Mikoszewo, Poland, leg. Zając; ex *Sterna sandvicensis* (Lath.); MNHW No 765: current status: *Quadraceps punctatus regressus* Timmermann, 1952).

***Koeniginirmus punctatus flabilis*** Złotorzycka, 1967: 753; holotype MS No 43/g/17 [m]; Mikoszewo, Poland, leg. Zając; ex *Sterna albifrons* Pall.; MNHW No 766; current status: *Quadraceps punctatus regressus* Timmermann, 1952).

***Mjoberginirmus musealis*** Złotorzycka, 1967: 745; holotype MS No 50/F/2 [m]; Zipnarolok, Kola, Russia; ex *Uria troille* L. (museum skin specimen); MNHW No 779; current status: *Quadraceps obliquus* (Mjöberg, 1910).

***Neodocophorus hopkinsi*** EICHLER, 1949: 14; 13 paratypes [mf]; from *Bubo bubo* L.; MNHW No 783; current status: *Strigiphilus strigis* (PONTOPPIDAN, 1763). Remarks: locality missing on the specimen label and in the original description.

***Neodocophorus uralensis*** EICHLER, 1949: 15; allotype MS No 290 [m]; Tartumaa, Estonia, leg. VOORE; ex *Strix uralensis litturata* TENGM.; MNHW No 784; current status: *Strigiphilus heterocerus* (GRUBE, 1851).

***Panurinirmus visendus*** ZŁOTORZYCKA, 1964b: 270; holotype MS No 9/c/1 [f]; Górki Wschodnie, Poland, leg. ZAJĄC; ex *Panurus biarmicus* (L.); MNHW No 786; current status: *Penenirmus visendus* (ZŁOTORZYCKA, 1964).

***Penenirmus accuratus*** ZŁOTORZYCKA, 1964b: 271; holotype MS No 26/H/3 [f]; Goszczowice (= Guschwitz) ad Niemodlin (= Falkenberg), Poland; ex *Dryocopus martius martius* (L.) (museum skin specimen, leg. ZŁOTORZYCKA); MNHW No 787; current status: *Penenirmus heteroscelis* (NITZSCH, 1866).

***Penenirmus silesiacus*** ZŁOTORZYCKA, 1964b: 273; holotype MS No 26/e/1 [f], 1 paratype [l]; Ruda Sułowska, Milicz, Poland, leg. ZŁOTORZYCKA; ex *Dryobates medius* (L.); MNHW No 788; current status: *Penenirmus auritus* (SCOPOLI, 1763).

***Picicola contiguus*** ZŁOTORZYCKA, 1965: 67; holotype MS No 26/a/10-1 [m], allotype [f], 3 paratypes [f]; Wrocław-Opatowice, Poland, leg. ZŁOTORZYCKA; ex *Picus viridis viridis* L.; MNHW No 789; current status: *Picicola candidus* (NITZSCH, 1866).

***Pleurinirmus affectator*** ZŁOTORZYCKA, 1976a: 210; holotype MS No 8/a/10 [f], 3 paratypes [f]; Mierzeja Wiślana, Poland, leg. BUSSE; ex *Sylvia borin borin* (BODD.); MNHW No 790; current status: *Penenirmus affectator* (ZŁOTORZYCKA, 1976).

***Pleurinirmus phylloscopi*** ZŁOTORZYCKA, 1976a: 210; holotype MS No 8/ń/3 [m], 4 paratypes [mf]; Mierzeja Wiślana, Poland, leg. BUSSE (holotype, 2 paratypes), Finland (2 paratypes); ex *Phylloscopus trochilus trochilus* (L.) (Poland) and *Phylloscopus trochilus acredula* (L.) (Finland); MNHW No 791; current status: *Penenirmus phylloscopi* (ZŁOTORZYCKA, 1976).

***Pleurinirmus rarus*** ZŁOTORZYCKA, 1976a: 212; holotype MS No 8/n/9 [m], 2 paratypes [f]; Wyskok, Kętrzyn, Poland, leg. ZŁOTORZYCKA (holotype), Mierzeja Wiślana, Poland, leg. BUSSE (paratypes); ex *Phylloscopus collybita collybita* (VIEILL); MNHW No 792; current status: *Penenirmus rarus* (ZŁOTORZYCKA, 1976).

***Prunellides annae*** ZŁOTORZYCKA & EICHLER, 1984: 221; holotype MS No 7/a/71 [m], 1 paratype [f]; Piotrówka- Kępno, Poland, leg. OKULEWICZ; ex *Prunella modularis modularis* (L.); MNHW No 793; current status: *Philopterus modularis* (DENNY, 1842).

***Pseudocophorus antennatus*** CARRIKER Jr., 1940: 282; 1 paratype [m]; La Cuchilla, Venezuela; ex *Pipreola arcuata* (LAFRESNAYE); MNHW No 794.

***Pseudolipeurus subsimils soui*** CARRIKER Jr., 1953: 219; 1 paratype [m]; Simiti, Colombia; ex *Crypturellus soui caucae* (CHAP.); MNHW No 1134; current status: *Pseudolipeurus dubius* GUIMARÃES, 1942.

***Quadraceps retractus*** ZŁOTORZYCKA, 1967: 722; holotype MS No 42/er/1 [m], 1 paratype [f]; Atanasov Lake, Bulgaria, leg. BALÁT; ex *Charadrius alexandrinus* L.; MNHW No 1164; current status: *Quadraceps macrocephalus* (WATERSTON, 1914).

***Rostrinirmus refractariolus*** Złotorzycka, 1964b: 277; 1 paratype [f]; Wrocław, Poland, leg. Złotorzycka; ex *Passer domesticus domesticus* (L.); MNHW No 798; current status: *Sturnidoecus refractariolus* **(**Złotorzycka, 1964).

***Strigiphilus glaucidii*** Złotorzycka, 1974: 337; holotype MS No TBr 413a [m], 3 paratypes [f]; Vesanto, Finland, leg. Alaja; ex *Glaucidium passerinum passerinum* (L.); MNHW No 799; current status: *Strigiphilus splendens* (Giebel, 1874).

***Strigiphilus portigi*** Eichler, 1952: 154; holotype MS No 3609 c [m], allotype [f]; Erlangen, Germany, leg. Stammer; ex *Strix aluco aluco* L.; MNHW No 800.

***Sturnidoecus blandus*** Złotorzycka, 1964b: 278; holotype MS No 4/o/1 [f]; Górki Wschodnie, Poland, leg. Złotorzycka; ex *Carduelis carduelis carduelis* (L.); MNHW No 801.

***Syrrhaptoecus bedfordi*** Waterston, 1928: 342; 1 paratype [f]; North Asia; ex *Syrrhaptes paradoxus* (Pallas); MNHW No 802.

***Trollipeurus eichleri*** Złotorzycka, 1963b: 2; 1 paratype [m]; Paraguay; ex *Coragyps atratus foetens* (Licht.) (museum skin specimen); MNHW No 804; current status: *Falcolipeurus marginalis* (Osborn, 1902).

***Trollipeurus kleinmachnowensis*** Złotorzycka, 1963b: 4; 2 paratypes [mf]; ex *Vultur gryphus* L. (museum skin specimen); MNHW No 805; current status: *Falcolipeurus assessor* (Giebel, 1874).

Family Trichodectidae

***Bovicola orientalis*** Emerson & Price, 1982: 186; 2 paratypes [mf]; Puli, Taiwan; ex *Capricornis crispus swinhoei* Gray; MNHW No 733; current status: *Damalinia orientalis* (Emerson & Price, 1982).

***Geomydoecus panamensis*** Price & Emerson, 1971: 251; 2 paratypes [mf]; Cerro Punta, Chiriqui, Panama; ex *Macrogeomys cavator* Bangs.; MNHW No 754.

***Suricatoecus fennecus*** Emerson & Price, 1981:673; 1 paratype [f]; Faiyum, Egypt; ex *Fennecus zerda* (Zimm.); MNHW No 1133; current status: *Felicola (Suricatoecus) fennecus* (Emerson & Price, 1981).

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# The Heteroptera collection of Aleksander Wróblewski in the Museum of Natural History, University of Wrocław

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Abstract. The water Heteroptera collection of Aleksander Wróblewski preserved in the Museum of Natural History, University of Wrocław, Wrocław, Poland, is summarized. The collection consists of dry-mounted and ethanol-preserved specimens and microscope slides of 182 species and subspecies, total 3973 specimens. This number includes 1879 type specimens of 29 species and subspecies of Corixidae and Veliidae. A brief biographic note on Aleksander Wróblewski, the late professor of the Poznań branch of the Institute of Zoology, Polish Academy of Sciences, and a renowned specialist on water Heteroptera, is given. All type specimens from the Wróblewski Collection are listed with respective details and bibliographic data.

Key words: Wróblewski, Insecta, Heteroptera, Corixidae, Veliidae, type collection, Wrocław University, Poland.

## INTRODUCTION

Aleksander Wróblewski (1911-1985) was a hydrobiologist and systematic entomologist whose work was dedicated to water heteropterans, a specialty uncommon among Polish zoologists. Born in Poznań, nearly all his life spent in this academic center of Western Poland. Already as a student of the Poznań University (presently Adam Mickiewicz University), Wróblewski was employed as an assistant in the Department of Systematic Zoology, where in 1936 he obtained his MSc degree. Although his first published scientific study was focused on a rare freshwater crustacean, Wróblewski soon became interested in water bugs and this group remained his main research subject for the entire scientific career. In 1938 he discovered his first new taxon, and most surprisingly it was a *Microvelia* common around Poznań, but previously not distinguished from a similar species (Wróblewski 1938). In the short period after receiving the MSc and before the WWII, Wróblewski managed to publish two valuable faunistic studies.

Then his work was interrupted by the onset of war and he was drafted into military service. Taken captive by Germans, he spent the five war years in prisoner of war camps. Immediately after the war Wróblewski traveled to Wrocław, where he participated in organizing and restoring largely damaged collections of the Zoological Institute of the University of Wrocław (presently these collections are preserved in the Museum of Natural History). This was only a brief episode in Wróblewski's career and already in summer 1945 he returned to Poznań to take again a position at the Department of

1. Example of dry-mounted specimens in drawer trays of the Wróblewski Collection

Systematic Zoology. There he received his PhD and in 1950 was appointed as a head of the Museum of Natural History in Poznań, which three years later became a part of the Institute of Zoology, Polish Academy of Sciences. In this institution WRÓBLEWSKI continued his study of water Heteroptera and soon became a top specialist on the large and diverse genus *Micronecta* KIRKALDY. His numerous taxonomic papers are focused on the systematics and morphology of *Micronecta*, and this lineage of Corixidae is best represented in his collection. He was also interested in the shore bugs (Saldidae) and published an important monograph on Polish species of this poorly known family. A long cooperation and friendship with professor Tadeusz JACZEWSKI, a specialist on Nepomorpha water bugs, resulted in publication of the Keys to Identification of the Insects of Poland: Hebridae, Mesoveliidae, Hydrometridae, Veliidae and Gerridae. WRÓBLEWSKI was also an editor-in-chief of the "Fauna Słodkowodna Polski" (Freshwater Fauna of Poland) series and the Polskie Pismo Entomologiczne (currently Polish Entomological Journal), a president of the Poznań Section of the Polish Entomological Society and the Polish Hydrobiological Society. More biographical details can be found in RAFALSKI (1987).

The WRÓBLEWSKI Collection of Heteroptera is preserved in the Museum of Natural History, University of Wrocław (MNHW). The main part of the collection consists of dry-mounted (Figs 1, 7) and ethanol-preserved (Figs 2-3) specimens and microscope slides (Figs 4-6, 8-12) of 182 identified species and subspecies, total 3973 specimens. This number includes 1879 type specimens of 29 species and subspecies. All type specimens are catalogued and specimen details can be found in electronic MNHW databases. There is also a large ethanol-preserved and partly identified material stored in vials contained in plastic jars. This part of the collection, mostly containing sorted samples of Corixidae from field studies in Poland, with many thousands of individuals, is not organized and catalogued yet. The type specimens are listed below, in an alphabetical order, with respective MNHW database codes, microscope slide numbers (if available) and other details. Abbreviations: m - male, f - female.

## CHECKLIST OF THE HETEROPTERA TYPE SPECIMENS IN THE MNHW WRÓBLEWSKI COLLECTION

### Family *Corixidae*

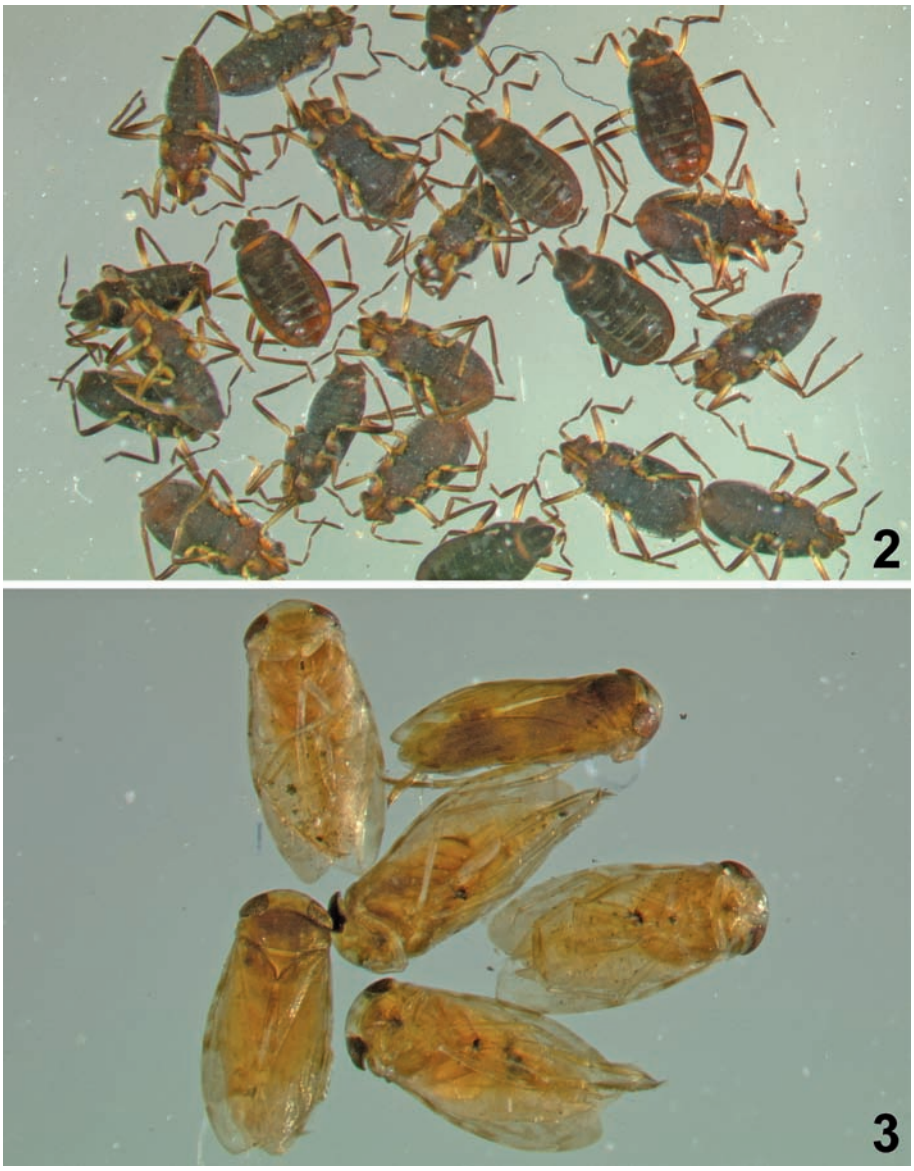
***Corixa albifrons*** (MOTSCHULSKY, 1863); MNHW No 810; neotype [m] (design. WRÓBLEWSKI 1968); Sri Lanka, Colombo, leg. MADARÁSZ. Current status: *Micronecta albifrons* (MOTSCHULSKY, 1863).

***Micronecta altera*** WRÓBLEWSKI, 1972a: 33; MNHW No 811; holotype [m] (microscope slide AW343), allotype [f] (microscope slide), 1212 paratypes [mf] (1 f and 1 m in microscope slides, 570 m, 640 f in ethanol); all specimens from Sri Lanka, Arulagamwila, Manampitiya, leg. KARUNARATNE.

***Micronecta annae illiesi*** WRÓBLEWSKI, 1970: 687; MNHW No 812; 6 syntypes [mf] (2 exx. in microscope slides Au49 and Au50 annotated as holotype (m) and allotype (f), 1 ex. in microscope slide Au40, 4 pinned exx. annotated as paratypes); Australia, NSW, Eucumbene River, 2 miles E Kiendra, leg. ILLIES. Remarks: all specimens are syntypes.

***Micronecta annae kirkaldyi*** WRÓBLEWSKI, 1970: 688; MNHW No 996; 1 syntype [m] (microscope slide AW23); Australia, Mornington Island, leg. AITKEN & TINDALE. Current status: *Micronecta queenslandica* CHEN, 1965.

***Micronecta annae tasmanica*** WRÓBLEWSKI, 1977: 685; MNHW No 813; 34 syntypes [mf]; Australia, Victoria, Lake Parrumbete, Camperdown, leg. KNOWLESS (1 m




2-3. Example of ethanol-preserved specimens of the WRÓBLEWSKI Collection. Syntypes of *Microvelia umbricola* WRÓBLEWSKI (2) and paratypes of *Micronecta fieberi* WRÓBLEWSKI (3)

in microscope slide Au73), Australia, Tasmania, Lake Pawleena, leg. Walker (1 m in microscope slide Au82, 10 exx. in ethanol), Australia, Tasmania, Bronte Lagoon, leg. Beecroft (10 exx. in ethanol), Australia, Tasmania, Llewellyn Lake, leg. Sheppard (2 exx. in microscope slides Au80, Au81, 10 exx. in ethanol).

***Micronecta carpatica*** Wróblewski, 1958: 324; MNHW No 819; holotype [m] (microscope slide), allotype [f] (microscope slide), 103 paratypes (4 exx. in microscope slides, 55 m and 44 f in ethanol); Poland, Jasło, Wisłoka River, leg. Pniewski.

***Micronecta ceylonica*** Wróblewski, 1968: 757; MNHW No 820; holotype [m] (microscope slide AW131), allotype [f] (microscope slide), 13 paratypes (1 m and 1 f in microscope slides, 9 m and 2 f in ethanol); Diyaluma Falls, Koslande, Sri Lanka, leg. Fernando.

***Micronecta fernandoi*** Wróblewski, 1964: 168; MNHW No 821; holotype [m] (microscope slide AW79), paratype [m] (in ethanol); Sri Lanka, Diyaluma Falls, leg. Fernando.

***Micronecta fieberi*** Wróblewski, 1968: 768; MNHW No 822; holotype [m] (microscope slide AW125), allotype [f] (microscope slide), 12 paratypes (2 m in microscope


4. A case originally belonging to Wróblewski with type specimens of Heteroptera in microscope slides

slides, 3 m and 7 f in ethanol); India, Kodonad, Cochin, Trivandrum, Periyar River, leg. Borchsenius.

***Micronecta flavens*** Wróblewski, 1960: 317; MNHW No 823; holotype [m] (microscope slide AW 77); Sri Lanka, leg. Nietner.

***Micronecta halei*** Wróblewski, 1970: 695; MNHW No 824; 36 paratypes (1 f pinned, 15 m and 14 f in ethanol, 4 m and 2 f in microscope slides); Australia, Queensland, Normanton, leg. Aitken & Tindale. Current status: *Micronecta halei* Chen.

***Micronecta hungerfordi*** Chen, 1960: 108; MNHW No 994; 2 paratypes (1 in microscope slide, 1 in ethanol); Taiwan, Tai-pei, leg. Chen.

***Micronecta jaczewskii*** Wróblewski, 1962: 178; MNHW No 825; holotype [m] (microscope slide AW42); Vietnam, Há-Nôi, leg. Galewski.

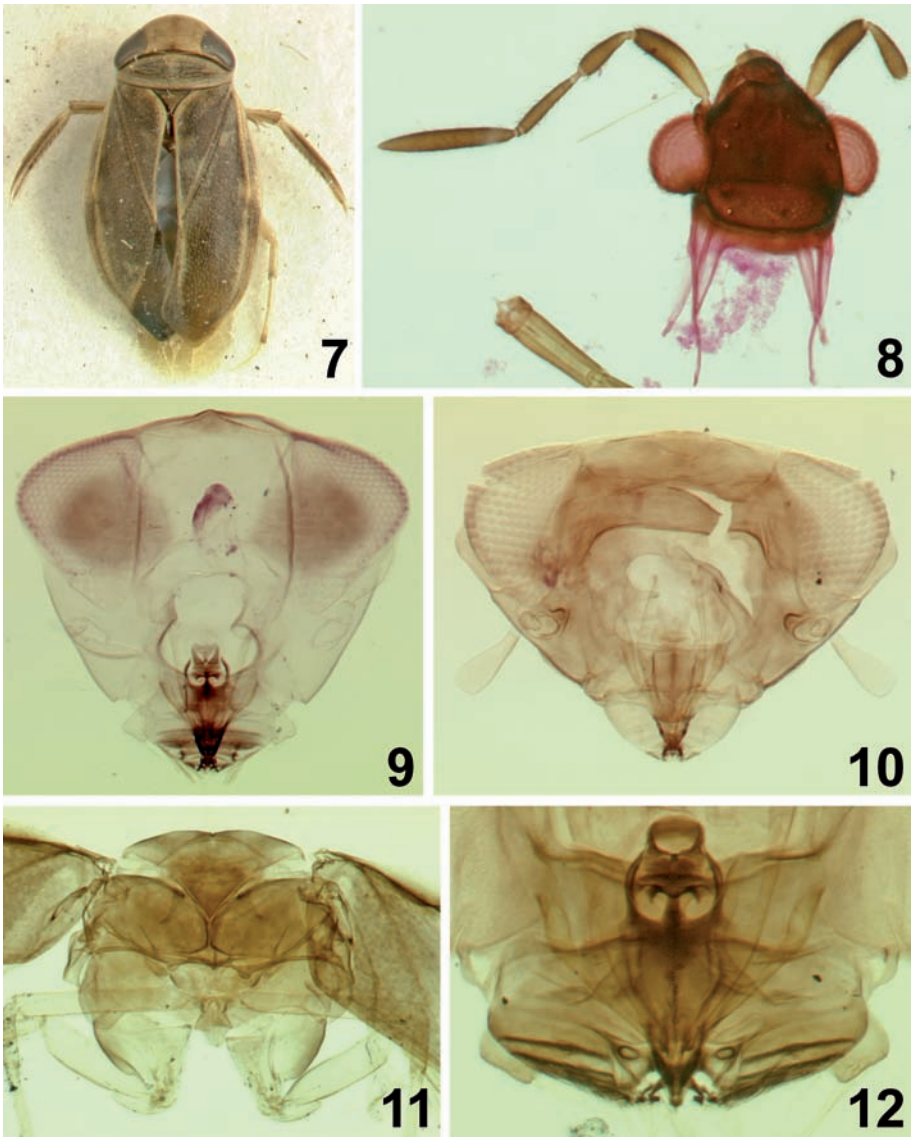
***Micronecta japonica*** Chen, 1960: 109; MNHW No 997; 1 paratype (microscope slide); Japan, Kasari-mura, leg. Miyamoto.

***Micronecta johorensis*** Fernando, 1964: 18; MNHW No 826; 5 paratypes (1 m and 1 f in microscope slides, 3 f in ethanol); Malaysia, Johore, Jemalúang.

***Micronecta kiritshenkoi*** Wróblewski, 1963: 472; MNHW No 827; 2 paratypes (n in microscope slide, f pinned); Russia, Nikolsk Ussuriyskiy, leg. Rostovykh.

5. Example of a microscope slide specimen tray in the Wróblewski Collection


6. Microscope slides in the Wróblewski Collection




7-12. Examples of type specimens of species described by Aleksander Wróblewski. *Micronecta annae illiesi* Wróblewski, syntype (7); *Microvelia umbricola* Wróblewski, head of paratype (8); *Micronecta jaczewskii* Wróblewski, head of holotype (9); *Synaptonecta capillata* Wróblewski, head of holotype (10); *Micronecta ceylonica* Wróblewski, pterothorax of paratype (11); *Micronecta orientalis* Wróblewski, mouthparts of holotype (12)

***Micronecta lansburyi*** WRÓBLEWSKI, 1972b: 521; MNHW No 828; 2 paratypes (1 m in microscope slide, 1 ex. in ethanol); Australia, N.T., Katherine, leg. WATTS.

***Micronecta ludibunda langkana*** WRÓBLEWSKI, 1968: 767; MNHW No 829; holotype [m] (microscope slide AW74), allotype [f] (microscope slide), 5 paratypes (2 m and 3 f in ethanol); Sri Lanka, Polonarruwa, leg. FERNANDO.

***Micronecta malayana*** LEONG, 1966: 86; MNHW No 830; 4 paratypes (1 ex. in microscope slide, 3 exx. in ethanol); Malaysia; Johore.

***Micronecta orientalis*** WRÓBLEWSKI, 1960: 313; MNHW No 831; holotype [m] (microscope slide AW78), allotype [f] (microscope slide), 64 paratypes (13 exx. in microscope slides,16 m and 35 f in ethanol); Hong Kong, Un Long (fishpond), leg. THORNTON.

***Micronecta pocsi*** WRÓBLEWSKI, 1967: 232; MNHW No 832; 132 paratypes (71 exx. pinned, 5 m, 2 f in microscope slides, 9 m, 45 f in ethanol); Vietnam, prov. Ha-Tinh, Húöng-Sön, leg. PÓCS.

***Micronecta semilaevis*** HORVÁTH, 1899: 102; MNHW No 993; paratype [f] (microscope slide); Algeria. Current status: *Micronecta scholtzi* (FIEBER, 1860).

***Micronecta taipeiensis*** CHEN, 1960: 112; MNHW No 995; 4 paratypes (1 ex. in microscope slide, 3 pinned); Taiwan, Tai-pei, leg. CHEN.

***Micronecta taprobanica*** WRÓBLEWSKI, 1972a: 20; MNHW No 833; holotype [m] (microscope slide AW276), allotype [f] (microscope slide), 33 paratypes (16 exx. in ethanol, 6 f, 2 m in microscope slides, 8 f, 1 m pinned); Sri Lanka, Colombo, leg. KARUNARATNE (holotype, allotype, 5 paratypes); Sri Lanka Prov. Sabaragamuwa, Bopathella Falls, 9 miles NNW Ratnapura (4 paratypes); Sri Lanka, Dambuwa, leg. PERERA (4 paratypes); Sri Lanka, Yakalla, 18 miles NE Colombo (10 paratypes); Sri Lanka, Lunawa, leg. FERNANDO (1 paratype); Sri Lanka, Gangodawila, Nugegoda, leg. FERNANDO (3 paratypes); Sri Lanka, Uva Prov., Monoragala, leg. KARUNARATNE (1 paratype), Sri Lanka, NC Prov., Manampitiya, Arulagamwila, (5 paratypes).

***Micronecta wroblewskii*** POLHEMUS, 1979: 105; MNHW No 835; 4 paratypes (1 m in microscope slide, 3 exx. in ethanol); Sri Lanka, Kalu-Ganga-Carney, Ratnapura, leg. STARMÜHLER.

***Micronecta yui*** CHEN, 1960: 114; MNHW No 836; 5 paratypes (1 m, 2 exx. in microscope slides, 3 exx. pinned); Taiwan, Karenko, Taito, leg. YU (4 paratypes); Taiwan, Takao, leg. SAUTER (1 paratype).

***Sigara vitticeps*** HORVÁTH, 1895: 161; MNHW No 834; 1 paratype [f] (dry-mounted); Bosnia, Tezero. Current status: *Micronecta poweri poweri* (DOUGLAS & SCOTT).

***Synaptonecta capillata*** WRÓBLEWSKI, 1972a: 10; MNHW No 838; holotype [f] (microscope slide AW274), 1 paratype [f] (microscope slide); Sri Lanka, Monaragala, Wattegama, leg. KARUNARATNE (holotype); Sri Lanka Yakalla, 18 miles NE Colombo (paratype).

**Family *Veliidae***

***Microvelia umbricola*** WRÓBLEWSKI, 1938: 213; MNHW No 837; 176 syntypes (5 m in microscope slides, 163 adults and 8 larves in ethanol); Poland, Poledno, leg. WRÓBLEWSKI (35 syntypes); Poland, Poznań, leg. WRÓBLEWSKI (141 syntypes). Current status: *Microvelia buenoi umbricola* WRÓBLEWSKI.

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# Janusz Pluciński and his Coleoptera collections in the Museum of Natural History, University of Wrocław

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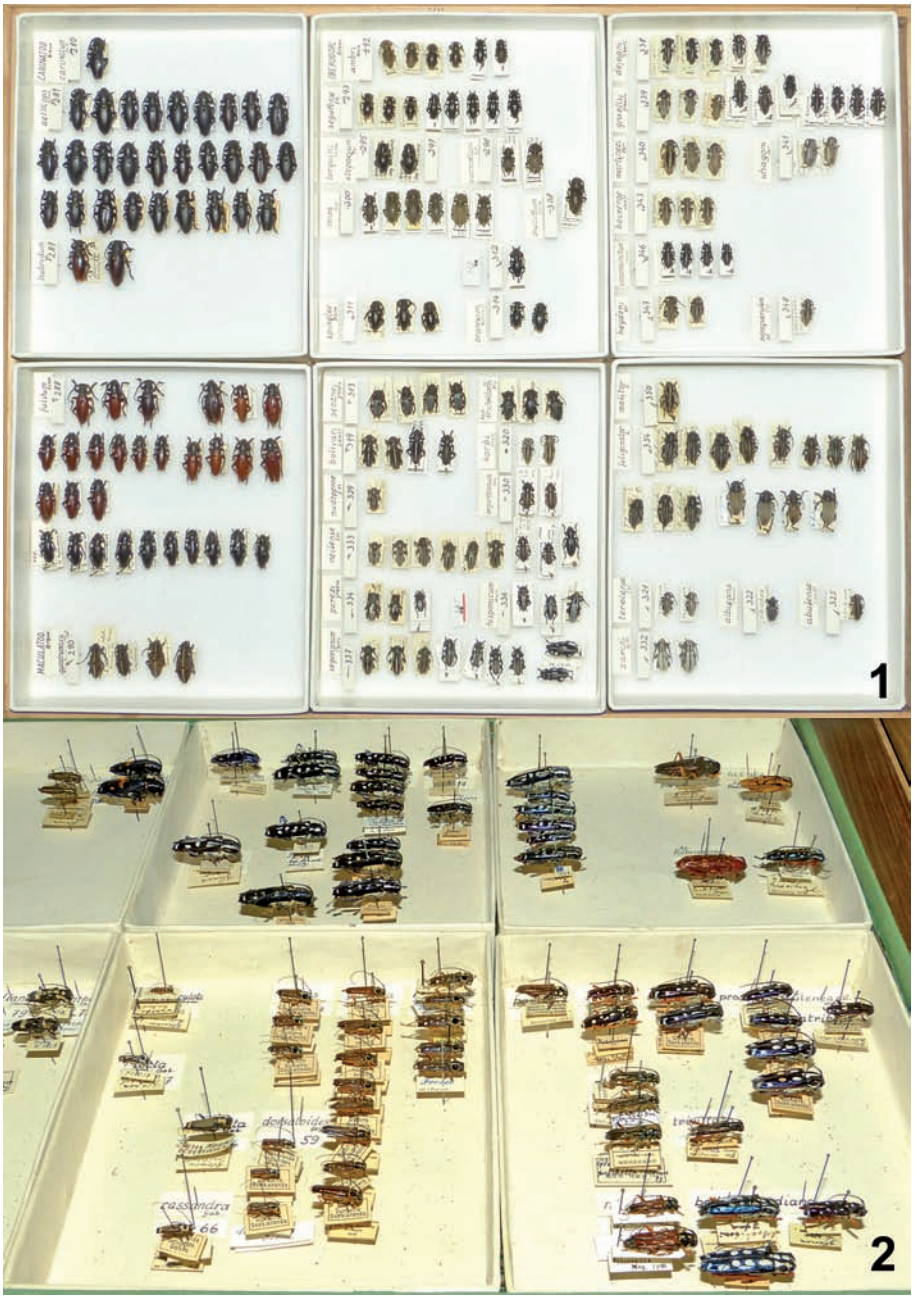
Abstract. Janusz Pluciński (1925-1999), a professor of chemistry of the Wrocław University of Technology, was a devoted collector of longhorn beetles (Cerambycidae, Disteniidae and Vesperidae) and leaf-rolling weevils (Rhynchitidae and Attelabidae). After his death, his collections have been donated to the Museum of Natural History, University of Wrocław. They consist of 9180 specimens representing 1570 identified nominal species and subspecies; with a strong representation of Cerambycidae (1254 species and subspecies), Rhynchitidae (106 species and subspecies) and Attelabidae (202 species and subspecies). Pluciński is a vivid example of an amateur coleopterist, whose knowledge has gained a deserved respect among entomologists and his remarkable collections have become a part of the legacy of several generations of naturalists whose specimens are preserved in the Museum of Natural History.

Key words: Pluciński, Insecta, Coleoptera, Cerambycidae, Disteniidae, Vesperidae, Rhynchitidae, Attelabidae, longhorn beetles, weevils, collection, Wrocław University, Poland.

## INTRODUCTION

Janusz Pluciński (1925-1999) was a Polish amateur entomologist interested in selected phytophagous beetle families, whose collections belong to largest in Poland. Pluciński spent his youth in Poznań, but moved to Wrocław just after WWII, where he studied chemistry at the Wrocław University of Technology. His entire professional career was associated with this institution, where in 1947, still as a student, he became a vice-assistant in the Department of Organic Chemistry. In 1948 Pluciński moved to the Department of Explosive Material Technology, where he got his PhD in 1961, habilitation in 1969 and became a university professor in 1990, to retire a year later. Pluciński's professional activities were focused on applied chemistry, mainly techno-




1. Specimens of Cerambycidae from the Pluciński Collection. One of several drawers of Dorcadionini (1) and examples of Gleneini (2)

logy of explosive materials, industrial chemical synthesis and chemistry of surfactants (BURCZYK 1999).

PLUCIŃSKI was able to successfully combine his research and teaching activities at the University with a great passion to insects. He was particularly fond of two distant groups of cucujiform Coleoptera: longhorn beetles (Cerambycidae, Disteniidae and Vesperidae) and leaf-rolling weevils (Rhynchitidae and Attelabidae). PLUCIŃSKI himself collected beetles mainly in Poland and Bulgaria during his summer holiday trips. However, his broad international contacts enabled him to exchange specimens with specialists from many countries, including Japan and China, and although he never published any article in entomology, his identification services were appreciated by museums and universities in Poland and abroad. PLUCIŃSKI's will was that his entire collection and entomological library were to be donated after his death to the Museum of Natural History, University of Wrocław (MNHW), institution with which he closely cooperated for many years. Two of the authors (JK, MW) have had the pleasure of knowing prof. PLUCIŃSKI and they occasionally visited him in his small flat in Wrocław to spend hours talking about his favourite beetles.

The PLUCIŃSKI Collection in MNHW retained its original organization and has been catalogued. The specimens are properly curated and both the longhorn beetles and leaf-rolling weevils are the most species-rich collections of these taxa preserved in Polish museums. The entire PLUCIŃSKI Collection consists of 9180 specimens representing 1570 identified nominal species and subspecies; only a small fraction awaits determination.

## Longhorn beetles in the PLUCIŃSKI Collection

The Cerambycidae, Disteniidae and Vesperidae collection (Table 1) comprises 6832 specimens of 1262 identified species and subspecies. Disteniidae and Vesperidae are represented by only three and five species, respectively. The family Cerambycidae (Figs 1-2) includes representatives of 9 subfamilies, 81 tribes, 354 genera and 1254 species and subspecies. The majority of Cerambycidae (83.09%) is Palaearctic, followed by Oriental (12.2%), Afrotropical (3.9%), and a few Nearctic species (0.8%) (Palaearctic taxa are those included in LÖBL & SMETANA (2010), Oriental those not included in this catalogue). PLUCIŃSKI was primarily focused on Eurasia and only within selected genera of Saperdini (*Glenea* NEWMAN, *Nupserha* THOMSON, *Obereopsis* CHEVROLAT) he collected species from outside this area. Phytoeciini, Dorcadionini, Gleneini and Lepturini belong to the largest groups in the collection. The detailed list of taxa is given below.

**Cerambycidae**

**Apatophyseinae**

**Apatophyseini**

*Apatophysis baeckmanniana* SEMENOV, 1907
*Apatophysis caspica* SEMENOV, 1901
*Apatophysis pavlovskii* PLAVILSTSHIKOV, 1954
*Apatophysis sinica* SEMENOV, 1901

**Necydalinae**

**Necydalini**

*Necydalis gigantea* KANO, 1933
*Necydalis major* LINNAEUS, 1758
*Necydalis moriyai* KUSAMA, 1970
*Necydalis solida* BATES, 1884

**Cerambycinae**

**Achrysonini**

*Icosium tomentosum* Lucas, 1854

**Anaglyptini**

*Anaglyptus arabicus* Küster, 1847
*Anaglyptus bellus* Matsumura & Matsushita, 1933
*Anaglyptus colobotheoides* Bates, 1884
*Anaglyptus gibbosus* (Fabricius, 1787)
*Anaglyptus matsushitai* Hayashi, 1955
*Anaglyptus mysticus* (Linnaeus, 1758)
*Anaglyptus niponensis* Bates, 1884
*Anaglyptus nokosanus* Kano, 1930
*Anaglyptus subfasciatus* Pic, 1906
*Paraclytus excultus* Bates, 1844
*Paraclytus reitteri* Ganglbauer, 1882
*Paraclytus sexguttatus* Adams, 1817

**Callichromatini**

*Anubis bipustulatus* Thomson, 1865
*Aphrodisium cantori* Hope, 1839
*Aphrodisium faldermannii yugaii* Kano, 1933
*Aromia bungii* Faldermann, 1835
*Aromia moschata ambrosiaca* (Steven, 1809)
*Aromia moschata moschata* (Linnaeus, 1758)
*Cataphrodisium rubripenne* Hope, 1842
*Chelidonium argentatum* (Dalman, 1817)
*Chloridolum japonicum* Harold, 1879
*Chloridolum sieversi* Ganglbauer, 1887
*Chloridolum thaliodes* Bates, 1884
*Chloridolum thomsoni* Pascoe, 1859
*Embrikstrandia bimaculata* (White, 1853)
*Embrikstrandia unifasciata* (Ritsema, 1896)
*Leontium lameeri* (Pic, 1900)
*Leontium viride* Thomson, 1864
*Pachyteria dimidiata* Westwood, 1848
*Polyzonus bizonatus* White, 1853
*Polyzonus fasciatus* Fabricius, 1781
*Polyzonus obtusus* Bates, 1879
*Polyzonus tetraspilotus* Hope, 1835
*Schwarzerium quadricolle* (Bates, 1884)

**Callidiini**

*Callidiellum rufipenne* (Motschulsky, 1862)
*Callidium aeneum* (De Geer, 1775)
*Callidium chlorizans* Solsky, 1871
*Callidium coriaceum* Paykull, 1800
*Callidium villosulum* Fairmaire, 1900
*Callidium violaceum* (Linnaeus, 1758)
*Leioderes kollari* Redtenbacher, 1848
*Lioderina linearis* (Hampe, 1871)
*Phymatodes albicinctus* Bates, 1873
*Phymatodes maaki* Kraatz, 1879
*Phymatodes quadrimaculatus* Gressitt, 1935
*Phymatodes testaceus* (Linnaeus, 1758)
*Poecilium alni* (Linnaeus, 1767)
*Poecilium fasciatum* (Villers, 1789)
*Poecilium glabratum* (Charpentier, 1825)
*Poecilium lividum* (Rossi, 1794)
*Poecilium pusillum* (Fabricius, 1787)
*Poecilium rufipes* (Fabricius, 1776)
*Pronocera angusta* (Kriechbaumer, 1844)
*Pyrrhidium sanguineum* (Linnaeus, 1758)
*Ropalopus clavipes* (Fabricius, 1775)
*Ropalopus femoratus* (Linnaeus, 1758)
*Ropalopus insubricus* (Germar, 1824)
*Ropalopus macropus* (Germar, 1824)
*Ropalopus siculus* (Stierlin, 1864)
*Ropalopus signaticollis* Solsky, 1872
*Ropalopus ungaricus* (Herbst, 1784)
*Semanotus bifasciatus* Motschulsky, 1875
*Semanotus japonicus* (Lacordaire, 1869)
*Semanotus laurasii* (Lucas, 1851)
*Semanotus russicus* (Fabricius, 1776)
*Semanotus semenovi* Okunev, 1933
*Semanotus sinoauster* Gressitt, 1951
*Semanotus undatus* (Linnaeus, 1758)
*Turanium johannis* Baeckmann, 1923

**Callidiopini**

*Ceresium leucosticticum* White, 1955
*Ceresium longicorne* Pic, 1926
*Ceresium sinicum* White, 1855
*Stenodryas clavigera* Bates, 1873
*Stenygrinum quadrinotatum* Bates, 1873

**Cerambycini**

*Acalolepta formosana* Breuning, 1935
*Acalolepta fraudatrix fraudatrix* (Bates, 1873)
*Acalolepta luxuriosa* (Bates, 1873)
*Acalolepta permutans paucipuntata* (Gressitt, 1938)
*Acalolepta permutans permutans* (Pascoe, 1857)
*Acalolepta sejuncta* (Bates, 1873)
*Aeolesthes chrysothrix* (Bates, 1873)
*Aeolesthes sarta* Solsky, 1871
*Cerambyx cerdo acuminatus* Motschulsky, 1852
*Cerambyx cerdo cerdo* Linnaeus, 1758
*Cerambyx dux* (Faldermann, 1837)
*Cerambyx miles* Bonelli, 1812
*Cerambyx multiplicatus* Motschulsky, 1860
*Cerambyx nodulosus* Germar, 1817
*Cerambyx scopolii* Fuessly, 1775
*Cerambyx welensii* (Küster, 1845)
*Derolus mauritanicus* (Buquet, 1840)
*Dymasius hirayamai* Matsushita, 1941
*Gibbocerambyx maculicollis* Matsushita, 1933
*Hemadius oenochrous* Fairmaire, 1889
*Hoplocerambyx spinicornis* Newman, 1842
*Lachnopterus auripennis* Newman, 1842
*Margites fulvidus* (Pascoe, 1858)
*Massicus trilineatus* (Pic, 1933)

*Neocerambyx raddei* Blessig, 1872
*Neoplocaederus scapularis* Fischer von Waldheim, 1821
*Plocaederus obesus* Gahan, 1890
*Rhytidodera bowringii* White, 1853
*Trachylophus sinensis* Gahan, 1888
*Trirachys orientalis* Hope, 1843
*Xoanodera maculata* Schwarzer, 1925
*Xoanodera regularis* Gahan, 1890

**Certallini**

*Certallum ebulinum* (Linnaeus, 1767)

**Cleomenini**

*Artimpaza setigera japonica* Pic, 1928
*Artimpaza setigera setigera* Schwarzer, 1925
*Dere reticulata* Gressitt, 1942
*Dere thoracica* White, 1855
*Kurarua chujoi* Makihara, 1982
*Kurarua rhopalophoroides* Hayashi, 1951

**Clytini**

*Brachyclytus singularis* Kraatz, 1879
*Chlorophorus aegyptiacus* (Fabricius, 1775)
*Chlorophorus annularis* Fabricius, 1787
*Chlorophorus aritai* (Ohbayashi, 1964)
*Chlorophorus buqueti* Laporte & Gory, 1836
*Chlorophorus diadema* Motschulsky, 1853
*Chlorophorus dohertyi* Gahan, 1906
*Chlorophorus eleodes* Fairmaire, 1889
*Chlorophorus faldermanni* (Faldermann, 1837)
*Chlorophorus figuratus* (Scopoli, 1763)
*Chlorophorus glabromaculatus* (Goeze, 1777)
*Chlorophorus gratiosus* (Marseul, 1869)
*Chlorophorus herbstii* (Brahm, 1790)
*Chlorophorus hungaricus* Seidlitz, 1791
*Chlorophorus japonicus* (Chevrolat, 1863)
*Chlorophorus kanoi* Hayashi, 1963
*Chlorophorus macaumensis* (Chevrolat, 1845)
*Chlorophorus miwai* Gressitt, 1936
*Chlorophorus motschulskyi* Ganglbauer, 1887
*Chlorophorus muscosus* (Bates, 1873)
*Chlorophorus mushanus* Matsushita, 1931
*Chlorophorus pelletieri* Laporte & Gory, 1836
*Chlorophorus pilosus* (Forster, 1771)
*Chlorophorus quinquefasciatus* (Laporte & Gory, 1836)
*Chlorophorus ruficornis* (Olivier, 1790)
*Chlorophorus sartor* (Müller, 1766)
*Chlorophorus sexguttatus* (Lucas, 1849)
*Chlorophorus simillimus* Kraatz, 1879
*Chlorophorus t-nigrum* (Jordan, 1894)
*Chlorophorus trifasciatus* (Fabricius, 1781)
*Chlorophorus varius* (Müller, 1766)
*Clytobius davidis* (Fairmaire, 1878)
*Clytus arietis* (Linnaeus, 1758)
*Clytus arietoides* Reitter, 1889
*Clytus auripilis* Bates, 1884
*Clytus lama* Mulsant, 1847
*Clytus melaenus* Bates, 1884
*Clytus raddensis* Pic, 1904
*Clytus rhamni* Germar, 1817
*Clytus tropicus* (Panzer, 1795)
*Cyrtoclytus capra* (Germar, 1824)
*Cyrtoclytus caproides* Bates, 1873
*Demonax albicinctus* Hope, 1831
*Demonax albomaculatus* Allard, 1894
*Demonax okuni* Mitono, 1942
*Demonax transilis* Bates, 1884
*Grammographus albosignatus* (Gahan, 1906)
*Grammographus flavicollis* Matsushita, 1931
*Grammographus notabilis* Pascoe, 1862
*Isotomus barbarae* Sama, 1977
*Isotomus comptus* (Mannerheim, 1825)
*Isotomus jarmilae* Sláma, 1982
*Isotomus speciosus* (Schneider, 1787)
*Kazuoclytus lautoides* Hayashi, 1950
*Neoclytus acuminatus* (Fabricius, 1775)
*Plagionotus arcuatus* (Linnaeus, 1758)
*Plagionotus bobelayei* (Brullé, 1832)
*Plagionotus christophi* Kraatz, 1879
*Plagionotus detritus* (Linnaeus, 1758)
*Plagionotus floralis* Pallas, 1776
*Plagionotus lugubris* Ménétriés, 1832
*Plagionotus pulcher* Blessig, 1872
*Plagionotus scalaris* (Brullé, 1832)
*Pseudosphegesthes cinerea* Laporte & Gory, 1836
*Rhabdoclytus acutivittis* (Kraatz, 1879)
*Rhaphuma circumscripta* Schwarzer, 1925
*Rhaphuma diminuta* (Bates, 1873)
*Rhaphuma gracilipes* (Faldermann, 1835)
*Rhaphuma placida* Pascoe, 1858
*Rhaphuma ruficollis* Mitono, 1842
*Rhaphuma testaceiceps* Pic, 1915
*Rhaphuma virens* Matsushita, 1931
*Rhaphuma xenisca* Bates, 1884
*Xylotrechus adspersus* Gebler, 1830
*Xylotrechus altaicus* Gebler, 1836
*Xylotrechus antilope* (Schönherr, 1817)
*Xylotrechus arvicola* (Olivier, 1795)
*Xylotrechus asellus* Thieme, 1881
*Xylotrechus capricornus* Gebler, 1830
*Xylotrechus chinensis* Chevrolat, 1852
*Xylotrechus clarinus* Bates, 1884
*Xylotrechus cuneipennis* Kraatz, 1879
*Xylotrechus emaciatus* Bates, 1884
*Xylotrechus grayi* (White, 1855)
*Xylotrechus hircus* Gebler, 1825
*Xylotrechus ibex* Gebler, 1825
*Xylotrechus javanicus* Laporte & Gory, 1836

*Xylotrechus lautus* Matsushita, 1933
*Xylotrechus magnicollis* (Fairmaire, 1888)
*Xylotrechus namanganensis* Heyden, 1885
*Xylotrechus pantherinus* (Savenius, 1825)
*Xylotrechus polyzonus* (Fairmaire, 1888)
*Xylotrechus pyrrhoderus* Bates, 1873
*Xylotrechus rufilius* Bates, 1884
*Xylotrechus rusticus* (Linnaeus, 1758)
*Xylotrechus yanoi* Gressitt, 1934

**Deilini**

*Deilus fugax* (Olivier, 1790)
*Delagrangeus angustissimus* Pic, 1892
*Delagrangeus schurmanni* Sama, 1985

**Graciliini**

*Axinopalpis gracilis* (Krynicki, 1832)
*Gracilia minuta* (Fabricius, 1781)
*Lucasianus levaillantii* (Lucas, 1847)
*Penichroa fasciata* Stephens, 1839

**Hesperophanini**

*Hesperophanes sericeus* (Fabricius, 1787)
*Stromatium longicorne* Newman, 1842
*Stromatium unicolor* (Olivier, 1795)
*Trichoferus campestris* (Faldermann, 1835)
*Trichoferus fasciculatus* (Faldermann, 1837)
*Trichoferus griseus* (Fabricius, 1792)
*Trichoferus machadoi* Sama & Schurmann, 1983
*Trichoferus roridus* (Brullé, 1838)
*Turcmenigena warenzowi* Melgunov, 1893

**Hylotrupini**

*Hylotrupes bajulus* (Linnaeus, 1758)

**Molorchini**

*Dolocerus holtzi* (Pic, 1905)
*Dolocerus reichii* Mulsant, 1862
*Epania dilaticornis kumatai* Hayashi, 1961
*Epania shikokensis* Ohbayashi, 1936
*Merionoeda formosana formosana* Heller, 1924
*Merionoeda formosana iriomotensis* K. Ohbayashi & N. Ohbayashi, 1965
*Merionoeda hirsuta* (Mitono & Nishimura, 1936)
*Molorchus gracilis* (Hayashi, 1949)
*Molorchus hattorii* (Ohbayashi, 1953)
*Molorchus ishiharai* (Ohbayashi, 1936)
*Molorchus kiesenwetteri* (Mulsant & Rey, 1861)
*Molorchus kojimai* (Matsushita, 1939)
*Molorchus marmottani* (Brisout, 1863)
*Molorchus minor* (Linnaeus, 1758)
*Molorchus nitidus* (Obika, 1973)
*Molorchus shibatai* Hayashi, 1961
*Molorchus takeuchii* (Ohbayashi, 1937)
*Molorchus umbellatarum* (Schreber, 1759)

**Nathriini**

*Nathrius brevipennis* (Mulsant, 1839)

**Obriini**

*Obrium brunneum* (Fabricius, 1792)
*Obrium cantharinum* (Linnaeus, 1767)
*Obrium nakanei* Ohbayashi, 1959

**Prothemini**

*Prothema ochraceosignatum* (Pic, 1915)
*Prothema signatum* Pascoe, 1856

**Phoracanthini**

*Allotraeus sphaerioninus* Bates, 1877
*Nysina rufescens* (Pic, 1923)
*Phoracantha semipunctata* (Fabricius, 1775)

**Pseudolepturini**

*Erythresthes bowringii* (Pascoe, 1863)
*Erythrus championi* White, 1853
*Erythrus formosanus* Bates, 1866

**Purpuricenini**

*Amarysius altajensis* Laxmann, 1770
*Amarysius sanguinipennis* Blessig, 1872
*Anoplistes halodendri ephippium* (Steven & Dalman, 1817)
*Anoplistes halodendri halodendri* (Pallas, 1773)
*Anoplistes jacobsoni* Baeckmann, 1904
*Anoplistes mongolicus amoenus* Reitter, 1898
*Dicelosternus corallinus* Gahan, 1900
*Euryclelia cardinalis* (Thomson, 1861)
*Euryphagus lundii* (Fabricius, 1793)
*Pavieia superba* Brongniart, 1890
*Purpuricenus barbarus* (Lucas, 1842)
*Purpuricenus budensis* (Götz, 1783)
*Purpuricenus dalmatinus* Sturm, 1843
*Purpuricenus desfontainii* (Fabricius, 1793)
*Purpuricenus globulicollis* Dejean, 1839
*Purpuricenus kaehleri* (Linnaeus, 1758)
*Purpuricenus lituratus* Ganglbauer, 1886
*Purpuricenus malaccensis* (Lacordaire, 1869)
*Purpuricenus sideriger* Fairmaire, 1888
*Purpuricenus spectabilis* Motschulsky, 1858
*Purpuricenus temminckii* (Guérin-Méneville, 1844)

**Pyrestini**

*Pyrestes cardinalis* Pascoe, 1863
*Pyrestes curticornis* Pic, 1923
*Pyrestes haematicus* Pascoe, 1857
*Pyrestes longicollis* (Pic, 1953)

**Rosaliini**

*Rosalia alpina* (Linnaeus, 1758)
*Rosalia batesi* Harold, 1877

**Stenhomalini**

*Stenhomalus bicolor* (Kraatz, 1862)
*Stenhomalus incongruus muneaka* Hayashi, 1981
*Stenhomalus naganoi* Hayashi, 1960
*Stenhomalus taiwanus* Matsushita, 1933

**Stenopterini**

*Callimoxys gracilis* (Brullé, 1832)
*Callimus abdominalis* (Olivier, 1795)
*Callimus angulatus* (Schrank, 1789)
*Callimus femoratus* (Germar, 1824)
*Stenopterus ater* Linnaeus, 1767
*Stenopterus creticus* Sama, 1995
*Stenopterus flavicornis* Küster, 1846
*Stenopterus mauritanicus* Lucas, 1846
*Stenopterus rufus* Linnaeus, 1767

**Thraniini**

*Thranius multinotatus signatus* Schwarzer, 1925
*Thranius variegatus* Bates, 1873

**Tillomorphini**

*Cleroclytus banghaasi* Reitter, 1895
*Epipedocera atra* Pic, 1937
*Epipedocera laticollis* Gahan, 1906
*Epipedocera rollei* Pic, 1910
*Epipedocera zona* Chevrolat, 1863

**Xystrocerinini**

*Leptoxenus ibidiiformis* Bates, 1877
*Xystrocera festiva* Thomson, 1861
*Xystrocera globosa* (Olivier, 1795)

**Lamiinae**

**Acanthocinini**

*Acanthocinus aedilis* (Linnaeus, 1758)
*Acanthocinus carinulatus* (Gebler, 1833)
*Acanthocinus griseus* (Fabricius, 1792)
*Acanthocinus reticulatus* (Razoumov, 1789)
*Acanthocinus stillatus* Bates, 1884
*Exocentrus adspersus* Mulsant, 1846
*Exocentrus fasciolatus* Bates, 1873
*Exocentrus galloisi* Matsushita, 1933
*Exocentrus guttulatus* Bates, 1873
*Exocentrus lineatus* Bates, 1873
*Exocentrus lusitanus* (Linnaeus, 1767)
*Exocentrus punctipennis* Mulsant & Guillebeau, 1856
*Exocentrus ritae* Sama, 1985
*Exocentrus stierlini* Ganglbauer, 1883
*Exocentrus testudineus* Matsushita, 1931
*Leiopus femoratus* Fairmaire, 1859
*Leiopus nebulosus caucasicus* Ganglbauer, 1887
*Leiopus nebulosus nebulosus* (Linnaeus, 1758)
*Leiopus punctulatus* (Paykull, 1800)
*Rondibilis saperdina* Bates, 1884

**Acanthoderini**

*Aegomorphus clavipes* (Schrank, 1781)
*Callapoecus guttatus* Bates, 1884

**Agapanthiini**

*Agapanthia amurensis* Kraatz, 1879
*Agapanthia annularis* (Olivier, 1795)
*Agapanthia asphodeli* (Latreille, 1804)
*Agapanthia cardui* (Linnaeus, 1767)
*Agapanthia coeruleipennis* Frivaldszky, 1878
*Agapanthia cynarae* (Gyllenhal, 1817)
*Agapanthia dahli* (Richter, 1821)
*Agapanthia daurica* Ganglbauer, 1883
*Agapanthia detrita* Kraatz, 1882
*Agapanthia irrorata* (Fabricius, 1787)
*Agapanthia kirbyi* (Gyllenhal, 1817)
*Agapanthia lateralis* Ganglbauer, 1884
*Agapanthia pustulifera* Pic, 1905
*Agapanthia schurmanni* Sama, 1979
*Agapanthia soror* Kraatz, 1882
*Agapanthia subchalybaea* Reitter, 1898
*Agapanthia villosoviridescens* (De Geer, 1775)
*Agapanthia violacea* (Fabricius, 1775)
*Agapanthia walteri* Reitter, 1898
*Agapanthiola leucaspis* (Steven, 1817)
*Aulaconotus pachypezoides* Thomson, 1864
*Calamobius filum* (Rossi, 1790)
*Eucomatocera vittata* White, 1846
*Pseudocalamobius japonicus* Bates, 1873
*Theophilea cylindricollis* Pic, 1895

**Ancylonotini**

*Palimna liturata* Bates, 1884
*Palimna palimnoides* (Schwarzer, 1925)

**Apodasyini**

*Anaesthetis testacea* (Fabricius, 1781)
*Arhopaloscelis bifasciata* (Kraatz, 1879)
*Clytosemia pulchra* Bates, 1884
*Deroplia albida* (Brullé, 1838)
*Deroplia annulicornis* (Mulsant, 1838)
*Deroplia genei* (Aragona, 1830)
*Deroplia gertiana* Sama, 1996
*Deroplia pilosa* (Wollaston, 1862)
*Deroplia troberti* (Mulsant, 1843)
*Euseboides matsudai* Gressitt, 1938
*Graphidessa venata* Bates, 1884
*Mimectatina meridiana* (Matsushita, 1933)
*Oplosia cinerea* (Mulsant, 1839)
*Penthides flavus* Matsushita, 1933
*Rhodopina lewisii* (Bates, 1873)
*Rhopaloscelis maculata* Bates, 1877
*Rhopaloscelis unifasciata* (Blessig, 1873)

**Apomecynini**

*Aimura japonica* Bates, 1873
*Asaperda agapanthina* Bates, 1873
*Asaperda rufipes* Bates, 1873
*Doliops similis* Miwa & Mitono, 1933
*Microlera ptinoides* Bates, 1873
*Ropica fuscolaterimaculata* Hayashi, 1974
*Sybra baculina* Bates, 1866
*Sybra flavomaculata* Breuning, 1939
*Sybra ordinata* Bates, 1873
*Sybra subfasciata* (Bates, 1884)
*Xylariopsis mimica* Bates, 1884

**Astathini**

*Astathes episcopalis* Chevrolat, 1852
*Bacchisa fortunei* (Thomson, 1857)
*Bacchisa guerryi* Pic, 1911

**Batocerini**

*Abatocera irregularis* Vollenhoven, 1871
*Abatocera leonina* Thomson, 1865
*Apriona cylindrica* Thomson, 1857
*Apriona germari* Chevrolat, 1852
*Apriona rugicollis* Chevrolat, 1852
*Batocera aeneonigra* Thomson, 1859
*Batocera andamana* Thomson, 1878
*Batocera calana* Parry, 1844
*Batocera celebiana* Thomson, 1858
*Batocera davidis* Deyrolle, 1878
*Batocera gigas* (Drapiez, 1819)
*Batocera hercules* Boisduval, 1835
*Batocera horsfieldi* (Hope, 1839)
*Batocera laena* Thomson, 1858
*Batocera lineolata* Chevrolat, 1852
*Batocera maculata* (Schönherr, 1817)
*Batocera matzdorffi* Kriesche, 1915
*Batocera nebulosa* Bates, 1877
*Batocera numitor* Newman, 1842
*Batocera roylei* (Hope, 1833)
*Batocera rubus* Linnaeus, 1758
*Batocera rufomaculata* De Geer, 1775
*Batocera victoriana* Thomson, 1856
*Batocera wallacei* Thomson, 1858
*Rosenbergia mandibularis* Ritsema, 1881
*Rosenbergia weiskei* Heller, 1902

**Ceroplesini**

*Thysia wallichi* (Hope, 1831)

**Crossotini**

*Moechotypa diphysis* (Pascoe, 1871)
*Moechotypa formosana* (Pic, 1917)

**Dorcadionini**

*Dorcadion abakumovi* Thomson, 1965
*Dorcadion aethiops* (Scopoli, 1763)
*Dorcadion anatolicum* Pic, 1900
*Dorcadion arenarium abruptum* (Germar, 1839)
*Dorcadion arenarium arenarium* (Scopoli, 1763)
*Dorcadion atritarse* (Pic, 1931)
*Dorcadion bangi* Heyden, 1894
*Dorcadion beckeri* Kraatz, 1873
*Dorcadion biforme* (Kraatz, 1893)
*Dorcadion bodemeyeri* Daniel, 1900
*Dorcadion breuningi* (Heyrovsky, 1943)
*Dorcadion brunneicolle* Kraatz, 1873
*Dorcadion carinatum* (Pallas, 1771)
*Dorcadion catenatum* Waltl, 1838
*Dorcadion cinerarium* (Fabricius, 1787)
*Dorcadion coiffaiti* Breuning, 1962
*Dorcadion crassipes crassipes* Ballion, 1878
*Dorcadion crassipes validipes* Jakovlev, 1906
*Dorcadion decipiens* (Germar, 1824)
*Dorcadion dimidiatum* Motschulsky, 1838
*Dorcadion divisum* (Germar, 1839)
*Dorcadion elegans* (Kraatz, 1873)
*Dorcadion equestre equestre* (Laxmann, 1770)
*Dorcadion equestre nogelii* Fairmaire, 1866
*Dorcadion equestre transsilvanicum* (Ganglbauer, 1884)
*Dorcadion etruscum* (Rossi, 1790)
*Dorcadion eugeniae* (Ganglbauer, 1885)
*Dorcadion fulvum cervae* (Frivaldszky, 1892)
*Dorcadion fulvum fulvum* (Scopoli, 1763)
*Dorcadion gallipolitanum* (Thomson, 1867)
*Dorcadion gebleri* Kraatz, 1873
*Dorcadion glabrofasciatum* (Daniel, 1900)
*Dorcadion glycyrrhizae glycyrrhizae* (Pallas, 1773)
*Dorcadion glycyrrhizae striatum* Goeze, 1777
*Dorcadion hampei* Mulsant & Rey, 1863
*Dorcadion heinzi* Breuning, 1964
*Dorcadion hellmanni* Ganglbauer, 1884
*Dorcadion holosericeum* (Krynicki, 1832)
*Dorcadion hybridum hedvigae* (Jureček, 1933)
*Dorcadion iconiense* Daniel, 1900
*Dorcadion infernale* Mulsant & Rey, 1863
*Dorcadion jakobsoni* Jakovlev, 1899
*Dorcadion kozanii* (Breuning, 1962)
*Dorcadion krueperi* (Ganglbauer, 1883)
*Dorcadion laeve* Faldermann, 1837
*Dorcadion lameeri* Thery, 1896
*Dorcadion lineatocolle* (Kraatz, 1873)
*Dorcadion ljubetense* (Pic, 1909)
*Dorcadion lugubre* (Kraatz, 1873)
*Dorcadion merkli* (Ganglbauer, 1884)
*Dorcadion minutum* (Kraatz, 1873)
*Dorcadion multimaculatum* Pic, 1932
*Dorcadion murrayi* (Küster, 1847)
*Dorcadion mystacinum mystacinum* Ballion, 1878
*Dorcadion mystacinum rufidens* Jakovlev, 1906
*Dorcadion nitidum* Motschulsky, 1838
*Dorcadion niveisparsum* Thomson, 1865
*Dorcadion nivosum* Suvorov, 1913
*Dorcadion olympicum* Kraatz, 1873
*Dorcadion parallelum* Küster, 1847
*Dorcadion pararufipenne* Braun, 1976
*Dorcadion parnassi* (Kraatz, 1873)
*Dorcadion pedestre pedestre* (Poda, 1761)
*Dorcadion pedestre kaszabi* Breuning, 1956
*Dorcadion pilosellum* (Kraatz, 1873)
*Dorcadion pilosipenne* Breuning, 1943
*Dorcadion pluto* Thomson, 1867
*Dorcadion preissi* (Heyden, 1894)
*Dorcadion pseudobithyniense* Breuning, 1962

*Dorcadion pseudopreissi* Breuning, 1962
*Dorcadion quadrimaculatum nodicorne* (Tournier, 1872)
*Dorcadion regulare* (Pic, 1931)
*Dorcadion rufipenne* Breuning, 1946
*Dorcadion rufogenum* Reitter, 1895
*Dorcadion saulcyi* Thomson, 1865
*Dorcadion scabricolle* Dalman, 1817
*Dorcadion scopolii* (Herbst, 1784)
*Dorcadion scrobicolle* Kraatz, 1873
*Dorcadion semenovi* Ganglbauer, 1863
*Dorcadion septemlineatum* (Waltl, 1838)
*Dorcadion songaricum* Ganglbauer, 1883
*Dorcadion striolatum* (Kraatz, 1873)
*Dorcadion subsericatum* Pic, 1901)
*Dorcadion tauricum* (Waltl, 1838)
*Dorcadion tibiale* Jakovlev, 1889
*Dorcadion tschitscherini* Jakovlev, 1899
*Dorcadion turkestanicum* Kraatz, 1881
*Dorcadion wagneri* Küster, 1846
*Dorcadion weyersi* Fairmaire, 1866
*Eodorcadion carinatum blessigi* Ganglbauer, 1884
*Eodorcadion carinatum carinatum* (Fabricius, 1781)
*Eodorcadion chinganicum* (Suvorov, 1909)
*Eodorcadion egregium* Reitter, 1897
*Eodorcadion humerale* Gebler, 1823
*Eodorcadion oreadis* Reitter, 1897
*Eodorcadion virgatum* (Motschulsky, 1854)
*Iberodorcadion abulense* (Lauffer, 1902)
*Iberodorcadion albicans* (Chevrolat, 1862)
*Iberodorcadion amorii* (Marseul, 1856)
*Iberodorcadion becerrae* (Lauffer, 1901)
*Iberodorcadion bolivari* (Lauffer, 1898)
*Iberodorcadion brannani* (Schaufuss, 1870)
*Iberodorcadion circumcinctum* (Chevrolat, 1862)
*Iberodorcadion fuliginator fuliginator* (Linnaeus, 1758)
*Iberodorcadion fuliginator meridionale* (Mulsant, 1839)
*Iberodorcadion fuliginator obessum* (Gautier, 1870)
*Iberodorcadion graellsii graellsii* (Graells, 1858)
*Iberodorcadion graellsii longipenne* (Chevrolat, 1862)
*Iberodorcadion heydenii* (Kraatz, 1870)
*Iberodorcadion korbi* (Ganglbauer, 1884)
*Iberodorcadion lorguinii* (Fairmaire, 1855)
*Iberodorcadion marmottani* (Escalera, 1900)
*Iberodorcadion martinenzii* (Perez, 1874)
*Iberodorcadion molitor* (Fabricius, 1775)
*Iberodorcadion mosqueruelense* (Escalera, 1902)
*Iberodorcadion mus* (Rosenhauer, 1856)
*Iberodorcadion neilense almarzense* (Escalera, 1902)
*Iberodorcadion neilense neilense* (Escalera, 1902)
*Iberodorcadion nigrosparsum* Verdugo, 1993
*Iberodorcadion perezi cercedillanum* (Pic, 1900)
*Iberodorcadion perezi hispanicum* (Mulsant, 1851)
*Iberodorcadion perezi nudipenne* (Escalera, 1908)
*Iberodorcadion segovianum dejeanii* (Chevrolat, 1862)
*Iberodorcadion segovianum segovianum* (Chevrolat, 1862)
*Iberodorcadion seguntianum* (K. Daniel & J. Daniel, 1898)
*Iberodorcadion seoanei kricheldorffi* (Pic, 1910)
*Iberodorcadion seoanei seoanei* (Graells, 1858)
*Iberodorcadion spinolae caunense* (Lauffer, 1910)
*Iberodorcadion spinolae spinolae* (Dalman, 1817)
*Iberodorcadion terolense* (Escalera, 1902)
*Iberodorcadion uhagonii* (Perez, 1868)
*Iberodorcadion zarcoi* (Schramm, 1910)
*Neodorcadion bilineatum* (Germar, 1824)
*Neodorcadion fallax* (Kraatz, 1873)
*Neodorcadion laqueatum* (Waltl, 1838)
*Neodorcadion orientale* (Ganglbauer, 1884)
*Neodorcadion virleti* (Brullé, 1832)
*Politodorcadion politum* (Dalman, 1823)
*Politodorcadion ribbei* Kraatz, 1878

**Dorcaschematini**

*Olenecamptus cretaceus cretaceus* Bates, 1873
*Olenecamptus cretaceus marginatus* Schwarzer, 1925
*Olenecamptus formosanus* Pic, 1914
*Olenecamptus taiwanus* Dillon & Dillon, 1948

**Gleneini**

*Glenea acuta* Fabricius, 1801
*Glenea adelpha* Thomson, 1858
*Glenea albocingulata* Aurivillius, 1926
*Glenea albofasciata* Gahan, 1897
*Glenea albolineata* Thomson, 1860
*Glenea algebraica* Thomson, 1857
*Glenea aluensis* Gahan, 1897
*Glenea angerona* Thomson, 1865
*Glenea anna* Thomson, 1879
*Glenea annulicornis* Schwarzer, 1925
*Glenea anticepunctata obsoletepunctata* Thomson, 1857
*Glenea anticepunctata* Thomson, 1857
*Glenea apicalis* Chevrolat, 1857
*Glenea arcuata* Chevrolat, 1858
*Glenea arouensis* Thomson, 1858

*Glenea atriceps* Aurivillius, 1911
*Glenea astarte* Thomson, 1865
*Glenea beatrix* Thomson, 1879
*Glenea beccarii* Gahan, 1907
*Glenea bellona* Thomson, 1879
*Glenea blandina* Pascoe, 1858
*Glenea buqueti* Thomson, 1865
*Glenea camilla* Pascoe, 1867
*Glenea cantor* Fabricius, 1787
*Glenea caraga* Heller, 1921
*Glenea cardinalis* Thomson, 1861
*Glenea cassandra* Gahan, 1907
*Glenea celia* Pascoe, 1888
*Glenea ceylonica* Breuning, 1958
*Glenea chlorospila* Gahan, 1897
*Glenea chrysomaculata* Schwarzer, 1925
*Glenea cinerea* Thomson, 1865
*Glenea citrina* Thomson, 1865
*Glenea concinna* Newman, 1842
*Glenea coris* Pascoe, 1867
*Glenea cyanipennis* Thomson, 1858
*Glenea diana* Thomson, 1865
*Glenea dimidiata* Fabricius, 1801
*Glenea distinguenda* Gahan, 1889
*Glenea diversimembris* Pic, 1926
*Glenea dorsaloides* Breuning, 1856
*Glenea elegans* (Olivier, 1795)
*Glenea elegantissima* Breuning, 1956
*Glenea exculta* Newman, 1842
*Glenea extensa* Pascoe, 1858
*Glenea extrema* Sharp, 1900
*Glenea fainanensis* Pic, 1916
*Glenea fasciata* Fabricius, 1781
*Glenea fatalis* Pascoe, 1867
*Glenea fissicauda* Aurivillius, 1926
*Glenea flava* Jordan, 1895
*Glenea formosana holatripes* Breuning, 1953
*Glenea fulvomaculata* Thomson, 1860
*Glenea funerula* Thomson, 1857
*Glenea gabonica* Thomson, 1858
*Glenea galathea* Thomson, 1865
*Glenea giraffa* Dalman, 1817
*Glenea glauca* Newman, 1842
*Glenea grisea* Thomson, 1860
*Glenea grossepunctata* Breuning, 1958
*Glenea hasselti* Ritsema, 1892
*Glenea heptagona* Thomson, 1860
*Glenea homonospila* Thomson, 1865
*Glenea indiana* (Thomson, 1857)
*Glenea iwasaki* Kano, 1933
*Glenea jordani* Lepesme & Breuning, 1952
*Glenea juno* Thomson, 1865
*Glenea kannegieteri* Breuning, 1958
*Glenea keili* Ritsema, 1897
*Glenea kraatzii* Thomson, 1865
*Glenea labuanensis* Breuning, 1956
*Glenea lacteomaculata* Schwarzer, 1925
*Glenea latevittata* Aurivillius, 1920
*Glenea lecta* Gahan, 1889
*Glenea lefebvrei* Guérin-Méneville, 1831
*Glenea lepida* Newman, 1842
*Glenea lineata* Gahan, 1897
*Glenea lineatocollis* Thomson, 1860
*Glenea lycoris* Thomson, 1865
*Glenea manto* Pascoe, 1866
*Glenea mathematica* Thomson, 1857
*Glenea maunieri* Pic, 1926
*Glenea melia* Pascoe, 1867
*Glenea melissa* Pascoe, 1867
*Glenea myrsia* Pascoe, 1867
*Glenea nicanor* Pascoe, 1867
*Glenea nigromaculata* Thomson, 1865
*Glenea nigrotibialis* Breuning, 1950
*Glenea novemguttata* Guérin-Méneville, 1831
*Glenea numerifera* Thomson, 1865
*Glenea nympha* Thomson, 1865
*Glenea ochraceovittata* Thomson, 1865
*Glenea oreophila* Breuning, 1958
*Glenea pascoei* Aurivillius, 1923
*Glenea paulina* Gahan, 1907
*Glenea pici* Aurivillius, 1920
*Glenea plagiata* Gardner, 1930
*Glenea porphyrio* Pascoe, 1866
*Glenea posticata* Gahan, 1894
*Glenea proserpina* Thomson, 1865
*Glenea proxima* Lameere, 1893
*Glenea pseudocolobotheoides* Breuning, 1950
*Glenea puella* Chevrolat, 1858
*Glenea pulchra* Aurivillius, 1926
*Glenea pustulata* Thomson, 1865
*Glenea quadrinotata* Guérin-Méneville, 1843
*Glenea quinquelineata* Chevrolat,1855
*Glenea relicta* Pascoe, 1858
*Glenea rubricollis* Hope, 1842
*Glenea sanctaemariae* Thomson, 1857
*Glenea scalaris* Thomson, 1865
*Glenea signatifrons* Gahan, 1897
*Glenea silhetica* Plavilstshikov, 1927
*Glenea sophronia* Pascoe, 1867
*Glenea speciosa* Gahan, 1889
*Glenea strigata* Thomson, 1860
*Glenea suada* Gahan, 1907
*Glenea submorosa* Breuning, 1952
*Glenea sumatrana* Breuning, 1950
*Glenea suturalis* Jordan, 1894
*Glenea tenuilineata* Thomson, 1879
*Glenea timoriensis* Jordan, 1894
*Glenea tonkinea* Aurivillius, 1926

*Glenea tritoleuca* Aurivillius, 1923
*Glenea trivittata* Aurivillius, 1911
*Glenea truncatipennis* Breuning, 1950
*Glenea venus celebensis* Ritsema, 1892
*Glenea venus venus* Thomson, 1865
*Glenea venusta* Guérin-Méneville, 1831
*Glenea versuta* Newman, 1842
*Glenea vigintiduomaculata* Thomson, 1858
*Glenea virens* Aurivillius, 1925
*Glenea voluptuosa* Thomson, 1860
*Glenea wiedenfeldi* Aurivillius, 1911

**Gnomini**

*Imantocera penicillata* (Hope, 1831)

**Homonoeini**

*Bumetopia sakishimana* Hayashi, 1966

**Lamiini**

*Aethalodes verrucosus formosanus* Kriesche, 1924
*Aristobia approximatrix* Thomson, 1865
*Aristobia hispida* (Saunders, 1853)
*Aristobia horridula* (Hope, 1831)
*Aristobia reticulatrix* (Fabricius, 1781)
*Aristobia voeti* Thomson, 1878
*Cremnosterna carissima* Pascoe, 1857
*Epepeotes ambigenus formosanus* Gressitt, 1951
*Gerania bosci* (Fabricius, 1801)
*Herophila fairmairei* (Thomson, 1857)
*Herophila tristis* (Linnaeus, 1767)
*Lamia textor* (Linnaeus, 1758)
*Lamiomimus gottschei* Kolbe, 1886
*Morimus asper* (Sulzer, 1776)
*Morimus asper funereus* Mulsant, 1862
*Morimus verecundus* (Faldermann, 1836)
*Paraleprodera diophthalma* (Pascoe, 1857)
*Paraleprodera itzingeri* Breuning, 1935
*Psacothea hilaris hilaris* (Pascoe, 1857)

**Mesosini**

*Agelasta perplexa* Pascoe, 1858
*Cacia watantakkuni* Kano, 1933
*Coptops japonicus* Breuning, 1936
*Falsomesosella gracilior* Bates, 1884
*Mesoereis koshunensis* Matsushita, 1933
*Mesosa cribrata* Bates, 1884
*Mesosa curculionoides* (Linnaeus, 1761)
*Mesosa hirsuta* Bates, 1884
*Mesosa japonica* Bates, 1873
*Mesosa longipennis* Bates, 1873
*Mesosa myops* (Dalman, 1817)
*Mesosa nebulosa* (Fabricius, 1781)
*Mesosa senilis* Bates, 1884

**Monochamini**

*Agnoderus gnomoides* Thomson, 1864
*Annamanum albisparsum* (Gahan, 1888)
*Anoplophora albopicta* Matsushita, 1933
*Anoplophora chinensis* Forster, 1771
*Anoplophora glabripennis* Motschulsky, 1854
*Anoplophora horsfieldii* (Hope, 1842)
*Anoplophora lurida* Pascoe, 1856
*Anoplophora malasiaca* Thomson, 1865
*Cereopsius praetorius* (Erichson, 1834)
*Eupromus ruber* (Dalman, 1817)
*Mecynippus pubicornis* Bates, 1884
*Monochamus alternatus* Hope, 1842
*Monochamus galloprovincialis* (Olivier, 1795)
*Monochamus grandis* Waterhouse, 1881
*Monochamus guerryi* Pic, 1903
*Monochamus nitens* (Bates, 1884)
*Monochamus saltuarius* (Gebler, 1830)
*Monochamus sartor sartor* (Fabricius, 1787)
*Monochamus sartor urussovi* (Fischer von Waldheim, 1806)
*Monochamus subfasciatus shikokensis* Breuning, 1956
*Monochamus subfasciatus subfasciatus* (Bates, 1873)
*Monochamus sutor* (Linnaeus, 1758)
*Pseudomeges marmoratus* Westwood, 1848
*Uraecha angusta* (Pascoe, 1857)
*Uraecha bimaculata* Thomson, 1864
*Xenicotela pardalina* (Bates, 1884)
*Xenohammus bimaculatus* Schwarzer, 1931

**Morimopsini**

*Dolophrades terrenus* Bates, 1884

**Parmenini**

*Lepromoris gibba* (Brullé,, 1839)
*Parmena balteus* (Linnaeus, 1767)
*Parmena pubescens* (Dalman, 1817)
*Parmenopsis caucasica* Leder, 1880

**Petrognathini**

*Ithocritus ruber* Hope, 1839
*Morimopsis lacrymans* (Thomson, 1864)

**Phrissomini**

*Mesechthistatus binodosus* (Waterhouse, 1881)
*Mesechthistatus furcifer furcifer* (Bates, 1884)
*Mesechthistatus furcifer meridionalis* (Hayashi, 1951)
*Parechthistatus gibber gibber* (Bates, 1873)
*Parechthistatus gibber grossus* (Bates, 1884)
*Parechthistatus gibber nakanei* Miyake, 1980
*Parechthistatus gibber pseudogrossus* Miyake, 1980

**Phytoeciini**

*Conizonia bodoani* Pic, 1912
*Conizonia detrita* (Fabricius, 1792)
*Conizonia guerini* Bréme, 1840
*Conizonia warnieri* Lucas, 1847
*Dirphya imitans* (Breuning, 1956)
*Dyenmonus trivittatus* Aurivillius, 1914
*Epiglenea comes* (Bates, 1884)

*Gracilinitocris gracilenta* Kolbe, 1893
*Linda atricornis* Pic, 1924
*Linda femorata* Chevrolat, 1852
*Linda fraterna* Chevrolat, 1852
*Linda nigroscutata* (Fairmaire, 1902)
*Mallosia graeca* (Sturm, 1843)
*Mallosia herminae* Reitter, 1890
*Mallosia imperatrix* Abeille de Perrin, 1885
*Mallosia mirabilis* Faldermann, 1837
*Mallosia scovitzi* (Faldermann, 1837)
*Mallosia tristis* Reitter, 1888
*Mallosiola regina* (Heyden, 1887)
*Mecas cineracea* Casey, 1913
*Mecas obereoides* Bates, 1881
*Micromandibularia rufa* Breuning, 1954
*Musaria wachanrui* Mulsant, 1851
*Mystrocnemis bicolor* Aurivillius, 1914
*Neonitocris modesta* Fabricius, 1781
*Neonitocris princeps* Jordan, 1894
*Nitakeris adorata* (Thomson, 1858)
*Nitakeris nigricornis* (Olivier, 1795)
*Nitakeris similis* (Gahan, 1893)
*Nitocris lucasii* (Thomson, 1858)
*Nupserha antennalis* Jordan, 1894
*Nupserha apicalis* Fähraeus, 1872
*Nupserha apicata* Fairmaire, 1891
*Nupserha bidentata* Fabricius, 1792
*Nupserha convergens* Aurivillius, 1914
*Nupserha deusta* (Dalman, 1817)
*Nupserha elongata* (Kolbe, 1893)
*Nupserha fasciata* Aurivillius, 1907
*Nupserha fricator* Dalman, 1817
*Nupserha grisea* Aurivillius, 1914
*Nupserha homeyeri* Harold, 1879
*Nupserha madurensis* Pic, 1926
*Nupserha marginella* (Bates, 1873)
*Nupserha nigriceps* Gahan, 1894
*Nupserha nigricornis* Fisher, 1935
*Nupserha nyassensis* Aurivillius, 1914
*Nupserha quadrioculata* Thunberg, 1787
*Nupserha sexpunctata* Chevrolat, 1857
*Nupserha strigicollis* Fairmaire, 1893
*Nupserha taliana* Pic, 1916
*Nupserha tricolor* Aurivillius, 1920
*Nupserha ustulata* Erichson, 1834
*Nupserha vanrooni* Aurivillius, 1916
*Nupserha variabilis* Gahan, 1894
*Nupserha vitticollis* (Kolbe, 1893)
*Nupserha yunnanensis* Breuning, 1960
*Oberea balineae* Heller, 1915
*Oberea birmanica* Gahan, 1894
*Oberea ceylonica* Aurivillius, 1921
*Oberea compta* Pascoe, 1867
*Oberea consentanea* Pascoe, 1867
*Oberea curialis* Pascoe, 1866
*Oberea erythrocephala* (Schrank, 1776)
*Oberea erythrostoma* Heller, 1915
*Oberea euphorbiae* (Germar, 1813)
*Oberea ferruginea* (Thunberg, 1787)
*Oberea formosana* Pic, 1911
*Oberea fuscipennis* (Chevrolat, 1852)
*Oberea hebescens* Bates, 1873
*Oberea inclusa* Pascoe, 1858
*Oberea japonica* (Thunberg, 1787)
*Oberea jordani* Aurivillius, 1923
*Oberea keyensis* Breuning, 1962
*Oberea lacana* Pic, 1923
*Oberea laetifica* Pascoe, 1867
*Oberea linearis* (Linnaeus, 1761)
*Oberea lutea* (Thunberg, 1787)
*Oberea maculicollis* Lucas, 1842
*Oberea mixta* Bates, 1873
*Oberea mutata* Pascoe, 1867
*Oberea nefasta* Pascoe, 1867
*Oberea nigriventris* Bates, 1873
*Oberea nigrocincta* Aurivillius, 1907
*Oberea nigrolineata* Aurivillius, 1916
*Oberea ocellata* Haldeman, 1847
*Oberea oculata* (Linnaeus, 1758)
*Oberea ophidiana* Pascoe, 1858
*Oberea pedemontana* Chevrolat, 1856
*Oberea posticata* Gahan, 1894
*Oberea pseudolacana* Breuning, 1956
*Oberea pupillata* (Gyllenhal, 1817)
*Oberea ressli* Demelt, 1963
*Oberea sansibarica* Harold, 1880
*Oberea tricolor* Aurivillius, 1924
*Oberea tripunctata* (Swederus, 1787)
*Oberea vittata* Blessig, 1873
*Oberea walkeri* Gahan, 1894
*Obereopsis atripennis* Breuning, 1955
*Obereopsis kankauensis* Schwarzer, 1925
*Obereopsis leptissima* Breuning, 1957
*Obereopsis luteicornis* Breuning, 1957
*Obereopsis maculithorax* Matsushita, 1933
*Obereopsis masaica* Breuning, 1950
*Obereopsis modica* Gahan, 1894
*Obereopsis nigriceps* Breuning, 1957
*Obereopsis obscuritarsis* Chevrolat, 1855
*Obereopsis obsoleta* Chevrolat, 1858
*Obereopsis pseudocapensis* Breuning, 1955
*Obereopsis quadrinotaticollis* Breuning, 1949
*Obereopsis variipes* Chevrolat, 1858
*Oxylia argentata* Ménétriés, 1832
*Oxylia duponcheli* (Brullé, 1832)
*Phytoecia affinis* (Harrer, 1784)
*Phytoecia algerica* Desbrochers des Loges, 1870
*Phytoecia angusta* Aurivillius, 1914

*Phytoecia argus* (Frölich, 1793)
*Phytoecia bohemani* Pascoe, 1858
*Phytoecia caerulea* (Scopoli, 1772)
*Phytoecia cinerascens* (Kraatz, 1882)
*Phytoecia coerulescens* (Scopoli, 1763)
*Phytoecia cylindrica* (Linnaeus, 1758)
*Phytoecia flavescens* (Brullé, 1832)
*Phytoecia guilleti* Pic, 1906
*Phytoecia hirsutula* (Frölich, 1793
*Phytoecia humeralis* (Waltl, 1838)
*Phytoecia icterica* (Schaller, 1783)
*Phytoecia larvata* Pascoe, 1871
*Phytoecia longitarsis* Reitter, 1911
*Phytoecia melanocephala* (Fabricius, 1787)
*Phytoecia merkli* (Ganglbauer, 1884)
*Phytoecia millefolii* (Adams, 1817)
*Phytoecia molybdaena* (Dalman, 1817)
*Phytoecia nigricornis* (Fabricius, 1781)
*Phytoecia ochraceipennis* Kraatz, 1882
*Phytoecia pubescens* Pic, 1895
*Phytoecia puncticollis* Faldermann, 1837
*Phytoecia puncticollis stygia* Ganglbauer, 1884
*Phytoecia pustulata* (Schrank, 1776)
*Phytoecia rubropunctata* (Goeze, 1777)
*Phytoecia rufipes* (Olivier, 1795)
*Phytoecia rufiventris* Gautier, 1870
*Phytoecia scutellata* (Fabricius, 1792)
*Phytoecia tigrina* (Mulsant, 1851)
*Phytoecia tirelli* (Luigionii, 1913)
*Phytoecia uncinata* Redtenbacher, 1842
*Phytoecia virgula* (Charpentier, 1825)
*Phytoecia vittipennis* Reiche, 1877
*Phytoecia vulneris* Aurivillius, 1923
*Poecilobactris militaris* Fairmaire, 1887
*Pseudoblepisanis analis* (Fabricius, 1781)
*Pseudoblepisanis nigriventris* (Kolbe, 1893)
*Pseudoconizonia basalis* Gahan, 1890
*Pteromallosia albolineata* (Hope, 1852)
*Schoenionta necydaloides* Pascoe, 1867
*Stibara humeralis* Thomson, 1865
*Stibara rufina* Pascoe, 1858
*Stibara tetraspilota* Hope, 1840
*Stibara tricolor* Fabricius, 1793

**Pogonocherini**

*Pogonocherus anatolicus* K. Daniel & J. Daniel, 1898
*Pogonocherus caroli* Mulsant, 1862
*Pogonocherus decoratus* Fairmaire, 1855
*Pogonocherus dimidiatus* Blessig, 1873
*Pogonocherus eugeniae* Ganglbauer, 1891
*Pogonocherus fasciculatus* (De Geer, 1775)
*Pogonocherus hispidulus* (Piller & Mitterpacher, 1783)
*Pogonocherus hispidus* (Linaeus, 1758)
*Pogonocherus neuhausi* Müller, 1916
*Pogonocherus ovatus* (Goeze, 1777)
*Pogonocherus perroudi* Mulsant, 1839
*Pogonocherus sieversi* Ganglbauer, 1886

**Pteropliini**

*Abryna coenosa* Newman, 1842
*Albana m-griseum* (Mulsant, 1846)
*Desisa variabilis* (Schwarzer, 1925)
*Grammoechus bipartitus* Ritsema, 1890
*Mesosella simiola* Bates, 1884
*Niphona furcata* (Bates, 1873)
*Niphona picticornis* Mulsant, 1839
*Pterolophia angusta* (Bates, 1873)
*Pterolophia annulata* (Chevrolat, 1845)
*Pterolophia caudata* (Bates, 1873)
*Pterolophia jugosa* (Bates, 1873)
*Pterolophia leiopodina* (Bates, 1873)
*Pterolophia rigida* (Bates, 1873)
*Pterolophia zebrina* (Pascoe, 1858)
*Pterolophia zonata* (Bates, 1873)
*Sthenias franciscanus* Thomson, 1865

**Saperdini**

*Cagosima sanguinolenta* Thomson, 1864
*Callundine lacordairei* Thomson, 1879
*Entelopes griseipennis* Breuning, 1954
*Eumecocera argyrosticta* (Bates, 1884)
*Eumecocera gleneoides* (Gressitt, 1935)
*Eumecocera impustulata* (Motschulsky, 1860)
*Eumecocera minamii* Makihara, 1984
*Eumecocera trivittata* (Breuning, 1947)
*Eumecocera unicolor* Kano, 1933
*Eutetrapha sedecimpunctata* Motschulsky, 1860
*Eutetrapha chrysochloris* (Bates, 1879)
*Eutetrapha metallescens* Motschulsky, 1860
*Eutetrapha ocelota* (Bates, 1873)
*Menesia bipunctata* (Zoubkoff, 1829)
*Menesia discimaculata* Aurivillius, 1924
*Menesia flavotecta* Heyden, 1886
*Menesia sulphurata* (Gebler, 1825)
*Niponostenostola niponensis niponensis* (Pic, 1901)
*Niponostenostola niponensis pterocaryai* (Hayashi, 1960)
*Ossonis clytomima* Pascoe, 1867
*Paraeutetrapha eximia* (Bates, 1884)
*Paraeutetrapha simulans* (Bates, 1873)
*Paraglenea fortunei* (Saunders, 1853)
*Paraglenea swinhoei* Bates, 1866
*Paramenesia kasugensis* (Seki & Kobayashi, 1935)
*Paramenesia theaphia* (Bates, 1884)
*Saperda balsamifera* Motschulsky, 1860
*Saperda candida* (Fabricius, 1787)
*Saperda carcharias* (Linnaeus, 1758)

*Saperda fayi* Bland, 1863
*Saperda inornata* Say, 1823
*Saperda interrupta* Gebler, 1825
*Saperda lateralis* (Fabricius, 1775)
*Saperda octopunctata* (Scopoli, 1772)
*Saperda perforata* (Pallas, 1773)
*Saperda populnea* (Linnaeus, 1758)
*Saperda punctata* (Linnaeus, 1767)
*Saperda puncticollis* Say, 1824
*Saperda scalaris* (Linnaeus, 1758)
*Saperda similis* Laicharting, 1784
*Saperda tetrastigma* Bates, 1879
*Saperda tridentata* Olivier, 1795
*Saperda vestita* (Say, 1824)
*Serixia andamanica* Gardner, 1930
*Serixia aurulenta* Pascoe, 1867
*Serixia javanica* Breuning, 1950
*Serixia sedata* Pascoe, 1862
*Stenostola dubia* (Laicharting, 1784)
*Stenostola ferrea* (Schrank, 1776)
*Thyestilla gebleri* (Faldermann, 1835)

**Tetraopini**

*Tetrops hauseri* Reitter, 1897
*Tetrops praeustus* (Linnaeus, 1758)
*Tetrops starkii* (Chevrolat, 1859)

**Tmesisternini**

*Sphingnotus mirabilis* (Boisduval, 1835)

**Xenoleini**

*Hirtaeschopalaea nubila* Matsushita, 1933

**Lepturinae**

**Encyclopini**

*Encyclops olivaceus* Bates, 1884

**Enoploderini**

*Enoploderes sanguineum* Faldermann, 1937

**Lepturini**

*Alosterna chalybeella* (Bates, 1884)
*Alosterna ingrica* (Baeckmann, 1902)
*Alosterna tabacicolor* (De Geer, 1775)
*Anastrangalia dubia* (Scopoli, 1763)
*Anastrangalia reyi* (Heyden, 1889)
*Anastrangalia sanguinolenta* (Linnaeus, 1761)
*Anastrangalia scotodes* Bates, 1873
*Anastrangalia sequensi* Reitter, 1898
*Anoplodera excavata* (Bates, 1884)
*Anoplodera rufipes* (Schaller, 1783)
*Anoplodera sexguttata* (Fabricius, 1775)
*Anoploderomorpha cyanea* (Gebler, 1832)
*Anoploderomorpha monticola* Nakane, 1955
*Corennys sanguinea* Kano, 1933
*Corennys sericata* Bates, 1884
*Cornumutila lineata* (Letzner, 1844)
*Dokhtouroffia nebulosa* Gebler, 1845
*Ephies japonicus* Nakane & Ohbayashi, 1961
*Etorofus pubescens* (Fabricius, 1787)
*Etorofus vicarius* Bates, 1884
*Eustrangalis anticereducta* Hayashi, 1958
*Eustrangalis distenoides* Bates, 1884
*Idiostrangalia contracta* (Bates, 1884)
*Ischnostrangalis davidi* (Pic, 1934)
*Japanostrangalia dentatipennis* (Pic, 1901)
*Judolia sexmaculata* (Linnaeus, 1758)
*Judolidia kyushuensis* Kusakabe & Ohbayashi, 1992
*Kanekoa azumensis* Matsushita & Tamanuki, 1942
*Kanoa granulata* Bates, 1884
*Leptostrangalia hosohana* (Ohbayashi, 1952)
*Leptura aethiops* Poda, 1761
*Leptura annularis annularis* Fabricius, 1801
*Leptura annularis mimica* Bates, 1884
*Leptura aurulenta* Fabricius, 1792
*Leptura dimorpha* Bates, 1873
*Leptura duodecimguttata* Fabricius, 1801
*Leptura latipennis* Matsushita, 1933
*Leptura modicenotata* Pic, 1901
*Leptura ochraceofasciata ochraceofasciata* Motschulsky, 1861
*Leptura ochraceofasciata ochrotela* Bates, 1873
*Leptura quadrifasciata* Linnaeus, 1758
*Leptura regalis* Bates, 1884
*Leptura subtilis* Bates, 1884
*Leptura thoracica* Creutzer, 1799
*Lepturalia nigripes* De Geer, 1775
*Lepturobosca virens* (Linnaeus, 1758)
*Mimostrangalia dulcis* (Bates, 1884)
*Nivellia sanguinosa* (Gyllenhal, 1827)
*Nustera distigma* (Charpentier, 1825)
*Oedecnema gebleri* Ganglbauer, 1889
*Ohbayashia nigromarginata* Hayashi, 1953
*Pachytodes cerambyciformis* (Schrank, 1781)
*Pachytodes cometes* Bates, 1884
*Pachytodes erraticus* (Dalman, 1817)
*Pachytodes longipes* Gebler, 1832
*Paracorymbia excisipes* (K. Daniel & J. Daniel, 1891)
*Paracorymbia stragulata* (Germar, 1824)
*Paracorymbia tonsa* K. Daniel & J. Daniel, 1891
*Paranaspia anaspidoides* (Bates, 1873)
*Parastrangalis lesnei* Pic, 1901
*Parastrangalis nymphula* (Bates, 1884)
*Parastrangalis tenuicornis* Motschulsky, 1862
*Pedostrangalia emmipoda* (Mulsant, 1863)
*Pedostrangalia femoralis* Motschulsky, 1860
*Pedostrangalia revestita* (Linnaeus, 1767)
*Pedostrangalia verticalis* (Germar, 1822)
*Pseudalosterna misella* (Bates, 1884)
*Pseudovadonia livida* (Fabricius, 1776)
*Pyrrhona laeticolor* Bates, 1884

*Rutpela maculata* (Poda, 1761)
*Stenurella approximans* (Rosenhauer, 1856)
*Stenurella bifasciata* (Müller, 1776)
*Stenurella jaegeri* Hummel, 1825
*Stenurella melanura* (Linnaeus, 1758)
*Stenurella nigra* (Linnaeus, 1758)
*Stenurella novercalis* Reitter, 1901
*Stenurella septempunctata* (Fabricius, 1792)
*Stictoleptura cardinalis* (K. Daniel & J. Daniel, 1899)
*Stictoleptura cordigera* (Fuessly, 1775)
*Stictoleptura deyrollei* (Pic, 1895)
*Stictoleptura dichroa* Blanchard, 1871
*Stictoleptura erythroptera* (Hagenbach, 1822)
*Stictoleptura fontenayi* (Mulsant, 1839)
*Stictoleptura hybrida* (Rey, 1885)
*Stictoleptura igai* (Tamanuki, 1942)
*Stictoleptura maculicornis* (De Geer, 1775)
*Stictoleptura oblongomaculata* (Buquet, 1840)
*Stictoleptura pallens* (Brullé, 1832)
*Stictoleptura palmi* (Demelt, 1971)
*Stictoleptura picticornis* (Reitter, 1885)
*Stictoleptura pyrrha* (Bates, 1884)
*Stictoleptura rubra* (Linnaeus, 1758)
*Stictoleptura rufa* (Brullé, 1832)
*Stictoleptura scutellata* (Fabricius, 1781)
*Stictoleptura tesserula* (Charpentier, 1825)
*Stictoleptura trisignata* (Fairmaire, 1852)
*Stictoleptura variicornis* (Dalman, 1817)
*Strangalia attenuata* (Linnaeus, 1758)
*Strangalia fortunei* Pascoe, 1858
*Strangalia koyaensis* Matsushita, 1933
*Strangalia maculata* Poda, 1761
*Strangalia takeuchii* Matsushita & Tamanuki, 1935
*Strangalomorpha tenuis* Solsky, 1873
*Vadonia bisignata* (Brullé, 1832)
*Vadonia imitatrix* K. Daniel & J. Daniel, 1891
*Vadonia moesiaca* K. Daniel & J. Daniel, 1891
*Vadonia steveni* (Sperck, 1835)
*Vadonia unipunctata* (Fabricius, 1787)
*Xestoleptura rufiventris* Gebler, 1830

**Oxymirini**

*Oxymirus cursor* (Linnaeus, 1758)
*Oxymirus mirabilis* (Motschulsky, 1838)

**Rhagiini**

*Acmaeops angusticollis* Gebler, 1833
*Acmaeops marginatus* Fabricius, 1781
*Acmaeops septentrionis* Thomson, 1866
*Acmaeops smaragdulus* Fabricius, 1793
*Akimerus schaefferi* (Laicharting, 1784)
*Brachyta bifasciata* (Olivier, 1792)
*Brachyta interrogationis* (Linnaeus, 1758)
*Brachyta punctata* (Faldermann, 1833)
*Brachyta variabilis* (Gebler, 1817)
*Cortodera alpina* Ménétriés, 1832
*Cortodera femorata* (Fabricius, 1787)
*Cortodera flavimana* (Waltl, 1838)
*Cortodera holosericea* (Fabricius, 1801)
*Cortodera humeralis* (Schaller, 1783)
*Cortodera umbripennis* Reitter, 1890
*Cortodera villosa* Heyden, 1876
*Dinoptera anthracina* Mannerheim, 1849
*Dinoptera collaris* (Linnaeus, 1758)
*Dinoptera minuta* Gebler, 1832
*Evodinus borealis* (Gyllenhal, 1827)
*Evodinus clathratus* (Fabricius, 1792)
*Fallacia elegans* Faldermann, 1837
*Gaurotes atripennis* (Matsushita, 1933)
*Gaurotes virginea* (Linnaeus, 1758)
*Gnathacmaeops pratensis* (Laicharting, 1784)
*Gnathacmaeops brachypterus* K. Daniel & J. Daniel, 1899
*Grammoptera abdominalis* (Stephens, 1831)
*Grammoptera auricollis* Mulsant & Rey, 1863
*Grammoptera baudii* Sama, 1985
*Grammoptera ruficornis* (Fabricius, 1781)
*Grammoptera ustulata* (Schaller, 1783)
*Japanocorus caeruleipennis* Bates, 1873
*Lemula decipiens* Bates, 1884
*Lemula nishimurai* Seki, 1944
*Lemula rufithorax* Pic, 1901
*Pachyta bicuneata* Motschulsky, 1860
*Pachyta erebia* Bates, 1884
*Pachyta lamed* (Linnaeus, 1758)
*Pachyta quadrimaculata* (Linnaeus, 1758)
*Paragaurotes doris* Bates, 1884
*Paragaurotes ussuriensis* Blessig, 1873
*Pidonia amentata* (Bates, 1884)
*Pidonia bouvieri* Pic, 1901
*Pidonia debilis* Kraatz, 1879
*Pidonia discoidalis* Pic, 1901
*Pidonia grallatrix* Bates, 1884
*Pidonia insuturata* Pic, 1901
*Pidonia limbaticollis ohbayashii* (Matsushita, 1933)
*Pidonia lurida* (Fabricius, 1792)
*Pidonia maculithorax* (Pic, 1901)
*Pidonia masakii* Hayashi, 1955
*Pidonia miwai* (Matsushita, 1933)
*Pidonia puziloi* (Solsky, 1873)
*Pidonia semiobscura* Pic, 1901
*Pidonia signifera* Bates, 1884
*Pseudogaurotina excellens* (Brancsik, 1874)
*Pseudosieversia japonica* (Ohbayashi, 1937)
*Rhagium bifasciatum* Fabricius, 1775
*Rhagium fasciculatum* Faldermann, 1837
*Rhagium heyrovskyi* Podaný, 1964

*Rhagium inquisitor* (Linnaeus, 1758)
*Rhagium mordax* (De Geer, 1775)
*Rhagium sycophanta* (Schrank, 1781)
*Stenocorus amurensis* Kraatz, 1879
*Stenocorus insitivus* (Germar, 1824)
*Stenocorus meridianus* (Linnaeus, 1758)
*Stenocorus quercus* (Götz, 1783)
*Stenocorus validicornis univittatus* (Reitter, 1914)
*Toxotinus reini* (Heyden, 1879)

**Rhamnusiini**

*Rhamnusium bicolor bicolor* (Schrank, 1781)
*Rhamnusium bicolor demaggii* Tippmann, 1956

**Sachalinobiini**

*Sachalinobia koltzei* Heyden, 1887

**Xylosteini**

*Xylosteus bartoni* Obenberger & Mařan, 1933

**Parandrinae**

**Parandrini**

*Parandra caspia* Ménétriés, 1832
*Parandra brunnea* (Fabricius, 1798)

**Philinae**

**Philini**

*Mantitheus pekinensis* Fairmaire, 1889

**Prioninae**

**Aegosomatini**

*Aegosoma scabricorne* (Scopoli, 1763)
*Aegosoma sinicum* (White, 1853)
*Megopis marginale* (Fabricius, 1775)
*Nepiodes costipennis* White, 1853

**Anacolini**

*Psephactus remiger* Harold, 1879

**Callipogonini**

*Callipogon relictus* (Semenov, 1899)

**Ergatini**

*Ergates faber* (Linnaeus, 1760)

**Eurypodini**

*Eurypoda batesi* Gahan, 1894

**Macrotomini**

*Bandar pascoei pascoei* (Lansberge, 1884)
*Bandar pascoei formosae* Gressitt, 1938
*Prinobius myardi* Mulsant, 1842
*Rhaesus serricollis* (Motschulsky, 1838)
*Xixuthrus microcerus* White, 1853

**Meroscelisini**

*Tragosoma depsarium* (Linnaeus, 1767)

**Prionini**

*Dorysthenes buqueti* Guérin-Méneville, 1844
*Dorysthenes hydropicus* Pascoe, 1857
*Lobarthron balassogloi* (Jakovlev, 1885)
*Mesoprionus angustatus* (Jakovlev, 1887)
*Microarthron komaroffi* (Dohrn, 1885)
*Pogonarthron bedeli* (Semenov, 1900)
*Prionomma orientalis* Olivier, 1795
*Prionus besikanus* Fairmaire, 1855
*Prionus coriarius* (Linnaeus, 1758)
*Prionus insularis* Motschulsky, 1858
*Prionus sejunctus* Hayashi, 1959
*Prionus yakushimanus* Ohbayashi, 1964
*Priotyrranus closteroides* (Thomson, 1877)
*Pseudoprionus bienerti* (Heyden, 1885)
*Psilotarsus brachypterus* (Gebler, 1830)
*Psilotarsus turkestanicus* (Semenov, 1888)
*Trichohammus granulosus* (Thomson, 1860)

**Spondylidinae**

**Anisarthrini**

*Alocerus moesiacus* (Frivaldszky, 1837)
*Anisarthron barbipes* (Schrank, 1781)

**Asemini**

*Arhopalus rusticus* (Linnaeus, 1758)
*Arhopalus syriacus* (Reitter, 1895)
*Asemum striatum* (Linnaeus, 1758)
*Cephalallus unicolor* (Gahan, 1906)
*Megasemum quadricostulatum* Kraatz, 1879
*Nothorhina punctata* Fabricius, 1798
*Tetropium castaneum* (Linnaeus, 1758)
*Tetropium fuscum* (Fabricius, 1787)
*Tetropium gabrieli* Weise, 1905
*Tetropium gracilicorne* Reitter, 1889

**Atimiini**

*Atimia okayamensis* Hayashi, 1972

**Saphanini**

*Oxypleurus nodieri* Mulsant, 1839
*Saphanus piceus ganglbaueri* Brancsik, 1886
*Saphanus piceus piceus* (Laicharting, 1784)

**Spondylidini**

*Spondylis buprestoides* (Linnaeus, 1758)

**Disteniidae**

**Disteniini**

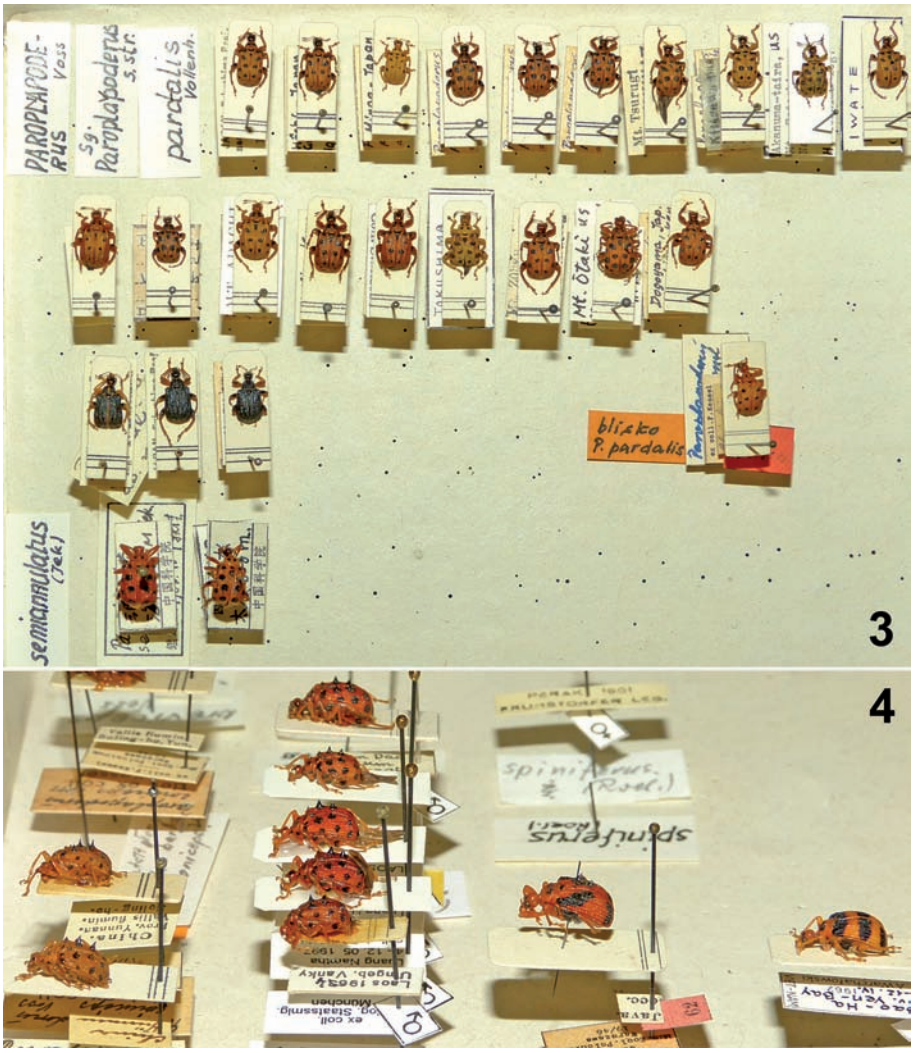
*Distenia gracilis* Blessig, 1872
*Tengius kurosawai* Makihara, 1986
*Tengius ohkuboi* Matsushita, 1938

**Vesperidae**

*Vesperus conicicollis* Fairmaire & Coquerel, 1866
*Vesperus fuentei* Pic, 1905
*Vesperus luridus* (Rossi, 1794)
*Vesperus strepens* (Fabricius, 1792)
*Vesperus xatarti* Mulsant, 1839

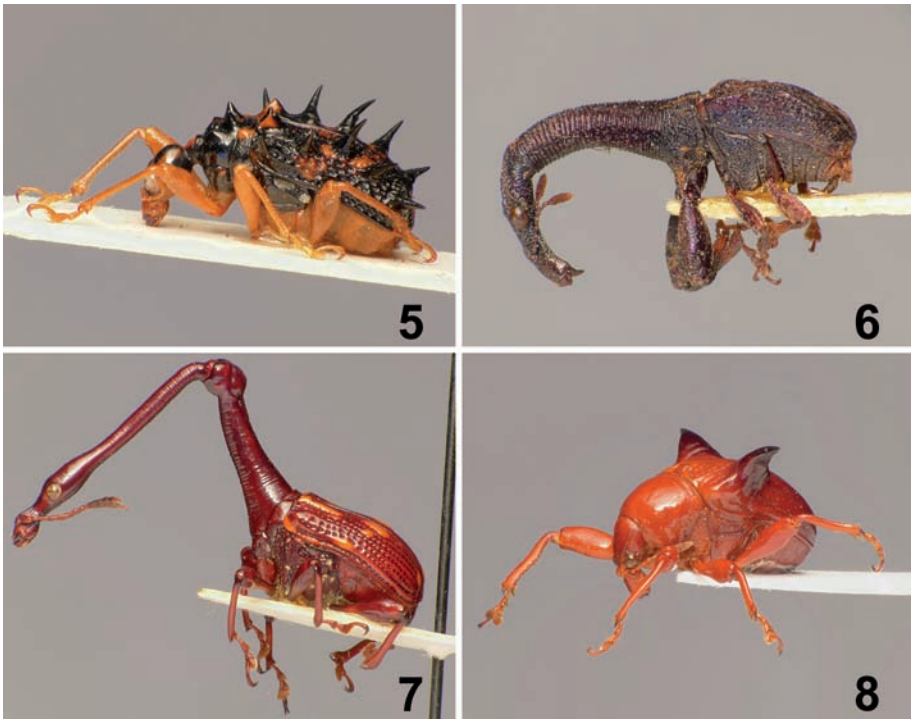
**Leaf-rolling weevils in the Pluciński Collection**

The Rhynchitidae and Attelabidae collection (Table 2, Figs 3-8) comprises 2346 specimens of 308 identified species and subspecies. They come mostly from Europe and Asia (particularly South-East and Japan), but unlike cerambycid collection, African (incl. Madagascar) and American species are also relatively well represented. The family Rhynchitidae is represented by 1000 specimens of 106 species and subspecies, while Attelabidae by 1346 specimens (975 Apoderinae and 371 Attelabinae) of 202 species and subspecies. Tribes Rhynchitini and Apoderini are especially species-rich in the Pluciński Collection. The detailed list of taxa is given below.




2-3. Specimens of Attelabidae (examples of Hoplapoderini) from the Pluciński Collection

**Rhynchitidae**
**Rhynchitinae**
**Auletini**
*Aletinus akinini* (Faust, 1885)
*Aletinus maculipennis* (Jacquelin du Val, 1854)
*Auletes tubicen* Boheman, 1829
*Auletobius irkutensis* Faust, 1893
*Auletobius sanguisorbae* (Schrank, 1798)
*Eomesauletes politus* (Lepeletier & Audient-Serville, 1825)
*Eurostauletes rubrorufus* (Solsky, 1880)
*Hamiltoniauletes cassandrae* (LeConte, 1876)
*Mesauletobius pubescens* (Kiesenwetter, 1851)
*Pseudauletes luceus* (Gyllenhal, 1839)
*Pseudomesauletes uniformis* (Roelofs, 1874)
**Bycticini**
*Aspidobycticus clavicornis* (Pascoe, 1875)
*Aspidobycticus coerulans* (Voss, 1929)
*Aspidobycticus lacunipennis* (Jekel, 1860)
*Aspidobycticus paviei* (Aurivillius, 1891)
*Bycticus betulae* (Linnaeus, 1758)
*Bycticus congener* Jekel, 1860
*Bycticus fausti* Sharp, 1889
*Bycticus impressus* (Fairmaire, 1900)
*Bycticus populi* (Linnaeus, 1758)
*Bycticus princeps* (Solsky, 1872)
*Bycticus rugosus* (Gebler, 1830)
*Bycticus venustus* (Pascoe, 1875)
*Listrobycticus corvinus* (Pascoe, 1885)
*Nelistrobycticus gagates* (Pascoe, 1875)
**Deporaini**
*Caenorhinus glastinus* (LeConte, 1857)
*Caenorhinus mannerheimii* (Hummel, 1823)
*Caenorhinus marginatus* (Pascoe, 1883)
*Capylarodepus klapperichi* (Voss, 1941)
*Chokkirius truncatus* (Sharp, 1889)
*Chonostropheus chujoi* Voss, 1956
*Chonostropheus seminiger* (Reitter, 1881)
*Chonostropheus tristis* (Fabricius, 1794)
*Deporaus affectatus* Faust, 1887
*Deporaus betulae* (Linnaeus, 1758)
*Deporaus bicolor* (Voss, 1938)
*Deporaus unicolor* (Roelofs, 1874)
*Exrhynchites puberulus* (Faust, 1895)
*Paradeporaus depressus* (Faust, 1882)




5-8. Examples of spectacular Attelabidae specimens from the Pluciński Collection. *Echinapoderus enoplus* (Brancsik) (5), *Lagenoderus gnomoides* White (6), *Cycnotrachelus flavotuberosus* (Jekel) (7), *Lamprolabus spiculatus* (Boheman) (8)

**Eugnamptini**

*Aderorhinus crioceroides* (Roelofs, 1874)
*Aderorhinus pedicellaris* Voss, 1939
*Chryseugnamptus flavinasus* (Boheman, 1845)
*Eugnamptobius aurifrons* (Roelofs, 1874)
*Eugnamptobius flavipes* (Sharp, 1889)
*Neoeugnamptus amurensis* (Faust, 1882)
*Neoeugnamptus bimaculosus* (Voss, 1939)
*Neoeugnamptus hirsutus* (Voss, 1924)

**Rhynchitini**

*Ameroinvolvulus scutellaris* (Sharp, 1889)
*Amerorhynchites aeneus* (Boheman, 1829)
*Amerorhynchites eximius* (LeConte, 1876)
*Amerorhynchites mexicanus* (Gyllenhal, 1833)
*Amerorhynchites obscuricolor* (Voss, 1938
*Amerorhynchites planifrons* (LeConte, 1876)
*Amerorhynchites pseudomexicanus* (Hamilton, 1974)
*Amerorhynchites quadripennis* (Fall, 1929)
*Amerorhynchites subauratus* (Sharp, 1889)
*Auletomorphus cupidio* (Pascoe, 1875)
*Auletomorphus tonkinensis* (Voss, 1924)
*Clinorhynchidius flexirostris* (Voss, 1938)
*Cneminvolvulus gensanensis* (Voss, 1920)
*Cneminvolvulus rugosicollis* (Voss, 1920)
*Cyllorhynchites cumulatus* (Voss, 1930)
*Cyllorhynchites kawiensis* (Hartmann, 1899)
*Cyllorhynchites ursulus* (Roelofs, 1874)
*Involvulus amabilis* (Roelofs, 1874)
*Involvulus caeruleus* (DeGeer, 1775)
*Involvulus cupreus* (Linnaeus, 1758)
*Involvulus pilosus* (Roelofs, 1874)
*Involvulus placidus* (Sharp, 1889)
*Involvulus pubescens* (Fabricius, 1775)
*Lasiorhynchites brevirostris* (Roelofs,1874)
*Lasiorhynchites caeruleocephalus* (Schaller, 1783)
*Lasiorhynchites cavifrons* (Gyllenhal, 1833)
*Lasiorhynchites olivaceus* (Gyllenhal, 1833)
*Lasiorhynchites praeustus* (Boheman, 1845)
*Lasiorhynchites sericeus* (Herbst, 1797)
*Mecorhis aethiops* (Bach, 1854)
*Mecorhis pilositessellata* (Voss, 1922)
*Mecorhis plumbea* (Roelofs, 1874)
*Mecorhis ungarica* (Herbst, 1783)
*Merhynchites bicolor* (Fabricius, 1775)
*Merhynchites wickhami* (Cockerell, 1912)
*Neocoenorrhinus abeillei* (Desbrochers, 1869)
*Neocoenorrhinus assimilis* (Roelofs, 1874)
*Neocoenorrhinus germanicus* (Herbst, 1797)
*Neocoenorrhinus interpunctatus* (Stephens, 1831)
*Neocoenorrhinus interruptus* (Voss, 1920)
*Neocoenorrhinus minutus* (Herbst, 1797)
*Neocoenorrhinus pauxillus* (Germar, 1824)
*Perrhynchites aereipennis* (Desbrochers, 1895)
*Rhodocyrtus cribripennis* (Desbrochers, 1869)
*Rhynchites auratus* (Scopoli, 1763)
*Rhynchites bacchus* (Linnaeus, 1758)
*Rhynchites fulgidus* Faldermann, 1835
*Rhynchites giganteus* Schoenherr, 1832
*Rhynchites heros* Roelofs, 1874
*Rhynchites lenaeus* Faust, 1891
*Rhynchites smyrnensis* Desbrochers, 1869
*Tatianaerhynchites aequatus* (Linnaeus, 1767)
*Temnocerus aureus* (LeConte, 1876)
*Temnocerus coeruleus* (Fabricius, 1798)
*Temnocerus dilatarostris* Hamilton, 1971
*Temnocerus levirostris* (Fall, 1929)
*Temnocerus longiceps* (C.G. Thomson, 1888)
*Temnocerus nanus* (Paykull, 1792)
*Temnocerus semicyaneus* (Bedel, 1884)

**Attelabidae**

**Apoderinae**

**Apoderini**

*Anisonychus atropterus* (Voss, 1927)
*Anisonychus cinchonae* (Roepke, 1911)
*Anisonychus melanopterus* (Wiedemann, 1819)
*Anisonychus rugosus* (Voss, 1927)
*Apoderus coryli* (Linnaeus, 1758)
*Apoderus jekelii* Roelofs, 1874
*Apoderus rugicollis* Schilsky, 1906
*Borneocorynus fenestratus* (Heller, 1908)
*Centrocorynus rufulus* Voss, 1929
*Centrocorynus scutellaris* (Gyllenhal, 1833)
*Compsapoderus dimidiatus* (Faust, 1890)
*Compsapoderus erythropterus* (Gmelin, 1790)
*Compsapoderus foveipennis* (Suffrian, 1870)
*Compsapoderus geminus* (Sharp, 1889)
*Compsapoderus lepidulus* (Voss, 1927)
*Compsapoderus papei* (Voss, 1927)
*Cycnotrachelodes camphoricola* (Voss, 1924)
*Cycnotrachelodes coeruleatus* (Faust, 1895)
*Cycnotrachelodes cyanopterus* (Motschulsky, 1861)
*Cycnotrachelodes roelofsi* (Harold, 1877)
*Cycnotrachelus flavoguttatus* Voss, 1929
*Cycnotrachelus flavotuberosus* (Jekel, 1860)
*Echinapoderus enoplus* (Brancsik, 1893)
*Echinapoderus horridulus* (Boheman, 1845)
*Echinapoderus kilimanus* (Aurivillius, 1910)
*Echinapoderus partitialis* Voss, 1929
*Echinapoderus ugandensis* Voss, 1926
*Hamiltonius notatus* (Fabricius, 1792)
*Hamiltonius sexguttatus* (Voss, 1927)
*Hamiltonius trinotatus* (Faust, 1883)
*Heterapoderus bicallosicollis* (Voss, 1932)
*Heterapoderus brachialis* (Voss, 1924)

*Heterapoderus cantonensis* (Voss, 1927)
*Heterapoderus crenatus* (Jekel, 1860)
*Heterapoderus geniculatus* (Jekel, 1860)
*Heterapoderus interpositus* Kessel in litt.
*Heterapoderus pauperulus* (Voss, 1927)
*Heterapoderus pullus* (Jekel, 1860)
*Heterapoderus sulcicollis* (Jekel, 1860)
*Leptapoderus affinis* (Schilsky, 1906)
*Leptapoderus balteatus* (Roelofs, 1874)
*Leptapoderus basalis* (Jekel, 1860)
*Leptapoderus carbonicolor* (Motschulsky, 1860)
*Leptapoderus collaris* (Jekel, 1860)
*Leptapoderus nigroapicatus* (Jekel, 1860)
*Leptapoderus praecellens* (Sharp, 1889)
*Leptapoderus quadripunctatus* (Gyllenhal, 1833)
*Leptapoderus rubidus* (Motschulsky, 1860)
*Leptapoderus rufobasalis* (Heller, 1908)
*Leptapoderus rufus* (Fabricius, 1801)
*Leptapoderus sejugatus* (Voss, 1924)
*Leptapoderus sinicus* (Voss, 1927)
*Leptapoderus submaculatus* (Voss, 1927)
*Opanassenkovius verrucosus* (Pascoe, 1881)
*Paracycnotrachelus chinensis* (Jekel, 1860)
*Paracycnotrachelus collaris* (Jekel, 1860)
*Paracycnotrachelus consimilis* Voss, 1929
*Paracycnotrachelus curvaticeps* (Pic, 1932)
*Paracycnotrachelus cygneus* (Fabricius, 1801)
*Paracycnotrachelus longiceps* (Motschulsky, 1860)
*Paracycnotrachelus moluccarum* Voss, 1929
*Paracycnotrachelus montanus* (Jekel, 1860)
*Paracycnotrachelus nietneri* (Jekel, 1860)
*Paracycnotrachelus rufobasalis* (Heller, 1908)
*Paracycnotrachelus wallacei* (Faust, 1890)
*Paratrachelophorus brachmanus* Voss, 1924
*Paratrachelophorus longicornis* (Roelofs, 1874)
*Paratrachelophorus nodicornis* Voss, 1924
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*Physapoderus aemulus* (Faust, 1894)
*Physapoderus biguttatus* (Fabricius, 1801)
*Physapoderus bilineatus* (Faust, 1883)
*Physapoderus crucifer* (Heller, 1922)
*Physapoderus flavotorosus* (Faust, 1898)
*Physapoderus gracilicornis* (Voss, 1929)
*Physapoderus proximus* (Voss, 1929)
*Physapoderus ruficlavis* (Voss, 1929)
*Pseudocycnotrachelus ledyardi* (Heller, 1915)
*Strigapoderus indicus* (Heller, 1908)
*Strigapoderus javanicus* (Jekel, 1860)
*Strigapoderus tranquebaricus* (Fabricius, 1798)

**Clitostylini**

*Allapoderus cyaneovirens* (Jekel, 1860)
*Allapoderus dentipes* (Faust, 1883)
*Maculphrysus inspersus* (Voss, 1929)
*Maculphrysus quadrimaculatus* (Faldermann, 1835)
*Morphocorynus nigricollis* (Roelofs, 1874)
*Pseudophrysus parvulus* (Voss, 1928)

**Hoplapoderini**

*Homapoderus anxius* (Faust, 1894)
*Hoplapoderus calliginosus* (Faust, 1894)
*Hoplapoderus echinatus* (Gyllenhal, 1833)
*Hoplapoderus gemmatus* (Thunberg, 1784)
*Hoplapoderus gemmosus* (Jekel, 1860)
*Hoplapoderus hystrix* (Fabricius, 1801)
*Paroplapoderus amoenus* Voss, 1926
*Paroplapoderus armatus* Voss, 1926
*Paroplapoderus bistriospinosus* (Faust, 1894)
*Paroplapoderus bituberculatus* Voss, 1926
*Paroplapoderus breviceps* Voss, 1926
*Paroplapoderus coniceps* Voss, 1926
*Paroplapoderus doriae* (Pascoe, 1885)
*Paroplapoderus fallax* (Gyllenhal, 1839)
*Paroplapoderus fasciatus* Voss, 1928
*Paroplapoderus pardalis* (Snellen van Vollenhoven, 1865)
*Paroplapoderus semiannulatus* (Jekel, 1860)
*Paroplapoderus spiniferus* (Roelofs, 1880)
*Paroplapoderus tentator* (Faust, 1895)
*Paroplapoderus turbidus* Voss, 1926
*Paroplapoderus validus* Voss, 1926
*Paroplapoderus vanvolxemi* (Roelofs, 1875)
*Paroplapoderus vitticeps* (Jekel, 1860)
*Phymatapoderus flavimanus* (Motschulsky, 1860)
*Phymatapoderus latipennis* (Jekel, 1860)
*Phymatapoderus subornatus* (Sharp, 1889)
*Rhamnapoderus dumosus* (Gyllenhal, 1839)
*Rhamnapoderus sinifer* (Fahraeus, 1871)
*Rhamnapoderus spiculosus* (Jekel, 1860)
*Rhamnapoderus verticalis* Voss, 1926
*Strigapoderopsis submarginatus* (Gyllenhal, 1839)
*Tomapoderus coeruleipennis* (Schilsky, 1903)
*Tomapoderus ruficollis* (Fabricius, 1781)
*Tomapoderus subconicollis* Voss, 1926

**Trachelophorini**

*Madagasocycnelus elegans* (Voss, 1929)
*Madagasocycnelus humeralis* (Olivier, 1807)
*Metriotrachelus festivus* (Klug, 1833)
*Trachelophoridius flavicornis* (Gyllenhal, 1839)
*Trachelophoridius tamatavoensis* Voss, 1929
*Trachelophorus abdominalis* (Gyllenhal, 1839)
*Trachelophorus ardea* (Gyllenhal, 1839)
*Trachelophorus fausti* Voss, 1929
*Trachelophorus giraffa* (Jekel, 1860)
*Trachelophorus madegassus* (Hustache, 1922)
*Trachelophorus signatus* Voss, 1929
*Vossitrachelophorus limbatus* (Faust, 1889)

**Attelabinae**

**Attelabini**

*Attelabus cyanellus* Voss, 1925
*Attelabus nitens* (Scopoli, 1763)
*Attelabus sulcifrons* (Argod-Vallon, 1895)
*Catalabus quadriplagiatus* Voss, 1953
*Cyrtolabus christophi* (Faust, 1884)
*Cyrtolabus mutus* (Faust, 1890)
*Henicolabus giganteus* (Faust, 1882)
*Henicolabus gigantoides* (Voss, 1925)
*Henicolabus hypomelas* (Fairmaire, 1878)
*Henicolabus lewisi* (Sharp, 1889)
*Henicolabus octomaculatus* (Jekel, 1860)
*Henicolabus simplex* Voss, 1925
*Humerilabus fausti* (Voss, 1925)
*Isolabus indigaceus* (Pascoe, 1883)
*Isolabus jekeli* Legalov, 2002
*Isolabus magnus* Voss, 1925
*Lamprolabus bihastatus* (Frivaldszky, 1892)
*Lamprolabus bispinosus* (Gyllenhal, 1833)
*Lamprolabus gestroi* (Faust, 1894)
*Lamprolabus spiculatus* (Boheman, 1845)
*Lamprolabus trapezicollis* (Heller, 1922)
*Omolabus centomyrciae* (Voss, 1925)
*Omolabus corvinus* (Gyllenhal, 1839)
*Omolabus laesicollis* (Gyllenhal, 1839)
*Omolabus nitidus* (Fabricius, 1801)
*Paramecolabus discolor* (Fahraeus, 1839)
*Paramecolabus feae* (Faust, 1894)
*Phialodes rufipennis* Roelofs, 1874

**Euopini**

*Euops championi* Voss, 1929
*Euops chinensis* Voss, 1922
*Euops cuprinus* Voss, 1956
*Euops elongatus* Voss, 1925
*Euops guineensis* Voss, 1922
*Euops lespedezae koreanus* Sawada & Morimoto, 1985
*Euops lespedezae lespedezae* Sharp, 1889
*Euops punctatostriatus* (Motschulsky, 1860)
*Euops pustulosus* Sharp, 1889
*Euops splendidus* Voss, 1930
*Euops togoensis* Faust, 1895
*Euops viridifuscus* Voss, 1922

**Euscelini**

*Clinolabus buqueti* (Jekel, 1860)
*Clinolabus melanocoryphus* (Germar, 1824)
*Eleuscelus lineatus* (Voss, 1925)
*Emphyleuscelus corallinus* (Gyllenhal, 1839)
*Euscelus mundanus* (Sharp, 1889)
*Euscelus peruanus* Voss, 1925
*Euscelus scutellatus* (Klug, 1829)

**Euscelophilini**

*Calolabus cupreus* (Roelofs, 1874)
*Euscelophilus burmanus* Marshall, 1948
*Euscelophilus camelus* Voss, 1937
*Euscelophilus chinensis* (Schilsky, 1906)
*Euscelophilus gibbicollis* (Schilsky, 1906)
*Trachelolabus floridus* (Zhang, 1993)

**Hybolabini**

*Heterolabus fabricii* Legalov, 2002
*Himatolabus axillaris* (Gyllenhal, 1839)
*Himatolabus rhois* (Boheman, 1829)
*Homoeolabus analis* (Illiger, 1794)
*Hybolabus ater* (Olivier, 1789)
*Hybolabus columbinus* (Erichson, 1848)
*Hybolabus cyaneus* (Klug, 1825)
*Hybolabus peruanus* Voss, 1925
*Synolabus bipustulatus* (Fabricius, 1776)

**Lagenoderini**

*Lagenoderus gnomoides* White, 1840
*Phymatopsinus pustula* (Ancey, 1881)
*Pleurolabus algoensis* (Péringuey, 1888)
*Pleurolabus costulatus* (Jekel, 1860)
*Scotopsinus verrucifer* (Jekel, 1860)

**Pilolabini**

*Pseudopilolabus sumptuosus* (Gory, 1834)
*Pseudopilolabus viridans* (Gyllenhal, 1839)

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# Paweł Stachowiak and his weevil collection in the Museum of Natural History, University of Wrocław

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Abstract. Paweł Stachowiak (1952-2014), a forester and entomologist from Poznań, was the only coleopterist after WWII who extensively studied weevils of Western Poland and published numerous comprehensive faunistic surveys of various regions, national parks and nature reserves. He passed away in 2014 but his collections were acquired by the Museum of Natural History, University of Wrocław (MNHW) already in 2004. Their main part consists of 52119 dry-mounted specimens representing 290 genera and 1111 identified nominal species and subspecies of Curculionoidea. This is an important collection of voucher specimens that have been used in 40 faunistic articles on the weevils of Poland published by Stachowiak. MNHW is also in possession of a large and still not organized collection of unsorted dried weevils and other beetles from Stachowiak's field studies in 1970-2004, preserved in thousands of vials and boxes. This part of the collection is estimated at over half a million specimens. A biography of P. Stachowiak with details of his scientific activities and his full bibliography are given.

Key words: Stachowiak, Insecta, Coleoptera, Curculionoidea, weevils, collection, bibliography, Wrocław University, Poland.

## INTRODUCTION

Paweł Stanisław Stachowiak (1952-2014) (Fig. 1) was a Polish entomologist and forester. Born on the 5th of May 1952 in Krzystkowice, he obtained his basic education in a primary school in Zielona Góra. Already during his school years Stachowiak showed a great interest in nature and especially insects, and after completing the Forestry Technical School in Rzepin, in 1971 he entered the Forestry Faculty of the Poznań University of Life Sciences. Already in the first grade Stachowiak became a member of the Forestry Students' Research Group and the Polish Entomological Society, to

develop his entomological interests. In 1977 he got his MSc degree for a thesis entitled "Weevils (Curculionidae) of trees and bushes in the Zielonka Forest". Already as a student STACHOWIAK was employed as a technical assistant in the Institute of Forest Protection, Poznań University of Life Sciences. In 1976-1981 he worked in the Department of Experimental Forestry in Siemianice as a specialist, and then for one year in the Wielkopolski National Park. In 1983-1992 STACHOWIAK was employed, again as a technical specialist, in the Department of Forest Entomology, Poznań University of Life Sciences, where he submitted a dissertation "Folivore beetles in sapling cultivations in the forest department Krzystowice and the Department of Experimental Forestry in Siemianice" and in 1986 was awarded a PhD degree. Since 1990-ties he has been struggling with an incurable disease, and in 2004, aware of his terminal condition, arranged for his collection, library and his handwritten notebooks to be transferred to the Museum of Natural History, University of Wrocław (MNHW). Paweł STACHOWIAK died on the 25th of June 2014.

STACHOWIAK's early fascination with weevils lasted his entire life and his scientific activities were focused on this large and diverse group of beetles. He shared this interest with the junior author (MW), we first met around 1980 in Siemianice and then stayed in contact for many years, occasionally collaborating on several faunistic projects. Paweł STACHOWIAK was an indefatigable and enormously effective field collector, whose activities were restricted almost exclusively to the territory of Poland. He has published 54 papers (a complete list can be found in the References), among them 40 entirely or partly focused on weevils. During his fieldwork he discovered six species new to the

1. Paweł STACHOWIAK, end of 1970s

fauna of Poland (Stachowiak 1978, 1979, 1988a, 1997, Stachowiak & Wanat 2001, Wanat *et al*. 2003). Even a greater accomplishment was a rediscovery in the Białowieża National Park the weevil species *Euryommatus mariae* Roger, described 130 years earlier from the Beskidy Mts and since then never collected again (Stachowiak 1997). Stachowiak was probably the only coleopterist since the middle of 19th c. who was lucky enough to collect this relic and legendary weevil using a beating net, while all later records were based on specimens taken from traps or reared. Stachowiak also significantly contributed to the knowledge of the weevil fauna of various regions, national parks and nature reserves in Poland: Wielkopolski National Park (Stachowiak & Baraniak 1980), Babia Góra National Park (Stachowiak 1980), Zielonka Forest near Poznań (Stachowiak 1984), Wolin National Park (Stachowiak 1987a), Karkonosze National Park (Stachowiak 1988b, 1993a), three forest reserves near Kępno, Central Poland (Stachowiak 1992d), Bieszczady Mts (Stachowiak 1994a), Bielinek Nature Reserve (Stachowiak 1994b), Bukowa Forest near Szczecin (Stachowiak 1995b) or Białowieża Primeval Forest, including its Belarusian part (Stachowiak 1995c, 1997, Stachowiak & Gutowski 1999). He also published several synoptic studies in which he summarized distributional data on selected weevil taxa in Poland (Stachowiak 1987b, 1993b, 1999, 2001, 2002). Stachowiak 's work was based not only on his own field studies but also involved important historical museum collections - he identified

2. General view of a drawer from the main Stachowiak Collection


3. A large part of the collection consists of thousands of labelled vials and boxes with specimens documenting Stachowiak's faunistic and ecological projects

weevils of the Wielkopolska Region in the collections of MYRDZIK (STACHOWIAK 1995a) and SZULCZEWSKI (STACHOWIAK 1996). Occasionally, he also studied cases of teratology in weevils (STACHOWIAK 1982).

STACHOWIAK's numerous studies were devoted to forest ecology, focused mainly on the role of weevils in forest ecosystems (SZMIDT & STACHOWIAK 1980, 1981, BARANIAK & STACHOWIAK 1985ab, STACHOWIAK 1988c, 1991ab, 1992a-c, 1993c, PRZEZBÓRSKI & STACHOWIAK 1989, LUTEREK *et al*. 1995). However, he was also interested in other economically important groups of insects and various specific problems related to forest management (BARANIAK & STACHOWIAK 1983, 1985cd, 1988, BANASZAK *et al*. 1984, STACHOWIAK & SZMIDT 1985, KORCZYŃSKI *et al*. 1984ab, BAŁAZY *et al*. 1985, BARANIAK *et al*. 1985, STACHOWIAK & STACHOWIAK 1997). He also participated in a study of food preferences of the white stork *Ciconia ciconia* (L.) (PINOWSKA *et al*. 1991). In STACHOWIAK's bibliography one can also find an article on a monument commemorating most merited persons involved in nature conservation in Poland (STACHOWIAK 1981). His last publication was a faunistic record of a rare staphylinid beetle occurring on Babia Góra Mt. (MAZUR & STACHOWIAK 2009).

The STACHOWIAK Collection is one of the most recent acquisitions of MNHW and the largest separate collection in the Museum in terms of the number of specimens. Apart from the main mounted, organized and identified collection of weevils (Fig. 2) and approximately 40 drawers and boxes with many other insects, it comprises also thousands of glass vials and matchboxes full of field samples collected in 1970-2004 (Fig. 2). This part is still only provisionally sorted, and the samples frequently contain beetles representing various other families. The number of specimens in this unmounted collection is estimated to likely exceed half a million.

The main weevil collection of STACHOWIAK comprises 52119 dry-mounted specimens representing all families of Curculionoidea living in Europe. The specimens are identified and over 95% of them come from Poland, while only a small fraction is from abroad, mostly from other European countries, Turkey, Morocco and USA, obtained as a gift or in exchange from various weevil specialists. This collection is completely catalogued and specimen details of 1111 species and subspecies are available from MNHW electronic databases. The STACHOWIAK Collection does not contain primary type specimens; there are only 2 paratypes of *Catapion koestlini* DIECKMANN and 2 paratypes of *Omphalapion pseudodispar* WANAT, currently included in the main type specimen MNHW collection. Voucher specimens represent a reference material for 40 publications, an invaluable collection documenting approximately three decades of extensive faunistic studies of Polish weevils. Further details of the STACHOWIAK Collection can be found in Table 1.

The STACHOWIAK Collection is one of the largest collections of Curculionoidea in Poland and the only substantial post-war source of distributional data concerning weevils of western Poland, where for many years only P. STACHOWIAK has been studying this enormously large and diverse superfamily. It has a significant scientific value and it is very fortunate that after the premature death of its owner, the collection has not been scattered or destroyed, but is now deposited in a natural history museum, where under a proper care it has the greatest chances to serve in further studies.

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Table 1. Summary of taxa and specimens in the Curculionoidea MNHW Stachowiak Collection.

| family | subfamily | tribe | genera | species & subspecies | specimens |
|---|---|---|---|---|---|
| **Nemonychidae** | | | **3** | **3** | **89** |
| | Nemonychinae | | 1 | 1 | 15 |
| | Cimberidinae | | 2 | 2 | 74 |
| | | Cimberidini | 1 | 1 | 70 |
| | | Doydirhynchini | 1 | 1 | 4 |
| **Anthribidae** | | | **16** | **21** | **790** |
| | Anthribinae | | 12 | 14 | 406 |
| | | Allandrini | 2 | 3 | 16 |
| | | Anthribini | 1 | 2 | 155 |
| | | Discotenini | 1 | 1 | 2 |
| | | Piesocorynini | 1 | 1 | 1 |
| | | Platyrhinini | 2 | 2 | 25 |
| | | Platystomini | 1 | 1 | 48 |
| | | Trigonorhinini | 1 | 1 | 4 |
| | | Tropiderini | 1 | 1 | 22 |
| | | Zygaenodini | 2 | 2 | 133 |
| | Choraginae | | 3 | 3 | 9 |
| | | Choragini | 2 | 2 | 2 |
| | | Araecerini | 1 | 1 | 7 |
| | Urodontinae | | 1 | 4 | 375 |
| **Rhynchitidae** | Rhynchitinae | | **14** | **29** | **739** |
| | | Auletini | 2 | 2 | 4 |
| | | Byctiscini | 1 | 2 | 145 |
| | | Deporaini | 2 | 4 | 98 |
| | | Rhynchitini | 9 | 21 | 492 |
| **Attelabidae** | | | **3** | **3** | **139** |
| | Apoderinae | Apoderini | 2 | 2 | 77 |
| | Attelabinae | Attelabini | 1 | 1 | 62 |
| **Apionidae** | Apioninae | | **39** | **124** | **8029** |
| | | Apionini | 1 | 5 | 290 |
| | | Aplemonini | 6 | 14 | 1203 |
| | | Aspidapiini | 2 | 4 | 129 |
| | | Ceratapiini | 5 | 16 | 490 |
| | | Exapiini | 1 | 6 | 464 |
| | | Ixapiini | 1 | 1 | 5 |
| | | Kalcapiini | 4 | 12 | 407 |
| | | Malvapiini | 3 | 4 | 41 |
| | | Oxystomatini | 14 | 46 | 3197 |
| | | Piezotrachelini | 2 | 16 | 1803 |
| **Nanophyidae** | | | **5** | **13** | **249** |
| | | Corimaliini | 2 | 3 | 5 |
| | | Nanophyini | 3 | 10 | 244 |

| | | | | | |
|---|---|---|---|---|---|
| **Curculionidae** | | | **210** | **918** | **42066** |
| | Bagoinae | Bagoini | 1 | 15 | 188 |
| | Baridinae | Baridini | 6 | 17 | 427 |
| | Brachycerinae | Brachycerini | 1 | 4 | 8 |
| | Curculioninae | | 32 | 206 | 9157 |
| | | Acalyptini | 1 | 2 | 49 |
| | | Acentrusini | 1 | 1 | 1 |
| | | Anoplini | 1 | 3 | 198 |
| | | Anthonomini | 3 | 21 | 1122 |
| | | Cionini | 3 | 18 | 1295 |
| | | Curculionini | 2 | 11 | 483 |
| | | Ellescini | 2 | 26 | 800 |
| | | Mecinini | 5 | 37 | 1638 |
| | | Rhamphini | 6 | 31 | 1164 |
| | | Smicronychini | 2 | 5 | 34 |
| | | Storeini | 1 | 4 | 19 |
| | | Styphlini | 2 | 2 | 5 |
| | | Tychiini | 3 | 45 | 2349 |
| | Ceutorhynchinae | | 42 | 165 | 6383 |
| | | Amalini | 1 | 1 | 12 |
| | | Ceutorhynchini | 26 | 133 | 5391 |
| | | Cnemogonini | 1 | 1 | 26 |
| | | Mononychini | 1 | 1 | 64 |
| | | Phytobiini | 6 | 21 | 557 |
| | | Scleropterini | 5 | 5 | 301 |
| | Conoderinae | Coryssomerini | 2 | 3 | 32 |
| | Cossoninae | | 10 | 19 | 608 |
| | | Cossonini | 2 | 4 | 153 |
| | | Onycholipini | 4 | 4 | 85 |
| | | Pentarthrini | 1 | 1 | 1 |
| | | Rhyncolini | 3 | 10 | 369 |
| | Cryptorhynchinae | | 8 | 14 | 174 |
| | | Camptorhinini | 1 | 1 | 8 |
| | | Cryptorhynchini | 6 | 12 | 160 |
| | | Gasterocercini | 1 | 1 | 6 |
| | Cyclominae | | 4 | 5 | 178 |
| | | Dichotrachelini | 1 | 1 | 2 |
| | | Hipporhinini | 3 | 4 | 176 |
| | Dryophthorinae | | 3 | 6 | 145 |
| | | Dryophthorini | 1 | 1 | 43 |
| | | Litosomini | 1 | 3 | 94 |
| | | Sphenophorini | 1 | 2 | 8 |
| | Entiminae | | 58 | 306 | 18822 |
| | | Alophini | 3 | 5 | 81 |
| | | Blosyrini | 1 | 1 | 4 |
| | | Brachyderini | 4 | 11 | 1771 |

| | | | | |
|---|---|---|---|---|
| | Cneorhinini | 3 | 4 | 146 |
| | Cyphicerini | 1 | 1 | 2 |
| | Geonemini | 1 | 4 | 57 |
| | Myorhinini | 2 | 2 | 3 |
| | Omiini | 4 | 8 | 86 |
| | Otiorhynchini | 5 | 106 | 3556 |
| | Peritelini | 4 | 7 | 517 |
| | Phyllobiini | 6 | 30 | 3492 |
| | Polydrusini | 4 | 37 | 2629 |
| | Psalidiini | 1 | 1 | 13 |
| | Sciaphilini | 9 | 33 | 1391 |
| | Sitonini | 4 | 29 | 4331 |
| | Tanymecini | 4 | 11 | 275 |
| | Trachyphloeini | 1 | 10 | 413 |
| | Tropiphorini | 1 | 6 | 55 |
| Erirhininae | | 6 | 14 | 526 |
| | Erirhinini | 5 | 12 | 433 |
| | Tanysphyrini | 1 | 2 | 93 |
| Hyperinae | Hyperini | 5 | 27 | 1873 |
| Lixinae | | 19 | 66 | 1360 |
| | Cleonini | 15 | 25 | 441 |
| | Lixini | 4 | 41 | 919 |
| Mesoptiliinae | Magdalidini | 1 | 18 | 662 |
| Molytinae | | 12 | 34 | 1521 |
| | Hylobiini | 1 | 5 | 542 |
| | Lepyrini | 1 | 2 | 140 |
| | Molytini | 6 | 15 | 365 |
| | Pissodini | 1 | 8 | 443 |
| | Trachodini | 1 | 1 | 27 |
| | Typoderini | 2 | 3 | 4 |
| Orobitidinae | | 1 | 1 | 48 |
| Raymondionyminae | | 1 | 1 | 4 |
| **Total** | | **290** | **1111** | **52119** |

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