



BIOGRAPHICAL REMARKS ON DR. ANTONI JÓZEF WAGNER AND THE COLLECTION OF HELICINIDAE (GASTROPODA: NERITOPSINA) AT THE MUSEUM AND INSTITUTE OF ZOOLOGY IN WARSAW

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ABSTRACT: The Helicinidae stored at the Museum and Institute of Zoology in Warsaw were studied in 2003. The 990 lots encompass the whole collection of A. J. WAGNER, and a minor part consists of material collected by W. LUBOMIRSKI. The Wagner collection contains a significant number of the original specimens for the volume of the “Martini & Chemnitz – Systematisches Conchylien-Cabinet” on Helicinidae which represents the most recent comprehensive revision of the family. A brief description of the contents of the collection is given. Additional search for historic archive material revealed new biographic information about the malacologist ANTONI JÓZEF WAGNER (1860–1928) which is presented here for the first time. The main sources were letters by WAGNER to RUDOLPH STURANY, Vienna, and EDUARD VON MARTENS, Berlin. Special attention is paid to the historical background of his studies on the Helicinidae. An annotated list of malacologists of WAGNER’s time, who contributed most of the helicinid specimens in exchange, is included, based on label information in the collection and comments in an unpublished catalogue written by WAGNER.

KEY WORDS: malacology, history, Antoni Józef Wagner, Helicinidae

INTRODUCTION

In 2003, during my visit to Warsaw, I studied WAGNER’s collection of Helicinidae stored in the Museum and Institute of Zoology (MIZ). The present paper will focus on WAGNER’s history and person in connection with his research on this family of terrestrial gastropods and only a rough description of the collection will be given. A more detailed report about its contents will be presented in another paper.

WAGNER is well-known and honoured as a researcher of European land snails, and one of his most important contributions to malacology was the consistent use of anatomical characters to solve systematic questions at the generic and, especially, at the species level. However, some of his first publications cover the exotic tropical land snails of the family Helicinidae, whose members he never had the opportunity to collect himself, nor could he study their anatomy al-

though he theoretically considered the subject of sexual dimorphism manifest in the shell shape (WAGNER 1910).

After preliminary studies (WAGNER 1905a, b), he provided the second and up to now the last comprehensive revision of Helicinidae (WAGNER 1907–1911) including several new taxa. The first serious compilations of Helicinidae date back to SOWERBY (1842), L. PFEIFFER (1850–1853) and SOWERBY (1866). Some additions and corrections to WAGNER’s papers were published by FULTON (1915). Fortunately, nearly all of WAGNER’s original material has been preserved and is now stored in the collection of the MIZ. Access to this collection is rather difficult, because on the one hand, since the retirement of Prof. Dr. A. RIEDEL it is only supervised by him on a voluntary basis and, on the other hand, it has been moved out of Warsaw

to the small village of Łomna where most of the MIZ collections are now kept.

ABBREVIATIONS

MIZ – Museum and Institute of Zoology of the Polish Academy of Sciences, Warsaw, Poland

SMF – Naturmuseum und Forschungsinstitut Senckenberg, Frankfurt a. Main, Germany

ZMB – Museum für Naturkunde der Humboldt-Universität zu Berlin, Germany

A. J. WAGNER AND THE HISTORY OF HIS COLLECTION

POLIŃSKI (1929a, b) published the only two available short biographies of WAGNER. The search for documents relating to WAGNER's life is complicated by the fact that the whole archive of the MIZ (covering the period 1819–1939) was burnt during World War II in 1944. A. RIEDEL, the mollusc curator from approximately 1950 until 31.12.1999, gathered new data from WAGNER's correspondence with RUDOLF STURANY, found in the archives of the Naturhistorisches Museum in Vienna, which have been only presented orally. These documents were re-examined by the author. In addition, a few yet unrecognised letters to EDUARD VON MARTENS, at that time curator at the ZMB, have been studied. Search for more sources of information, such as letters written to other scientists (see below), remained unsuccessful. The complete correspondence of KOBELT is missing (ZILCH 1973: 17), the same seems to apply to that of VON MOELLENDORFF.

Around 1997/1998, rather by chance, catalogues to some parts of the collection written by WAGNER

during his time at the MIZ were found. The 1926 inventory of Helicinidae (WAGNER 1926) is hand-written and lists the material from his own collection and LUBOMIRSKI's.

During World War II, the collection was housed in the building of the MIZ in Warsaw until it was nearly destroyed by an arson, resulting in both floors above the mollusc collection burning down. Subsequently, it was evacuated. RIEDEL, being the first and only curator after the war, rearranged the whole collection (more information about the history of the MIZ is provided by RIEDEL 2000). Of course, he also recognised the importance of the helicinid collection amongst the others and started the compilation of a catalogue of the various type specimens which, however, remained unfinished. At that time, WAGNER's hand-written catalogue was unknown. This catalogue and RIEDEL's draft provide a very good basis for the current work.

BIOGRAPHY OF DR. ANTONI JÓZEF WAGNER

ANTONI JÓZEF WAGNER was born on the 1st of February 1860 near the south-western border of Poland in Ustroń/Wisła. Interestingly, later he dedicated a genus of the Helicinidae, *Ustronia* A. J. Wagner, 1908, to his birth place. A. J. WAGNER was the youngest of nine children. His father JĘDRZEJ WAGNER was an inspector of the Austrian crown successor's forests. He also showed a strong interest in nature, being the author of one of the first Polish manuals for the forest rangers, providing much entomological data (WAGNER 1875). Already while attending the lyceum of Teschen [Cieszyn], A. J. WAGNER collected snails in the surrounding Carpathian mountains. The collection of the MIZ still possesses some old lots from Ustroń and environs. In 1879 he became a student of natural sciences and medicine at the University of Vienna where he showed a special interest in crystallography, mineralogy and malacology.

In 1886 he joined the Austrian army as a physician, in order to have more free time to pursue his scientific interests than he would have had when holding a practice of his own. In fact, he used his time in Her-

mannstadt [= Sibiu, Romania] to study the mountain mollusc fauna of Transylvania. The Bruckental Museum still houses materials collected by WAGNER. During that time he got in contact with M. VON KIMAKOWICZ from Hermannstadt, to whom he dedicated the zonitid species *Daudebardia (Carpathica) kimakowiczi* (A. J. Wagner, 1895). Subsequently, he moved to the military academy in Fischau and later to Wiener-Neustadt, working as a professor of biology. He investigated the Croatian mountains and adjacent areas (at that time belonging to the Austro-Hungarian Monarchy).

In 1905 WAGNER left the military service and settled with his family in Diemlach near Bruck at the Mur in Steiermark [Styria]. Probably those years were the best of his restless life, although not much is known from this period. He could spend most of his time studying molluscs, corresponding and exchanging material with many well-known malacologists of his time (see below); among those was STURANY from the Museum in Vienna. Besides the malacological work, he showed a strong interest in gardening and

music – his daughter ERIKA (later ERIKA SELES) played piano.

Upon the decline of the Austro-Hungarian Monarchy and the outbreak of World War I, he was forced to rejoin the army as a lieutenant-colonel (med.) and as a commander of different hospitals at the south Austrian front line. Much information on the following period of his life (1916–1923) comes from his letters to STURANY. In the hard times of 1916 WAGNER already points out to his attachment to Poland “*Am Tage der Neuerrichtung des Pohnischen Königreiches habe ich Wein getrunken, und mich sehr gefreut; alle Erinnerungen meiner Jugend und der Familie sind an Polen geknüpft ...* [On the day of the re-establishment of the Polish Kingdom I drank wine, and I rejoiced, because all memories of my youth and family are linked to Poland ...]” (letter from 19.2.1916). WAGNER was often sent home to Diemlach from the military service, suffering too strongly from a bilious complaint, with repeated heavy attacks, which was never cured. They were usually accompanied by heavy pain forcing WAGNER to medicate himself with morphine.

In April 1916 he was deeply concerned about the sudden death of KOBELT, an “old friend and my best teacher” and seems to feel responsible for taking over some tasks regarding mollusc research whilst still not having new plans of his own. Typically, WAGNER used to distract himself from his sufferings (health as well as psychological ones) with his scientific studies. Furthermore, he often invited STURANY to his house in Diemlach and such visits – obviously rarely enough possible for STURANY – provided a strong motivation for WAGNER and his family. STURANY was an important source of material and a link to the museum in Vienna. At the end of 1916 WAGNER wrote to him about starting studies on *Albinaria* and being able to do some “peace work” in the evenings.

The beginning of 1917 was again a very difficult time. People were suffering from the negative effects of winter and hunger. WAGNER had to work in an “*Industriegebiet mit Tausenden Arbeitern und Gefangenen; Kampf mit Hunger und Läusen, sowie menschlichen Schwächen, wie da sind Habsucht, Kriegspsychose* [industrial area with thousands of workers and prisoners; fight against hunger and lice, as well as human weaknesses such as greed and war psychosis]” (letter from 28.3.1917). He survived by doping himself with cigarettes and, if those were unavailable, with morphine. In May things started looking better. WAGNER was often travelling on business, but also resumed collecting and took up his studies in order to displace bad memories. In Diemlach, he and his family could mainly provide themselves with their own food supply from their garden. His first wife’s talented daughter gave concerts at home.

The winter again brought difficulties and also a delay of his studies, because often not even coal for heating the room or petroleum for light to work after dark

were available. Besides recurring health problems, doubts began to grow more heavily, due to problems arising at all ends “*ich würde mich am liebsten in einer tiefen Höhle verbergen* [I really would like to hide in a deep cave]” (letter from 24.4.1918) and “*die ganze Sorge und Last um Gegenwart und die noch ungeklärte Zukunft* [all the concern and burden of the present and about the still uncertain future]” (letter from 14.10.1918). All the people around him seemed to show apathy and wish for an end of the war, however achieved. WAGNER wavered between resignation and some kind of hope still retained. His daughter’s letter to STURANY, asking for political news, shows that even she could not ask him about it, because he was too nervous and worried (letter from 22.10.1918).

The beginning of November brought the “end” of the war, hopefully the end of misery, although leaving WAGNER without hope for a nice or even only quiet future. He still continued to work in the hospital for the new government, for the need of the suffering people, and awaited his replacement. Apart from that, he still tried to continue his malacological studies, because “it is uncertain what will come later”. In November, his family had to prepare for an escape, plundering was likely, the collection was hidden and WAGNER was terribly ill and nervous, but still had to continue working, because his commando was the last of the old regime still kept together and operating. By the end of November 1918 (letter from the 27.11.) after being denounced, he experienced a violent search of his house, although the urgent threat to his family seemed to be over.

In December his service officially finished and again he tried to distract himself with studies on clausiliids from Crete that appeared to him as a “*Fata Morgana* of good times”. In fact, he was surprised to conduct better anatomical dissections at that time than ever before. During the subsequent time he tried to withdraw from political issues as much as possible, being frustrated and repeatedly mistreated. The coming spring was his hope: “*... ich hoffe in der Natur einzig auf Wiederherstellung des Gleichgewichtes* [... hoping that the nature alone will restore a balance]” (letter from 17.12.1918). WAGNER seemed to work as much as possible on the molluscs, but at the same time he had to recognise the end of the “Old Austria” and hoped “*hier unterzukommen, nachdem ich volle 40 Jahre in Deutsch-Österreich gelebt und gelitten habe* [to find a home here after 40 years of living and suffering in German-Austria]” (letter from 20.1.1919). Meanwhile, STURANY had to fight for the survival of the Natural History Museum in Vienna. WAGNER’s confidence about his future grew, he called himself “German-Austrian” and stated “*Nun habe ich ja Zeit und hoffe bei Euch bleiben zu können* [Now I have time and hope to be able to stay with you]” (letter from 29.1.1918). He proudly received the “Offizierkreuz”, being the second highest decoration of the Red Cross

and rejoiced that he and STURANY would soon be countrymen having already participated in elections. WAGNER apparently worked effectively, asking for more preserved material of exotic forms from Indonesia, Oceania, America etc. to solve problems of higher systematics. He expressed his surprise that so few German malacologists would work anatomically. The plates for the Crete study were finished.

In April new doubts began to arise, because the state of Austria was unwilling to continue pension payment to Silesians, and WAGNER's daughter intended to marry and move away "... dann wird es hier wirklich Abend werden, ich glaube kaum es noch lange Zeit hier aushalten zu können [then night will really fall here, I do not believe I can hold on much longer]" and "Nun warte ich auf den Friedensschluß, welcher mir erst meine unbekannte Heimat weisen wird; bis dahin bin ich auf dieser Erde überflüssig und werde nicht weiter beachtet [Now I am waiting for the conclusion of the peace treaty; only this can show where my home country will be; until then I am unnecessary on earth and will not be recognised anymore]". His mental condition was well expressed in his statement "Ich würde jetzt sehr geeignet sein mich einer gefährlichen Expedition im Interesse der Wissenschaft anzuschließen, habe auch solche Sehnsucht nach Ländern und Menschen, welche anders sind als es hier ist [Now I would be well qualified to participate in a dangerous expedition in scientific interest, also keenly longing for other countries and people, different from what I find here]" (all letter from 6.5.1919). His hope finally broke down: "es ist aber auch alles, ... auf einmal wie durch einen Zauber geschwunden [all ... but vanished as if by magic at once]" (letter from 23.5.1919) and Czechia or Poland were the only remaining choices.

Following POLIŃSKY's suggestion WAGNER applied for a newly created position at the Zoological Museum in Warsaw that should become independent from the university on its centenary. At that time he signed his letter "Antoni Wagner Ustroński" (alluding to his origin). Nevertheless, or even especially now, his intense studies continued, the Crete study was nearly completed and he discussed anatomical details a lot. He even started to work on minerals which he had got from Vienna. To alleviate his health problems, he took arsenic stating that "...präpariere mich mit Arsen und bin bald zum Ausstopfen geeignet [... preparing myself with arsenic and soon I will be ready to be stuffed]" (letter from 12.9.1919). By the end of the year, WAGNER started to prepare his departure to Poland, where first he would join the Polish Army as military surgeon (sublieutnant) in the war against the Bolshevik invasion. Still in Austria, after a visit to Vienna, he suffered a complete break-down of his health, postponing his departure. On the one hand he feared conscription, but on the other he was thankful for having a new home. Amongst all his trouble he managed to finish identification work for the mu-

seum in Vienna and handed over the final manuscript version concerning Crete.

Meanwhile, WAGNER seemed to be in a desperate financial situation, having already sold all his collections of stamps and coins to save his molluscs "... so kann ich meine Schnecken noch bewahren [so that I can still keep my snails]" (letter from 6.1.1920). He – which is interesting for the present article – even tried to offer his helicinid collection to the museum in Vienna "Ich erlaube mir heute die Anfrage, ob die käufliche Überlassung meiner abgebildeten Exemplare zu Mart. Chem. Conch. Cab. Heliciniden auch heute noch ventilierbar wäre ... [Today I ventured to ask if the purchasable transfer of my specimens figured in Mart. Chem. Conch. Cab. Heliciniden was still to be discussed ...]" (same letter). Fortunately for the MIZ this never happened.

In March 1920 WAGNER finally and directly moved to Warsaw, where he was very content with the new surroundings, the city, the lower prices and his lessened poverty compared to Austria. Furthermore: "POLIŃSKI [ist] sehr lieb und äußert fürsorglich, ohne Ihn wäre ich wohl verloren gegangen [POLIŃSKI is very kind and extremely solicitous, without him, I suppose, I would have got lost]." (postcard from 4.3.1920). Now started a period of re-building and re-organising the museum in Warsaw and WAGNER questioned STURANY a lot about technical details. Again, the situation was difficult and desperate: "Ich denke gar nicht an die Frage, ob ich mich behaupten und durchsetzen werde, sonst würde es mir glatt unmöglich erscheinen, denn alles was mich umgibt ist Hindernis und meine Gesundheit kann jeden Tag zusammenbrechen, denn die Entbehrungen wären auch für lebenskräftigere Individuen arg [I do not consider the question at all if I can hold my own and be accepted, otherwise it would simply appear to be impossible, because everything that surrounds me is obstacles and my health can break down at any time due to the privations even deleterious to more vital people]" (letter from 7.3.1920).

WAGNER returned to Diemlach at the end of the year to visit his daughter. There he suffered again a physical break-down, delaying his return to Warsaw by 2 months. He tried to stop his morphine treatment and get rid of the addiction, and wished to return as soon as possible. On the 1st of January 1921 he officially became director of the Polish Zoological Museum in Warsaw. He continued to fight for the improvement of the museum, asked for additional zoologists who should be dedicated to museum work, systematics and Poland. He achieved the equalisation of the employees at the museum with those at the university, re-organised the exhibition and took up his malacological studies, among those the old manuscript concerning Crete. Especially after the death of his life companion, this provided him with a strong motivation to recover his health to be able to visit his daughter in Austria once in a while. Those periods of time always seemed to represent some kind of recre-

ational process for WAGNER. “*Nun sehe ich, dass nur die Natur Trost bringt, da sieht man ein, dass alles in Ordnung ist und nur die Menschen Unfug treiben* [Now I see that only nature brings comfort, one understands that everything is in order and only humans are up to mischief]” (letter from 28.6.1923). There, unfortunately, the available correspondence with STURANY ends. Un-

til his sudden death in 1928 (12.6.1928) WAGNER continued his malacological research and its publication. WAGNER donated his valuable collection to the museum in Warsaw, and it still still represents an important part of the whole collection.

HISTORIC BACKGROUND OF THE HELICINID STUDIES

WAGNER's work on Helicinidae fell within the period of his first service in the Austrian military forces and the subsequent intermediate retirement to Steiermark (Styria). He assembled the necessary material for the revision mainly through exchange (see the following paragraph) and it seems that he visited only very few museum collections. His good relations with Vienna are obvious, but the fact that he neither gave any reference to this collection in his publications on Helicinidae nor does there appear any hint in his collection and its catalogue, renders it very likely that the contents of the Vienna collection could not contribute much to his studies on those exotic land snails.

With respect to Helicinidae his relation to Berlin, Prof. Dr. E. VON MARTENS, at that time curator of the mollusc collection of the Königliches Museum zu Berlin [Royal Museum of Berlin; now Museum für Naturkunde der Humboldt-Universität zu Berlin] is more interesting. Studies in its archives prove the intense exchange of material. One of WAGNER's letters shows that he was especially interested in specimens collected by GUNDLACH in Cuba: “...*, denn Gundlachsche Formen möchte ich natürlich sehr gern erlangen und fürchte nur keine entsprechenden Gegenleistungen bieten zu können* [...because I would very much like to obtain specimens from Gundlach, but I am afraid to have nothing suitable to offer in return]” (letter from 18.9.1900). He repeats it again at the end of the same letter „*Auf Gundlachsche Formen lege ich den größten Wert* [Specimens from Gundlach would be of the highest value to me]”. In fact, WAGNER's collection includes several specimens obtained from GUNDLACH (via MARTENS). Nearly all descriptions of new Cuban Helicinidae from L. PFEIFFER, and these were many, were based on material collected by the famous naturalist GUNDLACH, although the material in Berlin was most probably acquired through direct exchange with GUNDLACH.

On the one hand, this example illustrates well WAGNER's commendable aim to obtain as much original or nearly original material as possible for his studies, as well as for his collection. Obviously, the practice of acquiring the specimens of nearly all species would also allow easy access to specimens for the illustrations, which he provided for nearly all species and subspecies covered in his revision. Only a minor frac-

tion of the species is not represented in his collection at the MIZ. Those are mainly in the collections of the SMF and the ZMB (see below). On the other hand, and this also being a justified criticism on his work, WAGNER ignored many other species from literature and sometimes his figures “have a most unnatural appearance” (FULTON 1915: 238). SOLEM (1959: 160) put it even more drastically in stating “The illustrations are useless...”, a clearly exaggerated opinion.

A comparison between an original plate by WAGNER and a reconstruction based on photographs of the voucher material is given in Fig. 1 for plate 13, to illustrate the quality of WAGNER's drawings. One of the problems consists in sometimes incorrect sizes given for species and specimens: for example, on this plate, the specimen in Nos. 19–21 (asterisks) is originally shown with 11.3 mm in height being “3×” enlarged, but actually it measures 8.7 mm in height and had to be enlarged here four times (Fig. 1, lower half, asterisks) to match roughly the size of the original figures. Obviously, the magnification of Nos. 17–18 is also not quite correct. Another criticism applies to characters considered to be important by WAGNER being a little over-emphasised, e. g. the basal notch in No. 23 (arrow). Other minor differences become evident in the outlines and shapes of aperture and outer lip.

In addition to exchange there is strong evidence, both in the correspondence and in the ZMB collection, that WAGNER also examined the collection personally. After a long time apparently without written contact (or at least no evidence for such contacts has been preserved), a letter from 25. 5. 1903 is very instructive: “*Gleichzeitig erlaube ich mir die Anfrage, ob Sie Anfang des Monates Juni in Berlin zu finden sind und ob ich Sie um diese Zeit im Museum aufsuchen darf. Ich beabsichtige meine Familie nach Deutschland zu begleiten, welche...; meine Erholung soll jedoch besonders in dem Vergnügen bestehen Sie aufsuchen zu dürfen und dabei:/wenn erlaubt:/auch Helicinenstudien zu machen* [At the same time I take the liberty to ask whether you can be found in Berlin in the beginning of the month of June and whether I may visit you during this time at the museum. I intend to accompany my family to Germany, who...; whereas my holiday shall consist especially in the pleasure to be allowed to visit you and (if permitted) to study helicininids]”. A final proof of the realisation of his intention is yet wanting, but on the



Fig. 1. Upper half: Reproduction of original plate of WAGNER (1907–1911: pl. 13); Lower half: Same plate rearranged with photographs of the original specimens from coll. WAGNER (Nos. 1–5: MIZ 8389 *Alcadia* (*Leialcadia*) *ampliata fuscocallosa* A. J. Wagner, 1908; Nos. 6–8: MIZ 8392 A. (*L.*) *aurantia* (Gray, 1825); Nos. 10–12: MIZ 8388 A. (*L.*) *ampliata* (C. B. Adams, 1850); Nos. 13–15: MIZ 8382 A. (*L.*) *spectabilis* (L. Pfeiffer, 1858); Nos. 17–18: MIZ 8385 A. (*L.*) *spectabilis venusta* A. J. Wagner, 1908; Nos. 19–21: MIZ 8394 A. (*L.*) *nemoralis* (Guppy, 1866); Nos. 22–24: MIZ 8368 A. (*L.*) *trochulina* auct. non d'Orbigny, 1841 [= *A. alta* (Sowerby, 1866)] (for further explanations see text)



letter there is a scribbled note “*Prof. v. Martens ist noch im Juni u. Juli hier...* [Prof. v. Martens is still here in June and July...]”. Furthermore, a considerable number of lots in the ZMB bear labels written by WAGNER.

The knowledge about the beginning and especially WAGNER’s intention for the studies on Helicinidae – so different from his other subjects of malacological research – is scarce. Five years before his first publications on Helicinidae he wrote to VON MARTENS: “*Meine Studien über Helicina schreiten sehr*

langsam vorwärts. [My studies on Helicina proceed very slowly]” (letter from 5.9.1900), but already two weeks later his words sound very enthusiastic: “*Meine Helicina-Studien beginnen mir nun auch Freude zu machen, ich hoffe wirklich zu einem Resultate zu kommen, freilich bereiten mir die Abbildungen viel Mühe*. [I begin to enjoy my studies on Helicina and I hope to gain real results, but of course, the illustrations require much effort]” (letter from 18.9.1900).

CONTACTS TO OTHER SCIENTISTS AND SOURCES OF MATERIAL

No Helicinidae occur in Europe and WAGNER never left the continent, therefore his whole collection was assembled by exchange with other malacologists or on purchase. Unfortunately, WAGNER would rewrite a considerable part of the original labels and only seldom made a note of the source. The same applies to a still higher degree to his publications on Helicinidae (WAGNER 1905a, b, 1907–1911). Hence the following preliminary list is compiled from the labels, the hand-written catalogue and other collections containing material of Helicinidae studied by WAGNER. The distinction between direct and indirect contacts is mainly based on likely assumptions. Additional information is mostly gained from ZILCH (1967) and DANCE (1986).

Direct Contacts:

- BOETTGER O. (1844–1910): Good friend of WAGNER, to whom he dedicated two species, *Helicina boettgeri* A. J. Wagner, 1911 and *Helicina oskari* A. J. Wagner, 1911, which he received shortly before BOETTGER’s death; a part of the examined material, obtained from BOETTGER, including the types, is now in the SMF.
- DAUTZENBERG P. (1849–1935): Important source of species described by French authors or collected by French naturalists; among them MARIE, MONTROUZIER, CROSSE, SALLÉ (Central American and Caribbean species), GRAEFFE (material from several Pacific islands), MESSAGER, but also material of others, like ARANGO (Cuba), BIOLLEY (Costa Rica), DE LA TORRE (Cuba), GUNDLACH (Cuba, very few) and HIRASE (Japan, very few)
- DUPONT L. E. E. (1847–1933): Only one or very few species.
- FULTON H. C.: see SOWERBY.
- HARTMAN W. D. (1817–1899): Only one or very few species.
- HEDLEY C. (1862–1926): Only one or very few species.
- HENDERSON J. B. (1870–1920): A few species from the Bahamas and Jamaica.
- HIDALGO J. G. (1843–1923): Only one or very few species.

- HIRASE Y. (1859–1925): Source of nearly all Japanese species; most of them were described by PILSBRY (1901a, b, 1902) and PILSBRY & HIRASE (1904) on the basis of the material collected by HIRASE.
- JETSCHIN R. (1839–1613): Several species without a special geographical focus.
- KOBELT W. (1840–1916): Various, also material collected by SEMPER.
- MARTENS C. E. VON (1831–1904): Curator of the malacological collection of the ZMB, details given above; the material exchanged includes, among others, many species described and/or collected by VON MARTENS and specimens collected by J. GUNDLACH (1810–1896) in Cuba (see above); other collectors were BRAUER, CHAMPION, DUNKER, HÖGE, RIISE, SALVIN, SEMPER, H. H. SMITH and STAUDINGER. Several type specimens of taxa described by WAGNER remained in the ZMB.
- MOELLENDORFF O. F. VON (1848–1903): Important source of most of the Philippine species and some species from the adjacent areas, communicated also specimens collected by SEMPER. Various names introduced by MOELLENDORFF (1898) as nomina nuda were validly published by WAGNER (1905a).
- ROLLE H. (1864?–1929): Well-known German dealer in WAGNER’s period; obviously his relations with WAGNER were very good, because all helicinid lots in the remaining part of his collection (now in the ZMB) bear labels written by WAGNER.
- SCHLÜTER: A few South American species.
- SOWERBY G. B. 3rd (1843–1921) & FULTON H. C. (1861–1942): Dealers in London; several species without a special geographical focus.

Collectors whose material is represented in the collection, but which was communicated by others:

- ARANGO: via DAUTZENBERG
 BIOLLEY: via DAUTZENBERG
 BRAUER: via MARTENS
 CHAMPION: via MARTENS
 CROSSE J. C. H. (1826–1898): via DAUTZENBERG

- DUNKER R. W. (1809–1885): The collection of DUNKER became a part of the ZMB collection, but only very few specimens from this collection were exchanged; via MARTENS
- GRAEFFE: via DAUTZENBERG
- GUNDLACH J. (1810–1896): via MARTENS (also via DAUTZENBERG, but much less important)
- HÖGE: via MARTENS
- MALTZAN, H. DE (1843–1891): Only one or very few species, most likely via ROLLE.
- MARIE E. A. (1835–1888): via DAUTZENBERG
- MESSAGER (–1915): via DAUTZENBERG
- MONTROUZIER R. P. X. (1820–1897): via DAUTZENBERG
- RIISE: via MARTENS
- SALLÉ A. (1820–1896): via DAUTZENBERG
- SALVIN: via MARTENS
- SEMPER C. (1832–1893): via MOELLENDORFF (also via MARTENS and KOBELT)
- SMITH H. H.: via MARTENS
- STAUDINGER: via MARTENS
- TORRE C. DE LA (1858–1950): via DAUTZENBERG

THE COLLECTION OF THE HELICINIDAE* AT THE MIZ

Inwentarz prowizoryczny oraz naukowy. Helicinacea. No. 8172–9150 (WAGNER 1926).

This hand-written catalogue theoretically enumerates 979 lots, but a few numbers were used twice, so it actually includes a total of 988 lots. In addition, two numbered lots were found in the collection (add to p. 13: No. 8414 *Alcadia (Leialcadia) oweniana anozona* (von Martens, 1876), Coban, Vera Paz, Guatemala, coll. LUBOMIRSKI and add to p. 19. No. 8553 *Ustromia straminea rubromarginata* (Gundlach, 1856), Rangel, Cuba, coll. LUBOMIRSKI) having obviously been overlooked by WAGNER when writing them down.

Those 990 lots split up into 952 lots of Helicinidae as recognised by WAGNER (1907–1911) and 38 lots of other “Helicinacea” sensu WAGNER, e. g. *Bourciera*, *Stoastoma*, Proserpinidae, Ceresidae and Hydrocenidae.

During my visit and the subsequent search for the very few missing lots by A. RIEDEL all lots listed by WAGNER could be found in the collection except for (only) four: MIZ 8379: *Alcadia bellula bellissima* A. J. Wagner, 1908, Cuba, Baracoa, coll. WAGNER; MIZ 8798: *Orobophana solidula colorata* (Pease, 1868), Pounotu Archipel, coll. LUBOMIRSKI; MIZ 8812: *Orobophana rohri* (L. Pfeiffer, 1849), Marquesas, Sandwich?, coll. LUBOMIRSKI and MIZ 9109: *Schasicheila nicoleti* Shuttleworth, 1852, Mexico, Veracruz, coll. LUBOMIRSKI. The material of *Bourciera*, *Stoastoma*, Proserpinidae, Ceresidae and Hydrocenidae has not been checked. Furthermore, three lots of Helicinidae (MIZ 8917: *Helicina boettgeri* A. J. Wagner, 1911; MIZ 8918: *Helicina oskari* A. J. Wagner, 1911 and MIZ 9048 *Helicina goldfussi* Boettger, 1887) had to be returned to the SMF by RIEDEL, because they actually belonged to the collection of O. BOETTGER and were obviously only loaned to A. J. WAGNER (ZILCH 1978).

Out of the 990 lots, 107 (“Helicinidae”) + 17 (“other Helicinacea”, among them all *Stoastoma*)

originate from the collection of WŁADYSŁAW PRINCE LUBOMIRSKI (1824–1882) and are incorporated in WAGNER’s list. LUBOMIRSKI’s material includes specimens from the Greater Antilles (Jamaica, Cuba), Central (Guatemala, Mexico) and South America (e. g. Peru, Colombia, Venezuela, Brazil) and several Pacific islands. Accordingly, the true “WAGNER collection” comprises a total of 842 lots of “Helicinidae” and 21 lots of “other Helicinacea”.

A considerable part of the lots possesses the old “original” labels from WAGNER, only a minor part has labels written during his time as director of the Zoological Museum in Warsaw which can be easily recognised by the imprint of the institution. WAGNER only added the catalogue numbers in red ink and symbols for specimens illustrated, or types. RIEDEL (2000) described and explained further details of the meaning of those symbols and remarks.

In his monograph, WAGNER (1907–1911) treated 529 species and subspecies of which 483 are represented in his collection. Additional specimens referred to names synonymised by WAGNER, and they are not included here. For the following 46 taxa the publication was based on specimens from other museum collections (probably nearly entirely ZMB and SMF) or literature only, the numbering in WAGNER (1907–1911) is given in brackets: *Calybium massiei* [13], *Sulfurina citrinella celebica* [19], *S. neglecta* [29], *S. parva elata* [39], *S. zelebori* [43], *Sturanya beryllina tutuilana* [51], *S. singularis* [53], *S. nesiotica* [63], *Alcadia proxima* [79], *A. gemma* [118], *A. fragilis mohriana* [123], *A. iheringi* [524], *A. dominicensis* [525], *Eutrochatella virginea* [154], *E. opima* [156], *E. cisnerosi* [181], *Geophorus oxytropis* [216], *G. oxytropis opacus* [528], *Geotrochatella jourdyi excelsa* [237], *Aphanoconia villosa* [255], *A. ogasawarana arata* [285], *A. yoshiwarana microtheca* [287], *A. eduardi* [310], *A. porphyrostoma* [314], *A. mouensis* [317], *A. rusticana* [334], *Orobophana pohliana* [349], *O. rohri nukahivana* [355], *Palaeohelicina solitaria* [366], *P. stanleyi rosselensis* [378],

* The generic assignments and systematics follow WAGNER (1907–1911) allowing easy comparison with his monograph. They do not necessarily represent the opinion of the author (see e. g. RICHLING 2004).



Helicina caracolla moreletiana [410], *H. lirifera* [425], *H. conus* [430], *H. sulfurea* [433], *H. decorosa* [434], *H. punctisulcata zunilensis* [439], *H. bautistae* [444], *H. tenuis pittieri* [449], *H. pitalensis* [456], *H. festiva* [471], *H. viridis* [475], *H. goldfussi* [484], *H. boettgeri* [497], *H. oskari* [498], *Lucidella wolffi* [514], *L. vinosa* [515].

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