

THE ORNITHOLOGICAL COLLECTION OF THE
ZOOLOGICAL MUSEUM IN MUNICH.

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THE nucleus of the Munich collection goes back to the old Museum of the Bavarian Academy of Sciences founded in 1759. The earliest specimens that I have been able to trace are certain species described by Hahn¹ from the Academy's Museum, the types of which, with a few exceptions, are still preserved. In 1807 Johann Baptist Spix took charge of the Zoological Department, and from 1817-1820, in company with the botanist Philipp Martins, traveled extensively in Brazil. The ornithological results of these expedition were laid down in a sumptuous work entitled 'Avium Speciae Novae, quas in itinere per Brasiliam annis 1817-1820 . . . suscepto collegit et descripsit . . .', consisting of two volumes in imperial 4°, in which no less than 220 supposed new species of birds are described. The entire material was deposited in the Academy and, following the custom of the time, mounted for exhibition. All of the types, excepting a few which have disappeared, are still in existence as may be seen from a critical review published by myself in the 'Abhandlungen der Bayerischen Akademie der Wissenschaften,' 2, Kl., vol. 22, Abt. 3, p. 561-726, 1906. They were dismounted under my supervision and placed in the study series of skins.

In 1826, when the University of Landshut was transferred to Munich, the zoological collection of that institution was merged with the Academy's Museum, this combination resulting in the foundation of the Zoological Museum of the Bavarian State, annexed to the Department of Zoology at the University. Under Spix's successor, Johannes Wagler (1826-32), the Museum received an interesting shipment of Mexican birds from a Mr. Keerl,² which was promptly reported on in the 'Isis' for 1831. During Wagler's curatorship, ornithology was given more attention than before, and numerous novelties described by him in the 'Systema Avium' and 'Monographia Psittacorum' were based

¹ Vögel aus Asien, Africa, America and Neuholland. Nürnberg. 1818 et seqs.

² Mispelt "Reerl" in the Willughby Society's reprint.

on material in the Munich Museum. After Wagler's untimely death, at the age of 32, Andreas Wagner, the famous mammalogist, was appointed as Curator. He published only short notices of collections received through Karwinski from Mexico, and through Schubert from Egypt and Sinai, including the description of two new species,¹ the types being now incorporated in the research series.

The next important accession (through bequest) was the large private collection of the Duke of Leuchtenberg² of Eichstatt, which, in addition to a specimen of the Great Auk, contained the types of *Pteroglossus beauharnaisii* Wagler and *Asio stygius* Wagler.

The brothers, J. H. C. Friedrich and J. Wilhelm Sturm, well known naturalists of Nuremberg, also left their extensive zoological collections, especially rich in insects, to the Bavarian State Museum. Besides many species secured by their correspondent, Dr. Stephan, in Minas Geraes and other parts of southern Brazil, this gift included a set of artistically mounted Hummingbirds (still on exhibit in the original dust-proof case), and the series of Toucans which formed the material for their Folio work 'Monographie der Ramphastidae,' published at Nuremberg in 1841 to 1847. The types of several new species described therein thus passed into the Munich Museum.

The brothers Schlagintweit, distinguished geographers, procured a fair collection of birds during their exploration in Tibet and Western Himalayas, which was likewise deposited in the Museum.

Moriz Wagner, brother of the zoologist mentioned above, while traveling in Ecuador, lost no opportunity of securing birds for the Museum of his native city. Although the total number obtained by him was small, his shipments added many species previously unrepresented as well as types of *Aglaeactis aequatorialis* Cabanis and Heine.

In the early seventies, the Museum was enriched by the acquisition of a representative set of the species collected by Dr. F. Ley-

¹ *Cuculus velox* and *Corvus infumatus* in Münchener Gelehrte Anzeigen, 3, 1836, p. 95, and l. c., 8, 1839, p. 301.

² The Duke of Leuchtenberg was a descendant of Eugene Beauharnais, Viceroy of Italy, the stepson of Napoleon 1st, and his wife, Augusta, a daughter of the first King of Bavaria.

bold, around Mendoza and in the Chilean Cordilleras near Santiago. Sir Julius Von Haast presented some of the characteristic species from New Zealand, while Mr. J. Parrot and Baron Von Müller were responsible for the donation of a series of birds from New South Wales. Dr. Gustav Radde, the late director of the Tiflis Museum, was the donor of one hundred bird skins collected by himself at Lenkoran and in the Caucasus, and Mr. Friedel Martin transmitted a collection of native-made skins from Sikkim to the Museum.

In the late nineties, the institution was favored with a gift by Mr. Oscar Neumann, of a set of duplicates from the collection made during his travels in German and British East Africa, and about the same time Dr. Ludwig Martin, the well-known entomologist, then physician in the Dutch Colonial Army, began sending in ornithological specimens from the Deli District of Sumatra.

In 1900, Dr. O. Haberer, a former student of the University, settled in Yokohama, and within the next two or three years presented large collections from the two main islands of Japan, the Kuril Island Iturup as well as from the lower Yangtse River in China, amounting to about 2000 bird skins.

Now and then smaller consignments were received from various gentlemen, among which an interesting lot from Hercegowina, Balkan Peninsula, donated by Eugene Sandré, deserves special notice.

After Wagner's retirement in the forties, scientific activity in the Zoological Department drifted away to Entomology, and for more than sixty years not a single publication on ornithology stands to the credit of its staff. With the appointment of Dr. Franz Doflein as subdirector in 1902, however, the Museum entered upon a new phase of development, and it is due to his initiative that, early in 1903, the writer assumed the task of organizing an Ornithological Department. When he entered upon his duties, the skin collection numbered about 4000 specimens, and there was but a small library, consisting principally of Gould's folios and some illustrated works of the early French authors. While hampered by lack of space, he immediately set to work for better installation and increase of the collections under his care. With the aid of a special grant from the Academy, a representative series

of the bird fauna of the Galapagos Islands, numbering close to a thousand specimens and including two *Nannopterum harrisi*, and Dr. Georg von Almásy's private collection of 1500 Hungarian birds were acquired by purchase. Dr. Bruno Hagen, the noted ethnologist, presented valuable material from Sumatra, Bangka¹ and German New Guinea, while Mr. G. Wieninger, of Schärding (Austria), contributed 150 bird skins from his coffee plantation Bernalcué, near Asunción, Paraguay. Dr. Doflein's expedition to the east resulted in the accumulation of 830 specimens from Japan and Ceylon, and Lieut. Kaufmann contributed 200 birds collected during his rambles in Mysore and the Himalayan Mountains. The distinguished explorer, Prof. Gottfried Merzbacher, on his two expeditions in 1902-03 and 1907-08 to the Tian-shan, while primarily interested in geography, succeeded in bringing together a splendid collection of nearly 2000 bird skins² which he generously donated to the Museum.

On the writer's return to Munich from a three years' leave of absence, he was appointed Curator of the newly created Department of Birds which, in 1909, was transferred to more comfortable quarters in another wing of the Museum building, where adequate accomodation for arranging the research material and spacious offices for the Curator and his assistant were available. Special grants having been obtained from the Bavarian Legislature, wooden cabinets for the collection were soon installed, and at the same time many books and serials added to the rapidly growing departmental library. Among the more important accessions, during this period, may be mentioned the large collection of European birds' eggs, formed by the late Dr. Hermann Burstert of Memmingen. Dr. Karl Brügel donated fifty specimens from Siam and Borneo, including two supposed novelties described by the late K. Parrot.³ 140 skins from western Ecuador and 63 from Liberia were purchased.

The year 1909 was an exceptionally eventful one in the history of the Department. The accessions reached the grand total of 6129 entries and included 3250 skins from the collection of Count

¹ See Parrot, Abhandl. Bayer. AK. Wiss., 2. Kl., 24, No. 1, 1907, p. 149-286.

² See Schalow, Journ. Orn., 1908, p. 72-121, 202-260, and Laubmann, Abhandl. Bayr. AK. Wiss., math. phys. Kl., 26, No. 3, 1913, p. 1-105.

³ See Verhandl. Orn. Ges. Bay. 8, 1908, p. 97-139.

R. de Dalmas,¹ from northern South America, the Atlantic Islands, Senegambia, Malacca, etc.; a collection of 649 specimens collected by Merwyn G. Palmer in the Chocó district of western Colombia, with several striking new species and many rarities; 284 birds from the Rio Madeira, Brazil, obtained by W. Hoffmanns; 142 skins from French Guiana, received from H. Le Mout; 527 examples from the Cumbre de Valencia, Venezuela, procured by S. M. Klages; finally 123 specimens from Maranhão through Ferdinand Schwanda. In 1910, Professor L. Müller, Curator of the Department of Herpetology, on behalf of the Academy, undertook a collecting trip to the estuary of the Amazon and, besides large quantities of herpetological material, obtained nearly 700 birds in the Pará region as well as on the islands of Marajó and Mexiana. From Corsica, the Museum received a good collection of nearly 500 skins through Dr. Karl Parrot and a local taxidermist. Another patron of the Museum, Prof. K. Schloesser, contributed a small but valuable lot from the Sinai Peninsula, while Dr. Erich Zugmayer donated 140 skins secured on his expedition to Ladak and western Tibet.

From tropical Asia, too, material began to pour in. Mr. Emil Riemel presented 214 beautifully prepared specimens collected by his correspondent Primavesi on Mount Gedeh, in western Java, and 370 additional birds from the same island and Sumatra are due to the generosity of several other gentlemen.

Capt. von Vallentini enriched the Museum by the gift of 130 skins from Kiau-tschou, China, and Gov. Hahl forwarded 117 birds from New Guinea and New Hanover, including several fine Birds of Paradise.

During the next few years, the Department kept on growing and, while purchases were mostly confined to the neotropical region, much valuable material came in from other parts of the world. The Wanner Expedition in which the Museum was represented by one of its taxidermists, yielded 384 birds from Timor² and 62 from Ceylon, and Prof. W. Kattwinkel's hunting trip to Massailand added 281 specimens to the African series. Dr. Lothar Von

¹ The first set, including most of the types, had previously been acquired by the Tring Museum (England).

² See Hellmayr, *Avifauna von Timor* in C. B. Haniel, *Zoologie von Timor*. Lief. 1, pp. vi + 112, pl. 1. Stuttgart, 1914.

Wiedefeld presented a very valuable collection of nearly 500 skins, obtained by himself on the north coast of German New Guinea. Other smaller donations were received from the Sudan, Congo Free State, southern Tunisia, British East Africa, Borneo, the Bismarck Archipelago, Brazil, the Faroe Islands, and various parts of Germany, including two specimens of the Shoe-bill (*Balaeniceps rex*), one from the Blue Nile, the other from the Upper Congo.

Dr. Zugmayer, the ichthyologist of the Museum, commissioned by the Academy with zoological researches in Baluchistan, remitted 277 birds, including two new species.¹ In the meantime, plans had been made for an intensive ornithological survey of northern South America, and aided by an extra grant from the Academy's exploration fund and with the financial support of a number of patrons, field work was begun by Mr. S. M. Klages on the south coast of the Caribbean Sea. The large collections which were divided between the Museum and Count Seilern added 681 birds from Trinidad, 204 from Tobago, and 766 from the Caracas region in northern Venezuela to the study series. While engaged in the exploration of the Sierra of Carabobo, the world war broke out, and communications with Europe having been severed, Mr. Klages entered the service of the Carnegie Museum, Pittsburgh, on whose behalf he continued his activity for years with remarkable success.

From 1911 to 1914, the Museum received about 1000 bird skins from the Sierra of Carabaya in southern Peru,² secured by the brothers H. & C. Watkins, through Mr. W. F. H. Rosenburg, and acquired 176 specimens of an interesting collection made by Mr. F. B. Müller around Victoria, Espirito Santo, Brazil.³ Other purchases included a series of 412 examples from Agua Suja, near Bagagem, western Minas Geraés, collected by G. A. Baer's former field assistant Odilo Alves de Carvalho; representative sets of the birds obtained by Dr. Adolf Lendl and Mr. Emil Weiske on their journeys to Neuquen, western Argentina (about 200 skins); a small collection (64 specimens) from the Island of Formosa, brought

¹ See Laubmann, Abhandl. Bayer. Ak. Wiss., math. phys. Kl, 26, No. 9, 1914, p. 1-71.

² See Hellmayr, Arch. Naturg., 85, A. Heft 10, p. 1-131, 1920.

³ See Hellmayr, Verh. Orn. Ges. Bay., 12, p. 126-159, 1915.

back by Dr. A. Moltrecht, and several minor lots from north-western Argentina (Jujuy), Paraguay, and British Guiana.

Noteworthy accessions by gift were 200 birds collected by Mr. Max Prager in the Caucasus Mountains;¹ O. Tauern's Misol collection,² presented by Mr. E. Stresemann; thirty birds from the South Polar region through Lieut. W. Filchner; eighteen skins from New Hanover; seventy-five from the Cameroons, contributed by Dr. E. Mack, etc.

By that time, quite a good representation of the bird fauna of Bavaria had been brought together, thanks to the efficient help of numerous friends of the Museum, among whom Mr. Karl Lankes (of Munich) and Mr. Anton Fischer (of Augsburg), both excellent field naturalists, deserve special praise for their efforts to supply needed material. With the view to filling certain gaps, Prof. L. Müller, in the spring of 1914, spent several weeks in the Palatinate and accumulated a collection of 228 specimens, including a number of the peculiar Rhenish races.

The German-Austrian Alpine Club donated nearly 100 birds obtained by the members of its expedition to the Range of Peter the Great in Central Asia.

With the outbreak of the war, the influx of material from abroad came to a sudden halt. Still the Bird Department kept on growing, and in the years 1915 to 1922, no less than 18,783 specimens were incorporated in the research series. The most valuable gift ever received by the Museum was Dr. Alfred Laubmann's private series of more than 6000 Palaearctic birds, containing the collections of Anton Fischer (Swabia), R. Schlegel (Saxony), Von Tschusi³ (generally Palaearctic), E. P. Tratz (Tyrol, Canary Islands), R. Tancré (European and Asiatic Russia), Von Thanner (Canary Islands), Hugo Weigold (Mesopotamia and Asia Minor), F. Canesi (Corsica), etc., and a large selection of Bee-eaters and Kingfishers.

In 1920, Prof. H. Dürck presented an interesting collection of 400 skins obtained by himself near Rio de Janeiro and on the Island of Marajó, and Mrs. A. Schulze enriched the Department by 49 birds from Bolivia.

¹ See Laubmann, *Orn. Jahrb.*, 26, p. 8-52, 1915.

² See Stresemann, *Journ. Orn.*, 61, p. 597-611, 1913.

³ The second collection of Von Tschusi's, numbering about 1400 skins. The first Tschusi collection of more than 5000 specimens, including forty types, was acquired by the Vienna Museum.

Much valuable material was secured by members of the Bavarian Ornithological Society in various sections of the war zone. Mr. E. Stresemann contributing from the Vosges Mountains 100, Mr. R. Schelcher from eastern Galicia 115, Mr. P. Rockinger from Anatolia 120 bird skins, while smaller consignments were received from Poland, Italy, and northern France. During the German occupation of Macedonia, an extended biological survey of that country was inaugurated under the auspices of a specially appointed scientific commission on which Prof. L. Müller served as representative of the Bavarian Academy and to whose remarkable energy the exceptional success of the enterprise is mainly due. In little more than eighteen months, an exhaustive collection of 3258 birds¹ was brought together, and this in spite of many restrictions incident to traveling in a country under military rule.

From May to November 1918, Prof. E. Stechow, of the curatorial staff of the Museum, commissioned to make zoological researches in Lithuania forwarded 703 bird skins to the Department, and this collection, supplemented by 228 specimens donated by Dr. H. Krieg, formed the subject of an excellent memoir by H. Sachtleben² to whom the material had been entrusted for study.

Under the writer's administration, from 1908 to 1922, numerous exchanges were made with other museums and private individuals, notably the Royal Swedish Museum at Stockholm (birds from Sweden and Juan Fernandez), the American Museum of Natural History in New York, Count Hans von Berlepsch, E. Lehn Schiøler (Danish birds), Count Joseph Seilern, the Museum of Comparative Zoology, Cambridge (North American species), the Carnegie Museum, Pittsburgh, and the Muséum d'Histoire Naturelle, at Paris. From the University Museum at Würzburg a few types of Hahn (*Mochaeropterus regulus*) and Wagler (*Diglossa baritula*, *Sittace petzû*) were also obtained in exchange.

When the writer, in September 1922, relinquished his post, the total number of birds in the Department was a little over 55,000, of which 14,000 were mounted.

Since then, we are informed by Dr. A. Laubmann, now Curator in charge of the bird collection, an important addition has lately

¹ See Stresemann, *Avifauna Macedonica*. Munich 1920. 8°, pp. xxiv + 271, with six plates.

² See *Abhandl. Bayr. A.K. Wiss., math. phys. Kl., Suppl.*, No. 1, p. 1-232, 1922.

been made by about 1700 bird skins received from Dr. H. Krieg's Pilcomayo Expedition, while various smaller lots were acquired from Chile (77 specimens), Misiones (30), Madagascar (110), Hungary (115), and Mount Elgon, Kenya (100). The late Ex-Princess Theresa of Bavaria bequeathed her private collection of (200) South American birds to the Museum which thus came into possession of the type of *Dendrexetastes paraensis* Lorenz.

There are in the collection approximately 400 type specimens described by Hahn, Spix, Swainson (one), Wagler, Wagner (two), Opperl (one), Lesson (one), Pelzeln (one), Cabanis and Heine (one), Dalmas, Parrot, von Tschusi (one), Hellmayr, Seilern, Stresemann, Laubmann, Sachtleben (three), Kollibay (two), Lorenz (one), Götz (one), and Von Ihering (two). In summarizing, it may be said that the Department possesses one of the finest collections of Palaearctic birds in existence and a fair representation of the neotropical fauna. Certain families, such as Hummingbirds, Toucans, and Manakins are especially rich in series and rare forms.

Among rarities may be mentioned two Great Auks, four Passenger Pigeons, one Labrador Duck, and one Eskimo Curlew.

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