

THE ORNITHOLOGICAL COLLECTION OF THE NATURAL
HISTORY MUSEUM IN STOCKHOLM.¹

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THE original nucleus of a Natural History Museum in Stockholm was formed by the Royal Academy of Sciences. In the first year of its existence in 1739, under the presidency of Linnaeus, a cabinet was provided for natural history specimens, but the preservation of birds was then very difficult and some time elapsed before any collection was obtained. Single specimens were now and then received and mentioned in the minutes of the Academy. In the year 1751, mention was made of a bird from Brazil "in beauty similar to a parrot, but it was said to belong to the eagle tribe." The collection at first contained mostly foreign birds which were presented as curiosities, and apparently a real collection of Swedish birds was not obtained before 1770. This was from northern Sweden and was said to be "well mounted." To guard birds against insects presented great difficulties at that time, and in 1784 when Sparrman was the first curator, it was advised that small birds should be put under bells of glass "since they had been mounted and arranged in their natural position," and the larger birds should be "dusted from time to time" and "be freed from moths by heat." The increase in the bird collection was probably not very rapid but donations were received from different parts of the world, including East Indies, South Africa, Brazil, West Indies, etc., and in 1791 a "Mr. Peale in America" forwarded "a box with rare mounted birds from Carolina."

For some time the bird collection of the Academy seems to have been deposited in the celebrated "Museum Carlssonianum" (described by Sparrman in a work of this name), because the owner, President G. von Carlsson, had bequeathed his collection to the Academy. After his death in 1801 difficulties arose and after some delay only a part of these collections came into the

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possession of the Academy. Evidently several birds had been destroyed by moths, because it is said that the curator had to clean them and expose them to the smoke of sulphurous acid. It is possible that the collection was reduced not a little by such unfortunate circumstances and consequently the catalogue of 1808 contains only 346 species represented by 430 specimens. At that time the curator was the botanist Olof Swartz, who appears also to have been somewhat interested in birds, as he, himself, presented some specimens to the Museum of the Academy. The bird collection was further increased by donations both of Swedish and exotic specimens, and among the latter those from South America were in the majority. An army surgeon, Frolich donated a large collection from Brazil, and minor collections from other donors were also received from the same country.

After the death of Swartz in 1818, the Academy appointed J. W. Dalman as curator. He is known as an eminent entomologist, and when the collections were placed in his care he was obliged to state, much to his regret, that again a number of birds had been destroyed by moths or other agencies. It was, of course, extremely difficult to protect birds against insects before an effective poison had been discovered. The first bird skins prepared with arsenical soap received by the Stockholm Museum were reported to have come from Brazil in 1818, where they had been collected by the German naturalist, G. W. Freyreiss. For perhaps ten years following the date just mentioned, the birds in the Museum were kept in wooden boxes faced with a pane of glass fastened with putty. Each bird was mounted in a more or less natural position on a turned wooden perch fixed crosswise on top of a similar wooden upright. The legs of the mounted specimens, as a rule, were set too far back and the eyes were often made of sealing wax or imitated by a black pearl of glass. In the museum these boxes were placed on shelves or simply piled up on each other against a wall for exhibition. Thanks to these boxes however, we have still preserved a fairly good collection of birds from the beginning of the last century and several even from the eighteenth century. Some are faded, but the majority are in a comparatively satisfactory condition, and some cannot be said to have lost their colors at all.

In the first year of Dalman's curatorship he had the good fortune to receive a large collection of birds from Brazil, presented by Consul General Westin to the Museum of the Academy. This and other important donations made the appointment of a skilled taxidermist necessary, but before it could be effected the Museum entered upon a new phase of development.

One of the members of the Academy, Baron Gustaf von Paykull had been from youth greatly interested in natural history, and although he later held an office in a government bureau which had nothing to do with this subject, he remained true to his first love. When traveling in the different countries in Europe he had had an opportunity of making the personal acquaintance of distinguished scientists of the time, and he had also visited and studied the natural history museums. His own work as a naturalist was chiefly confined to entomology and to ornithology, and he has described and named some birds, among which *Dromas* is the most interesting. On his estate, Vallox-Säby, in the province of Upland, he brought together a fairly large zoölogical collection for which he erected a special building in his garden.

In his later years, the desirability, not to say necessity, of establishing a natural history State Museum in Sweden occupied his thoughts, and to realize this plan he most generously offered to present his own very valuable collections to the State. This magnanimous offer was accepted by the King, Carl XIV Johan, with gracious benevolence. At the meeting of the Academy on the 24th of March, 1819, a royal letter was read in which it was announced that the King had accepted Baron Paykull's offer, and the Academy was requested to provide a suitable building for the natural history museum. After due investigation and preparation, the Academy replied that it was willing to grant the use of its own building for the purpose. This was also accepted, and the new State Museum was placed in charge of the Academy, which later added its own collections. The Royal Academy of Sciences was constituted a board of trustees for the State Museum, and appointed its own "intendant" or curator to take care of its collections as well as those belonging to the State. By Royal charter, the curator received the same title and rank as professors in the universities of the State.

When all the formalities had been happily arranged it remained to move Baron von Paykull's collections to the city, and this was no small task with the means of communication of that time. According to the inventory of 1819, the bird collection was kept in a house erected especially for that purpose. The windows were placed "all round under the roof, so that the walls are unbroken." The house contained three big rooms, each "15 ells broad and 10 ells long." The bird boxes (described above) were piled to a height of "4 ells, 6 to 9 inches," and the number of boxes is said to have been not less than 1,362. It was rather a large collection for that time and also contained many rarities. In June, 1820, it was reported that all the collections had been successfully transferred to Stockholm and arranged in the same manner as before in the building of the Academy. During the following years, the collection received several additions, among which perhaps the most important was a collection of birds from Java donated in 1826 by the King.

After Dalman's death, Dr. Sven Nilsson became his successor. He was a very able scientist and has made his name well known through his splendid faunal works as well as through his researches in the field of archeology in which he was a distinguished pioneer. He was appointed in 1828 and retired in 1831, when he accepted the professorship in zoölogy at the University of Lund, where he had studied and won his doctorate. His time at the State Museum was thus very short, but, nevertheless, of great importance. At the time that he entered office, the Academy had bought a large building for the Museum, in which it was housed until 1914, and since it had been remodeled for its new purpose it proved very suitable for the time. The specimens were exhibited in new cabinets and cases instead of the boxes above mentioned, and a great number of new specimens were mounted by a very able taxidermist. Nilsson was especially interested in the Scandinavian fauna, on which he has written some classical works of permanent value, and at the first opportunity he endeavored to assemble a complete collection of the vertebrates of Sweden. In this undertaking he received great help from many naturalists and sportsmen in different parts of the country. During his time, the Museum received a very valuable donation which had be-

longed to a wealthy manufacturer, Grill, and most of which had been brought together during the latter part of the eighteenth century. The birds in this collection numbered about 700, and about 50 of them were from the "Museum Carlssonianum," and thus, were partly Sparman's types. Birds were also received from abroad, and in the records are mentioned collections from India and South America.

In May, 1831, Sven Nilsson was succeeded by Dr. Bengt Fredrik Fries, docent in anatomy at the University of Lund, who was also very able and took up his new work with great energy. In order to obtain a complete representation of the Scandinavian fauna and at the same time valuable material for exchange, he sent collectors to different parts of the peninsula, especially in the north. He also sent circulars to several persons in northern Sweden and Lapland informing them of the needs of the Museum, and in this way he obtained a considerable number of specimens. These were used for exchange with museums abroad; for example, he mentions with pride that he had received a Tragopan for a Lapp Owl (*Strix lapponica*) not to mention mammals, etc.¹ At that time, in the thirties of the 19th century, the Swedish physician and naturalist, Dr. Johan Hedenborg, made several expeditions to Syria and Egypt and later to Nubia and the Sudan and sent home large and important collections of various kinds. From the first expedition, 210 birds were received and from the second to Nubia and the Sudan no less than 777. In the year 1837, Dr. Sven Lovén made the first Swedish Arctic expedition to Spitzbergen and brought home 27 species of birds among other zoölogical collections. The Museum was also favored with many private gifts of minor collections and single specimens from aboard as well as from Sweden. Several ornithologists and sportsmen interested in faunal studies contributed liberally and regularly,

¹ Another exchange, mentioned in the records for 1835-6, was very deplorable from the present point of view. Professor Fries gave a specimen of *Alca impennis* for an *Ornithorhynchus*. Both were at that time estimated to have a value of 40 Hamburg Thaler (the same value as a specimen of *Strix lapponica*). It was of course not known that the Great Auk was then nearly exterminated. Fries believed that he would be able to obtain more specimens from Iceland, as he stated in a letter to one of his correspondents, but it was unfortunately too late. The only specimen of the Great Auk that the Museum now possesses belonged to Baron von Paykull.

thus making the series of native birds more complete and furnishing material for exchange. Unfortunately, the zealous intendant, Professor Fries, died in 1839, and the Academy elected as his successor a man well known in ornithological literature for his taxonomic and morphological works, Dr. Carl Jakob Sundevall. From the beginning he was devoted to the study of birds. Two years after his appointment in 1841, the growth of the collections of the Museum made it necessary to divide the zoölogical department into three, one of which contained all the vertebrates (as is still the case). By this arrangement, Sundevall found more opportunity to concentrate his studies on birds (and mammals) than before, when insects and lower animals were also entrusted to his care. In 1842, the collection of exotic birds was estimated to contain 5,227 specimens.

Probably the most important additions to the vertebrate collections since the establishment of the State Museum began to pour in about 1840 and following years. The Swedish naturalist, Johan August Wahlberg, famous as a South African explorer, then sent the first of his great collections from various parts of South Africa. The exact number of birds which he collected is unfortunately not known, as a considerable number of "duplicates" were sold to cover expenses and many others were used for exchange with other museums. Some of the remainder were mounted but a good many skins are still as they came from Wahlberg's hands, and it can be asserted that they are exquisite specimens of the very highest quality, as was everything prepared by him. From these collections, Sundevall was able to describe many new forms. The last collection received from Wahlberg contained 204 birds, procured in the country near Lake Ngami shortly before he was killed by an elephant. From Cape Colony, the Museum received 300 birds collected by a promising young ornithologist, Victorin, who, however, died in his youth. Many donations of varied importance included birds. A consul, Lindgren, presented 115 birds from Bahia in 1843; now and then birds were received from other gentlemen from Brazil, China, India, New Zealand; and His Majesty, the King, in 1848 donated a considerable collection of birds from Venezuela and Colombia.

In 1851, the frigate 'Eugenie' was sent out on a voyage of

circumnavigation of the globe and a naturalist was allowed to accompany the expedition. About 490 bird skins and many birds preserved in alcohol were among the results of this voyage. The most interesting were perhaps those procured at the Galapagos Islands, among which Sundevall was able to describe *Spheniscus mendiculus*. During the fifties, Consul Bartolucci presented 360 birds from the countries about the Nile; Consul Bohlsen, 138 birds from Chile; others donated birds from Brazil, Surinam and the West Indies. The several Swedish Arctic expeditions also brought home bird material. Thus, Dr. C. Y. Malmgren collected birds on Spitzbergen in 1864, and the 'Sofia' Expedition to Greenland in 1868 also made valuable collections. The taxidermist of the Museum, W. Meves, had opportunities of making repeated excursions to different parts of Sweden and he also made an expedition to northern Russia and obtained many birds from that country which was then comparatively unknown.

Exchanges with foreign museums were also frequent. From the Smithsonian Institution in Washington, 205 North American birds were obtained, from New Zealand 30, and from Mr. Kumlien some birds from Wisconsin were purchased, but otherwise North America is a rather weak point in the collection in our Museum.

Since the annual grant of the Museum had been increased a little, Sundevall was also able to buy specimens, and sometimes he added what was needed from his own purse. In this way he succeeded in bringing together a bird collection which was unusually rich for that time. He was, therefore, quite justified in saying, as he once did, in an annual report "The Bird Collection of the Museum has reached rather far in systematic completeness." Considering that the annual grant to the vertebrate department during the epoch from 1858 to 1877 was only 2,650 Swedish crowns (about \$700), and with that sum everything had to be paid for (except salaries, heat, light, etc.) one cannot forbear sincerely admiring what Sundevall accomplished with such small means but with untiring zeal. It must also be borne in mind that at the same time he also brought the collection of mammals fairly up to date, and that he not only took care of the increase in the collections of the State Museum, but he also distributed much material to the universities and schools. From the present point of view,

it is perhaps almost deplorable that he was so generous in this respect, because much of that which was given to the schools was less well cared for and would have been more useful if it had been retained.¹ At that time racial and geographical variation was not considered important, and consequently it often seemed sufficient to retain a couple of specimens of each species. The others were, I am sorry to say, regarded as "duplicates" and often disposed of. Another weak point was that all specimens that were kept were mounted and thus they required considerable room and could not easily be stored. This contributed perhaps to the willingness of a curator of that time to give away "duplicates" when his cases were crowded.

Professor Sundevall retired from office with a pension in 1870, but he loved the Museum so much that he afterwards donated specimens of birds which he had bought at his own expense. He died in 1875. His successor, Dr. Fredrik Adam Smitt, docent in zoölogy at the University of Upsala, was appointed in 1871, shortly after Sundevall's retirement. Professor Smitt was chiefly interested in the study of fishes, but the bird collection of the Museum still grew during his time, especially through material from abroad brought home by expeditions to different countries. Several expeditions to the Arctic, including those of Nathorst and Kolthoff to Spitzbergen and Greenland, returned with some birds, though the marine fauna was the chief interest of the zoölogists accompanying them. The most famous of these expeditions, the voyage of the 'Vega' in search of the North East passage, collected birds along the arctic coast of northeastern Asia and also at several points on the way home. In addition to these expeditions in the Arctic Sea were also some on land, and from one of these to the Yenisei Dr. Theel brought back birds in 1876. Some years earlier, in 1872, the taxidermist of the Museum, Meves, traveled through northern Russia and Ural, where he collected birds and mammals. During three successive summers, 1876-78, Lieut. H. Sandeberg made expeditions to the Kola Peninsula and the countries bordering the White Sea. He had a taxidermist with him,

¹ Before Sundevall's time, considerable quantities of natural history specimens had been distributed to schools. For example, in 1836 no less than 408 birds were given to one school.

and these expeditions were probably the first which collected birds for the Stockholm Museum in accordance with modern ideas, as they brought together quite extensive series of the different species found in these regions.

Dr. Bovallius traveled in Central America, chiefly in Nicaragua, and made great collections of birds, which on his return were purchased for the Museum by means of an extra grant in 1886. Birds from Central America were also received from Consul General Ascoli. Some Swedish gentlemen residing for years in Argentina, Mr. Aberg, an architect, and Captain Ros, sent home specimens from that country and also from Paraguay, and Prof. Bustillos presented a collection of birds from Chile. As a member of a Swedish scientific expedition to northwestern Argentina and Bolivia in 1901-02, Mr. G. von Hofsten made a collection of birds in these countries, which was purchased for the Museum.

From Africa, birds were obtained in various ways. Collections made in Damara and Nama-land by Mr. G. de Wylder were bought through funds raised by subscription in 1876. Messrs. Knutsson and Waldau, sportsmen and pioneers in Cameroons, collected birds in this "new" country and sent them to the Museum. Several of these birds were of great interest and later were described as new by Dr. Bror Yngve Sjöstedt, from whom also some other birds from the same country were purchased in 1893. His Majesty King Oscar II, in 1894, presented a collection of birds from Borneo, and several years later the Museum acquired a collection from Java from Dr. E. Nyman. A collection of birds from Australia brought home by Dr. Fristedt was purchased in 1890. *Didunculus* and some other interesting birds from Samoa were presented by Mr. Cedercrantz when he was Chief Justice on those islands. In addition to these collections, several minor donations were received and several purchases were made which cannot be enumerated here.

Professor Smitt took no special interest in birds, and space in the old Museum was very limited. The more important acquisitions were, however, mounted and exhibited as before; some collections of skins were packed in boxes and were hardly available for scientific study. These collections were, however, not very large and there was hardly any collection of Swedish birds except the one on exhibition, which was fairly complete.

When Professor Smitt died in February, 1904, the Academy elected as his successor Dr. Einar Lönnberg, formerly docent in zoology at the University of Upsala. For several years he had the same difficulties owing to lack of space, but there was a strong movement for obtaining a new building and thus hope for better arrangements. In 1908, money was granted by Parliament for the erection of a new building for the Natural History Museum, and in 1914 the vertebrate collections could be moved gradually to their new home. The director of the department did not, however, remain idle during these years of waiting, but tried to work for the increase of the collections under his care. He perceived the necessity of establishing scientific study collections of Swedish as well as of exotic birds. On the other hand the exhibit collections could be cut down to some extent because unnecessarily large, but this could not be effected before the rearrangement in the new Museum. To begin with, it was important to try to obtain more material for scientific study and exchange. Many favorable circumstances have contributed to render these efforts successful, and the director received much help from friends and patrons of the Museum. Among the most important sources for the increase of the ornithological collections the following may be mentioned: Although the Swedish Antarctic expedition lost most of its collections when the ship was wrecked by the ice, nevertheless, the Museum received from the same source in 1904, and from other expeditions in connection with it, several birds from the western part of the Antarctic, and a few years afterwards, Mr. Sorling, taxidermist of the department, had an opportunity of collecting birds as well as other material (whale skeletons, etc.) on South Georgia. The collection of Arctic birds was increased especially by the donations of Mr. C. Bangert, a Danish gentleman, who on several occasions presented birds, including a splendid series of falcons from Greenland and Iceland. Baron Klinckowstrom also presented birds from these same countries. The collection from the Palearctic region, has as far as Europe is concerned, been improved chiefly by exchanges with foreign museums and occasional smaller purchases.

From different parts of Asia, several important collections have been obtained, thus, in 1904, one from Thian Shan; in 1906,

1908 and 1909, some from Turkestan and Northwestern Mongolia, and in 1908 a very large and representative one from Sachalin. From Japan, several minor collections were purchased. One of the Swedish officers in the Persian service, Captain R. Nicolin, who was much interested in birds, collected a great number of specimens, which he presented to the Museum. Professor J. G. Anderson, in connection with his geological and archeological researches in China during the last decade, also turned his attention to the recent fauna, and as a result the Museum received from him directly or indirectly more than 1100 birds collected in Mongolia, and in northern, western and eastern China. Recently, Mr. St. Bergman has turned over to the Museum a large and interesting collection of birds from his expedition to Kamchatka. From the Oriental region much material has also been obtained. With the valuable support of friends of the Museum, Count Nils Gyldenstolpe (assistant in the vertebrate department) was enabled to make two expeditions to Siam, which resulted in the acquisition of about 1500 specimens of birds (not counting other collections). A few years later, a friend of Count Gyldenstolpe, Mr. Eisenhofer, who had resided for a long time in Siam, presented his private collection of 1450 birds to the Museum, but as he was a German citizen the collection was sequestered by the Siamese authorities, and the Museum in 1920, had to pay a comparatively high price to redeem its own property. A few years later, a Swedish gentleman residing on the Malay peninsula, Mr. Adelborg, kindly presented a collection of 764 birds from that region.

From Australia, only one other important collection has been received, viz., from Western Australia, from the expedition of Dr. Erik Mjöberg. This collection was purchased with money granted by Parliament in 1912. Some few birds have been purchased from New Zealand, Hawaii, etc.

The greatest quantity of new material from any zoögeographical region has, however, poured in from Africa. In 1906, Professor Sjöstedt returned from an expedition to the Kilimanjaro region of East Africa and delivered to the Museum a great collection of birds, etc. Swedish missionaries procured specimens of birds in Eritrea and the Congo. In 1910-11, Professor Lönnberg, him-

self, made an expedition to Mount Kenia and the region to the north and on his return presented all his collections and among them some 900 birds. Three years later, H. R. H. Prince Wilhelm undertook a shooting expedition to British East Africa, engaged a taxidermist and donated 372 specimens of birds to the Museum. The following year, Captain E. Arrhenius, who had entered the Belgian service in the Congo, sent home about 500 birds. After the war H. R. H. Prince Wilhelm and Count Gyldenstolpe made an expedition to Central Africa to the Kivu region and inner Congo. Among the large collections obtained by this expedition were 1680 specimens of birds. Mr. A. Turner, who had accompanied the Prince on his first African expedition, added to this collection nearly 400 specimens collected in Kavirondo and adjacent districts. Still another Swedish expedition under the direction and at the expense of Capt. S. Lovén, has recently collected zoölogical material in the Elgon district in East Africa. The ornithologist of this expedition, Dr. Granvik, brought together 1333 birds for the Museum. From Madagascar, 150 specimens were received from Dr. Kaudern in return for facilities granted to him.

From North America only a little material has been acquired, and only a few hundred specimens have been obtained by exchange. The accessions from South America have, however, been more important. From Ecuador, the Museum has received through Consul L. Söderstrom about 4000 birds, not counting minor donations and purchases from other countries. Dr. K. Bäckstrom collected a representative series of birds on Juan Fernandez, and presented them to the Museum in 1919. From Cuba, about 370 specimens have been acquired through purchase.

A very valuable donation of birds was received in 1921 from Count Otto von Zedlitz. On condition that the specimens should be kept separately under the name of "Collectio Zedlitz," he deposited in the Museum all of his birds from the Palearctic region and Africa, now amounting to not less than 7481 specimens, many of great value, and collected by himself during his expeditions to Africa and other countries.

At the same time that the exotic collection increased as above mentioned, a collection of Swedish birds has been built up as well.

In doing this the director has had much assistance from a number of friends and correspondents all over the country. This collection has been drained now and then, because material for exchanges with museums abroad has been taken from it, but it comprises at present 3860 specimens for scientific use. The exhibit collection of mounted Swedish birds numbers 1710 specimens and several biological groups. The exhibition of mounted exotic birds includes about 5900 specimens. A collection of old birds containing specimens, none of which is less than one hundred years old, and many date from the end of the eighteenth century, forms a kind of "historical" exhibit which contains 855 specimens. About 1800 other old specimens have been deposited without being registered together with the scientific collection of exotic birds. The latter consists of about 30,500 specimens.

The total number of birds belonging to the Natural History State Museum of Stockholm is thus at present fully 52,100, or a little more. There are a good many type specimens, but the exact number is not known, except that those of the old collection are 28, viz., 2 from many of Sparrman's ("Museum Carlssonianum"), 2 from Paykull, etc. In the main collection are found types of species described by Sundevall, Wahlberg, Sjöstedt, Lönnberg, Gyldenstolpe, Bergman, and others. Finally, among rarities may be mentioned 1 Great Auk, 1 extinct Starling of Mauritius (*Fregilupus varius*), 3 Passenger Pigeons, and some specimens from Hawaii and New Zealand, of species which are now practically extinct.

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