THE ORNITHOLOGICAL COLLECTION OF THE MUSEO NACIONAL, BUENOS AIRES ITS ORIGIN, DEVELOPMENT AND PRESENT CONDITION.

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(TRANSLATED BY T. S. PALMER).

THE ornithological collection of the National Museum of Natural History in Buenos Aires began with the foundation of the institution in 1823. Four years later, according to an inventory of the objects in the Museum at that time,1 it contained a collection of 150 birds. A few years later another accession purchased in France included 33 Raptores, 24 Gallinae, 50 Waders, 41 Palmipedes, 27 Scansores, and 84 Passeres. From this time on for many years the collection seems to have remained stationary with the exception of small donations made from time to time which consisted of isolated specimens of common species indigenous and exotic, generally without data, in bad condition, and consequently without scientific value. According to data found in the archives of the Museum, another inventory made on March 23, 1854, by those in charge, Sr. Santiago Torres and Dr. Miguel Garcia Fernandez, showed that the ornithological collection then comprised 445 mounted birds, 36 eggs and 3 nests.

In 1862, when Dr. Herman Burmeister was made Director of the Museum, the institution received a greater impulse for progress and took on a character really scientific. This savant should therefore be considered the real founder of the collection now in the Museum, and particularly of the collection of birds in which he always took a special interest. The work of Dr. Burmeister as an ornithologist is well known to all who have been interested in the birds of South America and especially of the Argentine Republic. Several years prior to the time that he undertook the directorship of the Museum, he devoted himself to the study of Argentine birds, publishing descriptions of many new species and a list of those

¹ Published in 'La Cronica politica de Buenos Aires,' No. 36, June 9, 1827.

known from the Republic. The types of nearly all these new species may be found today in the Museum of Halle, Germany.

From the time he entered the Museum he began to organize the ornithological collection systematically, to identify the specimens then existing, and to increase them with the limited means available by sending out collectors on expeditions through the Province of Buenos Aires with the object of bringing together the greatest possible number of the birds of the La Plata region. Meanwhile he undertook exchanges of duplicates with other museums in Europe and the United States. In this way he was able to obtain from the Smithsonian Institution a beautiful collection of about 650 specimens of North American birds from the Museum of Geneva some of the showy plume birds, from the Malay Archipelago, and from the Museum of the University of Greifswald, Germany, several series of European birds, these last in large part mounted and ready to be placed on exhibition.

Little by little small collections of native and foreign birds were acquired among which was one of humming birds from Deyrelle in Paris, another of the birds of Chubut, Patagonia, from the English collector Henry Durnford, and others from Frederico Schulz collected in the northern and central regions of the territory. Lastly, through the assistance of the National Government, was acquired a beautiful collection of birds of Santa Cruz de la Sierra, Bolivia, made by San Martin, comprising more than 300 specimens.

A little later he undertook to broaden the field of personal expeditions sent out from the Museum to the most remote regions of the country to make collections, and in some cases utilized for the purpose expeditions which the Government made for other objects. In this way some collections of birds were obtained from Patagonia and other provinces of the Republic. Among these may be mentioned one made by Frederico Schulz of the birds of the Rio Guayquiraro region in the Provinces of Entre Rios and Corrientes, a list of which has been published in 'El Periodico Zoologico Argentino,' by Dr. Adolfo Deering of the University of Córdoba.

All the specimens of birds obtained during these expeditions were mounted, and, after having been identified by Dr. Burmeister, were placed on exhibition in the halls of the Museum. Gradually

the ornithological collection was increased, and in 1892 at Burmeister's death the specimens numbered more than 3500, well classified and systematically arranged. Although this record may appear somewhat modest for the 30 years in which Dr. Burmeister held the directorship of the Museum, it should be remembered that the institution had very small resources, and the entire personnel included only the Director, an assistant and two preparators who were occupied at the same time with other groups and especially with the palaeontological collections.

Dr. Burmeister also succeeded in arranging matters so that remains of some extinct birds were represented in the Museum and with this object in view made an exchange with the British Museum and secured a nearly complete skeleton of Syornis casuarina (Owen) from New Zealand, and parts of the skeletons of species of Pachyornis and the gigantic Dinornis.

Following Dr. Burmeister, Dr. Carlos Berg succeeded to the directorship of the Museum and continued to maintain the prestige of the institution, following up the work undertaken by his illustrious predecessor. After introducing improvements in the interior of the old building restored in the best possible manner, he busied himself with the exhibition of the collections, ordered the construction of more suitable cabinets and glass exhibition cases and undertook to increase the scientific material, especially the part relating to biology. Although his specialty was entomology he gave much attention to fishes and reptiles and at the same time took great interest in birds. He undertook to bring together collections of eggs and nests and exhibited in glass cases some of the principal species of each family of birds native to the Argentine Republic, preserving the duplicates in cases for comparison to show the changes which light produces in the colors of the shell.

He occupied himself also with the labels of the specimens on exhibition some of which had deteriorated through age and replaced them with others which were more appropriate, added the corresponding common names to the scientific names, and improved the opportunity of bringing the latter down to date in accordance with modern nomenclature. This great work was done with meticulous care, Dr. Berg revising each label before replacing the specimen on exhibition and undertaking with the

greatest solicitude to preserve the old labels written in the handwriting of Dr. Burmeister, which were not removed and can always be found on the backs of the pedestals.

Heretofore all specimens of birds which entered the Museum were mounted so as to be placed on exhibition, but Dr. Berg realized the necessity of also making a collection of skins for study. With this end in view he sent preparators to collect in different regions of the Republic and secured other specimens from special collectors who began to devote themselves to this kind of work. Up to this time with the exception of some naturalists and foreign collectors like Durnford, White, Withington, Barrows, Gibson and others who generally sent their collections to the respective museums in their own countries there were no persons who devoted themselves to studying and collecting skins, nests and eggs of birds for scientific purposes. It was Dr. Berg who succeeded, through his advice, in interesting several young men who frequented the Museum. One of the first of these collectors was Luis Dinelli who made one of the most extended collections and brought together a large number of skins of Argentine birds. Santiago Venturi was another careful observer of the habits of birds and an active collector of nests and eggs. To these were added later, others like Julius Koslowsky who made large collections of birds in Chubut; Emilio Budin and Wm. Gerling who worked in the northeast of the Republic; and later the brothers Manuel and Demetrio Rodriguez who brought together large collections from the Andean region on the north, from Misiones, the Chaco and the Province of Buenos Aires; Juan Mogensen who collected in the northern part of the territory, in Patagonia and Tierra del Fuego; and finally Pablo Girard who collected in the provinces of Tucumán. Salta and Santiago del Estero. Unfortunately, a large part of these collections were acquired by, and passed into the possession of, European museums, especially the British Museum and the Tring Museum.

Among the most important collections of skins acquired by the Museum during the directorship of Dr. Berg may be mentioned one of nearly 350 specimens representing 118 species made by Dr. Felipe Silvestris, chief of the zoological section of the Museum, during a trip to the provinces of Salta and Tucumán in the year

1898, and another of birds from the Province of Buenos Aires brought together by the collector Luis Dinelli. Thus was begun the formation of the present study collection of skins which now includes numerous specimens of birds from all parts of the Argentine territory. Dr. Berg acquired also a part of the collection of nests and eggs made with great care by Venturi just mentioned. Another large part of this same collection was acquired by the Tring Museum and has been described by Messrs. Hartert and Venturi in Vol. XVI of the 'Novitates Zoologicae,' 1909.

It was during the last two years in which the Museum was under the direction of Dr. Carlos Berg, and more exactly in 1900, that the writer of these notes became associated with the personnel of the institution. Almost immediately he undertook a trip to the Territory of Misiones and in the following year another to Tierra del Fuego. From both of these trips he brought back collections of birds, the first which had reached the Museum from these distant sections of the country.

In the meantime I began to review the skins in the collections of Argentine birds already in the Museum which had not been studied and which were very numerous. Briefly, the number of species recorded in Sclater and Hudson's 'Argentine Ornithology,' 1888-89 only totals 434, but after the expeditions of Dr. Alfredo Berelli of the Museum of Turin, and G. A. Baer to the northeastern regions of the Republic, and of S. Venturi to the Chaco, between 1892 and 1903, many species new to science were described and many others were recorded for the first time in the limits of the Argentine Republic. The descriptions of new species and the lists of birds, collected by the naturalists above mentioned, were published in various journals of this country and Europe, such as the 'Anales del Museo de Buenos Aires,' 1902; 'Bollettino Musei Torino, 1896-97; 'Ornis,' 1904, etc. It was therefore necessary for me to compile as complete a list as possible of all the species recorded from Argentina, a work which was finished in 1910 and which has been published in the 'Anales of the Museo Nacional,' under the title 'Systematic and Descriptive Catalogue of the Birds of the Argentine Republic.' Unfortunately, the material which I had at my disposal at this time was not very complete or sufficient for an exhaustive study, due to the fact that in various cases I was unable to refer to the citations of other authors, and this condition resulted in certain errors especially in the geographic distribution of some species which did not belong to the Argentine avi-fauna. Furthermore, I lacked for comparison specimens of birds of countries bordering on Argentina. Since 1910 I have been able to devote myself to obtaining the greatest possible amount of this study material with the object of continuing the 'Descriptive Catalogue of Argentine Birds' and publishing a new and more complete list brought down to date so far as nomenclature is concerned. This work is now in course of preparation, but unfortunately, because of the multiplicity of duties which consume a great part of my time in the Museum, it will not be possible to finish it as soon as I should like.

Thanks to the good will and approval of the directors of the Museum, Dr. Florentino Ameghino and Angel Gallardo who respectively succeeded Dr. Berg, and also of the Secretary of the Museum, Sr. Augustin J. Pendola, the collections of birds acquired since 1910 tripled the number of specimens previously in the Museum, increasing the total from 5000 to the present 15,330. Of these 15,330 specimens 4,212 are mounted and on public exhibition, indicating that the 11,118 others are skins which make up the study collections and duplicates. As to origin, these specimens may be distributed roughly as follows: 2500 belong to species from North and Central America, Europe, Asia, Africa and Australia, and 12,830 represent South American species. especially those of Brazil, Paraguay, Argentina and Chile. the last mentioned group are about 8,000 specimens obtained in Argentine territory and representing nearly all the species which have been recorded from this area.

The collections which deserve mention on account of greater importance in respect to number of species and specimens are mentioned below with the name of the collector and the designation of the scientific institution from which they came:

- 1. The Juan Mogensen Collection of 2250 birds from north-western Argentina, Chaco, Patagonia, Misiones and Tierra del Fuego.
- 2. The Pablo Girard Collection of 1300 birds from northwestern Argentina, especially Salta, Tucumán, and Santiago del Estero.

- 3. The Collection of F. M., and Demetrio Rodriguez of 900 birds from the mountain region of northwestern Argentina, Chaco, Misiones and the Province of Buenos Aires.
- 4. The Gordon Bowman Collection of 450 birds from Neuquen and the Rio Negro.
- 5. The Nunes Collection of 350 birds from Misiones and the Province of Buenos Aires.
- 6. The Luis Dinelli Collection of 300 birds from Tucumán and the Province of Buenos Aires.
- 7. The H. Ambrosetti Collection of 1350 birds from Tucumán, Salta, Misiones, Chaco, the United States and Costa Rica.
- 8. The Felipe Silvestris Collection of 350 birds from Salta and Tucumán.
- 9. The Emilio Budin Collection of 120 birds from Chaco, Salta, Jujuy, and from Neuquen and western Chubut.
- 10. The Collections of W. Foster and F. Posner of 422 birds from Paraguay.
- 11. The Collections of J. Steinbach and San Martin of 1150 birds from Santa Cruz de la Sierra, Bolivia.
- 12. The Collections of Herbert Smith and L. Moquerys of 550 birds from Matto Grosso, Brazil.
 - 13. The Carlos S. Reed Collection of 145 birds from Chile.
- 14. The Rodriguez Luna Collection of 220 birds from Guatemala.
- 15. The Smithsonian Institution Collection of 650 birds from North America.

As indicated in the foregoing list, the greater part of the collections above named contain species of birds of the neotropical region and especially of the southern half of the South American continent which at present are the ones of chief interest.

Beside the types and co-types of Argentine species and subspecies described by other ornithologists and myself, there are represented in the collection various rare neotropical birds and a goodly number of others which are uncommon in the museums of Europe, and in the United States, such as the following:

Tinamotis ingoufi Penelope nigrifrons Porzana spiloptera Pluvianellus sociabilis Phegornis mitchelli Thalassogeron eximius Diomedea epomophora sanfordi Merganetta berlepschi Merganser brasilianus Phoenicopterus jamesi Spiziapteryx circumcinctus Gisella harrisi Astur poliogaster Dinospizias pectoralis Ara caninde Anodorhynchus glaucus Bolborhynchus rubrirostris Amazona pretrei Amazona tucumana Celeus kerri Phloeotomus schulzi Apus andecolus dinellii Cypseloides senex Chaetocercus burmeisteri Clibanornis dendrocolaptoides

Leptasthenura ægithaloides berlep-Geositta antarctica Geositta punensis Geositta isabellina Muscisaxicola fluviatilis Muscisaxicola capistrata Haplocercus sclateri Acrochordopus subviridis Xenopsaris albinucha Cinclus schulzi Notiocorys bogotensis shiptoni Pseudosicalis stewarti Spinus magnirostris Sporophila palustris Compsospiza baeri Haplospiza unicolor Planesticus subalaris

In addition the collections also contain some specimens of birds on the road to extinction, such as Apteryx oweni, Conuropsis carolinensis, Stringops habroptilus and Ectopistes migratorius. Nearly all the specimens have been identified and in doubtful cases of certain neotropical species I have sent specimens to Dr. C. E. Hellmayr to whose courtesy I owe the identification of various species and the confirmation of my own.

In reference to the preservation of the study collections, we have adopted for small specimens a system analogous to that in use in the museums of Europe and the United States, consisting of small cases which contain each a dozen trays measuring 75×75 centimeters and 8 to 10 centimeters in depth, in which the bird skins are distributed in systematic order. Specimens of medium or large size are provisionally kept in ordinary boxes of uniform shape, provided on one end with a label which shows the order, family and genera to which the specimens belong.

The general catalogue of the ornithological collection has been made according to systematic order and the entries, besides noting the scientific and common names contain also the data on the respective labels to which they refer. Another entry is added indicating the state of preservation of the specimen, good, bad or deficient, and whether it is mounted and on exhibition or simply a skin.

The collection of birds on public exhibition as stated above comprises 4212 specimens and occupies two halls of the Museum. Due to lack of space the center of these halls is occupied mainly by large cases which contain skeletons of fossil mammals which cannot be located in other halls. The present installations represent an antiquated type and do not conform to the requirements of a modern museum. The specimens of birds are arranged side by side in the numerous spaces of the cases, so high that they can only be observed with much difficulty by the public, not only because of the distance but also because of the scarcity of light.

In recent years, notwithstanding the reduced space available, it has been possible to place in the center of the hall some glass cases in which are exhibited certain small habitat groups, in which are introduced, in addition to the birds, artificial reproductions of the surroundings in which the birds live. Among these groups are: A group of birds of the coast of Argentina, including Gulls, Terns, Oystercatchers, etc.; a group representing part of a barranca in which certain species of Swifts are accustomed to nest, with a specimen of Cypseloides fumigatus and another of Streptoprocne zonaris each with its nest and eggs; a group containing male and female of the Rufous Tinamou (Rhynchotus rufescens) with its nests and eggs, etc. . . Absolute lack of space at present prevents continuing the exhibition of these interesting groups. In another separate glass case is exhibited a small collection of American Trogons including several beautiful specimens of the Quetzal (*Pharomacrus mocinno*), and in still another the principal species of birds of paradise. In a central case is a varied collection of the birds of the most showy plumage from the tropical regions of America, Asia, Africa and Oceanica. Finally a special glass case is devoted to species of birds of the Province of Buenos Aires.

In reference to the artistic side of the mounting of the specimens there are, as in all museums, many old specimens which were very indifferently prepared, but the works of taxidermy which were executed some years ago by the preparators Santiago and Antonio Pezzi are excellent and worthy of a place in almost any museum.

The egg collection has been on public exhibition since the time of Dr. Carlos Berg, and contains eggs of the common species of the Argentine avi-fauna, There is also another collection for study preserved in boxes in special cases and this includes especially eggs of the birds of northern Argentina in which each species of bird has the complete number of eggs in each set and all the data required to give such a collection scientific value.

The collection of mounted skeletons comprises 140 species of Argentine and some exotic birds. There are also numerous unmounted skeletons of birds which are utilized for study and are preserved in boxes. I have given special attention to this collection in order to obtain skeletons of the greater number of birds belonging to the genera of Passeres represented in Argentina. Finally there are some osteological preparations exhibited in glass cases to illustrate the disposition of the bones of the palate in distinct groups of birds and others to demonstrate the relations between the flight feathers and the bones of the wing.

The Ornithological Society of LaPlata has its home in the Museum, where from time to time meetings are held at which the collections which come in and other interesting specimens are exhibited. All the birds which the members of the Society send in as gifts to the Ornithological Society form part of the Museum collection.

As in the case of other sections the general activities of the Ornithological Section, on account of its great expansion are very limited at present because of absolute lack of space and inadequate conditions of the present museum building, but these inconveniences will be overcome with the projected construction of a new building which for years has become more and more necessary. Thanks to the energy and activity of the new director Professor Martin Duelle-Jurade, the steps necessary to realize this object have already been taken and it is hoped that in time not far distant there will be erected, on the 36,000 square meters of land recently granted to the municipal government of the capital, a Museum building worthy of the great South American metropolis.

Museo Nacional, Buenos Aires.