

## THE BIRD COLLECTION OF THE CARNEGIE MUSEUM\*

BY RUTH TRIMBLE

Although the bird collection of the Carnegie Museum is not among the oldest of American collections, it has the distinction of being among the largest. Listing American collections according to their size we find Carnegie in fourth place, with approximately one hundred and ten thousand specimens, representing about one-fourth of the known species of birds in the world. No munificent gifts of large private collections have increased our store, and no spectacular million-dollar expeditions, such as have contributed to the history of our sister institutions, have come our way. It would seem that the bird department of Carnegie Museum, much after the fashion of its founder, whose name it bears, has lifted itself by its own boot-straps.

In November, 1895, Andrew Carnegie's gift to the City of Pittsburgh became a reality. On June 1, 1896, the first birds were received. They consisted of 185 mounted specimens, a gift to the Museum from the Academy of Science and Art of Pittsburgh. Naturally the first concern of the new museum was exhibition and the early collections acquired were mainly of local birds. A consistent attempt in the early years of the museum succeeded in assembling an appreciable array of birds from western Pennsylvania. No inconsiderable part of this was the collection of Mr. W. E. Clyde Todd, who was destined to become the curator of the Section of Ornithology. Also included was a part of the George B. Sennett Collection, and the birds collected by Mr. Samuel N. Rhoads for the Museum. These collections all contain many interesting birds which now form a large part of our exhibition series of the birds of western Pennsylvania. As the years passed, the series of Pennsylvania birds continued to develop, until now we have a very complete representation of the birds of our region. Areas which received particular attention were the region of Lake Erie, the only section of western Pennsylvania where water birds abound; Pymatuning Swamp, which ecologically offered a fertile field for investigation; and the mountains of the middle portion of the State. In 1904 Mr. Todd published in the *Annals of Carnegie Museum* a comprehensive survey of the birds of Erie and Presque Isle, and in 1928 in the same publication Dr. George M. Sutton brought out an interesting paper on the bird-life of Pymatuning Swamp. This paper was quite timely, due to the fact that much of

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the swamp-land was to vanish before a State project calling for the flooding of the area in the construction of a storage dam. In the past few years Pymatuning Dam has gradually become a reality, which has spelled doom for many marsh-dwelling birds, but which at the same time has opened up new territory for water birds. Observations on these changes and much valuable information as to the occurrence and distribution of the three hundred-odd species of birds known to occur in our region will be recorded in a long contemplated work by Mr. Todd on "The Birds of Western Pennsylvania", soon to be published. The basis of this report is a collection of approximately 6,000 birds, taken within a period of fifty years, and supplemented by detailed notes by the author, as well as those of many other observers who have unselfishly placed their notes at his disposal.

Coincident with the effort to build up a series of local birds the Section of Ornithology began to enlarge its scope and cast about for ornithological "plums", so to speak. From the Baron van Schauburg in Holland were purchased 800 beautifully mounted European birds. These constitute at present a large portion of the Synoptic Series of Genera of Birds of the World in our Galleries. Two unique and historic collections acquired in the early days of the Museum were that of A. W. Anthony, consisting of 10,000 North American birds, and that of Sir Walter Buller, 200 specimens of the birds of New Zealand. The Anthony birds were taken in the western States, in Lower California, along the Pacific Coast, and on the Island of Guadalupe. From the latter island are good series of the Guadalupe Junco (*Junco insularis*) and the Guadalupe House Finch (*Carpodacus amplus*), both described by Anthony, and also representatives of the now extinct Townsend's Shearwater (*Puffinus auricularis*), the Guadalupe Caracara (*Polyborus lutosus*), and the Guadalupe Flicker (*Colaptes cafer rufipileus*). The Anthony collection includes nineteen types, and is particularly rich in seabirds.

The Buller collection which came to the Carnegie Museum is that upon which Sir Walter Buller based his *Supplement to the Birds of New Zealand*, published in 1905. History was to record the almost complete destruction of a unique avifauna by the ingress of civilization on these islands, and today many of the native birds exist only in museums, and even there are rare. A number of these extinct forms are included in the Buller collection, among them one of the famous Stephen's Island Wren (*Traversia lyalli*), of which only about a dozen specimens are known to exist, the extermination of this species having been perpetrated by the light-house keeper's cat within a few months of its discovery by the self-same cat.

Although these particular units are important historically, they are but isolated bits of the main general collection, which from its inception was particularly designed to build up a representation of the avifauna of the New World. Two regions were designated for exhaustive investigation. The first comprised the arctic and subarctic regions of North America with particular emphasis upon the Peninsula of Labrador; the second, the countries of northern South America and the adjoining states of Middle America.

Operations in the North Country were first begun in 1901, when Mr. Todd led an expedition to Newfoundland Labrador. No less than twelve expeditions to Labrador and the region of the James and Hudson Bays have been conducted under Museum auspices since that initial venture. At the time this project was inaugurated Labrador was from a naturalist's standpoint an unworked field, and the collection of birds that has subsequently been assembled by the Carnegie Museum is surpassed by no other. The various expeditions have encircled the Peninsula, working the coast, the coastal islands and rivers of Ungava, Ontario, and Quebec, north of the southern limit of James Bay. In spite of the inaccessibility of the region investigations were made during all seasons of the year. On one occasion Mr. O. J. Murie elected to spend the winter in the Great Whale River region of western Quebec with the result that a magnificent series of such little-known arctic and subarctic species as Holboell's Redpoll, Rock Ptarmigan, Snow Bunting, and Lapland Longspur were secured for Carnegie Museum. On another occasion the Museum accomplished a difficult traverse of the interior of the Labrador Peninsula from the Gulf of St. Lawrence to Ungava Bay, a region never previously visited by naturalists. And again Mr. Todd invaded the winter fastness of the Hudson Bay area by dog-team with the specific purpose of observing nesting birds and collecting the little-known eggs and young of arctic forms. Thus the Carnegie collection is unique in that it was made not only in a region the natural history of which remains unrecorded, but also because it covers an entire season, winter as well as summer. The series of ptarmigan showing the various stages of spring and fall molt are not to be duplicated elsewhere; there are exceptional series (adult and juvenile plumage) of the various species of Limicolae, which have become rare of late years; and the many specimens of geese and ducks from this area prove invaluable in settling problems of subspecies and their distribution. The results of this research are being prepared by Mr. Todd for publication.

In line with the studies in Labrador was an intensive survey of the bird-life of Southampton Island, in Hudson Bay, made by Dr. George M. Sutton, whose conclusions were recently published in the *Carnegie Museum Memoirs*, and whose excellently prepared specimens are now all a part of our collection. Later studies have also been made in Manitoba, Saskatchewan, and British Columbia. Much of this work in the North Country has been made possible through the generosity of Mr. John B. Semple, of Sewickley, a trustee of the Carnegie Museum. Although the Museum has never actually worked in Alaska, we have secured several small but important collections from this territory, as well as from Wrangel Island and eastern Siberia.

In addition to our series of birds from Pennsylvania and the nearby States of Maryland, Virginia, and the District of Columbia, we have acquired a worth-while collection from Florida, secured by Mr. Willis W. Worthington in the early 1900's, and latterly through the efforts of Mr. John B. Semple and Dr. Sutton. These two gentlemen have within recent years collected for the Museum in the Rio Grande Valley of Texas and in Oklahoma. Except for these few instances our work in the United States has been somewhat erratic, and the greater part of our birds from the western states are those acquired in the Anthony Collection.

More than half of our entire collection has come from South and Middle America. From the Bahama Islands of the West Indies we have a small but fairly representative series of land birds, which formed the basis of a paper on the ornithology of those islands, published by Mr. Todd in 1911. In 1912 and 1913 Mr. G. A. Link, Sr., then of the Museum staff, secured during a year's residence on the Isle of Pines a splendid collection of birds, concerning which Mr. Todd published in the *Annals of Carnegie Museum*, in 1916, an admirable monograph, which stands as the authority on the birds of that neotropical island.

British Honduras was early marked for attention, and our first material was received from Mr. Morton E. Peck in 1905. For several years Mr. Peck collected in this interesting locality, but we were unable financially to acquire all of his collections. Through the courtesy of other institutions which received a share of this material the opportunity of studying and listing the specimens was granted to Mr. Todd, who was contemplating the preparation of a paper on the birds of British Honduras. It was apparent that more field work was necessary, even after Mr. Ernest G. Holt in 1926 had added another fine series of birds to our store. Meanwhile the Museum of Zoology of

the University of Michigan has acquired some note-worthy birds from this region and Dr. Josselyn Van Tyne has agreed to collaborate with Mr. Todd in the preparation of the report. It is hoped that our plans for sending another expedition to British Honduras to finish up the work there will be a reality of the near future.

We have a reasonably complete representation of the birds of Costa Rica, a territory not so large as the peninsula of Florida, but supporting a wonderfully rich and varied avifauna. This collection was made by Mr. M. A. Carriker and was reported upon by him in our *Annals* in 1908.

Santa Marta, Colombia, came in for a share of attention in the very early days of our history. The initial collection from Santa Marta numbered about one thousand skins purchased from H. H. Smith in 1898. In 1911 Mr. Carriker began operations in the region. From that time until 1920 work was continued there practically without interruption, resulting in the assembling of 5,000 specimens of birds, more than 4,000 of which came ultimately to the Carnegie Museum. "The geographical position of Santa Marta, lying as it does right at the gateway, so to speak, from the plains of Venezuela into northern Colombia; its semi-insular character; the isolation of its mountains, and their different trend and greater height as compared with the neighboring Andean system, all combined to make the study of its bird-life a problem of exceptional interest." Mr. Carriker's collections were made at various elevations from sea-level savannas to snow-capped mountains and in all the various kinds of habitat represented. In collaboration with Mr. Todd a faunal report on the birds of Santa Marta was prepared and published in the *Annals* in 1922.

The success of the work done in Colombia made the opportunity to acquire additional collections from Venezuela, put up in Mr. Carriker's inimitable style, seem highly desirable in furthering our work in neotropical regions. Venezuela was chosen as the next field of endeavor because it was the most logical field to enter after Colombia and presented a chance to work out distributional problems raised in connection with the investigations in Colombia. To Mr. Carriker's collections were added those from Mr. S. M. Klages, who had a wide experience in collecting in South America, and those of Mr. Ernest G. Holt and Mr. Harold Clement, who were sent out by the Museum on a regularly organized expedition, which, sad to relate, came to an untimely end. The Venezuelan material at present comprises more than 12,000 specimens and represents diverse areas, including as it does material from the north coast, from the Lower Orinoco and Lower

Caura Valleys, the foothills and western slopes of the Venezuelan Andes, and the coast region of the Gulf of Maracaibo to the paramos of the Andes of Merida.

Supplementary to the Venezuelan material are fairly good collections from Trinidad and Curacao, secured by Mr. Carriker, and also a valuable collection from French Guiana, received from Mr. Klages. French Guiana is of peculiar scientific interest because it is the accepted type-locality of many species of South American birds originally described in the writings of French and Dutch naturalists. In addition to his work in Venezuela and French Guiana, Mr. Klages also collected in Brazil for the Carnegie Museum. This material, amounting to almost 15,000 specimens from the valleys of the Lower, Middle, and Upper Amazon, is the largest and most excellently prepared collection of those birds in existence. It is very rich in such families as the Antbirds, Ovenbirds, Woodhewers, etc., and many species are in series large enough to permit disposal of duplicates by exchange when the collection has been finally worked up.

As early as 1909 we received our first consignment of birds from Bolivia, collected by Mr. José Steinbach. Until the time of his death a few years ago Mr. Steinbach sent us material regularly, mainly from his headquarters near Santa Cruz de la Sierra, but also from the Andes to the north and west. In many ways this material is the most interesting received from South America, because Bolivia is relatively unknown ornithologically. It has been a difficult collection to study because of the scarcity of material for comparison, but already a number of new forms have been described.

No attempt has been made to prepare faunal accounts of the countries of South America just reviewed. In most cases additional field-work will be necessary for comprehensive surveys. However, in the course of critical and systematic studies of our collection family by family—a task which is at present a little more than half complete—this large assemblage of birds has proved amazingly fruitful. In actual numbers it exceeds 60,000 specimens and comprises 2,500 species and subspecies, or fully one-half the number at present known from the South American continent. Already more than 280 new forms have been described, and with such excellent material available important contributions to geographical distribution and the revision of certain families and genera were made possible. These papers have been published, mainly by Mr. Todd, in the *Annals of Carnegie Museum*, in the *Proceedings of the Biological Society of Washington*, and in the *Proceedings of the U. S. National Museum*.

Carnegie Museum has, as already stated, given greatest consideration to the building up of adequate series of New World birds. Our collection of the birds of the Old World is consequently most inadequate. It is limited to the more common European forms and to small collections from China, Japan, the Philippine Islands, New Guinea, Australia, and New Zealand, already mentioned, and a small but interesting lot of the fast vanishing avifauna of the Hawaiian Islands. Most of this material has been acquired by purchase or exchange, except for one short trip to Austria and Yugoslavia, made by Mr. Ludwig von Fuehrer under Museum auspices.

The continent of Africa is represented by collections from Algeria, Cameroun, Kenya Colony, Nyasaland, Southern Rhodesia, and Angola. The Cameroun birds were collected over a period of years, mainly by Mr. Jacob Reis, and comprise almost 4,000 specimens. Two expeditions to Africa were made possible by the interest of generous friends. In 1929-30 Mr. Rudyerd Boulton, then a member of our staff, collected in Nyasaland and Southern Rhodesia; and in 1930-31 he again went to Africa—this time to Angola, in Portuguese West Africa, accompanying Mr. Ralph Pulitzer of New York, who generously financed the expedition. Our collection from Angola, although not extensive, supplements admirably the material in the American Museum of Natural History, and together with it will form the basis of a report on the birds of Angola, which Mr. Boulton is preparing. A number of obvious new forms have already been described by Mr. Boulton in advance of his general paper.

That, somewhat sketchily, is an account of the scope of Carnegie's collection of birds and the purpose it has served. We trust that in the future it will serve as capably to advance the science of ornithology. The success of the work is attributed in part at least to the general excellence of our material and its careful, systematic arrangement. The standard of quality upon which Mr. Todd has insisted has sometimes proved a trial to collectors, but at the same time a delight to those who have utilized our material. We take justifiable pride in the fact that our collection is regarded as unexcelled in quality and arrangement.

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