

The region is limited, as already said, to the area north of the Arctic Circle, and includes the following eleven islands and groups of Islands: (1) Bear Island, with 28 species and subspecies, of which 17 breed on the island. (2) Spitzbergen Archipelago, with 50, of which 25 breed, while 18 of the 50 are circumpolar. (3) Franz Joseph Land, 28, 16, and possibly 18, of which breed, while 18 are circumpolar. (4) Nova Zembla, 49, of which 18 are circumpolar. (5) Kolgnew, 51, of which 42, or 84 percent, breed, and 16 are circumpolar. (6) Dolgoi, 23, of which 18 are circumpolar and 18 breed. (7) Waigat, with 49, of which 29 breed, and 17 are circumpolar. (8) New Siberia, 50, of which 19 are circumpolar, 23 palæartic, and 8 nearctic, and 37 breed. (9) Wrangel Island, 28, of which 15 breed, 12 are circumpolar, 10 'pacific-nearctic,' and 6 palæartic. (10) Herald Island, 23, of which 14 breed, 8 are circumpolar, 11 'pacific-nearctic,' and 4 'Europæo-Asiatic.' (11) Greenland, 161, of which 20 are circumpolar, 83 palæartic, and 58 nearctic, with 60 that breed. Of these 56 are common to both East and West Greenland; West Greenland has 153, of which 20 are circumpolar, 60 nearctic, and 73 palæartic; East Greenland, 64, of which 17 are circumpolar, 9 nearctic, and 38 palæartic. (12) Jan Mayen, 52, 18 of which are circumpolar, 4 nearctic, and 30 palæartic, and 19 have been found nesting.

The ornithology of these different islands is very unequally known, some, like Jan Mayen, being very well known ornithologically, while others, like Dolgoi, Kolgnew, Waigat, etc., are very imperfectly known, so that the statistics for some of them include some more or less doubtful species. As will be seen, however, from the foregoing, in this critical examination of the arctic ornithology the author has brought together a vast amount of exceedingly important and interesting information.—J. A. A.

NOTES AND NEWS.

DR. SAMUEL W. WOODHOUSE, a Corresponding Fellow of the American Ornithologists' Union, died at his home in Philadelphia on October 23, 1904. Although for many years retired from active work, Dr. Woodhouse's early life was full of adventure and his name was prominent among men of science and travel fifty years ago.

Samuel Washington Woodhouse was born in Philadelphia, June 27, 1821, the son of Com. Samuel Woodhouse, U. S. N., and H. Matilda Roberts. The family came from Northumberland, England, his grandfather emigrating to America in 1776.

Dr. Woodhouse was educated at private schools in Philadelphia and at

West Haven, Conn. For a time he engaged in farming, but later determined upon the study of medicine and matriculated at the University of Pennsylvania, graduating in 1847. He then became assistant resident physician at the Philadelphia Hospital, a post which he held for a year or more, when he resigned to become Surgeon and Naturalist to the U. S. Topographical Engineer Corps on the survey of the boundary between the Creek and Cherokee Indian nations.

From early life he had been enthusiastically interested in natural history, especially ornithology, and had visited the Academy of Natural Sciences. Here he became intimate with Thomas Nuttall, the botanist and ornithologist, J. K. Townsend, Drs. George Leib, Samuel G. Morton, Robert Bridges, Paul Goddard, Joseph Carson, Elwyn and Zantinger, and other active members of the Society. On his farm he continued his study of ornithology, and under the instruction of Dr. Leib became skilful in the art of taxidermy, which was then an important part of the ornithologist's equipment. With these strong tastes it is not surprising that he preferred positions in which he could combine his love of nature with the sterner duties of the medical profession. Therefore, when Col. J. J. Abert, the chief of the Topographical Engineers, applied to Dr. Morton to recommend a doctor and naturalist, Woodhouse was only too anxious for the appointment. He reported in Washington in April, 1849, and reached Fort Gibson, where the expedition under Lieutenant Sitgreaves was to rendezvous, on June 6. The country traversed by the Survey was an unexplored section of the Indian Territory, and his collections were consequently of much importance to science. In the following year, under Lieutenant Woodruff, the survey was completed.

In 1851, again under Lieutenant Sitgreaves, Dr. Woodhouse was a member of the Zuni River Expedition, traveling from San Antonio, Texas, via El Paso to Santa Fé, and then west to the Zuni, which was followed to its junction with the Little Colorado, thence across the San Francisco Mountains and down the Colorado River to Yuma, reaching San Francisco early in 1852.

Much of the country was virgin soil to the naturalist, and Dr. Woodhouse secured many specimens, though he was seriously handicapped in his collecting by a rattlesnake bite which he received at the pueblo of Zuni. This hindrance to his natural history researches was, however, of importance from a medical standpoint, and he made a careful study of the effects of the bite and the result of his treatment.

At the close of this expedition, in 1852, Dr. Woodhouse returned to Philadelphia and prepared a report upon all the collections of birds and mammals obtained by him in the Southwest, and this treatise forms one of the most valuable pioneer contributions to the ornithology and mammalogy of our western States and Territories. Six new quadrupeds were described and named, and an equal number of novelties were discovered among the birds, while many other of Dr. Woodhouse's specimens proved later on to belong to undescribed forms. Some of these, such as the Woodhouse's Jay (*Aphelocoma woodhousei*) have been named in his honor.

His next position was that of surgeon to the Inter-ocean Canal, Railroad, and Mining Company Expedition to Nicaragua and Honduras, covering the years 1853-1854, when he traveled over the route to Lake Nicaragua, since made famous by the more recent advocates of the Nicaragua Canal.

Returning from this enterprise Dr. Woodhouse became surgeon at Fort Delaware from 1854 to 1856 and later, 1859-1860, was surgeon on Cope's Line of Packets plying between Philadelphia and Liverpool.

In 1872 Dr. Woodhouse married Miss Sarah A. Peck, and is survived by two children. The last of his generation of scientific men, he had been for many years in retirement, as it were, and out of touch with the leaders in his favorite study, but more recently he became associated with the younger ornithologists of the present day and attended two Congresses of the American Ornithologists' Union, and many meetings of the Delaware Valley Ornithological Club, where his reminiscences of the older bird students were received with deep interest; his stories of Nuttall, combining his hobbies by digging up plants with his gun-barrel, and the details of the capture of rare birds where city streets and blocks of houses now stand, were ever interesting themes.

His earnest attention to papers and communications and his interest in every new discovery gave evidence that the enjoyment of these meetings was not all on one side, and the revival of the favorite pastime of his youth seems to have added not a little to his pleasure and to have cast a brighter glow over the closing years of a life as full of action and adventure as it was marked by modesty and earnestness. — W. S.

JOHN COWING KNOX, of Jackson, Minnesota, an Associate of the American Ornithologists' Union, was drowned in Shoal Lake, Manitoba, Canada, on June 10, 1904. Mr. Knox was one of a party of three, and had started to row from the mainland to a small island three miles distant. When about two miles from shore a gale sprung up and the boat went over. This occurred at nine in the morning. The three occupants clung to the boat and tried to swim and push the boat to shore. This failed, and at two o'clock in the afternoon one of the party dropped from the boat from exhaustion and sank. Mr. Knox managed to hang on until two-thirty, when he, too, relaxed his hold and sank. The third member of the party managed to cling to the boat until it finally drifted ashore at eleven o'clock that night, and was rescued. The two bodies were recovered several days later. Mr. Knox was twenty-five years of age, and had just recently gone into partnership with his father, in law business. He was a graduate of the University of Minnesota in 1900, and of the Law Department of the same university in 1903. He had been interested in ornithology since childhood, and had formed an excellent collection of eggs of Minnesota birds. He had long planned this ornithological outing to Canada, which came to such a sudden and sad ending. He was an excellent student, and very popular with his friends, having a warm, open-hearted nature. — W. T. M.

Handwritten notes:
 The above is a true and correct copy of the original as given to me by Mr. W. T. M. on June 10, 1904.
 W. S. Woodhouse
 June 10, 1904

TWO BIRD groups which are nearing completion in the American Museum of Natural History are believed to exceed in beauty, in scientific accuracy, and in educational value anything of the kind which has heretofore been attempted.

The first group is designed to represent the bird life of the irrigated portion of the San Joaquin Valley in California, near Los Baños. Material for this group was collected by Mr. Frank M. Chapman in May and June, 1903. Mr. Chapman was assisted by Mr. Louis A. Fuertes, whose sketches from life and whose paintings of the soft parts of birds proved of the greatest value to the taxidermists; Mr. John Rowley, formerly chief of the Department of Taxidermy of the American Museum of Natural History, who prepared models of the characteristic vegetation of the region; and Mr. C. J. Hittell, the well-known San Francisco artist, who painted a background representing the Valley with the Coast Range in the distance.

The group will contain the Avocet, Stilt, Killdeer, Mallard, Cinnamon Teal, Coot, and Black Tern, all with newly hatched young, and also Forster's Tern, the Ruddy Duck, the Pintail, the Fulvous Tree Duck, the Red-head, the Black-crowned Night Heron, and the White-faced Glossy Ibis. All these species were abundantly represented in the irrigated section, their presence or absence depending largely upon the distribution of water.

The group is twenty feet long, nine feet wide, and ten feet high, and will contain about eighty individuals of the species mentioned. The birds have been successfully mounted by Mr. H. S. Denslow and the aquatic vegetation, consisting of over ten thousand leaves, has been prepared at the American Museum of Natural History, and is a facsimile reproduction of the actual plants. Doubtless no more difficult subject has previously been attempted in this line of bird exhibits, but the group is already sufficiently near completion to place its success beyond question.

A second, and even more remarkable group, which will be opened to the public some time during the present month, will represent the nesting habits of the American Flamingo. This group is also based upon Mr. Chapman's studies from life, and perhaps better than any other group of birds which we can now recall, illustrates the importance of detailed studies in nature as a basis for an accurate representation of the nesting habits of a bird.

Mr. Chapman made two trips to the Bahamas before he succeeded in finding an occupied colony of Flamingoes. On the second journey to these islands, in the spring and summer of 1904, a fully occupied colony of birds was discovered, and a large series of photographs was made, portraying very satisfactorily the heretofore unknown nest-life of this remarkable species. Specimens were also secured, representing not only the adults, but the newly-hatched chick, which illustrate its development to about the age of one month.

Great difficulty was experienced in collecting newly-made nests of the Flamingo. On a former trip Mr. Chapman secured nests which had been built the previous year and, at the beginning of the rainy season, were sufficiently sun-baked to permit of their successful transportation to New York City. Newly-made nests, however, were found to be water-soaked by almost continuous rains, and not only was their weight therefore greatly increased, but an attempt to remove them generally resulted in their disintegration. This emergency having been anticipated, a canvas canoe was taken to the rookery, into which the nests were directly removed after having been placed upon boards. Without further handling, the canoe itself being lifted upon the deck of the schooner in which Mr. Chapman travelled, the nests were conveyed directly to Nassau where they were cast by Dr. B. E. Dahlgren, Chief of the Museum's Department of Preparation. The surface structure and modelling were, therefore, perfectly preserved, and the plaster models subsequently made from these casts were covered with characteristic Bahaman marl, of which the nests themselves are composed. The result is a perfectly satisfactory and accurate representation of the Flamingo's nest, far less perishable than the nest itself, which experience has shown crumbles very quickly when exposed to steam heat in the Museum.

The group of Flamingoes which the Museum is now about to place upon exhibition will contain some seventeen adult birds, with young in various stages of development. The pose of each bird, whether feeding or brooding its young, incubating or roosting in various poses, is based upon photographs from life, and is, therefore, true to nature. It was recognized, however, that, even with the greatest care in the production, such a group would come far short of representing the conditions under which the birds live, if it could not be shown as the foreground of a colony of from fifteen hundred to two thousand pairs of these brilliantly colored birds. Accordingly the services of Mr. Fuertes, who accompanied Mr. Chapman upon his first trip to the Bahamas, were secured to paint upon a canvas, twenty feet long and ten feet high, a representation of the nesting colony, which, in connection with the birds represented in the group would give a graphic idea of a populous Flamingo rookery.

Mr. Hittell's work in connection with the *Los Baños* painting, previously mentioned, was so successful that he was induced to come to New York from San Francisco to paint the landscape for the background of the Flamingo group. So satisfactorily have these artists coöperated that the result of their combined efforts has met with the approval not only of artists but also of naturalists.

The successful completion of these two elaborate, exceedingly difficult and striking groups is due not alone to the skill of the artists, taxidermists, and modellers who have so effectively contributed to their construction, but primarily to the foresight, energy, and intelligence of the Associate Curator of this Department, Mr. Frank M. Chapman, who conceived their execution, secured the materials that compose them, and

directed the work in all its details. Especially is this true of the Flamingo group, which has entailed on Mr. Chapman's part indomitable perseverance, much hardship, and field-craft of the highest order. The locating, after many discouraging experiences, of this immense Flamingo colony, its successful invasion with a novel photographic equipment, and a sojourn for days almost within hand-reach of the brooding birds, is a triumph of tact and skill, buoyed by unflagging enthusiasm, unparalleled in the annals of ornithological exploration. How it was accomplished has been modestly told by Mr. Chapman in an article in the 'Century Magazine' for December, 1904, which strikingly illustrates, with its many photographs, the home life of the Flamingo in its Bahaman home. There is now little left to imagine in the domestic life of this striking and peculiarly interesting bird, the camera has so fully revealed the long-hidden mysteries of its manner of reproduction. There is no longer any doubt that it sits on its nest as do other birds, and does not straddle it with a leg hanging down on either side, as formerly believed. The young have been found to have a general resemblance to young fluffy ducklings, but to be less precocious, being fed for several days in the nest by the old birds; on the other hand they are not so helpless and are less altricial than the Heron tribe, with which and with the Anseres they were formerly alternately placed by the systematists. The younger stages of their infantile life and their subsequent development are now not only for the first time made known, but the most important period of their life history is fully portrayed in a museum group, forming one of the most interesting and instructive ornithological exhibits ever placed before the public.

THE SECOND edition of Henry Reed Taylor's 'Standard American Egg Catalogue' will doubtless be warmly welcomed by not only egg collectors but by others, as it gives the A. O. U. Check-List numbers, and the technical and common names to date, arranged in proper sequence. It contains also a Directory of some sixty or seventy of the leading collectors, and a dozen pages of introductory matter of general interest to oölogists.

FOR several years past there has been a National Committee of Audubon Societies, made up of representatives of each of the State societies, with Mr. William Dutcher as Chairman. The purpose of this Committee was to secure coöperation and unity of interest between the several State organizations. As the field of activities has broadened and the importance of the undertaking has steadily increased, it has seemed more and more desirable to centralize the work of bird protection in a national organization, and accordingly steps have been taken, and are now about completed, for the incorporation of a National Association of Audubon Societies. The National Association will be incorporated under the laws of New York, and the headquarters of the Association will be in New York City. The management will be vested in a board of thirty directors,

chosen from the several State societies, with, in all probability, Mr. Dutcher as the active head of the new organization, as it is through his energy and zeal as Chairman, both of the National Committee and of the A. O. U. Committee for the Protection of Birds, that the work of bird protection has been for years past so effectively and successfully advanced. It is the purpose of the new organization to secure funds, not only for present use, but for permanent endowment, so that the work may be established on a secure foundation for many years to come; for all who are in touch with this great and beneficent enterprise must know that the fight for the protection of birds and other useful animals must be a perpetual strife against unwise legislation and selfish and short-sighted interests. The management of the new organization, has already secured the services of Mr. T. Gilbert Pearson, of Greensboro, N. C., to take the field as a propagandist in the cause of bird protection, to awaken public interest and secure financial assistance for the National Association, for which special work he is eminently fitted by his energy and earnestness, and his well-known effectiveness as a public speaker.

THE WORK of the A. O. U. Committee for the Protection of North American Birds has not only been very aggressive during the past year but the results achieved have been extremely important and gratifying, as shown by the following summary, kindly prepared by the Chairman, Mr. William Dutcher, for publication in the present connection.

As usual the Committee has directed its efforts along three lines, the first of which, Warden work, has been continued with funds procured through Mr. Abbott H. Thayer; without such financial support this branch of the work could not be carried on at all, as it is impossible to secure the services of wardens unless they are paid a small salary during the time they are actually guarding the birds in the breeding season.

In Maine the colonies of Herring Gulls, Terns, Black Guillemots, and Puffins are rapidly increasing. All of the reports received, not only from the wardens themselves but from interested outsiders, show that the protected birds are becoming uncommonly fearless of man. While it is true that the conditions for bird protection on the Maine coast are extremely favorable, the large increase in their numbers is entirely due to the care given to the breeding birds by this Committee.

In Massachusetts the results are practically the same; the Terns on Penekese, Muskeget and the Weepecket Islands are doing finely, as are also those in the two colonies on Gardiner's Island, in New York State.

In New Jersey the colonies of Laughing Gulls and Terns made a small increase, but the conditions there are unfavorable, for the reason that the coast is becoming more densely populated every year, especially during the summer months, and the shores are being taken up for resident purposes, thus contracting annually the area occupied by the birds. The New Jersey colonies were very small when the Committee commenced to protect them and it is very doubtful whether they can be continued; it

is probable that Laughing Gulls and Terns will eventually cease to breed in the State, although by careful protection this unfortunate result can be indefinitely postponed.

In Virginia it is believed that the birds are not only holding their own but are slowly gaining in numbers; this applies especially to the Laughing Gull and Least Tern; the Chairman made an extended trip along the Virginia coast during the past breeding season and was astonished to note the extent of the territory occupied by the birds; it is practically worthless for any purpose except as a breeding resort. With care and the creation of a proper sentiment regarding the æsthetic and economic value of birds it will be easy to not only maintain but rapidly increase the birds of this coast.

In North Carolina all of the colonies made a large increase, owing to the splendid work of the Audubon Society. This Society is unique in its character, as its charter confers on it the powers of a Fish and Game Commission.

In Florida four wardens were employed; one during the entire year and the others during the breeding season only. In the localities in charge of these wardens the birds made a normal increase; in other parts of the State, however, the conditions were not so satisfactory. A commercial collector was detected shipping skins of Ivory-billed Woodpeckers from the State contrary to law; he was arrested, but has not yet been tried. As the Ivory-bills are on the verge of extinction it is extremely important that this man should be convicted as a warning to all persons who collect birds for commercial rather than scientific purposes.

A warden was employed in Texas for the first time during the past year; he was stationed near Matagorda Bay. Undoubtedly there are a number of colonies of birds on the Texas coast that should be protected but they cannot be located unless a bird survey is made; it was impossible to make such a survey during the past year owing to lack of funds.

The large colony of Herring Gulls in Lake Superior was again protected, and the Committee joined with the game commission of Oregon in giving special protection to the water birds that breed in the numerous shallow lakes in the southeastern portion of that State.

Several other colonies of birds were discovered during the past year that it is purposed to protect with wardens during the coming season.

The second line of work is legislation. During the past year the A. O. U. model law was adopted in two very important States, viz., Mississippi and Louisiana. In the latter State, in addition to the law protecting the non-game birds, a very drastic statute was passed protecting game birds.

This new legislation in Louisiana has an influence reaching far beyond the confines of the State, inasmuch as it stops the sale of native caged birds throughout the United States; nearly all of the Mockingbirds, Cardinals, Nonpareils, and Indigo Buntings that were sold by dealers came from Louisiana, and the cutting off of the supply of these birds actually stops the traffic in other parts of the country.

Efforts were made to secure the passage of the A. O. U. model law in Iowa and Vermont, but both attempts were unsuccessful.

In New York State a determined effort was made by the professional gunners of Long Island to repeal the anti-spring shooting wild fowl law; but, owing to the opposition of the sportsmen of the rest of the State, aided by the Committee, this important law is still in force. At the last election, however, the repeal of this law was made a political issue on Long Island and the battle will have to be fought again at the coming session of the legislature.

In New Jersey the law preventing the shooting of snipe and shore birds during the spring migration was repealed, notwithstanding all of the efforts of this Committee to prevent it. An attempt was also made to remove protection from Robins, on the ground that they were destructive to fruit; this, however, was not successful.

As heretofore, the Committee has fostered the Audubon movement as much as possible; during the past year one very active society was organized and is now successfully working in California. Many of the other State Audubon Societies are rapidly increasing in size and strength and are doing more effective work than ever in creating favorable sentiment and educating the public as to the value of bird life.

A detailed report of the joint work of this Committee and of the National Association of Audubon Societies will be published in the February number of 'Bird-Lore,' the official organ of the Societies; separates of this report will be mailed free to members of the American Ornithologists' Union on request sent to any member of the Committee.

The Committee for the following year is as follows:

WILLIAM DUTCHER, Chairman, 525 Manhattan Ave., New York, N. Y.

ABBOTT H. THAYER, Monadnock, N. H.

RALPH HOFFMANN, Belmont, Mass.

ROBERT W. WILLIAMS, Jr., Tallahassee, Fla.

FRANK M. MILLER, New Orleans, La.

FRANK BOND, Cheyenne, Wyoming.

Mrs. FLORENCE M. BAILEY, Washington, D. C.

EDWARD B. CLARK, Chicago, Ills.

T. GILBERT PEARSON, Greensboro, N. C.

Mrs. LOUISE MCG. STEPHENSON, Helena, Arkansas.

A. W. ANTHONY, Portland, Oregon.

Subcommittee on Laws.

Dr. THEODORE S. PALMER, Washington, D. C.