

OLD TIMES WITH THE BIRDS: AUTOBIOGRAPHICAL
WITH TWO PORTRAITS

By CHARLES HASKINS TOWNSEND

MY FIRST BOOK OF BIRDS, a happy discovery in our household library, was contained between the covers of a bulky report of the United States Department of Agriculture for the year 1856. It was a fifty-page chapter on *Birds Injurious to Agriculture* by Ezekiel Holmes, illustrated with thirty-two full-page woodcuts after Audubon. It supplied what I needed fairly well, the only other work in the house on natural history being J. G. Wood's *Bible Animals*, which unfortunately did not apply to my part of the world. When the old home was abandoned years later, I rescued this treasure of youth and had it bound, together with another chapter from the same ancient and battered report, almost as much prized, on the *Quadrupeds of Illinois* by Robert Kennicott, whose trail in northern Alaska I crossed years after.

Ornithologists would not now admit that some of the birds discussed by Ezekiel Holmes, such as kingbird, orchard oriole and rose-breasted grosbeak, are injurious to agriculture. They are, in fact, rather reluctant about admitting that any bird is very injurious. The Carolina "parakeet" was still common in Holmes' day and "exceedingly annoying to the farmers." I still have in my collection a fine skin of this now probably extinct bird, taken near Fort Myers in Florida in the early 'nineties. Inexpensive books on American natural history were not as available in the 'seventies as they became twenty years later. There was no public library within reach and no one noticed my needs.

Our books being largely theological, I naturally turned to Holmes, as my only authority, for enlightenment on the passenger pigeons, at the flights of which I greatly marvelled. The last large flight of these birds in our neighborhood, twenty-five miles east of Pittsburgh, occurred in the spring of 1875. There can be little doubt about the date, as I visited the Centennial Exposition not long after, where I saw mounted pigeons for the first time. The two events are closely connected in my memory. With a single-barreled muzzle-loader borrowed from a neighbor, I killed pigeons in the scattered oaks that crowned a hill half a mile from our country home. The older boys of the neighborhood got more than I did. Some of them with a raking shot along a dead limb got four or five at a single discharge. Their guns were also muzzle-loaders. The birds had been coming pretty steadily since morning, an occasional low-flying flock of two or three hundred lighting on the oaks, while the greater bands of pigeons flew considerably higher and made no stops so far as we could see. They may have alighted on the wooded tops of higher hills a couple of miles farther north.

Looking southward along the western slope of the Alleghanies where the view was unobstructed, we could see the birds coming in many long irregular "streaks"—not compact flocks—the most of which passed during the forenoon. The streaks or bands, mostly advancing end on, were broad and dense in some parts, narrow and almost broken in others, while the far ends in some of them were too distant to be made out clearly. The pigeons may have been coming across the mountains six or seven miles away, which here have a northeast and southwest trend; but this could not be determined. We had heard of a great pigeon roost in Cambria, one of the mountain counties to the eastward. I described these flight formations to L. A. Fuertes, who sketched them rather successfully in his picture of the passenger pigeons in Chapman's *Birds of Eastern North America*, but the perspective is not altogether satisfactory. I did not then know how to

skin birds. The pair of mounted passenger pigeons now in my possession, the gift of the late Frederic S. Whitman of Brooklyn, came from a roost at Grand Haven in Michigan in 1880.

At that time, so far as natural history was concerned, I travelled quite alone. Some lines written by the Selborne naturalist a hundred years earlier, applied well enough to my locality: "It has been my misfortune never to have had any neighbors whose studies have led them toward the pursuit of natural knowledge; so that, for want of a companion to quicken my industry and sharpen my attention, I have made but slender progress." Delightful and unconscious modesty! The literary world appraised his accomplishment quite otherwise.

They intended me for the clergy, to keep up family tradition; but I was too fully occupied with the natural world to consider the supernatural. A dentist in the neighborhood taught me what little he knew about mounting birds and I formed a small collection consisting chiefly of game birds. The specimens must have been presentable for they were purchased to adorn the rooms of a sportsman in an adjoining county and I was engaged to make additions. This important undertaking languished, as I was forced to attend country school and devote myself to arithmetic, grammar and other uninteresting matters. It was perhaps just as well, as my nucleus of a collection eventually went down the Conemaugh along with the most of Johnstown. About this time the *American Cyclopaedia* in sixteen volumes came to our house. In this rich mine I dug out all the natural history nuggets from aard-vark to zebra.

Professor Henry A. Ward introduced me to the museum atmosphere in 1879, when he invited me to Rochester. There I got acquainted with F. A. Lucas and W. T. Hornaday, then in his employ. The three of us later found our several ways to the National Museum and eventually turned up in New York, each as the director of a museum in that city. We are still sitting on the lids of those institutions. Although on a commercial basis the collections at Ward's natural science establishment were varied and accessible, and there was a fair working library, in which I read industriously. Training in museum methods is one of the ways in which embryo naturalists get started on their careers. Some of the young men employed as preparateurs in osteology, taxidermy and other museum work, became college professors, explorers and museum curators. The late Professor W. B. Barrows who wrote much on the birds of Argentina and Michigan, was among the "alumni" of Ward's, as were also George K. Cherrie, Carl Akeley, Prof. Henry E. Crampton, of Columbia, Prof. W. M. Wheeler, of Harvard, and Prof. Ward's son Henry. At that time we were preparing collections for the Museum of Comparative Zoology on a large order from Alexander Agassiz, with whom I sailed later in the *Albatross*.

In 1882 they took me into the Philadelphia Academy of Natural Sciences on my own recognizance, plus a letter of recommendation from Professor Ward, where I dabbled in ornithology and other zoologies, with great personal satisfaction but to little scientific effect. It took me a long time to find myself, enjoying as I did, everything in nature from birds to pollywogs. The all-around naturalist misses in considerable degree the distinction that attaches to the work of the specialist.

While at the Academy I had some acquaintance with Edwin Sheppard, the artist, and the venerable Titian Peale. Sheppard, a tall distinguished looking man, was drawing birds on little blocks of wood for Dr. Coues, to be engraved by Nichols. I there saw many familiar bird cuts in the making. I recall his telling me one day that he was among those who surrendered to General Grant at Appomattox. His woodcuts do not appeal to bird men in these days of abundant photographs and colored plates, but they have a charm of their own. They are instantly recognizable portraits of the species

they represent. There is a delicate expression of light and shade, and the birds are properly balanced on their legs despite the fact that they were drawn from old museum specimens often indifferently mounted. Sheppard like many another bird artist had the habit of sketching in a background in which most of the distant landscape appears *below* the bird standing on the ground. It must be somewhat of an accomplishment to get a glimpse of the horizon between the legs of a wading bird. But I am not an artist. Gurdon Trumbull used nearly a hundred of Sheppard's birds as electrotypes in his *Names and Portraits of Birds*, and I was mightily pleased when W. L. McAtee reproduced fifty of these in a recent document of the Biological Survey. The camera has given us a new ornithology since Sheppard's day.

Mr. Peale kindly allowed me the use of his Audubon, a volume at a time, my first acquaintance with this work. Later, in the *Albatross* I sailed in Peale's wake in Polynesia, where he had collected and painted birds while with the Wilkes Expedition sixty years before. During that voyage we picked up four hundred birds of ninety-three species, on thirty-three different islands, many of them being new. They were reported upon by Alexander Wetmore and myself, Wetmore with his greater ornithological ability doing most of the work.¹ Peale's collection in the National Museum furnished most of the material for comparison. Some of the islands were then visited for the first time by naturalists.

At Whitsunday, an uninhabited atoll of the Low Archipelago, I shot a sandpiper of a species (*Aechmorhynchus parvirostris*) first taken and described by Peale, no other specimens being known. Conditions were unfavorable and my boat was the only one that succeeded in making a landing at this remote but famous atoll. The only other bird I secured there was a new warbler (*Conopoderas rava*). Darwin saw this atoll from the deck of the *Beagle* but could not land. His picture of it is copied from Beechey's *Voyage*. My own, published by Agassiz, was taken from the top-sail yard of the *Albatross*. This was an oceanographic voyage in charge of Agassiz, and our stops were brief except at islands where supplies were renewed. The collecting of birds was largely dependent upon my personal efforts. The skinning had to be done at night after the ship's laboratory had been cleared of the day's deep-sea dredgings.

At Philadelphia, Spencer Trotter, W. E. Saunders and W. L. Baily were the only young men among my associates who made use of the Academy's large collection of birds. Baily one day brought in a hybrid sparrow (*Junco-Zonotrichia*) of which I prepared a description and E. T. Seton a colored plate for the *Auk*. Hybrids between distinct genera of sparrows are rarities and are interesting as throwing light on certain obscure species known only from single examples.

When I met Professor Baird, in 1883, he at once inquired as to my relationship with J. K. Townsend the ornithologist. All I could say was that we probably had the same Philadelphia quaker ancestor, mine having arrived there with William Penn in the ship *Welcome* in 1682. Prof. Baird gave me a job in the Fish Commission and within a week sent me to the salmon hatchery on McCloud River, California. Knowing that I was something of a collector, he wrote personal letters from time to time requesting that certain birds be secured. I collected about two hundred species there and around Mount Shasta before it was time to start back to Washington.² Professor Baird thought there was a chance of finding white-tailed ptarmigan on Shasta and I followed the timber-line clear around the mountain; and then I tried Lassen Peak

¹ *Albatross Voyage. Tropical Pacific, 1899-1900. The Birds*, by Charles Haskins Townsend and Alexander Wetmore. Bull. Mus. Comp. Zool., Harvard Coll., vol. LXIII, no. 4, 1919, pp. 151-225.

² Field-notes on the Mammals, Birds and Reptiles of Northern California, by Charles H. Townsend. Proc. U. S. Nat. Mus., X, 1887, pp. 159-241, pl. 5 (map), several text-figs.

awhile before giving up the search. Lassen became an active volcano thirty years later and deeply covered my old collecting ground with ashes. I joined a party of the U. S. Geological Survey for a few weeks that summer (1883) and participated, zoologically, in the survey of Mount Shasta.

Fish cultural duty in California was followed by a cruise with the *Albatross* among the Bahamas in 1886. Our capture of specimens of the long-missing Kirtland warbler and several new species in the Bahamas was a matter of great interest to Prof. Baird.



Fig. 73. CHARLES HASKINS TOWNSEND IN 1883, AT TIME OF DEPARTURE FROM PHILADELPHIA FOR MCCLLOUD RIVER FISH HATCHERY, NORTHERN CALIFORNIA.

Sir Henry Blake, the governor, came on board often while we were at Nassau, when I taught him to skin birds. This attractive and capable Englishman was afterwards governor of the British colonies of Jamaica, Newfoundland, Queensland, Hongkong and Ceylon. He facilitated my bird work in the Bahamas, and one of my new birds from Abaco was named *Centurus blakei*. According to our experience, England always had fine officials in her colonies.

In 1885, I accompanied the U. S. S. *Corwin* on a voyage to Kotzebue Sound and went with Lieutenant John Cassin Cantwell, a nephew of Cassin the ornithologist, on a two months' trip up the Kowak River. We were the first white men to reach its headwaters. It was a hard drive every day, and we often stood waist deep in the icy water getting our launch off the sand bars; but I managed to pick up fifty-two species of birds while above the Arctic Circle. The boreal species were to be expected, but to find such common home birds as robin, swallow, shrike, water-thrush, rusty black-bird, kingfisher and others, was to realize for the first time that birds do considerable moving about. During the trip Cantwell told me more or less about Cassin, but I have no notes on the subject. At the Pribilofs I got the Asiatic

stint (*Tringa damacensis*) which was as far off its beat as the stray catbird I found at the Farallon Islands in 1894. Both records remain unique.

After that came a trip to Honduras in 1887 which yielded hundreds of birds and a dozen new species. Professor Baird gave me a letter to Mr. George N. Lawrence with whom I spent an evening before sailing from New York. A student of tropical birds, he talked about the birds I would likely find in Honduras.

This trip included visits to Grand Cayman and Swan islands in the Caribbean Sea. I am unable to recall anything in outpouring bird-song comparable with the early morning chorus of the mockingbirds (*Mimus orpheus*) at Grand Cayman. The continuous volume of melody came from every part of the surrounding shore of the little bay where

our schooner lay, as though each of the host of musicians was producing his entire repertory. It was the waking call for all on board. The only approach to it in my experience was the singing of the large babbling thrushes (*Conopodera percernis*) of Nukuhiva, in the Marquesas. The woods rang with their melody and it was not uncommon to hear several of them singing on a single tree. They were by far the best choristers of Polynesia. Herman Melville, in "Typee", that classic of Polynesia, said the Nukuhiva birds were all songless. Being the captive of cannibals, he probably had more important matters on his mind than birds. Anyway he was wrong.

Swan Island was visited by a naturalist for the first time when I landed there. I collected thirty species of birds, certainly all that were present at that time.³ Visiting Swan Island twenty-two years later, Percy R. Lowe⁴, now of the British Museum, found some changes in the bird life. The black ani (*Crotophaga ani*) had established itself there, possibly from Grand Cayman, 185 miles distant; but he searched in vain for the red-legged thrush (*Mimocichla rubripes*) which was well represented in my collection.

To enter Honduras at the mouth of the Segovia River was to enter the tropical jungle for the first time and have acquaintance with toucans, trogons, scarlet macaws, brilliant tanagers and others of the feathered host of gorgeous attire. The first camp a few miles up the long river which separates Honduras from Nicaragua, was beside a tree in the open colonized by cheerful hang-nests (*Ostinops montezumae*). A score of yard-long nests swung from the higher branches, suggesting at a distance strange fruits rather than the treetop cradles of young birds. My Indian canoe-men salvaged the bodies of the birds I skinned and put them in the pot along with that of a spider monkey. I did not always participate in their feasts; but sometimes there were delectable pigeons and river turtles, with occasional deer. Farther up and weeks later we entered an open pine forest where scarlet macaws gathered in the high trees like grackles at home. Following the river, the only thoroughfare far inland, with nature's bird and other riches abounding, the half-enchanted naturalist thinks little about turning back, and the enchantment lasts until he has drifted out again.

Professor Baird had arranged for the *Albatross* to go to the Pacific in the autumn of 1887 but did not live to see the vessel start. We got birds at many points around South America, especially in the Straits of Magellan⁵ and at the Galapagos Islands. The latter collection supplied the material for Ridgway's *Birds of the Galapagos*, supplemented by another collection when I re-visited the islands on the *Albatross* voyage of 1891.

In the Straits sea birds were constant objects of interest. The nesting places of cormorants were marked by masses of black-backed, white-breasted birds, acres in extent. From low island levels Cassin terns rose in clouds of protesting thousands when our boats grounded.

Steamer ducks kept well ahead of the active oarsmen, their flightless wings aiding their webbed feet in a manner suggestive of paddle wheels used as auxiliaries to screw propellers, trailing a foamy wake a hundred yards behind. The species belongs exclusively to southern South America and is altogether the most notable bird of the Straits region. It is said to weigh over fifteen pounds. While it can not, or at least does not, fly, and is seldom inclined to dive, the rapidity of its progress over the surface long ago attracted the attention of explorers and navigators. Most observers are of the opinion that the wings move alternately when in motion. An occasional penguin—that flight-

³ Catalogue of a Collection of Birds made by Mr. Chas. H. Townsend on Islands in the Caribbean Sea and in Honduras. By Robert Ridgway. Proc. U. S. Nat. Mus., X, 1887, pp. 572-597.

⁴ A Naturalist on Desert Islands. By Percy R. Lowe. Witherby & Co., London, 1911, 300 pp., 32 ills.

⁵ A Naturalist in the Straits of Magellan. Charles Haskins Townsend. Popular Science Monthly, July, 1910, pp. 5-18, 9 ills.

less, burly diver peculiar to Antarctic seas—only showed himself above water in porpoise-like leaps and was seldom easy to get.

The diving petrel, also Antarctic in range, was by special request a mark for all guns, but no specimens were taken. As a quick diver it is a little brother to the northern auklet, which it resembles in appearance and to some extent in habits. When at large there is nothing in its actions to suggest the petrel. It strikes down into the water from full flight, emerging farther on, fairly bursting forth into the air with wings in rapid motion.

The barred Magellan geese are important on account of their abundance. This bird is a resident of the region throughout the year. It is an inhabitant of the open plains and mountain slopes and is a land rather than a water species. It occupies the open country of Tierra del Fuego in enormous numbers and has contributed more to the food of the white settlers now establishing sheep ranches in that country and in Patagonia than any other wild creature. The most familiar bird of the Straits is a species of creeper which follows the hunter constantly through the forest. The Cape Horn wren is as saucy as a wren can be, and the marsh wren creeping through the grass like a mouse, is almost familiar enough to be caught with a butterfly net. Of the hundred or more species of birds to be found along the Straits we obtained about seventy, three of which belonging to the family of "wood-hewers" were new to science. Our bird collection numbered one hundred and seventy specimens in all.

We are indebted to Darwin for the first accounts of the peculiar land birds of the Galapagos, "the importance of which in their bearing upon the study of natural science has never been equalled" (Salvin). Habel collected there in 1868, and two smaller collections were made later by others.

After running a line of deepsea soundings from Panama, the *Albatross* turned us loose on these classic islands for eleven arduous but wonderful days. There was help in the collecting, but I worked until midnight at the preparation of bird skins, leaving to others the preservation of reptiles and such miscellaneous zoological plunder as each returning boat dumped into our upper and 'tween-decks laboratories. Everybody was drafted including the surgeon, who helped to press plants, while boat crews swept the beaches with seines. There were eighteen tortoises crawling about the deck when we sailed, one of them big enough for the sailors to ride. The giant land tortoises for which the archipelago was named, had already disappeared from some of the islands and were scarce on the others. Ships had been carrying them away in large numbers for three centuries. I once made a study of whale-ship log-books to ascertain what the whalers of the nineteenth century did to the tortoises and found that seventy-nine ships carried away thirteen thousand tortoises.*

Half of the land birds are finches. In the peculiar *Geospiza* finches of the Galapagos, of which Ridgway recognizes as many as twenty-two species, all the males are black. In a few species the bill is thicker and heavier than in any other members of the Fringillidae, while in most of them it varies amazingly in size and form.

We did not collect many water birds, believing that our limited time should be spent on the indigenous land birds. In this way we missed a prize—the short-winged and absolutely flightless cormorant which remained unknown until 1898. Another water bird of unusual interest because of its geographical position on the Equator, but which we did not overlook, is the Galapagos penguin. I have living specimens in the Aquarium that are as lively and engaging as any birds could be. I often lift them out of their pool, to follow me about the floor.

* The Galapagos Tortoises in Relation to the Whaling Industry. Charles Haskins Townsend. *Zoologica*, N. Y. Zool. Soc., IV, 1925, pp. 55-135, 11 pls., map.

Investigations in the North Pacific kept the ship busy for several years. We surveyed the fishing grounds along the northwest coast and in Bering Sea; sounded the route for the Hawaiian cable; mapped the seal rookeries of the Pribilof and Commander islands; participated in the Bering Sea patrol and charted part of the Aleutian region. I sent many birds to Washington after these voyages, all secured at random as opportunity afforded. This was entirely unauthorized work by a young man supposed to be fully occupied with fishery and other investigations. During this northern work we had our prolonged controversy with England over "The Bering Sea Question". "Pelagic sealing" and "seal rookeries" became household words. The *Albatross* staff had to study fur seals ashore and afloat and supplied much of the matter that filled volumes of public documents on both sides of the Atlantic. I never stopped the voluntary picking up of birds when the *Albatross* visited out-of-the-way places. While the detailed instructions sent to the ship before each voyage might cover a wide field of fishery and oceanographic investigations, ornithology was not included. Mr. Ridgway, however, never failed to send me a list of desiderata, and when I had a run ashore in the Fijis, or anywhere else, it was invariably with a gun and a fishing creel for birds. According to engine-room records, the *Albatross* steamed over 200,000 miles while I was with her and the birds sent to Washington numbered among the thousands. When the ship was sounding or dredging in deep water I often lowered a boat and shot petrels, but we never got the long-missing Hornby petrel, of which Mr. Ridgway sent me a colored sketch that hung in the ship's laboratory for years. Later on, Chapman found the Hornby Petrel common on the coast of Ecuador. The second and third specimens of the Least Petrel which had been missing for a quarter of a century obligingly flew aboard the ship, one in Panama Bay, the other off Acapulco. An electrically lighted ship is a good target for night-flying petrels. I have captured twenty in a single night. We got many petrels also when the ship was under way by trailing a long cod line astern, from which were suspended numerous threads with small fish hooks attached. The petrels swinging from side to side in the ship's wake often got their wings hooked, then the cod line would be hauled in.

The new species of birds were generally described by somebody before I got a chance to visit headquarters; but I succeeded in attaching my name to a dozen or more by side-tracking some bird collections at San Francisco and taking them to Washington later on as personal baggage. It isn't safe to leave undescribed species where ornithological nomenclators are prowling about. Mr. Elliot, for instance, found some novelties in my collection of Aleutian ptarmigan; but I had at least the fun of shooting them on the mossy mountains of Attu, Aggatu, Kyska and Adak, to say nothing of Atka and Unalaska. And what joy for my setter, who was a sailor for years!

At Cocos Island, Professor Agassiz, then in charge of the *Albatross*, gave me a whole day ashore, which was productive of bird rarities.⁶ "Cocos Island, visited many times by seekers for buccanneers' treasure, had been visited only once before by naturalists when H. M. S. *Sulphur* called there in 1840 and found a peculiar cuckoo (*Coccyzus ferrugineus*). I secured two more specimens of this rarity, a new genus and species of flycatcher (*Nesotriccus ridgwayi*) and specimens of *Pinaroloxias inornata*, a small finch-like bird, previously known from a single specimen and wrongly attributed to the Low Archipelago. Cocos is small, high, well wooded and has some small streams. If I had to be marooned on a small uninhabited island I think I'd select Cocos.

Malpelo lies to the southeast of Cocos on the Panama-Galapagos course. I lowered a boat and tried in vain to find a foothold at the northern end. This apparently inac-

⁶ Birds from Cocos and Malpelo Islands, with Notes on Petrels Obtained at Sea. By C. H. Townsend. Bull. Mus. Comp. Zool., XXVII, No. 3, 1895, pp. 121-126, 2 pls.

cessible rock is a mile long and nearly a thousand feet high, its top a guano-whitened bird rookery. I did not try the other end where the sea was making a turmoil. I shot four fork-tailed gulls (*Creagrus furcatus*) from the boat and saw others on the cliffs. This was a new locality for *Creagrus*. Only three specimens of this bird were known prior to the voyage of the *Albatross* to the Galapagos in 1888, when I shot two at Dalrymple Rock off Chatham Island.

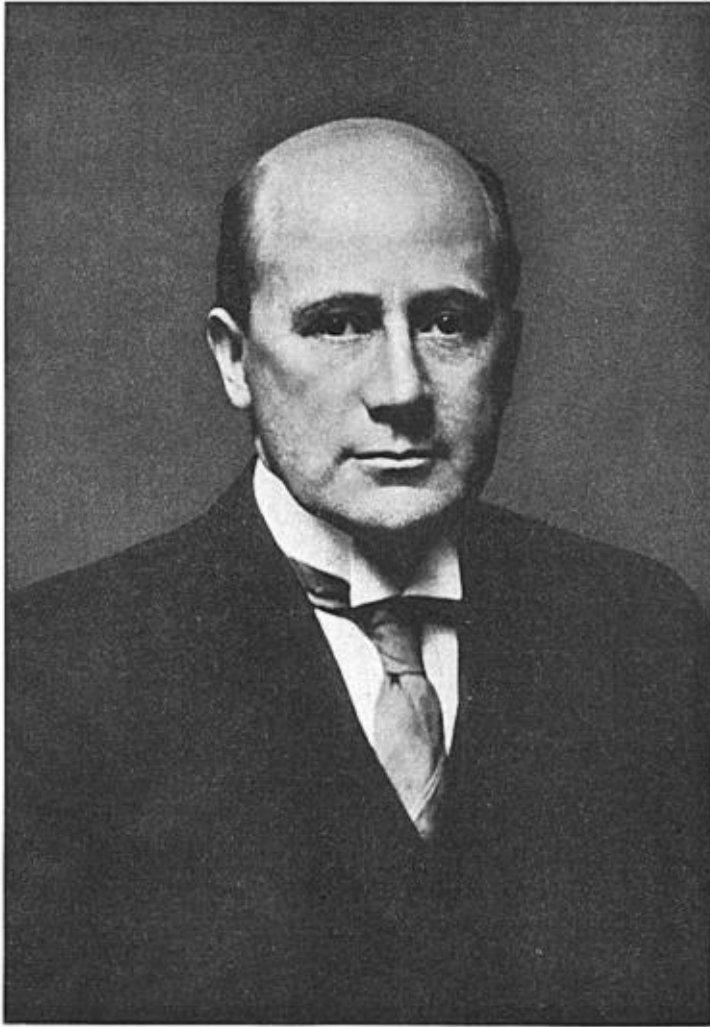


Fig. 74. DOCTOR CHARLES HASKINS TOWNSEND IN 1926, WHEN DIRECTOR OF THE NEW YORK AQUARIUM.

The *Albatross* once dropped anchor at the Revilla Gigedo Islands, 100 miles southwest of Lower California. While the seining crews were sweeping the beaches for fishes I had a profitable day ashore with the birds. The results were five new species, a burrowing owl, a dove, a wren, and two petrels. Twenty of the petrels came on board at night, six of which were skinned. This was the first visit of a naturalist to

Clarion and San Benedicte, the other island, Socorro, having been visited by Grayson twenty years before when several new land birds were found. The islands off southern California similarly rewarded my bird collecting efforts.⁷

After a time it fell to my lot to direct the work of the ship. During investigations in the Lower California region, when there were in the ship's company efficient helpers in the labor of bird skinning, we got 800 birds of 159 species from the Peninsula and from islands in the Gulf.⁸ A dozen species came from Tiburon Island, the first and, so far, the only birds known from that large unexplored island.

I think I never saw a single species of sea bird in greater numbers within a limited area, than when the *Albatross* entered Yukon Harbor in the Shumagin Islands; everyone on board noticed the increasing numbers of crested auklets as we passed in.⁹ The surface of the water was covered and the air filled with them. This lonely and uninhabited anchorage was apparently occupied by crested auklets to the practical exclusion of other birds. Large flocks launched themselves into the air from the lofty cliffs and careened toward the vessel with great speed and loud whirring of wings. During the long evening the birds were amazingly active. We tried the effect of a long blast of the whistle. The result was startling: bird legions shot out from the cliffs to join the amazing numbers already in the air and on the water. It was a surprising and memorable ornithological display, even to those of us who had seen the almost unbelievable numbers of murrets that revolve, like the rings of Saturn, about St. George Island at the Pribilofs.

Other memorable aggregations of birds were provided by the sooty shearwaters that sometimes gather at sea in vast numbers both north and south of the Aleutian islands. We saw at least one of these great congregations every summer, but one seen southwest of the Shumagin Islands surpassed all our previous experiences with them. To discuss their numbers in commonplace terms of millions would not convey the impression made upon us at the time. The birds were no more to be numbered than "the innumerable company of the stars". The sea was smooth and the *Albatross* was making about eight knots through the bird-covered area, which extended as far on both sides as it was possible to see from the top-sail yard. It was "Alaska weather"—inclined to be hazy and the horizon not very clear. Immediately ahead the birds kept rising and moving out of the ship's course. The rather narrow belts that were disturbed on either side rose and moved forward, joining the continuous flight of those ahead, which gradually tended to windward toward the left. The log of the *Albatross* might show how long we were crossing the avian galaxy. It would be worth looking up.

It was not my destiny to go very deeply into ornithology. The long voyages with Agassiz, always illuminated with his enthusiastic talk in the ship's laboratory, amounted to a course in oceanography, which tended away from ornithology and eventually anchored me at the Aquarium. In this fishy atmosphere only the sea birds, pelicans, boobies, gulls, gannets and Galapagos penguins remain.

The New York Aquarium, New York City, May 17, 1927.

⁷ Birds from the Coasts of Western North America and Adjacent Islands, Collected in 1888-'89, with Descriptions of New Species. By Chas. H. Townsend. Proc. U. S. Nat. Mus., XIII, 1890, pp. 131-142.

⁸ Albatross Voyage, Gulf of California. Birds Collected in Lower California. By Charles Haskins Townsend. Bull. Amer. Mus. Nat. Hist., XLVIII, 1923, pp. 1-26, 1 pl., map.

⁹ The Crested Auklet, by Chas. Haskins Townsend. Educational Leaflet, no. 65, Nat. Assoc. Audubon Soc., 1913.