

THE SURVEY

ISSUED MONTHLY FOR THE PERSONNEL OF THE BUREAU OF BIOLOGICAL SURVEY, U. S. DEPARTMENT OF AGRICULTURE

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Vol. 16

Washington, D. C., March 1935

No. 3

1885 -- FIFTIETH ANNIVERSARY NOTES --1935

Opening Celebration

Bureau Gives Dinner and Dance.--Opening a celebration of the 50th anniversary of the Biological Survey, more than 200 members, former members, and guests of the Bureau attended a dinner and dance at the Roosevelt Hotel in Washington on February 27. The speakers were the Secretary of Agriculture, Dr. C. Hart Merriam, the first Chief of the organization, Mr. Darling, and Hon. A. Willis Robertson, chairman of the Special Committee on the Conservation of Wildlife Resources, of the House of Representatives.

Mr. Henderson presided as master of ceremonies. He expressed to each of the speakers the Bureau's appreciation and gratitude, and in introducing Dr. Merriam he sketched briefly the history of the Biological Survey.

Those who attended as the guests of the Bureau were: The Secretary of Agriculture and Mrs. Wallace; Dr. C. Hart Merriam, Mrs. Merriam, and Mrs. Zenaida Merriam Talbot; Hon. A. Willis Robertson, of Virginia, and Mrs. Robertson; Paul H. Appleby, assistant to the Secretary of Agriculture, and Mrs. Appleby; J. D. LeCron, assistant to the Secretary, and Mrs. LeCron; Mrs. C. B. Baldwin; Dr. T. S. Palmer and Mrs. Palmer; Vernon Bailey; and Mrs. Paul G. Redington and Miss Mary A. Redington.

The Secretary Speaks.--Secretary Wallace congratulated the Bureau on its past accomplishments and predicted for it an increased usefulness, suggesting that during the coming century the American people may be as deeply concerned with the manifestations of life as during the past they have been with machinery. He pointed out the peculiar usefulness of the Bureau's wildlife studies and services, and in appreciation of the occasion, expressed a renewed interest in the history, functions, and personnel of the Biological Survey.

First Chief Reminisces.--Dr. Merriam, in a reminiscent mood, told of the events that led up to his organizing the new Government unit. He described his boyhood interest in the wild animals and birds about his home in northern New York, his explorations in the Adirondacks, and his studies while attending school in White Plains, N. Y. These early studies, he said, led him to inquire into the distribution of animals and birds as influenced by varying temperatures and to the recognition of life zones, which later he made one of the initial studies of the Biological Survey. He recounted other interesting incidents in connection with his early development as a naturalist. He told, for instance, how he had to pay for the privilege of being admitted to a knowledge of the then closely guarded art of taxidermy and the difficulties encountered because of the fragmentary knowledge of the fauna of this

country. After referring incidentally to the handicaps encountered in establishing the new work--handicaps of limited personnel and insufficient funds--Dr. Merriam described the expedition to San Francisco Mountain in Arizona as an example of the early work carried on by the Biological Survey. Dr. Merriam included in his remarks many complimentary references to his early scientific helpers.

Following the first Chief's talk, Mrs. Merriam, who had served as his assistant in the early days of the Survey, was introduced. She arose to acknowledge the greetings of those present.

Present Chief Views the Future.--Mr. Darling, who followed Dr. Merriam, expressed the group's deep interest in the reminiscences of the first Chief, and a feeling of humility in thinking of the sacrifices made by the founders of the organization. Speaking then of fifty years in the future and the life and work of the Biological Survey in that time, Mr. Darling declared that wildlife must be given a more definite place in a national program of conservation and that ample areas must be allotted to the Bureau for the uses of wildlife. In emphasizing the importance of a national program that will recognize the importance of all species, he pointed out that the Biological Survey should enlarge its program to cover the conservation of wildlife in general. Mr. Darling emphasized especially the importance of restoring areas that had been unwisely taken from wildlife by various interests.

Legislator Voices Interest.--Congressman Robertson voiced his great interest in the work of the Bureau and pledged his cooperation and support as a legislator in the cause of conservation. The people of the United States, he declared, are in need of the tonic influences of the outdoors and nature.

Closes with Dance.--Those attending the banquet later joined with others in a dance which concluded the evening. Dinner music and a male quartet of entertainers during the dance were supplied by the Musical and Theatrical Guild of the Department. Arrangements for the evening were made by a special committee, which included Albert M. Day, chairman, Dr. J. E. Shillinger, Mrs. Margaret Leonard, Miss Margaret Roberts, Miss Wilma Aho, Howard Gammon, and Howard Zahniser.

Banquet Floral Pieces Sent to Bedsides.--The floral pieces that decorated the speakers' table were taken the following morning to a local hospital, where they were presented to Miss May T. Cooke and Mrs. Viola S. Snyder, members of the Bureau who were unable to attend the banquet.

Dr. Merriam's Remarks Revised for THE SURVEY.--The text of Dr. Merriam's remarks, as printed below, were revised by him for THE SURVEY. Dr. Merriam was reluctant to submit a paper consisting so largely of personal references, but he kindly responded to assurances that the readers of THE SURVEY would be well aware that the early history of the Bureau is inseparable from the events and scientific concepts in which he participated personally. This paper, which will be immediately recognized as an invaluable document to those interested in the history of the Bureau and in the development of the natural sciences in this country, is the first of a series being planned for THE SURVEY during this 50th Anniversary year.

The Biological Survey--Origin and Early Days--A Retrospect

By C. Hart Merriam

Having been brought up on my father's farm in northern New York, overlooking the western front of the Adirondack Mountains, I had as a boy become familiar with the chipmunks and squirrels about the house, the woodchucks and meadow mice of the fields, the skunks of the woodlands, the mink and muskrats of the streams. When ten years old I had trapped and caged all of these and had come to know the names of most of the nesting birds of the region.

Nearly every spring my father went into the nearby Adirondacks on fishing trips and often took me with him. During these trips I made the acquaintance of a number of birds different from those at the home farm--among them both species of three-toed woodpeckers, the red-bellied nuthatch, the winter wren, the junco, the white-winged crossbill, the hermit and olive-backed thrushes, the rusty blackbird, the Canada jay, the spruce grouse, several species of warblers, several butterflies, a few trees, and many shrubs and flowering plants different from those at our home. The observance of these obvious differences with the recognition of the fact that they were due in the main to the cooler climate of the Adirondacks was one of the thrilling events of my young life.

Then, on going to school at White Plains in southeastern New York I was again delighted to find that many of the birds, trees, and smaller plants were unfamiliar--indicating still another faunal area.

Thus in boyhood it became obvious that our Adirondack birds and plants belonged to a climate colder than that of my home, only a few miles distant, and that those of southeastern New York were where they were by reason of warmer temperatures.

On talking this over, my father told me that it was well known that birds are much influenced by temperature, that many of the species visiting us in spring pass on to nest in Canada, and others still farther north, not stopping to breed even in our Adirondacks. Then my father, reaching up to the Humboldt shelf of his library, gave me the volume entitled "Views of Nature"--a great work, containing a most revealing discussion of the distribution of animals and plants. I was deeply impressed by Humboldt's account of animal and plant life in the lofty Andes, particularly on the great Chimborazo, where the various species are grouped one above another in successive belts or zones according to differences of temperature and humidity.

Thus, while still a boy I had become impressed by the zonal distribution of breeding birds, and in the single State of New York had recognized three faunal areas. These, as I soon learned, were already known to naturalists as the Canadian, Alleghanian, and Carolinian Faunas, established by the elder Agassiz in 1854 and later accepted and more fully defined by A. E. Verrill in 1863 and by J. A. Allen in 1871. In other words, the subject of the geographic distribution of animals and plants--the very substance and essence of a biological survey--had taken form in my mind at an early date.

During these years, knowing nothing of taxidermy, I had preserved my specimens by removing the intestines and plugging the body cavity and throat with cotton soaked in carbolic acid--thus converting them into mummies. A little later my father took me to the well-known New York naturalist-taxidermist, John G. Bell, who many years earlier had accompanied the great Audubon on his famous trip to the upper Missouri River. Bell said he would teach me the secret of bird skinning for \$100 and that thereafter I might work in his shop as long as necessary. The price seeming excessive, we visited another taxidermist, John Wallace, of William Street. Wallace agreed to teach me the secrets of the art for \$25. This was accepted, and during the winter of 1870-71 I spent Saturdays and holidays in his shop skinning and mounting birds.

In the early spring of 1872 (soon after my sixteenth birthday), Professor Baird wrote me to come to Washington as he had secured my appointment to the position of naturalist on the Hayden Survey of the Territories. I therefore left school and reported to Professor Baird at the Smithsonian, remaining under his instructions until May 1872, when with other members of the Hayden Survey, I went to Cheyenne, Wyo., and a little later to Ogden, Utah. From Utah we traveled north on horseback to old Fort Hall on Snake River in Idaho and thence to the Geyser region of Yellowstone National Park--thus cut off from communication with the outside world for many months during which I made extensive collections of mammals and birds in Utah, Idaho, and Wyoming.

There were no roads. The route led through arid deserts, rolling plains, deep canyons, and dense mountain forests, each the home of a different association of animals and plants.

Being young and susceptible to new impressions, I was keenly observant of these changes and thrilled by the succession of unfamiliar scenes. This naturally broadened my view of the animal and plant life of our country and opened my eyes still wider to the influence of altitude and other factors in determining the distribution of animals and plants.

In the spring of 1873 I collected birds in South Carolina and Florida, particularly along the Ocklawaha River, where for the first time I became acquainted with several subtropical species.

In 1874 I entered the Sheffield Scientific School of Yale and under the guidance of Professors A. E. Verrill and S. I. Smith worked in the Zoological Laboratory, and collected marine invertebrates at various points on the New England coast; and in 1875 was assistant on the U. S. Fish Commission with headquarters at Woods Hole, Mass., from which base marine collecting by means of dredge and trawl was carried on from the steamer Blue Light.

In the early spring of 1876 I visited the coast of Maine, accompanied by the zoologist E. B. Wilson and the ornithologist William Brewster. Wilson and I collected marine invertebrates in the Bay of Fundy while Brewster collected birds at Point Lapreau.

In 1877 my first book--the "Birds of Connecticut"--was published by the Connecticut Academy. By this time I had become so deeply interested in the power of temperature in controlling the distribution of animals and plants that I planned a biological survey of the State of New York. With credentials from Professor Baird and several professors of the Yale Scientific School, I proceeded to Albany and interviewed the paleontologist Professor James Hall and the heads of the other State surveys, hoping to secure their active assistance in obtaining an appropriation for an ornithological survey of New York State. In this I failed utterly, it being the unanimous verdict of those in charge that an attempt to inaugurate an additional survey would injure, if not destroy, their expected appropriations.

This was a severe blow. But having graduated from the College of Physicians and Surgeons of New York I had a profession--medicine and surgery--and determined to engage in its practice. This I did while still living at our family home in northern New York. At this time, having already published my "Birds of Connecticut" (1877), I succeeded, by working nights, in bringing out the two parts of the "Mammals of the Adirondacks" (dated Oct. 1882 and Aug. 1884). The circumstance that my home during the years of medical practice was in a sparsely populated region just west of the Adirondacks enabled me at the same time to continue natural-history investigations.

I was anxious to visit distant regions and in order to do this, secured the services of other physicians to take my practice for a month or two in summer--thus enabling me to make collections in the Bermudas; to make two boat voyages down the River and Gulf of St. Lawrence to southern Labrador--first as guest of the Hon. Judge H. E. Teschereau, Chief Justice of the Supreme Court of Canada; and later in the capacity of ship surgeon of the steamship Proteus, to study the great hooded seal on their breeding grounds on the vast ice floes between Labrador and Greenland--where I secured more than a hundred of their skulls.

During the winter of 1885 I went to Germany and worked for several months with the Blasius brothers at the Braunschweig Museum and, later, visited the great natural-history museums of Berlin, Germany; Leiden, Holland; and the British Museum in London.

Before leaving Germany I accepted an invitation from Count Hans Von Berlepsch to visit him at his home in Munchen. While there I received a cablegram from the United States Department of Agriculture asking if I would accept the pending new position of Ornithologist of the Department. I replied that I would, provided I should be granted carte blanche in shaping the work--for I felt that this might give me the long-cherished opportunity to establish a Biological Survey--this time to include the whole United States instead of the single State of New York! Returning to Washington I entered upon the new duties, formulated plans, and proceeded to carry out the dream of my life. A year later Congress, acceding to my request, broadened the scope of the work to include mammals.

At this time I was fairly familiar with the several faunas of the eastern United States and Canada, having collected birds, plants, and mammals in New York, New England, the Southern States, including Florida, and also in the Western States (then territories) covered by the Hayden Survey in 1872, as already mentioned.

In the spring of 1887 I visited the Ozark Mountains of southern Missouri, and later in the same year, with Henry Gannett, of the Geological Survey, made a buck-board trip of upwards of four hundred miles in the Southern Alleghanies and Great Smoky Mountains of Virginia, Tennessee, and North Carolina--working the summits of Roan Mountain and Mount Mitchell, thereby gaining first-hand knowledge of the summer ranges of birds and the approximate boundaries of the faunal belts of that region.

Feeling the need of more extended personal knowledge of yet unvisited parts of the West, I managed in the summer of 1888 to get away from official Washington long enough to look over a really vast extent of country--traversing the Prairies and Great Plains of the Middle West, parts of the Bad Lands of the Missouri and Little Missouri in North Dakota, the lower Yellowstone and other parts of Montana, the hot basin of the Great Bend of Columbia River from Pasco to Umatilla and Pendleton, including the Grand Coulee, the densely wooded shores of Puget Sound, and the Strait of Fuca from Seattle to Neah Bay and Cape Flattery where the moisture-reeking forests receive the heaviest rainfall of any part of the United States; and the same year went south through the entire length of California with side trips to various parts of the State.

From the foregoing outline it will appear that by the beginning of 1889 I had become personally familiar with the outstanding features of all the faunal areas of North America save only those of the arid southwest. This was a good beginning.

Studies thus far made led to the belief that many factors of scientific and economic importance would be brought to light by a biological survey of a region comprising a diversity of physical and climatic conditions. I felt that if a high mountain where the different climates and zones of animal and plant life succeed one another from base to summit could be studied, the result would be of distinct value to science and to agriculture.

With this in mind, San Francisco Mountain in Arizona was chosen, because of its isolation, great altitude, and proximity to an arid desert. The Survey was made; the major results, stated briefly, are:

1. The discovery that outside of the Tropics there are only two primary life areas in North America, a Northern Boreal and a Southern Subtropical, both extending completely across the continent.
2. The consequent abandonment of the three life areas or provinces then generally accepted by naturalists; namely, Eastern, Central, and Western.
3. Recognition of seven minor life zones in the San Francisco Mountain region--four of Boreal, three of Subtropical or mixed origin.
4. The correlation of the Boreal Zones with corresponding zones in the North and East.

This in subsequent years was followed by biological work in Oregon, Washington, Wyoming, Idaho, Nevada, Utah, California, Arizona, British Columbia, and Alaska. The

most noteworthy of these surveys was the Death Valley Expedition of 1891. Mention should be made also of the Harriman Alaskan Expedition of 1899, of which I was Secretary. This noteworthy expedition permitted field work along the coasts and islands of British Columbia and Alaska, including Bering Sea, and extended even to Plover Bay, Siberia.

The life-zone maps and accompanying publications resulting from these surveys are believed to be of economic value to our farmers, enabling them to know in advance what crops are likely to succeed in the regions in which they live. This is in marked contrast with the practice of the Department when I came into it in 1885, for at that time the same seeds were distributed to farmers in all parts of the United States without regard to the natural areas and climatic conditions!

Without attempting an enumeration of the many contributions to knowledge made by the Biological Survey during the fifty years of its existence--or even for the twenty-five years during which I personally shaped its operations--let me, in conclusion, point with pride to the long series of revisions of groups of mammals, and the volumes on the natural history of little-known parts of the United States, Canada, and Mexico, by such well-known naturalists as Vernon Bailey, Merritt Cary, A. K. Fisher, E. A. Goldman, Ned Hollister, Arthur H. Howell, Hartley H. T. Jackson, C. Hart Merriam, Gerrit S. Miller, E. W. Nelson, Harry C. Oberholser, Wilfred H. Osgood, T. S. Palmer, and E. A. Preble.