nations, but it has always taken the first step toward the revival of learning and the advance of knowledge. Hence it has survived religions, is more powerful than government and has a better record than the church. In the university medicine has always occupied a commanding position because it deals with a primal necessity, self-preservation. At times medicine has been almost the sole source of inspiration toward learning and intellectual effort. Medicine directed by the university idea has accomplished great things in the control of disease and the revelation of man's physical nature, but its main task still lies before it. We may not wisely conceive of a world without physical evil. It would hardly be human. There is no such danger. Yet there are voices acclaiming the arrival of the day when medicine, having virtually conquered the old diseases, may now pass on to birth control, eugenics and the superman—dreams, possible to him who ignores the stern realities of the sick room and the dead house. Preventive medicine has done much, but the era of clinical efficiency in curative medicine is still to dawn.

The world looks hopefully to the university and its medical school and to educated physicians to go forward with the task of controlling disease and carry it as far as may be. We shall therefore jealously guard the best traditions of the university ideal. We shall see to it that attested medical knowledge is carried into every human activity and relation where it may be of service in the control of disease and the elevation of the standard of intelligence, and by cooperative intellectual and moral endeavor, we hope to justify mankind's great adventure in altruistic effort, the university.

ROOSEVELT, THE NATURALIST[1]

By Dr. C. HART MERRIAM

WASHINGTON, D. C.

WHEN I was a boy there was a branch of knowledge called natural history. And there were men called naturalists—men whose main object in life was the study of our native animals. Of them Spencer F. Baird, for many years secretary of the Smithsonian Institution, was by far the most eminent, most influential and most helpful.

But Baird was by no means the first to interest himself in natural history. Three hundred years before his time some of the Pilgrims to New England and Virginia gave entertaining accounts of the animals of their new home, and a century or more afterward several Englishmen who had lived many years in America, notably Mark Catesby, Alexander Wilson and Thomas Nuttall, gave the world valuable books on the fauna and flora of our Eastern and Southern States.

Still more important from the technical standpoint were European naturalists, who from the time of Linnaeus to that of Cuvier, published technical works on the animals of the world. These contained descriptions of American animals based on specimens and information from "overseas."[2]

It was not long, however, before American-born men of letters began to interest themselves in the fauna of our country. Outstanding among these were the eminent ornithologists, John James Audubon and his co-worker Dr. John Bachman, whose monumental works on birds and mammals with their splendid colored plates have never been surpassed; and Dr. John J. Godman, whose "American Natural History" was in such demand that several editions were printed. Others worthy of mention were Dr. Benjamin Smith Barton, Governor DeWitt C. Clintion, James E. DeKay, Dr. Richard Harlan and Edward Hitchcock.

The distinguished Swiss naturalist, Louis Agassiz, who came to America in 1846, was made professor of zoology at Harvard in 1848. His stimulating influence can hardly be overestimated. Among his many students at Harvard and Penikese were Newberry, Verrill, Morse, Packard, Scudder, Alexander Agassiz, Hyatt, Shaler, Wilder, Garman, Allen, Brooks, Walcott, Fewkes and Jordan—men whose names stand as monuments along the highway to knowledge of animal life.

Another naturalist of the period was Sanborn Tenney, professor of zoology at both Vassar and Williams Colleges. Tenney, though not a technical worker, published a "Manual of Zoology," which, in spite of its shortcomings and crude illustrations, was widely used and proved a great help to hundreds of

[1] Address made on the occasion of the presentation of the Roosevelt Distinguished Service Medal in Natural History to Dr. C. Hart Merriam. The presentation address by the secretary, Hermann Hagedorn, was as follows: "For distinguished service in the field of natural history, Mr. President, I have the honor to present the name of one who for over sixty years has studied the wild life of earth and sea and air. Founder and for a quarter century director of the United States Biological Survey; the leader, among American scientists, in the field of mammalogy; a profound scholar not only in his own domain but in the fields of plant life and ornithology, of faunal and physical geography, and of the language, customs and racial origins of the Indians of the Pacific Coast; a tireless investigator and expounder, who, in the laboratory, has distilled the knowledge garnered under the open sky.

[2] After Linnaeus, the most notable of these were Erxleben, Gmelin, Pennant, Pallas and F. Cuvier. Their works are the foundations of our present-day systematic zoology.

young men and women. To many of us who lived in the back country it was a priceless boon. I confess that in my younger days I prized it more highly than any other book, for it stimulated my interest and enabled me to identify the mammals, birds and reptiles of New York State. I was not then familiar with DeKay's volumes on the natural history of New York.

Returning to Baird: Baird's influence with Congress and with the people was far greater than that of any other man. He invigorated the Smithsonian, enhanced its reputation and broadened its field of usefulness. He created the National Museum and the U. S. Fish Commission. He fostered the government's transcontinental expeditions known as the Pacific Railroad Surveys and named surgeon-naturalists to accompany them for the purpose of collecting animals and plants in unexplored parts of the little known West.

He was the kindly, helpful friend of many a young naturalist—among whom Theodore Roosevelt and I were proud to have been numbered. It was Baird who in 1872, when I was a lad of sixteen, secured my appointment as naturalist of the Hayden Survey of the Territories; and, three years later, as assistant on the Fish Commission.

Baird was an indefatigable worker. He felt that the time had arrived for an overhauling and rewriting of the technical works on the land faunas of America and promptly set about the task. Of all the naturalists of our generation he made the most important and most lasting contributions to knowledge. The period of his activities has been named the Bairdian Period.

Among his disciples who attained eminence in the field of natural history were Captain Chas. E. Bendire, E. D. Cope, Elliot Coues, W. H. Dall, B. W. Evermann, Charles H. Gilbert, Theodore Gill, G. Brown Goode, Henry W. Henshaw, F. A. Lucas, O. C. Marsh, E. W. Nelson, Mary J. Rathbun, Robert Ridgway, L. Stejneger.

Baird died in 1887. At that time interest in natural history was at its heydey.

But it was not to last, for soon came the great development of the microscope, permitting intensive studies of minute organisms and revealing "worlds unknown." It took the colleges by storm. In a surprisingly brief period microscopes stood in rows on the laboratory tables, and the things seen through their lenses came to be called "Biology." The more obvious forms of life were no longer of interest.

Then by means of lectures and laboratory instruction many young men and women interested in outdoor natural history were led to abandon their first interest and substitute the revelations of the microscope and section cutter. Many a promising naturalist was thus diverted from his intended career. Some accepted the substitute; others, grievously disappointed, abandoned scientific work.

Years of sadness followed—long years in which the study of general natural history not only languished; it all but expired. Our instructors in their enthusiasm over the all-important revelations of the microscope seemed to overlook the fact that this instrument is not the only road to knowledge—forgetting that it takes no account of the higher forms of life and fails utterly to explain the interrelations of life and environment.

An ominous cloud had overspread the broad field of natural history, blinding teachers to the dependence of wild life on the nature of the home; blinding them to the obvious groupings of unrelated animals in certain localities; and blinding them further to the modifications or splittings of species as brought about by factors of environment and distribution.

Even museum studies of skins and skulls came to be frowned upon as trivial.

For a while it seemed that faunal and systematic natural history were destined to be swept off the face of the earth. But the influence and teachings of the elder Agassiz in studies of marine life and of Spencer Baird and his followers in studies of land animals, were not wholly lost. Some of the disciples of these great men held on, and now and then a sporadic naturalist appeared—a sort of ancestral throwback who, following the trails of Baird and Allen, kept the breed alive until the United States Biological Survey, and later the Museum of Comparative Zoology of the University of California, began the training of a new group of faunal naturalists. These naturalists were taught to broaden their zoological horizon by including the study of conspicuous types of plant life—thereby illuminating their comprehension of nature. Their knowledge of the environmental factors that control the distribution of animals and plants has contributed in no small degree to the present-day understanding of our fauna and flora.

To-day these younger men are leaders of the minority that has striven to stem the overwhelming tide of collegiate biology which for so many years threatened to engulf and exterminate the race of field and systematic naturalists.

Theodore Roosevelt had the instincts, the powers of observation and the vision of a faunal naturalist. Half a century ago he wrote me, confirming my account of the food habits of the short-tailed shrew and giving his personal observations on this little animal. At that time he had prepared numerous specimens of mammals and birds and had already begun a museum.

While his strenuous life as President interrupted, it never dimmed his interest and enthusiasm for natural history. Once during the spring migration

of birds he phoned me to breakfast with him at the White House to make sure of a species of warbler then visiting the tall elms south of the mansion. His identification of the little birds as blackpoll warblers proved correct.

Another time, when that remarkable man, Ambassador Bryce, had expressed a desire to see in life our American kingfisher and the red-eyed pipilo or towhee, the President led us to places well known to him in the forest north of the city, where both birds were seen and heard—much to the ambassador's satisfaction.

In later years, when living in Washington, he joined Vernon Bailey and me in a twilight bicycle trip up Rock Creek to see a beaver (presumably an escape from the Zoo) which had temporarily established itself on that stream. He was "delighted" to see the beaver cut a willow and swim with it to a floating log, where he sat up and ate the bark.

Few people are aware of Roosevelt's knowledge of mammals and their skulls. One evening at my house (where I then had in the neighborhood of five thousand skulls of North American mammals) he astonished every one—including several eminent naturalists—by picking up skull after skull and mentioning the scientific name of the genus to which each belonged.

He was deeply impressed by the gigantic size of the great Kadiak bear as contrasted with the Rocky Mountain grizzlies, and several times brought friends to see for themselves the enormous difference between the skull of an old male Idaho grizzly and that of one of these giant Kadiaks—the two standing side by side on my desk.

On one occasion, before a meeting of the Biological Society of Washington, he crossed swords with me in regard to the validity of several species of coyote as shown by their skulls.

Roosevelt's publications on hunting and on the game animals of the Plains and Rocky Mountains,[3] his daring exploration into unknown parts of South America,[4] his excellent accounts of African game animals,[5] his "Biological Analogies in History," "A Booklover's Holiday in the Open," and his critical work on "Revealing and Concealing Coloration in Birds and Mammals" rank among the more important of his contributions to the knowledge of nature.

He had great respect for genuine hunters—the kind who endure hardship, exhibit prowess and tell the truth—such men as Selous, Warburton Pike, George Bird Grinnell and Charles Sheldon. Early in his career in the White House he asked to be notified when out-of-town hunters came to the city. So when the Canadian hunter and sub-arctic explorer Warburton Pike had arrived, Sheldon and I were requested to bring him to dine at the White House. The time happened to be a particularly busy one politically, and we were warned that the President must excuse himself directly after dinner. But instead, he took us upstairs and kept us in his den till midnight. He was several times interrupted by messengers, but declined to see them. Finally his son-in-law (Nicholas Longworth) came with an important telegram. Roosevelt waved him away with the remark that he was not to be interrupted—that for this one night he felt entitled to enjoy himself.

Theodore Roosevelt lived during the period of ultra-microscopic specialization in the study of animate nature—the sad period in which the good old term "natural history" fell into disuse, actually disappearing from text-books and college curricula; nevertheless he was not misled.

The keenness of his observation coupled with his intimate first-hand knowledge of nature enabled him to recognize the necessity for field work and convinced him of the absolute need of museum specimens for exact studies of animals and plants.

He appreciated the work of the Biological Survey and aided it with his personal influence, even incorporating a paragraph about it in at least one of his messages to Congress.

If his major interests had not been diverted into the time-consuming field of politics he would have been one of America's foremost naturalists.

In conclusion, Mr. President, may I express my deep personal gratification that the medal you have seen fit to award me is an acknowledgment and a tribute both to the science of natural history and to the memory of the great man whose name it bears.

OBITUARY

ROBERT DeCOURCY WARD

ROBERT DECOURCY WARD, professor of climatology at Harvard University, died suddenly at Cambridge, Massachusetts, on November 12, 1931. He was born in Boston on November 29, 1867, but at the age of six months was taken to Dresden, Germany, where he remained for four years. He then was one year in Switzerland, one in England, and returned to Boston

[3] "The Deer Family"; "American Big Game Hunting"; "Hunting the Grizzly"; "Hunting Trips on the Prairie"; "Hunting Trips of a Ranchman"; "The Wilderness Hunter"; "Ranch Life and the Hunting Trail"; "Hunting in the Cattle Country."

[4] "Through the Brazilian Wilderness."

[5] "African Game Trails"; "Life Histories of African Game Animals" (by Roosevelt and Heller).