Reuben Myron Strong

1872–1964

# IN MEMORIAM: REUBEN MYRON STRONG

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SEVEN decades ago when R. M. Strong was identifying plants about his home in Wisconsin, helping to organize the club which was the precursor of the Wilson Ornithological Society, and writing his first bird paper for publication, there were few positions available for professional naturalists. Many young men of the period, with an interest in animals and plants and faced with the necessity of earning a living, turned to a career in medicine or teaching as best combining opportunities for professional success with time and means to indulge other interests. R. M. Strong decided on teaching and spent much of his life as a Professor of Anatomy. His ornithological accomplishments were carried on in his spare time, during his summer vacations, and in his 18 years of retirement.

On October 8, 1872, Reuben Myron Strong was born in North Greenfield (now part of West Allis), Wisconsin. His parents were Myron W. and Mary (Leonard) Strong. His boyhood was spent in rural surroundings with occasional trips to Milwaukee, where in the public Museum he met Carl Akeley, W. M. Wheeler, and H. Nehrling. He married Mary Ethel Freeman in 1907, and they had one daughter, Madelaine. His death occurred at the age of 91 years on August 11, 1964, at Petoskey, Michigan, near his summer home in Bay View, where he spent many of his summer vacations when he lived in Chicago.

Strong graduated from Oberlin College in 1897 with the degree of Bachelor of Arts. From 1898 to 1901 he did graduate work at Harvard University and earned the degrees of Master of Arts and Doctor of Philosophy. Later, in 1909–10, he studied with Dr. Ludwig Edinger in his Neurological Institute (Neurologisches Institut) at Frankfort, Germany.

In the early part of his teaching career, Dr. Strong taught at Lake Forest Academy, near Chicago, 1897–98; University of Chicago Academy at Morgan Park, Illinois, 1901–02; and Haverford College, Pennsylvania, 1902–03. He instructed variously in chemistry, physics, biology, botany, zoology, and physiography. Also he coached football and track teams. In 1903, with one of the newly instituted Carnegie Research Assistantships, he came to the University of Chicago's Department of Zoology, where he soon became an instructor, a position he held for 10 years, until 1914.

In 1914 he accepted the position of Professor of Anatomy at the University of Mississippi, and two years later, a similar position at Vanderbilt University, Nashville, Tennessee. Finally in 1918 he went to Loyola University, School of Medicine, Chicago, where he remained until he retired in 1946. Then he accepted an office and the honorary title of Research Associate in Zoology at the Chicago Natural History Museum.

Dr. Strong's teaching career and his contributions in non-avian anatomy, in both of which fields he made significant contributions, and his affiliations with anatomical societies, have been dealt with in a memorial which appeared in the 1965 Proceedings of the American Association of Anatomists (*Anatomical Record*, vol. 152, no. 3, pp. 370–372, July 1965). Dr. Thesle T. Job, Professor Emeritus, who succeeded Dr. Strong as Professor and Chairman of the Department of Anatomy of Loyola University School of Medicine, now Stritch School of Medicine, provides the following brief comments for inclusion here.

"Dr. Strong joined the Faculty of Loyola University School of Medicine during the time of its complete reorganization. Within his first year he was made Secretary of the Faculty, which position he held until his retirement, 29 years later. His influence was invaluable in establishing the faculty, the curriculum, scholastic standard, and research enthusiasm of the Medical School, and he remained a constant stimulus to the betterment of all that pertained to the school.

"In addition to his life-long interest in birds and conservation Dr. Strong did worthy investigative work in different fields of mammalian anatomy. He published articles on the *fasciculus solitarius* and its *nucleus* as found in the adult human brain, and on the development of the fourth ventricle and its related subarachnoid space in human embryos. His interest in avian pigmentation carried him into studies of human pigmentation. The work he did on the development of the rat skeleton led to his preparation of the chapter on the skeleton in *The rat in laboratory investigation*."

In some autobiographical notes, Dr. Strong wrote that he could not remember when he was not interested in natural history. This early interest in the world of living things about him later found one expression in his associating with organizations in which amateur field naturalists predominated. He also organized and conducted courses in bird study, which included bird walks, during his 10 years at the University of Chicago. In discussing these classes he wrote that "very early rising for bird work is often overdone with classes and it is certainly not advisable if work can be done as well at a later hour." In this connection, it is interesting to remember that Elliott Coues once made the comment that he did not care to be abroad before the world was aired though he often found it necessary. Strong also took pleasure in going on bird walks with congenial company during his early and middle years, activities which ceased only when he was in his middle eighties.

However, the influence of the formal training Dr. Strong received at Harvard, which was in zoology, especially morphology, and in Germany, in neurology, is evident in much of his bird research. This was mostly laboratory or library work. The one outstanding exception was the summer's

field work in 1911 on Herring Gulls and Red-breasted Mergansers in the Green Bay region of Wisconsin. His usual approach to avian research was the investigation of a special problem, of a type of phenomenon, rather than descriptive additions to our knowledge of certain birds.

In his first longer paper, "A quantitative study of variation in the smaller North American shrikes" (1901), one product of his Harvard days, he writes: "It was my desire to employ statistical methods in the study of variation in a group of birds." His paper on the study of Herring Gulls, mentioned above, was begun with the intention of studying bird habits intensively. In a later study of these gulls, in 1917, he had in mind that the submarine problem of World War I was then "desperate" and "appalling" and hoped to contribute to the "utilization of gulls . . . in locating submarines," a program that the National Research Council had recommended.

Dr. Strong's bird work showed great diversity before he became immersed in his major contribution, his "Bibliography." Between 1901 and 1925, he published important papers on development of color in feathers, on sense of smell in birds, on hybridization, on inheritance, and on ossification of the bird skeleton, as well as those mentioned above.

Dr. Strong's main ornithological contribution, and the one for which he will be remembered longest, is his "A bibliography of birds." This four-volume work of some 1,650 pages was not planned as such. Rather it grew out of another project, one on the anatomy of the Procellariformes, and this offshoot flourished at the expense of its parent.

When Dr. Strong was studying in Germany, he discovered certain peculiarities in the structure of the Fulmar. This focused his interest on the related petrels and albatrosses. In 1910, on his return to the United States, he set about borrowing material for dissection and a comparative study. Eight years later, while at Vanderbilt University, he had prepared a draft of his proposed paper. Then came the question of arranging the extensive bibliography. In conferring with his colleagues, he was much impressed with the suggestion of the ichthyologist, Dr. E. W. Gudger of the American Museum of Natural History, that he follow the arrangement used in Bashford Dean's well known *A bibliography of fishes.*

Gradually the scope of the bibliography was enlarged, from one documenting an anatomical paper to one that stood as a major contribution in itself. When the first three volumes were completed and published, Dr. Gudger, reviewing it for *Science* (July 18, 1947, p. 71), wrote in part: "This is a monumental work for which no praise is too great. . . . the sure and solid foundation on which avian bibliographies will build in the long future. . . . this is surely *the* Bibliography of Birds, the most valuable tool

ever forged for students of Ornithology, and an imperishable monument to the labors of the author."

The bibliography proper was completed and published in 1939, having taken about ten years longer than planned, as Dr. Strong wrote in its introduction. It was not until 1947, the year after his retirement from teaching, that the third volume, the subject index, was completed, and nearly ten years of his retirement elapsed before the final "finding index" was published.

The preparation of the "Bibliography" and work on the "Anatomy of the Procellariformes" occupied Dr. Strong's available time to the exclusion of other bird research during the second quarter of the century. Then in his museum office he completed the "Bibliography" and devoted his time to the "Anatomy." In his retirement Dr. Strong was remarkably conscientious in coming to his office; he appeared up until the day before he left on what proved to be his final trip to Bay View. A spare, stooped figure, he spent his days bent over his work table, checking references, labelling the many, exquisite, full-page albatross plates, checking the names of tissue and bones to be used on these and in the accompanying manuscript, and occasionally checking a detail of morphology by dissection. This work was nearing completion. Then, in 1962, when Mrs. Strong's final illness necessitated his spending much time at home, he took the manuscript to his apartment to work on it there and it mysteriously disappeared.

While work on the "Bibliography" had retarded work on the "Anatomy of the Procellariformes," with the completion of the former another of his interests, that in organizations, competed for Dr. Strong's time.

Strong had joined the A.O.U. in 1889 and was elected a Fellow in 1949, in recognition of his "Bibliography." But the Wilson Ornithological Society, in its various corporate forms, was his first and his continuing love. He was President from 1891 to 1897 and again in 1920–21, wrote a history of the society in 1939, was for many years its only living founder, and attended his last meeting in 1963 in Charleston when he was 90 years of age. When he was teaching a course in bird study at the University of Chicago, the desirability of a local bird club became apparent and he organized the Chicago Ornithological Society in 1912, an organization that continues active.

When Dr. Strong came to Loyola University, he began to take an interest in local conservation matters. This inevitably led to his association with numerous societies, committees, and advisory boards, a dozen or so of them, of which the following may be mentioned as illustrating their diversity: Illinois Audubon Society, Chicago Conservation Council, Illinois Chapter of the Wild Flower Preservation Society, Outdoor Art League,

a Save the Dunes Council, and an Illinois Governor's Advisory Committee on State Parks. In many of these he served in an official capacity.

The appreciation of the community for these activities was shown by the honor conferred on him in 1957 when the Jesuit Centennial Committee chose Dr. Strong as one of the One Hundred Outstanding Chicagoans.

### ORNITHOLOGICAL PUBLICATIONS

Dr. Strong estimated his bibliography at about 125 titles. Fewer than half of these deal with birds. Most of his bird papers were published before 1928 and these plus later ones are given in his "Bibliography" (cited below), in which 42 items are listed, covering the period 1891–1939. To these, two are added below.

1891–1939. [42 titles listed in the following reference]

1939–1959. A bibliography of birds. With special reference to anatomy, behavior, biochemistry, embryology, pathology, physiology, genetics, ecology, aviculture, economic ornithology, poultry culture, evolution and related subjects. Field Mus. Nat. Hist. (Chicago), Zool. Ser., 25 (pt. 1): 1–464, 1939 (author catalogue, A to J); (pt. 2): 469–937, 1939 (author catalogue, K to Z); (pt. 3): 1–528, 1946 (subject index); (pt. 4): 1–185, 1959 (finding index). Reviewed: G. M. Allen, Auk, 57: 264–265, 1940 (pts. 1 and 2); J. T. Zimmer, Auk, 64: 478, 1947 (pt. 3); E. Eisenmann, Auk, 77: 100–101, 1960 (pt. 4).

1945. A history of the Chicago Ornithological Society. Audubon Bull. (Illinois Audubon Society, Chicago), no. 53; pp. 1–3.

1952. A peculiar pigmentation. Auk, 69: 199–200.

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