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## IN MEMORIAM: WITMER STONE

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### *Plate 10*

IN THE eminently fitting words of a long-time colleague, "Witmer Stone was born a naturalist, nurtured a naturalist and a naturalist he lived until the end of his days. Most of the many activities that filled his busy life flowed from his profound interest in nature." Scientist, man of letters, biographer of science and scientists, and protector of wildlife, he combined with these attainments what another old friend, Dr. Cornelius Weygandt, has most aptly called "a genius for friendship." To a buoyant spirit he added an enthusiasm which he kept through life, a keen sense of humor, a touch of whimsey, a sympathetic understanding, a love of good literature and the instincts of the historian and bibliophile, attributes all of which broadened his outlook upon the world and drew him closely to his fellow men. In his death on May 23, 1939, the American Ornithologists' Union lost an honored Fellow and a former President and Editor, and his associates at the Academy of Natural Sciences were deprived of a counselor and coadjutor who for over fifty years had lived as one of them.

Witmer Stone was born in Philadelphia, September 22, 1866, the second son of Frederick D. and Anne E. Witmer Stone. His ancestry was Pennsylvania English-Quaker and Pennsylvania Dutch, two stocks which have given us a number of our famous American naturalists, such as Melsheimer, Haldeman, Say, von Schweinitz, Darlington, Cassin, Leidy and Cope. His father was for many years Librarian of the Historical Society of Pennsylvania and a recognized authority on Pennsylvania history. Doubtless we can trace much of Witmer Stone's appreciation of good literature, scholarly writing and regard for books and book-making to an early paternal influence. When quite young his interest in Nature began to assert itself, and the collecting



*Walter Hodge*

of minerals, birds' eggs and skins, insects and plants was the pattern by which it became evident.

By the rare good fortune which some of us have, a group of neighboring youths of the Brown family had similar interests, and from this early association developed friendships severed only by death. In his memorial of Stewardson Brown, Dr. Stone has pleasingly pictured in the following words the influence of 'Restalrig', the Brown home-  
stead, and its folk, upon the lives of the boys who shared it:

"It lay on the extreme eastern edge of Germantown (part of Philadelphia) and beyond it stretched miles of open country, with delightful bits of woodland here and there, and the Wingohocking Creek, then a clear open stream, flowed not far away. The surroundings were ideal for the development of a love of natural history; and the atmosphere of the home equally so. There was a general interest in out-door life in the family, and a love of hunting and fishing on the part of the father and elder brothers. A gun closet in the hall was ever ready to furnish the means of securing any rare bird that visited the neighborhood, while many mounted specimens graced the bookcase in the parlor. And there life was not bound about by narrow restrictions such as some parents feel it necessary to impose. . . . We three boys had very many interests in common—a love of Nature, of music and of out-door athletic exercises—and we became inseparable companions. Indeed for a period of more than ten years we spent almost our entire spare time at Restalrig or in the immediate vicinity mainly in collecting and studying specimens of plants, animals and minerals . . . . In 1882, in conjunction with my late brother Frederick D. Stone, Jr., and Brown's younger brothers, Herbert and Francis H., we formed the 'Wilson Natural Science Association', which met in our house where a room had been transformed into a museum for the housing of our collections, and here weekly sessions were held and papers read with all the formality of a more serious organization. While our activities were admittedly very local in scope, I have since been impressed with the admirable basis that they afforded for our future work, better, I am inclined to think, than would have been derived from less concentrated work over a wider field. Our aim was to become familiar with all of the animal and plant life of that part of Germantown as well as the minerals and rocks, and I think we nearly succeeded."

The productive value of this common early interest is evident from the subsequent careers of the two Brown boys most intimately concerned. Amos P. Brown eventually became Professor of Geology at the University of Pennsylvania and Stewardson Brown for years prior to his death in 1921 was Curator of Botany at the Academy of Natural

Sciences of Philadelphia. Its importance to Witmer Stone was often expressed by him, and doubtless much of his exceptionally broad acquaintance with specific elements of the fauna and flora of eastern Pennsylvania could be traced to the boyhood years at Germantown.

Witmer Stone's early education was secured at the historic Germantown Academy, from which he passed to the University of Pennsylvania, graduating in 1887. In undergraduate days he was elected Secretary of his class—one which produced an exceptional number of able and outstanding men—and this post he held until his death. The A.B. degree of 1887 was followed by that of A.M. in 1891, and in 1913 the University of Pennsylvania conferred on him the honorary one of Sc.D., while in 1937 it further honored him with its Alumni Award of Merit.

In March 1888, Stone's appointment as a Jessup Fund Student at the Academy of Natural Sciences of Philadelphia was the beginning of the most important and continuous association of his life, one rich in concrete results for the institution and opportunities for the man. At the beginning of his services at the Academy, interest there in ornithology was definitely quiescent. After the passing of the Cassin period of American ornithology, which centered chiefly at the Academy, the foci of active investigation in that field in this country were elsewhere—chiefly Washington, New York and Cambridge. Stone found the priceless inheritance of the days of Cassin, the great and representative bird collection, mainly mounted on white T-perch stands, still as it was in the 'forties, 'fifties and 'sixties, its priceless types often unmarked and all crowded in glass display cases, subject to the deteriorating effects of light and dust.

His own words, written in 1909,<sup>1</sup> describe vividly the condition in which he found this collection, considered by Philip Lutley Sclater in 1858 to be the finest one then existing of the birds of the world. "When I became acquainted with the collection in 1888, it had had no attention from an ornithologist since the death of Cassin twenty years before and was practically in the condition in which he left it.

"There were 25,000 specimens, all mounted, for, according to the ideas of the middle of the 19th century, every specimen was supposed to be on exhibition. The ornithologist, who to-day can sit comfortably at his desk with thousands of bird skins in cabinet drawers within arm's reach, can realize the difficulties that attended John Cassin's researches, when tray after tray of mounted specimens had to be carried from the museum to the library and there stood upon tables gath-

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<sup>1</sup> In 'Problems of Modernizing an Old Museum', Proc. Amer. Assoc. of Museums, 3: 122-123, 1909.

ering dust until their investigation was completed. . . . Data were written on the bottoms of the stands, occasionally with the addition of personal or historical comment. One stand for instance bore the inscription, 'Labelled by John Cassin this 29th of Nov. 1848, 1/4 before 8 o'clock in the evening, Wednesday', another 'Just heard of the downfall of the French Empire. Vive la République'. I found also the handwriting of Townsend, Audubon, Baird and Peale. . . . The amount of crowding that was necessary to get the 25,000 specimens into the exhibition cases can readily be imagined. There were no less than 1500 hawks and eagles, among which were 30 specimens of the sparrow hawk, 38 duck hawks and 18 golden eagles. . . . The prospect of reducing that collection . . . and of transforming the majority of the specimens into study skins, not to speak of the task of procuring tight cases for their accommodation, and the cataloging and labelling incident to the work—all at a time when funds for the purpose were not available—was, to say the least, appalling, and was not accomplished in a single year. The entire history of the collection had to be worked up and all possible types or historical specimens hunted out, for in the old days authors did not clearly mark their type specimens; and not until this had been done was it possible to discard any apparently useless duplicates. Finally the data on the wooden stands had to be carefully transcribed to the labels and the catalogue pages and, in the case of types, the bases of the stands themselves were preserved and numbered."

In this laborious work, very largely done with his own hands, Stone located over six hundred types of Gould, Cassin, Townsend, Audubon and a score of other authors; he developed the nucleus of a modern housing method in the Academy and saved for posterity many hundreds of exceedingly rare and in some cases extinct species of birds. Not alone to the bird collection was this salvaging work extended, but extensive, important and irreplaceable series in virtually all fields of zoology and palaeontology were saved from further deterioration and preserved for future generations. For the greater part of twenty years the major official activity of Witmer Stone, aside from direct administration, was that of bettering, with limited help and even more restricted funds, the condition of priceless collections and their conservation for students in years to come.

The official minute adopted by the Council of the Academy on October 3, 1939, after the death of Dr. Stone, most accurately summarized the services of the man to the institution in these words: "His life became so merged with that of the Academy that for many years it was difficult to think of them apart. With characteristic energy and

thoroughness, and the help of other workers, the then wasting biological collections were salvaged, renovated and conserved. Many valuable specimens and records were saved and many reforms in labeling, cataloging and storing were established. During most of this period Stone not only bore the heavy curatorial burdens but for several successive administrations he was the chief advisor of the governing officers and council. Poverty greatly hampered the progress of the Academy. Only through the loyalty and enthusiasm of the staff was its place in the scientific world maintained. The personal sacrifices made were little short of heroic and Stone was an acknowledged leader and inspiration to the younger men."

Officially Witmer Stone's connections with the Academy during the more than fifty years of his association, and subsequent to his first appointment as a salaried student, were: Assistant to the Board of Curators in 1892; a member of the Board of Curators in 1908; executive of that body in 1918; by an administrative reorganization in 1925 becoming Director of the Museum, and Emeritus Director in 1928. He was also elected one of the two Vice-Presidents of the Academy in 1927 and held this honored post until his death. He also served continuously as a member of the Council of the Academy from 1908 on. His technical posts, as distinct from his corporate or purely administrative ones, were: Conservator of the Ornithological Section in 1891, Curator of Vertebrates in 1918, Curator of North American Birds in 1934 and Emeritus Curator of Birds in 1938. As a member of important committees, as those on publication and library, he served the Academy for many years, part of that time as Chairman of the Library Committee.

In 1888, when Dr. Stone became associated with the Academy, its bird collections numbered 26,000 specimens. In 1939, at the time of his death, they totalled 143,000. Much of this growth was directly or indirectly due to Witmer Stone, taking place in years when the conservation of the older collections, and administrative and non-ornithological curatorial routine were paramount responsibilities.

Soon after his association with the Academy, Stone made the acquaintance of Spencer Trotter, who in the 'seventies had been a Jessup Student at the Academy, then had turned to medicine and, after his graduation, to the teaching of biology, for many years prior to his death in 1931 holding that chair on the faculty of Swarthmore College. While a splendid general naturalist, Spencer Trotter was fundamentally an ornithologist of the old school, to whom the gun was the bird man's chief source of information. The resulting life-

long friendship of Stone and Trotter<sup>1</sup> exerted its influence upon both men, who mutually possessed a background of inherited scholarship and culture, brilliant minds, clever wit, a love of good literature and graceful writing with the ability to produce the latter.

Through Spencer Trotter, Witmer Stone met William L. Baily, George Spencer Morris and Samuel N. Rhoads, all young and enthusiastic bird men, and these five with Charles A. Voelker and J. Harris Reed in 1890 organized the Delaware Valley Ornithological Club. From that time what has proved to be one of the most active regional ornithological organizations in the United States, had Witmer Stone as its major figure, while his life had as an integral part the activities and progress of the D. V. O. C., as its members call it. Until failing health compelled him to limit his evening activities, for decades Witmer Stone gave to the meetings of the Club the value and pleasure of an association which its members, drawn as they were from the ranks of technical and professional men of all character—bankers, architects, manufacturers, merchants, doctors, teachers and printers—and students at the start of life, valued beyond expression. His broad knowledge, kindly comments, tactful suggestions and discerning advice were always welcomed, and he stood in the Club as the symbol of authoritative ornithology. For nearly fifty years he gave to the discussions at its meetings a breadth, value and appreciation of ornithology, in its broadest aspects, which has seldom been equalled in the popularization of science in America.

It was largely the interest and energy of Witmer Stone which influenced the D. V. O. C. to authorize the preparation by him of 'The Birds of Eastern Pennsylvania and New Jersey', which was issued in 1894 as a publication of the Club. Similarly his initiative was largely instrumental in the founding of the Club's serial 'Cassinia' in 1901, and for many years he served as the official and for others as the unofficial editor of this journal. The title was very properly given in recognition of Philadelphia's great ornithological figure, John Cassin, and most appropriately the first article was a sketch of Cassin's life by Witmer Stone. His interest in bird migration and the permanent recording of the great number of observations of this type made by the extensive Philadelphia group of bird lovers, and a desire for the continuity of this record, were the chief factors which influenced Stone to urge the founding of 'Cassinia', which has remained distinctive in its migrational information.

Witmer Stone became an Associate of the American Ornithologists'

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<sup>1</sup> See 'Spencer Trotter, 1860-1931', by Witmer Stone. *Cassinia*, no. 28, pp. 1-8, with portrait, 1932.

Union in 1885, and was elected a Fellow in 1892. The first meeting of the Union attended by him was that of 1889, and it gave opportunity to meet men whose names were familiar to him from their writings—Brewster, J. A. Allen, C. F. Batchelder, Charles B. Cory, Robert Ridgway, Elliott Coues, C. Hart Merriam, D. G. Elliot and numerous others. For Brewster he developed a high personal regard and life-long esteem, sometimes intimated in informal and conversational evaluations of the work and influence of his American ornithological contemporaries. Coues was considered a particularly brilliant figure, sometimes belligerent but learned and well informed, and withal a bibliographer, which latter implied one mentally in tune with Witmer Stone. Merriam's epochal work on life-zones made an early impression upon Stone, as did many of Dr. Allen's masterly studies. The New England school of ornithologists, possessing that intangible something New Englanders have in common with Philadelphians of the old school, always appealed to Witmer Stone. His occasional visits to Cambridge always afforded him very real pleasure in their opportunities again to meet old friends and respected traditions, and see anew familiar surroundings.

During the 'nineties one of the most pressing matters before the A. O. U. was the need for satisfactory and comprehensive protection for North American birds. While the egret and tern situations were the most conspicuous, they were but symptomatic of a problem made up of many angles—plumes and feathers, eggs, game and pointless slaughter. To this campaign Witmer Stone gave the best in him, and in association with William Dutcher he was a potent factor in securing effective legislation in many directions. He had been active in the work of the Pennsylvania Audubon Society, of which he was President for a number of decades, and also that of the National Association of Audubon Societies when it took over the active work of the State bodies and became the central body for bird protection. However, before that time the A. O. U. Committee on Bird Protection was the main national agency, functioning as early as 1885. As far as available records show, Dr. Witmer Stone became a member of this Committee in 1896, when William Dutcher was Chairman. In 1896, Stone became Chairman of the Committee and continued in that post until 1901, when Dutcher again assumed the chairmanship. During his tenure as Chairman, Dr. Stone was severely criticized by certain oölogists for his strictures on excessive egg collecting, and this may have influenced his withdrawal from the Committee in 1901, disliking, as he did, controversy or personalities in discussion. However, in 1903 he was a member of the A. O. U. Committee on Relations with the Millinery



Trade, which correlated its work with that of the Bird Protection Committee. During the years from 1897 to 1903, a considerable part of his time was taken up with an extensive correspondence on protection matters, and many visits were made to legislative centers in support of bird-protection measures. This interest remained active throughout his life, and the indication of the 'Witmer Stone Bird Sanctuary' at Cape May, by the National Association of Audubon Societies, was a graceful appreciation of his years of service to and interest in the cause of bird protection.

The exact date of Witmer Stone's first appointment as a member of the A. O. U. Committee on Nomenclature and Classification I am unable to ascertain, as Dr. Hicks advises me that the unpublished A. O. U. records of the first two decades of the present century are incomplete in many respects, in part probably due to the membership of such committees being appointed and not elected. From the recollections of years of daily association with Dr. Stone, I am sure that this appointment was made prior to 1910, while, as shown beyond, his cooperation in the preparation of the third edition of the 'Check-list of North American Birds', issued that year by that Committee is acknowledged in the preface. He is shown by the records to have been Chairman of the Nomenclature Committee from at least 1919 to 1931 inclusive, when he was succeeded by Dr. Alexander Wetmore.

The services of Witmer Stone as editor of 'The Auk' and in the preparation of various 'Check-lists' are reviewed on a following page, and in addition he was one of the indexers of the eight volumes of the 'Bulletin of the Nuttall Ornithological Club' and volumes 1 to 37 of 'The Auk', having served as a member of the Index Committee which prepared the index of volumes 18 to 37.

Dr. Stone became a member of the Council of the A. O. U. in 1898, and by election (1898-1914) or by virtue of other office (1914-39) served continuously as a member of that body until his death. He was elected a Vice-President of the A. O. U. in 1914, serving in that capacity until 1920, when he became President, retiring in 1923.

On June 19, 1939, the A. O. U. Council, assembled at the 57th Stated Meeting in Berkeley, California, accepted the report of the Brewster Memorial Medal Committee, which "recommended that the 1939 award be made posthumously to Dr. Witmer Stone for the two-volume work on 'The Birds of Old Cape May'." It was especially fitting that this award, bearing the name of one who to him represented outstanding scholarship in ornithology, should have been made to Witmer Stone, even though fate decreed it should be "in memoriam."

It may well be said that Witmer Stone gave the American Orni-

thologists' Union a half-century of service, probably unsurpassed in its varied character by that of any other member.

Of the considerable number of purely ornithological contributions which came from the pen of Witmer Stone, those of greatest fundamental importance as ornithological corner-stones, or of greatest influence upon other students, are probably the 1896 classic on 'The Molting of Birds, with Special Reference to the Plumages of the Smaller Land Birds of Eastern North America', and his last two-volume opus of 'Bird Studies at Old Cape May', which appeared in 1937. The molts and plumages of birds always had been for him an entertaining field of study, and he personally collected much of the material on which his relatively pioneer work of 1896 was based, an investigation which prompted the search for particular plumages or molting conditions. Through all the later years of his life this interest is reflected in critical plumage comments scattered through papers more directly bearing upon other phases of ornithology.

The Cape May volumes had as their inspiration the appreciation long years before of the particular ornithological importance of the Cape May peninsula. This is due to the convergence of migration lines, the intimate mingling of land and water birds and the area's ease of access from Philadelphia, as well as the fact that its southern position brought into our territory some forms of life very rarely seen elsewhere in New Jersey. Early bird and mammal field work there, with his old friend Samuel N. Rhoads, laid the foundation for a liking which increased with the years, and Cape May became Stone's usual summer residence. His steadily growing notes were constantly augmented by those of other observers living there, the accurate recollections of trustworthy old-time residents of an area which had for generations produced many wild-fowlers, and the records of groups of members of the Delaware Valley Ornithological Club, to whom Cape May, in the last decade and a half, became a year-round Mecca.

As impaired health in his last years prevented the freedom of action to which he had been accustomed, Stone then devoted himself very largely to the preparation of these Cape May volumes, giving to them the concentration and devotion which he was unable to give to field study. With an artistry that combines science and history he wove into a whole this delightful account of the past and present bird life of the region, the changes in conditions and dependent bird life which the years have brought, the bird societies of the various closely placed but very different environments, the migrations and seasonal associations of the birds, and followed these with a series of graceful word pictures of the birds themselves, which will remain part of America's

most cherished ornithological literature. As one colleague has fitly said, this work "reflects Stone at his best, both as a naturalist and a writer."

Stone's first serious contribution to ornithology was published in the 1885 'American Naturalist', a note on 'The Turkey Buzzard breeding in Pennsylvania'. Between that year and 1894, he published sixteen contributions on the ornithology of Pennsylvania and New Jersey; his first paper in 'The Auk', issued in 1887, was on the 'Migration of Hawks at Germantown, Pennsylvania', thus evidencing his early interest in that angle of ornithology, supplemented in 1889 in the same journal by another dealing with methods of recording migration, i. e., 'Graphic Representation of Bird Migration'. An 1892 paper early indicated his Cape May interest—'Winter Birds of Cape May, New Jersey'—and others of these earlier studies dealt with the summer birds of Harvey's Lake and the Pocono Mountains of Pennsylvania, and of the pine barrens of New Jersey. Between 1887 and 1910, he published fifty-two ornithological contributions in 'The Auk' and twenty-six others on the same subject in the 'Proceedings' of the Academy, of which certain ones call for special mention. An 1899 study of a collection of birds from the vicinity of Bogotá, Colombia, is, as stated by Dr. Chapman in an historical summary of the ornithological literature of Colombia, the first critical examination of authentic material from that immediate area, for most previous 'Bogotá' records had been based on trade-skins often secured at considerable distances and in very different life areas. The same year saw the publication of Stone's important historical catalogue of types of birds in the Academy collection, supplemented and completed years later in 'The Emu' by the inclusion of the Academy-owned Gould types of Australian birds. An almost completed manuscript, laid aside in his last illness, carried this catalogue to 1939.

The breadth of Stone's interest in correlated angles of investigation is reflected in certain of his contributions published after the turn of the century, such as the 1903 'Racial Variation in Plants and Animals, with Special Reference to the Violets of Philadelphia and Vicinity', and the 1907 'Life Areas of Southern New Jersey'. Critical ornithological revisions dealt with the genus *Anous*, the Old World Rallinae, the genus *Sturnella*, the genus *Psilorhinus* and the genus *Piaya*; the faunistic studies treated of birds from Greenland, Alaska, California, New Mexico, Lower California, Yucatan, southern Mexico, Honduras, Panama, Matto Grosso, Brazil, Kenya, Uganda, Belgian Congo, French Equatorial Africa and Sumatra. In addition to the 'Birds of Eastern Pennsylvania and New Jersey', which has already been mentioned,

Dr. Stone prepared at the request of the New Jersey State Museum, a volume on 'The Birds of New Jersey, their Nests and Eggs', which was issued in 1909, and which contains a full bibliography of New Jersey ornithology up to the date of its preparation.

In 1912, there appeared from Stone's pen a short paper, most stimulative of thought on a subject which constantly recurs not only to ornithologists, but to all zoologists concerned with problems of relationship. This was 'The Phylogenetic Value of Color Characters in Birds', and its author graphically presented the evidence of color similarities in structurally distinct genera of bee-eaters, kingfishers, cuckoos and parrots inhabiting the same areas.

In the years subsequent to 1910, the number of original ornithological contributions Stone was able to produce was necessarily reduced by his increasingly important official curatorial duties, as well as his new post as Editor of 'The Auk'. It is not necessary to discuss for 'Auk' readers the services of Witmer Stone in the latter capacity. The volumes testifying to this twenty-five years of service need no review. He worked increasingly for the diversification of the contents of the numbers and volumes to cover the many overlapping fields of ornithological research and observation. During the years of his editorship we find the number of critical reviews of current literature from his pen running into several thousand, between 1911 and 1920 alone totalling nearly eight hundred, while in addition 'The Auk's' pages include from his pen a very considerable number of obituaries of American and foreign ornithologists who passed away during those years. His reviews of current literature were more than abstracts and his comments constructively useful to author and student alike. His days and evening hours not devoted to official institutional routine duties were absorbed by the mounting responsibilities of the journal, and as other equally conscientious editors have done, he surrendered many opportunities for original work to devote these hours to the often thankless task of an editor. Only when declining strength made such a decision necessary did he ask to be relieved. At the time of his retirement in 1936, Dr. Stone received from the Council of the A. O. U. a resolution of appreciation for "his 25 years of continuous and arduous work in editing 'The Auk' and other publications of the Union."

Dr. Stone's labors in connection with both the third and the fourth editions of the A. O. U. 'Check-list' have already been noted, but it is fitting that attention should be called to the Union's own recognition of these responsibilities. In the preface to the third edition, issued in 1910, it is stated that "the preliminary revision of the geographical

ranges of the species and subspecies was undertaken by Mr. Stone," and again it is emphasized that "the Union owes a lasting debt of gratitude to Mr. Stone and Dr. Merriam." The years between 1924 and 1931 were crowded with seemingly endless duties required by the fourth edition, and it is stated in its preface that the work was largely written by Dr. Stone. We who were his associates know how largely the 'leisure' hours of Witmer Stone during these years were consumed in the 'Check-list' labors, and to the writer at least the production of this important ornithological corner-stone seemed to afford its chief compiler a deeper satisfaction than any similar task.

The history of his particular field of research, and the lives of those who had labored on the same subject, comprised one of Stone's most vivid interests. For many years he had devoted such time as might be available to accumulating information on the history of American ornithology. Many of these investigations developed little-known or forgotten facts in the lives of a number of the leading actors in the pageant of ornithology on our continent. Fortunately for posterity the series of biographical sketches which appeared from Witmer Stone's pen in 'Cassinia' between 1901 and 1937 gives us in more than one case the best word pictures we have of personalities who left their impress upon American ornithology. Thirteen of these biographies were issued, sympathetically treating, among others, the lives of John Cassin, John K. Townsend, Samuel W. Woodhouse, Adolphus L. Heermann, Thomas B. Wilson,—the patron of Cassin,—William Gambel, George A. McCall and Titian Ramsey Peale. The encouragement of Stone induced other members of the Delaware Valley Ornithological Club to add, in the pages of 'Cassinia', similar studies of Charles Lucien Bonaparte, William Bartram, George Ord and Edward Harris, the patron of Audubon. Stone also contributed the biographies of Alexander Wilson and John James Audubon in 'Leading American Men of Science', published in 1910, and numerous other short articles dealing with these men, their personalia or their classic works came from his pen at various times.

In 1923, at the Fiftieth Anniversary of the Nuttall Ornithological Club, Stone was the guest speaker, and his 'Ornithology of Today and Tomorrow' painted graphically the changing tenor of ornithological research. In introducing the speaker, the President of the Nuttall Club referred to Dr. Stone as the successor in Philadelphia of John Cassin, who was considered "perhaps the first American-born ornithologist of real greatness."

Many years of application to problems of zoological nomenclature, perhaps abetted by his membership in the A. O. U Committee on

Classification and Nomenclature, resulted in his appointment, in the last decade of his life, as one of the few American members of the International Committee on Zoological Nomenclature, a post he still held at the time of his death.

In fields other than ornithology we see reflected the breadth of interest of the man in animate Nature as a whole. Mr. Wharton Huber, in an appreciation of Stone's work as a mammalogist (*Journ. Mammalogy*, 21: 1-4, 1940), lists nineteen mammal contributions from his pen, of which two, i. e., 'American Animals' (published in conjunction with W. E. Cram) issued in 1902, and 'The Mammals of New Jersey', published in 1908 by the New Jersey State Museum, are of particular importance. Many of his field investigations in the eastern United States had mammal objectives as well as bird incentives. In conjunction with S. N. Rhoads he rediscovered the lemming vole in New Jersey, extended the range of the red-backed vole south in the coastal plain to that State, and reported the rediscovery of the rice rat in the same area.

Stone's familiarity with reptiles is evidenced by a number of papers, among them three on these animals in the Academy's 'Proceedings', while one of his early studies dealt with the lycosid spiders occurring in the Philadelphia area. An extensive collection of local arachnids accumulated by him over a number of years, was added to the Academy's series about the turn of the century, and was followed by a similar presentation of his extensive local bird collection, built particularly to furnish evidence for his plumage studies.

In insect life he always maintained a keen interest, and during the later years of his life his residence at Cape May had as a diversion, which physical limitations had not negatived, the building-up of a comprehensive collection of the local insect fauna. This series of many thousands of specimens, often of marked scientific interest and as yet but in part studied, passed at his death to the Academy. The capture, mounting and labelling of these insects during his summers provided escape for the ever-active mind and the inherent collector's instinct from increasing physical limitations. One of the most interesting of the New Jersey pine-barrens grasshoppers—*Melanoplus stonei*—attests his keen interest in local entomology, as he helped collect the type series.

Stone's life-long interest in botany inspired a ten-year period of intensive botanical field studies of the New Jersey pine barrens and adjacent areas, and the consequent accumulation of many thousands of botanical specimens, with full data, which today form part of the Academy herbarium. As a result of these investigations, and the cor-

related examination of Philadelphia and other important herbaria, he prepared what will long remain our most authoritative work on the botany of a part of this area—"The Plants of Southern New Jersey with Especial Reference to the Flora of the Pine Barrens and the Geographic Distribution of the Species". Published in 1912 by the New Jersey State Museum, this work of over 800 pages, backed by thousands of previously unpublished records, is considered by competent botanists to be an exceptionally important floristic study. As Dr. Francis W. Pennell, in appraising Witmer Stone's services to botanical science, feelingly writes (*Bartonia*, no. 20: 33-37, 1940), "it stands forth increasingly with time as the most careful geographic study of any comparable part of the flora of eastern North America." In a recent clarification of the systematics of the gentians it was found that the striking New Jersey pine-barrens gentian required a new name. It is eminently fitting that this exquisite species, which Dr. Stone considered "one of the choicest flowers of the region," will now be known as *Gentiana stoneana*.

Of the many honors bestowed upon Witmer Stone in the course of his busy life, the following may be mentioned to supplement those already given: Vice-President and President of the American Society of Mammalogists; President of the Delaware Valley Ornithological Club; Fellow of the American Association for the Advancement of Science; Member of the American Philosophical Society, Franklin Inn and Philobiblon Club; Secretary and Director of the Ludwick Institute; Honorary Member of the Nuttall Ornithological Club, Cooper Ornithological Club, Linnaean Society of New York, Zoological Society of Philadelphia (also serving for some years as a Director); Philadelphia Botanical Club, British Ornithologists' Union, Ornithological Society of France, Ornithological Society of the Netherlands and Hungarian Ornithological Society; Foreign Member of the German Ornithological Society and the Bavarian Ornithological Society. The Otto Hermann Medal of the Hungarian Ornithological Society was conferred upon him in 1931 for his studies of bird migration. The posthumous award of the Brewster Medal has already been mentioned.

To those privileged to know Witmer Stone in the intimacy of daily association, his broad knowledge of and intimate acquaintance with zoological and botanical matters, his experience in intricate problems of nomenclature, and familiarity with the history of American ornithology and scientific exploration were always available. He was ever ready to give of his time and knowledge to help others who might ask assistance, yet possessed to a considerable degree the reticence, some-

times mistaken for diffidence, of one of deficient hearing, an aftermath of juvenile whooping-cough. His dominant traits of kindness and helpfulness were so pronounced that his long-time friend, Dr. Cornelius Weygandt, has most fittingly said,<sup>1</sup> "Such is his human fellowliness and unselfishness that he will spend an hour any time to help you in your little concerns"; and again, "He was brought up in the old classical curriculum, belonging to that tradition of scientists who know the best that is known and thought in the world outside of their specialty."

Stone's opinion was constantly asked by his associates on many matters other than pure science,—literary form and composition, technical editing and printing, book-making, bibliography and museum technique; his constructive criticism was valued and deeply appreciated. Beneath the burden of responsibilities, some self-imposed because of his preference to do much detail work himself rather than to delegate it to others, there was always a lighter side, a merry twinkle of the eye, a touch of delicate whimsey, or a hearty laugh, to show that beneath all the serious thought there was a buoyant spirit, keenly alive to the world about. As Mr. Huber has so graphically said, "This keen sense of humor and a memory that seldom failed, except in the last few years, made his desk a focal point for his fellow-workers. It is an inestimable privilege to have known Witmer Stone."

Dr. Stone married Miss Lillie May Lafferty, August 1, 1904. While childless, it was an ideally happy marriage. Mrs. Stone survived her husband by little more than a year.

In the passing of Witmer Stone, on May 23, 1939, the A. O. U lost a devoted associate, science a learned disciple, and his fellow-workers a counselor and leader. As has been said of another, "he was one of the great spirits and they are all too few." In all truth, "his works and our memories are a fitting memorial."

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<sup>1</sup> 'Philadelphia Folks', by Cornelius Weygandt, 1938 (pages 266 to 269 give a personal appreciation of Witmer Stone).