



EDWIN RICHARD KALMBACH, 1884-1972

(From a photograph taken in 1961)

IN MEMORIAM: EDWIN RICHARD KALMBACH

JACK F. WELCH

E. R. KALMBACH passed away on 26 August 1972. Few men have left a greater legacy to the wildlife profession. It is impossible to encapsulate in a few words his varied and distinguished career, but perhaps the citation read when he received the Aldo Leopold Award comes the closest:

"Few people have respected critical research more than Dr. Kalmbach. Over a period of 40 years he has contributed substantially to our basic knowledge of wildlife ecology, and he has striven, throughout his life, to promote and to advance the fact-finding activities of others. Starting as he did at the bottom of the ladder in government service, without benefit of formal training in biology, he advanced in his profession on a do-it-yourself basis until, at the time of his recent retirement, he had reached a position of prominence among the best wildlife investigators of this continent. Some of his contributions to our knowledge of wildlife, particularly of farm 'game' and migratory waterfowl, stand as classics of investigational effort.

"An artist of considerable renown, he fathered the idea of wildlife postage stamps to impress upon the public the importance of our wildlife resources. Being a skilled orator and diplomat, he was called upon to represent the United States Government in a number of international conferences on conservation. Further recognition of his skill in analysis of conservation issues and in lucid presentation of his ideas, was evidenced by the fact he was chosen to summarize the Twenty-third North American Wildlife Conference."

This citation sketches some of Dr. Kalmbach's major accomplishments and indicates his standing as a scientist. I can do little more in this brief tribute. As I was associated with him for nearly 37 years and was permitted to examine his extensive and careful files after his death, I can add some details of his career and some appreciation of the kind of man he was. But so great and diversified were his contributions as a distinguished scientist, wildlife artist, teacher, and friend, that any tribute must, at best, be incomplete.

THE SCIENTIST

Dr. Kalmbach was born in Grand Rapids, Michigan, on 29 April 1884. His interest in birds and in natural history must have been evident from an early age, for on graduating from high school in 1903, he immediately joined the Kent Scientific Museum in Grand Rapids. Starting as a taxidermist, he soon was made Assistant Director and Curator.

In the summer of 1907, while with the museum, he organized (and paid for) a canoe expedition down the Grand River from Jackson to Grand

Rapids. On this trip he and a high school student interested in birds spent 2 months collecting ornithological specimens, photographing wildlife habitat, and studying the bird life of the valley. According to available records, this was the first scientific effort made to identify and document the bird life of this area. Among the rare birds the two sighted and studied were the Prothonotory Warbler, Henslow's Sparrow, and a Mourning Warbler that proved to be a new record for the state.

On 1 July 1910 he resigned from the Kent Museum and joined the Division of Economic Investigations in what was then the Bureau of Biological Survey, U. S. Department of Agriculture, in Washington, D. C. He was to continue his association with this bureau and successor agencies until retirement in 1954. He often remarked that this was a uniquely stimulating period in his life. Although the bureau's activities dated back to 1885, the era from 1910 through 1954 was a significant one in the history of ornithology and wildlife conservation in the United States. He was privileged to know and work with many of the pioneers responsible for the course and growth of the government's conservation programs. Beginning in the Taft administration, he was too late to be associated with C. Hart Merriam, the first Chief of the Bureau of Biological Survey, but he worked under every succeeding chief of the bureau and its successor agency, the Fish and Wildlife Service, U. S. Department of the Interior. These included H. W. Henshaw, E. W. Nelson, Paul G. Redington, "Ding" Darling, Ira N. Gabrielson, and Alfred Day. Other of his earlier associates, in and out of government service, were A. K. Fisher, Harry C. Oberholser, Vernon Bailey, E. A. Goldman, T. S. Palmer, F. E. L. Beal, Louis Fuertes, F. M. Chapman, George Shiras, and Gifford Pinchot. These men all antedated him in his career, and he wrote, "I was merely a novice among giants, much to my advantage." Contemporaries with whom he worked and associated included W. L. McAtee, Alexander Wetmore, Clarence Birdseye, Olaus Murie, A. M. Bailey, and Frederick C. Lincoln.

Entering on duty as "an Expert" in 1910, he rapidly rose in the ranks of the bureau and in 1928 was made a Senior Biologist, the top scientific position at that time. During this period he gained great respect for W. L. McAtee, his supervisor and mentor. His two papers after McAtee's death, "In memoriam: W. L. McAtee" (1963, *Auk* 80: 474) and "An ornithological treasure awaits resurrection" (1968, *Auk* 85: 703) attested to his appreciation for this man. On 31 March 1954, McAtee wrote to Kalmbach, "From the time of your first coming to the little red brick building in the old Department of Agriculture setup, you showed unfailing application to the task at hand, and you never ceased in that devotion. You were willing to undertake a worthwhile training period and I think the results justified it."

The training involved learning the many techniques necessary for making food habits studies, a field in which he became very proficient, as revealed in his published papers. As a result of this work, he acquired considerable skill in entomological taxonomy and became the government's expert in identifying insects and insect fragments.

Not all his work was done in Washington. Various studies required extensive field trips, mostly in the West. As he liked to recount later, these trips had their frustrations. Expense money was limited, and he frequently had to dip into his own funds to get by. Travel in those early days was largely by train, and this left the field investigator without transportation when he arrived at his destination. Dr. Kalmbach solved this problem by buying a motorcycle, but when the accounting office in Washington learned it had a sidecar, they immediately classed it as a passenger vehicle and disallowed the expenditure. Only with difficulty did he convince them it was to haul field equipment and supplies, not people.

During this period, his assignments were largely concerned with birds of economic importance to the farmer. His work in Utah in 1911-12 revealed conclusively that the House Sparrow was a factor in controlling the alfalfa weevil. This resulted in his first publication, "Birds in relation to the alfalfa weevil" (1914, U. S. Dept. Agr. Bull. 107). Subsequent field studies included research on crows, blackbirds, magpies, starlings, and armadillos. His scholarly reports on these studies still retain their authoritative status.

In 1928 he was assigned to investigate one of the most baffling problems of western waterfowl, known then simply as "western duck sickness." His clear insight and energetic experimentation soon led to the discovery that the cause was in fact type C botulism. This and other of his findings formed the basis for a realistic attack on avian botulism.

In 1932 he was named Director of the bureau's newly established Food Habits Laboratory in Denver. Under his guidance and supervision this group carried out important researches on the food habits of coyotes and bobcats, and on birds in relation to agriculture. As director he emphasized the importance of combining field work with laboratory studies. In a letter to Washington in 1930 he wrote, "I believe more effective and reliable work can be done on many of the western problems through greater emphasis being placed on field studies. . . . [In] meeting present-day questions of the worth of birds and mammals that have great individual capacity for harm, that exert important influences not discernible by stomach examination, that inflict great damage through the multiplication of numbers locally, or inflict damage that is particularly pernicious, field studies must be relied upon for results."

His new administrative responsibilities did not reduce his capacity to carry on his research; it just made him work a longer day. It was while he headed this laboratory that he conducted his important studies on the relationship between crows and waterfowl. I have heard it said that the resulting publication, "Crow-waterfowl relationships, based on preliminary studies on Canadian breeding grounds" (1937, U. S. Dept. Agr. Circ. 433) should be required reading for everyone engaged in research, management, or administration of North American waterfowl resources.

In 1940 under his guidance the Denver Wildlife Research Laboratory was formed, and he served as its first director. This laboratory evolved by amalgamation of the Food Habits Laboratory and the existing Control Methods Research Laboratory, which had been established in Denver in 1928. In drawing up guidelines for the new laboratory, Dr. Kalmbach had this to say:

"It is recognized that in endeavoring to find solutions to animal damage problems the laboratory will not be restricted to any one avenue of approach. In addition to the admitted needs for improvement in the methods for animal control through removing the offending animals, efforts should be made to demonstrate the utility of other means, including measures of avoidance, changes in cultural practices or land use, ecological control of environment where possible, and in short, any procedure that can be demonstrated to be economically sound and effective and not unduly destructive to beneficial forms of wildlife. . . . It is recognized that the need for research in control methods rests on the necessity for control under the varied situations presenting themselves. For that reason investigations of the nature and extent of damage in relation to the productive capacity of the land, including appraisals of financial losses involved and estimating the cost of any suggested method of control, will therefore be considered within the province of the Laboratory's activities . . . trouble shooting will be curtailed thus leaving the personnel free to devote their time to the solving of fundamental problems associated with the control program."

In these few words, he set forth the foundation for the scientific approach to problems of animal control. His philosophy of control and his concern for wildlife have undoubtedly had considerable influence on the pattern of thinking now evident in approaches to stopping wildlife damage. He was a fighter, and would not compromise in defending what he felt was right. His opposition to programs of reductional control of birds frequently found him fighting alone, but he invariably won.

During his tenure as director, the Denver Wildlife Research Laboratory made great progress in several areas of research. His success in fostering such programs as the study of deterrents and repellents, coyote ecology, and the search for more specific control agents materially added to scientific knowledge and enhanced and upgraded operational programs.

As taxing as his administrative duties were, he still found time to conduct productive research. His discovery of the value of color in minimizing

acceptance of rodent baits by birds proved most useful in safeguarding birds from accidental poisoning. During this period, he developed a scanning device useful in counting waterfowl and other wildlife on enlarged aerial photos. His mechanical talent did not stop there, for he also developed a "mouse-mobile." Designed to be pulled behind a small tractor in orchards, this machine made simulated mouse trails and automatically placed toxic baits in them.

His bibliography contains nearly 80 titles. In line with his interests, most are in some way related to ornithology. Many represent major contributions to our basic knowledge of wildlife ecology; as he frequently commented, he did not write just to see his list of publications grow. His writing reflected the same qualities as his work. It was articulate, precise, and thorough, and seldom did his manuscripts need revision.

His last year of service with the government was spent in writing and, as he put it, "getting his house in order" before retirement. After retiring in 1954, he continued to maintain a deep interest in conservation matters and published a number of significant papers. Notable among these was "Conservation in an expanding economy: An appraisal of the 23rd North American Wildlife Conference" (1958, *Trans. 23rd North Amer. Wildl. Conf.*: 585-608). In typical Kalmbach fashion, he did the unusual. He not only reviewed the 23rd North American, but classified every paper in the published series of transactions, beginning with the 1928 American Game Conference and on through the 22nd North American—a total of 29 volumes, 1,777 papers.

Several years before he died he presented his extensive file of separates, books, and periodicals to the Conservation Library in Denver, and he continued to donate current issues of journals and other literature each year until his death.

THE ARTIST

Dr. Kalmbach's artistic talents, like his interest in science, must have been evident at an early age, for his files revealed that he served on the board of "La Plume," his high school's monthly paper. His drawings were used for several of this publication's cover pages during 1901-1903.

Over the years, he both organized and contributed to a number of art exhibits. In 1926 Harry Harris wrote of him in "Examples of recent American bird art" (*Condor* 28: 191). "One of the surprises of the show proved to be the group of small water colors by Mr. Edwin R. Kalmbach of the Biological Survey, Washington, D. C. The fidelity of Mr. Kalmbach's likeness and the finish of his execution justly entitle him to recognition as a bird portraitist of the first rank." He was to receive many

additional words of praise and nationwide recognition for this talent in the years to come.

Some of his best-known paintings have appeared as illustrations in such books as "Birds of Colorado" (Bailey and Niedrach 1965, Denver, Denver Mus. Nat. Hist.), "New Mexico birds" (Ligon 1961, Albuquerque, Univ. New Mexico Press), "Birds of Alaska" (Gabrielson and Lincoln 1959, Harrisburg, Pennsylvania, Stackpole Co.), and others. "Knowing birds through stories," a book published in 1922, was illustrated with 12 color plates he prepared (Bralliar, New York, Funk and Wagnalls Co.). His drawing of the Ruddy Duck was selected for the Migratory Bird Hunting Stamp in 1941. The illustrations in his publications were from his own pen, as were many in publications by associates or employees. His series of original Christmas cards, spanning a period of 25 years, will long be remembered by those who received them, particularly those who worked with him in Denver, for each of us received one of the original drawings over the years.

Through his interest in wildlife art, he successfully promoted his idea that American wildlife should have a place on our commemorative postage stamps, to help focus public attention on the importance of the nation's wildlife resources. He wrote several articles encouraging this idea, and his six suggested designs (grizzly bear, prong-horned antelope, Bald Eagle, Whooping Crane, beaver, and Wild Turkey) were reproduced in his article "Wildlife in the mails" (1950, *Nature Mag.* 43: 317, 332). Though these particular designs were not used, the fruits of the idea are familiar to all today.

In 1956 he began working on the idea of a tri-nation stamp to commemorate the Migratory Bird Treaty Acts between the United States, Canada, and Mexico. Two years of effort failed to make this proposal a reality, and in 1966, with some disappointment evident, he wrote to a friend:

"When I saw you . . . you mentioned you would appreciate a sample of my art work.

"With the current issuance of a postage stamp commemorating the Treaty with Canada protecting migratory birds, another related proposal becomes definitely a 'lost cause.' I refer to the suggested issuance, simultaneously by the United States, Canada, and Mexico, of such a stamp bearing the same basic design and commemorating the two treaties involving the three countries.

"At odd moments, ever since the issuance of the series of conservation stamps in this country, I have been plugging for such action between the three North American countries, but the recently issued stamp terminates that idea, at least in my day. Hence, the original design becomes merely a memento to that proposal. I don't know of a better method of disposal than to send it to you. I hope you like it."

The design showed three Mourning Doves in flight, one over each of the three countries outlined on a global map of North America.

In recent years, he continued to dispose of his art work, and many of the offices and field stations where he worked were recipients of one or more of his paintings. He kept records of these "official" presentations, but not of the numerous drawings and paintings given to friends and associates over the years. There are undoubtedly many people all over the country who are lucky enough still to own original Kalmbachs.

THE MAN

Dr. Kalmbach was greatly admired and respected by his friends and associates. He possessed unusual vitality, both physically and mentally, which kept him working far into the night, day in and day out. His love for work and intellectual pursuits never left him. Even in his advanced years he would steer conversation into areas of new thought rather than dwell on the past. He found great pleasure in doing things that were new and constructive. Only last year, at the age of 87, he purchased and planted, by himself, waterfowl food plants in a newly built pond near his apartment, "to attract ducks and make it more pleasant for others."

Like many intellectual men, he was not to be read on first meeting and too often was misunderstood by the casual visitor. Those fortunate enough to work with him or to have frequent contacts with him, professionally or socially, found him friendly, understanding, and extremely honest. Although he was not prone to overdo the use of salutary remarks, when he said thank you, or that he enjoyed it, you knew he meant it. He showed warm affection for his friends and stood ready to help mentally or physically, and even financially, if needed. Although serious and stern if the occasion demanded, he could also be lighthearted. He loved to joke and found great pleasure in pulling some prank to indicate his dislike for something. For example, he would put a clothespin on his nose when Mrs. Kalmbach was cooking cabbage or cauliflower. (In this connection, a study of his food habits would have been an easy task, for his preferences in food were extremely limited and clear-cut.)

A favorite relaxation all his life was an occasional evening of penny-ante poker. For years after I became associated with him we had a monthly game during the winter months. Six or seven members of the laboratory staff played routinely, and each person took his turn at hosting the game at his home. Ed's game was generally straight draw or stud, and he was not enthusiastic about the high-low and wild card games the younger fellows called.¹

¹ I had the pleasure of sitting in a game with Ed and W. L. McAtee, among others, at a Biological Survey party in Washington the winter of 1930-31.—Ed.

His one other card game was cribbage. He and his wife played a game or two every night just before bedtime when he was home, and the running score he kept ran into the thousands. According to his daughter, the games continued until Mrs. Kalmbach died, after which it had such sentimental value that he discarded the board and records related to it and never played again.

While he himself was not an athlete, his avid interest in sports colored his whole life. He took great interest in professional boxing and in the University of Colorado's football and basketball teams. Frequently, on coming to work Monday following a Saturday game, he was so hoarse from urging the team on that he could hardly speak above a whisper.

He had little interest in creature comforts, and although he wore gloves, he regularly came to work during the winter without hat or overcoat. On occasions when he felt propriety demanded it, he would wear an overcoat, and once I recall he bought a hat for a trip to Washington. Needless to say, his hat and overcoat were repeatedly left in restaurants and offices and had to be retrieved. By the time he returned home the hat had vanished, and the coat had to be sent to him by parcel post.

Being a naturalist, he loved the out-of-doors and spent most of his limited leisure time studying birds, photographing wild flowers, and searching for botanical specimens with Mrs. Kalmbach. Together they collected over 3,000 plants of various kinds in Colorado, which became the nucleus for the establishment of the herbarium at the Denver Botanical Gardens. His interest in mountain climbing was also very keen, and when he was Director of the Wildlife Research Laboratory at Denver, he arranged an outing for interested employees each year to climb one of the many 14,000-foot peaks in the state. The last one he climbed was Mt. Elbert, the highest, at the age of 66.

Dr. Kalmbach excelled as a teacher, although this was a title he never formally carried. His philosophy and the stimulus and guidance he gave young research workers in the broad field of wildlife had a lasting effect, and many leaders in conservation and wildlife research today are indebted to him for the training and inspiration he provided.

Like few others, his dedication to the search for truth in wildlife matters overshadowed all his other interests. When on field assignments, he worked tirelessly without concern for his own well-being; his real desire was to solve the problem at hand. Each of the 15 major studies he conducted while he was still engaged in active research (1910-1940) were diligently and effectively executed and brought forth meaningful and lasting scientific findings. From these studies 38 publications resulted, 12 of them major bulletins that still stand as classics in biology today.

Many honors came to Dr. Kalmbach. In 1954, when he retired, he

received the Distinguished Service Award, the highest award granted by the U. S. Department of the Interior. In 1955, the University of Colorado conferred on him an honorary Doctor of Science degree. In the spring of 1958 at the North American Wildlife and Natural Resources Conference in St. Louis, the Wildlife Society presented him the Aldo Leopold Medal, the highest honor this professional body can bestow. The same year, he was presented the Izaak Walton League's highest award of achievement, the Founders' Award, at the league's 36th Annual Convention in Colorado Springs. He is also included in "Leaders of American conservation" (Clep-per 1971, Nat. Res. Council of America, New York, The Ronald Press Co.).

His professional affiliations were many, and not until the past few years did he find it necessary to relinquish association with some national and local groups. He had been or was a member of the Wilson Ornithological Society, the Cooper Ornithological Society, the American Society of Mammalogists, the American Society of Range Management, and the American Association for the Advancement of Science. He associated himself with the A.O.U. in 1910 and was made a Fellow in 1927. He was a charter member of the Wildlife Society, became an honorary member in 1952 and served as Regional Representative of the society in 1944, 1945, 1947, and 1948. In 1962 in collaboration with W. L. McAtee and Tracy I. Storer, he prepared a history of this organization, "The Wildlife Society: The first quarter century" (1962, *J. Wildl. Mgmt.* 26: 291).

His joy in attending the annual meetings of the A.O.U. and the North American Wildlife Conference lasted until his death. This past year I had the pleasure of accompanying him to the North American Wildlife Conference held in Mexico City, to which he had looked forward for months. Our flight out of Denver left at 7 a.m. When I arrived at his daughter's house to pick him up about 6:15, he was waiting at the curb with his suitcase. He had been ready since 5:00.

The conference was particularly enjoyable for him, since illness had prevented his attending the previous two years. He was eager to renew friendships and to learn of new developments in the wildlife field. Although I had frequently seen him during his illness and recuperation, I was not fully prepared for his alertness and determination to be as "Young as you feel." During walks around the conference hotel and at a bullfight we attended, I found myself repeatedly trying to be helpful, taking his arm as he crossed streets or went up steps. Finally he remarked, "Jack, I don't need help. Let me help you." The gentle hint quickly put me in my place.

My last visit with him was in mid-July. We discussed wildlife matters and the world champion chess game that was underway in Iceland. An accomplished chess player himself, he was much interested in the progress of those games. At the time, he was playing a game by mail with the

husband of one of his granddaughters in Stockholm, Sweden. He was then 88.

As I was leaving he mentioned that he hoped to attend the Wildlife Conference to be held in Washington, D. C., the spring of 1973. Since I intended to go myself, I said I would like very much to go with him. His expression showed that this pleased him. It was not to be, however, for the great person that he was passed away alone, in his new-found apartment home, insisting to attendants who called to check on him that he was fine but just needed to rest.

To the end he "paddled his own canoe," much as he had done as a young man in Michigan, searching for specimens and studying the bird life in the valley of the Grand River.

Mrs. Kalmbach died in 1962. Survivors include a son, Olin, and two daughters, Mrs. Virginia Adams and Mrs. Mildred Cook, all of Denver; six grandchildren; and five great grandchildren.

2731 South Ogden, Englewood, Colorado 80110. Accepted 28 November 1972.