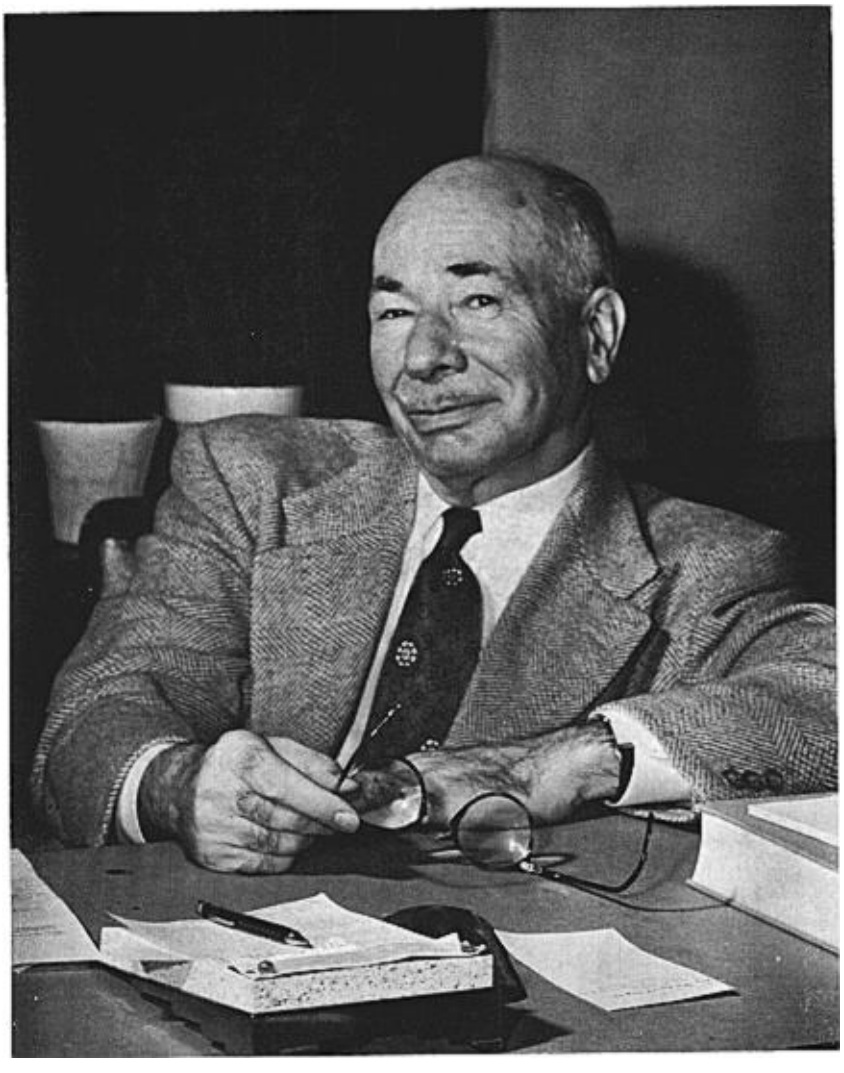

LEE S. CRANDALL, 1887–1969

(From a photograph taken in 1952)

IN MEMORIAM: LEE SAUNDERS CRANDALL

WILLIAM G. CONWAY

IN 1908 when Lee Crandall began work at the Bronx Zoo as a student keeper, his first job was to assist the bird keepers in the Ostrich House. When he died in his home in Bronxville, New York, on 25 June 1969 at the age of 82, he had become general curator emeritus of the New York Zoological Society and was beyond question the most highly respected zoo man in America. During his 61 years with the society, Mr. Crandall made several expeditions, wrote hundreds of articles and several books, and did much to win recognition for zoos as places of study as well as recreation.

Lee Crandall was born in Sherburne, New York, on 26 January 1887, the son of a doctor and a member of a very long-lived family. His father, Charles Spencer Crandall, died in 1944 at the age of 92, while his mother, Ada Harwood Crandall, survived until 1964 and died only twelve days short of her 100th birthday. When Lee was four his family moved to Utica and it was there that the first signs of his interest in wild animals became evident. Accompanying his father on his horse-and-buggy medical rounds of the countryside, he accumulated all the unwary owls, snakes, and turtles that he could catch, the basis of a home zoo. At the age of fifteen Lee was "in business" for himself, breeding and exhibiting Sebright and Cochin bantams, maintaining his solvency only because his father paid for the "Crandall and Company" letterheads he had ordered.

As the son and grandson of doctors, Lee was expected to follow the same career and was enrolled in Cornell Medical School in 1907 when his family moved to New York City from Utica. In his autobiographical "A zoo man's notebook," Crandall wrote of medical school:

"I stuck it out one whole year, but my heart was not in medical studies. What I really wanted was something to do with animals—wild animals. This feeling was very real and ever present, but I didn't know what I could do about it." Eventually, a casual conversation with a classmate, a nephew of the treasurer of the New York Zoological Society, led to an introductory note to the director of the New York Zoological Park, William T. Hornaday:

"Dr. Hornaday listened to my account of the wild and domestic pets I had kept at home in Utica, my disenchantment with medicine, and my desire to work with animals. He was a decisive man. After very few questions, he announced that as soon as medical school was out that spring, I could come to work in the zoological park as a student, rotating

duties in the mammal, reptile, and bird departments. He did not say anything about payment, and so I assumed that this glorious opportunity was free—I would not have to pay for the privilege he offered."

School closed in May and Crandall reported for work in June. Writing of his first day of work at the zoo, (Animal Kingdom, 71: 25, 1968) Lee referred to the opening page of his student notebook dated 21 June 1908. He had been assigned for training at the ostrich house and the pheasant aviary and at the end of the day, exhilarated with enthusiasm, he had reflected:

"I had learned one thing, if no more. This course must be 'learning by doing,' with no *Manual*, no *Gray's Anatomy*, to serve as guide."

As a student keeper, Crandall recalled in "A zoo man's notebook" that his duties were simple, "I was to do what I was told to do." Mostly, these duties were of a fetch and carry nature and included cleaning cages, windows, floors, and other such highly technical responsibilities as the keepers felt justified in entrusting to his inexperience. But they were not always without excitement.

"Among other things, I learned how to do an impossible thing—walking unharmed through a red deer paddock dominated by a huge rutting buck in full antler. I never did it alone, then or since, but I did it alongside Keeper John Quinn. 'Carry the bucket and stay close' was his only instruction, and then he seized a pickhandle and entered the paddock, banging on every rock he passed on the way to the feeding trough and back. Whether it was his boldness, or the banging, or the sheer unlikelihood of it all, so that even the savage buck could not believe his eyes, I do not know. At any rate John Quinn entered the paddock and emerged alive day after day, and I stored the experience in my memory as one thing *not* to do."

Crandall was influenced at least as much by Samuel Stacey, first of the Bronx Zoo's series of exceptional head bird keepers, as he was by any other member of the staff. The redoubtable Stacey, whose grandfather had been body sergeant to the Duke of Wellington during the Waterloo campaign, had grown up in the Duke's household where his father was water bailiff. The Duchess made Sam her bird boy and eventually found him a place in the London Zoo, whence he came to the New York Zoological Park to train a staff of bird keepers. From this taciturn and occasionally secretive man, Crandall extracted, bit by bit, a wealth of avicultural lore, for, as he noted (Ibid.), "In those days gamekeeping was an inbred profession, filled with 'secrets' that were—as we know today—hardly secrets at all."

Lee did not meet William Beebe until nearly the end of the summer of 1908 "when one day, as I was cleaning cages in the south end of the

zoo, the curator of birds stopped to speak to me. I had seen William Beebe at a distance, of course, but never to speak to; student keepers did not waste the time of curators." Samuel Stacey had recommended Crandall to Beebe and Will thereupon launched Lee truly upon his career. "Mr. Beebe explained that he expected to be away a good deal in the future and would need an assistant. I could have the job if I wanted it. The salary would be $30 a month." In complete sincerity Lee wrote, "Such happiness comes few times in a lifetime; the human system could not stand repeated shocks like that. In the fall of 1908 I became a *salaried* employee of the New York Zoological Park. I have never regretted it." Thus fortified financially, Lee enrolled in Columbia University, taking a variety of zoology courses during 1908–09. Among the lifelong friends he made during these school days was James Chapin, who later made such important contributions to ornithology.

In 1910 Lee married Celia Mary Dowd, who died one year after him, on 17 June 1970. The Crandalls are survived by one daughter, Mrs. Sylvia Dudley. Although Mr. and Mrs. Crandall were very close, Mrs. Crandall played little direct part in her husband's professional life. Lee was an inveterate bridge player and his other relaxations included stamp collecting, gardening, and golf.

The year after he became a keeper, in 1909, he became an associate member of the American Ornithologists' Union. He was elected to membership in 1930, was made a fellow in 1951, and his interests remained carefully channeled throughout his long life. At the time of his death he was secretary-treasurer of the American Committee for International Wildlife Protection, a fellow of the New York Zoological Society and of the New York Academy of Sciences. He was a corresponding member of the Zoological Society of London, an honorary member of the Zoological Society of San Diego, the American Institute of Park Executives, the International Union of Directors of Zoological Gardens, and the Avicultural Society. In 1965 he was awarded the Everly Gold Medal of the American Association of Zoological Parks and Aquariums.

When Lee returned to the zoo on a full-time basis in 1909, he found himself among a group of individualists notable even in an age of individualism. Besides director Hornaday and curator of birds Beebe, Henry Fairfield Osborn was then president of the society and Raymond L. Ditmars was curator of reptiles.

Hornaday seems to have made a strong impression upon Crandall. One staff member told me that Lee was "scared to death of him," a feeling understandable by those familiar with Hornaday's violent conservation prose. However, Lee's daughter says that her father adored Dr. Hornaday, according him always the highest respect and loyalty.

Crandall's relations with Ditmars were cordial, but their professional concerns led them in very different directions. Of particular interest to ornithologists is Lee's long association with William Beebe (See Auk, 81: 37–41, 1964).

Cautious and self-effacing, Lee could hardly have been less like the dynamic, wide-ranging Beebe. Certainly his competence in fulfilling the responsibility Will Beebe thrust upon him, at so callow an age, was important in providing Will with the freedom from zoo cares that enabled him to turn his whole attention to field studies. There seems to have been no desire on Lee's part to emulate Beebe's career in any way and he and Beebe seem never to have jointly authored a paper, although Lee did contribute various observations to some of Will's articles. Will's comments to me about Lee were always fond, but he considered him "a stay at home." Crandall admired Beebe enormously.

Despite the vigorous professional company in which Lee began his career and despite his retiring nature, he was appointed curator of birds in 1919, Beebe becoming honorary curator. Lee was taking an ever more important role within the zoo at the center of the zoological society's operations. Although Hornaday, Beebe, and Ditmars all began as zoo men, the first is best remembered as a conservationist, the second as a naturalist-explorer-popularizer, and the third as a natural history writer. Crandall became preeminent as *the* zoo man.

His very first publication, "Wild birds bred in captivity in the United States," (New York Zool. Soc. Bull. 2: 580–583, 1909) defined his interests and gave some indication of the contributions he would make to understanding the management of captive wild animals. All told he published nearly 250 articles and four books. Most of his writings were semipopular, many avicultural. The demands of his position precluded long-term problem-oriented research. His technical papers were largely observational, concerning displays and plumage changes. Original observations festoon his most important work on the captive management of wild mammals, and it is a great loss that he could not have undertaken a planned volume on birds with which his experience was incomparably greater.

Throughout his life Lee was primarily concerned with the *animal*: the individual and the species. He simply delighted in each zoo specimen, took immense pleasure in learning from it, and was almost incredibly knowledgeable about the habits and appearance of wild creatures. From morning until night his phone would ring with requests for animal information from all over the nation, and many of these calls would be from fellow biologists. He was much less interested in the techniques of zoo animal exhibition and education than he was in species biology.

Nor was he an innovator of zoo exhibits and techniques; rather he was a careful adherent of tried methods and modest extrapolations from them. Interestingly, he was much concerned with the introduction of small children to animals and took a personal interest, for example, in the management of the "contact" areas in the Bronx Zoo's Children's Zoo and Riding Track.

Will Beebe's characterization of Lee as "a stay at home" was accurate only by his own standards. Beebe took Crandall on a collecting trip to British Guiana in 1909, during Lee's first year at the zoo. Will later reported that his young assistant had gotten himself bitten by a perai, a savage fish, and had wrestled a large bushmaster for ten minutes until help came. One day he had come in from the field with a live bird in each hand and one in his mouth. In 1912 Crandall returned from a trip to various European zoos and animal dealers with a large collection of exhibition specimens, including probably the first white canary and the first blue budgerigar ever brought to the United States. In 1914 he made an expedition to Costa Rica, assisted by T. Donald Carter, then a student keeper at the zoo; who later became assistant curator of mammals at the American Museum of Natural History. Crandall and Carter returned, after six weeks in the field, with more than 300 living mammals, birds, reptiles, amphibians, fishes, and insects—an extraordinary feat, considering the problems of supply and transport at that time.

All of Crandall's earlier trips were eclipsed by his expedition into the interior of New Guinea in 1928 to collect birds of paradise for the zoo. He left New York on 9 August 1928 and returned 21 March 1929 with 40 birds of paradise, about 200 other birds, and several mammals. Afoot with J. E. Ward, an Australian field naturalist, as his companion and a train of native bearers for the collecting gear, he penetrated the Owen Stanley Mountain Range and eventually secured nine species of birds of paradise. On the way back, his ship was wrecked on a coral reef between Port Moresby and Sydney and, although the other passengers were soon taken off, Crandall and his charges rode out a storm for six days until they were rescued. He arrived in New York after the 44-day return trip without losing a single specimen.

The birds lived well in New York and the display forms of the birds of paradise became the subject of an important series of papers by Crandall, mostly published in Zoologica. In 1930 Scribners published his fascinating popular account of the expedition under the title "Paradise quest."

Almost everyone who knew Lee Crandall sooner or later mentions his remarkable memory, a faculty he retained to the last. His ability to

recall details about the appearance of an animal he had seen but once, perhaps fifty years earlier, was almost legendary in the zoo field. His recollections were often touched with humor. Referring to the Philadelphia Zoo's extraordinarily long-lived but badly-exhibited echidna, he wrote ("The management of wild mammals in captivity"):

"I saw this echidna first in 1909, a feat accomplished by inserting my index finger through the cage bars and gently lifting the lid of the sleeping box. I repeated the act for the last time on April 13, 1951, the only noticeable change during the 42-year interval being the slightly increased resistance of the rusting lid hinges. Few zoo animals can enjoy such prolonged seclusion."

I treasure his reply to a letter I wrote him in 1955 when I was curator of birds at the St. Louis Zoological Gardens. The St. Louis Zoo's director had halted my plan to band all of the birds in the collection for record and study purposes because the bands were "unsightly." Thinking to win support, I described my plight in a letter to Mr. Crandall, but he sided wtih my director, writing: "I don't like banding myself—it detracts from the appearance of the birds and makes them look domesticated. The only way to make certain, it seems, is to know the individuals and then try to live longer than they do." Lee was meticulous in maintaining Bronx Zoo records and precise in making clear what he did not know.

Despite his diffident nature, Crandall was the best impromptu speaker I have ever heard. In some strange fashion the warmth of the man reached out to his audience whenever he was called upon to rise and talk. His gentle, dry humor and sense of timing were so well-known that he could never expect to escape a call to comment, no matter how short the notice or unlikely the occasion. When, in 1957, a zoological society trustee-staff dinner had been arranged, society president Fairfield Osborn, son of Henry Fairfield Osborn, made the error of telephoning Crandall late in the afternoon to forewarn him that he would be called upon "to say something funny, because this dinner could be awfully dull." That night Lee responded by reporting Dr. Osborn's telephone call verbatim and demanding that Fair explain himself to the delighted gathering. Having thus assured the success of the evening, he rescued the sputtering president with his usual affectionate account of the recent doings of people and animals in the zoo. On his 75th birthday he noted that being 75 felt no different than any other age, "although it seems to me that it is harder to break in shoes than it used to be."

It was Fairfield Osborn whose foresight and forcefulness stimulated him to produce his most significant publication, the 300,000-word "The management of wild mammals in captivity." Immediately upon Lee's

retirement in 1952, plans were set in motion for the production of books on the captive history and care of mammals and birds; they were to be a distillation of his half-century of observation of the feeding, housing, reproduction, and longevity of animals in the Bronx Zoo, with copious references to the practices of zoos around the world. When the mammal book was published in 1964, it immediately became known in the zoo world as "the zoo man's bible."

During the long preparation of "The management of wild mammals in captivity" and until shortly before his final illness, Lee continued to work in the zoo's offices at least five days a week. As general curator emeritus and later as zoological park consultant, he provided an inexhaustible store of knowledge and sound judgment. Upon reflection, it seems to me a wonder that he was able to complete his great mammal book between the constant calls for counsel from society staff and colleagues throughout the zoo world. I have always thought it a tragedy that he was unable first to undertake the contemplated volume on the captive management of birds. Crandall was primarily an ornithologist, only becoming general curator in 1943, nine years before his retirement. His first love and greatest competence was in ornithology, and the necessity of assembling much additional mammal literature, particularly in the zoo field where so little has been published in commonly available journals, greatly slowed his project.

I did not get to know Lee well until 1956, when I joined the zoological society's staff. From that time onward, I enjoyed the warmth and daily privilege of his fellowship. His interest and humanity made him easily approachable and in our thirteen years of close association, I never saw him angry. For zoo men from elsewhere, visiting with Lee in his office or at the zoological society's staff lunch table, and soliciting his measured comments or delightful stories of zoo experiences was a memorable experience. Upon his retirement he was presented with an extraordinary "book of letters" from admiring colleagues all over the world. He was extremely moved by the tribute, but it was revealing of his modest nature that he never opened this book. "I couldn't bear to," he told me.

Crandall was a natural investigator—and teacher. He rarely contradicted a zoological statement with which he disagreed, but instead asked a series of questions designed to develop a reassessment of the events or problems under consideration. In my experience, he invariably accorded the same concern and respect to the problems of a small boy trying to raise homing pigeons as he would to those of a professional colleague. He never "talked down" to a person of lesser experience, and this characteristic resulted in the extraction of unusual amounts

of information about their animals from other zoo men and from Bronx Zoo keepers, information of which the informants were often unaware.

Almost every morning when Lee came to the zoo, he would have one or more questions to ask about the status of some specimen in the collection and would pose it as soon as he caught sight of me. It was a habit, he once explained, retained from his life-long practice as a curator. Each night, before going to sleep, he reviewed the condition of every animal he had looked at in the collection that day. He tried to remember if it had looked well; if it was getting along all right with its exhibit mates; if on the morrow there was something more he could or should do for one of the animals at the zoo.

For assistance in gathering these notes I thank Grace H. Davall and William Bridges, both of whom were long associated with Mr. Crandall.

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