

The North American Bird collection of the Chicago Academy of Sciences: views of the past, perspectives on the present

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THE ORNITHOLOGICAL COLLECTIONS at the Chicago Academy of Sciences (CAS) have recently been reinventoried, and the records entered into a computerized data base program for quick and easy access. In addition, the records for the more than 3600 specimens forming the Stephen S. Gregory, Jr., collection have been added to the data base. This valuable group of specimens was collected between the 1870s and 1950s; it was in private hands until 1970, and has been little noted in ornithological literature.

For some years the Academy's ornithological collections were often inaccessible to researchers, making critical study and examination difficult. The present paper provides information on hitherto unrecorded, unknown, or undocumented specimens, and discusses specific examples from the collection that illustrate how the status and distribution of certain North American species, especially those found in Illinois, have changed since the time the specimens were collected.

The collection consists of over 12,000 study skins and 1000 mounted birds, representing 63 families and 583 species (including two extinct species) of North American birds. Although the collection includes no skeletal specimens, it does contain a small

number of birds preserved in alcohol. A small collection of birds from other areas of the world, including over 100 specimens from Kenya, is also being inventoried; and work has begun on adding to the data base the Academy's extensive oological collection, which contains approximately 2500 sets of eggs representing about 440 species of North American birds.

A unique feature of the Academy's ornithological collection is that most of the specimens were collected during the second half of the nineteenth century and the first 30 years of the twentieth century. Over 30% of the specimens were collected before 1900. Therefore, the collection contains a wealth of information on the status and distribution of North American birds during that time.

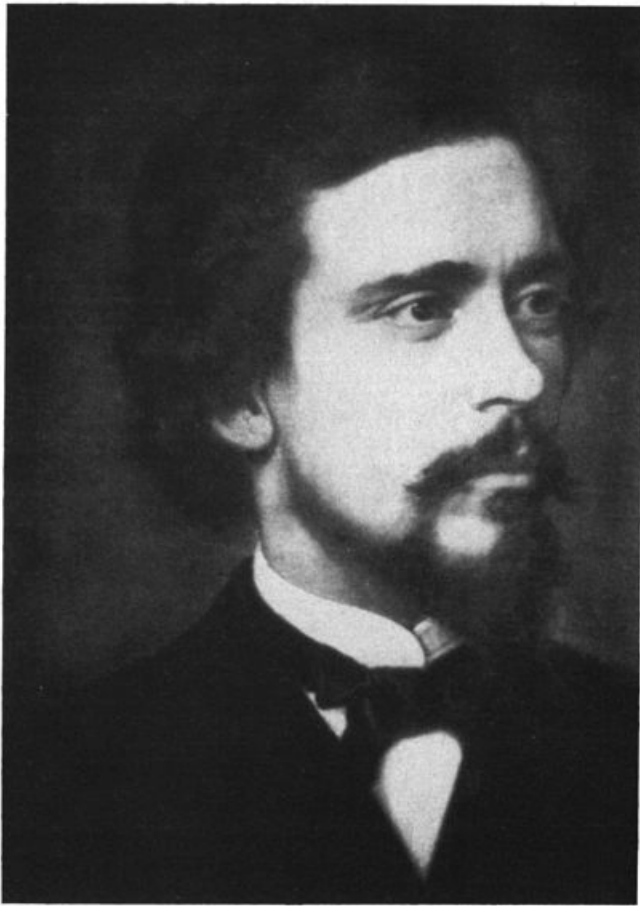
The Academy has long had a history of ornithological investigation. Its founder, Robert Kennicott, collected extensively throughout Illinois in the 1850s, and his specimens represent some of the earliest records in the collection. The 110 Kennicott birds were donated to the Academy by Northwestern University in 1930.

Historically minded ornithologists will find specimens—in some cases accompanied by the original field notes—collected by many of America's most distinguished ornithologists, including Charles E. Bendire, Arthur

Cleveland Bent, William Brewster, Elliott Coues, Ruthven Deane, and Robert Ridgway. The Academy's archives contains several hundred letters from these scientists, a collection that had previously been unknown. This correspondence sheds some light on the founding of the American Ornithologists' Union and provides insights into the way these men approached the science of ornithology.

Forty percent of the specimens in the collection were collected in the states of Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. The rest of the specimens were collected from many areas of North America, with large numbers from Alaska, Arizona, and Louisiana. Many of the species are represented by several subspecies or variant forms; they thus provide both a record of the former status and distribution of these forms and a resource for taxonomic study.

Since 1900, northeastern Illinois has experienced rapid urbanization and industrialization, along with continued population growth. This growth and expansion has resulted in large-scale destruction of natural habitats and radical changes in avian diversity and distribution. Changes in the bird populations around Chicago and in the Cook County area are well illustrated by the following examples



Robert Kennicott,
founder of the Chicago
Academy of Sciences.
From the Chicago
Academy of Sciences.

Ruffed Grouse (*Bonasa umbellus*) formerly bred throughout the Chicago area (Mlodinow 1984). Kennicott collected a specimen from Illinois (CAS 3766) around 1855. Specimens were secured from the Chicago suburb of Evanston, Illinois (CAS 3760), in 1872, and from Kane County, Illinois, to the west of Chicago, (CAS 4011) in 1886. Eggs were collected from a nest found in Lake County, Illinois, to the north of Chicago, (CAS 324) in 1893. By 1932, the species was considered very rare in the Chicago area (Ford 1956), and the original population is now extirpated from the state (Bohlen 1978). A "new population" has recently been reintroduced to areas of southern Illinois (Stroyls 1987).

The Sharp-tailed Grouse (*Tympanuchus phasianellus*), another species now extirpated from the state of Illinois (Bohlen 1978), was also known to nest in the Chicago area (Kennicott 1855). Nelson (1876) reported a covey of 14 birds near the Chicago suburb of Waukegan, Illinois, during 1863 (or 1864), but by 1876, he reported them

as "extremely rare in northeastern Illinois". The Academy's specimen (CAS 5704) was secured prior to 1894, in Geneva, Illinois, 40 miles to the west of Chicago.

The Common Raven (*Corvus corax*) "formerly a not uncommon resident" (Nelson 1876) but now extirpated from the state, has been recorded in the Chicago area only five times since 1900 (Mlodinow 1984). The Academy's Illinois specimen (CAS 15487) was collected just north of Chicago in 1875. Another bird once quite common (Kennicott 1855) but now extirpated in northern Illinois is the American Swallow-tailed Kite (*Elanoides forficatus*). The Academy has one (CAS 15124) of three specimens taken in Cook County in the spring of 1905 (Ford *et al.* 1934).

Greater Prairie-Chickens (*Tympanuchus cupido*) fed by the thousands in the fields surrounding Cook County in the 1850s (Ford 1956). By the 1930s they were considered uncommon local residents but were still found in small numbers near Chicago

(Ford *et al.* 1934) The last record of a Greater Prairie-Chicken around Chicago was of one seen near LaGrange, Illinois, Cook County, in 1948 (Ford 1956). This state endangered bird is now extirpated in northern Illinois (Mlodinow 1984). The Academy has a specimen collected in 1894 in Chicago (CAS 5706), and one collected in Woodstock, Illinois in 1932 (CAS 5340).

Upland Sandpipers (*Bartramia longicauda*), which are also Illinois state endangered birds, were once so common that 10 specimens were collected for the Academy in one year (1894), only a short distance from Chicago. Nesting pairs were found in Cook County very near Chicago as late as the 1930s (Ford *et al.* 1934). Now the species is not found in most places where "suitable" habitat exists (Mlodinow 1984).

The Academy's collection of Illinois birds contains many specimens which are now on the federal endangered species list. Piping Plovers (*Charadrius melodus*), of which the Academy has several specimens taken in the Chicago area, were once considered to be common summer residents in northeastern Illinois (Nelson 1876). By the early 1950s they were considered uncommon summer residents (Ford 1956). Single pairs are now only rarely found around the Chicago area, although a few birds are seen each year during migration (Mlodinow 1984).

The Peregrine Falcon (*Falco peregrinus*), another bird on the federal endangered species list, once nested locally throughout Illinois (National Land Institute 1981), and at one time was considered a rare summer resident in the Chicago area (Nelson 1876). Although the Academy has 14 specimens, at least four of which were collected in the Chicago area, they probably do not represent resident breeding birds because all but one are of the subspecies *tundrius* (McCoy and Spreyer 1987). The Academy has released 36 Peregrines in the last four years in an attempt to restore a viable population to the Chicago area.

Eskimo Curlews (*Numenius borealis*), on the federal endangered species list and considered to be almost extinct, also used to frequent the Chicago area (Ridgway 1895). The Academy has a specimen collected in 1880 in Cook County, Illinois, near the present-day suburb of Lemont (CAS

15324), as well as a specimen that was purchased in a Chicago market in 1896 (CAS 3101).

Federally endangered species from other areas of North America in the Academy's collection include a total of 15 specimens of the Red-cockaded Woodpecker (*Picoides borealis*) collected in Alabama, Arkansas, Florida, Mississippi, and South Carolina during the years 1878–1894, six specimens of the Ivory-billed Woodpecker (*Campephilus principalis*) collected in Florida between 1892 and 1894, and a California Condor (*Gymnogyps californianus*) (CAS 4478) collected in southern California on March 1, 1927.

Extinct species in the collection include 14 specimens of the Passenger Pigeon (*Ectopistes migratorius*) collected in Missouri and Illinois during 1870–1899, and 12 specimens of the Carolina Parakeet (*Conuropsis carolinensis*), 11 from Florida, and one collected by Robert Kennicott in Union County, Illinois; all were obtained between the years 1857 and 1893.

The Academy's ornithological holdings also contain several specimens which are considered to be very rare vagrants to northern Illinois. A Western Gull (*Larus occidentalis*) was collected in 1927 in Lincoln Park, Chicago (CAS 1663). This is the only specimen of this species recorded for the state (Mlodinow 1984) and "the only specimen to be taken at any distance from the [west] coast" (J. R. Jehl, in litt.). Another rare vagrant to the Chicago area is the Ferruginous Hawk (*Buteo regalis*). The Academy's specimen (CAS 15030) was collected in Northfield Township, Cook County, Illinois, on April 21, 1939; it represents one of only two specimens of this species collected in the state (Bohlen 1986).

Two northern species, a Boreal Owl (*Aegolius funereus*) collected in Chicago on March 15, 1914 (CAS 15083), and a Boreal Chickadee (*Parus hudsonicus*) collected in Waukegan, Illinois, on November 8, 1906 (CAS 1408), were both quite far south of their normal ranges. A Townsend's Solitaire (*Myadestes townsendi*), another very rare vagrant, was collected in Waukegan, Illinois, on December 16, 1875 (CAS 16235); and, a male Kirtland's Warbler (*Dendroica kirtlandii*), a very rare bird whose re-

stricted breeding range was unknown until 1903 (Woodruff 1907), was collected 15 miles west of Chicago on May 17, 1894 (CAS 17303).

Bachman's Sparrow (*Aimophila aestivalis*), also considered a very rare vagrant to the Chicago area, is represented by a specimen (CAS 18425) taken in the Chicago suburb of Highland Park on April 22, 1922; and the only Illinois specimen (Mlodinow 1984) of a Golden-crowned Sparrow (*Zonotrichia atricapilla*) was collected in Waukegan, Illinois, on November 28, 1935 (CAS 8175).

Several other regions of North America are represented by a significant number of specimens. Eight percent of the collection consists of birds collected in Alaska. Robert Kennicott was one of the first naturalists to collect extensively in that region. He died before he could publish his results, but his work was carried on by his co-workers William Healey Dall and Henry Bannister. A report of the Alaska work, listing 213 species of birds, was published in the Academy's *Transactions* in 1869 (Dall and Bannister 1869) along with a follow-up paper by Spencer Fullerton Baird of the Smithsonian Institution (Baird 1869). Unfortunately the great Chicago fire of 1871 destroyed most of these early collections.

The Academy's connection with arctic avifauna did not end with Kennicott. Some 40 years later Academy director Alfred M. Bailey recruited several workers in Alaska to collect for the museum. One of these men was Charles Brower, a whaler who lived at Point Barrow. The Academy

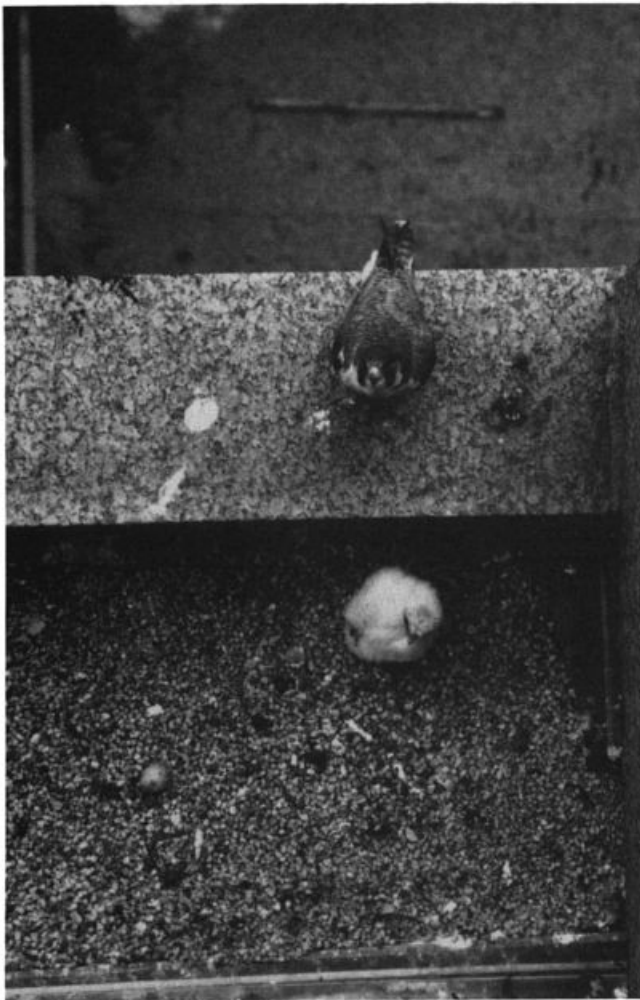
paid Brower anywhere from forty cents to three dollars a skin. The collection contains 930 Alaska birds, most taken in the early 1930s. The two main sites represented are among the most forbidding regions on the North American continent; Point Barrow, the northernmost point in Alaska, and Cape Prince of Wales, the westernmost, only 56 miles from Siberia.

The Alaska collection contains a fine series of gulls, eiders, and loons, with an especially fine collection of the rare Ross' Gull. Several Alaska specimens are noteworthy. A specimen (CAS 7128) representing the first U.S. breeding record of Kittlitz's Murrelet (*Brachyramphus brevirostris*) was noted by Ford (1936). The oological collection contains an egg of this species, collected in 1935 (CAS 1000). According to Kiff and Hough (1985) this is one of only seven sets of eggs of this species in U.S. institutions. The Alaska collection also includes a specimen, eggs, and nest (CAS 6363, CAS 837) of the Rufous-necked Stint (*Calidris ruficollis*). These constitute the first nesting record for this species in North America (Ford 1934).

Arizona and Louisiana are two other states represented in the collection by a significant number of specimens. Among the 492 specimens from Louisiana are two vagrants to the state, a Great Kiskadee (*Pitangus sulphuratus*) collected in 1930 (CAS 3863), and a Sage Thrasher (*Oreoscoptes montanus*) collected in 1926 (CAS 4006). Each is the earliest specimen of its kind collected in Louisiana (J. V. Remsen, in litt.). A Broad-



Researcher with immature Peregrine Falcon ready for release. Photograph/Chicago Academy of Sciences.



Peregrine Falcon chick with adult female. Note unhatched egg in lower left of photograph.

winged Hawk (*Buteo platypterus*) (CAS 6524) collected on January 5, 1934, represents one of the only verified winter records for Louisiana; and the three American Oystercatchers (*Haematopus palliatus*) collected in June, 1930, (CAS 4065, 4123, and 4390), are among the very few specimens of this species that have been collected in the state (J. V. Remsen, in litt.).

Many of the 532 specimens from Arizona were collected during a 1937 Chicago Academy of Sciences expedition to that state (Gloyd 1937). Among the specimens collected were one of four Elf Owls (*Micrathene whitneyi*) in the Academy's collection (CAS 8691) and a group of seven downy young Burrowing Owls (*Athene cucularia*), which are preserved in alcohol (CAS 18799).

The Chicago Academy of Sciences ornithological collection contains many rare, in some cases unique, specimens of North American birds, most of them collected in the decades

just before a critical period of environmental change in the United States. The specimens have historical and scientific significance and will be of special value to researchers studying avian systematics and distribution. The increased accessibility of the collection made possible by the reorganization and computerization of its records will definitely aid such research. A search of the records and printout are available on request.

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