Celebrating the Centennial of *The Birds of Wisconsin*: Remembering Ludwig Kumlien, with Selections from His “Lost” Ledgers

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A n important event for Wisconsin ornithology occurred in 1999, with the reappearance after nearly a century of the personal ledgers of ornithologist and Milton College professor Ludwig Kumlien. The six-volume set (Figure 1) details over 2,000 records of eggs, nests, and bird skins obtained from sites around Wisconsin—the majority from the southeastern counties—as well as additional specimens from collectors worldwide. These ledgers served as original source material in preparing Kumlien and Hollister’s *The Birds of Wisconsin*, which was originally published 100 years ago in the combined January, April, and July 1903 issue of the *Bulletin of the Wisconsin Natural History Society*. Unfortunately, Kumlien did not live to see the fruits of his labor; he passed away at his home in Milton on 4 December 1902, from throat cancer.

*The Birds of Wisconsin* was the first comprehensive, scientific treatment of Wisconsin’s avifauna, and was reissued by the Wisconsin Society for Ornithology (WSO) in 1951, with bracketed annotations and updates by A. W. Schorger. It stood as the primary ornithological reference for the state for nearly a century, superseded only by the 1991 publication of Sam Robbins’ *Wisconsin Birdlife*.

The exact history of Kumlien’s
Figure 1. Six original ledgers (three shown here) cataloging Ludwig Kumlien's extensive collection of Wisconsin birds, nests, and eggs were obtained by Sumner Matteson in 1999 from an Illinois antique dealer.
ledgers is still something of a mystery. Once in the possession of *The Birds of Wisconsin* coauthor and Delavan, WI, native Ned Hollister, who died in 1924 in Washington, DC, the ledgers eventually found their way to an estate auction in Delavan, where an enterprising Illinois antique dealer purchased them on 2 October 1999. As it turns out, a woman formerly married to a Hollister had bequeathed her daughter (from a second marriage) the Kumlien ledgers, and the daughter had put them up for auction not knowing anything about them. The antique dealer did not know anything about Ludwig Kumlien, but seeing that the ledgers contained Wisconsin bird information, he contacted Summer Matteson, then WSO President.

Delving into the ledgers has been fascinating from both a historical and ornithological perspective. The careful but sometimes undecipherable handwritten entries for each skin and nest suggested a personality both meticulous and earnest, and left us wanting to know more about Ludwig Kumlien and the life he lived. We present first a biographical sketch, including some previously unpublished material, of this man who was one of Wisconsin’s pioneering ornithologists, and then provide excerpts and information on particular species from the ledgers themselves.

**EARLY DAYS OF LUDWIG KUMLIEN**

Aaron Ludwig Kumlien (Figure 2) was born on 15 March 1853, to Swedish immigrants Thure (Figure 3) and Christina (Wallberg) Kumlien in their log cabin near Busseyville (formerly called Sumner) in southwestern Jefferson County, WI. Thure’s granddaughter, Angie Kumlien Main (1943a), (born Mary Angenia 20 February 1883) provides a glimpse inside the cabin. “[T]he roomy log house...had a large room 20 feet long and 16 feet wide, with a lean-to bedroom to the north and a chimney above the large room which was reached by real stairs. Under these stairs was a pantry with shelves. The floor was of smooth pine. When any of the old neighbors told me of this house and Christine, they always added, ‘She was a fine housekeeper and kept that floor white.’”

Ludwig was the oldest of four children (a fifth, first-born Christina Augusta Sophia, died as an infant in 1845 during a severe October cold spell), followed by Theodore on 7 January 1855, daughter Swea Maria on 8 August 1857, and youngest son Axel Frithiof on 19 December 1859 (Main 1944). While growing up, Ludwig joyfully romped through fields, marshes, and oak openings of the Lake Koshkonong area, and influenced by the collecting of his pioneering naturalist father, he took to raising wild birds as pets. Brother Theodore once remarked in a 1936 letter (paraphrased by Taylor 1937) that Ludwig was... “a naturalist from childhood. He was always making friends with birds and other animals. He raised a pair of Mourning Doves, feeding them as he had seen the parent birds feed them, and they became household pets. A pair of goldfinches were [sic] also tamed. By damming up a nearby spring he caught and tamed a blue heron. It followed at his heels ever eager for the frogs, minnows, and small fish he secured for its food. Ludwig’s collection of birds’ nests and
eggs was also begun in his childhood years."

Thure added a few more details about the Mourning Doves in a letter (31 March 1872) to his friend and colleague, Boston ornithologist T. M. Brewer: "Ludwig is a great one for pets. He has now a pair of mourning doves that he has had 2 years. The male is so tame that he will alight on my head, and allow me to stroke him any time. He will coo whenever I ask him to (unless he sees strangers). He will coo sometimes evenings, after dark, and is almost sure to coo even then if on the flute I play a melancholy tune."

By the time Ludwig was thirteen, he had already gained the confidence of his father, who recommended his services to other naturalists—especially eastern oologists and ornithologists—interested in obtaining bird eggs for their collections. Brewer was especially assertive in asking for bird skins and eggs, and he subsequently encouraged Ludwig in letters to Thure to find something rare in the Lake Koshkonong area (Schorger 1946).

Angie Main (1945) described the Lake Koshkonong scene at the time:
Lake Koshkonong is a widening of Rock River and is fed by numerous springs. In the territorial and early days of this state, the lake as a whole was not as deep as it is now. Wild rice and wild celery grew abundantly in the bays and shallow parts of the lake. This change in the depth of Lake Koshkonong was brought about by the construction of a dam at Indian Ford which is about four miles below the outlet of the lake. . . . When this dam was changed from a height of four feet to six or seven feet, the depth of the lake was greater. This killed the wild rice, except that which grew in the shallow bays.

When Dr. Increase Lapham visited Lake Koshkonong in 1850, he wrote: 'The water is from 4 to 12 feet deep. At the time of our visit in July, wild rice was growing abundantly over almost its entire surface, giving it more the appearance of a meadow than a lake.'

In a letter written August 15, 1886, by Frithiof Kumlien to his father, Thure Kumlien, he says, "Thursday I took the Slagg boys out sailing. You
Figure 4. Ludwig Kumljen sometimes sketched birds’ heads, eyes, or bills in his ledger entries in order to record specific colors likely to fade with time on his specimens. On this page (from Vol. 3, p. 92 of the bird skins ledgers) he describes the color of a Green Heron (Ardea virens) head.
would laugh to have seen the lake, grasshoppers and birds can walk clear across on the weeds."

Main (1943b) added a personal reminiscence. Her father and mother lived on an adjoining forty acres north of the log home where Ludwig was born.

The walk down through the woods to the house was an especially beautiful one to me. After we left our yard we followed a road which ran beside a long row of Indian mounds. Most of these were round mounds, but there was also a linear mound and a panther-type mound... Beautiful Lake Koshkonong was in plain sight all the way except where a small piece of woods, which we called ‘the breaking,’ hid our view. This piece of unpastured woodland, with a rail fence along the side of the road, was left in its natural state to save the beautiful ferns and flowers—maidenhair ferns and yellow lady-slippers grew there in greatest abundance... Many old settlers and their descendants have told me that before that region was pastured the grass [on the marshes] grew so high a horse could not be seen in it... When [Thure first reached Lake Koshkonong in late summer, 1843], it more than met his expectations. It must have seemed as though paradise was spread out before him. The primeval forests all about him were alive with songbirds; the mud flats on the lake shore were covered with sandpipers at this time of the year; rails worked their way through the reeds; blue herons fished on the shores as they do now; ducks of many kinds covered the lake; whistling [tundra] swans sailed majestically on the water; wild geese honked their way overhead; bitterns were almost invisible in their old-stump camouflage; red-winged and yellow-headed blackbirds teetered on the rushes... Thure Kumlien himself wrote of Lake Koshkonong (1877):

The land surrounding the lake consists to a great extent of low and very extensive marshes, on which thousands of tons of hay are annually cut, but limestone bluffs exist in many places all around the lake...

The lake with its, in many places, marshy shores and hundreds of acres of wild rice, and the grass-like plant, known to botanists as Vallisneria spiralis [wild celery, Vallisneria americana], growing in it in the greatest abundance, used to be a great favorite place for ducks, and especially the famed Canvasback (Aythya vallisneria [valisneria]), which, with the Redhead, is particularly fond of the Vallisneria spiralis. Geese, cormorants, and white pelicans were also very numerous, and fifty to one hundred of those latter birds could be seen at one time in the latter part of April or first of May.

In the marshes and on the shores were a great variety of waders... Of the snipe family, twenty species, besides curlews and godwits. Three species of rails, and gallinules and coots [coots], very plenty.

In 1869, at the age of 16, Ludwig Kumlien wrote a manuscript titled "Ornithological Observations" on spring bird migration during 9 March to 26 May at Busseville. Schorger (1944) obtained the paper from Angie Main and described it as "probably the earliest formal list of migrating birds prepared in Wisconsin... and it shows that he had thorough training under his father, Thure Kumlien."

Included in Ludwig's 1869 list were the following species (listed by their current official common names) that are now considered uncommon to rare or extinct in the state: Northern

Ludwig’s last entry (26 May) from his 1869 list suggests a substantial and diverse mixed flock of birds, presumably at Lake Koshkonong: “A great abundance of [shorebirds and larids], such as Godwits, willets, blackbellied . . . piping, and Wilson’s plover . . . Bonaparte’s, Least, Semipal, and pectoral sandpipers. Red, northern and Wilson’s phalaropes, Turnstones, Caspian, Arctic, Wilson’s [Common] and forster’s tern. A large flock of terns left for the north.”

Schorger (1944) erroneously stated that the inclusion of Arctic Tern on Kumlien’s list was an “obvious error,” and he made similar statements regarding this and some later records cited in *The Birds of Wisconsin* and in other publications (Schorger 1945, Schorger 1951). Robbins (1991), noting that the Smithsonian Institution had confirmed a 25 April 1965 record of two Arctic Terns in Green Bay (from photographs submitted by Tom Erdman), indirectly corrected Schorger’s pronouncement: “But it now appears that Kumlien and Hollister were correct.”

When Ludwig was a lad of twenty, he collected—to the absolute delight of Brewer—what turned out to be the first North American record of White-winged Tern (*Chlidonias leucophaeus*), which he shot amid a flock of Black Terns at Lake Koshkonong on 5 July 1873. Brewer (1874) duly noted the record: “On the 5th of July last Ludovic, a son of Thure Kumlien, the well known ornithologist of Wisconsin, shot . . . a bird which at once recognized as something entirely new to our fauna. It was a mature female and was found to contain well developed ova, though not fully grown. Mr. Kumlien, Sr., who is familiar with European forms, at once recognized it as *Hydrochelidon leucoptera* [former scientific name] and this determination has since been confirmed by Prof. Baird.”

Ludwig—the budding naturalist—pursued his natural history interests at Albion Academy (in Albion, southeastern Dane County), where Thure taught zoology and botany, then applied to the University of Wisconsin in Madison, where he was a special student from 1875 to 1877 (Schorger 1945). Angie Main (1944), based on her father Theodore’s diary, briefly described part of Ludwig’s 1875 spring and summer before he embarked for the big city. There was little time for romping about.

What time Ludwig could spare from school, he spent in hauling wood to Edgerton in the forenoon and to Al-
bion in the afternoon of the same day, taking a cord at each load. After the cordwood was hauled, the rest of the limbs were cut for stovewood. Next they mowed the brush, then grubbed the stumps out, and burned what couldn’t be used for firewood. . . . All through the summer Thure and . . . Ludwig mounted birds for the normal schools. When the boys had time from their crops [corn, tobacco, winter wheat], they dug limestone from their quarry and sold it.

On September 8 Theodore took Ludwig to the depot at Edgerton from where he left for Madison to enter the university.

Ludwig and Frithiof inherited their father’s brilliancy of mind, and were fine students; both were especially gifted in art. Frithiof was a good musician, and Ludwig was a natural history student from the time he was a very small boy.

According to Schorger (1945), Ludwig “during his student days” in 1876 briefly conducted field work for the U.S. Fish Commission in Texas, and on 12–13 December 1876 in Waller County, Texas, he collected a few bird specimens, which are housed at the Smithsonian Institution.

THE HOWGATE POLAR EXPEDITION

Soon after the completion of his studies in 1877, Ludwig was appointed naturalist to the Smithsonian’s Howgate Polar Expedition of 1877–1878 and sailed from New London, Connecticut, to the eastern Canadian Arctic, mainly Cumberland Sound and Greenland. Here he distinguished himself as an ornithologist (additionally documenting 21 different mammals) under quite harsh and dismal conditions, and what sounded like an almost lost cause due to the vagaries of weather.

“The schooner,” Ludwig wrote in the introduction to the expedition’s findings (1879a),

. . . sailed on the morning of August 3, 1877, [actually August 2, according to Schorger 1945] unfortunately two months later than desirable, had her object been purely scientific. The primary object of the expedition, by Captain Howgate’s order, was to collect material, skins, skin clothing, dogs, sledges, and Eskimo, for the use of a future colony on the shores of Lady Franklin Bay, [located on northeastern Ellesmere Island]. The secondary object of the expedition was scientific work; and, thirdly, whaling was to be one feature of the cruise. So far as the primary object of the expedition is concerned, the expedition was successful as could be expected: a large amount of skins was collected and made into clothing; the services of sixteen Eskimo were secured, who were willing to accompany the coming steamer northward; nearly thirty dogs were secured, and several good sledges . . . As far as the scientific work, some valuable work was done . . . under very discouraging conditions. The lack of any place to work save a snow-hut on shore, in which neither sufficient light nor heat was to be obtained, rendered it very difficult to prosecute certain investigations . . . . It was often difficult to get from the ship to the shore on account of the ice or unusually stormy weather. . . . From our peculiar surroundings [of snow and ice] and the isolation to which we were necessarily subjected, we lost much of our wonted enthusiasm during the long, dreary winter, and found rest only in continual work . . . . The spring of 1878 was stormy and backward, and the prevalence of southerly gales kept the
ice closely packed about us till the fore part of July. This treacherous condition of the ice, and early departure from the winter harbor, robbed us of any opportunity to prosecute extended researches, except in the immediate vicinity of the harbor; thus the most valuable season was completely lost to us.

In a later letter (8 March 1879) to ornithologist J. A. Allen of the American Museum of Natural History, Kumlien commented further on the conditions for writing notes and making drawings, in this case of an apparent harp seal: “Considering the conditions under which it was made and the materials at my disposal it is good; any ink would freeze [?] in my pen, my light was a tin box filled with seal oil, and my table pork barrel with an Agassiz alcohol tank for a seat.”

Despite the harsh working conditions, Kumlien managed to document 84 different kinds of birds (not all identifiable to species), many of which he secured on the rocky islands of Cumberland Sound and at Disko Island, Greenland. Even preparing the specimens posed grave dangers. In Kumlien’s (1879b) Report of Explorations in Greenland, which Taylor (1937) quotes, Ludwig states: “While dissecting one of the animals [an Eskimo dog] I had the misfortune to cut a finger slightly, and the virus (?) together with a frost-bite made me a cripple for two months, and came very near costing me the loss of my arm; this occurring in the busiest season, I lost many specimens. Eskimo women were instructed to skin and clean birds and mammals, which they soon learned to do very nicely, invariably removing the fat with their teeth.”

Taylor (1937) provides some interesting phenological details summarized by Kumlien in his Report:

No birds except Corvus corax [Common Raven], Falco candidus [now F. rusticolus, Gyrfalcon], and two species of Lagopus [palmigran] remain during the winter. The first birds to return are Larus glaucus [now L. hyperboreus, Glaucous Gull], often long before there is any open water; they cruise up the ice-covered fjords and feed on the young of Phoca forchata [now Phoca groenlandica, harp seal]. As soon as the snow begins to melt Plectrophanes nivalis [Plectrophanes nivalis, Snow Bunting] greets one with very pretty song. [Common] Eiders, Somateria mol[l]issima, nested by the thousands on the rocky islets around our winter harbor, and the eggs were a very welcome addition to our rations.

Kumlien (1879a) caught or observed several bird species while on board his ship, the schooner Florence: White-breasted Nuthatch—“Caught on shipboard off the coast of Newfoundland October 22.”; Tree Swallow—“A couple of these swallows followed the schooner for two days in succession off Belle Island, in August 1877. Where were they during the night?”; Purple Finch—“During a dense fog, September 1, 1877, off Resolution Island, north of Hudson’s Straits, one of these birds was caught . . .”; White-winged Crossbill—“Caught on board the schooner in a fog off Bonne Bay, Newfoundland, August 15, 1877.”; Dark-eyed Junco—“Once obtained on shipboard off Belle Island, October, 1878.”; Yellow-bellied Flycatcher—“Taken at sea off Cape Farewell, Greenland, September, 1878. This is, I think, the first recorded instance of its occurrence in
Greenland.”; Red Knot—“A small flock lit on the schooner’s deck in November after the harbor was frozen over.”

Perhaps the most remembered species from the expedition was the discovery by Ludwig of what is today known as a subspecies of the Iceland Gull—“Kumlien’s Gull” (Larus glaucoodes humlienii)—which he identified at the time as Larus glaucescens, today known as the Glaucous-winged Gull. According to Schorger (1945), Harvard University ornithologist William Brewster described the specimen brought back by Kumlien as a new species (Larus humlienii) after careful examination of the skin, but later taxonomists viewed it as a hybrid between Thayer’s Gull and Iceland Gull, thereby leading Schorger and others to dismiss it as a new species. Schorger (1946) later corrected himself by stating that “Kumlien’s gull has been reinstated in the A.O.U. Check-List as a subspecies of Larus leucopéterus” or Iceland Gull (note different species name).

Although known for his zoological contributions during the expedition, Kumlien also collected many plant species, mainly from Niantic Harbor, Annanactook, the Kikkerton Islands, and (mostly) Greenland’s Disko Island. These were later identified and catalogued by famed Harvard University botanist Asa Gray (Rydberg 1907).

The return voyage of the Florence almost ended in disaster (Kumlien 1879a).

On the 11th of October [1878], the Florence left St. John’s, Newfoundland, for the United States. The passage was one of unusually severe weather: one storm followed [another] before the sea could go down, and to add to our misery the schooner sprang a leak on the evening of the 19th, while carrying a good deal of canvas, with stiff free wind and heavy head sea. We were somewhat off Sable Island at the time, our exact bearings being unknown to us. The pumps were kept manned, and diligent search made for the leak, but without avail. Such a condition of affairs cast a shadow of gloom over the whole company; our provisions gone, ship leaking badly, and not knowing at what moment it might gain on us; the elements in all their fury let loose, so that we were entirely in their power, drifting helplessly at the mercy of the raging billows, without knowledge of our position within a hundred miles. On the evening of October 25, Thatcher’s Island lights were sighted, and the Florence seemed to have become animated, for with a fair NW. breeze she sped like a thing of life, and before midnight we saw the reflected lights of Boston on the clouds, and the next morning dropped anchor in Provincetown, Mass. Provisions were secured and some slight repairs made.

On the morning of October 30, the Florence lay alongside of the same dock she had left fifteen months before, every man brought back alive.

Kumlien left unsaid in his official report some major disappointments with the leadership of the expedition, but he shared them privately in a letter dated 11 November 1878 to Spencer Fullerton Baird. One is led to believe from Kumlien’s official report that weather and ice conditions prevented trips ashore. That may have been the case in several instances, but there was another factor—human conflicts—that affected his situation. On page 4 of a 5-page letter summarizing the disposition of materials collected, Ludwig wrote:
I am rather reluctant to find fault but I must tell you in order that you will understand some points more fully that Mr [?] Sherman and myself were obliged to 'put up' with a great deal—the [Captain?] was anything but a suitable person for his position. He on several occasions forbid me to do any trading whatsoever with the Eskimos. I was also informed that no valuable specimen of anything should be kept by me no matter how, or by whom procured. I was obliged to remain on ship board for days together for want of a boat when the ship had three (not in use) and the Eskimos four. This is but a sample and by no means the worst. . . . I would not have told you this if I had not thought it necessary. When the [?] was gone it was much better but then the most valuable times for collecting was [sic] over.

CHASING EMPLOYMENT AS A NATURALIST

Upon his return from the Arctic, the now 25-year-old Kumlien embarked on a journey of a different sort—a more than decade-long quest for a stable career in ornithology or as a naturalist, culminating with a professorship at Milton College. The search required him to promote vigorously both himself and his skills, and he made thorough use of his growing contacts among scientists and institutions. Excerpts from his extensive correspondence with J. A. Allen of the American Museum of Natural History in New York, published here for the first time, reveal Kumlien’s frequent exasperation but enduring tenacity during this difficult period of his life.

In 1879, Kumlien worked for the U.S. Fish Commission on Lake Michigan studying the fishing industry, which, according to Schorger (1945), afforded an opportunity for observations on the birds in the upper portion of the lake.” Baird encouraged (and supported?) this work, having been highly pleased by Kumlien’s report on the Howgate Polar Expedition.

Throughout this year, Ludwig was also pursuing possible employment at the American Museum of Natural History, and now began his earnest correspondence with J. A. Allen. In an 8 March 1879 letter to Allen, who had apparently offered to pay for Ludwig’s services as a natural history illustrator, Kumlien wrote:

I am very anxious that this may reach you in time, for nothing would give me greater pleasure than to be able to do the work you propose. It has always been my greatest delight to draw and paint birds and insects; I am vain enough to think I can suit you both as regards the drawing and coloring.

While in College I made a portfolio of drawings mostly birds that was exhibited at the Centennial and since at the Paris Art Exp. I received most flattering notices of this work from eminent men. . . . You will please excuse my self praise, but I almost feel it a duty to myself, for this kind of work has always been my greatest delight, and I feel sure of being able to make a success of it if the remuneration is sufficient to allow me to give the subject my whole time and attention.

Kumlien sent some drawings to Allen, who passed them on to a Boston business associate, L. Prang, of Art and Educational Publishers. (Two volumes of Ludwig’s drawings are archived at the Wisconsin State Historical Society in Madison. He also occasionally made rough sketches in the ledgers themselves—see Figures 4 (on p. 250) and 5. Ludwig received a
Figure 5. Amidst other bird records is a sketch made by Ludwig Kumlien showing the eye and ear placement on a frog (Rana sp.) (from Vol. 4, p. 45 of the bird skins ledgers).
rejection letter from Prang and immediately wrote to Allen on 31 March 1879, inquiring further about employment with the Museum:

I have received a letter from Mr. Prang in which he says my drawings are not pictures enough for his purpose. Of course no attempt was made with these drawings to represent anything but just the bare subject. . . . Do you think it probable that if I pay attention to the subject that I can get any work in natural history drawing[?] And lastly, is there, or will there be any opening for me at your museum not in drawing particularly but any kind of work for which a living salary could be paid?

You will think me very impertinent in bothering you with so many questions, [but] I must soon go to work on the U.S. Fish Commission if I am unable to procure work to my taste. The fish work is not permanent and is moreover very laborious and gives me no opportunity to study.

I can mount birds or mammals, prepare and mount skeletons etc. etc. Prof. Baird promises me a situation in the Smithsonian but as you know their means will depend upon the caprice of [?], and just now looks rather dubious.

As to my abilities or experience in the handling of nat. hist. specimens, I can refer you to the Leyden Museum, Royal Museum of Stockholm, Smithsonian, Pres. Paul Chadbourne of Williams Coll., Dr. Brewer of Boston, Prof Baird, [Robert] Ridgway[6] and Gill besides many others. . . . I am sorry I sent Mr. Prang such drawings as I did[;] if I had known what I now do of the style of work they contemplate publishing I would have made one of a different character.

Allen convinced Prang to take a second look at Ludwig's work. Kumlien, heartened at the news, went to work on a set of warbler sketches. On 17 April 1879, he wrote Allen: "I have nearly finished a picture of four warblers showing seasonal and sexual differences. I am in great hopes that it will suit Mr. Prang. Will send it to you in a few days." At the bottom of the page he added: "I hope Mr. Prang will not make any definite [sic] arrangements before he has seen the piece I am now working at. It is far superior to any of the others and is in a popular style." Prang (letter to Allen, 17 July 1879), meanwhile, wanted to talk with Baird before making a decision on paying Kumlien for his "scientific drawing." Ludwig informed Allen on 3 July that he was "about to leave for Lake Superior where I will spend the summer collecting and investigating the fisheries." He listed a new home address: 643 Franklin Street, Milwaukee. It is unknown if a business relationship followed between Prang and Kumlien because the correspondence on this matter does not continue, or at least we do not have copies of their correspondence.

It is unclear where Ludwig was employed during 1880, but presumably he remained with the U.S. Fish Commission since he was unable to secure work as a naturalist elsewhere. Beginning in 1881 (not 1883 as noted by Schorger 1945), he went into private business as a member of H. P. Leavens and Company in Milwaukee "manufacturing flour sacks and twines," but by 1886 (Schorger 1945) he had "gone out of business and my natural inclination is to devote my time to my favorite study,—if I can find a situation where I can get a salary" (letter to Allen, 11 June 1887).

In 1886, Kumlien joined the Milwaukee Public Museum staff as "De-
terminating Collector," a temporary position with an uncertain future. In his 11 June 1887 letter to Allen, Ludwig commented on his prospects, and then made one more pitch for employment in New York:

I am only temporarily in charge here and do not know if we will get funds sufficient so I will continue. We have a fair Museum here but our appropriation (annual) is only one tenth of one mill on the assessed valuation of city property—this gives us $8200.00 last year from which sum must be drawn the salary of five employees and expenses connected with the Museum.

You could not use me at Central Park? You must have a pretty good idea of what I can do. I am young and strong and have something of a reputation as a worker. I have a wife but no children and would be willing to accept a situation that would give us a comfortable living (we are not extravagant). I am about to take a business trip east soon and if you think there would be any show[?] for me at your Museum I will arrange to go to N.Y. before my return home.

Allen could not promise anything and dissuaded Ludwig from pursuing the matter. In a reply dated 16 June 1887, he wrote:

I note what you say in reference to your natural history work, and wish I could give you some encouragement respecting a position here. Additional assistance is much needed, especially in my department, but my applications thus far have not been successful. I should try again next winter[?], but to be frank, I must say that in case[?] I am successful the position is already promised. I have no doubt of your abilities and energy, and if any opportunity opens will do what I can for you.

Ludwig was no doubt very disappointed on hearing this news, but he continued to look elsewhere, first at the Smithsonian, where he did not fare any better, and then again in his own backyard at the Milwaukee Public Museum. He wrote to Allen on 24 August 1887 asking for a letter of recommendation:

Please excuse me for bothering you, but as you can do me a very great favor I take the liberty of asking you to consider the following. The position of custodian and secretary of our Museum will undoubtedly be vacant soon owing to the probable resignation of the present incumbent (owing to ill health). He was granted a vacation of six months from Jan 1/87 and since May I have been doing his work here. I do not anticipate any serious obstacles in being appointed but would like to be able to show letters of recommendation from prominent scientists as I thereby hope for at least a small increase in the salary. The trustees of the Museum who have the power to make the appointment know nothing of scientific matters themselves and would be largely influenced by letters from noted naturalists. Some of my friends as are acquainted here are doing good work for me, e.g., Col. N. S. Goss of Kas, Prof Peckham and many others, and all advise me to write to you and Ridgway, [George Brown] Goode [Assistant Director, then Assistant Secretary, of the Smithsonian], Bean, Gill, etc prominent people who knew me and my work while I was in Washington.

If you feel you could conscientiously give me a recommendation I would be very grateful. I think you know I am competent to fill the place and would take a just pride in building up a museum that would be an honor to our city and state. The present custodian is a crippled soldier who had hosts of influ-
ential friends—a good man, but he knows nothing of scientific matters and always worked to a great disadvantage. Hoping you will feel inclined to do the best you can for me.

Allen did indeed write a letter—a very strong letter—of recommendation, but in the end politics seemed to have ruled the day. On 20 September 1887, Kumlien wrote Allen:

Your kind and very flattering letter was duly received, please accept my most sincere thanks to your great kindness. I had similar letters from Baird, . . . Bean, Ridgway, Prof Green and many others, and yet a boy not yet 19 was elected to the position. He has no experience and no particular fitness for the place, but he had two uncles on the board of trustees which accounts for it. I feel the disappointment keenly, yet it is but a sample of how such things are done.

My time will soon expire and if you should be able to put me on the track of anything I would be very thankful. Goode is trying to make room for me in Washington, but it seems to me from what I have read lately that the American Mus. offers a better field to work in.

Ludwig also wrote to William Brewster at Harvard on the same day with the same news. Allen did not reply until December, due to poor health. Ludwig spent the fall of 1887 working on "lithographic plates for Peckham’s N. A. Attidae [jumping spiders]" and wrote Allen on 24 November that after that he had “nothing special” on the horizon. “I would be glad to hear if you should find anything for me,” he concluded.

Kumlien continued to work on the spider lithographs well into the summer of 1888, but he was also dealing with very poor health, possibly a recurrence of severe rheumatism he had probably first experienced during the fall of 1886, when he wrote Brewster (18 November 1886): “I have been confined at my house with Rheumatism for three weeks . . . I hope you may never have Rheumatism as I have it—it is simply horrible—I can scarcely hold a pen.”

Ludwig corresponded with both Allen (March? 1888) and Brewster (July 1888) trying one last time to secure natural history work in the East. He also sent Allen several bird observations and notes, including those from his youngest brother, Frithiof, who had passed away on 6 January 1888 in Milwaukee (Main 1944). The subject of membership in the recently formed (1883) American Ornithologists’ Union (AOU) also arose. Allen’s last correspondence of 17 March 1888 read in part:

You have my deep sympathy in your affliction, so sudden and painful. Your late brother’s observations are certainly interesting and I will try to make a place for these in the July issue of the Auk. I can also make use of your notes on bird migration, at least in abstract.

It is a great oversight that you have not been elected to the A.O.U. The first step will be your election to Associate membership . . . It will give me great pleasure to present your name at the next meeting, to be held November next. . . .

I am allowed only a pittance for work, and it is fortunate that I find volunteers ready to help for the instruction and experience they gain. I wish I could throw something your way, but am unable to do so at present.

On 5 August 1888, Thure Kumlien died from inhaling a preservative poison. The loss of his father and
youngest brother in the same year no doubt affected Ludwig deeply, and he changed course, halting his search for employment outside of Wisconsin. He applied for and accepted a teaching position in 1889 at Albion Academy, where his father had taught natural history from the mid-1860s to 1870. Located in the village of Albion, the Academy was only three to four miles from Ludwig’s birthplace. A more happy period followed in the early 1890s. First, in 1891, Ludwig became Professor of Physics, Natural History and Physiology at Milton College in Milton, Wisconsin, a position he held until his death. Then, on 21 December 1892, he married Annabelle Carr, and they had three children, Ludwig Baird Carr (1893), Lawrence Lorraine (1896), and Alice Lenore (1900) (Main 1944).

Kumlien was a feisty and passionate professor at Milton. Schorger (1945) quotes from a letter he received from the eminent mammalogist and Wisconsin naturalist H. H. T. Jackson, who was one of Ludwig’s students at Milton College:

I should say that Kumlien as a teacher was an excellent field naturalist. I don’t believe he really enjoyed teaching. He always when teaching seemed to me to be yearning for the woods and marshes. Possibly I got this impression because of my own urges, and I knew he was sympathetic. Yet he spent many indoor hours with his bird and egg collection, preparing specimens, and reading. Some of his students seemed to get little from his teaching efforts. Usually it was not long before he told them so. Other students were inspired and enthused. There seemed to be no halfway ground. Often he would wander widely from the study assignment for the class, and would talk for almost an entire class period on some inspiration of the moment. These talks were always instructive and suggestive. . . . I spent many days with him in the field around Milton and Lake Koshkonong. He was an exceptionally keen observer and exceedingly careful about identifications. . . . He questioned me in person on my record of the nesting of the barn owl in Green County because the nest was in a hollow in a bur oak tree, instead of in the customary building or cave.

THE PARTNERSHIP OF KUMLIEN AND HOLLISTER

The last decade of Ludwig’s life centered around his natural history pursuits, particularly his bird studies with naturalist Ned Hollister (Figure 6). Hollister, born on 26 November 1876, had grown up in the Delavan countryside and shown an early aptitude for natural history study, taking an interest first in turtles, then birds, and next mammals. At the age of eight he was apparently reading college-level books on ornithology, and at age ten he had earned a correspondence course degree in taxidermy (Eagan, n.d.). By age twelve he was corresponding with some of the top American zoologists. To the astonishment of his parents, according to Eagan (a cousin), instead of shirts and neckties in Ned’s dresser drawers he had bird nests and eggs, stuffed birds and other animals, and snake skins. “Good heavens!” declared his father, Kinner Hollister, a cavalry officer during the Civil War and owner of a general drug store, “It’s a mortuary! Tell the boy to get rid of this stuff; it’s liable to infect the whole house!” His mother, Fannie, however,
supported Ned’s natural history bent and allowed the items to remain.

Before he was a teen, Hollister had focused his exuberant energy on conservation. He wrote passionate letters to elected officials requesting federal action to save the Passenger Pigeon. He also recommended state and federal acquisition of wetlands as protected refuges for animals and plants (Yadon 1986).

By the time Ned entered Delavan High School, he had read every available science book he could get his hands on. The school’s superintendent, George Collie, a Harvard-trained geologist, obtained several books on ornithology from Beloit College and loaned them to Ned. Collie then introduced the 16-year-old to Professor Ludwig Kumljen, and Ludwig immediately recognized a kindred soul. He invited the young man to sit in on his lectures at Milton College and became Ned’s first mentor in natural history study, taking him to lectures in Madison and Milwaukee and opening his personal library to him.

Over the decade of their close friendship—cut short by Kumljen’s death in 1902—they often sojourned together to observe and investigate birds at favorite locales in Dane, Rock, Jefferson, and Walworth Counties (Figure 7): the “Jefferson Woods” tamarack swamp east of Fort Atkinson;
Figure 7. Favorite haunts in southeastern Wisconsin where Ludwig Kumlien, Thure Kumlien, and Ned Hollister collected birds and nests. Map prepared by Julie Bleser of the Wisconsin DNR.
the Lima tamarack swamp near Milton; the Lake Koshkonong marshes, fields, and woods; Lake Koshkonong’s Otter Creek and Black Hawk Island; the Sumner (Busseville) area fields, prairies, and woods, including oak openings, and a tamarack swamp about 1.5 miles north of the Kumlien home; the Bark River woods; Delavan Lake and marsh; the Milton and Milton Junction oak woods and fields; prairie areas east of Janesville; Lake Como marsh and bog; the marshes of Turtle, Rice, and Sweet lakes, a chain of lakes west of Sumner; and Turtle Lake Marsh near Delavan, among others. They also visited the Milwaukee, Racine, and Pewaukee areas, and no doubt others. They seldom visited other locales away from southeastern Wisconsin because of time and travel constraints. Travel was by horse and buggy or on foot, which made their bird observations even more remarkable given travel limitations and work and family obligations.

Ned apparently had little patience for the standard high school fare of the day and dropped out after his junior year. He went on, however, to become a distinguished scientist in the field of mammalogy, leading U.S. National Museum and U.S. Biological Survey mammal collecting expeditions to Siberia, the Yukon, the Canadian Rockies, and the Philippines, adding several new species to the museum’s collection. From 1910 to 1916 he served as Assistant Curator, and later as Curator, of Mammals at the U.S. National Museum, and from 1916 to 1924 he was the Superintendent of the Washington National Zoo. During his tenure at the Museum, he named 162 new mammals (Osgood 1925, Yadon 1986).

At the National Zoo, Hollister was much beloved as a leader and had excellent relationships with the staff, but he had no patience for visitors who tormented animals. He once said: “The more I see of people, the more I love animals” (Yadon 1986).

Hollister was a prolific writer (including several books on mammals) and editor, served as president of the National Biological Society, president of the International Society of Mammalogists, charter member of the American Society of Mammalogists and editor of its journal for five years. Ned died suddenly on 3 November 1924 at the age of 49 after a gall bladder attack and some time after emergency surgery (Yadon 1986). (Ironically, both Kumlien and Hollister died in their late forties.)

During his Wisconsin days, Hollister often assisted Kumlien with bird and egg collecting. Ludwig built up his collection of Wisconsin eggs and skins during the 1870s to about 1900 mostly through personal or family collecting, but also through a network of other Wisconsin contributors. When Thure Kumlien died in 1888, he inherited his father’s natural history collection, bird books, and bird notes of over 40 years.

Ludwig also obtained many specimens through donations or purchase and bartering with individuals contacted as a result of public solicitations. For example, Kumlien both advertised his collection and asked for specimens in at least three popular bird magazines—The Osprey, The Oologist, and The Nidiologist—that ran mainly in the 1890s. At one cent per word in The Nidiologist (Volume 3, 1896) he wrote: “TO EXCHANGE.—Proceedings of Boston Society of Nat-
ural History (unbound), for over 30 years; also Proceedings of Essex Institute, for birds’ eggs in sets, or skins.” Noted widely for his taxidermy skills, he attempted to secure additional dollars in the same Nidologist issue (above the ad just described) by offering his services: “Greasy, dirty, or badly made-up bird skins cleaned and made over. Correspondence solicited from museums and those having large collections. Any reference desired. Charges reasonable.” Also in the same issue: “FOR SALE—Choice bird skins, full data. Also a few extra fine mammal skins. Write for list and prices. Ludwig Kumlien, Milton, Wis.”

Kumlien displayed some of his collection at Milton College (Taylor 1937, Schorger 1945). And just how large was the collection? From the Janesville Gazette, October 21, 1899, came this description:

His collection of natural history specimens is very large, embracing between 5,000 and 6,000 bird and mammal skins, all North American, and an egg collection of over 500 species of North American birds, and what is most notable, there is not a doubtful egg in the entire collection. The skin collection comprises sixty-six species of the warblers of the United States, nearly all the hawks, owls, ducks, geese, woodpeckers, waders and finches, most every species of Wisconsin birds, embracing 365 species, of which the professor has added more than thirty to the list himself.

**COMPILING THE BIRDS OF WISCONSIN**

Kumlien’s vast collection provided him and Hollister with much of the direct material they used in compiling *The Birds of Wisconsin*, the first comprehensive treatise on bird distribution and breeding in the state. As noted in the book’s introductory pages, however, they were by no means the only source:

The records, notes, and observations herein given are based principally upon our own collections and personal work in the field, covering a large part of the time for periods of thirty-five [LK] and fifteen [NH] years, respectively. In this time work has been done, more or less thorough, over a large portion of the State. While the greater part by far of the time has been spent in the southeastern counties of Jefferson, Rock, Dane, Milwaukee, Waukesha, and Walworth, trips have been made, allowing of extended observations and collections, along the entire length of the shores of Lake Michigan and Lake Superior, the Michigan border, and to different points along the Mississippi River, as well as in a goodly number of the central counties. Added to this, and perhaps of even greater value, has been the use of the extended, accurate, and perfectly authentic notes of the late Thure Kumlien, covering a period of constant residence in the state of nearly forty-five years, from 1844 to 1888, making, with the time spent by us in similar work, a total period of sixty years of constant observation, embracing nearly all parts of the state and especially complete for the southeastern portion. Besides the personal acquaintance of the late Dr. P. R. Hoy and Capt. B. F. Goss, we have had the benefit of many letters from these gentlemen to Thure and L. Kumlien for many years. These letters, in many cases, have been of great value in verifying records, and have furnished valuable notes. Mr. J. N. Clark, of Meridian, Dunn County, has contributed a list of the birds noted in that section of the state during over sixteen years of active and careful work, with copious notes on
such species as we have especially inquired about. The collections of the Milwaukee Public Museum and of a number of private ornithologists have been carefully gone over.

Kumlien and Hollister also used the published lists and notes on Wisconsin birds found in regional and national publications and “in the files of the Auk, Nidiologist, Osprey, Wisconsin Naturalist, Bulletin of the Wisconsin Natural History Society, etc., etc.” They also acknowledged the assistance of “many Wisconsin ornithologists for valuable help in the preparation of the list. To Messrs. J. N. Clark, H. Russell, H. L. Skavlem, Wm. J. Bennetts, S. R. Hartwell, H. H. T. Jackson, H. A. Winkenwerder, and Drs. H. V. Ogden and E. Copeland, who have furnished notes and suggestions, or allowed us to examine their collections . . . and especially Mr. William Brewster, who has examined and determined many specimens for us; we wish to express our sincere thanks.” Curiously, there is no mention of T. M. Brewer, who corresponded with both Ludwig and Thure for over three decades, and helped to identify several specimens.

The authors included in The Birds of Wisconsin only species “which we ourselves are thoroughly satisfied have, at some time, occurred in the state, and which have records entirely satisfactory to us. Our determinations are founded either upon specimens which we have ourselves taken in the field, or have ourselves examined in collections of others, public or private, or upon records made by others whom we have been able to accept as strictly reliable and competent ornithologists. Doubtful species have, following the usual custom, been relegated to a ‘Hypothetical List,’ at the end of this paper.”

Schorger (1945) noted that Kumlien had begun work on what was to become The Birds of Wisconsin as early as 1878, with the manuscript “apparently nearly completed” by 1880. It is unknown what delayed its publication, but neither Kumlien nor Hollister saw the final proofs; Kumlien because he died in 1902 after a horrific bout with cancer of the throat, and Hollister because he had been conducting field work in Alaska for several months for the U.S. Biological Survey. After Kumlien died, Hollister spent the rest of the winter of 1902–03 finishing the manuscript. (Hollister also purchased Kumlien’s collection of 1,500 mounted birds and mammals.)

The original 1903 publisher’s note (omitted in WSO’s 1951 reissue) stated in part:

In putting the following paper through the press the [Wisconsin Natural History] Society has been left without the assistance from the authors in the correction of proof and preparation of index. Prof. Kumlien’s lamented death last winter is a source of sorrow to his many friends. . . . The manuscript received the last touches from [Hollister’s] hands early in March [1903]. The delay in publication has been due to many causes, not the least among which has been the lack of time on the part of those upon whom the duty of supervising the work of publication has fallen.

**SCHORGER AND ROBBINS ON THE BIRDS OF WISCONSIN**

Any bird checklist, once published, is immediately out of date and necessarily becomes subject to updates, revisions, and second guessing by others
in the field. A. W. Schorger and Sam Robbins, in particular, were thorough and critical students of Kumlien and Hollister’s work and commented on it extensively. Schorger (1945) lauded the significance of *The Birds of Wisconsin*, while at the same time beginning a decades-long discussion on the current and historical status of many species and subspecies listed in the book.

The number of species and subspecies described is 357. In the light of present knowledge, it is necessary to eliminate certain species and subspecies, such as the black-throated loon, arctic tern, greater snow goose, Cory’s least bittern, belted piping plover, willow ptarmigan, Richardson’s merlin, long-tailed chickadee, western wood pewee, Traill’s flycatcher, Alma’s Thrush, etc. Cory’s least bittern is now considered to be a color phase, while the belted piping plover is only a variant of the piping plover. The western wood pewee was included on the authority of Coues. Several western forms identified by Brewster are very questionable, e.g. Traill’s flycatcher . . .

Robbins, in his *Wisconsin Birdlife* (1991), directly or indirectly addressed Schorger’s dismissal of most of the species above. Regarding the Black-throated Loon (also called Arctic Loon and today known as Pacific Loon [*Gavia pacifica*]), Robbins cited both historical specimens and a number of observations to justify including the species on Wisconsin’s list as a “casual migrant.” And while acknowledging that Snow Goose and Blue Goose have been recognized as one species—Snow Goose (*Chen caerulescens*)—since 1972, Robbins leaves the question open as to Kumlien and Hollister’s distinction between “Lesser” and “Greater” Snow Goose, commenting: “If Kumlien and Hollister were correct, there has been a drastic change, for the Greater is now restricted to Atlantic coastal areas.” Robbins makes no comment on “Cory’s least bittern,” but Schorger was correct for his time, and today it is simply considered a former name for Least Bittern. Nor did Robbins comment on “belted piping plover,” but Schorger (1951) corrects himself: “Now considered a valid subspecies.”

On Willow Ptarmigan (*Lagopus lagopus*), Schorger (1951) apparently changed his mind and accepted Kumlien and Hollister’s account, if the lack of any bracketed commentary can be construed as such. And Robbins agreed with an 1846 record mentioned in *The Birds of Wisconsin* as justifying the bird’s status as “Accidental.”

The case of “Richardson’s merlin” is an interesting one. Robbins makes no mention of it, and Schorger (1951) says only that no Wisconsin specimen “has been located.” Thure Kumlien did not consider Richardson’s “distinct” from what was known then as the Pigeon Hawk (and today as Merlin, *Falco columbarius*), but Kumlien and Hollister were convinced and mentioned “a fine specimen in Mr. Skavlem’s collection . . . shot near Janesville in the late fall of 1886.”

Kumlien and Hollister considered the Long-tailed Chickadee to be a subspecies of the Chickadee (now Black-capped Chickadee). It is unclear whether Kumlien was referring to a Pacific or Rocky Mountain form of this species, but as noted by Schorger (1951), Hollister (1912) withdrew the subspecies based on a lack of any Wisconsin specimen. The Western Wood-Pewee is listed by Robbins
(1991) as "hypothetical," based on the confirmation of a song heard by birder Laura Erickson in 1981. The location of a nest and eggs sent by Kumlien to noted ornithologist Elliott Coues—and "unquestionably" confirmed by him (Kumlien and Hollister 1903)—as well as a specimen apparently collected on 31 July 1890, are unknown today. Still, says Robbins, "The possibility that Western Wood-Pewees might wander to Wisconsin is real." (See additional comments on Western Wood-Pewee in next section.)

In Kumlien's day, the Alder Flycatcher was considered to be a subspecies of Traill's Flycatcher, which Kumlien and Hollister viewed as "uncommon or accidental" in Wisconsin (Alder Flycatcher [Empidonax alnorum] and Willow Flycatcher [Empidonax traillii] were lumped together as Traill's Flycatcher between 1957 and 1973). The Alder Flycatcher, however, they described as a "tolerably common summer resident" and Brewster confirmed the Alder as "no doubt the breeding form" in Wisconsin. Apparently Schorger's objection was to the occurrence in The Birds of Wisconsin of what today is regarded as the western race of the Willow Flycatcher, but this is only speculation on our part.

Alma's Thrush is today known as Swainson's Thrush (Catharus ustulatus). Here again, it appears that Schorger's objection may have been to the inclusion on the checklist of what is now considered the Swainson's western race, known as Hylocichla fuscescens salicicola in Kumlien's time. Taxonomic classifications of birds at the subspecies level have long been a source of tension and controversy in the scientific community.

To be fair to Schorger, he did not know what we know today about the occurrences of several species and subspecies that he thought erroneously reported in The Birds of Wisconsin. He was indeed correct when he pointed out some earlier errant Kumlien observations, although he failed to note that Kumlien later (in The Birds of Wisconsin) corrected himself on Red-throated Loon and both phalarope species. At issue was Kumlien's 1891 series of articles on Wisconsin breeding birds in the Wisconsin Naturalist, in which he suggested that Red-throated Loon, Red Phalarope, Red-necked Phalarope (known as Northern Phalarope at the time), Long-billed Dowitcher, and Stilt Sandpiper bred in the state. Kumlien corrected his 1891 views on Red-throated Loon by stating in The Birds of Wisconsin: "[In] June (1881) I saw a dozen or more on the rocks at the 'Door' (the extreme northern end of Door County, between Lake Michigan and Green Bay), and . . . made a record to the effect that they were breeding. Possibly they were, but with the mature judgment of later years I should have been much slower in considering the evidence conclusive." Kumlien and Hollister (1903) were very clear about the nonbreeding status of both phalarope species.

The cases of Stilt Sandpiper and Long-billed Dowitcher are more intriguing. Regarding the Stilt Sandpiper, Kumlien and Hollister (1903) state: "We have taken young barely able to fly, readily running them down. These had the head and upper neck still in the natal down." Robbins agrees with Schorger in this instance, saying that Kumlien and Hollister's account "cannot be accepted as bona
fide nesting evidence, and would have been exceptional for a species that normally nests in the Arctic.” Exceptional, but still possible?

As for the dowitcher, the picture is anything but clear. Robbins (1991) believes that Kumlien and Hollister were referring to Short-billed Dowitcher (known simply as “Dowitcher” in Kumlien’s time) and not Long-billed when they stated that “There is positively no question that considerable numbers bred in Wisconsin from 1865 to 1875 and in 1872 and 1873.” Robbins points to the Short-billed’s closer breeding range and suggests that this “increases the likelihood that it was primarily the Short-billed Dowitcher that formerly bred in the state.” Schorger (1951), on the other hand, only comments that the status of both species is “uncertain” in the state, and adds that Long-billed Dowitcher “nests in the Arctic.” It seems evident that Schorger was unwilling to accept any suggestion of a dowitcher breeding in the state.

All of this raises the question of how many Canadian- or Arctic-nesting shorebird species may have nested in the state prior to the twentieth century. Neither Robbins (1991) nor Schorger (1951) challenge Kumlien and Hollister’s Marbled Godwit breeding records near Stoughton and at Lake Koshkonong in the mid-1850s. The probable nesting of the Solitary Sandpiper is another interesting example. In an 18 November 1886 letter to William Brewster, Ludwig stated that the “Solitary Tattler” nested nearby: “This coming May I intend to procure the eggs of the Solitary Tattler if it takes a week. I was a little late this year but I have found the nest I am positive—in some scrubby willows about 4 feet up in a very miry springy place—I shall get them this year. My father found the European [form] nesting similarly . . . in the Baltic and this led me to look for ours in such places. It is a spot of about an acre and not a bunch of grass or tussock or dry land that could contain a nest. I could almost catch the parents while near the nest but the surroundings were such that the young escaped my notice.” Robbins (1991) seemed to lean toward validating Kumlien’s find when he stated: “In the nineteenth century nesting may have been a distinct possibility.” Schorger (1946) dismissed the possibility, called it a “will-o’-the-wisp of the Kumlien family,” but curiously added the following: “The fact that this shorebird lays its eggs in old nests in trees was not published until 1904. In view of this custom, it is desirable to [revisit] Ludwig’s letter of November 18, 1886 . . .”

The Semipalmated Plover is another species that Kumlien and Hollister (1903) found nesting at Lake Koshkonong (“We procured the young still unable to fly . . .”). Schorger’s (1951) comment: “Not known to breed south of Canada.” Robbins (1991) did not discount and even seemed to validate Kumlien and Hollister’s observation: “It is highly unlikely that breeding will occur in Wisconsin again, because the nesting range is now restricted to northern Canada.” Both Schorger and Robbins accept the observations of Kumlien and Hollister (and others) of breeding Lesser Yellowlegs, but Schorger indirectly disputes Ludwig’s claim in The Birds of Wisconsin that he procured pre-fledged downy young of Greater Yellowlegs near Minnesota Junction (Dodge County) in 1882. Schorger’s
(1951) comment: “Breeding records very doubtful.” Robbins (1991) offers only the cryptic statement, “The likelihood that this species will ever again nest in Wisconsin is remote.”

THE VALUE OF THE KUMLIEN LEDGERS

Kumlien and Hollister’s observations of breeding birds, and their and Thure Kumlien’s documentation of hundreds of Wisconsin bird records, stand as remarkable accomplishments for any time. Our appreciation for their efforts only increases when we consider that they worked without the benefits of modern optics, field guides, and reliable transportation and highway systems. Now, with Kumlien’s original ledgers in hand, we have the opportunity to increase our understanding of their legacy.

It is instructive, for example, to examine records from the ledgers that were either overlooked, omitted, or summarized in some of The Birds of Wisconsin species accounts. For example, the second Wisconsin entry in the first ledger volume on eggs is for Herring Gull. In The Birds of Wisconsin account for this species, there is no mention of any dates for nesting or any locational breeding data other than “different islands of Green Bay.” But the ledger entry, though short and succinct, has both and more. For the date 27 May 1886: “American Herring Gull. Green Bay Wis Nest (eggs) on bare sand. Rowleys Bay Door Co Wis. C. M. [refers to collector Charles Mann].” A trove of information from the ledgers is thus revealed in the form of dates and location data that may (and sometimes do) provide the earliest known nesting records for particular species, right down to the day and month of a specific year (Figure 8).

Occasionally, as in the case of the Nashville Warbler, not only is a significant date revealed, but additional and previously unknown breeding details are provided. The Nashville account in The Birds of Wisconsin again provides no dates or specific breeding locale other than “Walworth County, at Lake Koshkonong, Dunn County, and northward,” although they do mention that tamarack swamps are “a favorite nesting site . . . the nest being placed on sphagnum, or reindeer moss.” The ledger entry is again brief but highly informative. We learn that on 4 June 1895, a pair of Nashville nests in the “Lima tamarack swamp [near Milton, Rock County]. Nest on ground among the thickest tamaracks; placed among sphagnum + reindeer moss + cranberry vines. Birds shot. Iden[tification] per[fect]. L. K. collr. [collector] Bird was out of one egg and the rest had their bills through shell. Eggs could not be handled. Suitable for identification only. First instance to my knowledge in Wis. Perfect nest.”

The ledgers may also shed some light on the Western Wood-Pewee question, discussed above. In the first volume on eggs there is a 1 June 1894 entry for this species from Lake Koshkonong. It reads: “Nest?? Bur oak 3 ft from ground. Bird shot and carefully examined; first time I ever found this bird in Wis. L. Kumlien.” The nest and eggs from this site were the ones sent to Elliott Coues, who verified their identity “unquestionably.” Unless one doubts Coues’ veracity and ability, this ledger record corroborates Kumlien and Hollister’s 1903 published account and should be accepted as the
Figure 8. A page from one of the ledgers documenting Ludwig Kumlens’s nest and egg collection (Vol. 2, p. 31) on which he lists a Loggerhead Shrike specimen from Milton, Rock County, and a Henslow’s Sparrow specimen taken from Turtle Lake Marsh, Walworth County, in 1898.
only nesting record for the species in the state. Robbins' (1991) main concern with the account in *The Birds of Wisconsin* was that Kumlien and Hollister "provided no dates." The ledger entry, at the very least, does just that.

**READING THE KUMLIEN LEDGERS**

The physical appearance of the ledgers themselves offers little to suggest the wealth of information on Wisconsin ornithology that they contain. Except for the moderately ornate embossed covers, they appear to be standard record-keeping notebooks—with pages lined and numbered—of a kind still available in stationery stores today (Figure 1). Each of the six volumes has 100 completely filled pages (except for Vol. 2 of the eggs, which has only 38 pages filled) and measures either 10 by 7¾ inches or 12¾ by 8 inches. There are four volumes recording skins and taxidermic mounts and two volumes of nests and eggs, the first page of each bearing the handwritten legend "Record of Ornithological [or Oological] Collection of Ludwig Kumlien, Milton College, Milton, Wis." The earliest volumes are dated 1895, the latest 1897.

Actually reading the ledgers can be challenging; while Kumlien's script is carefully inked and easily legible in places, it is undecipherable in others. Many entries contain descriptions and measurements in a shorthand familiar only to museum workers and taxidermists. For example,

\[\text{♂ juv., L. } 6 \frac{3}{4}, \text{ Ex. } 9, \text{ T. } 2 \frac{3}{4}, \text{ T&T. dk. br., I. reddish}\]

translates as a male juvenile, length 6 \(\frac{3}{4}\) inches, wingspread 9 inches, tail 2 \(\frac{3}{4}\) inches, tarsi and toes dark brown, irides (eye color) reddish. In addition, many of the scientific names under which Kumlien catalogues his specimens have changed—sometimes more than once—in the intervening century. The Northern Goshawk (now *Accipiter gentilis*), for example, appears in the ledgers as both *Astrur atricapillus* and *Accipiter atricapillus*.

Not all of the information in the ledgers is technical. Kumlien frequently commented on the condition of the specimens he received, noting in one instance that a Passenger Pigeon skin was "one of the finest I ever saw" and in another that a Great Horned Owl was "so rotten & full of maggots that one wing fell off." He also frequently expressed a craftsman's delight when he did a particularly good job on a study skin or taxidermic mount, noting "fine job" or "extra well made up."

There is also a good deal of bookkeeping, both scientific and financial, in the ledgers. Kumlien frequently exchanged specimens with other ornithologists in the United States and abroad, and appended a note when a particular skin had been "traded to [William] Brewster" or sent off to Robert Ridgway. As discussed earlier, collecting birds was also a business for Kumlien, and his widely recognized skill at taxidermy likely provided an important source of income. He not only sold to other collectors and natural history dealers—such as John and Joseph Mailliard of California and Charles K. Worthen of Warsaw, Illinois—but he also supplied large numbers of bird skins and mounts to schools and colleges around Wisconsin. Some ledger pages are all but covered with red-inked annotations re-
porting, for example, that a group of Snow Buntings was sold to “Stevens Point Normal for $1.50” or that a Bald Eagle mount was sent to “Oshkosh Normal for $10.” Multiple entries from the autumns of 1900 and 1901 suggest he did a booming business mounting trophies for local hunters, with deer heads going for $5 to $8.

Kumlien acquired a very substantial amount of his collection through his own field work, but he also regularly received Wisconsin specimens from numerous other collectors. In the Milton and Lake Koshkonong area, these included Ned Hollister, H. H. T. Jackson, and Thure Kumlien. He often received specimens of northern and winter irruptive species from Meridian in Dunn County (possibly from J. N. Clark).

Despite their being labelled an “ornithological collection,” Kumlien’s ledgers also included many entries for mammal skins, as well as a few fish and amphibians. And though our focus in this article is on the birds of Wisconsin, entries for birds from other states and around the world swell the pages of the ledgers and make for interesting browsing. Some of the tantalizing entries for non-Wisconsin birds include a single Bachman’s Warbler (27 February 1891, St. Tammany Parish, Louisiana) and an 1894 pair of Ivory-billed Woodpeckers from Florida (“Magnificent! Not to be sold!”).

The individual species accounts that follow are necessarily but a small selection from the more than 2,000 entries for Wisconsin birds found in the ledgers. There is not sufficient room here to provide all the entries verbatim, nor would the vast majority of these be of interest to the general reader. Instead, we have selected entries that we feel provide interesting details, dates, and locations not mentioned in the original 1903 publication of The Birds of Wisconsin, and that may also shed light on Ludwig Kumlien’s propensities as a collector and bird lover.

Readers are cautioned that there is some ambiguity regarding certain of the collecting localities mentioned below. It is not clear, for example, whether records from “Sumner” refer to the Jefferson County township of that name, or possibly to the village of Sumner (now Busseyville) within that township where Thure Kumlien homesteaded and Ludwig grew up. Similarly, specimens from “Milton” may be from either the town or surrounding township. Finally, “Bradford” apparently refers to the Rock County township between Janesville and Delavan, there being no record at the Wisconsin State Historical Society that any town or village of that name ever existed in the Lake Koshkonong region.

**Selections from the Ornithological Ledgers of Ludwig Kumlien**

**Surf Scoter (Melanitta perspicillata)**

Whereas Robbins (1991) calls the Surf Scoter an “uncommon fall migrant” in eastern Wisconsin and a “rare spring and fall migrant elsewhere,” Kumlien and Hollister found it “not rare on Lake Michigan in winter, and usually found on all the larger inland lakes in late fall.” They cite no specific records in The Birds of Wisconsin, although Hollister (1920) mentions three birds shot at Lake Delavan.
between 1892 and 1899. Several additional pre-1900 records are noted in Robbins (1991).

Three Surf Scoter specimens are listed in the ledgers under the now defunct scientific name *Oidemia perspicillata*.


24 October 1896 Lake Koshkonong, WI, a juvenile female, “L. 16½, Ex. 30, Bill olivaceous pale black, I. ochre yellow, T.+T. ochre yellow, webs dusky black. Very small.”

24 October 1896 Lake Koshkonong, WI, another female (adult?), “L. 18, Ex. 31½,” otherwise same as the other 24 Oct. specimen.

**White-winged Scoter (Melanitta fusca)**

“At times exceedingly abundant on Lake Michigan,” Kumlien and Hollister (1903) report, adding that it is “found on all the larger inland waters from October until the ice makes.” “How times have changed,” notes Robbins (1991). While he agrees that the species is “a fairly common migrant east,” it is now a rare spring and fall migrant “away from the eastern shore.”

Kumlien and Hollister cite no specific records in *The Birds of Wisconsin*, but the ledgers list three specimens under the old name *Oidemia deglandi*:

28 October 1898 Lake Koshkonong, WI, a juvenile male.

November 1899 Storrs Lake, WI, a juvenile female.

28 October 1901 Lake Koshkonong, WI, an adult male, “a dandy.”

**Black Scoter (Melanitta nigra)**

Like the Surf Scoter, the Black Scoter is today an “uncommon fall migrant” in eastern Wisconsin and a “rare fall and spring migrant elsewhere” in the state (Robbins 1991). For Kumlien and Hollister, the bird (called by them American Scoter) was a “rather common winter resident on Lake Michigan” but “less common in the interior, occurring principally as a migrant in late fall.” No specific records are cited in *The Birds of Wisconsin*, although Hollister (1920) mentions six birds shot at Lake Delavan between 1892 and 1899.

The ledgers list five inland Black Scoter specimens under the name Velvert Scoter *Oidemia americana*.

Oct. 1860 Lake Koshkonong, WI, an adult male. Collected by Thure Kumlien.

26 October 1893 Lake Koshkonong, WI, a male, “bill greenish black. T.+T. reddish maroon, webs black.”

26 October 1893 Lake Koshkonong, WI, a female, “same as above.”

15 October 1896 Lake Koshkonong, WI, a juvenile female, “L. 20 Ex. 36, bill black Iris dk br., T.&T. dark yellow flesh. Webs dusky.”

24 October 1896 Lake Koshkonong, WI, a juvenile male, “L. 21. Ex. 37, otherwise same as [15 October specimen].”

**Red-tailed Hawk (Buteo jamaicensis)**

There are more than ten entries for Red-tailed Hawk in the ledgers (under the scientific name *Buteo borealis*), but the following stands out. Albino and partial albino Red-tails are still sighted and are of interest to birders in the state today.

Kumlien wrote a short note on this specimen for the April 1895 issue (Vol. 2, No. 8) of the popular ornithological journal The Nidiologist, titled “An Albino Buteo Borealis.” A sketch he made of the mounted bird also appeared on that issue’s frontispiece (Figure 9).

The subject of sketch . . . was procured in Bark River Woods, Jefferson County, Wis., in the winter of 1844. The sketch shows him as he looks to-day, after being mounted for half a century. It is a male, but as large as an average female. The feathers are unusually long and thick, and his whole appearance is robust in a marked degree.

As the sketch shows, he is pure white except sides of head and back of neck and part of tail. The tail is about half white, the rufous being very light and bright.

The irides, bill, cere, tarsi, toes, and nails were pale-straw color. The nails are blunt and worn and show age. This Hawk, according to the Indians then living in Bark Woods, had been resident in the same locality for more than twenty-five years when my father procured it in 1844. The Indians seemed to have some superstition regarding it and would not kill it, even when a fair reward was offered. I have often heard my father speak of a very intelligent Indian chief who had known the famous “White Hawk” for more than twenty-five years. He claimed the Hawk had a favorite tree, where he sat for hours at a time. He also said he was alone and allowed no intruders in his territory; hunted in the open in fine weather, but retreated to the deep woods in severe winter weather.

Ferruginous Hawk (Buteo regalis)

Two entries for this rare visitor to Wisconsin appear in the ledgers under the old scientific name Archibu-teo ferrugineus:

17 October 1891 Lake Koshkonong, WI, an adult male.
26 October 1893 Lake Koshkonong, WI, a juvenile female, “First specimen for Wis. L. Kumlien. Very large and white.”

Unfortunately, there is a distinct lack of conformity regarding the information for this species in The Birds of Wisconsin and the ledgers (and even within the ledgers themselves). In The Birds of Wisconsin, Kumlien and Hollister state that the 1893 Lake Koshkonong specimen above and an October 1894 bird “that was taken at the same locality and came into our possession,” are “the only records of capture obtainable for Wisconsin.”

Two points of confusion are evident. First, if the 1894 bird mentioned in The Birds of Wisconsin came into Kumlien’s possession, why is there no record of it in the ledgers? Second, why is there an inconsistency within the ledgers for the two entries, such that the 1893 specimen (recorded in Vol. 1 of the ledgers) is described as the “first specimen for Wis.” instead of the 1891 specimen (recorded in Vol. 3)? No annotations appear next to the latter entry to suggest that the identification or origin of this bird were ever in doubt. Perhaps the specimen did not make its way into Kumlien’s hands for several years after its actual collection (no collector’s name is cited),
Figure 9. Sketch of a mounted albino Red-tailed Hawk made by Ludwig Kumljen that appeared in *Nidiologist*, April 1895. The bird was collected by Ludwig's father, Thure Kumljen, in Bark River woods, Jefferson County, in 1844.
and after Kumlien had already made his own 1893 entry? We shall likely never know the answer.

**Sharp-tailed Grouse (Tympanuchus phasianellus)**

As late as the 1840s, “this species was the common prairie grouse of southern Wisconsin, and was at that time extremely abundant,” say Kumlien and Hollister (1903). But by the end of the nineteenth century, Sharp-tails were “rapidly giving way to the prairie hen [Greater Prairie-Chicken], a species better adapted for life in a settled country.” The decline was such that Kumlien and Hollister predicted the bird was “probably doomed to speedy extinction in the state.” They were overly pessimistic, but Sharp-tails are today limited to a small number of locations in northern and central Wisconsin.

Two entries appear in the ledgers under the name Prairie Sharp-tailed Grouse and the old scientific name *Pediocetes phasianellus*. Although Kumlien and Hollister note that “the last record we have for southern Wisconsin is near Janesville, October, 1869,” the first specimen below was collected five years later.

19 October 1874 Sumner, WI, an adult male, “Shot by L[udwig] K[umlien]. Keep this specimen as is probably the last of the race in Wis.,” *Pediocetes p. phasianellus campestris.*

8 April 1897 Stevens Point, WI, an adult female, “first record for Wis for years? Very white under & small, L. 426 mm,” *Pediocetes p. columbianus.*

**Greater Prairie-Chicken (Tympanuchus cupido)**

In Kumlien and Hollister’s day, the future looked rosy for the Greater Prairie-Chicken, or “Prairie Hen” as they called it. It was a “common resident in many parts of the state,” and a beneficiary of “sensible legislation” that resulted in “a marked increase in its numbers during the past ten to fifteen years.” Today, it is restricted to a small number of locations in central and northern Wisconsin.

Two nests were catalogued in the Milton College collection, both from Albion in southwestern Dane County and dated 15 May 1866, and both with the notation “Nest on ground in marsh. R. C. Green.”

The ledgers also contain entries for 24 skins collected in the area around Milton between July and January, 1870 to 1901 (with an additional skin each from Cartwright (?) in 1896 and Oshkosh in 1897). The specific localities are Milton (1 skin), Tiffany (1 skin), Sumner (2 skins), Darien (2 skins), Lake Koshkonong (3 skins), Bradford (4 skins), Delavan Marsh (5 skins), and Emerald Grove (6 skins).

**King Rail (Rallus elegans)**

“A regular breeder in suitable localities throughout the state,” according to Kumlien and Hollister (1903), who also noted that the King Rail was “much commoner than twenty-five years ago” (a favorable response to agricultural development, suggests Robbins 1991). Their comment that “the value of this bird for table purposes has come to be recognized in many sections” perhaps explains the curious annotation in the 1894 record below.
10 May 1894  Lake Koshkonong, WI, an adult male, “L. 16. Irid. dark br. Bill dk. br. all but light part which is orange red. T.+T. pale gray brown. Kept alive for 3 weeks fed on fine chopped asparagus & soaked wheat.”


The ledgers record the collection of but a single nest:

24 May 1894  Lake Koshkonong, WI, “Nest among rushes.” Collected by G. M. Burdick.

**American Coot (Fulica americana)**

A common nesting species in Kumlien and Hollister’s time as well as today, the following entry from the ledgers is interesting for its description of behavior by a captive bird.

12 June 1895  Lake Koshkonong, WI, a hatchling, “Magnificent! Keep this one. Kept [for] days after hatching. Became very tame, fed from my fingers & followed me about on the floor. Strikingly ventriloquistic.”

**Sandhill Crane (Grus canadensis)**

“In an early day a very abundant migrant and common summer resident,” Sandhill Cranes were already in serious decline by the time Kumlien and Hollister compiled *The Birds of Wisconsin*. “Although at the present time entirely absent from most thickly settled portions of the state,” they still found 100 to 150 migrants on the “Big Marsh” near Delavan every spring and fall.

Despite this species’ apparent availability for collecting, the ledgers contain only a single entry for it. Kumlien’s comments about the Sandhill’s palatability are interesting in light of the current controversy over a proposed hunting season.

4 April 1894  Emerald Grove, WI, an adult male, “Irides red! Naked skin on head light maroon red. Bill & feet black. Found to be excellent eating. Oesophagus full of corn. L. Kumlien.”

**Upland Sandpiper (Bartramia longicauda)**

The ledgers contain only two separate entries for Upland Sandpiper skins—a bird from Lima in May 1892, and four birds from Emerald Grove in August 1894. The latter entry is notable for the following comments, which provide insight both into the condition of these fall migrants and their wariness towards hunters: “These are the fattest birds I ever saw. So fat as to break open when they struck the ground. Very shy except with a horse.”

Two nest records are found in the ledgers:

April 1870  Sumner, WI, “Nest on ground in tuft of grass. L. Kumlien.”

25 May 1899  Lake Koshkonong, WI, “Nest a slight depression in the ground, lined with a few grass leaves. Bird flushed from under the horses. Very nearly hatched. Dark set.”
Stilt Sandpiper (Calidris himantopus)

Statements made by Kumljen and Hollister about various shorebird species breeding in Wisconsin have been highly controversial. Both Robbins (1991) and Schorger (in his annotations in The Birds of Wisconsin) reject outright the possibility for Stilt Sandpiper, but Kumljen and Hollister were suspicious.

Although allowing in The Birds of Wisconsin that “few are taken in full breeding plumage, and at the present day they are decidedly rare in spring,” they go on to say that “we have taken young barely able to fly, readily running them down; these had the head and upper neck still in the natal down, and if they were not hatched at Lake Koshkonong, certainly they could have come but a short distance.”

The only Wisconsin entry for Stilt Sandpiper (listed as Micropalama himantopus) in the ledgers appears to relate to this incident.

20 July 1882 Lake Koshkonong, WI, a juvenile male, “just feathered, 2 others procured at same date just able to fly.” Collected by Thure Kumljen.

Western Sandpiper (Calidris mauri)

An uncommon migrant today (Robbins 1991), Kumljen and Hollister (1903) described the Western Sandpiper as a regular migrant “in May and often up to the middle of June.”

Two entries for this species appear in the ledgers under the old name Ereunetes occidentalis. Robbins (1991) mentions the 1896 pair as residing in the Milwaukee Public Museum, but does not cite the 1897 record. Curiously, Kumljen put a question mark behind the scientific name in each entry, even though he states “an undoubted occidentalis” in the 1896 records.


29 May 1896 Lake Koshkonong, WI, a female, “L. 6 ½, otherwise ditto.”

12 May 1897 Lake Koshkonong, WI, a male, “Ereunetes occidentalis? L. 6 ⅛, Ex. 12 ⅛, Bill & feet dark greenish ash, especially feet.”

Least Sandpiper (Calidris minutilla)

The Least Sandpiper is another species for which Kumljen and Hollister believed they had evidence for nesting in Wisconsin. Robbins (1991) opined that breeding “seems highly unlikely for this tundra-nesting species,” and Schorger’s annotation in The Birds of Wisconsin declares simply “does not nest in the United States.”

Nevertheless, Kumljen and Hollister state that “we have known of at least two instances of this bird’s nesting within the state, and from specimens seen in various parts of the north and central portions of the state, suspect that, at least twenty years ago, it bred in some numbers.”

One of the two records they cite is the following: “A breeding female, shot June 10, 1876, on Lake Koshkonong, and now the Kumljen collection, has the entire back black, with merely a slight edging of rusty color on the tips of the inner tertaries.” Although whatever was considered the conclusive evidence for nesting is not specifically reported,
the ledger entry for this specimen does communicate Kumlien’s excitement.

10 June 1876  Lake Koshkonong, WI, a female, “Breeding! Back black! Keep.” Collected by Thure Kumlien.

White-rumped Sandpiper (Calidris fusicollis)

Although they make no claims for nesting in Wisconsin, Kumlien and Hollister (1903) also wondered about the White-rumped Sandpiper: “Small flocks of a dozen or less are sometimes found about Lake Koshkonong until the middle of June, and they are back again with barely full fledged young by August 1. It stands to reason that some of them, at least, can not go far north to nest. We have no evidence, however, that they ever breed in Wisconsin.”

Considering those remarks, the following entry from the ledgers is intriguing, if not conclusive.


Wilson’s Phalarope (Phalaropus tricolor)

Now an uncommon summer resident (Robbins 1991), Kumlien and Hollister (1903) described this species as “a common summer resident in Wisconsin, breeding in larger or smaller colonies in many different parts of the state.” They also refer to “one colony at Lake Koshkonong...known to have more than two hundred pairs on the marsh at one time.”

The following selected entries from the ledgers give an idea of the dates and condition of the birds Kumlien collected in his area.

June/July 1894  Lake Koshkonong, WI, five males, “belly bare & wrinkled.”

16 June 1895  Lake Koshkonong, WI, a male, “Very remarkable plumage, more like a [female] than a [male]. Bare belly and no doubt incubating. Shot at mouth of Otter Creek in Bingham’s marsh.”

8 June 1897  Lake Koshkonong, WI, two males (“breeding, bare belly, eggs”) and one female.

Only one nest record appears in the ledgers, from Dane County:

10 June 1875  Albion, WI, “Nest by prairie slough 5 mi. from lake. 2 young and 2 eggs hatching in nest. L. Kumlien.”

Red Phalarope (Phalaropus fulicarius)

Kumlien and Hollister (1903) cite June 1877 and September 1891 records of this now rare migrant from Lake Koshkonong, but make no reference to two entries from the ledgers. Both entries record adult females (Crymophilus fulicarius) in winter plumage taken at Lake Koshkonong, both on 31 October, one in 1889 and the other in 1894.

Caspian Tern (Sterna caspia)

Noting that this species is “not common, except, perhaps, on northern Lake Michigan and Green Bay,” Kumlien and Hollister (1903) do mention that Caspian Terns nested at times between 1879 and 1893 “on different islands in Green Bay and on the north
shore,” but provide no more specific information.

The following data from the ledgers provide two intriguing early nest records from Lake Michigan. Kumlien places “Gull Island” and “Gravely Gull Ids.” in Green Bay, Wisconsin. It is unclear which Island he is referring to, but Michigan’s Gravely Island, known formerly as Gravelly Gull Island, is located north of Door County in the entrance to Green Bay (Wood 1951), 12 miles south of Fairport in Delta County, Michigan (Brewer et al. 1991). There is also a Gull Island south of Gravely Island, which Brewer et al. (1991) state has “appeared in low water levels” and which has had nesting Caspian Terns. So it appears that Kumlien unknowingly referred to both sites as occurring in Wisconsin waters.

These entries from the ledgers (under the old name Sterna tscheegrava) appear to represent the earliest nest records for what is now a state endangered species:

27 May 1896 Lake Koshkonong, WI, a female, “Adt full breeding plumage. Large flocks at Bingham’s. L. 20 ½. Wings 3 in. beyond tail. Ex. 52 in. I. dark umber br. T.T. black. Bill deep dark vermilion fading to yellowish at extreme tip. Never before have I seen such numbers of these birds. I think I saw a hundred all told flying against the heavy gale.”

**Forster’s Tern (Sterna forsteri)**

The now state endangered Forster’s Tern as a nesting bird was already “not nearly as numerous as formerly” by 1903, according to The Birds of Wisconsin. The authors describe in some detail “a large number, not less than two hundred pairs, nesting at Lake Koshkonong” in June 1872. Despite this profusion, collecting within the colony was not without problems: “Plenty as were the nests and eggs, still we had the greatest difficulty in getting even two or three positively identified sets, as the discovery was soon made that all were not forsteri, but many hirundo [Common Tern], and a few parasidae [Arctic Tern].”

No skins or nests of Wisconsin Arctic Terns appear in the ledgers, so the following entry for Forster’s Tern provides the only mention of that species in these documents:

6 July 1872 Lake Koshkonong, WI, “Bulky nest of broken reeds. Eggs generally 3. Large colony of this species and parasidae together.”

**Black Tern (Chlidonias niger)**

Although today it is a state species of special concern, the Black Tern was “a very common summer resident in all the inland ponds, sloughs, wet
marshes and lakes” when *The Birds of Wisconsin* was published. With records for more than 25 individuals collected over 16 dates, it is one of the more common entries to appear in the ledgers.

Perhaps because it was so common in their day, Kumlien and Hollister cite no specific nesting dates or locations. The following records (under the old name *Hydrochelidon nigra surinamensis*) are thus likely the earliest detailed reports we have for the state.

6 June 1876  Lake Koshkonong, WI, "Nest on broken floating reeds. Thure Kumlien."
8 June 1895  Lake Koshkonong, WI, "Nest on floating drift stuff in water in marsh. L. K. collr. Perfect. Seven additional records are given for this same date and location, indicating a nesting colony; "Perfect. All more or less incubated."
16 June 1895  Lake Koshkonong, WI, "John MacArthur Coll[ector]. Nest as usual."
29 May 1896  Lake Koshkonong, WI, "L. K. coll[ector]. Eggs placed in floating drift stuff in water in marsh."

**Passenger Pigeon (*Ectopistes migratorius*)**

The last accepted record for the Passenger Pigeon in Wisconsin is a bird shot at Babcock in September 1899. Kumlien and Hollister were optimistic when writing about this species in *The Birds of Wisconsin* in 1903, saying that “small flocks, pairs and solitary individuals have been reported from various parts of the state nearly every year since [1883],” and that “it is highly probable that a very few still nest in isolated pairs” within the state.

Only a few skins appear in the ledgers, and the entries do not contain much information, although Kumlien does note that a male he collected in Milton in September 1891 was apparently the last one he ever saw. That same skin was traded to the prominent Massachusetts ornithologist William Brewster, but the disposition of the other specimens is unknown.

10 May 1870  Sumner, WI, an adult male, “tailless.” Collected by Thure Kumlien.
10 May 1870  Sumner, WI, an adult female. Collected by Thure Kumlien.
Spring 1870?  Baraboo?, WI, an adult male, “one of the finest I ever saw.”
Sept 1891  Milton (Carr’s Woods), WI, an adult male, “last one seen. Traded to Brewster.” Collected by Ludwig Kumlien.

Only two nests, both collected by Ludwig Kumlien, appear in the ledgers. An annotation records that the first nest below was sold in 1896 for $6.00 to the Mailliard Brothers, active amateur ornithologists and collectors in Marin County, California. The Mailliards eventually donated their collection of 14,000 bird specimens to the California Academy of Sciences in San Francisco (Mearns and Mearns 1998), so perhaps that is where the nests reside today.

22 May 1869  Sumner, WI, “nest in small elm 20 ft. up.”
6 June 1869  Sumner, WI, “nest in black oak 25 ft. up.”
Short-eared Owl (*Asio flammeus*)

Now a “rare summer resident” (Robbins 1991) in northern and central Wisconsin, Kumlien and Hollister (1903) called this species “a very common fall migrant” in prairie and marshy regions and noted that it “remains throughout the summer and breeds, even in the southern counties.” Of the handful of recent records from the Wisconsin Breeding Bird Atlas, only one is as far south as Lake Winnebago.

The two nest records from the ledgers are interesting for the location and habitat information they provide:

11 May 1882 Albion, WI, “nest on a stone pile in an old field. Female shot.” Collected by R.C. Green.
10 May 1897 Jefferson Woods, WI, “brought by boy, also parent. Nest on ground in tamarack swamp. Nearly hatched.”

The ledgers also list seven Short-eared Owl skins collected during fall or winter between 1893 and 1902. Of greatest interest, however, are three nestlings (later turned into study skins) that Kumlien found with Ned Hollister on 29 May 1898 at Delavan Marsh. They discuss at length in *The Birds of Wisconsin* the remains of over 600 feathers found in the nest, presumably from songbirds captured by the parents and fed to the young. Kumlien also wrote a short article in the January 1899 issue of *The Osprey* (Vol. 3, No. 5) describing what it was like to keep the chicks in captivity.

[The nest] was on wet ground in tall grass and weeds near a willow-fringed ditch, 30 rods from the edge of a marsh . . . I took the young owls home and kept them for over two weeks, but they developed such voracious appetites that I could not spare time to shoot English Sparrows enough for them. They were never tame—chasing one about the room continually or climbing up one’s trouser leg, woodpecker fashion. They seemed to enjoy playing on the floor with my little boys, or crawling over my water spaniel and nestling down beside him. Unless gorged with food they continually make a whistling, hissing noise, like escaping steam, during the daytime: at night they were always quiet, even in a strong light. Nine sparrows a day for the three was the least number they could get along with, but it required 12 or 15 to satisfy them. Once they ate 19 sparrows and the skinned bodies of 2 warblers in one day.

Loggerhead Shrike (*Lanius ludovicianus*)

In *The Birds of Wisconsin*, Kumlien and Hollister describe the Loggerhead Shrike as “a common bird in open regions along roadsides and borders of fields, where it nests preferably in isolated, bushy-topped trees.” Today this species is decidedly rare in Wisconsin, having declined precipitously since the mid-1950s (Robbins 1991), and is now listed as a state endangered species.

The ledgers list 16 Loggerhead Shrike skins and eight nests, collected between 1876 and 1899, from Jefferson, Rock, and Dane counties. Although in *The Birds of Wisconsin* it is called Migrant Shrike (*Lanius ludovicianus migrans*), in the ledgers Kumlien calls it White-rumped Shrike and differentiates between several subspecies (*L. l. excubitorides, L. l. migrans*, and *L. l. intermedius*).
April 1893  Otter Creek, Lake Koshkonong, WI, an adult male and female, _L. l. excubitorides._

April 6 1893  Lake Koshkonong, WI, an adult male and female, “nest with 4 eggs,” _L. ludovicianus._

28 April 1894  Otter Creek, Lake Koshkonong, WI, a mated pair (nest collected, see below), _L. l. excubitorides._

13 July 1895  Milton, WI, a juvenile male, “just beginning to show plumage of adult,” _L. l. excubitorides._

31 March 1896  Milton, WI, no sex given, _L. l. excubitorides._

16 June 1896  Indian Ford, WI, a juvenile male, “young of year, parents decidedly white-rumped,” _L. l. excubitorides._

11 June 1897  Milton, WI, two juvenile males, “corners of mouth yellow,” _Lanius ludovicianus._

24 July 1897  Bradford, WI, an adult female, _Lanius ludovicianus._

30 July 1897  Milton, WI, a pair of male and female fledglings, “just out of nest,” _Lanius ludovicianus._

5 August 1897  Lake Koshkonong, WI, a juvenile male, “bill very dark horn,” _Lanius ludovicianus_ [sic].

23 April 1898  Milton, WI, a female, bill “all black, typical Loggerhead?? Very small,” _Lanius ludovicianus_. Collected by H. H. T. Jackson.

25 April 1898  Milton, WI, an adult female, bill “all black,” (nest collected, see below), _L. l. excubitorides._

5 May 1898  Milton, WI, a male, bill “all black,” _Lanius l. excub. intermedius_. Collected by H. H. T. Jackson.


9 May 1898  Milton, WI, a male, bill “all black,” _Lanius l. ex. intermedius_. Collected by H. H. T. Jackson. A parent from nest collected same date (see below)?

15 May 1899  Milton, WI, a female, “parent to eggs and nest” for nest from same date (see below), _Lanius l. intermedius_. Collected by H. H. T. Jackson.

Kumlien’s notes on the nest and egg specimens suggest that this species frequented the same field edge and hedge row habitats in his day that the birds prefer today; five of the eight nests listed were collected from roadside trees. The birds were common enough in the Milton area that he and fellow collector H. H. T. Jackson were able to secure three nests within a two week period in late April and early May 1898.

5 April 1876  Dane Co., WI, nest in a “haw tree,” _L. l. excubitorides_. Collected by F[ritiof] Kumlien.

28 April 1894  Otter Creek, Lake Koshkonong, WI, “nest 5 ft. up small grape vine covered scrub burr oak. Both parents now in collection” (see above), _L. l. excubitorides._


8 June 1897  Milton, WI, “flat frail nest in small mulberry tree 8 ft up. [Eggs] heavily marked,” _Lanius ludovicianus_ [sic].

25 April 1898  Milton, WI, “placed in dead poplar by roadside. 20 feet up,” (see skin record above), _L. l. excubitorides._

4 May 1898  Milton, WI, “placed 16 ft up on tip of limb of scrub burr oak

9 May 1898  Milton, WI, "nest placed in apple tree 10 ft up along road side. Large bulky affair of sticks and weed stems heavily lined with feathers," *Lanius l. ex. intermedius*.


White-eyed Vireo (*Vireo griseus*)

Then, as now, the White-eyed Vireo was a rare visitor to the state. In *The Birds of Wisconsin*, it is a "rare summer resident in southern Wisconsin," for which "so few records are obtainable at other points than Lake Koshkonong that we are able to learn but little regarding the distribution of this species in the state."

Kumlien and Hollister cite no specific dates, so this single entry for the species (under the old name *Vireo noveboracensis*) is apparently the first documented Wisconsin record.


Blue-winged Warbler (*Vermivora pinus*)

Like the White-eyed Vireo, Kumlien and Hollister (1903) describe the Blue-winged Warbler as a "rare summer resident in southern Wisconsin." Robbins (1991) notes that "P. R. Hoy never found one at Racine in the 1850s," and the earliest specimen mentioned in *The Birds of Wisconsin* is a female taken by Thure Kumlien in the Bark River woods, Jefferson County, 14 June 1867.

We are left to wonder why the following record (under the old name *Helminthophila pinus*) is not cited in *The Birds of Wisconsin*. Was the indicated doubt about the collecting location sufficient to make the authors reject it as suitable for publication?

May 1860  "Jefferson Co. Wis.?" a male, collected by Thure Kumlien.

Henslow's Sparrow (*Ammodyramus henslowii*)

Currently an uncommon summer resident in south and central Wisconsin (Robbins 1991) and a state threatened species, Kumlien and Hollister (1903) knew this "exclusive species" from only a handful of specimens until they found large numbers nesting "in a large, dry marsh" near Delavan in 1897 (see below) and in following years.

Of the multiple entries for Henslow's Sparrow in the ledgers, the following relate some interesting observations. Kumlien believed this species raised "two broods at least" per year in the state, and Robbins (1991) cites the September 1898 record of nestlings as evidence that nesting continues into late summer.

September 1894  Lake Koshkonong, WI, two males and one female, "These and two shot by Atkins the first record for this section. . . . Saw a number of others and shot at least three more. Look for these along the many spring flows near the woods about Bingham's and Lalk's, not out in the big marsh like the Le Conte's."
29 May 1897 Turtle Lake Marsh, near Delavan, WI, four males and five females, "Breeding in numbers, shot several that had eggs, but found no nest. Visited marsh in company with Ned Hollister."

2 September 1898 Delavan ("Big Marsh"), WI, one adult male ("in moult") and two nestlings, one with "very little tail."

Kumlien and Hollister lamented the fact that although they had collected "many young still unable to fly more than a few feet and yet in nestling feather," they had been able to find but a single nest of this species.

29 May 1898 Turtle Lake Marsh, near Delavan, WI, five eggs, "Nest preserved. Placed on ground in tuft of grass beside small willows. A short distance (25 feet) from edge of tamarack trees in very wet marsh. Female shot. Nest found by Bruno. My first find of this species. In company with Ned Hollister."

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END NOTES

1 Thomas Mayo Brewer; 1814-1880; coauthor of the landmark History of North American Birds; a three-volume set published in 1875; Brewer’s Blackbird and Brewer’s Sparrow are named in his honor.
2 Spencer Fullerton Baird; 1823-1887; first Secretary of the Smithsonian Institution and an important mentor and patron for many field ornithologists; Baird’s Sandpiper and Baird’s Sparrow are named in his honor.
3 Joel Asaph Allen; 1838-1921; first Curator of Birds at Harvard University’s Museum of Comparative Zoology; cofounder of the American Ornithologists’ Union (AOU) in 1883; and the first editor of The Auk, the AOU’s journal.
4 William Brewster; 1851-1919; prominent Harvard ornithologist; cofounder of the AOU; Brewster’s Warbler is named in his honor.
5 Asa Gray; 1810-1888; foremost U.S. botanist of mid-nineteenth century; Curator, New York Lyceum of Natural History, 1835-1888; Professor of Botany, University of Michigan, 1838-1843, though he never took up the position; Professor of Natural History, Harvard University, 1842-1888 (retired from teaching in 1873); established Gray Herbarium at Harvard.
7 Elliott Coues; 1842-1899; Army physician
during the Civil War; naturalist for the U.S. Northern Boundary Commission (1873–1876) and the U.S. Geological and Geographical Survey of the Territories (1876–1880); published pioneering Key to North American Birds in 1872; editor (1893) of the journals of Lewis and Clark; with Allen and Brewster, cofounded the AOU in 1883.

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50 Years Ago in The Passenger Pigeon

Wesley Lanyon completes the write-up of the range and population studies of meadowlarks begun in the last issue with a discussion of the historical and ecological aspects of distribution. Part II covered wintering, migration, song, and breeding behavior.

One statement of interest still today—“Meadowlarks tend to be gregarious during the winter months and flocks of vagrant birds, travelling from farm to farm in search of food, frequently include individuals of both species. This tendency to mix freely coupled with an almost complete cessation of song, the one distinguishing mark of identification upon which most observers rely, has led to a general practice of disregarding winter identification as to species.”

Using hand raised birds, Lanyon was able to demonstrate that meadowlark song is learned rather than inherited. “Juvenile meadowlarks must learn their definitive territorial songs through a learning process that apparently is operative during their first summer and fall. He also noted that call notes appear to be inherited. “Any meadowlark heard to render a high, rasping “dzert” can be safely identified as the eastern species, for this is quite distinct from the analogous, lower-pitched “chupp” that identifies the western bird.

Readers wishing to see current breeding ranges for these two species, please go to the Atlas web site at http://www.uwgb.edu/birds/wbba/speciesmaps1.htm>

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