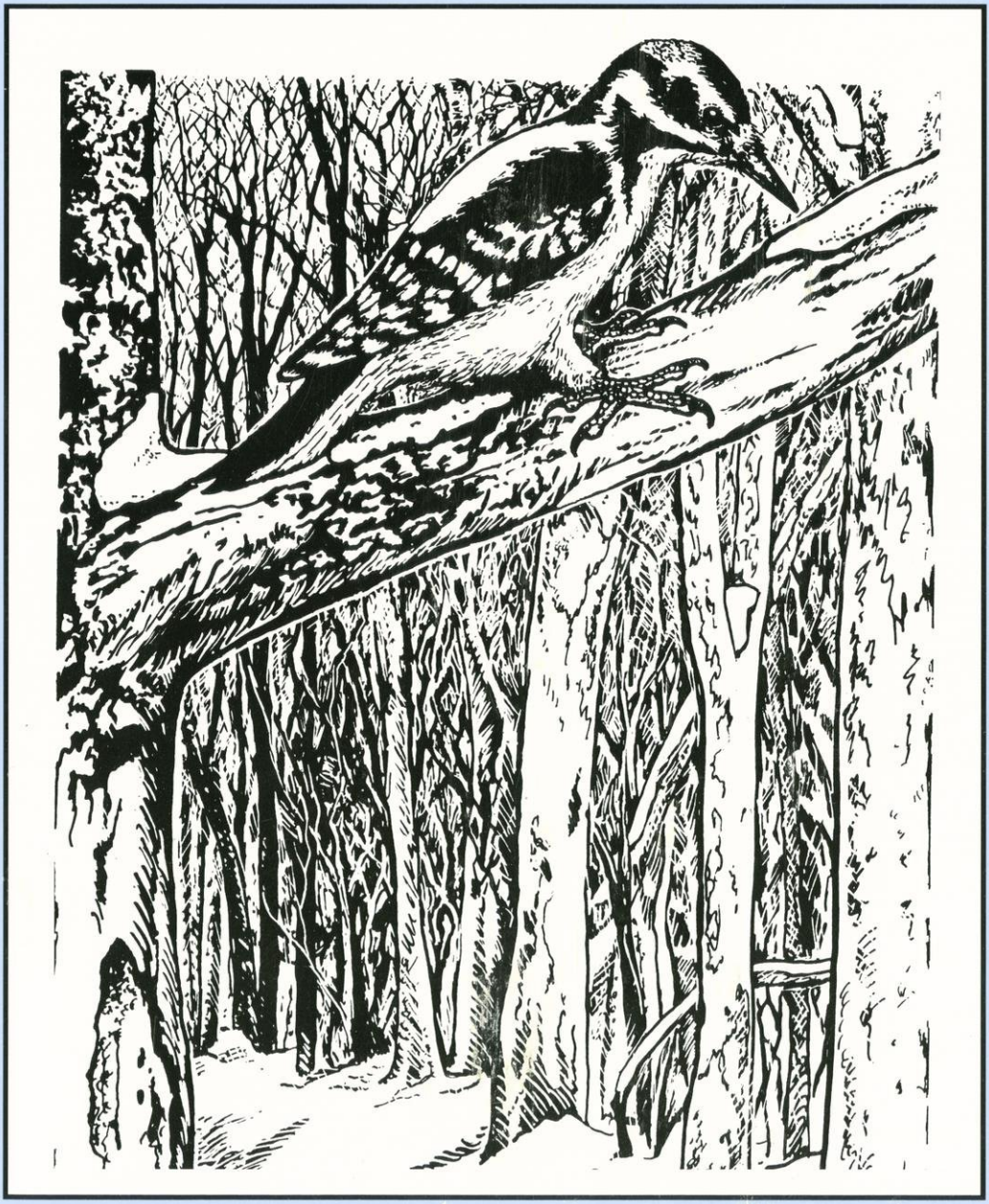
The passenger pigeon. Vol. 65, No. 4 Winter 2003

Madison, Wis.: Wisconsin Society for Ornithology, Winter 2003

THE PASSENGER PIGEON
Vol. 65 No. 4
Winter 2003

JOURNAL OF THE WISCONSIN SOCIETY FOR ORNITHOLOGY



THE PASSENGER PIGEON Vol. 65 No. 4 Winter 2003

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The Passenger Pigeon (ISSN 0031-2703) is published quarterly (Spring, Summer, Fall, and Winter) by The Wisconsin Society for Ornithology, 2022 Sherryl Lane, Waukesha, WI 53188 with an additional mailing office at Lawrence, KS 66044. Subscription rates are: Individual, $30 per year; Family, $35 per year; Sustaining, $75 per year; Life (Single), $600; Life (Couple), $700; Patron, $1,000; Library (*Passenger Pigeon* only), $25 per year. Foreign destinations require $5 additional postage. Back issues may be obtained for $8 each. Send back issue and change of address requests to Memberships, 810 Ganser Drive, Waunakee, WI 53597.

Send all manuscripts and correspondence to the Editors. Information for "Seasonal Field Notes" should be sent to the Bird Reports Coordinator. Manuscripts that deal with Wisconsin birds, ornithological topics of interest to WSO members, and WSO activities are considered for publication. For detailed submission guidelines, see pages 3–5 of the Spring 2000 issue (Vol. 62, No. 1) or contact the Editors. As a general guide to style, use issues after Vol. 60, No. 1, 1998.

Front Cover: Hairy Woodpecker in winter in Wisconsin as drawn by Judith Huf.

Let's Be Passionate

Bird conservation—what do these simple words mean to you? When I typed bird conservation into the Yahoo search service on my computer, almost 1 million results were found. I was pleasantly surprised to find the Wisconsin Bird Conservation Initiative (WBCI) listed as the 4th search result. More about WBCI later.

To many people, bird conservation means the protection of birds and their habitats. Accepting this as a short answer, the larger questions become how do we accomplish this and how are we doing in the year 2004? For this President's Statement prepared in February, I would like to explore this topic with you, and I hope that I don't become too "preachy."

Bird conservation work, to be successful, must encompass a lot—legislation, education, research, communication, action, and cooperation. I think we are doing a lot in these areas but is it enough? I'm frustrated when I read recent surveys that indicate that there are more people who watch birds than hunt or fish, and that birding is the fastest-growing outdoor activity in America. But where are these masses when it comes to bird conservation? Too often, it seems they take things for granted or find bird conservation as a distraction to avian enjoyment. I constantly ask myself, how do we move birders and wildlife viewers from recreation to bird conservation efforts including land purchases, cooperative agreements with agencies, donations and contributions, willingness to support alternative funding strategies for wildlife programs, and more. Birding and conservation **must** go hand-in-hand.

Hunters, anglers, and various other consumptive users have embraced conservation for many decades. They have been told by their leaders that conservation underpins these activities and that they have a personal responsibility to support conservation. It is now ingrained in their culture. For example, Pheasants Forever, active in Wisconsin only since 1985, has grown to 30 chapters with more than 6,000 members. At the same time birding organizations like the WSO are seeing a declining membership. Pheasants Forever has raised more than $4.1 million for Wisconsin's wildlife habitat, with chapters completing over 13,800 habitat projects benefiting over 104,000 acres since 1985 and participating in 24 land acquisitions totaling almost 4,000 acres. Obviously, this work benefits MANY bird species, not just pheasants. The Riveredge Bird Club was so impressed with these actions that we are financially supporting the annual February banquet/fundraiser of the Ozaukee Chapter of Pheasants Forever. Birding needs this attitude, and our bird resources desperately needs this voice. There are many things that birders and wildlife viewers can do, regardless of their level of expertise, to advance a focused message about birds, birding, and conservation.

We can't expect this integration to happen by itself or come entirely from

some group or bird plan. We must introduce birders to the recreation of birding and must make the connection with bird conservation from the very start. We must make a link between an appreciation, the value, and the saving of birds. And the approach must be positive, not doom-and-gloom. However, we can't expect that somebody else, somewhere, somehow, will take care of the interests of birds and birders.

Yes, organizations have a role to play. The American Bird Conservancy <http://www.abcbirds.org/> is the only U.S.-based group whose sole mission is to conserve wild birds and their habitats throughout the Americas. In Wisconsin I consider the formation of the Wisconsin Bird Conservation Initiative <http://www.wisconsinbirds.org/> to be the most exciting development for bird conservation in the state's history. I encourage you to learn about what WBCI is doing and to assist in this huge effort. However, I am frustrated, and, yes, annoyed, by how birders compare with hunters when it comes to raising big money for wildlife causes. It irritates me as a birder to see that my fellow-birders are not interested in paying more for their hobby. For my part, this has resulted in the Quad 30 Campaign that you've heard about. This IS a fund-raiser but also a way to highlight the importance of long term bird monitoring efforts through the federal Breeding Bird Survey (BBS) and the value of the Important Bird Areas program, a WBCI-sponsored activity. While some may consider my Quad 30 Campaign a vacation, it is a "vacation" that I've dreamed about for many years. I also view it as a way to spread the word about bird conservation while enjoying the recreation that birding brings and raising funds that we must have if we are to protect the most important areas in Wisconsin for birds.

Why do we need to "spread the word?" It seems that birders tend to remain silent about their hobby, whereas hunters like to tell the world. Birders must gain more power and influence so that we can reach top government officials and our federal and state legislators and tell them how dangerous the world is becoming for migratory birds—how we've added cats, agrochemicals, speeding cars, reflective windows, illuminated skyscrapers, and tall, guyed communication towers to the natural hazards of migration. As hawk watcher and author Scott Weidensaul recently stated, "I tell my birder friends, count and enjoy the passing migrants—but also make a vow to spread the message. Carry the gospel. Lobby. Plead. Harangue. Cajole. Badger. Do whatever it takes. For tens of millions of years, birds have blessed the skies with flight and majesty. Now it's time for us to do our parts."

There is no time for complacency, no time for timidity, or half-measures. In our hearts, we know what matters. Tell me what the WSO can do to help bring about a greater emphasis on bird conservation. Share with me your thoughts, your creativity, your association. Become more involved in bird conservation efforts!

President

From the Editors' Desk

Now that you are reading the second issue of this journal produced by the new team of editors, you may be noticing a few minor changes. These changes are not made because the new editors think anything was "wrong" about the old way, but just that this works better for us. We hope our readers are content with what they see.

One of the more substantial changes we wish to make concerns "By the Wayside." You may have noticed that from time to time—about once every three or so years—there would appear a second kind of "By the Wayside" in an issue. This one dealt with anecdotal observations of birds and bird behavior, not with the documentation of rare bird sightings. You will find the most recent such article on page 289 of this issue, but it now has a new title; "From Field and Feeder." This editor would like to have this article appear more often than once every three or so years, so please take a few minutes to jot-down any interesting interaction you may have with a bird or birds, any unusual and interesting behavior between birds, or birds and other animals, including with humans, and submit these to this Editor. If you can record the interesting behavior in a photograph we will try to include that in the article.

Detailed instructions for submitting articles to *The Passenger Pigeon* appeared in Vol. 62. No. 1, pages 3–5 of this journal. A few updates on that information are as follows: send items to the Editor in WordPerfect, if at all possible (this program works better for both the editors and the typesetter); send everything on a diskette, CD, or as an e-mail attachment; author's name and address and telephone number and e-mail address centered under the title; the text should be in a separate file from any and all figures; each figure should be in a separate file; figure captions separate from the figures themselves: scanned-in photographs at a resolution of 300 dpi or greater; Literature Cited with no abbreviations of journal titles; the whole thing in plain old 12-point Times Roman font; Latin names italicized; no underlining; and please remember to include a short bio about author(s).

We are trying to make this entire process as simple and easy as possible for those submitting items as well as for the editors and typesetters. If you have questions, please contact the Editors at bettie@vbe.com or harriman@uwosh.edu.

Bettie and Neil Harriman, Editors

Black-throated Blue Warbler *by Dennis Malueg*

New Distributional Records for Summer Birds in Southern Wisconsin Conifer Swamps

"Our long cherished tamarack swamp . . . had been bereft of its trees, its ericaceous under shrubs, and its delightful orchids," drained and planted with market-garden vegetables—Thure Kumlien, Jefferson Co. (Greene 1888, in Schorger 1946)

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Conifer swamps, still a familiar part of the landscape in northern Wisconsin, were also common in many southern counties when Yankee and European settlers arrived in the state in the mid 1800s. In seven southeastern counties, for example, presettlement conifer swamps occupied about 26 thousand ha (nearly 100 sq mi) in the land surveys of 1835–36, almost twice the area of hardwood swamps and 22% of all of the region's original wetlands (SEWRPC 1997:Table 31).

Many of these southern conifer swamps have since been destroyed or degraded—as in Kumlien's long-ago lament—by a combination of human and biotic impacts including cutting, drainage, agricultural conversion, insect outbreaks, and invasive non-native plants (Rhodes 1933; Catenhusen 1950; Curtis 1959; Luebke 1976; Dunn 1985; Reinhartz and Kline 1988). In Waukesha Co., for instance, the 5500 ha of conifer swamp in 1836 (SEWRPC 1997) had dwindled to 1600 ha in 1934 (Bordner et al. 1936) and perhaps as little as 250 ha in the 1980s (pers. obs.).

Botanists have had a long-standing

interest in remnant southern swamps, partly because these supposed "relicts" of boreal conifer forest (Curtis 1959:254) are apt to contain locally rare plants of northern affinities. Historical records also suggest that some boreal birds such as the Nashville Warbler may have nested in southern conifer swamps in the 1800s (Kumlien and Hollister 1903; Atwood 1948), yet ornithological studies have lagged behind botanical work in recent years. Except for counts in Ozaukee and Kewaunee Cos. (Weise 1973; SAPC 1974; Idzikowski 1982; Fowler and Howe 1987) and local or qualitative data elsewhere (Jackson 1914; Rudy 1967; Mossman 1980; Jaeger 1981), there is little modern information on the breeding birds of Wisconsin's conifer swamps.

During 1983–93, we conducted summer bird counts in 168 stands of conifer swamp throughout Wisconsin, including 125 stands in the southern half of the state (Fig. 1). As reported

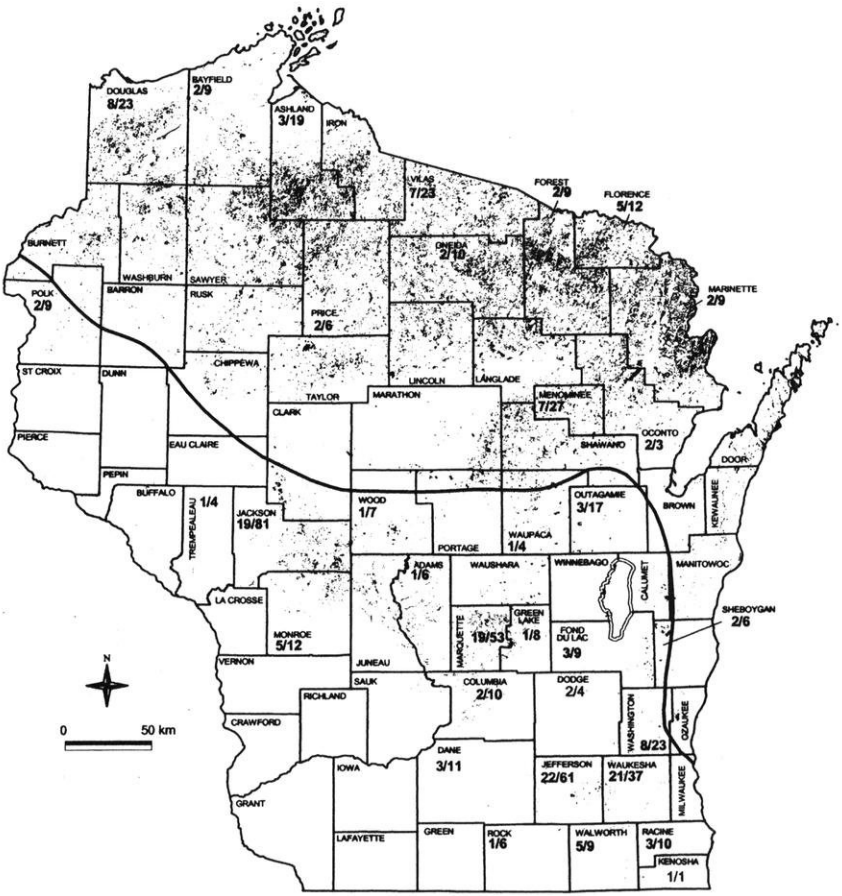

Figure 1. Number study stands (n=168)/number counting stations (n=538) in Wisconsin conifer swamps, by county, 1983–93. Stippling shows state conifer swamps ≥ 2 ha in size. Heavy line delimits southern Wisconsin at upper boundary of vegetational tension zone (see text).

here, we detected 20 species—many of them widespread or locally numerous—beyond the southern limits of their previously recognized summer ranges. Most of these new distributional records in southern Wisconsin conifer swamps thus seem to represent real revisions of known summer ranges, not casual out-of-range appearances. These new distributional data from a little-studied habitat type will complement the forthcoming results of the Wisconsin breeding bird atlas, and will also serve as a baseline for ongoing avian inventory efforts in statewide conifer swamps.

Study Sites and Methods

Conifer swamps were defined as wetlands in which tamarack (*Larix laricina*), black spruce (*Picea mariana*), and/or northern white cedar (*Thuja occidentalis*), plus other conifers, provided ≥ 5% absolute cover and ≥ 25% relative cover (vs. hardwoods) in tree and/or sapling layers over an area ≥ 2 ha. Additional conifers in some swamps in central or northern Wisconsin included white (*Pinus strobus*), red (*P. resinosa*), or jack (*P. banksiana*) pines, balsam fir (*Abies balsamea*), eastern hemlock (*Tsuga canadensis*), and/or white spruce (*P. glauca*). Jack pine was co-dominant with tamarack or black spruce in three study swamps, but these additional species were otherwise a minor component of conifer cover in study stands.

Although narrowly phrased in terms of the presence and prominence of tamarack, spruce, or cedar, this definition nevertheless encompassed much variety in vegetational composition and habitat structure. It included, for example, densely forested coniferous wetlands, mixed hardwood-conifer swamps, sparsely canopied stands allied to heath-like open bogs, and shrub swamps with scattered conifers. Our definition also admitted the effects of past and present disturbances such as drainage or grazing because we were interested in conifer swamps as extant bird habitats rather than homogenous or undisturbed plant communities.

However, despite transitional stands and some local exceptions, most study sites were congruent in aspect and composition with the three vegetational and geographic categories proposed by Clausen (1957), Curtis (1959), and Eggers and Reed (1987):

- **Conifer-ericad** swamps in black spruce-tamarack or tamarack bogs with low-growing understories of heath-like ericads—e.g., huckleberry (*Gaylussacia baccata*)—on saturated acidic peats in most of the northern half of the state and occasionally in the south, especially in Jackson Co.
- **White cedar** or **cedar-hardwood** swamps—e.g., yellow birch (*Betula lutea*) and black ash (*Fraxinus nigra*)—on somewhat drier, less acidic, and more fertile soils along the northern and eastern rims of the state, south to Washington and Ozaukee Counties.
- **Tamarack** and **tamarack-hardwood** swamps with tall shrub-sapling layers—e.g., American elm (*Ulmus americana*), green ash (*F. pennsylvanica*), red maple (*Acer rubrum*), red-osier dogwood (*Cornus stolonifera* of most references, now reduced to the synonymy of *Cornus sericea*), winterberry (*Ilex verticillata*)—but few or

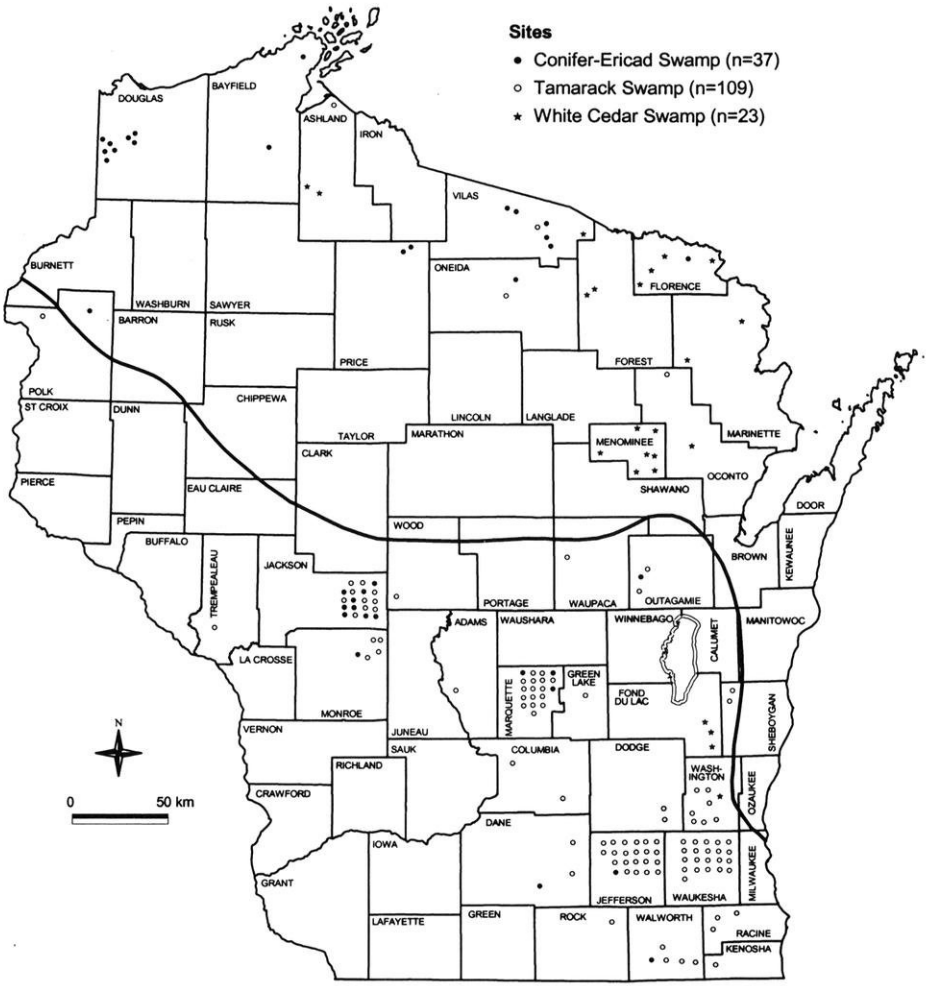

Figure 2. Distribution and vegetational category of study stands (n=168) in Wisconsin conifer swamps, 1983–93. Heavy line delimits southern Wisconsin.

no ericads on peats or mucks in the southeastern quarter of the state.

Figure 1 shows the distribution of Wisconsin conifer swamps ≥ 2 ha in size (WDNR 1998). Figure 2 arrays study stands in the three vegetational categories used here, and also gives a geographic picture of the regional availability of those three types as bird habitat.

We located study stands via reconnaissance, personal contacts, and historical or current land use, topographic, and wetlands maps. Although not random, the resulting sample is believed to incorporate a full spectrum of stand sizes, vegetational attributes, and other habitat features, especially in southeastern counties where most existing stands were surveyed.

We made single-visit, unlimited radius, six-minute point counts at one or more counting stations per study stand, depending on stand size (see below), between 0400 and 0900 CST on dates between 1 June and 7 July in 1983–93. Most statewide fieldwork and all but one count in southern swamps were conducted in 1983-86.

Station counts excluded birds flying above canopy level and birds beyond the edge of a stand in habitats other than conifer swamp. In each study swamp, we also listed additional bird species and additional individuals of selected species detected before, after, or between station counts. Figure 1 maps the number of study stands and stations per county. Conifer swamps are virtually absent in southwestern Wisconsin (Fig. 1), and we chose not to repeat the work of Weise (1973), Fowler and Howe (1987), and others in east-central counties. With these exceptions, our surveys were statewide.

Figures 1 and 2 also split the state into northern and southern halves along a dividing line that follows the northern edge of the "tension zone" (Curtis 1959), a midstate vegetational transition between southern floristic elements vs. northern elements such as white pine (Zimmerman 1991) and black spruce. In general—with the principal exception of southern conifer swamps—this line separates the pre-settlement prairies and hardwood forests of southern counties from the conifer-hardwood forests of northern Wisconsin (Curtis 1959). Other analysts of avian distribution have used a similar north-south division in view of the observed and potential correlations among floristics, avian habitats, and bird species' breeding ranges within Wisconsin (Beimborn 1970; Temple and Cary 1987; Robbins 1991).

For distributional purposes, we combine station counts and between-station lists, and report *stand presence* and total count of bird species in conifer swamps outside a species' previously recognized summer range. "Previously recognized" or "known" summer ranges are defined as the shaded summer ranges in Wisconsin in Robbins' (1991) maps, which we interpret as depicting the areas where a species is annually present in summer and presumably breeding in suitable habitats.

Stand presence is appropriate for displaying our distributional results because sampling effort (i.e., detection effort) was proportional to stand size. We established one bird counting station per 4 ha, up to a maximum of 12 stations in conifer swamps $\leq$ 50 ha in size. Only 16 of 125 study swamps in southern Wisconsin, mostly (7) in Jackson Co., exceeded 50 ha in size, so under-sampling and diminished detection probabilities were rarely a problem in southern swamps. Bird counting stations were objectively positioned 200-300 m apart along pre-determined transects through the interior of study stands, $\geq$ 60 m from stand's edge. Between-station effort as well as station counting was accordingly proportional to stand size. The probability of detecting a given species in stands of differing size thus depended on its absolute numbers within a stand (or set of stands) and not only its density in numbers per unit area. In other words, our chance of detecting a species was approximately equal in all stands (or sets of stands) where its absolute population sizes were similar.

Results

Surveys of summer birds in 168 Wisconsin conifer swamps in 33 of the state's 72 counties, including 125 swamps in 21 southern counties (Fig. 1), recorded 20 species outside known summer range, all south rather than north of previously identified range, as follows:

Sharp-shinned Hawk—We found one nest in a tamarack swamp in Waukesha Co. in 1983, another nest in a tamarack-pine swamp in Monroe Co. in 1985, and five other birds beyond known summer range in Jackson (2 stands), Marquette, Fond du Lac, and Jefferson Cos. in 1983–86. Trexel et al. (1999) reported that swamp conifers provided 38% of nest trees at 24 Wisconsin breeding sites discovered by unbiased methods, but this hawk is often inconspicuous in summer beyond the immediate vicinity of nests (Rosenfield et al. 1991). Our tally of seven observations in one or more of six counties in each of four years may thus suggest that it nests regularly in southern conifer swamps, as it also does in some upland conifer plantations in southeastern counties (Bielefeldt and Rosenfield 1994).

Broad-winged Hawk—Although hardwood-dominated forests are described as typical nesting habitat in recognized breeding range in northern Wisconsin (Robbins 1991) and elsewhere (Goodrich et al. 1996), a 1985 nest in tamarack in Fond du Lac Co. and a 1986 adult in a tamarack stand in Sheboygan Co. may be unexceptional in terms of habitat use and revised summer range in the state. Broad-wings do occur (Jaeger 1981; Fowler and Howe 1987; pers. obs.) and nest (Rosenfield 1984) in conifer swamps in known breeding range in northern counties. Recent nesting beyond previously acknowledged range has also been noted in upland conifer plantations or hardwood forests in Waukesha (Bielefeldt and Rosenfield 1994), Ozaukee (R. N. Rosenfield pers. comm.), and probably Jefferson and Walworth Cos. (pers. obs.).

Olive-sided Flycatcher—Single birds were recorded 50–200 km south of known summer range in Jefferson Co. 11 June 1984, Washington Co. 5 June 1984, and Outagamie Co. 13 June 1986, the last at least presumably resident in a swamp where Lincoln's Sparrow (see below) was also numerous. These and other June–July reports in southern conifer swamps in Waukesha (Bielefeldt 1977) and Ozaukee Cos. (Idzikowski 1982) could involve late migrants or non-breeding individuals, but occurrences in such characteristic summer habitat (Dawson 1979; Robbins 1991) suggest that a few might occasionally nest in southern swamps.

Yellow-bellied Flycatcher—In southeastern Jackson Co., counts at 81 stations in 19 stands yielded single midsummer birds at 5 stations, 23 June 1985 and 2–3 July 1986, about 125 km south of known range. It was locally frequent (5 of 12 stations) in the two spruce-tamarack-ericad stands where detected, in habitats co-occupied by Yellow-rumped Warblers at two stations.

Our survey's 29 statewide observations of this flycatcher, all prompted by song (12) or call notes (17), indicate that aural detectability is nil beyond 50–60 m and falls off quickly past 30–40 m, especially for calling rather than singing birds. (By comparison, most passerines are vocally de-

tectable at distances ≥ 100 m.) Its lesser audibility vs. other bird species thus limited the chance of detecting Yellow-bellies in the larger survey swamps (n=7) of Jackson Co., where we did not achieve area-proportional coverage of potential habitats. We speculate that the local summer population may be greater than our five records would indicate.

Another bird in Marquette Co. on 6 June 1984 should not necessarily be set aside as a late migrant: it did occupy the only site with a black spruce component among the eight counting stations in this tamarack swamp, where a bird was again detected near the same spot in a re-survey on 9 June 2001 (MM).

Alder Flycatcher—We tallied 84 Alders in 10 counties at 33 of the 87 study stands lying south of Robbins' (1991) contiguous midstate range limits, while recording only 14 Willow Flycatchers in 8 of these same 87 stands, all within the Willow's recognized range. We cannot preclude the possibility of late migrants among the 62 Alders at 24 (55%) of 44 southern swamps visited 1–10 June, vs. 22 Alders at 9 (21%) of 43 southern stands surveyed ≥ 11 June (Fig. 3).

For two reasons, we nonetheless propose that most Alders in our southern survey swamps were summer residents rather than belated migrants: (1) The Willow Flycatcher, a sibling species of similar wetland habitats at the upper edge of its breeding range in southern Wisconsin—hence probably resident—showed a comparable drop in song-linked detection rates (16% vs. 5%) in early June vs. later visits to southern swamps. Declining incidence of song after territorial establishment (Ettinger and King 1980) instead of migrant departures may be responsible for lower detection and identification rates in both species in mid June-early July. (2) Midsummer residency of Alders in some supposedly disjunct areas in southern Wisconsin (Fig. 3) is well-documented (Robbins 1991; pers. obs.), and multiple singers ($\bar{x}$=2.6 per occupied stand) rather than isolated individuals were detected at many southern swamps surveyed 1–10 June. It seems unlikely that late-migrant Alders were so widely present, in song, in such numbers, in seemingly suitable breeding habitat in early June over three consecutive years (1983–85) in a region otherwise known to be locally occupied by summer residents.

Summer range of the Alder Flycatcher in the state's southeastern counties probably exceeds and connects the disjunct pockets mapped by Robbins (1991). Some Alders may nest in tall shrub-tamarack swamps ≤ 10 km from the Illinois border (e.g., 7 birds in Walworth Co. 5 June 1984). Assuming summer residency and similar rates of detectability by song, we calculate that Alders outnumber Willows about 5 or 6 to 1 in southeastern tamarack-shrub swamps.

Habitat aspect and Alder Flycatcher distribution in southeastern tamarack-tall shrub swamps (Fig. 3) thus seem to parallel regional patterns for other newly-detected summer residents such as Northern Waterthrush (Fig. 4) and Canada Warbler (Fig. 6). Unlike those two species, however, Alders were also detected in Jackson and Monroe Cos. (within known range) in conifer-ericad swamps with minor amounts of tall shrubs such as alder (*Alnus rugosa*).

Red-breasted Nuthatch—Robbins

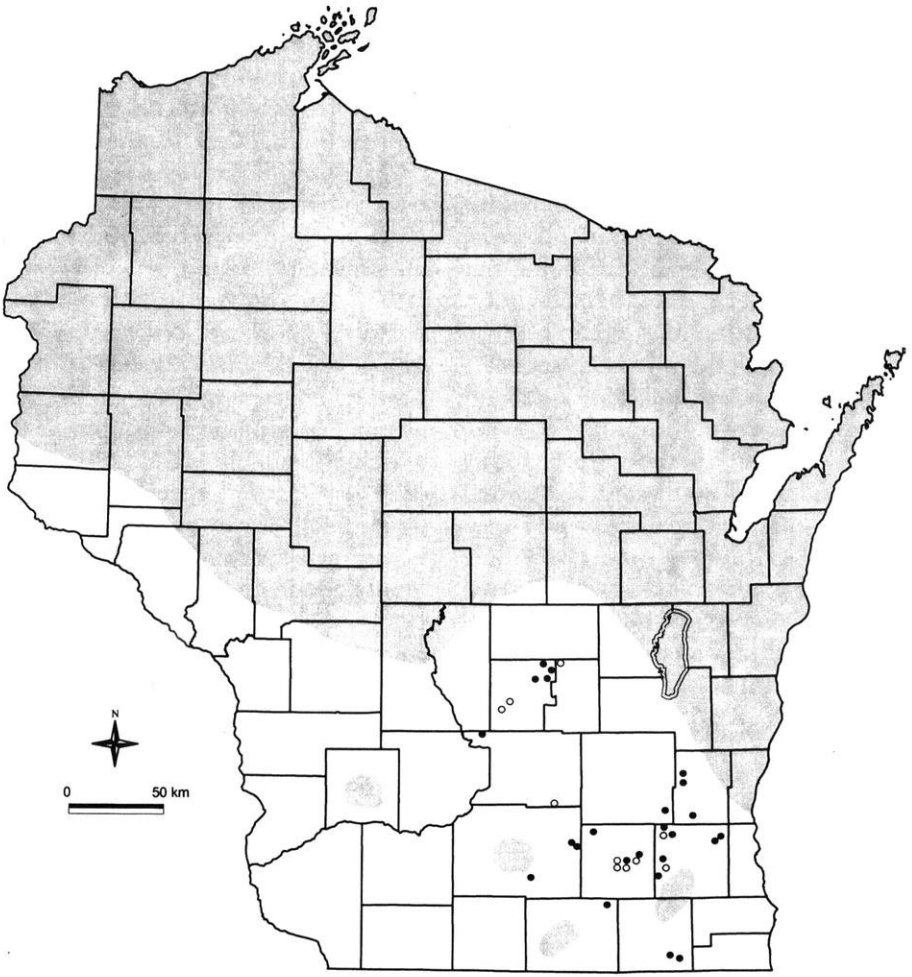

Figure 3. Detections of Alder Flycatcher beyond previously recognized summer range (shaded) in southern Wisconsin conifer swamps, 1983–93. Closed circles = 1–10 June, open circles = 11 June –7 July.

(1991) suggested that this nuthatch may be a rare summer resident in some west-central counties but did not map these areas as part of the usual summer range. In late June–early July, 1985–86, we detected single birds in three tamarack or tamarack-spruce stands, each with small amounts of white pine, in Jackson and Monroe Cos.

Brown Creeper—We found individuals outside known range in 3 tamarack or cedar swamps in Waupaca, Fond du Lac, and Jefferson Cos. in 1983–85. Creepers do occur in both hardwood and conifer swamps within recognized range in northern and eastern counties (Weise 1973; Robbins 1991; pers. obs.), and also in bottomland hardwood forests along the Mis-

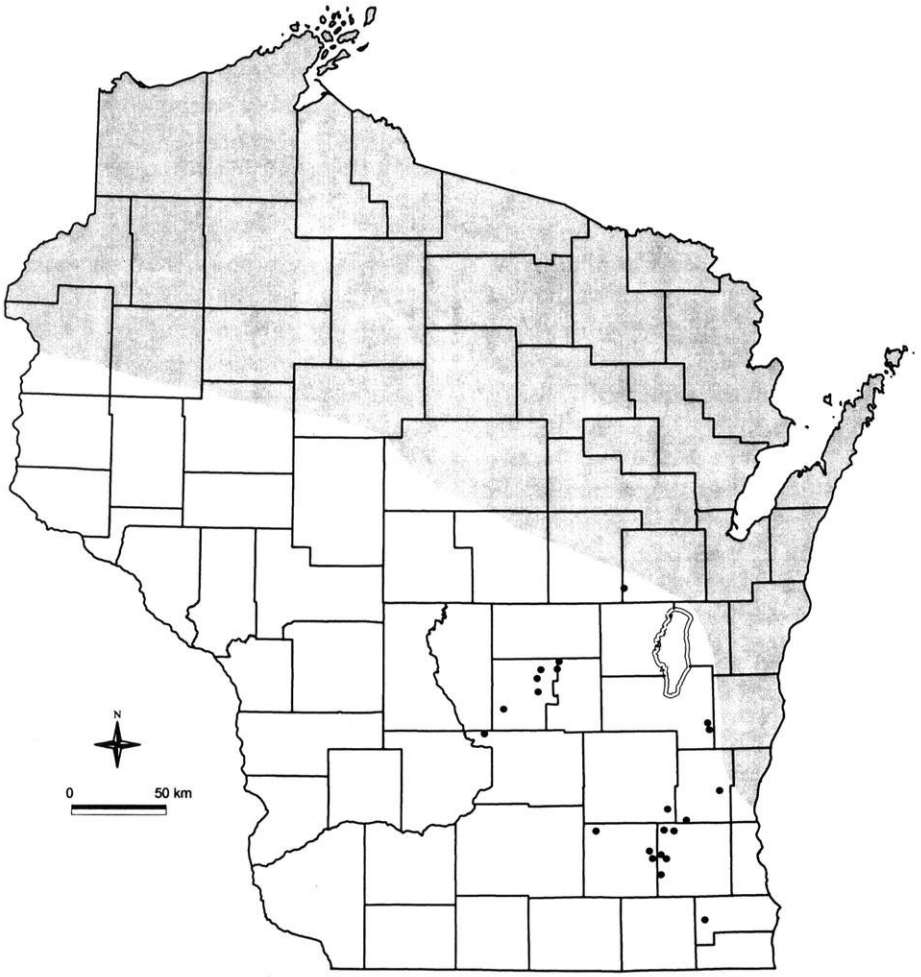

Figure 4. Detections of Northern Waterthrush beyond previously recognized summer range (shaded) in southern Wisconsin conifer swamps, 1983–93.

sissippi and Wisconsin Rivers in some southwestern counties (DeJong 1976; Mossman and Lange 1982; Robbins 1991). Not cited or mapped among other southern records in Robbins (1991) are additional summer birds in hardwood swamps in Columbia, Jefferson, and Fond du Lac Cos. \in 1974 (De Jong 1976 and pers. comm.), Waushara Co. in 1984 (Mossman et al. 1984), and Waukesha Co. in 1976–77 (Bielefeldt 1977; L. Safir pers. comm.). Taken together, these various southern reports suggest that creepers may be local summer residents in lowland forests in most of the lower half of the state.

Winter Wren—Single detections, both in cedar-tamarack habitat, were slightly outside known range in south-

western Outagamie Co. (1 June 1986) and south-central Washington Co. (4 June 1992).

Golden-winged Warbler—Only marginally beyond the southern summer limits shown in Robbins (1991) were 6 individuals in 4 tamarack swamps in Green Lake and northeastern Marquette Cos. Except for these birds and 3 others *within* known range in Washington, Adams, and Monroe Cos., Golden-wings were undetected in our surveys of conifer swamps (n=125) in the southern half of Wisconsin. However, we saw Blue-winged Warblers or heard Blue-winged song types in 23 of these southern swamps, north to Trempeleau, Monroe, Adams, Marquette, and Sheboygan Cos., all within areas where prior summer reports have been frequent (Robbins 1991). We saw one hybrid in "Brewster's" plumage in a tamarack- alder swamp in Waukesha Co. in 1985.

Nashville Warbler—Marquette Co. straddles the south-central boundary of the Wisconsin summer range mapped by Robbins (1991). Here we detected Nashvilles in 10 of 19 study stands, mainly (69 of 89 individuals and 3 nests) in three tamarack or spruce-tamarack swamps with low understories of huckleberry or bog birch (*Betula pumila*), as in the conifer-ericad swamps where this bird is common within recognized range in northern and west-central counties (e.g., Jackson). However, one nest and 20 birds elsewhere in Marquette Co. (within known range) occurred in tall shrub-tamarack stands similar in aspect to southeastern swamps occupied by Northern Waterthrush.

Elsewhere in such tall shrub-tamarack habitats, we detected 14 Nashvilles, 10–60 km past known range, in 6 swamps in Green Lake, Columbia, Dane, Jefferson, Waukesha, and western Sheboygan Cos. Also outside known range were 28 birds in a conifer-ericad swamp in Outagamie Co. (1986) and 5 birds in a cedar-tamarack swamp in Washington Co. (1992).

Yellow-rumped Warbler—Detected beyond known range only in Jackson Co., about 100 km south of Robbins' (1991) summer limits, but here we recorded 22 adults and one fledgling in 7 of 19 study stands, 22 June–3 July 1985–86. Habitat at occupied stations (n=21) was dominated by stunted tamarack ≤ 6 m in height, with small to equal proportions of black spruce for a combined canopy cover estimated at 30–60%. Tall shrubs and hardwood saplings were usually sparse (n=7) or absent (n=14) within ericaceous understories ≤ 1 m in height, as were dead trees and windthrown tip-overs. These stands resemble the conifer-ericad swamps of northern Wisconsin and differ in many compositional and structural respects from the tall shrub-tamarack swamps of southeastern counties.

Black-throated Green Warbler—With a single curious exception, all detections inside recognized summer limits in the northern third of the state (Robbins 1991) plus one bird outside known range in Washington Co. (4 June 1992) occurred in white cedar or cedar-hardwood swamps with tall (14–18 m) well-developed canopies (median closure 85%). Where listed in such stands (n=6) in known range, this warbler was common (12 of 33 stations). Habitat use thus agrees with Dawson's (1979) review of 30 breeding bird censuses in U.S. and Canadian conifer swamps: it

was recorded only in census plots dominated or co-dominated by white cedar.

We did not detect this species in counts at 144 tamarack or spruce-tamarack stands, in or out of known range, even in areas where nearby summer residents were meanwhile present in upland conifer forests in northern Wisconsin (Robbins 1991), Waukesha Co. (Bielefeldt and Rosenfield 1994), or Monroe and Jackson Cos. (pers. obs.). The exception was one bird on 7 June 1985 in a pure tamarack stand at Lima Bog, Rock Co., about 225 km south of Robbins' recognized range.

This bird in seemingly atypical habitat might be dismissed as an aberration or vagrant had not T. Ellis reported four Black-throated Greens at Lima Bog on 25 June 1972 (SAPC 1974; Robbins 1991). Moreover, Kumlien and Hollister (1903) also mentioned summer records for Rock Co. They did not specify a locale but Kumlien was familiar with this swamp (Jackson 1961:110) and collected other birds at Lima Bog (Atwood 1948), which was and is the only major conifer swamp in a county that historically lacked other coniferous habitats (Peet 1971). If the surmise that Kumlien found this warbler at Lima Bog in the late 1800s were accepted, it is perhaps equally difficult to believe that a small population has persisted for a century—or re-colonized at least once—in an atypical habitat patch in an isolated 40 ha tamarack stand far past the present margin of its summer range in other Wisconsin conifer swamps.

Black-and-white Warbler—Birds were detected in southeastern counties in each of the 1983–86 years, slightly past known range in Marquette (13 individuals in 6 stands) and southern Washington Cos. (1 bird), or farther beyond in Waukesha Co. (4 individuals in 3 stands). Occupied stations in these counties included single conifer-ericad, cedar-hardwood, and hardwood-tamarack swamps, but it was more often co-detected with the Northern Waterthrush in tall shrub-tamarack habitat that characterized 7 of 10 stands and 7 of 15 stations where recorded, including all of 3 stations in Waukesha Co.

This warbler has also been found beyond recognized summer range in lowland hardwood forests in Columbia, Green, Grant, and Buffalo Cos. (DeJong 1976 and pers. comm.), Waushara Co. (Mossman et al. 1984), and Waukesha Co. (pers. obs.). Breeding season distribution and habitat use in lowland forests seem similar to those of the Brown Creeper.

Northern Waterthrush—We found this bird beyond known range in unexpected numbers, with 62 individuals in 24 stands in 10 southeastern counties (Fig. 4), where detected in 26% of 92 survey swamps and each of the 1983–86 years. Habitat at occupied stations was variable in total tree canopy cover (10–90%) and hardwood cover (co-dominant to absent), but absolute cover of tall shrubs (2–4 m) was ≥ 50% at 30 of 39 stations. As in most southeastern swamps, tall tamarack (11–18 m) was the sole conifer in 21 of 24 occupied stands. Other features of these tall shrub-tamarack stands also contrast with conifer-ericad swamps: abundant dead trees and windblown tip-overs (often ≥ 20–40 per ha), an uneven substrate of drier hummocks and wet or muddy pools with common wetland herbs—

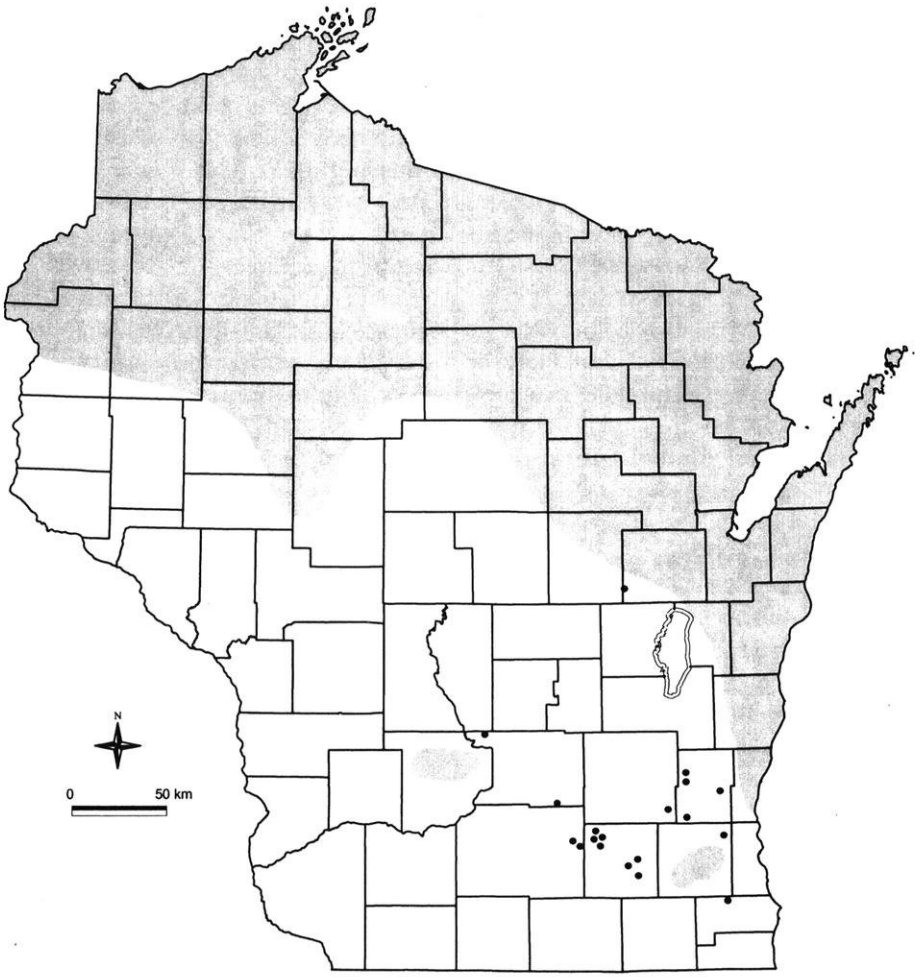

Figure 5. Detections of Mourning Warbler beyond previously recognized summer range (shaded) in southern Wisconsin conifer swamps, 1983–93.

e.g., jewelweed (*Impatiens biflora* of older references, now *Impatiens capensis*), marsh marigold (*Caltha palustris*), cattail (*Typha* spp.)—but few or no ericads, and often a prominent non-native element such as glossy buckthorn (*Rhamnus frangula*) and deadly nightshade (*Solanum dulcamara*).

Mourning Warbler—Robbins (1991) mapped almost identical summer limits to known Wisconsin ranges in this warbler and the Northern Waterthrush. Detections of 28 Mourning Warblers beyond recognized range in 20 conifer swamps in 7 southeastern counties—annually 1983–86 in Columbia, Dane, Dodge, Jefferson, Washington, Waukesha, and/or Racine Cos. (Fig. 5)—were also geographically congruent with out-of-range records for the waterthrush. Most birds of both species occurred in

tall shrub-tamarack swamps but Mournings were usually found at stand edges where scattered conifers (5–10% canopy cover) gave way to shrub-hardwood swamp. These two species were co-detected in only 6 (16%) of the 38 southeastern stands where one or the other was recorded (compare Canada Warbler). Unlike the waterthrush, Mournings are also widely present in summer in non-coniferous and/or upland habitats in southeastern Wisconsin—hardwood swamps in Columbia, Waushara, Fond du Lac, Dodge, Waukesha, Racine, and Jefferson Cos. (DeJong 1976 and pers. comm.; Mossman et al. 1984; pers. obs.) as well as upland thickets that follow clearcuts or heavy thinnings in oak forests and pine plantations in Walworth, Jefferson, and Waukesha Cos. (Bielefeldt and Rosenfield 1994; pers. obs.). Islands of southern summer range in Robbins (1991) should probably be consolidated in a distribution that includes most of the southeastern quarter of the state.

Canada Warbler—All detections of 41 individuals beyond known summer range came from 10 southeastern counties (Fig. 6), where it was recorded in 18 of 95 study stands, with annual regional observations in 1983–86. Nearly half (18) of these birds were found in 4 stands of tamarack-cedar or tamarack-spruce in Washington, Fond du Lac, Marquette, and southwestern Outagamie Cos., the remainder in 14 stands of tall shrub-tamarack as far south as Waukesha and Jefferson Cos. In the latter habitat, vegetational attributes at occupied stations were similar to those described for the Northern Waterthrush, as co-detected in 12 (38%) of 32 stands where one or both species were noted (vs. 3 [9%] of 34 stands for Canada vs. Mourning Warblers).

Dark-eyed Junco—Three adults outside known summer range were visually confirmed at a single station in Menominee Co. on 15 June 1991. Relatively small cedars (10–15 cm in diameter, 9 m in height) with lesser amounts of tamarack, black spruce, and balsam fir contributed a joint canopy cover of 80%.

Purple Finch—Single birds were listed at 6 stations in 5 stands in Jackson Co. in late June–early July 1985–86, about 50 km south of recognized range, in habitat where co-detected with Yellow-rumped Warbler in all stands and 3 stations.

Lincoln's Sparrow—Single birds were detected in 4 tamarack-spruce-ericad swamps in southeastern Jackson Co., 23 June 1985 and 29 June–2 July 1986, where habitat at occupied stations was similar to that of the Yellow-rumped Warbler except for a somewhat lesser canopy cover (30–40%) on average. We did not find both species at the same station. We also discovered a nest with 4 eggs (1 June) plus 10 other individuals (1–13 June) in 1986 near New London, Outagamie Co., in ericaceous muskeg with a scant cover (median 5%) of small tamarack and a few black spruce. These two sites are 60–140 km south of prior summer range in Wisconsin (Robbins 1991). [Nesting was proven (MM) in re-surveys of Jackson Co. swamps in 2001.]

White-throated Sparrow—In conifer swamps, at least, Robbins' (1991) map of the southern boundary of summer range seems to be remarkably accurate in portraying a very abrupt change in presence and abundance.

Figure 6. Detections of Canada Warbler beyond previously recognized summer range (shaded) in southern Wisconsin conifer swamps, 1983–86.

For example, we tallied 122 birds in 11 of 19 study stands at the margin of known range in southeastern Jackson Co., but none in 5 swamps only 7–20 km farther south (past known range) in Monroe Co. Similar contrasts on opposite sides of recognized range limits were noted in southwestern Outagamie Co. (34 birds in one stand at the edge of known range) and in eastern Fond du Lac Co.

An admixture of spruce, cedar, and/or pine may be essential to the White-throat's regular summer presence in conifer swamps. We did not find it in southeastern tamarack swamps, including a Columbia Co. stand where previously recorded by K. Lange (1980) and Mossman and Lange (1982). Our only detections outside known range were 14 birds in a cedar-tamarack swamp in south-cen-

tral Washington Co. on 16 June 1984 (with 8 also listed there on 4 June 1992), and one in tamarack with small amounts of black spruce in Marquette Co. on 6 June 1984.

Discussion

Among the 123 species in our cumulative list of summer birds at 538 counting stations in 168 conifer swamps in Wisconsin, 1983–93, 20 species were detected 20–225 km south of known summer limits as predicated on maps of contiguous breeding ranges in Robbins (1991). Seventeen of these 20 species (excepting Golden-winged Warbler, White-throated Sparrow, and Dark-eyed Junco) were recorded at multiple stands (range 2–18 stands) ≥ 50 km south of previously identified limits (median 80 km, n=108 stand-level detections).

Of 125 southern conifer swamps in our sample, 61 stands (49%) yielded detections of one or more bird species (x=1.8 species) ≥ 50 km beyond known range during single-visit survey work. (For perspective on these distances, the state's north-south midline between Vilas and Green Cos. is about 440 km in length.) No species was detected north of known range in our surveys of 43 conifer swamps in northern Wisconsin or other stands elsewhere in the state, although the Blue-winged Warbler seems to give a historical example of a species that previously encountered and occupied conifer swamps (in southern Wisconsin) as its summer range expanded northward.

Criteria of the Wisconsin breeding bird atlas would class many of our single-visit observations as possible rather than probable or confirmed breeding records, but multiple lines of evidence suggest that most of the distributional data reported here do represent real range revisions for regularly present and presumably breeding birds, not "exceptional" (Robbins 1991) or casual records. Despite limitations on single-visit detectability, as discussed below, several species were widely and frequently recorded beyond known summer range in seemingly appropriate habitats (e.g., Mourning Warbler). Annual presence in one or more southern conifer swamps during 1983–86 surveys also points to regular residency in several species (e.g., Black-and-white Warbler). Many summer records were obtained several weeks after a species' usual migrational departures from southern counties (e.g., Brown Creeper) and even among species that might be regarded as late migrants in early June in southern Wisconsin, most detections occurred ≥ 9 June (e.g., 88% in Canada Warbler). Although nest finding was not an objective in counts, we opportunistically discovered fledglings or nests for 5 of the 20 species found beyond recognized range (e.g., Lincoln's Sparrow). Other sources also support revisions of confirmed breeding ranges in some species (e.g., Broad-winged Hawk).

Finally, patterns of detection appeared to be geographically consistent with habitat variants in conifer swamps in several bird species. Brief single-visit counts cannot detect all species actually present in a survey stand and do not detect different species with equal efficacy. However, for passerine birds that give frequent songs or call notes, stand presence is a

relatively efficient measure of regional distribution. It requires only a single detection of a species at distances constrained only by audibility, and the likelihood of an aural detection rises rapidly when multiple individuals are present.

Proportionality between stand size and counting effort meant that detectability of a given species was correlated with its absolute numbers in a stand or set of stands; we had a similar chance of detecting a species in stands where its absolute numbers were the same. We surely overlooked some species (and many individuals) at the stand level, but it is unlikely that we missed the regional presence of a species in numbers comparable to those of other in-state regions. For example, we cannot assert that the Yellow-rumped Warbler is absent in summer in southeastern tamarack swamps (where unrecorded) but we can say with confidence that its summer population in the southeast (if any) is apparently much smaller than that in the conifer-ericad swamps of Jackson Co. (where numerous). The converse applies to the Northern Waterthrush.

Geographically congruent patterns in distribution seem most evident in Canada Warbler (Fig. 6) and Northern Waterthrush (Fig. 4), which showed nearly identical limits to revised range in tall shrub-tamarack habitats in southeastern counties. Although they also use upland and/or hardwood habitats in southern Wisconsin, five more species may fit this pattern within southeastern conifer swamps: Brown Creeper, Mourning Warbler (Fig. 5), Black-and-white Warbler, Nashville Warbler, and (Fig. 3) Alder Flycatcher. Of these seven species in "new" range in southeastern tamarack-shrub swamps, only the last two were detected (within known range) in the conifer-ericad swamps of Jackson Co. In comparison, "new" southern detections of Yellow-rumped Warbler, Purple Finch, Yellow-bellied Flycatcher, and (in part) Lincoln's Sparrow were mainly confined to the extensive spruce-tamarack-ericad swamps of Jackson Co. Within lowland coniferous habitats, the Black-throated Green Warbler appears to be virtually restricted to northern and eastern swamps dominated or co-dominated by white cedar.

Such discernible patterns in range revisions and habitat use in many species suggest that our distributional data (with a few possible exceptions mentioned earlier) do not involve an unstructured mix of vagrants and laggard migrants. This conclusion is also supported by re-survey work using comparable methods in the 2001 breeding season (MM, BB) at 28 of the same southern stands in Jackson (11), Jefferson (10), and four other counties. This re-sample was much smaller than the earlier set of 125 southern swamps in 21 counties in 1983–86. Even so, 15 of the 19 bird species (excluding Dark-eyed Junco) recorded beyond previously recognized range in 1983–86 were again detected in 2001. After 15+ years—and several avian generations—many species were re-encountered in the same stands where previously found—e.g., Purple Finch, Yellow-rumped Warbler, and others in Jackson Co.; White-throated Sparrow and others in Washington Co.; and Alder Flycatcher in Rock Co.

Conservation Implications

As noted above, many of the 19 bird species (excluding Dark-eyed Junco) detected beyond previously recognized summer ranges in conifer swamps in southern Wisconsin were not evenly distributed in comparable numbers among vegetational variants or, in turn, among the southern subregions where such variants prevail within local swamps. In the Northern Waterthrush, for example, tall shrub-tamarack swamps provided 88% of 24 stand-level detections—all in southeastern counties (Fig. 4)—and 81% of the 62 individuals detected beyond known range.

Only 5 of these 19 species were recorded beyond their known summer ranges in all three of the vegetational categories used here (conifer-ericad, tall shrub-tamarack, and cedar swamps), but our sample (n=5) of regionally rare cedar swamps in southern counties (Washington, Fond du Lac, and—not shown in Fig. 2—a small portion of one stand in Outagamie) was unavoidably small. Only 7 of 17 species (omitting Winter Wren and Black-throated Green Warbler as cedar affiliates) were detected beyond known ranges in both conifer-ericad and tall shrub-tamarack swamps.

Nevertheless, despite our small sample of cedar swamps in southern Wisconsin, each of these three variant types of conifer swamp yielded similar numbers of species (11–13) in stand-level detections beyond known ranges. Although most of them may also occur in other non-wetland or non-coniferous habitats elsewhere in the state, about 9–11 of these 19 species appear to be entirely or principally limited to conifer swamps in revised or possible summer ranges in southern Wisconsin: Olive-sided, Yellow-bellied, and perhaps Alder Flycatchers; Winter Wren and Northern Waterthrush; Yellow-rumped, Canada, and probably Nashville Warblers; Purple Finch and Lincoln's and White-throated Sparrows. Other species within but near the southern limits of known range—e.g., Veery in 6 tall shrub-tamarack stands among 10 survey swamps in Kenosha (1), Racine (2), Walworth (2), and Rock (1) Cos.—may also show frequent summer use of conifer swamps at the state's southeastern edge.

"The conifer swamp has always been considered an exceptionally distinct plant community," said Curtis (1959:239–240), "with great similarity throughout its range . . . [but] the apparent unity is really a physiognomic unity, imparted by the two trees, tamarack and black spruce." Much the same can be said for conifer swamps as breeding bird habitats in southern Wisconsin: summer bird assemblages in southern swamps do overlap but do also differ geographically with the prevalent composition and structure of vegetation in local swamps.

We thus suggest that the entire vegetational and geographic spectrum of southern Wisconsin conifer swamps merits protection as avian habitat if their breeding birds are to be conserved within newly recognized range limits. Many outlying cedar swamps (e.g., Jackson Marsh in Washington Co.) and conifer-ericad swamps (e.g., Beulah Bog in Walworth Co.) in the south already have full or partial protection as designated state natural areas or other public ownerships. Recently re-asserted wetlands law will

also offer partial protection against habitat loss in many conifer swamps.

Protective needs may be most acute for conifer-ericad swamps and their disjunct bird populations in Jackson Co. and for the tamarack swamps of southeastern counties. Jackson Co. holds many of the largest individual conifer swamps in southern Wisconsin—some exceeding 200 ha—as well as the biggest aggregate area of swamps (ca. 6400 ha) among all southern counties. These stands are also the largest remaining outpost of spruce-tamarack-ericad swamps in the south (Fig. 2); their newly documented breeding birds (e.g., Yellow-rumped Warbler) show these stands' affiliation, as bird habitat, with the conifer-ericad swamps of northern Wisconsin. In terms of vegetational integrity, avian habitats in these Jackson Co. stands rank among the least disturbed and most intact of the state's southern conifer swamps. Continuing inventory work in Jackson Co. since 1993 (not reported here) also suggests that a small but vegetationally distinctive set of white pine-red maple swamps will yield additional records beyond previously known summer range for several bird species including Winter Wren, Blue-headed Vireo, and Blackburnian Warbler.

Although their alliance with boreal forest and northern conifer swamps is uncertain (Curtis 1959), southeastern tall shrub-tamarack stands are sometimes seen in vegetational perspective as decadent versions of post-glacial and/or pre-settlement conifer-ericad swamps. In the past, preservation priorities in southeastern swamps have thus tended to focus on those supposedly "intact" stands that more closely resemble northern swamps in vegetational aspects. This viewpoint, accurate or not in vegetational and historical terms, is moot in terms of these swamps' current utility as avian habitat because several bird species—Alder Flycatcher, Northern Waterthrush, Canada Warbler, and others—appear to show habitat use and range revisions congruent with the availability of tall shrub-tamarack swamps in southeastern Wisconsin.

Remnant conifer swamps are a long-declining and now scarce resource in the landscape of southern Wisconsin. The role of conifer swamps in preserving avian diversity and other biological diversity on local, sub-regional, and regional scales in southern counties might be best served by protective plans (e.g., SEWRPC 1997) that give mutual consideration to vegetational assessments and to habitat values, as exemplified here by breeding birds.

Acknowledgments

Fieldwork and data analysis were supported in part by the Wisconsin Department of Natural Resources, the Wisconsin Society for Ornithology, and the Madison and Kettle Moraine Audubon Societies. C. Germain, D. M. Reed, and K. E. Hale provided much logistical help. J. Rosenberg gave technical mapping assistance, and B. Schaub patiently prepared the manuscript. Thank you each and all.

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Blackburnian Warbler *by Dennis Malueg*

Forest Bird Population Trends in the Chequamegon National Forest, Wisconsin (1992–2002)

As part of a forest bird population monitoring program on western Great Lakes national forests, personnel from the University of Minnesota's Natural Resources Research Institute have conducted annual breeding bird surveys at 390 locations throughout the Chequamegon National Forest since 1992. The majority of the 53 species tested showed stable trends for the 11 year period. Ten species increased significantly and 11 species decreased, several of which are ground-nesting species. Recent research on ground-nesting birds and potential effects of forest fragmentation are discussed.

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Introduction

The Chequamegon National Forest (NF) in northern Wisconsin is home to a wide variety of breeding songbirds, including several species of Special Concern (e.g. Black-throated Blue Warbler, Connecticut Warbler) (Wisconsin DNR 2002, Wisconsin Breeding Bird Atlas 2002). Because of continued forest loss and fragmentation in other parts of the Midwest, the forests of northern Wisconsin could be important "sources" for bird populations in other parts of the region (Robinson et al. 1995, Howe et al. 1996). Mounting concerns over recent declines in some continental songbird populations have led to an increased interest in monitoring forest bird populations in the western Great Lakes (Howe et al. 1996).

The U.S. Geological Survey's Breeding Bird Survey (BBS) is currently the best source of information available on continental bird trends (Peterjohn et al. 1995). BBS roadside surveys are conducted by experienced volunteers throughout North America during the breeding season. There are about 90 BBS routes in Wisconsin, although only three lie within the boundary of the Chequamegon NF. This is not a large enough sample to adequately calculate population trends for a localized area such as a national forest. A more intensive sampling effort is needed to evaluate population trends.

In 1992, a forest bird monitoring project was initiated on the Chequamegon NF by researchers at the Natural Resources Research Institute, University of Minnesota. This project is part of a larger monitoring effort on western Great Lakes forests, including the Superior and Chippewa National Forests in northern Minnesota, designed to document population trends for forest birds in the region (Hanowski and Niemi 1995, Hawrot et al. 1998, Lind et al. *in press*). Here we report results from the Chequamegon NF between 1992 and 2002.

Methods

Sampling design and point count methodology used in our program follow national and regional standards (Ralph et al. 1993, 1995, Howe et al. 1997). The sampling unit is a forest stand of about 16 ha (40 acres), which typically includes three individual point counts. A total of 132 stands (390 points) were sampled annually during early- to mid-June (Figure 1). Point count locations were established in a variety of forest types ranging from lowland coniferous to upland deciduous forests, encompassing relatively undisturbed areas as well as actively managed forests. Survey points were stratified across forest types according to the proportions that are present, so that our sample is representative of the forested area of the Chequamegon NF as a whole.

Ten-minute point counts were conducted by personnel experienced and trained in point count methodology (Hanowski and Niemi 1995). Counts were done from 0.5 hour before to 4 hours after sunrise on days with little wind ($\leq$ 15 km/hr) and little or no precipitation. All birds seen or heard within 100m of the count center were used in the analyses, excluding birds flying over. A species was included in the analysis if it was observed on a minimum of five stands and in at least three years on each stand.

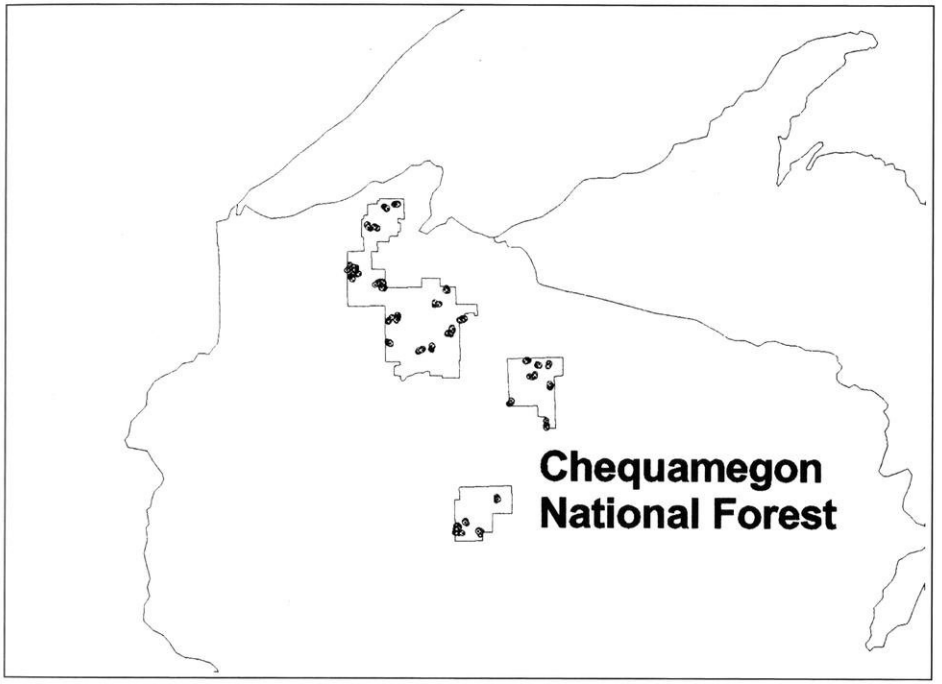

Figure 1. Location of forest bird monitoring points in the Chequamegon National Forest.

When an entire population is not censused, trends are characterized by evaluating an annual index of population size over a given time period. We computed this index by using loss-regression (James et al. 1996) to smooth the observed abundance from each stand. Observed abundance was calculated by summing the number of individuals of each species across two points per stand. Even though observers were trained to avoid double-counting, we used the two farthest separated points within a stand to further minimize the possibility of double-counting the same individual. The smoothed abundance values were averaged across all stands to give an annual index of population size for each species. We then used simple linear regression to model the relationship between the annual index and year. Population trends were considered significant if the regression was significant at $\alpha = 0.05$.

Results and Discussion

Population trends were calculated for 53 species on the Chequamegon NF. An additional 75 species were detected at least once during the 11 years of sampling. These species represent about 5% of the total number of individuals detected on surveys. They are comprised of 1) non-forest birds detected incidentally (e.g. Tree Swallow (*Tachycineta bicolor*), Wilson's Snipe (*Gallinago gallinago*)), 2) species at the edge of their range (e.g. Northern Cardinal (*Cardinalis cardinalis*),

Lincoln's Sparrow (*Melospiza lincolnii*)), 3) species not adequately surveyed with point counts (e.g. waterfowl, raptors) and 4) rare species, some of which are of Special Concern (Wisconsin DNR 2002) (e.g. Boreal Chickadee (*Poecile hudsonica*), Black-throated Blue Warbler (*Dendroica caerulescens*)).

Over half (32) of the 53 species tested for trends had non-significant (stable) trends between 1992 and 2002. Ten species (19%) increased significantly ($P \leq 0.05$) and 11 (21%) have declined (Table 1). Here we present the results from all species with significant trends ($\alpha = 0.05$), but we will focus our discussion on those with trends significant at the $\alpha = 0.01$ level. Graphs of annual abundance for

Table 1. Population trends and test statistics for significantly increasing and decreasing species on the Chequamegon NF between 1992 and 2002, with corresponding Breeding Bird Survey (BBS) trends for Wisconsin between 1980 and 2001. Significant trends at the $\alpha = 0.05$ level are in bold. N = number of stands analyzed for NRRI Chequamegon NF trends, or number of routes analyzed for BBS trends.

		Chequamegon NF (1992–2002)				BBS (1980–2001)		
Species	Scientific Name	Trend[a]	P	R^2	N	Trend[b]	P	N
Yellow-bellied Sapsucker	*Sphyrapicus varius*	0.018	0.07	0.31	50	**4.3**	**0.00**	**54**
Hairy Woodpecker	*Picoides villosus*	–0.012	0.37	0.09	10	**–1.8**	**0.03**	**77**
Eastern Wood-Pewee	*Contopus virens*	**–0.040**	**0.01**	**0.61**	**45**	0.2	0.74	91
Yellow–bellied Flycatcher	*Empidonax flaviventris*	**0.037**	**0.02**	**0.47**	**22**	7.2	0.08	12
Alder Flycatcher	*Empidonax alnorum*	–0.035	0.09	0.28	15	**4.2**	**0.00**	**55**
Least Flycatcher	*Empidonax minimus*	0.007	0.72	0.02	55	–1.4	0.05	81
Great Crested Flycatcher	*Myiarchus crinitus*	–0.001	0.93	0.00	23	–0.8	0.11	90
Eastern Kingbird	*Tyrannus tyrannus*	**0.039**	**0.01**	**0.53**	**6**	**–2.4**	**0.00**	**89**
Blue-headed Vireo	*Vireo solitarius*	–0.014	0.41	0.08	13	**6**	**0.01**	**22**
Red-eyed Vireo	*Vireo olivaceus*	**0.076**	**0.00**	**0.65**	**113**	**2.6**	**0**	**90**
Blue Jay	*Cyanocitta cristata*	0.016	0.12	0.25	57	–0.6	0.12	92
Black-capped Chickadee	*Poecile atricapillus*	–0.016	0.07	0.33	67	**1.3**	**0.01**	**90**
Red-breasted Nuthatch	*Sitta canadensis*	–0.005	0.53	0.05	25	**2.6**	**0.00**	**39**
White–breasted Nuthatch	*Sitta carolinensis*	0.004	0.37	0.09	14	0	0.99	87
Brown Creeper	*Certhia americana*	–0.021	0.06	0.34	38	0	1	14
House Wren	*Troglodytes aedon*	0.033	0.10	0.28	5	**1.5**	**0.00**	**90**
Winter Wren	*Troglodytes troglodytes*	**–0.066**	**0.00**	**0.94**	**40**	**2.3**	**0.02**	**32**
Golden-crowned Kinglet	*Regulus satrapa*	–0.013	0.48	0.06	8	1.3	0.83	13
Veery	*Catharus fuscescens*	**–0.043**	**0.03**	**0.44**	**55**	**–2**	**0.00**	**58**
Hermit Thrush	*Catharus guttatus*	**–0.045**	**0.00**	**0.88**	**73**	**2.7**	**0.00**	**35**
Wood Thrush	*Hylocichla mustelina*	**0.038**	**0.01**	**0.56**	**12**	1.5	0.24	77
American Robin	*Turdus migratorius*	0.018	0.17	0.20	77	0.3	0.31	92
Brown Thrasher	*Toxostoma rufum*	0.022	0.12	0.25	10	**–2.7**	**0.00**	**85**
Golden-winged Warbler	*Vermivora chrysoptera*	0.009	0.64	0.03	8	–0.3	0.82	40
Nashville Warbler	*Vermivora ruficapilla*	**–0.023**	**0.00**	**0.61**	**83**	**1.5**	**0.02**	**42**
Northern Parula	*Parula americana*	0.003	0.40	0.08	24	1.2	0.57	22
Chestnut-sided Warbler	*Dendroica pensylvanica*	**0.029**	**0.01**	**0.59**	**63**	**1.7**	**0.01**	**56**
Yellow-rumped Warbler	*Dendroica coronata*	–0.002	0.92	0.00	43	**3.9**	**0.00**	**34**
Black-throated Green Warbler	*Dendroica virens*	–0.009	0.24	0.15	89	**3.3**	**0.00**	**28**
Blackburnian Warbler	*Dendroica fusca*	**0.043**	**0.01**	**0.58**	**53**	4.4	0.1	25
Pine Warbler	*Dendroica pinus*	0.004	0.79	0.01	18	**10.5**	**0.00**	**37**
Black-and-white Warbler	*Mniotilta varia*	**–0.028**	**0.00**	**0.63**	**42**	1.6	0.13	46
American Redstart	*Setophaga ruticilla*	**0.096**	**0.00**	**0.69**	**13**	**4.2**	**0.00**	**70**

Ovenbird	*Seiurus aurocapillus*	**–0.088**	**0.02**	**0.47**	**113**	**0.9**	**0.00**	**75**
Northern Waterthrush	*Seiurus noveboracensis*	**0.070**	**0.01**	**0.52**	**9**	–2.1	0.1	24
Mourning Warbler	*Oporornis philadelphia*	–0.004	0.80	0.01	35	1.1	0.23	58
Common Yellowthroat	*Geothlypis trichas*	**–0.043**	**0.00**	**0.69**	**36**	0.1	0.54	92
Canada Warbler	*Wilsonia canadensis*	0.010	0.44	0.07	18	1.5	0.59	21
Scarlet Tanager	*Piranga olivacea*	–0.011	0.10	0.27	39	**1.5**	**0.01**	**76**
Eastern Towhee	*Pipilo erythrophthalmus*	**0.045**	**0.02**	**0.48**	**14**	0.7	0.42	64
Chipping Sparrow	*Spizella passerina*	–0.007	0.64	0.03	18	**0.9**	**0.03**	**92**
Clay–colored Sparrow	*Spizella pallida*	0.045	0.55	0.04	11	–1.9	0.06	54
Vesper Sparrow	*Pooecetes gramineus*	**0.067**	**0.03**	**0.43**	**8**	**–4.7**	**0.00**	**74**
Song Sparrow	*Melospiza melodia*	**–0.030**	**0.00**	**0.73**	**22**	0.4	0.11	92
Swamp Sparrow	*Melospiza georgiana*	–0.007	0.62	0.03	13	–0.3	0.83	68
White-throated Sparrow	*Zonotrichia albicollis*	–0.035	0.06	0.35	40	–0.1	0.86	39
Rose-breasted Grosbeak	*Pheucticus ludovicianus*	0.014	0.17	0.20	56	0.6	0.39	89
Indigo Bunting	*Passerina cyanea*	–0.010	0.60	0.03	7	**–0.9**	**0.02**	**92**
Red-winged Blackbird	*Agelaius phoeniceus*	**–0.172**	**0.00**	**0.72**	**5**	**–1.9**	**0.00**	**92**
Brewer's Blackbird	*Euphagus cyanocephalus*	0.357	0.06	0.34	5	**–4**	**0.00**	**51**
Brown-headed Cowbird	*Molothrus ater*	0.012	0.42	0.07	24	–0.9	0.06	91
American Goldfinch	*Carduelis tristis*	–0.004	0.80	0.01	7	**2.1**	**0.00**	92
Evening Grosbeak	*Coccothraustes vespertinus*	**–0.083**	**0.02**	**0.49**	6	3.7	0.21	18

a—change in the number of individuals/stand/year
b—% change/year

all species tested (as well as monitoring results from study areas in Minnesota) are available at http://www.nrri.umn.edu/mnbirds/.

The Red-eyed Vireo, Wood Thrush, Chestnut-sided Warbler, Blackburnian Warbler, and American Redstart showed significant ($P \leq 0.01$) increasing trends (Figure 2). Of these, the Red-eyed Vireo and American Redstart appeared to be the most convincing, based on the consistency of the trend through time and actual numerical changes (Table 1). For example, the Red-eyed Vireo had an annual change of 0.076 birds/stand, which equates to an annual increase of more than 3,100 individuals if extrapolated over the approximately 257,000 ha of appropriate Red-eyed Vireo habitat in the Chequamegon NF. The Red-eyed Vireo is a long-distance migrant that nests in trees and shrubs in a variety of deciduous and mixed deciduous/coniferous forest types (Cimprich et al. 2000). The American Redstart is a long-distance migrant that breeds in shrubby, early-successional deciduous and mixed forests, as well as the understory of older deciduous forests (Sherry and Holmes 1997).

The Wood Thrush, Chestnut-sided Warbler, and Blackburnian Warbler also had highly significant trends, although each had relatively small numerical increases (Table 1). The Wood Thrush is a long-distance migrant that commonly nests in the subcanopy of deciduous and mixed forests (Roth et al. 1996). The Chestnut-sided Warbler is a long-distance migrant that nests in the shrub layer of early-successional forests (Richardson and Brauning 1995). The Blackburnian Warbler is a canopy-nesting long-distance migrant that nests in coniferous and mixed forests (Morse 1994). Breeding Bird Survey results from Wisconsin between 1980 and 2001 show significant increases in Red-eyed Vireo, American Redstart, and Chestnut-sided Warbler, but sta-

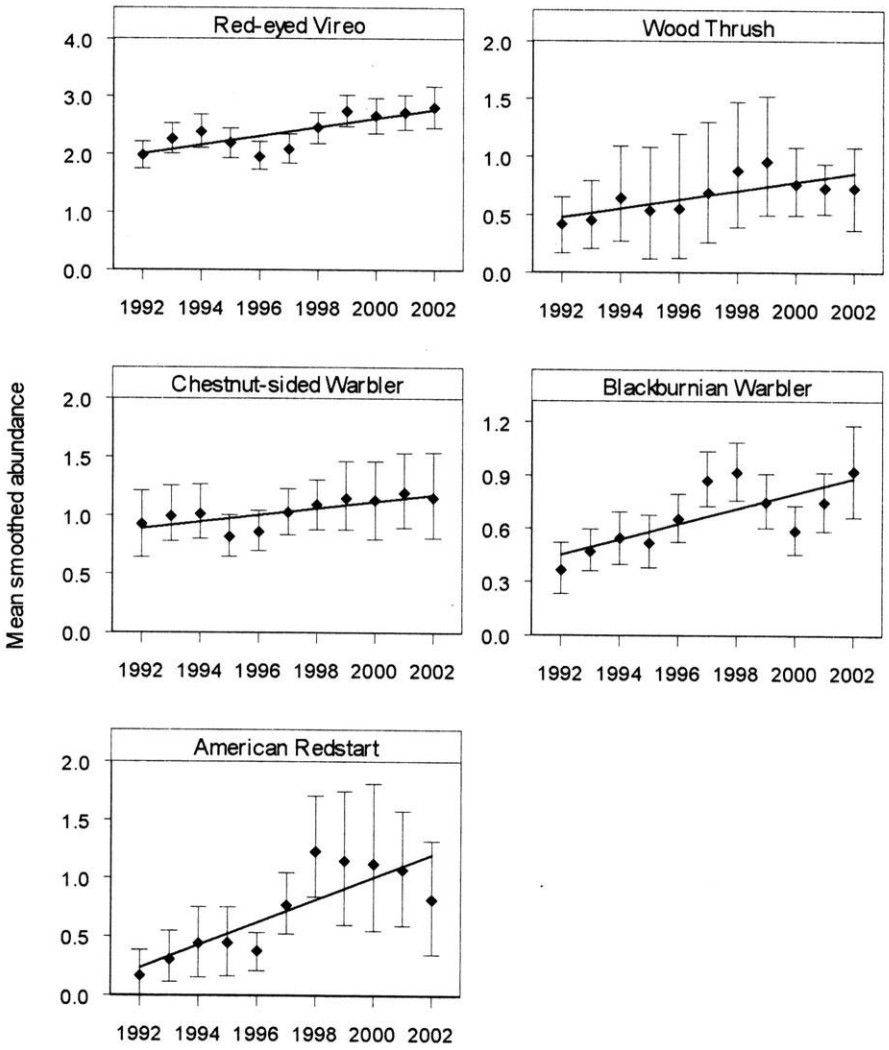

Figure 2. Mean smoothed abundance per stand and 95% confidence intervals for increasing (P # 0.01) species on the Chequamegon NF (1992–2002). Straight line is from simple linear regression of smoothed abundance on year. Note scale of graph for each species.

ble (non-significant) trends for Wood Thrush and Blackburnian Warbler (Table 1).

The Eastern Wood-Pewee, Winter Wren, Hermit Thrush, Nashville Warbler, Black-and-white Warbler, Common Yellowthroat, Song Sparrow, and Red-winged Blackbird showed significant decreasing trends at the $\alpha = 0.01$ level (Figure 3). Of these, the Eastern Wood-Pewee, Winter Wren, Hermit Thrush, and Common Yellowthroat

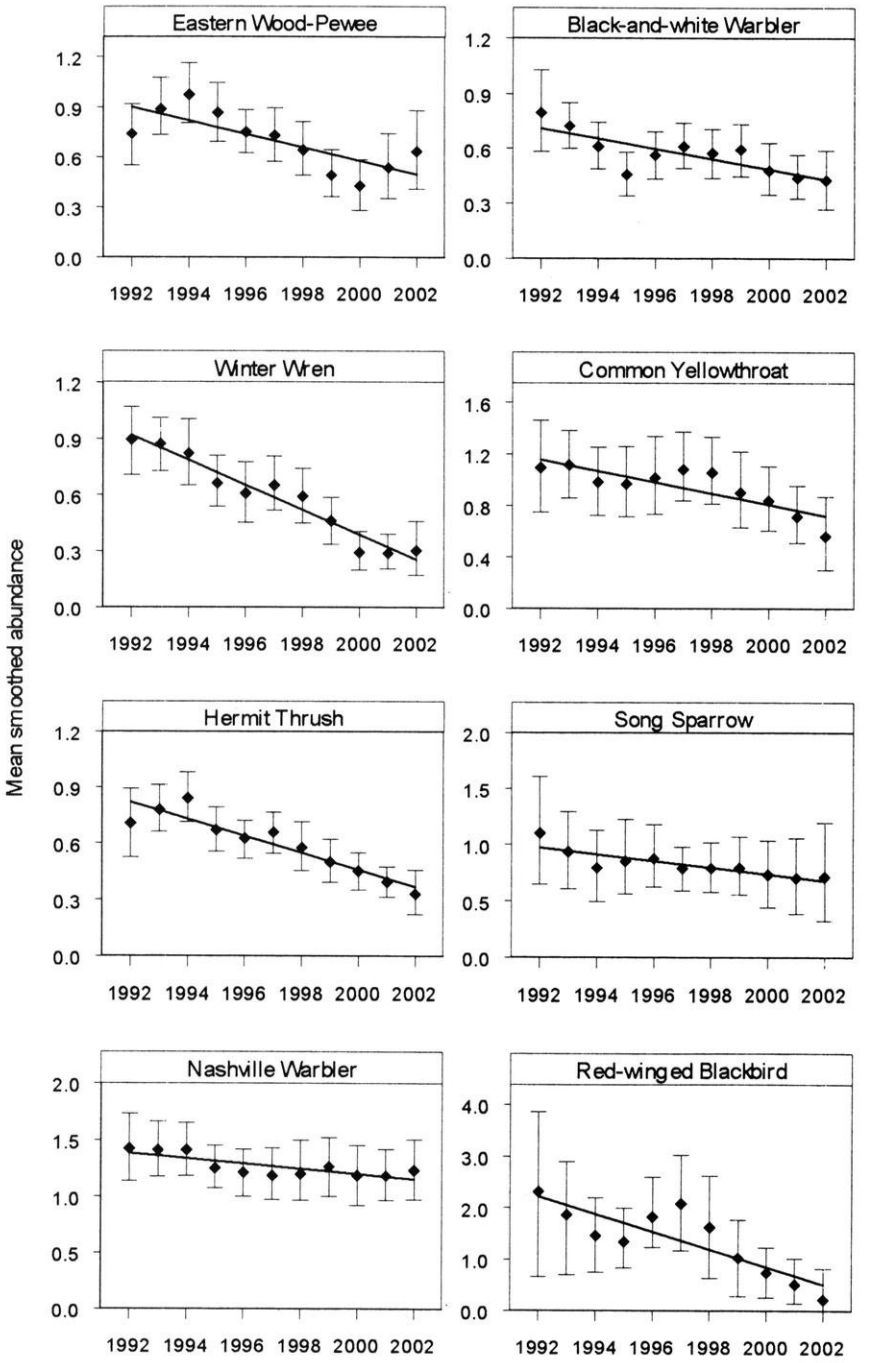

Figure 3. Mean smoothed abundance per stand and 95% confidence intervals for decreasing (P # 0.01) species on the Chequamegon NF (1992–2002). Straight line is from simple linear regression of smoothed abundance on year. Note scale of graph for each species.

have the most convincing declines. The Eastern Wood-Pewee is a long-distance migrant that nests in the canopy of mature deciduous and coniferous forests (McCarty 1996). The Winter Wren is a short-distance migrant that nests in coarse woody debris on the ground in coniferous and mixed forest types (Hejl et al. 2002). The Hermit Thrush is a short-distance migrant that nests on the ground in coniferous and mixed forests (Jones and Donovan 1996). The Common Yellowthroat is a ground-nesting short-distance migrant that breeds primarily in marshes, alder swamps, and recent clearcuts, as well as lowland conifer stands (Guzy and Ritchison 1999).

The Nashville Warbler, Black-and-white Warbler and Song Sparrow also had highly significant declines, although each had relatively small numerical decreases (Table 1). Both the Nashville Warbler and Black-and-white Warbler are long-distance migrants that nest on the ground in coniferous and mixed forests (Williams 1996, Kricher 1995). Song Sparrows are ground-nesting short-distance migrants that breed in open habitats, such as clearcuts, old fields, and suburban areas (Arcese et al. 2002). The Red-winged Blackbird had the largest numerical decrease, although it only occurred frequently enough to be tested on five stands. It is a short-distance migrant that nests in shrubs and emergent vegetation in open wetlands (Yasukawa and Searcy 1995). None of the species with highly significant declines showed declines on Wisconsin BBS routes between 1980 and 2001 (Table 1). The Winter Wren, Hermit Thrush and Nashville Warbler significantly increased on the BBS and the Eastern Wood-Pewee, Black-and-white Warbler, Common Yellowthroat, and Song Sparrow showed stable trends.

Some of the trends of species with relatively low sample sizes could be due to local effects at our survey sites rather than forest-wide effects. For example, the Eastern Kingbird, Eastern Towhee, and Vesper Sparrow occur almost exclusively on our surveys in the Moquah Barrens Wildlife Management Area in Bayfield County (although each occurs in non-forested areas throughout the Chequamegon NF). Large portions of the Moquah Barrens are managed for the jack pine barrens ecosystem through the use of brushing and burning, which is beneficial to these three "open country" bird species. The Red-winged Blackbird has declined, but this is likely associated with changing local conditions in beaver ponds, rather than an overall decline in the national forest.

A breeding bird monitoring program has also been conducted annually on the Nicolet National Forest in northeast Wisconsin since 1987 (Howe and Roberts, *in press*). During one weekend in June, volunteers survey permanent points on the forest, alternating annually between the northern and southern portion of the forest. Some of these survey points are only about 100 km east of our points in the Chequamegon NF. However, abundance trends from the two forests are quite different. While four of the declining species from the Chequamegon NF are also declining on the Nicolet NF (Eastern Wood-Pewee, Black-and-white Warbler, Veery, and Song Sparrow), none of the increasing species on the Chequamegon NF are increasing on the Nicolet NF. Note that three of the four species declining on both surveys

are ground-nesters. It is unclear what would lead to differences in results, but geography, study design and analysis, or timing of surveys may be factors. When interpreting population trends among a large group of species, we often look for common life history traits among groups of increasing and decreasing species. One of the life history traits that stands out among the declining species in our study is ground-nesting. Because 36% of the species we tested are ground nesters, we expect about 36% of the increasing species to be ground-nesters, and 36% of the decreasing species to be ground-nesters. However, this is not the case. Eight of the 11 declining species nest on the ground (73%), whereas only three of the ten increasing species (30%) are ground-nesters.. In addition, we observed declines in ground-nesting species across many habitats and successional stages, including early-successional forests (e.g. Common Yellowthroat, Song Sparrow) and mature forests (e.g. Winter Wren, Ovenbird). Ground-nesting species were also the most commonly declining species in northern Minnesota using the same methodology, personnel, and time frame (Lind et al. *in press*).

There are many factors that could affect ground-nesting species, such as forest fragmentation, increased residential development, and climate change. There is evidence that lower nest success rates for ground-nesting species in our region may be a result of changing forest conditions such as forest fragmentation (Flaspohler 2001). Numerous studies have shown that nest predation is the main cause of nest failure for most North American songbird species (reviewed by Martin 1992). Recent studies in northern Wisconsin, Minnesota, and Michigan have demonstrated elevated nest predation rates in ground nests at the edges of recent clearcuts (Fenske-Crawford and Niemi 1997 (artificial nests), Manolis et al. 2000, 2002 (natural nests), Flaspohler et al. 2001(natural nests)). Hanski et al. (1996) did not observe an edge effect, although their study area was highly fragmented and may have been "saturated" with edge habitat.

There is also evidence that forested landscapes have changed in the region over the past decade. For example, in northeastern Minnesota between 1990 and 1995, Wolter and White (2002) found significant increases in forest edge density, decreases in average forest patch size, and decreases in the area of interior forest on the landscape. Although it is unclear what factor(s) drive forest bird population trends, it is possible that forest fragmentation and edge-related changes in nest predation could be important factors that explain decreasing population trends of ground-nesting birds in the region.

The majority of forest bird species tested for trends in the Chequamegon NF have stable populations and most species with declining trends are ground-nesters. Forest fragmentation could be having adverse effects on ground-nesting birds in the region, and it may be necessary to take management steps to alleviate these effects if declines continue. Clustering harvest units, larger harvest patch sizes, reducing irregularly-shaped cuts, and using uneven-aged management have all been suggested as methods to reduce forest fragmentation (Faaborg et al. 1995, Howe et al. 1996). The

Chequamegon NF is an important area for breeding birds in northern Wisconsin, and could also be important to sustaining populations in other parts of the region.

This monitoring program has provided much-needed data on trends in off-road bird populations in the national forests of the western Great Lakes region. Because our sampling sites are habitat specific we have also been able to develop bird/habitat associations, which have been used to evaluate habitat selection at different geographic scales and to evaluate potential effects of future management across the landscape under different scenarios. Data from this monitoring effort assist the U.S. Forest Service in meeting their congressional mandate to monitor vertebrate species on their lands (Manley et al. 1993), and are used in forest planning and the evaluation of proposed management activities (Niemi et al. 1998). As conditions change into the future (e.g. forest management, climate change, disease, etc.) an intensive regional monitoring program such as ours will be important for examining related changes in forest bird abundance and distribution.

Acknowledgments

We thank the nearly 50 individuals who have conducted surveys over the past 11 years. We also thank U.S. Forest Service personnel for logistical support, particularly Linda Parker. Funding for the monitoring was provided by the Chequamegon National Forest, the Legislative Commission for Minnesota Resources, and the Minnesota Department of Natural Resources. This is contribution number 339 of the Center for Water and the Environment of the Natural Resources Research Institute.

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

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An 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

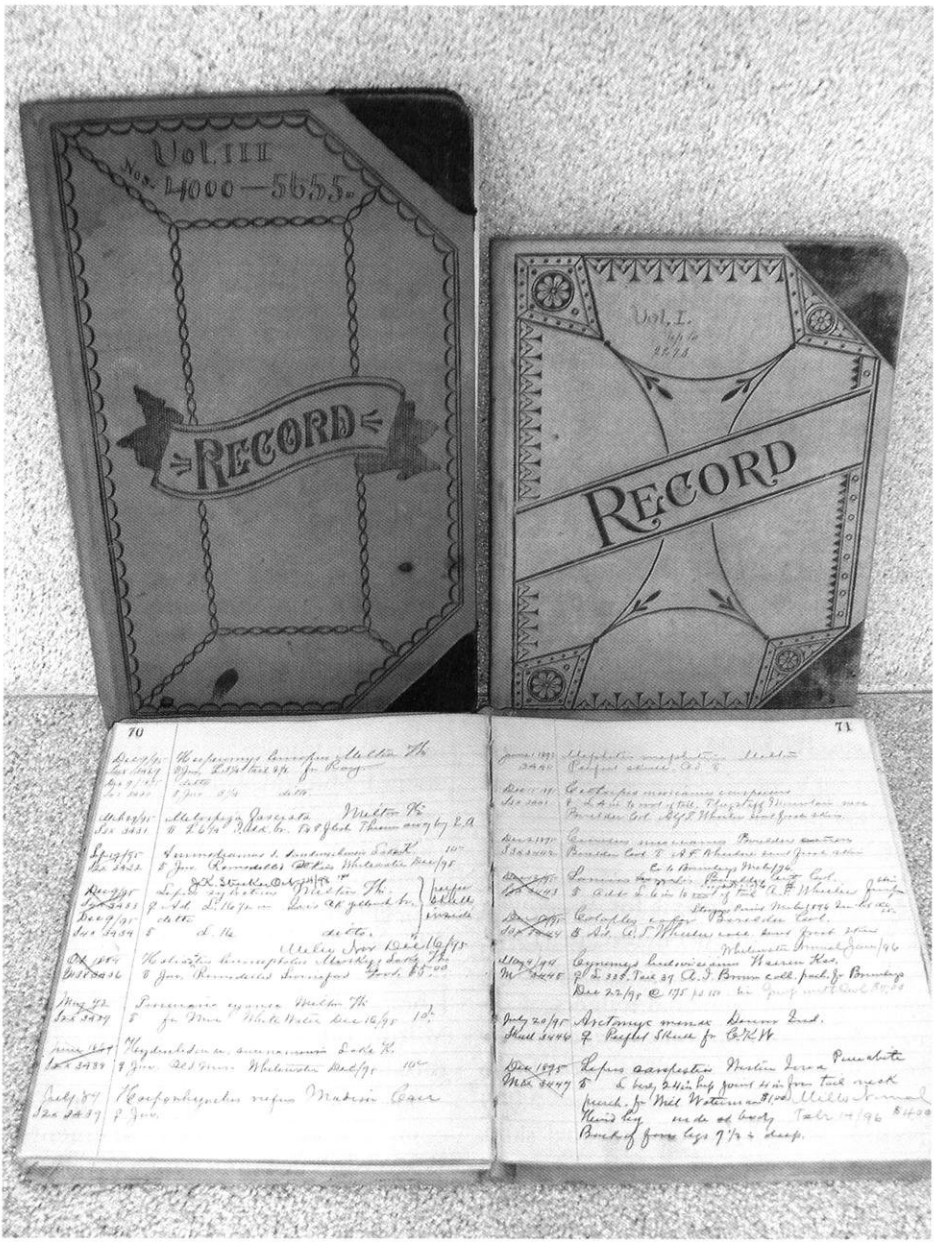


Figure 1. Six original ledgers (three shown here) cataloging Ludwig Kumlien's extensive collection of Wisconsin birds, nests, and eggs were obtained by Sumner Matteson in 1999 from an Illinois antique dealer.

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 Sumner 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 Angelia 20 February 1883) provides a glimpse inside the cabin. "[The] roomy log house . . . had a large room 20 feet long and 16 feet wide, with a lean-to bedroom to the north and a chamber 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

Figure 2. Aaron Ludwig Kumlien (1853–1902), early Wisconsin ornithologist, professor at Milton College, and coauthor of *The Birds of Wisconsin* (1903).

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[1]: "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:

Figure 3. Thure Kumlien (1819–1888), father of Ludwig Kumlien, was one of Wisconsin's pioneering ornithologists.

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

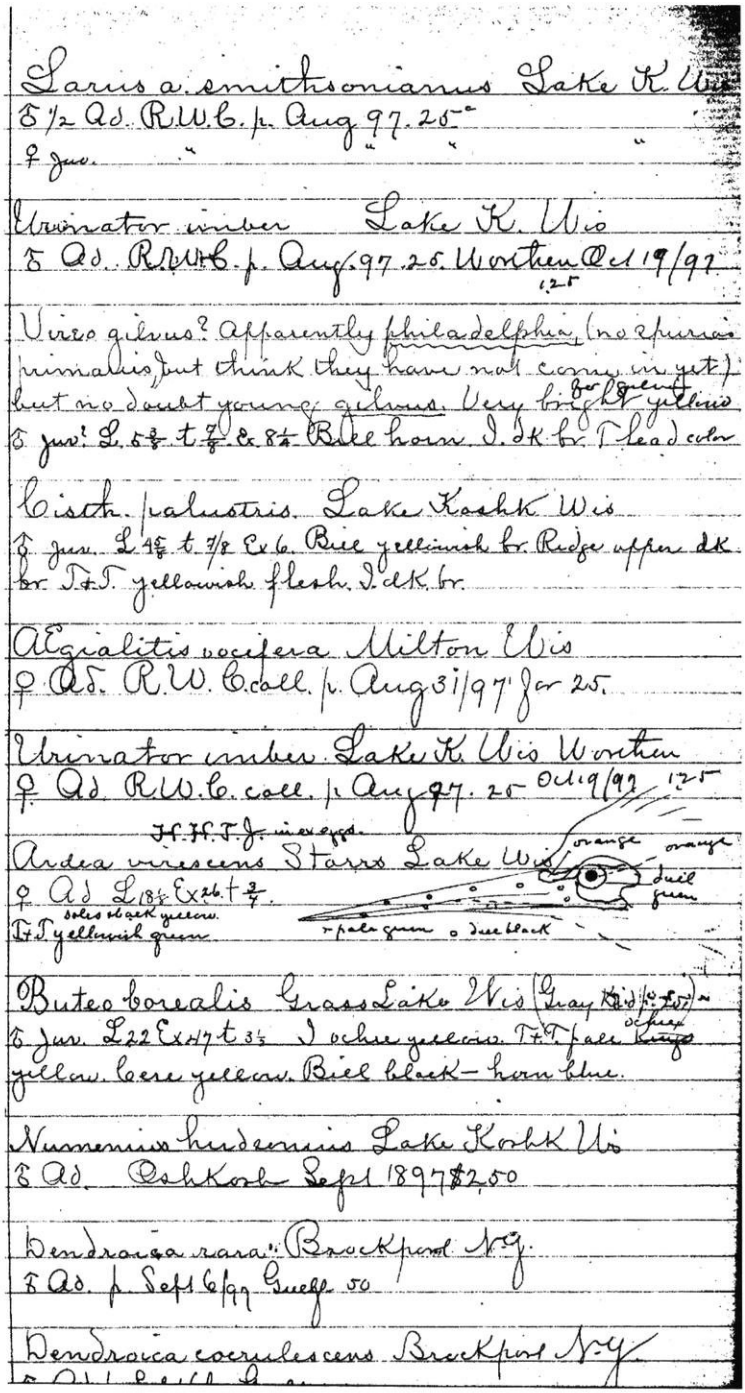


Figure 4. Ludwig Kumlien sometimes sketched birds' heads, eyes, or bills in his ledger entries in order to record specific colors likely to fade with time on his specimens. On this page (from Vol. 3, p. 92 of the bird skins ledgers) he describes the color of a Green Heron (*Ardea virescens*) head.

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 great 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 [valisineria]*), 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 coats [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 Busseyville. 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

Goshawk—24 March, "both old and young"; Passenger Pigeon—25 March; Peregrine Falcon—30 March, "with a just captured [Gadwall] male"; Greater Prairie-Chicken—30 March, "playing"; Passenger Pigeon—1 April, "Vast swarms . . . flying south, very high and slow"; Loggerhead Shrike—2 April, "building during a heavy snowstorm"; Swallow-tailed Kite—8 April; Passenger Pigeon—15 April, "Thousands . . . flying east very high, early in the morning"; American White Pelican—27 April; Loggerhead Shrike—1 May, "noticed pinning a bug on tree"; Loggerhead Shrike—3 May, "building"; Passenger Pigeon—3 May, "very abundant"; Passenger Pigeon—14 May, "egg of *Ectopistes migratoria*"; Passenger Pigeon—18 May, "Vast flocks of Pigeons flying north"; Passenger Pigeon—19 May, "Several pigeon nests"; Caspian Tern—22 May, "Caspian tern and lots of other tern on the lake."

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, Semipa, 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 leucopterus*), 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[2]."

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[3] 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 candicans* [now *F. rusticolus*, Gyrfalcon], and two species of *Lagopus* [ptarmigan] 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 foetida* [now *Phoca groenlandica*, harp seal]. As soon as the snow begins to melt *Plectrophanes nivalis* [*Plectrophenax nivalis*, Snow Bunting] greets one with very pretty song. [Common] Eiders, *Somateria mo*[*l*]*lissima*, 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 glaucoides kumlieni*)—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[4] described the specimen brought back by Kumlien as a new species (*Larus kumlieni*) 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 leucopterus*" or Iceland Gull (note different species name).

Although known for his zoological contributions during the expedition, Kumlien also collected many plant species, mainly from Niantilic Harbor, Annanactook, the Kikkerton Islands, and (mostly) Greenland's Disko Island. These were later identified and catalogued by famed Harvard University botanist Asa Gray[5] (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

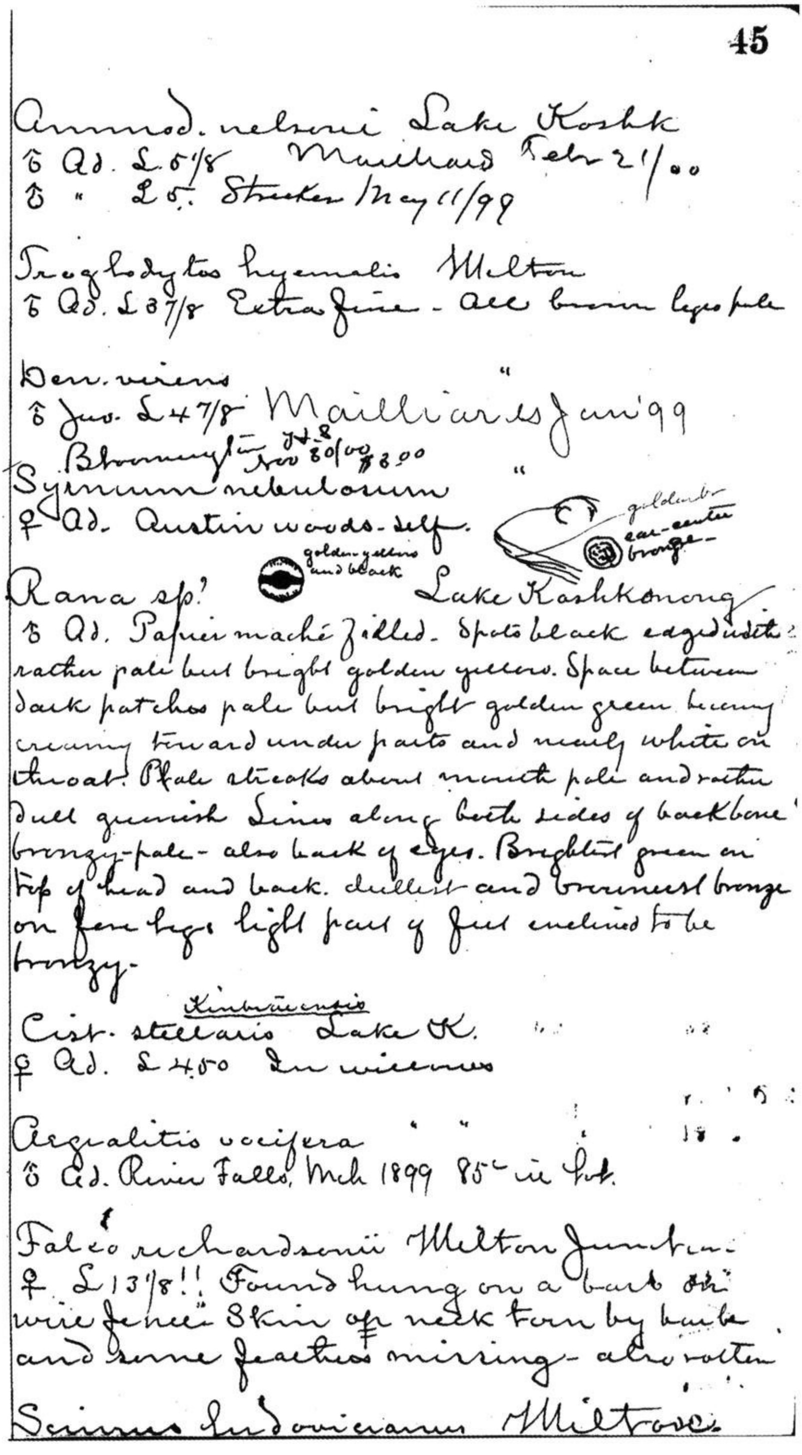


Figure 5. Amidst other bird records is a sketch made by Ludwig Kumlien showing the eye and ear placement on a frog (*Rana* sp.) (from Vol. 4, p. 45 of the bird skins ledgers).

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 definate [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-

termining 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 about 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,

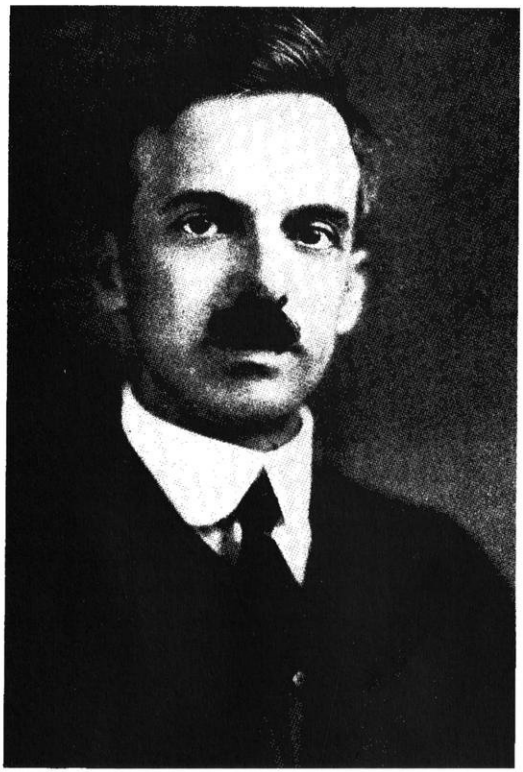


Figure 6. Ned Hollister (1876–1924), native of Delavan, Wisconsin, and coauthor with Ludwig Kumlien of *The Birds of Wisconsin* (1903).

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 Kumlien, 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 Kumlien'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;

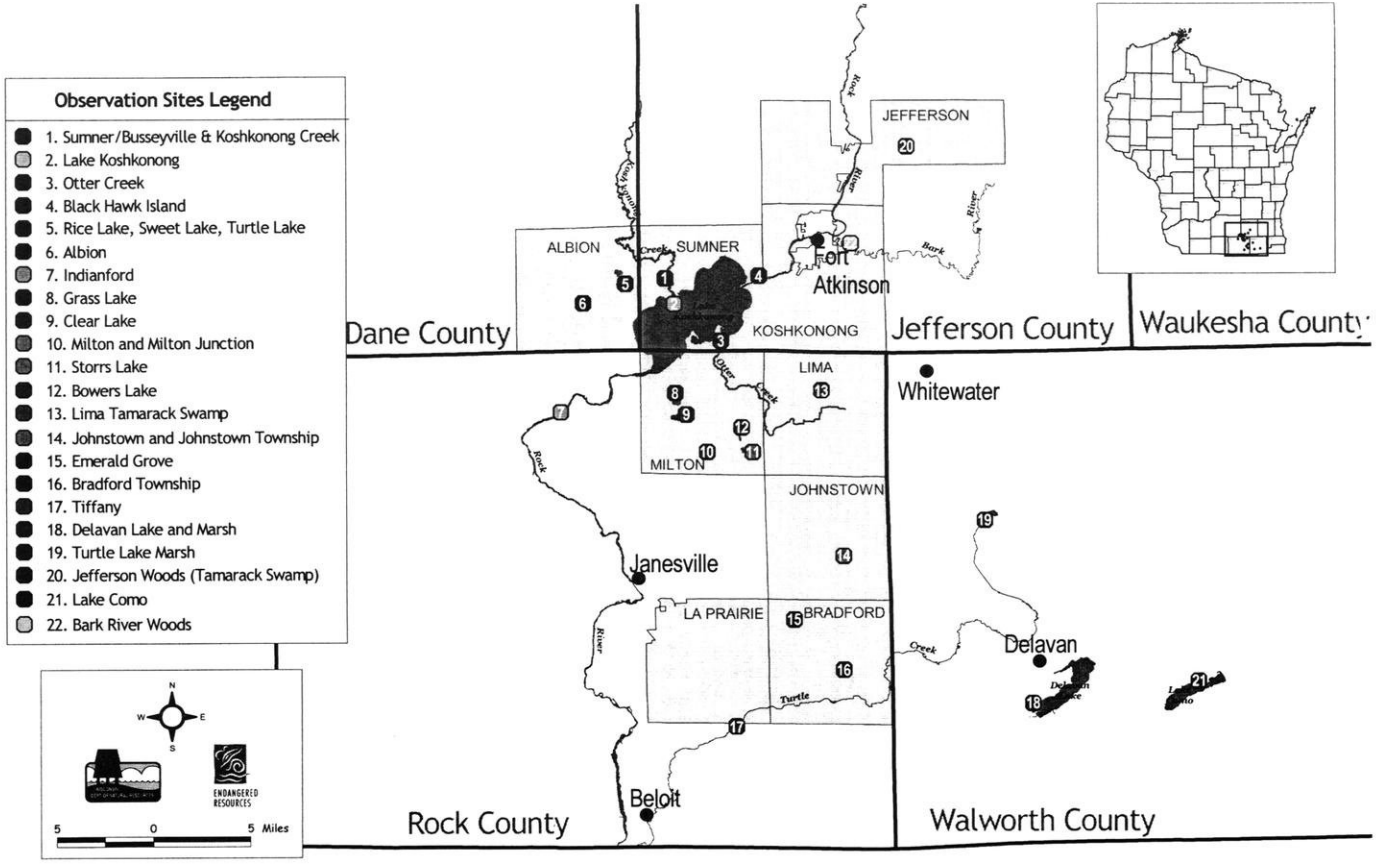


Figure 7. Favorite haunts in southeastern Wisconsin where Ludwig Kumlien, Thure Kumlien, and Ned Hollister collected birds and nests. Map prepared by Julie Bleser of the Wisconsin DNR.

the Lima tamarack swamp near Milton; the Lake Koshkonong marshes, fields, and woods; Lake Koshkonong's Otter Creek and Black Hawk Island; the Sumner (Busseyville) 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 *Nidiologist* 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 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[7]—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."

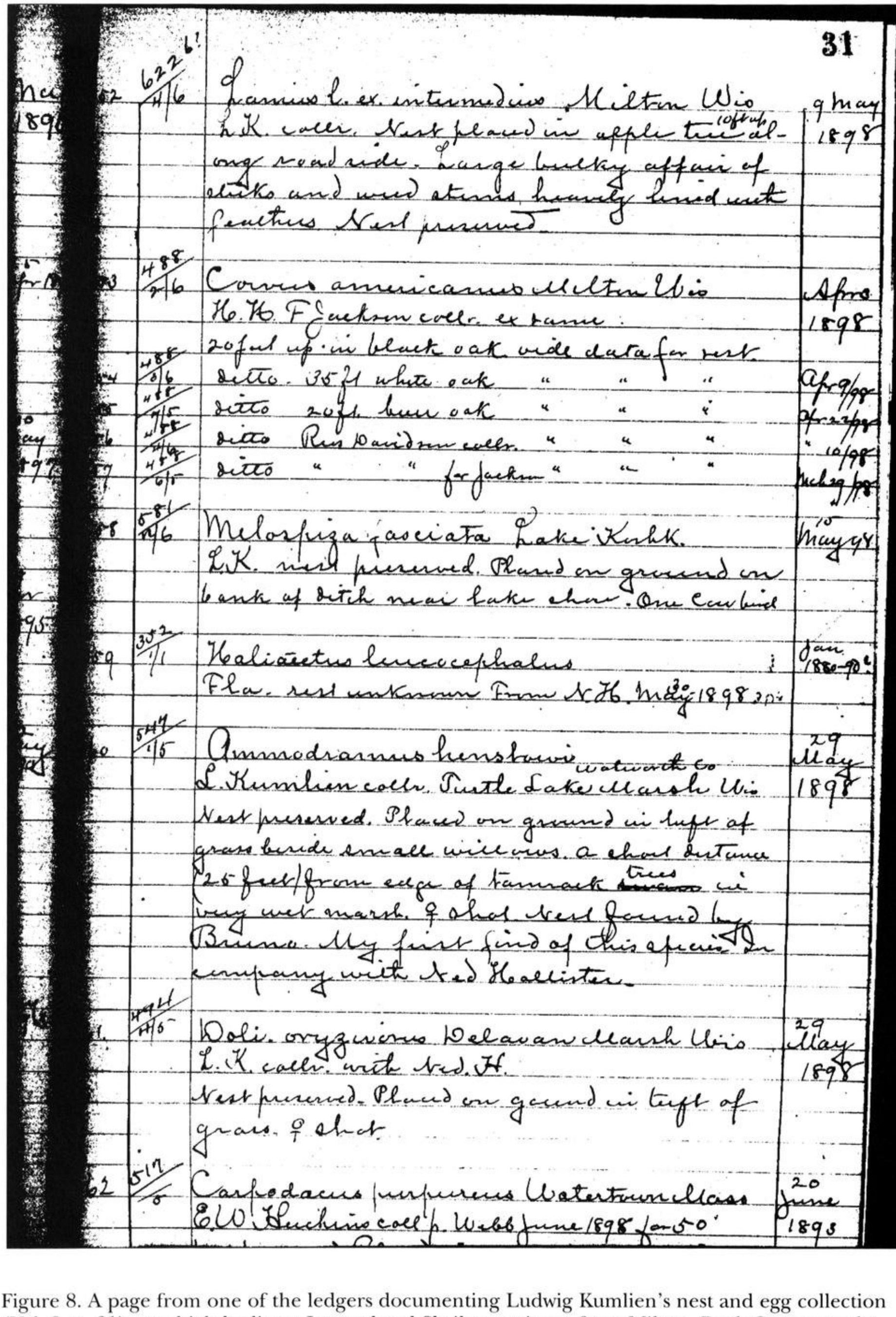
The Value of the Kumlien Ledgers

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 Nashvilles nested 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] perf[ect].* 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



31

622 4/6 Lanius l. ex. intermedius. Milton Wis. L.K. coll. Nest placed in apple tree (10 ft up) along road side. Large bulky affair of sticks and weed stems, heavily lined with feathers. Nest preserved. — 9 May 1898

488 2/6 Corvus americanus Milton Wis H. H. F. Jackson coll. ex same. 20 feet up in black oak vide data for nest. — Apr 5 1898

488 3/6 ditto 35 ft white oak " " " — Apr 9/98

488 7/5 ditto 20 ft burr oak " " " — Apr 22/98

488 4/4 ditto Rev Davidson coll. " " " — " 10/98

488 6/5 ditto " " for Jackson " " " — May 29/98

581 4/6 Melospiza fasciata Lake Koshk. L.K. nest preserved. Placed on ground on bank of ditch near lake shore. One cow bird — 15 May 98

352 1/1 Haliaeetus leucocephalus Fla. nest unknown From N.H. May 30 1898 — Jan 1880-90

547 1/5 Ammodramus henslowii Walworth Co. L. Kumlien coll. Turtle Lake Marsh Wis. 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. ♀ shot. Nest found by Bruno. My first find of this species. In company with Ned Hollister. — 29 May 1898

494 4/5 Doli. oryzivorus Delavan Marsh Wis L.K. coll. with Ned. H. Nest preserved. Placed on ground in tuft of grass. ♀ shot. — 29 May 1898

517 /5 Carpodacus purpureus Watertown Mass E.W. Hutchins coll. p. Webb June 1898 for 50' — 20 June 1898

Figure 8. A page from one of the ledgers documenting Ludwig Kumlien'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,

> ♂ juv., L. 6 ¼, Ex. 9, T. 2 ¾, T.&T. dk. br., I. reddish

translates as a male juvenile, length 6 ¼ inches, wingspread 9 inches, tail 2 ¾ 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 *Astur 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.*

23 October 1893 Lake Koshkonong, WI, a female (presumably adult), "T.+T. maroon (bright) webs blk. Bill blk." L. Kumlien collector.

24 October 1896 Lake Koshkonong, WI, a juvenile female, "L. 16 ½, 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. 31 ½," 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 Velvet 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.

Winter 1844 "Bark River woods Jefferson Co.," an adult male, "*Albino!* Thure Kumlien. remounted by L.K. after 50 years. Property of Carr Kumlien."

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 *Archibuteo 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),

THE NIDIOLOGIST.

VOL. II. NO. 8. NEW YORK, APRIL, 1895. $1.50 PER YEAR.

AN ALBINO BUTEO BOREALIS. See page 111.

Figure 9. Sketch of a mounted albino Red-tailed Hawk made by Ludwig Kumlien that appeared in *Nidiologist*, April 1895. The bird was collected by Ludwig's father, Thure Kumlien, 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 *Pediocaetes 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.," *Pediocaetes phasianellus campestris.*

8 April 1897 Stevens Point, WI, an adult female, "first record for Wis for years? Very white under & small, L. 426 mm," *Pediocaetes 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 1886, 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."

22 June 1899 Lake Koshkonong, WI, 3 hatchlings, "Legs very dull green brown. Bill dirty white, terminal ½ [indecipherable] dusky."

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. Oesophagous 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 Kumlien 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 Kumlien 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 Kumlien.

Western Sandpiper (*Calidris mauri*)

An uncommon migrant today (Robbins 1991), Kumlien 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, Kumlien 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, "*Ereunetes occidentalis*? L. 6 ½. Wings and tail even. Bill black. I. dk. br. T.&T. dk. greenish ash. An undoubted *occidentalis*.

29 May 1896 Lake Koshkonong, WI, a female, "L. 6 ¼, otherwise ditto."

12 May 1897 Lake Koshkonong, WI, a male, "*Ereunetes occidentalis*? L. 6 ½, Ex. 12 ⅛, Bill & feet dark greenish ash, especially feet."

Least Sandpiper (*Calidris minutilla*)

The Least Sandpiper is another species for which Kumlien 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, Kumlien 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 Kumlien collection, has the entire back black, with merely a slight edging of rusty color on the tips of the inner tertiaries." 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 fuscicollis*)

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.

2 June 1894 Lake Koshkonong, WI, a female, "L. 7, I. dk. br. Bill brownish black, lower yellow at base. T.&T. greenish brown. Breeding!"

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 fulicaria*)

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 Gull Island he is referring to, but Michigan's Gravelly 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 Gravelly 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 tschegrava*) appear to represent the earliest nest records for what is now a state endangered species:

June 1884 "Gull Id. Green Bay, Wis"; entries for four separate nests, "Eggs on bare sand on beach." Collected by C. L. Mann.

14 June 1893 "Gravely Gull Ids. Green Bay Wis. Placed in a mere hollow in the loose gravel of which the island is composed." Collected by "Ed. Van Winkel [Winkle] of Vans Harbor, Mich."

Although *The Birds of Wisconsin* describes Caspians as only irregular visitors to the larger inland lakes, Kumlien did occasionally encounter them on Lake Koshkonong, as the following entry relates:

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 vermillion 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 *paradisaea* [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 *paradisaea* 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 ludoviciana* [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 lud. excub. intermedius.* Collected by H. H. T. Jackson.

7 May 1898 Milton, WI, a male, "Up[per] bill dark horn, lower & tarsi leaden blue. Irides dark brown," *L. l. excubitorides.* 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[rithiof] 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.*

28 April 1896 Milton, WI, "nest in small pine by roadside," *Lanius ludovicianus.* R. W. Clarke collector.

8 June 1897 Milton, WI, "flat frail nest in small mulberry tree 8 ft up. [Eggs] heavily marked," *Lanius ludoviciana* [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

by road side. Fine pale set," *Lanius l. migrans.* H. H. T. Jackson collector.

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.*

15 May 1899 Milton, WI, "placed in evergreen tree by roadside. 20 ft up," (see skin record above), *Lanius (intermedius).* H. H. T. Jackson collector.

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.

6 May 1894 Lake Koshkonong, WI, an adult male, "L. 5 ⅛, T. 1 ¼ + wgs, I. white, T.&T. bright lead-blue. Up[per] mand[ible] blk. lower horn blue. First [of the] species I ever saw in Wis."

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 (*Ammodramus henslowii*)

Currently an uncommon summer resident in south and central Wisconsin (Robbins 1991) and a state threatened species, Kumlien and Hollister (1903) knew this "seclusive 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."

Acknowledgments

We wish to thank Mary LeCroy at the Department of Ornithology, American Museum of Natural History in New York, for locating and photocopying Ludwig Kumlien's letters to J. A. Allen. Similarly, we thank the staff from Special Collections, Ernst Mayr Library of the Museum of Comparative Zoology, Harvard University, for copies of correspondence between the Kumliens and William Brewster. We also want to thank the following individuals who assisted us with this project: Michael J. Mossman, Bureau of Science Services, Wisconsin DNR, for transcribing the letters of Ludwig Kumlien to J. A. Allen; Julie Bleser, Bureau of Endangered Resources, Wisconsin DNR, for preparing the Wisconsin map; and Ann Lacy and Sonia Slemrod, Wisconsin DNR librarians, for assistance in tracking down rare manuscripts. A special thanks to Greg Wenzel and Tom Bosworth of Milwaukee for providing copies of Hollister family correspondence and local newspaper articles on Ned Hollister. And special thanks as well go to the Illinois antique dealer who contacted Sumner back in 1999, for this article would not have been likely without a fortuitous email correspondence.

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, 1835–1838; 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.

[6] Robert Ridgway; 1850–1929; Curator of Birds at the Smithsonian; helped produce first *Check-List of North American Birds*; coauthor of *History of North American Birds*, author of *Ornithology of Illinois* (1889).

[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>

(Excerpts from Vol. 15, No. 4, 1953)

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"From Field and Feeder"

Observations of unusual occurrences and interesting behaviors for Common Loon, Northern Goshawk, Yellow Rail, Sandhill Crane, Marbled Godwit, Northern Parula, and Baltimore Oriole observed in 2003.

Rescue of a Common Loon (*Gavia immer*)

18 April 2003, Wausau, Marathon County—This afternoon I got the distinct pleasure of catching a Common Loon that had gotten stuck in a nice ditch knee-high full of water. It was a wonderfully wet, chilling experience, and luckily I only received one minor stab wound and a bunch of bruises. They can really maneuver on water and get really aggressive. When I finally got the angry, struggling bird to shore my partner was a Godsend and jumped right in to help me take the bird's body and get it crated. After transporting the loon to the raptor rehab center in Antigo, where it was checked over and banded, I went with a friend to release it on the lake the center had been repopulating with loons all day. While I was there, the center manager and an intern went to check out a report of another stranded loon. Altogether, over the space of the past one and a half days, there had been calls for fourteen loons, with ten successful captures and releases. Today they were trying for some of the missed ones again. This is the first time since helping at the center that I've done loons and they are incredible birds.—*Lynn Ott, Wausau, WI.*

Observation of Probable Cooperative Feeding by Common Loons (*Gavia immer*)

9 August 2003, Quetico Provincial Park, Ontario, Canada—On the final evening of a 6 day canoe trip in Quetico park we camped one mile northeast of the Cache Bay Ranger Station, just within Canada on Lake Saganaka, a large lake which straddles the U.S./Canadian border. Shortly after setting up camp as our group began supper preparations, about 19:45, we became aware of an unusual level of loon calling nearby and sought the source. West of our camp on a long narrow section of the lake formed by the narrow peninsula we occupied, we saw a group of 9 Common Loons (*Gavia immer*) in close formation. They formed an elongate cir-

cle estimated at 6–8 meters across and 10–12 meters long in an area 50–60 meters from a small island and probably over water of 3–6 meter depth. The birds performed a slow but nearly continuous counter-clock-wise circling pattern of swimming while sporadic members of the group dove and resurfaced alternately, such that it required 5–6 minutes of observation to determine the total number of birds present. Distance and lighting made it difficult to determine whether any young of the year were present in the group, but all appeared full size and to be in adult plumage. Considerable calling accompanied the activity and the cadre of loons slowly shifted locations, moving perhaps 70–90 meters southeast and returning to the original point in the course of 35 minutes. Shortly thereafter several members of the group took flight and moved 300 to 400 meters up the lake and resettled to the surface. Over the next 4–8 minutes all the remaining birds flew/ran/splashed over to join them and the calling and circling swimming behavior began once again. The group finally began to disperse as singles and pairs flew off into the growing darkness of a lingering semi-arctic dusk some 40–50 minutes post sunset, or roughly 21:30 hours.

The first thing to strike any of us present as unusual about our observation was the presence of more than a single pair, or pair and young, in a small area of water. Collectively we had many years of week-long Canada canoe trips between our group members, but none could recall ever seeing so many loons in close proximity, and certainly not without evidence of aggression and territorial behavior. Moreover, this appeared to be a well coordinated and cooperative behavior pattern, judged by regular spacing and repetition of actions by individuals, and the reforming of the group and activity at a new site.

Upon my return home, I went to my collection of ornithology references in my office at Capital University to see what information I could glean about the observed behavior. *The Audubon Society Encyclopedia of North American Birds*, 1995, John K. Terres, Wings Books NY., stated that Common Loons were highly territorial in summer, with a pair often claiming and defending whole lakes of 40–50 acre size. References therein indicated that the species does migrate in small groups in fall—but that occurs in September/October, not as early as August when we saw this activity. Thus, it failed to adequately explain what we had observed, although this type of activity may serve as a prelude to formation of such migratory groups. Still the idea of group migration led me to think that if they migrated in groups, they might stay together and feed communally once on the wintering grounds. If that were the case, our sightings might have constituted an early manifestation of that behavior. Further reading disclosed that once Common Loons arrive on the Eastern and Gulf Coasts, they spend their winters as single isolated birds and/or occasionally pairs, but well dispersed. Thus, there was little to indicate that the species might have developed a habit of cooperative feeding activity on the wintering grounds which could carry over to its post-nesting activities of summer.

I could find no mention of prior reports of cooperative feeding in the general literature of the species, but

there was little question that was what it appeared to be that we observed. The behavior was similar to that I have observed and read of in several species of gulls (*Larus* sp.) and in Brown Pelican (*Pelecanus occidentalis*) and American White Pelican (*Pelecanus erythrorhynchos*), where the circling swimming and diving of the birds is considered to "herd and contain" a school of prey fishes and increase the feeding efficiency of the group members. This same pattern was obvious in the actions of the Common Loons observed, and it may be that this behavior is unique to this period of late summer for the species, if it is widespread. It would serve well to increase fish catching efficiency in these highly oligotrophic northern lakes. Calling and rapid assembly of birds to take advantage of a school of bait fish once one was located would be mutually beneficial to all participating loons, as it is for gulls and other sea birds. At this time of year when territorial aggression dissipates and schools of hatchling bait fish should be at their peak in number (and feeding near the surface on abundant phytoplankton present in the warm surface waters), emergence of this type of cooperative feeding activity might prove adaptive to the loons by contributing to increased feeding success of newly fledged young, and/or to rapid weight gain to support up-coming migration. It is an area and idea that might benefit from further study. At the very least it was a spectacular sight and a delight to the ear as a continuous cacophony of loon calls washed across the water for the evening.—*Philip Whitford, Biology Dept., Capital University, 2199 East Main St. Columbus, OH. 43209.*

Northern Goshawk (*Accipiter gentilis*) Hunting Technique

13 March 2003, Hudson, St. Croix County—I was able to watch a rather incredible scene unfold in my backyard this morning. A large accipiter flew into a small tree in my backyard, so I went for the binocs. I identified the bird as an immature Northern Goshawk. The field marks were perfect. The tree was near my feeders, but the goshawk did not pester the juncos and tree sparrows. Instead, it proceeded to fly 20–30 feet and hover 4–6 feet over the prairie grass on several occasions. I thought maybe the goshawk was searching for mice, but no: finally it flew to within several yards of where it had been hovering, landed on the ground, and proceeded to walk on the snow, through the big bluestem grasses, until it flushed a female pheasant from the grass! The pheasant took off and the goshawk followed. I did not see whether it caught the pheasant. Thinking about it, I realized that the goshawk had been hovering over the spot where the pheasant was sitting, trying to get it to take flight. When that strategy failed, the goshawk simply *walked* over and flushed it from the ground. A rather incredible sight!—*Larry Persico, Hudson, WI.*

Up Close and Personal with a Yellow Rail (*Coturnicops noveboracensis*) at Comstock Bog

10 May 2003, Comstock Bog, Marquette County—Unable to sleep well last night, I decided to get up at 2:00 A.M. and go over to Comstock Bog. It was a beautiful night—fairly mild, with

clear starry skies and calm winds, and a first quarter moon beginning to set in the west. As I arrived at the bog about 3:00 A.M., there were scattered patches of ground fog along the road, and I noticed that the northern sky was glowing with an oblong greenish display of Northern Lights. There was also a loud din of frog calls (mostly peepers and chorus frogs) ringing out from the wetlands.

I walked north along the old wooded beach ridge and then turned west out into the bog. By the time I emerged into the open expanse of the boggy sedge meadow (where I switched off my flashlight), the sky display had become somewhat more dramatic, with scattered curtain-like streamers stretching up from the original ring of light, and rapid pulses of greenish light were rippling upwards through them in subtle waves. About the same time, I started to hear (above the steady clicking of the chorus frogs) the rhythmic ticking call of a Yellow Rail, and then soon thereafter, a second and a third. Also heard intermittently were the songs of a few Le Conte's and Henslow's sparrows and Sedge Wrens, as well as the calls of Soras and a Virginia Rail. A few cranes also voiced their occasional rattling displeasure at my intrusion.

The closest Yellow Rails were off to the north from me, so I slowly "splotched" my way through the soggy meadow in their general direction. Eventually I was hearing at least six or seven individuals. I turned and moved slowly to the east to try to approach the nearest one. It stopped calling as I approached, but I continued east nonetheless. Suddenly I heard the rail a short distance behind me. I had apparently walked right by him! I squatted down and started clicking a coin against the flashlight for a short series, and almost immediately got a brief response. I clicked another short series, and again he responded with his own. Shortly after I started clicking the next series, against the surprisingly bright twilight sky, I caught the sight of a fluttering shape as it zipped past me—about three feet off the ground—and then the rail started calling directly behind me! After a few more series back and forth between us, he once again fluttered past me—this time right over my head!

By this time, the Northern Lights display had diminished considerably and the eastern sky was beginning to lighten, so I checked my watch (4:15) and saw that it was time to start making my way back out toward my car—and leave my little rail to his territorial peace. What a night!—*Thomas Schultz, Green Lake, WI.*

Further Evidence of Late Nesting or Renesting by Sandhill Cranes (*Grus canadensis*)

17 & 18 July 2003, Montello, Marquette County—I had previously reported (*The Passenger Pigeon* Vol. 63: Nos. 1 & 2, p 35) observations of very young colts of Sandhill Cranes (*Grus canadensis*) seen as late as July 4 in the marshy areas near my farm outside of Montello. At that time, based on knowledge from years of participating in crane counts, monitoring individual pairs for breeding success in the late 1980s and early 1990s, and discussions with Scott Swengel of the International Crane Foundation (ICF) in Baraboo WI I concluded that the young observed were probably the re-

sult of renesting efforts rather than late initial nesting effort. More recent observations and knowledge of spring weather patterns for the year 2003 tend to supposed that conclusion.

As I left my Farm on Eagle Road, 8 miles north of Montello off Highway 22, on 17 July I was startled to find my car threatened by a Sandhill Crane as I rounded the bend adjacent to a marshy edge of a neighbor's corn field. The display involved flight, calls, and posturing with wings spread and displayed. I've seen such performances before, (almost certainly from the same pair since it was this location in past years) but always earlier in the year and associated with defense of young colts. I'd been seeing young of the year crane chicks with adults in other fields in the area in the preceding week that were nearing the height of the parent birds and well beyond the early downy plumage, and so thought that the time or year for new hatched chicks was well past. Yet, when I looked to the marsh/field interface I saw the second member of the pair escorting a yellow-orange downy colt toward the taller grasses and tussocks of the marsh. The colt was estimated to be 18–20 cm in height, below the knee of the adult, much like that I reported two years ago, and thus was estimated to be at most 5 to 8 days post-hatch—and this fully two weeks later in the season than those reported previously.

Apparently, the late hatch was not an isolated anomaly, for the following day, 18 July, I observed a second colt of the same stature and color accompanied by another set of adult birds in a corn field along Eagle Road roughly 1.5 miles west of the town of Germania. This puts the two colts about 2 miles apart by direct line and makes it unlikely they were the same set of birds. This second sighting provides evidence that late renesting is not uncommon in the species in this area, and may continue well beyond the dates when normal nesting activities are expected.

The weather this spring in Marquette was very cool and yet marshes were dry in March and April for there had been no major snow cover, our first appreciable and greatest snowfall of the year locally having been 4-5 inches of wet snow in late February. The marsh adjacent to my drive was dry enough to walk in spring and the absence of calling frogs in April made long-term drought effects evident. My crane territorial calling activity was strong on warm days in late March and early April, but lower in cold and windy days near the annual crane count. Regular and heavy May rains, coupled with cool weather filled my 35 acre marsh to a much more normal depth of 8–10 inches and delayed germination of nearly all garden plants until late May and early July, the combination of cool, overcast days and cold ground from deep frost hindering growth. I suspect this combination was also very hard on locally nesting cranes, causing flooding of nests in what had been dry marsh habitats when nesting commenced, and the wet, cold days and nights taking their toll on chicks from first nests that did hatch successfully. In contrast, less than one inch of water was recorded in my rain gauges from June 10 through July 15, making local conditions very favorable for crane nesting and rearing success during this later period. The combination of known adverse weather conditions for nor-

mal nesting/chick rearing periods, coupled with multiple sightings of late hatch young make it fairly certain that this species can and does regularly persist in renesting attempts extending several weeks beyond earlier reports of last hatching success, that date was recorded as 1 July, as reported to me via Scott Swengel of ICF for my last note on this subject. And which corresponded to my estimates of hatch dates of crane colts seen in 2000.—*Philip Whitford, Biology Dept., Capital University, 2199 East Main St. Columbus, OH 43209.*

Multiple Marbled Godwits (*Limosa fedoa*)

28 April 2003, Nine Springs, Madison, Dane County—A flock of 36 of these birds touched down briefly at the lagoons. The sighting was stunning: the flock came wheeling down out of the sky from the southwest at approximately 2:30 P.M., landed briefly on a sandbar at a far pond, then rose up and landed again for a few seconds right in front of me at another pond, flew to the front pond, touched down briefly there and then sprang up into the air and headed off to the northwest, all the while calling amongst themselves. The whole sighting only lasted a minute or two.—*Philip Ashman, Madison, WI.*

Northern Parula (*Parula americana*) Intent on Food

14 April 2003, Milwaukee, Milwaukee County—In the park located across Lincoln Memorial Drive from McKinley Marina and the Milwaukee Yacht Club, an open grassy area lies between the road and fairly steep wooded bluffs. Members of the Milwaukee Wave professional indoor soccer team were conducting a soccer clinic for approximately 75 children on the grassy area. My daughter Ann and her friends were attending the clinic. The park was crowded with people (and soccer balls), and Lincoln Memorial Drive was crowded with cars. I was standing behind a soccer goal, watching the girls kick balls at it and returning those that rolled beyond it. I noticed a tiny bird as it flew low—less than ten feet above the ground—around the front of the goal. Then the bird turned and flew directly toward the goal and through its cyclone-fence metal netting, past me, and down to the ground, where it immediately began foraging. Apparently single-minded in its pursuit—it was finding something to eat in the grass, though I couldn't tell what—the warbler didn't seem to mind my presence. It was a thrill to see the bird so close, and from above for a change, instead of from below! And I got to watch it for a full minute, I'd say. Then an errant shot headed for the bird, and I had to play goalie.—*Charles Hagner, Shorewood, WI.*

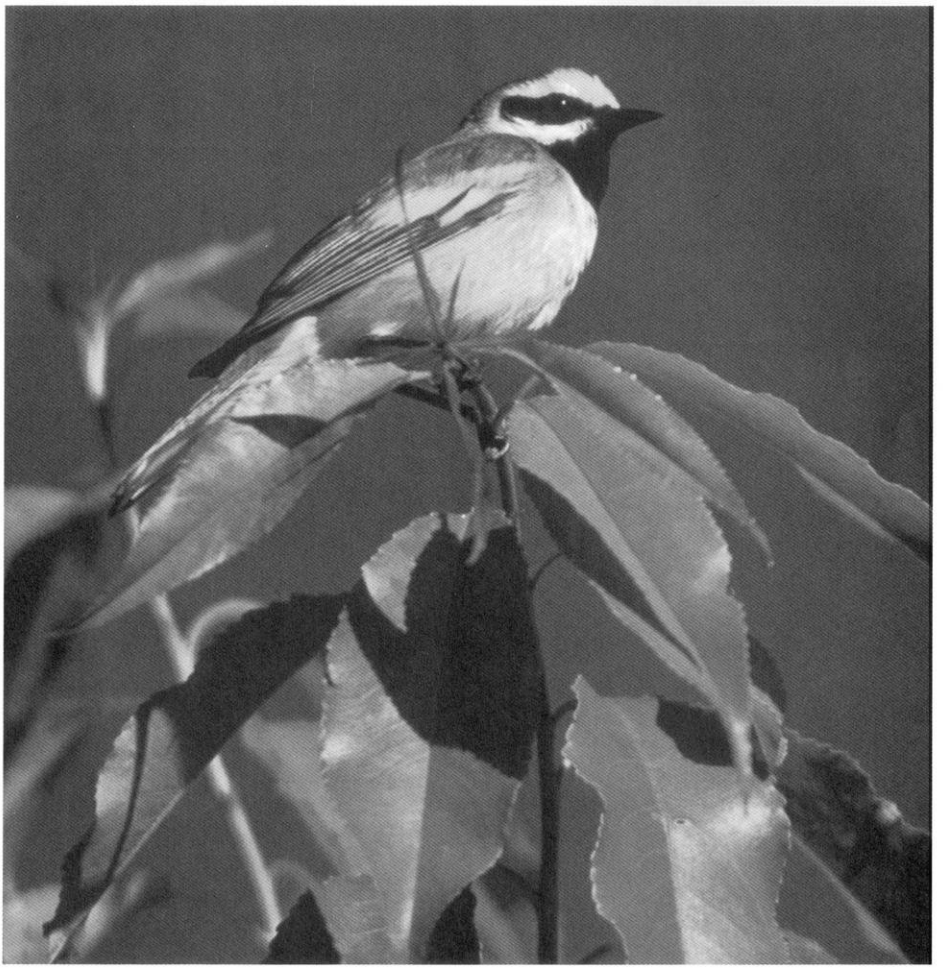
Baltimore Oriole (*Icterus galbula*) Observations

12 May 2003, Dousman, Waukesha County—This evening, while I was sitting at the kitchen table, a male Baltimore Oriole flew to the window and then dropped down to the sill, where he stood peering in at me. When I continued to sit, he flew up against the window as though trying to get in. At no time did he attack his reflection,

so my thought was that he was out of food and was trying to get my attention. Sure enough, all the jelly was gone and the oranges stripped bare. So of course I went out and filled up the feeders. He was back feeding shortly thereafter. I know that hummingbirds will do this, associating people with food, but I'd never had an oriole get my attention in this way.

Another funny thing happened the previous day involving an oriole and a Blue Jay. The jay was on the peanut feeder with his tail extended outwards. When the oriole flew in to land on the nearby orange-and-jelly feeder, he landed briefly on the jay's tail. The jay never moved and the oriole quickly corrected his course. They seemed to be equals as far as territory was concerned.

Enjoying the colorful spring show in my yard!—*Anne Moretti, Dousman, WI.*



Golden-winged Warbler from his yard in Waushara County *by Dennis Malueg*

Song Sparrow in Dodge County, June 1993 *by Jack Bartholmai*

The Spring Season: 2003

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After a universally acclaimed "incredible" Spring 2002 migration, it was almost inevitable that 2003 would appear to be a bit of a letdown. Of course, with an event so large and sustained, impressions will vary considerably; as Philip Ashman in Dane County observed, "it depended on where you were in the area on any particular day." He for example characterized the waterfowl migration as "fairly small," the shorebird flight as "excellent," and the passerine passage (especially warblers) as "unimpressive." Yet Bill Hilsenhoff, in the same county [and, speaking of location, having largely missed the waterfowl migration due to travel], described the shorebird migration as a "disaster," while the warbler migration was for him "good," though also "frustrating" because of overcast conditions and advanced foliage. Tom Klubertanz in Rock County had generally negative comments—like several other observers, he saw the Least Flycatcher flight as particularly poor—but his Red-eyed Vireo, Tennessee and Nashville warbler migration was "long and strong." Daryl Tessen's Outagamie County summary was of an overall "slow, tardy, poor migration." Yet several observers had fantastic "fallout" days, e.g. Marty Evanson at High Cliff State Park in Calumet County on May 10 and Sean Fitzgerald in Walworth County on May 19, an event for which he didn't even have to leave his own yard! And one final example: even as Norma Zehner was singling out Scarlet Tanagers as "conspicuously absent" in Milwaukee County, Bill Cowart happened upon a mind-blowing 29 of them in a 100-yard row of trees in Ozaukee County on May 16. Twenty-nine males that is—he didn't even bother to count the females!

Compiling a seasonal report mostly entails many hours of data collection and organization, of course, but along the way one is reminded over and over again of the sometimes simple but always surprising things that even common species do, things that help give us that feeling every time we go out that "anything can happen." One wonders, for example, if Ashman's good fortune in seeing 36 Marbled Godwits magically appear and just as suddenly disappear in a matter of two minutes by itself made the difference

between his and Hilsenhoff's impression of the shorebird migration. Or imagine Karen Etter Hale, longtime Jefferson County chronicler, never having seen pelicans there before, encountering *three* flocks flying over her house, and finally going to investigate a raucous roost of 150 not far away. In the confounding of stereotypes category, Jim Frank on a Dodge County expedition on May 8 saw two Lapland Longspurs in breeding plumage *on a telephone wire.* A short while later, he spotted an unfamiliar looking bird in a small tree and stopped to investigate. But of course . . . an American Pipit!

Two final anecdotes—Chuck Hagner was shagging errant soccer shots behind the goal at his daughter's game in Milwaukee County on April 14 when an early Northern Parula appeared to do some fly shagging of its own around the goal netting. And to conclude, how could it be that Thomas Wood would lift his glasses on May 30 in Dane County expecting to find a Northern Bobwhite, only to find instead a . . . well, you discover for yourself, as you read the species accounts and "By the Wayside"!

Weather and Birds

Thanks to *The Badger Birder* monthly highlights, Philip Ashman (Dane County), Murray Berner (Portage County), Alta Goff (Barron County), Karen Etter Hale (Jefferson County) and Steve & Laura LaValley (Douglas County), a sketch of the season's weather around the state and its implications for migration can be reconstituted as follows.

March—As Hale put it, the month was "all over the map," with snow and record cold early, followed by almost balmy weather at midmonth, then alternating cold and warm periods for the remainder. Northern Wisconsin shared the cold, if not the snow, with the first significant accumulation of the entire winter not coming until month's end. On the Lake Superior shoreline, the ice shelf stayed far offshore well beyond the date that most loons and grebes came through. For the most part conditions had to be described as dry. The strongest waterfowl movements were at midmonth. Several species, notably Ring-necked Duck and Killdeer, appeared to show up in a dozen counties or more all at once. Note the large number of March 15 reports in the species accounts that follow, keeping in mind that this year that would have been, by no accident perhaps, a Saturday. The "weekend effect" aside, it was very noticeable how more than one species exhibited a tendency to get roughly as far north as Portage or Marathon County very quickly, then slow down dramatically before reaching the extreme northern counties.

April—Much like March, it started out cold and wet, with sleet, hail and snow across much of the state the first week, followed by highs well into the 80s April 14–15. A dozen woodcocks celebrated by peenting all evening in the LaValley's backyard. Freezing rain soon thereafter brought about a considerable grounding of loons in central Wisconsin. For the most part, however, the rest of the month was dry with seasonal temperatures. With no major southerly winds, many traditional late April passerine migrants were still absent or just arriving at month's end.

May—The month began for Berner with "an unremarkable period, with birds just drifting through." But the critical importance of location was once again brought home when, during this same period, something like 400 Willets turned up, mostly but not exclusively along Lake Michigan, on May 6. This was also the wettest stretch of the season, with 5 inches of rain the first 11 days in Dane County, for example. The night of May 10–11 was perhaps the most significant of the season for its migrational ramifications. Here is how John Idzikowski described it in Milwaukee County: "As the storms rolled in last night an impressive migration developed. The migrants dodged the storm cells, but when the 40 mph winds came in behind the cold front, the swarms were pushed way out over the Lake at about 2 A.M. The effect of the night's wind produced a reverse migration in the morning as birds apparently overshot destinations. The shoreline was full of migrants moving south; the wind and the rain kept them feeding low all over the lawns within four blocks of the shoreline, where they were gorging themselves on a midge hatch we had last week." There were a couple more surges in the week that followed, but after May 20 or so things quieted down quickly, as high pressure and low temperatures prevailed.

Rarities

The Wisconsin Society for Ornithology Records Committee did not exactly have to work overtime on this season's reports, but it wasn't a complete washout by any means. First and foremost, in terms of the length of their stay and the number of observers who saw them, were the four White-faced Ibis at Horicon Marsh in Dodge County. More reunions of old birding friends and acquaintances were undoubtedly held over these birds than any others in the state, as they were reliable for weeks. A Ruff (reeve, actually) in Brown County probably came in second, also delighting many observers over a span of three or four days. A female Barrow's Goldeneye was found on a WSO field trip in Sheboygan County. The list of reports accepted by the Records Committee is rounded out by Black-legged Kittiwake, Eurasian Collared-Dove, Western Tanager (two) and Painted Bunting. See the species accounts for details.

Early Birds, Late (?) Bird

Only three first spring arrival records were rewritten, one of them (White-faced Ibis) hardly in the same category as the others since it is so rare to begin with. The more meaningful two were Stilt Sandpiper and Yellow-throated Vireo. In addition, the Yellow-breasted Chat record date was tied. See the species accounts for details.

In an enigmatic category of its own was Frank's discovery of a Savannah Sparrow at an Ozaukee County feeder on March 6. This was not to the observer's knowledge a known overwintering bird, but rather one that suddenly showed up after a snowstorm. His speculation that it was a "displaced" wintering bird is probably on the mark. If true, might this be the latest date on record for an overwinter-

ing individual? Until this year, the gap in the records was between February 21 (Waukesha County, 1971) and March 11 (also Waukesha County, 1977). You make the call! And see the Black-legged Kittiwake account for a similar further blurring of the distinction between winter wandering and migration.

Reintroductions and Exotics

The reintroduced migratory Whooping Cranes wandered considerably in the state throughout the season. Chronologically arranged, submitted sightings were: Dodge County March 29 (Tessen) and April 19 (Baumanns); Sauk County April 20 (DeBoer); Richland County May 1 and 4 (Duerksen); Shawano County May 2 (M. Peterson); Dodge County again May 11 (Tessen) and May 19 (Freriks); four individuals in Richland County May 24 (Duerksen); Marathon County May 28 (Belter). Quite the tourists!

Hilary Ford's feeder in Walworth County continues to serve as a magnet for exotics. This season it hosted a Great Tit (missing its tail) on May 3/4. Recalling the occurrence of this species at a Racine County feeder in December 2001; Idzikowski reported that an importer in northeastern Illinois had recently gone out of business. That may also help explain two, if not all three, of the European Goldfinch sightings. One was at Tom Uttech's Ozaukee County feeder on April 14, another at a Racine County feeder on May 17. Considerably farther away, Fred Lesher photographed one in Vernon County on an unspecified date in May.

Statistics

Spring seasonal totals have been coming in at often well over 300 species for many years, and the string was barely kept alive as exactly 300 species were recorded for Spring 2003. *The Badger Birder* monthly highlights columns mentioned Gyrfalcon twice, in March and again in May, from two different locations. However, no documentation was submitted. The same was true of two Blue Grosbeak sightings in Milwaukee County in May. American Golden-Plover was missed on the mudflats and Pine Grosbeak in the north woods, and for the first time in several years, there were no Varied Thrush or Nelson's Sharp-tailed Sparrow reports.

Using my arbitrary criterion of 25 or more species as constituting "non-incidental" coverage of a county on a given report, we find that 41 of Wisconsin's 72 counties received such coverage, with a total of 96 such reports. The reader comparing these figures with those for the last few years will understand that the near fall below the magic 300 number has simple underreporting as its most likely explanation, not a true significant decrease in the number of species that actually appeared.

In addition, the coverage was perhaps even more biased toward heavily populated south central and southeastern Wisconsin than usual, with a whopping 11 reports from Dane County alone, far ahead of runners up Milwaukee and Sauk Counties, which had 6 apiece. Columbia, Kenosha, Racine and Winnebago Counties were next with 4 reports each. One needs to keep this in mind when evaluating statements like "absent from south-

western Wisconsin" in the species accounts that follow. Twenty-five counties achieved representation by "incidental" reports only, leaving these six counties terra incognita: Adams, Clark, Lafayette, Lincoln, Polk and Rusk. Seventy-five observers submitted written reports. An additional 49 observers are cited from reports gleaned from the Wisconsin Bird Network, for a grand total of 124 contributors and cited observers.

The Accounts

Thirty widespread, common and mostly sedentary species are not included in the species accounts for lack of any conceivably useful information received: Canada Goose, Mute Swan, Mallard, Cooper's Hawk, Red-tailed Hawk, American Kestrel, Ring-necked Pheasant, Ruffed Grouse, Wild Turkey, Ring-billed Gull, Herring Gull, Rock Dove, Mourning Dove, Great Horned Owl, Barred Owl, Red-bellied Woodpecker, Downy Woodpecker, Hairy Woodpecker, Pileated Woodpecker, Blue Jay, American Crow, Horned Lark, Black-capped Chickadee, White-breasted Nuthatch, European Starling, Cedar Waxwing, Northern Cardinal, House Finch, American Goldfinch and House Sparrow.

Abbreviations: BOP = beginning of period; EOP = end of period; TTP = throughout the period; WBN = Wisconsin Bird Network; WSO = Wisconsin Society for Ornithology.

Reports (1 March—31 May 2003)

Greater White-fronted Goose—The characterization of this species in Robbins' *Wisconsin Birdlife* (1991) as a "rare migrant" reads like ancient history, with double-digit flocks now routine. A few were already present in Dodge (Kearns) and Rock (Paulios) Counties on March 1, and numbers built steadily, until Tessen was able to estimate well over 1000 birds in Columbia and Dane Counties (combined) on March 29. The tide then receded quickly, with lingerers reported in Monroe County on April 29 (L. Johnson) and Ashland County (Verch) May 6–18. Reported from 10 counties in all, most as expected from south central Wisconsin.

Snow Goose—Timing and distribution similar to the preceding species, but in far fewer numbers. Tessen's maximum, also in Columbia and Dane Counties on March 29, was but 6. Present in Waukesha County on March 1 (Fitzgerald). Last reported from Kewaunee County on May 9 by the Baumanns. Some observers perceived an increase in the percentage of "Blue" Geese in the population.

Ross's Goose—Reports with at least minimal documentation from Dane, Dodge, Winnebago and Outagamie Counties, with a maximum of 3 on April 19 in Winnebago County (Baumanns). Sightings spanned the period from March 18 (Dane County, Ashman) to April 21 (Dane County, Martin).

Trumpeter Swan—An overwintering flock in St. Croix County had 109 members (March 9, Persico). A loop drawn from Dane to Marathon to Oconto to Dodge Counties encompassed most of the sightings away from the Mississippi River.

Tundra Swan—BOP in Kenosha, Walworth, La Crosse and Door Counties. Zimmer estimated a megaflock in Winnebago County at 5,800 individuals on March 29. Birds lingered into mid-May in Ozaukee, Door, Ashland and Douglas Counties. Reported from 24 counties in all.

Wood Duck—One report from very near BOP (Vernon County, March 4, Dankert). Otherwise reports began in mid-March and were leisurely strung out over the next several weeks. Stutz had 30 in Grant County on April 13.

Gadwall—BOP in Milwaukee, Dane and Winnebago Counties. The highest count was 52 in Sauk County on March 28 (A. Holschbach).

American Wigeon—BOP in Dane County (Ashman). Otherwise followed preceding two species closely, with many mid-March arrival dates.

American Black Duck—Reported from 22 counties over most of the state, though not from the Mississippi River counties south of La Crosse County. One lingered in Milwaukee County to EOP (Gustafson).

Blue-winged Teal—As with most of the dabblers, a spate of mid-March sightings signaled the onset of the migration. The earliest was March 13 (Winnebago County, Bruce). Evanson tallied 30 in Fond du Lac County on April 28.

Northern Shoveler—BOP in Milwaukee (Prestby) and Dane (Ashman et al) Counties. Otherwise see above. The high count was 300 on April 19 in Dane County (Ashman).

Northern Pintail—A species of some concern, at least in relation to other dabblers, and apparently more observers responded by making a greater effort to count individuals. Thus counts of 135 in Dodge County on March 30 (Frank) and 170 in Marathon County on April 30 (Belter) were welcome. Found in a respectable 23 counties, with BOP reports only from Dane County (Martin).

Green-winged Teal—First reported on March 7 in Milwaukee County by David. Found in 31 counties, with Evanson counting 80 in Dane County on April 2.

Canvasback—BOP in Dane and Ozaukee, very early March in Kenosha and Milwaukee counties. Ziebell was up to 800 in Winnebago County by March 19.

Redhead—Distribution similar to the preceding species, though found in slightly more counties (27 vs. 24) and more widespread at BOP (Dane and 4 Lake Michigan counties). Ziebell's March 19 Winnebago County count, however, uncovered only 400 of this species.

Ring-necked Duck—Exploded onto the scene the weekend of March 15-16, with almost a dozen county firsts, all in the southern half of the state. Counties at the latitude of Oconto, Langlade, Marathon and Barron Counties generally had to wait until the following weekend. Present at BOP in Washington (Domagalski) and Winnebago (Tessen) Counties. Belter found about 1000 individuals in Marathon County on April 10.

Greater Scaup—To EOP in Door County (Lukes). Only one count of a large raft was submitted this year, 4000+ in Manitowoc County on March 1 (Sontag). More inland county reports than in recent years.

Lesser Scaup—Thirty county reports, with Sontag's 170 birds in Manitowoc County on March 27 the largest concentration reported. Five Lesser Scaup were admitted to the Wisconsin Humane Society Wildlife Rehabilitation Center in Milwaukee County on March 22 (Diehl). The suspected culprits were intestinal flukes, and only two of the birds survived long enough to receive treatment.

Harlequin Duck—Birds were in Milwaukee (Fitzgerald) and Sheboygan (Wood, 3 individuals) Counties early in the period. There was one much later Milwaukee County report (May 1, Frank).

Surf Scoter—Ranged the Lake Michigan shoreline from Racine to Manitowoc Counties, with a high count of 16 in Ozaukee County on March 13 (Frank). Three Lake Superior birds were seen on May 14 (Douglas County, R. Johnson). Seven were in Manitowoc County as late as May 18 (J. Holschbach). Inland, there was 1 in Sauk County May 13–15 (A. Holschbach et al), and a surprising 5 in Green Lake County on May 19 (Tessen).

White-winged Scoter—Inland reports from Winnebago (March 19, Ziebell) and Dane (April 9, Schirmacher) Counties. Otherwise, worked the same Lake Michigan counties as the previous species, with 23 reported by Frank in Ozaukee County on March 13. None were reported from Lake Superior counties. Final report of a single bird on May 1 in Manitowoc County by Tessen.

Black Scoter—Add Door County (April 27, Atwater) to the Lake Michigan counties for the other scoters. Only one was seen in Douglas County (May 6–11, R. Johnson). Also seen early on (March 1–16) in Dane County (Martin et al). No indication that more than one bird was involved in any of the sightings.

Long-tailed Duck—A count of 395 in Ozaukee County on May 10 (Frank) was by far the best in at least five seasons. Already present at BOP in Door County (Lukes). Inland reports were lodged from Dane (Martin) and Portage (Berner) counties; the latter was of 3 individuals on April 7. Final report on May 26 from Ozaukee County (Frank). There were no reports from Lake Superior counties.

Bufflehead—Widespread and common as always. Departure dates noted included May 10

in Sheboygan (Brassers) and May 16 in Ozaukee (Frank) Counties; TTP in Door County (Lukes). Frank counted 380 in Ozaukee County on April 9.

Common Goldeneye—TTP in Door (Lukes) and Portage (Berner) Counties. A May 29 date in Ozaukee County (Frank) was notably late.

Barrow's Goldeneye—With the veteran Ozaukee County male's absence from last spring's report, it was anyone's guess whether the Milwaukee County bird seen from March 9 to April 6 just a few miles to the south (Frank et al) was the same bird once again. Indisputably new though was the female found on a WSO field trip on March 9 in Sheboygan County and documented by several observers.

Hooded Merganser—BOP in 7 counties, including Ashland County (Verch). Berner found 60 in Portage County on March 29. Reported from 33 counties.

Common Merganser—BOP in 11 counties, including Ashland County (Verch). A. Holschbach counted 135 in Sauk County on March 2. Found in 30 counties.

Red-breasted Merganser—Surely present in every Lake Michigan County at BOP, but only reported as such from Kenosha, Ozaukee, Manitowoc and Door Counties. Sontag's 56 in Manitowoc County on May 9 was the maximum number reported. Found in 23 counties.

Ruddy Duck—Robbins' *Wisconsin Birdlife* comment about its absence from the northern tier of counties appears to still hold true, as it was reported no farther north than Langlade County (Schimmels, May 10–12). BOP reports from Kenosha (Hoffmann) and Ozaukee (Uttech) Counties, with Hoffmann counting 212 individuals in the former county on May 4.

Gray Partridge—Reports from Grant, Iowa, Dane, Manitowoc, Brown and Outagamie Counties, the most encouraging being of "several pairs" in Outagamie County on March 15 (Sykes).

Spruce Grouse—Independent Vilas County reports on April 13 (Smiths) and April 23 (M. Peterson).

Sharp-tailed Grouse—Reports from Taylor, Burnett, Douglas and Bayfield Counties, with the LaValleys reporting 28 on April 15 in Douglas County.

Greater Prairie-Chicken—Reports of 2 from Portage County (Berner, no date given) and of 13 from Marathon County (Belter, March 30).

Northern Bobwhite—Reported from Kenosha, Rock, Dane, Columbia, Green Lake, Sauk, Richland (11, April 4, Duerksen) and Pepin Counties.

Red-throated Loon—Reported only from along Lake Michigan this year: April 9, Manitowoc County (M. Peterson); April 10, Ozaukee County (Tessen); April 15, Racine County (Gustafson). Tessen found 5 again in Manitowoc County on May 1.

Common Loon—Many reports the last week of March, beginning in Dane County March 23 (Ashman) and in Marathon County the next day (Belter). On April 18, Belter counted 114 there while Berner was tallying 51 in Portage County. This coincided with an apparent major grounding of loons in central Wisconsin following a freezing rain. The Luepkes, for example, picked up one in Marathon County and were told of two more cases by the police department. See "By the Wayside" for another account.

Pied-billed Grebe—BOP in Kenosha County (Hoffmann); other reports began March 15 in Milwaukee County (Fitzgerald). Schirmacher counted about 100 in Dane County April 9. Reported statewide from 31 counties.

Horned Grebe—Uttech reported the earliest from Ozaukee County on March 12. Lingered in Bayfield County until May 14 (Verch). Ziebell reported 10 from Winnebago County on March 22. Tessen described them as "scarce" this year. Twenty-two counties registered reports.

Red-necked Grebe—Found in 17 counties, mostly eastern and central with an additional cluster of 3 northwestern ones. A very early individual was reported on March 17 in Dane County (Ashman, Evanson). According to Ashman, it had been present as early as March 7. The next report was not until April 9, with 5 individuals seen in Ozaukee County by Frank. Ten birds were in Green Lake County on May 9 (Belter). The final report came from Columbia County on May 22 (A. Holschbach).

Eared Grebe—Relatively widespread (6 or more counties) for the fourth consecutive year, with reports this year from 9 counties. First ap-

peared on April 10 in Dane (McDowell) and Ozaukee (Tessen) Counties. Most reports were from the southeastern quarter of the state, the exception being Bayfield County (May 19, Verch). A bird in Dodge County persisted until May 26 (Moretti).

American White Pelican—Historically, there were only two March reports before 1999. With the steady colonization of the state well underway, a March 29 arrival date this year (Brown County, Baumanns) no longer surprises. Knispel had a follow-up sighting in Winnebago County on April 1. Triple digit counts were registered in Jefferson (150), Crawford (300) and Grant (500) Counties. Oddly enough, all 11 Dane County observers missed this species!

Double-crested Cormorant—Successfully overwintered in Winnebago County for the second straight year (Ziebell). Next reports were from Kenosha County on March 14 (Hoffmann) and Milwaukee County on March 15 (David). Inland county arrivals were considerably later, e.g. April 2 in heavily birded Dane County (Schirmacher). Tessen estimated a staggering number of 10,000+ in Sheboygan County on May 6.

American Bittern—Relatively late first arrival date of April 19 (Door County, Lukes). Eleven were reported from Marathon County on May 24 (Belter). Altogether, appeared in 22 counties distributed evenly about the state.

Least Bittern—Hall reported the first, on April 26 in Portage County. Ultimately found in 11 counties, with a strong southeastern bias.

Great Blue Heron—Like several other early migrants, arrival dates from the Illinois border up to about Marathon County were tightly clustered, with the subsequent spread to the northern tier of counties much more drawn out. The initial surge was detected between March 12 (La Crosse County, Lesher) and March 16 (Marathon County, Belter) and encompassed at least 8 counties. The three active observers in Barron County, on the other hand, gave arrival dates of April 2, 6 and 9. In addition, there were two overwintering reports, from Iowa (Burcar) and Marquette (Shillinglaw) Counties. A rookery in Marathon County held about 250 individuals on May 24 (Belter).

Great Egret—Four March reports, starting with Milwaukee County on March 22 (Frank). Paulson had 6 in La Crosse County on March 29. Nineteen counties were represented, including Door, Oconto and Ashland Counties to the north.

Snowy Egret—Surprisingly, considering the number of summer reports that soon followed on the WBN, there was but a single submitted spring report of 2 birds in Kenosha County (Hoffmann), seen first on April 15 and then again on April 29.

Little Blue Heron—Steele found a subadult bird in Crawford County on April 6. An adult in Outagamie County found on April 27 lingered at least until May 1 (Wards et al).

Cattle Egret—Two in Sauk County April 20 (DeBoer) constituted the first of 4 county reports. The others were Dodge, Winnebago and Manitowoc Counties.

Green Heron—Fitzgerald's April 7 sighting in Walworth County was the first of many April arrival dates. Northern tier counties generally didn't see this species until early May. As expected, found throughout the state (30 counties).

Black-crowned Night-Heron—The first report came from Brown County on March 26 (Baumanns). Tessen had 8 in Winnebago County on March 31. Reported from 13 counties, with Trempealeau and Ashland Counties the most far-flung from its eastern base.

Yellow-crowned Night-Heron—A single report, an individual seen in Buffalo County on May 19 (M. Peterson).

White-faced Ibis—A *Plegadis* ibis was recorded for the fifth consecutive year, as up to 4 individuals thrilled dozens of observers in Dodge County between April 18 to at least May 1. Only two of them (Bahls, who discovered the birds, and Tessen) took the trouble to submit documentation to the WSO Records Committee, however!

Turkey Vulture—Though a much stronger flyer, Turkey Vulture dispersal throughout the state strongly resembled that of Great Blue Heron, with arrival dates well into April in counties such as Barron, Langlade, Douglas and Ashland. Portage and Marathon Counties had been reached by the end of March, almost a month after March 1 reports from Kenosha (Hoffmann) and Walworth (Fitzgerald) Counties. A. Holschbach counted 56 on April 14 in Sauk County. There was some discussion on the WBN concerning a perception of increased visi-

bility of Turkey Vultures in suburban and even urban settings.

Osprey—Overholt staked out an early individual in Portage County March 24–29. Another was in Dane County on March 30 (Rattenborg). Reported from 26 counties.

Bald Eagle—One report of over 100 birds, in St. Croix County on March 23 (Mitchell). Murphy found 69 in Crawford County on March 20 and described hunting of "unsuspecting" waterfowl by eagles working in tandem. "Once an eagle had its prey, posturing and fighting for the duck tartare dinner developed a feeding frenzy by all the predators in the area." Reported from 31 counties.

Northern Harrier—Overwintering reported from Rock, Ozaukee, Waukesha (3 individuals), Manitowoc and Door Counties, with 3 more counties registering it by March 9. Widespread, with reports from 31 counties.

Sharp-shinned Hawk—Difficult to separate overwintering from returning migrant reports, but using mid-March as an arbitrary cutoff, March 1–16 reports came from 6 southeastern, and Vernon, Portage and Ashland Counties (Verch on March 3 for the last). Three birds reported from Columbia County on March 22 (Tessen) were more likely migrants. In southern Wisconsin, reported from Dane County as late as May 18 (Ashman).

Northern Goshawk—A very good showing, with reports from 12 counties. A line drawn from Ozaukee to Calumet to Portage to La Crosse Counties will roughly delineate the southern boundary of the reported range. Persico vividly described one bird's hunting tactics in St. Croix County (see "By the Wayside").

Red-shouldered Hawk—Hilsenhoff knew of something the other 10 Dane County observers apparently did not, namely the existence of an overwintering individual. Burcar also had one at BOP in Iowa County. According to *Wisconsin Birdlife*, these areas are well within the species' "resident range." Reports from 6 counties March 11–16 would indicate migration had begun in earnest. There were 19 county reports in all. Noticeably absent from the northwest quarter of the state.

Broad-winged Hawk—First northbound migrant found over Walworth County by Parsons on April 13. A second was already in Door County the next day (Lukes). Ashman counted 12 in Dane County on April 28, Lesher 10 in Trempealeau County on May 3. Tallied in 25 counties.

Rough-legged Hawk—Reported from 24 counties, solid evidence of a good overwintering population. Six or so reports into April, with final dates of May 5 (Winnebago County, Bruce), May 11 (Oconto County, Smiths) and May 16 (Ashland County, Verch). The largest number reported was 11 in Trempealeau County on March 8 (Dankert).

Golden Eagle—Five reports this season: March 14, Ashland County (Verch); March 15, Vernon County (Lesher); March 27, Walworth County (Fitzgerald); April 17, Eau Claire County (Polk); May 21, Ashland County (Verch).

Merlin—As in recent years, continues to be reported TTP in Douglas (LaValleys) and Ashland (Verch) Counties. Otherwise, sightings in 12 more counties were spread between March 7 (Dane County, Stutz) and May 17 (Portage County, Hall).

Peregrine Falcon—Cutright relayed the Wisconsin Peregrine Society's announcement that, with 20 active nests and 63 fledged young, the recovery goal for the state has been met. Half of the successful nest sites were at electric power plants, though the cliff nesting population grew as well. With the exception of Douglas County, only Mississippi River (5) and Lake Michigan (7) counties were represented. In addition, observers spotted birds in 11 more counties.

Yellow Rail—First report was of 3 in Marquette County on April 26 (M. Peterson). One in Milwaukee County was brought in for rehabilitation on April 28 (Diehl). Schultz counted 8 during a nocturnal search in Marquette County on May 10 to the accompaniment of a Northern Lights display (see "By the Wayside"). Found also in Green Lake (Tessen) and Winnebago (Ziebell) counties.

King Rail—Reported from 6 counties, all in May. Earliest was one heard in Brown County on May 1 (Baumanns). M. Peterson had 2 in lightly birded Juneau County on May 19.

Virginia Rail—A March 25 report (Rock County, Paulios) is the second March report in the last three years. The next report came on April 4 (Walworth County, Fitzgerald). Reported from 19 counties.

Sora—In contrast to the previous species, first reported on the relatively late date of

April 16 (Waukesha County, Gustafson). Much more widely reported though (30 counties).

Common Moorhen—Does the inclusion of the lower Mississippi River counties as part of the range given in *Wisconsin Birdlife* need reassessment? For at least as far back as Summer 1998, there have been no spring or summer reports from this region. Reports did come in this spring from 5 southeastern counties, the earliest being in Dane County on April 19 (Hilsenhoff).

American Coot—BOP (or nearly so) in Kenosha, Milwaukee, Ozaukee, Dane and Winnebago Counties. Difficult to discern the true beginning of migration, but consistent mention of coots on the WBN began the first week of April, and peak numbers were all at mid-month, with the largest figure given 1400 in Sauk County on April 12 (A. Holschbach).

Sandhill Crane—Significant movement in mid-March, e.g. Bahls' comment on March 14: "hardly an hour goes by without hearing them." Howe was reporting 10 flocks with 8-38 birds per flock in Walworth County on the same day, correlating closely with Fitzgerald's estimate of 400, also on the same date and in the same county. BOP already in Kenosha, Milwaukee and Manitowoc Counties, with Hale reporting at least 100 going over Jefferson County on March 1 as well.

Black-bellied Plover—First reported April 29 from Kenosha County (Hoffmann). Maximum number reported 5, first in Oconto County on May 11 (Smiths), and then in Columbia County on May 20 (Stutz). In all, reported from 12 counties.

Semipalmated Plover—Appeared on April 23 in Dane County (Stutz). Thirty were counted twice, by Stutz in Columbia County on May 20 and by Belter in Marathon County on May 28. Visited 11 counties in all.

Piping Plover—Seen by Verch on two occasions in Bayfield County, May 10 and 19.

Killdeer—Given the conspicuousness of this species, the "weekend effect" (see Introduction) can only partially explain the synchronous detection of its arrival on Saturday, March 15 in at least 12 counties. As with several other early migrants, this first pulse took the species roughly as far north as Portage County, with the rest of the state mostly filled in by the end of the month (e.g. April 1 in Ashland County for Verch). The very first reports actually came from Rock County on March 10 (Yoerger) and from Winnebago County (Bruce) on March 13; 4 more counties followed on March 14 just ahead of the flood.

American Avocet—Occurrences confined to the Michigan lakeshore counties of Racine, Milwaukee, Ozaukee and Manitowoc. The first two reports were of significant flocks—25 on April 21 in Milwaukee County (Idzikowski) and 50 on April 28 in Ozaukee County (Uttech). The last two reports were of single birds in early May.

Greater Yellowlegs—Arrived in Kenosha County on March 26 (Jacyna) and in Dane County on March 29 (Tessen). Evanson reported 30 in Fond du Lac County on April 28. Reported from 26 counties.

Lesser Yellowlegs—Earliest reports from Dane County on March 24 (Feith) and from Douglas County on March 26 (R. Johnson), with two late March reports from Tessen in Dodge and Fond du Lac Counties. Reported from 29 counties.

Solitary Sandpiper—Domagalski recorded the first in Washington County on April 16. The species somewhat belied its eponymous character when Frank reported 14 in Ozaukee County on May 10. Reported from 25 counties.

Willet—This spring gave last year's "unmatched Willet migration" a serious run for its money. Small advance parties showed up on May 1 and 2 in Racine (Howe) and Milwaukee (David) Counties, with Sheboygan and Calumet Counties added on May 5, but May 6 was the banner day, with double-digit flocks recorded in Dane, Racine, Sheboygan, Manitowoc and Milwaukee Counties—in fact, the latter county had two flocks, one of 55 and the other of 68 individuals (Frank)! Sixteen were still being found in the county on May 11, and statewide reports continued until May 24 (Bayfield County, Verch). The only inland western county represented was Chippewa (Polk, with 6 birds on May 7).

Spotted Sandpiper—Earliest report was of an April 10 individual in Kenosha County (Hoffmann). Made appearances in 26 counties.

Upland Sandpiper—Reported from 10 counties well spread throughout the state. Four in Ozaukee County on April 20 (Uttech) were the first, and 7 in Portage County on May 10 (Hall) was the maximum count.

Whimbrel—Frank was agreeably surprised by a nice flock of 38 on May 18 in Ozaukee County. Much smaller groups or individuals also appeared twice in Manitowoc and once in Door Counties.

Hudsonian Godwit—Single birds were recorded twice, on May 24 in Marathon County (Belter) and on May 26 in Ozaukee County (Frank).

Marbled Godwit—A May 6 Manitowoc County report (Sontag) was followed by two more the next day, in Oconto (Smiths) and Chippewa (Polk) counties. But earlier, Ashman had lucked into a flock of 36 on April 28 in Dane County; these birds disappeared as suddenly as they had arrived, and in fact none of the other 10 Dane County reporters were able to record this species (see "By the Wayside"). Also found in Brown County.

Ruddy Turnstone—The Baumanns found 5 in Sheboygan County on May 9 for the first report. Well over 100 were reported from Brown County on May 20 (Baumanns) and from Manitowoc County on May 28 (Sontag). Reported from 12 counties.

Red Knot—Sontag and Wood reported individuals from Manitowoc and Marinette Counties respectively on May 20 and May 23. Belter had his first ever for Marathon County on May 24, the same day one was seen in Douglas County (R. Johnson).

Sanderling—Reported from 7 Great Lakes counties as well as Dane and Winnebago Counties, the latter also being the earliest report (May 7, Ziebell). David counted 20 in Racine County on May 31.

Semipalmated Sandpiper—Relatively late first arrival date of May 1 (Dane County, Schirmacher). Forty were still in the same county on May 31 (Ashman). Over 100 were counted in Marathon County on May 28 (Belter). Reported from 15 counties, including Barron and Pepin from among the more lightly reported western counties.

Western Sandpiper—Reported only from Dane County (May 19, Tessen and May 31, Martin). This species has become a WSO Records Committee "starred" boldface species and thus will require more extensive written documentation in the future.

Least Sandpiper—Reported from 16 counties, with Barron and Douglas the only representatives from the more western ones. Ashman had the first (April 16) and the maximum (100 on May 9) in Dane County. Stutz tallied 60 on May 20 in Columbia County.

White-rumped Sandpiper—A good spring, with reports from 8 scattered counties, 4 of them in the center of the state, 3 eastern and 1 western. First detected on May 3 in Fond du Lac County by Tessen. Things appeared to be just getting warmed up at EOP, with 3 reports in the final days, including 20 on May 28 in Marathon County (Belter).

Baird's Sandpiper—Reported in Kenosha County on May 9 (Hoffmann), Outagamie County on May 17 (Tessen), Barron County on May 19 (Haseleu) and Ashland County on May 28 (Verch).

Pectoral Sandpiper—There was a veritable deluge of March reports, representing 6 counties and extending as far north as Fond du Lac County. This included as many as 12 birds, found by Tessen in Dane County on March 30. Tessen also had the earliest report, March 22 in Columbia County. The migration was protracted as usual, with Ashman recording them in Dane County until May 23. Gustafson registered the high count of 80 on April 14 in Waukesha County. Common; reported from 20 counties.

Dunlin—First reported on April 15 by Hoffmann in Kenosha County, with another already at the other end of the state the very next day (Bayfield County, Verch). The highest number recorded from among the 18 reporting counties was 200 in Marathon County May 28 (Belter).

Stilt Sandpiper—Marfilius found and photographed an individual on April 13 in Dane County, thus eclipsing a 47-year old record early date by one day. Reports continued in Dane County until May 25, so undoubtedly multiple birds were involved. Additional reports came from Winnebago County on May 4 (Knispel) and May 10 (Bruce) and from Brown County on May 13 (Tessen).

Ruff—A reeve discovered by M. Peterson was seen (and well documented) by many observers in Brown County from May 12 to at least May 17. It was ABA area bird #700 for one of them (Tess).

Short-billed Dowitcher—Earliest report was McDowell's, April 27 in Dane County. J. Holschbach reported 8 in Manitowoc County

on May 15. Somewhat surprisingly, the species was reported from only 7 counties.

Long-billed Dowitcher—Reported April 27—May 12 in Dane (Ashman), Oconto (Smiths), Dodge (Frank) and Brown (M. Peterson, Tessen) Counties, in that order. Ashman's count in Dane County reached 6 on May 6.

Wilson's Snipe—The Smith's report from Oconto County on March 16 was almost a week ahead of the next report, from Douglas County on March 22 (R. Johnson). Six more counties were on the board by month's end, with Tessen tallying 24 on March 29 in Fond du Lac County.

American Woodcock—Five individuals already peenting in Ozaukee County on March 16 were heralds of spring there for Cutright. Six more counties followed within a week, with 28 counties the final count.

Wilson's Phalarope—Our most common phalarope was reported this spring from 13 counties, beginning with a May 3 Dane County report (Heikkinen). Double-digit counts were 10 in the same county on May 11 (Stutz) and 13 in Portage County on May 22 (Berner).

Red-necked Phalarope—Reported four times: 3 individuals in Columbia County on May 19 (Tessen); 2 in Chippewa County on May 26 (Polk); Dane County on May 28 (Ashman); 5 in Marathon County on May 30 (M. Peterson).

Parasitic Jaeger—R. Johnson recorded a light morph adult in Douglas County on May 18. This is the eighth spring record for the state (all in May, and all in Lake Superior counties).

Laughing Gull—Possibly the same wandering adult (speculation based in part on the subsequent summer visitation pattern) visited Racine County on May 6 (Fare) and Ozaukee County on May 10 (Uttech).

Franklin's Gull—A March 16 Dane County report is the second earliest on record (Stutz). Seen again in that county on May 11 (Ashman), and also in early May in Milwaukee, Walworth and Green Lake Counties. M. Peterson closed out the season with 3 individuals in Sheboygan County on May 14.

Little Gull—One of the most active springs in recent memory, beginning with the second ever March sighting (March 31, Milwaukee County, Boldt). Showed up again in Racine County on April 18 (Gustafson). Additional lakeside reports followed from Ozaukee, Manitowoc (3 birds) and Kewaunee Counties. Notable was an inland bird in Green Lake County present from May 9 (Belter) to May 16 (M. Peterson). Most reports referred to first year birds, with Sontag whimsically speculating that the wing pattern on one he was watching was "M for Manitowoc."

Bonaparte's Gull—Our obligate hooded gull was reported from 22 counties, evenly distributed across the state. Hoffmann and Rohde both reported 100's on March 31, five days after Gustafson had seen the first arrivals in Milwaukee County. David and Sontag both estimated flocks of 2500 in Kenosha County on May 3 and in Manitowoc County on May 15 respectively.

Thayer's Gull—Away from Lake Michigan, reported in Winnebago and La Crosse counties, with an exceptional individual in the latter county on March 28 exceptionally well described by Jackson. Milwaukee County concentrations were as high as 7 (March 4, Boldt). Frank still had 2 lingerers in Ozaukee County on May 29.

Iceland Gull—The exceptional report for this species came from Marathon County, where Belter photographed a first-winter bird on April 19. Bruce reported one from Winnebago County on April 26, and plentiful reports from 5 Lake Michigan and 1 Lake Superior counties continued until May 22 (Manitowoc County, Sontag).

Lesser Black-backed Gull—The least expected reports came from Vernon (March 26, Jackson) and La Crosse (April 16, Lesher) Counties. "Old Faithful" returned to Dane County on March 26; 4 of the 11 Dane County reporters apparently never bothered to go check it off! Lingered until May 22 and May 29 respectively in Manitowoc (Sontag) and Ozaukee (Frank) Counties.

Glaucous Gull—Reported from 6 Lake Michigan and Winnebago, La Crosse and Douglas Counties. The high count was 11 in Manitowoc County on April 18 (J. Holschbach). Lingered into mid-May in 4 counties.

Great Black-backed Gull—Unlike the previous 4 species, not seen away from Lake Michigan or Lake Winnebago. Maxed out at 9 in Manitowoc County on May 1 (Tessen), and remained to EOP in Sheboygan (Brassers) and Door (Lukes) Counties.

Black-legged Kittiwake—A first-winter bird was carefully described by Geiger and

Iceland Gull documented on Lake Wausau in Marathon County by Dan Belter on 19 April 2003.

Wood on March 2 in Sheboygan County. Like Savannah Sparrow (see Introduction), this was something of a "gap" bird, creating a record in the space between February 6 and March 12 were there had not been one before, and thus further blurring the possibility of distinguishing between winter wanderers and true migrants.

Caspian Tern—Simultaneously found on April 10 by Hoffmann and Tessen in Kenosha and Sheboygan Counties respectively. Sontag counted an impressive 475 in Manitowoc County on May 19. Found in 15 counties.

Common Tern—Earliest reports came from Marathon County on April 16 (Ott) and from Racine County on April 17 (Pugh), where David had 25 at month's end. Reported from 14 counties.

Forster's Tern—Unlike the previous two species, where about half the reporting counties border Lake Michigan, those with no Great Lakes frontage were in the majority, by 14 to 8. Also as usual, was first found after Caspian, but before Common Tern, with a first sighting of April 13 in Washington County (Domagalski). Hilsenhoff counted 19 in Columbia County on May 5.

Black Tern—Twenty-two reporting counties stands up reasonably well in comparison with recent years for this "species of special concern." Simultaneously first reported on May 3 in Green Lake (Tessen), Sauk (A. Holschbach) and Trempealeau (Lesher) Counties. The high count was 24 in Columbia County on May 16 (Hilsenhoff).

Eurasian Collared-Dove—The inexorable march north and west continued for this invasive species. Half of the Oconto County pair apparently disappeared (Smiths), and the Ozaukee County individual was last heard from on April 10 (Tessen), but not to worry, fresh reinforcements arrived in Green (April 26, Smith) and Milwaukee (May 9, Idzikowski) Counties.

Black-billed Cuckoo—First found by Fitzgerald in Walworth County on May 12. A. Holschbach found 3 on May 26 in Sauk County. Reported from 14 counties representing all regions of the state.

Yellow-billed Cuckoo—The more southerly of the two cuckoos was detected only as far north as Sheboygan and Portage Counties. A. Holschbach's May 26 Sauk County

cuckoo total (see previous account) ended up at 5, with 2 of this species. First found for the season in Ozaukee County on May 12 (Uttech).

Eastern Screech-Owl—Reports this period came in only from Milwaukee, Ozaukee, Rock, Dane, Sauk, Winnebago and Marathon Counties.

Snowy Owl—After an unexceptional winter for this species, lingerers or wanderers were still being seen only in Winnebago, Outagamie and Shawano Counties, and only until March 19.

Long-eared Owl—Reports from 8 counties, 3 of them on March 1 (Ozaukee, Dane and Sauk). There was a May 9 report from lightly birded Juneau County (M. Peterson) and a final May 17 report from Portage County (Hall).

Short-eared Owl—Not an outstanding spring for this species, with reports only from Waukesha, Ozaukee, Racine and Rock Counties in March, then nothing until a final May 10 report from Winnebago County (Ziebell). No more than 2 individuals were specified in any report.

Northern Saw-whet Owl—Reported frequently throughout March, beginning in Shawano and Brown Counties on March 12 (M. Peterson and Van Duyse respectively). In Douglas County from April 10 to EOP (LaValleys). Exceptionally late for the latitude was a Grant County individual on May 9 (Paulios). Reported from 10 counties all told.

Common Nighthawk—Two individuals appeared on April 13 in Sheboygan County for the third earliest report ever (Baughman). Not found again until May 6 in Dane County. Reported from a total of 22 counties.

Whip-poor-will—First detected in Walworth County on April 22 (Howe) and in Jefferson County on April 29 (Hale). There were 16 county reports, representing all regions of the state.

Chimney Swift—Slightly ahead of the main body was an April 22 individual in Dane County (Stutz). Between April 26 and April 29 the species turned up in 7 more counties, finishing with 31 for the season.

Ruby-throated Hummingbird—The first of 31 county appearances came on April 28 in Monroe County (Lichter). Also turned up in Walworth County (Parsons) before month's end.

Belted Kingfisher—Overwinterers reported at BOP in Sauk, Dane, Washington and Portage Counties. The next report came on March 16 (Iowa County, Burcar), with a steady stream of first reports beginning a week later and stretching well into April (e.g. April 9 in Ashland and April 13 in Oconto Counties).

Red-headed Woodpecker–If "late April" is taken as the benchmark for returning migrants, as indicated in *Wisconsin Birdlife*, then three March reports (Richland County, March 6; Vernon County, March 15; Door County, March 20) could well have been winter residents or wanderers, in addition to the BOP birds reported from Kenosha County by Hoffmann and from Portage County by Berner and Hall. Reported from 21 counties; only 3 of the 11 Dane County reporters listed it, supporting the perceived scarcity of this otherwise conspicuous species.

Yellow-bellied Sapsucker—Already present in Kenosha, Sauk and Portage Counties at BOP. Next reported from St. Croix County on March 23 (Mitchell), with 4 more counties squeezed in by month's end. Eventually widespread, with reports from 32 counties.

Black-backed Woodpecker—Reappeared on the spring roster after a hiatus last year, with R. Johnson registering one in Douglas County on May 14.

Northern Flicker—BOP or first week of March reports came from 8 counties, the most northerly being Portage (Berner, Hall) and Oconto (Smiths) Counties. Like Belted Kingfisher, but unlike Killdeer, county arrival dates were widely spaced, extending well into April in the northernmost ones.

Olive-sided Flycatcher—Steadily reported throughout May, beginning May 9 in Dane County (Martin). Thirteen county reports total, with Barron the only western one included.

Eastern Wood-Pewee—Multiple county reports began on May 10, preceded by sightings in Dane County (Schirmacher) and Sauk County (Tessen) on May 6 and May 8 respectively. Present on almost all comprehensive county reports.

Yellow-bellied Flycatcher—Reports May 11, 12 and 13 from Milwaukee (Prestby), Manitowoc (Sontag) and Dane (Stutz) Counties. Appeared in 6 more counties throughout the remainder of the month.

Acadian Flycatcher—First sighted by Ashman in Dane County on May 10. Nine county reports extended as far north as Outagamie County. Nesting at EOP in Washington County (Domagalski).

Alder Flycatcher—The breeding distribution was clearly reflected in the fact that 9 of the 18 county sightings extended north from Portage and Outagamie Counties. First detected on May 15 in Columbia County (A. Holschbach).

Willow Flycatcher—In logical contrast to the previous species, did not make it farther north than Marathon and Oconto Counties. In addition, the Mississippi River counties were a complete blank. Twenty-one reporting counties thus represented near-saturation in the southeastern quarter of the state. May 10 reports from Dane (Heikkinen), Ozaukee (Uttech) and Winnebago (Ziebell) Counties were the earliest.

Least Flycatcher—The only April report was surprisingly (?) far north, as the Lukes reported a Door County arrival on April 21. Did not begin to appear in earnest until May 3, when A. Holschbach and Stutz had them in Sauk and Dane Counties respectively. Belter counted a healthy 55 in Marathon County on May 24.

Eastern Phoebe—Arrival dates extended from March 15 in Walworth County (Fitzgerald) to April 16 in Ashland County (Verch). Boldt reported a dozen feeding on lakeside *cladophora* mats in Milwaukee County on March 30, while Stutz counted 30 in Dane County on April 5.

Great Crested Flycatcher—The first in a long line of typically late April neotropical migrants with first arrivals delayed this year into May, with the earliest report for this species not until May 3 (Grant County, Stutz). Widely reported (34 counties).

Eastern Kingbird—An April 19 report from Kenosha County (Howe) remained unseconded until three reports came in on the last two days of the month. The total number of reporting counties matched the previous species.

Loggerhead Shrike—Depressingly, only two reports: on April 15 in Sauk County (Tessen) and on May 9 in Manitowoc County (J. Holschbach).

Northern Shrike—Overwinterers persisted into the season in 12 counties throughout most of the state, the southwestern sector as usual the exception. Did not linger unusually late, with only three April reports, the last a Douglas County bird monitored since BOP by the LaValleys that departed on April 10.

White-eyed Vireo—May 1 birds popped up in Walworth (Fitzgerald) and Manitowoc (M. Peterson) Counties. A Dane County visitor was present from May 16 (Schirmacher) to May 30 (Wood). Also found in Green County (Frank).

Bell's Vireo—Found in 6 southwestern counties, as far north as Dunn County (May 19, M. Peterson). First reported on May 6 in Dane County (Martin), where it remained until EOP (Burcar).

Yellow-throated Vireo—A record early (by 3 days) individual was documented by Murphy in Crawford County on April 18. Did not appear again until May 3, when it was recorded in 3 counties, including Outagamie County (Hibbard). Recorded in 30 counties throughout the state.

Blue-headed Vireo—First detected in Dane County on April 24 (McDowell), with 4 more reports following before the end of the month. Reported from 29 counties statewide.

Warbling Vireo—Another bird missing the April deadline, with an earliest report of May 1 from Door County (Lukes). There was nothing on May 2, then 8 counties in the next two days. Statewide reports from 32 counties.

Philadelphia Vireo—All but one (Douglas) of the 13 reporting counties lay to the southeast of an arc drawn through Oconto, Portage and Dane Counties, with 7 counties registering it May 9–12, the first of these being Dane County (Stutz). The last of several reports in that county came on May 25 (Evanson).

Red-eyed Vireo—The only April report was on April 28 in Manitowoc County (Sontag). The Lukes again (see Warbling Vireo account) registered an early sighting up in Door County on May 1. This phenomenon seemed particularly noticeable to the present writer this spring; perhaps geography dictates that Door County can serve as a sort of "migrant trap" under the right conditions.

Gray Jay—Reported from Forest County on May 10 (Paulios) and from Douglas County on May 14 (R. Johnson).

Common Raven—The southernmost reports came from Monroe (Evanson, May 3) and

Ozaukee (Cutright, May 18) counties. Also found in 15 more northerly counties.

Purple Martin—Reports April 11, 12 and 13 in Kenosha (Hoffmann), Dane and Racine Counties; then La Crosse and Douglas Counties on April 14. Berner counted 21 on May 1 in Portage County. Reported from 22 counties.

Tree Swallow—Arrived March 16 in Dane (Stutz) and Outagamie (Zimmer) counties. April 21 saw counts of 350 in Sauk County (A. Holschbach) and of 2500 (!) in Marathon County (Belter). Reported from 39 counties.

Northern Rough-winged Swallow—Discovered in 9 counties the middle third of April, starting April 13 in Grant County (Stutz) and extending as far north as Portage County (April 18, Berner). Carlsen and Goff both first had it on April 29 in Barron County. Reported from 32 counties.

Bank Swallow—Arrived April 19 in Sauk (Burcar) and Ozaukee (Frank) counties. Found in 25 counties.

Cliff Swallow—First seen by Hoffmann in Kenosha County on April 13. Lesher thought "numbers were up" in La Crosse County; the statewide high count was 700 on May 11 in Portage County (Berner). Showed up in 28 counties.

Barn Swallow—About the fifth March record was established when Paulios found an overeager returnee in Dane County on March 27; the next report from this the most thoroughly covered county wasn't until April 14 (Ashman). That report was itself only preceded by April 8 and April 10 birds in Grant and Fond du Lac Counties respectively. Three more counties were also added on April 14, including Barron County (Goff). Reported from 36 counties, 3 fewer than Tree Swallow!

Boreal Chickadee—North woods birders reported it this season from Forest County (Paulios) on May 10 and Oneida County on May 20 (High).

Tufted Titmouse—Ten of the 15 county reports came from the species' southwestern base, with pioneers pushing north to Portage and Barron Counties, and southeastern reports from Rock, Jefferson and Waukesha Counties.

Red-breasted Nuthatch—TTP in Manitowoc, Door and Portage Counties. Low densities may have made patterns difficult to discern: for example, Ashman also had it TTP in Dane County, but the other 10 comprehensive reports from that county did not include it at all. Seventeen county reports left gaps mainly in southwestern Wisconsin and in the counties surrounding Lake Winnebago.

Brown Creeper—BOP in Ozaukee, Sauk, Dane and Portage Counties, remaining to EOP in the latter two. A March 5 report from Burnett County (McInroy) probably reflected overwintering as well, as there were no further reports until March 21 (Kenosha County, Hoffmann). Reported from 27 counties.

Carolina Wren—One of the better springs in recent memory, with no fewer than 6 counties registering reports: Grant, Iowa, Dane, Waukesha, Kenosha and (most notably) Portage. The reports increased in frequency as the season progressed; some counties appeared to have them at more than one location.

House Wren—First detected by Parsons in Walworth County on April 12, with 4 more counties added by April 24. Still, it mirrored to some extent the relative lateness of the passerine migration, as evidenced by 2 of the 3 highly active Ozaukee County observers not finding it until May.

Winter Wren—March 21–23 reports from 4 counties signaled the onset of migration. Interestingly, only 2 of these were southern counties; the other 2 were Portage (Hall) and Taylor (J. Peterson). A. Holschbach counted 10 in Sauk County on April 20.

Sedge Wren—The first individual made it as far north as Marinette County before being detected on April 25 (Marks). Tessen had 15 in Green Lake County on May 3. Appeared in 26 counties.

Marsh Wren—As usual, not quite as widespread as the previous species, and slightly later in arrival, with the first of 18 county reports coming on April 26 in Winnebago County (Ziebell). Tessen's May 3 Green Lake County wren census total for this species was 10.

Golden-crowned Kinglet—Five counties had reports by March 7: Dane, Columbia, Kewaunee, Portage and Florence. Multiple reports beginning March 24 signalled the onset of migration (Jacyna and Bontly in Kenosha and Ozaukee Counties respectively on March 24). Found in all in 28 counties.

Ruby-crowned Kinglet—Interestingly, first showed up on the same date as the first migrant Golden-crowned Kinglets, though in different locations, with March 24 reports from Racine (Gustafson) and Portage (Berner) Counties. Another early report came the next day in Dane County (Martin), followed by a brief lull until April 1. Stutz had 50 on April 19 in Dane County. Apparently departed Dane, Portage and Door Counties all on May 17, though Tessen found a lingerer in Brown County on May 21.

Blue-gray Gnatcatcher—No scattering of premature individuals, as it first appeared in 5 counties on April 15/16, one of which was Oconto County (Smiths) at the northern limit of the species' range. The Smiths in fact counted 12 there on May 18. Otherwise, got as far north as Marathon County in the center of the state and Burnett County in the west.

Eastern Bluebird—April arrival dates only in Ashland (Verch) and Douglas (LaValleys) Counties (both on April 13). Holdovers from the winter season reported from Kenosha, Dane, Sauk and Winnebago Counties. The first dated reports came from Vernon and La Crosse Counties on March 12 (Lesher). Not missed by any active observers, with reports from 42 counties.

Townsend's Solitaire—The small but well-established Sauk County overwintering colony was last heard from on April 15 (A. Holschbach), fairly late by recent historical standards. There are only two May records, both from the 1970s.

Veery—A May 1 report from Walworth County (Fitzgerald) was a bit ahead of the main body starting on May 7, curiously both as far north as Portage (Berner) and Marathon (Belter) Counties. Belter also had the high count in Marathon County, 25 on May 21. Reported from 29 counties.

Gray-cheeked Thrush—No fewer than 11 May 10/11 first county reports, preceded only by Lesher's May 3 Trempealeau County sighting. Reported from 21 counties.

Swainson's Thrush—A neotropical passerine migrant that did make the April cut, with an April 27 report from Dane County (Capobianco). The next report came on May 3 (Langlade County, Schimmels). No double-digit counts were received. Reported from 24 counties.

Hermit Thrush—BOP reports in Dane (Ashman) and Ozaukee (Bontly) Counties, with March 4 Kenosha County (Jacyna) and March 6 Door County (Lukes) birds unlikely yet to be migrants. Not heard from again until March 17 in Waukesha County (Szymczak). The most widely reported spotted thrush, with 33 counties represented.

Wood Thrush—The first of 32 county reports were in Walworth (Fitzgerald) and Dane (Stutz) Counties on May 1. Stutz also counted 10 on May 11, again in Dane County.

American Robin—BOP or March 1 reports from 14 counties, most notably from Ashland County (Verch). The last thoroughly covered county to register the species was Douglas County on March 23 (LaValleys).

Gray Catbird—A report of 2 on April 15 in Kenosha County (Hoffmann) was well ahead of the second, and only other April, report, which came on April 27 in Walworth County (Parsons). Belter tallied 30 in Marathon County on May 17.

Northern Mockingbird—A good total of 10 county reports. The most frequently reported individual was a Milwaukee County bird observed between March 17 (Bontly) and April 22 (Smiths). Reported north to Marquette (Shillinglaw), Langlade (Schimmels) and Manitowoc (Reisenbuechler) Counties.

Brown Thrasher—A (more than half?) hardy individual overwintered in Portage County (Hall). Returned on April 5 to Dane County (Stutz) and on April 9 to Columbia (Dischler) and Door (Lukes) Counties. Represented by 31 counties.

American Pipit—Earliest report came from Dane County (April 9, Schirmacher), where it was last seen on May 20 (Ashman). Most of the 12 county reports came in May, with Carlsen registering the last, May 22 in Barron County.

Bohemian Waxwing—Fitzgerald had 2 in Sheboygan County on March 3; J. Peterson had over 30 in Taylor County on March 22; R. Johnson had 31 in Douglas County on April 5.

Blue-winged Warbler—An April 28 report from Dane County (Ashman) was it until 4 counties reported it on May 6. Appeared altogether in 25 counties, reaching as far north as Barron, Marathon, Langlade and Door Counties.

Golden-winged Warbler—First seen on May 4 in Grant County (Ruhsers). Appeared in Marathon County on May 7, where Belter had a high count of 18 on May 21. Appeared in 27 counties.

Blue-winged × Golden-winged Warbler—Fitzgerald reported a "Lawrence's" Warbler on May 12 in Walworth County. In Portage County, Berner reported that "intergrade 'winged' warblers included a Golden-winged-like bird with its bib reduced to a small breast oval and a Blue-winged-like bird with gold wing patches singing a Golden-winged song. These were at Dewey Marsh, where the county's last Golden-wings persist."

Tennessee Warbler—Appeared in Dane County on April 29 (Evanson) and in Racine County on April 30 (Mueller). Berner had a high of 30 on May 20 in Portage County. Widespread.

Orange-crowned Warbler—Arrived fairly early (April 19) in Dane (Pope) and Dodge (M. Peterson) Counties, closely followed by an April 20 appearance in Portage County (Berner). Then there was a gap until April 28, when 4 counties registered it. Overall, appeared in 25 counties.

Nashville Warbler—An April 24 report was quite early for being as far north as Langlade County (Schimmels). Four more counties were added April 27–30. Widely reported (35 counties).

Northern Parula—An April 14 sighting was significantly, though not record, early (Milwaukee County, Hagner). More interesting was what the bird was doing (see "By the Wayside"). Also found before month's end in Dane County (April 27, Martin) and in Kenosha County (April 29, Hoffmann). There were 29 county reports.

Yellow Warbler—Already present in 6 counties by the end of April, starting with Dane County on April 27 (Ashman).

Chestnut-sided Warbler—Arrived relatively late by recent standards, May 3 in Dane County (Fitzgerald). Next reported on May 6 in Barron County (Carlsen) before becoming widespread.

Magnolia Warbler—Earliest reports came on April 29 from Kenosha County (Hoffmann) and, once again (see Red-eyed Vireo account), from Door County on April 30 (Lukes).

Cape May Warbler—First seen on May 6 in Ozaukee County by Bontly and on May 8 in Sauk County by A. Holschbach. Reported from 25 counties, with weakest representation from the northwestern part of the state.

Black-throated Blue Warbler—Appeared on April 29 in Kenosha (Hoffmann) and Ozaukee (Uttech) Counties. Cutright had 8-10 in the latter county on May 18, with Uttech again reporting the last one there on May 27. Appeared in 19 counties, with La Crosse County standing alone in the southwestern part of the state.

Yellow-rumped Warbler—Noted as BOP in Dane, Columbia, Racine and Ozaukee Counties, with a March 14 report from Manitowoc County (J. Holschbach) best left as an "in-betweener" with respect to migrational status. If Verch's March 24 Ashland County bird was truly a migrant, it was an ironic location for it. Most remaining counties gave arrival dates in mid-April. Impressive numbers included 375 in Sauk County on April 22 (A. Holschbach) and 300 in Dane County on May 11 (Stutz).

Black-throated Green Warbler—For the third straight year, the first turned up in mid-April, with an April 16 Racine County individual the earliest this year (Howe). That was all until April 26 (Dane County, McDowell), after which reports started coming in at the rate of 2 or 3 counties per day. Eight of the 32 reporting counties, in fact, had April arrival dates, extending as far north as Portage and Door Counties.

Blackburnian Warbler—Entered the state on May 5 in Portage County (Hall). Also found in Barron County on May 8 (Carlsen). All 3 active Ozaukee County observers reported it on the same day, May 10. Found in 31 counties.

Yellow-throated Warbler—Though it was again reported from Dane and Sauk Counties, where it is certainly suspected of breeding, by EOP it was being reliably found only in Grant County, where it had made its first statewide appearance on May 3 (Stutz). M. Peterson reported 3 there on May 25. Also reported from Walworth and Rock Counties.

Pine Warbler—Six county reports in four days, beginning on April 14 in Waukesha County (Gustafson). There were 8 in Portage County on April 26 (Berner), and it was found in Dane County as late as May 11 (Stutz). Reported from 24 counties.

Prairie Warbler—The Sykes entertained a visitor to their deck in Outagamie County on

May 2. Three reports followed somewhat later: Bayfield County May 17 (Schimmels); Walworth County May 19 (Fitzgerald); Racine County May 25 (DeBoer).

Palm Warbler—First found by Goff on April 17 in Barron County. Ubiquitous and numerous, with Stutz estimating 150 on May 9 in Dane County. Still coming through near month's end (10 on the lakefront in Racine County on May 25).

Bay-breasted Warbler—Appeared in 3 counties (Dane, Walworth and Winnebago) on May 7, with the final count being 21 counties. Burnett and Douglas Counties were the only representatives from far western counties.

Blackpoll Warbler—Checked in on May 1 in Racine County (Fitzgerald) and on May 5 in Dane County (Schirmacher). Only began to pick up steam though at mid-month, finishing with 22 counties, La Crosse County being the only far western one among them.

Cerulean Warbler—Stutz already had 6 in Grant County on the very first day the species was reported (May 3). That remained the high count, with Berner able to muster 4 in Portage County on May 21. Appeared in 15 counties (about average for recent years), all south of a Pepin—Marathon—Outagamie—Manitowoc county arc.

Black-and-white Warbler—Though there were at least 5 April reports, the lateness of the neotropical passerine migration was suggested by the fact that only 1 of the 11 Dane County observers gave an April date. Statewide, April 15 was the earliest date, registered in Kenosha (Hoffmann) and Walworth (Fitzgerald) Counties.

American Redstart—The lone April date was Parsons' April 29 Walworth County submission. The Lukes (again!) followed with a May 1 Door County individual. Ashman had the highest submitted total, 32 in Dane County on May 15.

Prothonotary Warbler—Reported from 8 southern and Outagamie counties, the first on April 28 in Dane County (Rattenborg et al), with up to 4 individuals kept tabs on there until May 14.

Worm-eating Warbler—Fitzgerald recorded the first, in Racine County, on May 1. Turned up on May 3 in Sauk County (Smiths), subsequently being featured on just about every trip list from that county posted on the WBN for the rest of the season (and into June for that matter). Also reported from Kenosha County on May 6 (Hoffmann) and from Ozaukee County on May 18 (Cowart).

Ovenbird—A year with but one April report (April 30, Rock County, Klubertanz) is a late year! Once again the Lukes were at least close to first up in Door County with a May 1 individual. After a May 2 arrival in Milwaukee County (Bontly), things got serious with 6 more county arrivals on May 3 (a Saturday, note!). Impossible to miss, with 39 county reports. Berner had 56 in Portage County on May 18.

Northern Waterthrush—First recorded in Sauk County on April 24 (A. Holschbach). In Portage County two days later (Berner, who recorded 22 on May 11). Frank had 28 in Ozaukee County on May 10. Thoroughly recorded statewide.

Louisiana Waterthrush—Oddly, absent from the western Wisconsin "summer range" given in *Wisconsin Birdlife*, except for Sauk and Grant Counties. Found though in Iowa and 7 more easterly counties, as well as Shawano and Marathon Counties to the north. A. Holschbach had the first (on April 12) and also the most (12) individuals, both in Sauk County.

Kentucky Warbler—A distribution better fitting the *Wisconsin Birdlife* summer range than the previous species, with numerous Sauk and Grant County reports, as well as one a bit to the north (Pepin County, May 19, M. Peterson). The earliest sighting was in Grant County on May 6 (Lesher). Otherwise, reported in Kenosha (Hoffmann, May 9), Walworth (Parsons, May 10) and Outagamie (Hibbard, May 19) counties.

Connecticut Warbler—The latest arriving warbler this season, as it often is, with the first one not reported until May 12 in Racine County (Gustafson). Ended up being seen in 14 counties, 2 within the species' breeding range (Washburn and Douglas).

Mourning Warbler—First seen on May 8 in Milwaukee County (David). Another late migrant, with only 5 more counties represented by May 16. Found altogether in 22 counties, with migration still under way at EOP.

Common Yellowthroat—First appearances on the relatively late date of April 28 in Rock (Klubertanz) and Racine (Gustafson) Counties.

Showed up in a third county (Washington County, Domagalski) by month's end.

Hooded Warbler—Gustafson recorded the first from Racine County on May 2. The northern boundary of the 14 reporting counties was formed by Pepin, Portage, Shawano and Manitowoc Counties. Domagalski reported nesting at EOP in Washington County.

Wilson's Warbler—First reported in Kenosha County on May 6 (Hoffmann) and in Racine County on May 10 (David). Found in 25 counties statewide.

Canada Warbler—Two May 9 and three May 10 reports pretty clearly signaled the beginning of its passage through the state, with Door County once again in this initial group. Douglas County aside, absent from all other far western counties.

Yellow-breasted Chat—Martin's April 28 Dane County sighting ties the record early date, set also in Dane County in 1990. There was a Milwaukee County report on May 12 (Cowart). The bird was again present in Dane County from May 14 (2 individuals, Paulios) to at least May 30, when Wood briefly mistook one for a Northern Bobwhite! See "By the Wayside" to see how that could have happened. Also found in Ozaukee, Walworth, Iowa and Buffalo Counties.

Summer Tanager—A spring season modest only in comparison to the extraordinary one of 2002 nonetheless saw the bird reported from 6 counties, most unusually Iron County from May 4 until at least May 11 (Bates). The earliest report was from Rock County (Ramsden) on April 28. The latest report came on May 16 (Ozaukee County, Cowart). Females, subadult and adult males were all represented.

Scarlet Tanager—Arrived May 4 in Dane (Martin) and Grant (Ruhsers) Counties. Cowart had an amazing total of 29 in Ozaukee County on May 16 (see Introduction), while Tessen had a still respectable 12 in Brown County on May 21.

Western Tanager—Two off-course individuals landed in Wisconsin this spring. Both were detected at feeders. Westaway had one in Dane County on May 7, and one hung out at the Rohrer feeder in Winnebago County from May 12 to May 14.

Eastern Towhee—The present writer, only in his fifth year of birding in Wisconsin, is not sure what to make of no less than 6 county arrivals in March, but it seems highly unusual to say the least. The first of these came on March 23 in Washington County (Domagalski); the remaining counties involved were (in order) Columbia, Door (!), Milwaukee, Kenosha and Manitowoc.

American Tree Sparrow—Any reports into May escaped notice while compiling, with an April 29 date culled from 3 different county reports the latest recorded: Door, Portage and Ashland. The Smiths counted 66 on April 8 in Oconto County.

Chipping Sparrow—March 17 (Walworth County, Rohde) and March 18 (Dane County, Weber) reports were earlyish, although an overwintering individual survived at least to BOP in Portage County (Hall). Then nothing until April 6, when Lesher reported it from La Crosse County. Widespread after that.

Clay-colored Sparrow—Arrived first in Columbia County on April 22 (Dischler). Door, Ozaukee, Dane and Racine Counties followed to round out the April reports. Reported from 30 counties around the state, with western counties better represented than was the case for many other equally common species.

Field Sparrow—No BOP reports, but reports early enough to suggest at least late winter wanderers came from Ozaukee County on March 7 (Uttech) and Dane County on March 18 (Weber). Reported from 3 more southeastern counties March 26–31.

Vesper Sparrow—March 18 reports received from Walworth (Fitzgerald) and Dane (Weber) counties were significantly early, as there were no further reports until March 30, when the bird appeared in Columbia County (A. Holschbach). Two reports followed on April 1 (Iowa and Sauk counties, Burcar). Reported from a healthy 24 counties.

Lark Sparrow—The first of the Sauk County birds returned on April 15 (Tessen), peaking at 10 individuals there on May 13 (A. Holschbach). There was but one other report, from Monroe County on May 3 (Evanson).

Savannah Sparrow—A March 6 report from Ozaukee County (Frank) was highly unusual (see Introduction). March 20 and March 22 reports from Dane (Stutz) and Racine (Gustafson) Counties more definitely signaled an early beginning to the migration.

Grasshopper Sparrow—Simultaneous first appearances came in Dane (Schirmacher) and Door (Lukes) Counties on May 1. Six were in Sauk County the next day for A. Holschbach, who subsequently counted 13 there on May 25 for the statewide high count. Reported from but 9 counties, with heavily birded southeastern Wisconsin oddly enough a complete blank,

Henslow's Sparrow—Freriks and Hall reported April 28 and April 29 returnees in Dodge and Portage Counties respectively. Seegert totaled 4 in Marquette County on May 4. Lesher thought that "numbers were up" in Grant and Trempealeau Counties. Reported from 12 counties as far north as Marathon County.

Le Conte's Sparrow—The earliest migrants were detected on April 29 in Waukesha (Gustafson) and on May 3 in Green Lake (Tessen) Counties. Found also in Milwaukee, Marquette, Wood, Marathon, Oconto, Oneida and Douglas Counties.

Fox Sparrow—BOP reports were collected from Ozaukee, Dane and Sauk Counties. Otherwise, the first cluster of reports began on March 15, preceded only by a March 10 report from Walworth County (Fitzgerald). Numbers reported peaked at 27 on March 28 in Sauk County (A. Holschbach). Late departure dates included May 9 in Manitowoc County (J. Holschbach) and May 13 in Dane County (Ashman), the latter a bird with an injured wing.

Song Sparrow—Reported at BOP in 8 southeastern counties. The next report came on March 15 in Milwaukee County (David). Most of the state repopulated by the end of the month, with the latest first county arrival recorded coming on April 7 in Ashland County (Verch).

Lincoln's Sparrow—As sometimes happens, first found in a northern county (Barron County, April 27, Goff). Then found in Dane, Ozaukee and Oconto Counties the next day. A widespread migrant, with 22 reporting counties. A lingerer was still in Milwaukee County on May 27 (David).

Swamp Sparrow—Present at BOP in Kenosha (Hoffmann) and Dane (Ashman) Counties. Next reported on March 13 from Milwaukee County (Frank); more concentrated reports began about March 25.

White-throated Sparrow—Birds certainly overwintered in Kenosha, Milwaukee and Door Counties, with a March 10 Walworth County date likely reflecting the same. Clear first migrant reports did not begin to appear until mid-April, e.g. the 3 most active Sauk County observers gave dates of April 10, 19 and 19.

Harris's Sparrow—A return to normal after last year's extraordinary invasion, with only the predominantly western counties of Sauk, Crawford, La Crosse, Wood and Douglas reporting transients (a Dane County individual overwintered at a feeder). The migration was an ephemeral four-day passage through the state, occurring just between May 10 (M. Peterson, Wood County) and May 13 (Stutz, Sauk County). No more than 2 individuals were mentioned in any report.

White-crowned Sparrow—Early reports were of birds in Outagamie County (April 17, Hibbard) and Dane County (April 20, Schirmacher). Five more counties of an eventual 29 had sightings before the end of the month. Tarried in Milwaukee County until May 27 (David).

Dark-eyed Junco—The Brassers counted 100 in Sheboygan County on March 22. The tardiest individual was a Milwaukee County bird remaining until May 20 (Huf).

Lapland Longspur—At least 6 reports of flocks of 100 or more, coming from Dane, Columbia, Ozaukee, Sheboygan and Barron Counties. Dane County had 2 such reports, one in March (Schirmacher) and the other as late as May 11 (Stutz). Tessen reported 70 birds on May 11 also, from Green Lake County; there were no later reports. Tessen's estimate of over 300 in a Columbia County flock on March 22 was the largest. Altogether appeared in 20 counties.

Snow Bunting—Reported only until April 18 (Brown County, Van Duyse) from 16 counties, with southwestern Wisconsin represented for the first time in several years by an April 13 sighting of a lost or ostracized individual in Grant County (Stutz). The aforementioned April 18 flock contained about 100 birds and was exceeded in size by the only report of a truly large flock—500 or more birds in Outagamie County on March 9 (Weyers).

Rose-breasted Grosbeak—Appeared to show up first in western Wisconsin, with April 24 and April 25 reports from Barron (Goff) and Crawford (Murphy) Counties respectively. A little later, Hatleberg reported 12 males and 4 females at her Chippewa County feeder on May 11. Stutz had 30 in Dane County the same day.

Indigo Bunting—There was a single April report, April 29 in Grant County (Vachavake). Eight more counties out of a final total of 32 had been added by May 10. Interestingly, neither Douglas County observer had yet recorded it by month's end.

Painted Bunting—A male was seen at a feeder for the second straight spring, thus forming the state's tenth record. This year's multicolored surprise came in Sheboygan County on May 13 (Baughman, Tess).

Dickcissel—Reported but once, from Green County on May 15 (M. Peterson).

Bobolink—Another species making the April list by virtue of a single report—Richland County, April 29 (Duerksen). Single May 1 and May 3 reports followed, then multiple county reports from May 4 on. Appeared in 29 counties.

Red-winged Blackbird—Remarkably, only reported at BOP from two locations: Kenosha (Mann) and Waukesha (Gustafson) Counties. Not reported again until March 7 (Dane County, Stutz). As in a number of other cases, Ashland County brought up the rear for county arrival dates (April 6, Verch).

Eastern Meadowlark—An overwinterer persisted through BOP in Door County (Lukes). First reports of returnees were fairly well concentrated by the standards for early migrant passerines, with 10 counties represented in the 5-day span March 14–18. This batch included Barron and Oconto Counties. Reached 32 counties.

Western Meadowlark—Recorded on March 16 in Dane and Iowa (Burcar) and Portage (Schaufenbuel) Counties. Appeared in but 9 counties: the above plus Sauk, Columbia, Walworth, Ozaukee, Calumet and Brown Counties.

Yellow-headed Blackbird—March records are scarce, but there were two reports this year, from Walworth County on March 21 (Fitzgerald) and from Kenosha County on March 31 (Hoffmann). Next appeared on April 10 in Winnebago County (Bruce). Appeared in 21 counties all around the state.

Rusty Blackbird—Appeared simultaneously in 3 counties (Walworth, Waukesha, Portage) on March 15. Three more counties (Iowa, Dane, Dodge) were added the next day. With the concern in recent years over this species' perceived decline, a report of over 1000 in Dodge County on March 28 (Kearns) is heartening. Mostly April departure dates where given, but found into early May in Ashland (May 3, Verch) and Green Lake (May 7, Gustafson) Counties.

Brewer's Blackbird—Intriguing (though inconclusive) evidence of possibly two distinct migrational pulses, with transients passing through southern counties in the second half of March and resident birds in more northern counties not showing up until the latter part of April. For example, it was first detected in Ashland, Oconto and Langlade Counties on April 20, April 28 and May 5 respectively, versus March reports in Dane, Walworth, Waukesha and Dodge Counties, the earliest being a report of 26 birds in Dane County on March 15 (Evanson). Reported from 20 counties.

Common Grackle—Only one BOP report (Milwaukee County, Prestby). Then no mention until the relatively advanced date of March 12 in Walworth County (Rohde); with 5 reports on March 14 quickly following, the migration was on in earnest. Got into Douglas County on March 31 and Ashland County on April 3.

Brown-headed Cowbird—Also but one BOP report, this one from Racine County (Gustafson). There were 6 more county reports by mid-March, beginning with Dane County on March 10 (Burcar). Finally reached Ashland County on April 14 (Verch).

Orchard Oriole—Like the swallows of Capistrano, the "orioles of Panetti" returned to that Ozaukee County feeder for the eighth straight year on April 29, constituting the season's earliest sighting. Showed up in 12 eastern, 5 central and 1 western (Dunn) counties. That and Oconto and Door Counties reports were the northernmost.

Baltimore Oriole—On the early side was an April 16 individual in Jefferson County (Kearns), the only report until April 29, when it appeared in Kenosha (Hoffmann) and La Crosse (Jackson) Counties. Hatleberg had 8 males and 4 females at her crowded Chippewa County feeder on May 11 (see Rose-breasted Grosbeak account). Orioles seemed particularly feisty this spring, with 4 fighting over the right to ingest sand from a backyard pile in Waupaca County on May 13 (Fisher); see also "By the Wayside" for another example of oriole assertiveness.

Purple Finch—A season with almost nothing in southern counties, only a single bird

being reported in Richland County on April 3 (Duerksen). As "finch winters" become more and more of a memory, we may see more of this. Thirteen other counties did report it, with Barron, Portage, Outagamie and Manitowoc Counties forming the southern border. The high count appeared to be only 6 (Portage County, Berner, May 6).

Red Crossbill—Almost missed, with only a WBN report on May 10 from Forest County (Paulios).

White-winged Crossbill—Considerably more conspicuous than the previous species, with reports from 7 central and northern counties. The high count was 10, reported from Oneida County on April 25 (Uttech).

Common Redpoll—Reported only 4 times: from Walworth County on March 7 (Fitzgerald); from Florence County on March 8 (Burcar); from Douglas County on March 22 (R. Johnson); from Door County April 6-8 (Lukes).

Pine Siskin—Again the only southern report came from Fitzgerald in Walworth County on March 10. And to write *finis* to a truly execrable winter finch year, there were a paltry two other reports, an unspecified number of birds in Douglas County on March 22 (R. Johnson) and a single bird in Portage County April 20–27 (Berner).

Evening Grosbeak—Reported from Portage, Shawano and 8 more northerly counties throughout the season, but mostly in May. Twelve were at an Iron County feeder on May 4 (Bates).

Corrigenda Spring 2002

References to American White Pelican and Cattle Egret Portage County sightings as "possible county firsts" should be deleted.

The April 18 Dane County Semipalmated Plover report should have been May 18.

Speculation as to Acadian Flycatcher possibly nesting in Portage County prompted information from Murray Berner that it has in fact been breeding there since at least 1995.

Contributors and Cited Observers

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Dark-eyed Junco in Dodge County *by Jack Bartholmai*

"By the Wayside"—Spring 2003

Documentation for rare species includes Barrow's Goldeneye, White-faced Ibis, Ruff, Laughing Gull, Little Gull, Black-legged Kittiwake, Eurasian Collared-Dove, and Yellow-breasted Chat.

Barrow's Goldeneye (*Bucephala albeola*)

9 March 2003, North Point Park, Sheboygan, Sheboygan County—This bird was found by members participating in the WSO field trip, and I decided to look for it after overhearing their conversation while I was birding along the lake. I viewed it from my vehicle using a 20–60 × 80 mm spotting scope. It was about 75 yards away, just beyond the ice shelf, where it was diving among a few scattered Common Goldeneyes. I recognized it immediately by its bright, nearly entirely orange-yellow bill, with only a small black mark at the tip. Without this field mark, I could have easily passed it over because of its similarities to female Common Goldeneyes. I am aware of the differences detailed in the field guides, but compared to bill color they are rather subtle. Both species had brownish backs, dark brown heads, a white neck ring, and varying amounts of white exposed on the wing. The Barrow's showed a fairly even white horizontal stripe on the wing. Both species had marbled gray-brown breasts and pale yellow eyes. After careful study I could see that the bill of the Barrow's was smaller than that of the Common Goldeneyes, and that the dark brown head was slightly browner. The steepness of the forehead was also greater when the Barrow's was at rest, but when preparing to dive it adjusted the slope of its forehead and differed little in appearance from diving Common Goldeneyes. I judged that while it was swimming, the bill was tilted downward a little more below the horizontal than the bills of the Common Goldeneyes. It was never close enough to Common Goldeneyes for an accurate size comparison, but I judged them to be close in size.—*Thomas Wood, Menomonee Falls, WI.*

White-faced Ibis (*Plegadis chihi*)

18 April 2003, Williamstown, Dodge County—The birds (four were seen) were just a bit bigger in body size compared to the Gadwalls and Mallards that were around them, but they had much longer legs which were red in color. The bills were very long with a downward curve. The birds were very dark overall, almost coot-like, but with a brown and green sheen to the body. In front of the eyes was a white patch, with red next to the bill. The birds were feeding, probing with their bills and picking up something that looked

like snails. The birds were skittish and would fly when the ducks quacked loudly. They would move through shallow spots in the water; when the water got too deep, they would fly to the next shallow spot and then continue feeding.—*Jeff Bahls, Beaver Dam, WI.*

Ruff (*Philomachus pugnax*)

12 May 2003, Highway 29 and City Lake Road, Brown County—In a large flooded area on the south side of Highway 29, there were several Lesser Yellowlegs feeding along with a couple of dowitchers that were mostly hidden in the tall grass. Several more yellowlegs, along with a similar-sized brownish-colored shorebird, were feeding farther down, so I moved closer. There were about ten Lesser Yellowlegs feeding along with this unfamiliar bird. It had a brown-colored head and neck. There was a faint whitish eye ring. The bill was about two inches long, dark gray, with a slight droop. It was thicker than the yellowlegs' bills. The back was a scaly dark brown. The breast had horizontal mottled grayish-brown markings. The belly and undertail coverts were white. The legs and feet were bright orange-colored. I watched the bird for about half an hour, then went to Bay Beach in Green Bay to tell Ty and Ida Baumann about it. We went back out to the spot and after about fifteen minutes relocated the bird. It flew a short distance once and the U-shaped white patch could be seen on the tail. It fed along with the twenty or so Lesser Yellowlegs, Long-billed and Short-billed dowitchers and Wilson's Phalaropes that were also in the pond. The orange legs were frequently hidden because it fed in deeper water than the yellowlegs.—*Mark Peterson, Caroline, WI.*

Laughing Gull (*Larus atricilla*)

10 May 2003, Port Washington Harbor, Ozaukee County—I parked on the overlook which looks over the harbor from the north side. There were many gulls and terns spread out before me, including a large flock on the coal pile. When a large flock of birds suddenly streamed north I assumed something had flushed the flock on the coal pile—but it was still there. I watched in near amazement as hundreds of birds streamed north in a continuous spread-out flock: some near, some far; some low, some high. The flock contained large gulls, small gulls, large Caspian Terns, small terns; it had adults and subadults all completely mixed up. A Laughing Gull flew within this flock, quite close to me and about eye height. It had an incomplete hood, dark gray mantle and flight feathers (which is how I picked it out of the flock in the first place). The wings were dark gray, blending into black-tipped primaries with no white on them at all. The undersides were white and the tail had a few black spots near the tip. It was close enough that I could see its black bill, which was large-looking, and I could even see the slightly drooping look it has.—*Tom Uttech, Saukville, WI.*

Little Gull (*Larus minutus*)

9 May 2003, Lake Maria, Green Lake County—I first picked this bird out from the Bonaparte's Gulls by its

smaller size as it rested on the water, which wasn't hard to notice. It showed a darker carpal bar on the folded wing than the Bonaparte's Gulls did. This darkness also extended into the folded primaries. The bill was also much smaller. I could also see that the bird had what appeared to be a light wash of gray on the nape and the rear area of the crown. When the bird took flight, the strong "W" (or "M") pattern was clearly seen. This indicated that this was a first-year bird.—*Dan Belter, Weston, WI.*

Black-legged Kittiwake (*Rissa tridactyla*)

2 March 2003, Rotary Park, Sheboygan, Sheboygan County—Upon reaching the park I positioned myself in the shelter of a spruce tree to block the sun's effects and not disturb the gulls by my presence. There were I would estimate 400–600 gulls present, resting on the ice floe on the south half of the river, with open water on the north half. I scoped the flock for about five minutes when my attention focused on a gull resting on the ice next to a number of Herring Gulls, near the outer edge of the ice floe, just beyond the open water. At the time the gull was facing me, head up, and I noticed it had a shorter all-black bill and was distinctly smaller than the Herring Gulls. As I continued to view this bird it rose to shift its position and immediately sat back down. It was at this time that I was able to see the distinct dark marking on the nape that angled like a collar, and another dark mark in the auricular area, behind the eye and at the same level. Also noted were the dark feathers on the lesser coverts, starting at the front and extending back a short distance. At the time that the bird rose to shift its position I attempted to ascertain its black legs. However, in the brief chance I had to look, I saw a leg that was not dark black, but pink. The mantle and wings were a similar gray to the nearby Herring Gulls. Also present were Ring-billed Gulls and one Greater Black-backed Gull. As I was observing this bird, a group of young kids came running down the boardwalk from the west, yelling and screaming, distracting me and flushing the flock. After the birds settled down again, further scanning of the flock could not relocate this bird.—*Charles Geiger, Manitowoc, WI.*

2 March 2003, Rotary Park, Sheboygan, Sheboygan County—The kittiwake was observed both on the water and standing and resting on the ice. It flew several times when the entire flock took to the air, but I was unable to track it in flight due to the numerous gulls surrounding it, but had no difficulty relocating it when the birds settled back on the ice. When it rested side by side with a Ring-billed Gull, I judged it to be comparable in length, perhaps a little smaller. The bill was thinner and all-dark with the lower mandible lacking a visible gonydeal angle and appearing straight nearly to the tip. The upper mandible had more of a curve from the base to the tip. The mantle, back and wing coverts were a uniform gray (somewhat darker than the Ring-billed plumage) except for evidence of a dark carpal bar which ran horizontally below the scapulars from breast to tertials. The wingtips extended beyond the tail and were solid black with no

white spots. The underparts were white and unmarked. The tail was white with a dark terminal band, but I did not get a complete view, so I don't know if the band extended the entire width of the tail. The face was white with a black vertical bar behind the eye. This bar did not completely pass over the white crown. There was also a faint black smudge directly over the black eye. A partial thick but fading or worn black collar reached from below the side of the throat around the nape to the other side. This collar made the bird easy to spot when it had its bill tucked in and facial features were hidden. When the bird stood on the ice, I noticed that the legs were solid black. Once it raised its wing and I saw that the tip was solid black, but this black was limited to a small area. Otherwise, the underwing was a brilliant white in the sunlight. As I mentioned, I had difficulty tracking the kittiwake in flight and could not get a look at the upperwing surface.—*Thomas Wood, Menomonee Falls, WI.*

Eurasian Collared-Dove (*Streptopelia decaocto*)

26 April 2003, Albany, Green County—A friend and I were biking the Sugar River Trail, and just as we entered the outskirts of the town of Albany, we passed a set of grain elevators next to the trail. I was caught off guard by a dove's call that was both familiar, yet not quite—a loud hoooo HOOOO hoooo—very different from that of a Mourning Dove or pigeon. I have birded Europe in the past and recognized the call as one of the Eurasian doves, but couldn't remember which one. After 5–10 minutes of searching, I finally located the birds far up on the elevator. I saw at least two and thought I heard a third while looking at the other two. At that point all I could see was a light, sandy-colored (not gray) bird that seemed stockier than a Mourning Dove, yet not quite as fat as a pigeon. After several minutes, the pair flew across the trail and landed briefly in a tree 40-50 feet away. In flight I saw the squared (not pointed) tail with a broad white band at the end. As the birds sat, one finally turned its neck so that I could see the white-rimmed dark "collar" on the back of the neck. The collar extended only to about the middle of the sides of the neck. The call and physical description matches those for Eurasian Collared-Dove in both of the European field guides and the National Geographic guide that I have. The only similar bird listed is the Ringed Turtle-Dove, which is also conceivable as an escape, but it is described as a smaller bird, with the accent in the call on the first, rather than the second, "syllable."—*Martin Smith, Madison, WI.*

Yellow-breasted Chat (*Icteria virens*)

30 May 2003, Brooklyn Wildlife Area, Dane County—I had heard of this bird from the WSO hotline and as I walked east on the trail from near CTH D and CTH DD, I heard a bird giving a persistent call similar to a Northern Bobwhite, but truncated so as to resemble a bird calling "White, white" over and over again. Last year I had found bobwhites calling in this area, so as I searched a hedgerow from where the call came, I expected to see one, if I

could locate the vocalizing bird. To my surprise I saw a Yellow-breasted Chat on a branch in the open and, since I was carrying my scope, I had an excellent look. I saw the very bright yellow throat and breast, dark olive-brown back, white lores, and white crescents above and below the eyes. It gave the same call for about two minutes, then disappeared into the hedgerow. When I returned the next morning, I heard the more familiar chat sounds but did not see the bird this time.—*Thomas Wood, Menomonee Falls, WI.*

Adult Male White-throated Sparrow *by Jack Bartholmai*

Barred Owl *by David Brandon*

WSO Records Committee Report: Spring 2003

Jim Frank

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The WSO Records Committee reviewed 31 records of 18 species for the spring season, accepting 25 of them. Also accepted was one record from the previous year. Highlights of the season included Wisconsin's tenth Painted Bunting record and new early spring records for Stilt Sandpiper and Yellow-throated Vireo.

Observers were notified of the committee's decisions by postcard in the instance of accepted records and by personal letter in the case of records not accepted.

Accepted

White-faced Ibis—

#2003-022 Dodge Co., 18 April 2003, Bahls (4 birds); 1 May 2003, Tessen (2 birds).

Long-legged, long-necked waders with a body size less than that of nearby Mallards was seen. The long, gray, decurved bills were apparent. The heads, necks, and upper backs were iridescent bronze-maroon in color while the lower backs were greener. Noticeable, unbroken white borders surrounded the eyes and the red-pink facial skin. The legs were red.

The red-pink facial skin, red legs, and white facial skin border distinguish this species from the Glossy Ibis.

Barrow's Goldeneye—

#2003-008 Sheboygan Co., 9 March 2003, T. Wood, Tessen.

This female had a brown head with an orange-yellow bill, black only at the tip. It was virtually identically colored with the adjacent female Common Goldeneyes other than the bill color. The bill shape of the Barrow's was stubbier than the Common Goldeneyes' bills. The head was a darker shade of brown relative to the Commons. In addition, the forehead rose

more steeply than that of the Common Goldeneyes.

The bill shape and head contour are essential in the identification of Barrow's Goldeneyes as the Common Goldeneye females can have all yellow bills in some cases.

Long-tailed Duck—

#2003-009 Ozaukee Co., 26 May 2003, Frank.

A pair of ducks were seen on Lake Michigan. The drake had a dark head and upper breast with a white patch surrounding the eye, white on the lower breast and belly, and a long, upturned tail. The bill was dark, but a pink area could be discerned on it. The female was still heavily white in color with a dark patch on the cheek and crown. The upper breast was white with a bit of dark smudging. The lower breast and belly were also white. The bill was gray and the female lacked the long tail.

This is one of the latest spring dates for Wisconsin.

Stilt Sandpiper—

#2003- 024 Dane Co., 13 April 2003, Marfilius (photo)

This shorebird was slightly smaller than adjacent Lesser Yellowlegs with green-yellow legs and an overall gray back and wing coloration. A white superciliary line accented the rusty eyeline. The bill was slightly longer and slightly downturned in comparison to the Lesser Yellowlegs.

This is Wisconsin's earliest record by one day, eclipsing a record from 1956. In addition, this record surpassed a 1954 date by two days.

Ruff—

#2003-012 Brown Co., 12,13 May 2003, Tessen; 12,14 May 2003, M. Peterson; 13 May 2003, Belter; 14 May 2003, Bontly.

This female was similar in size to the Lesser Yellowlegs in this pond, but this bird was brown in color and had a bulkier body in proportion to the head. The legs were orange-yellow. The scapulars and tertials had black central coloration with rufous edges. The back and breast although generally brown, both had black blotchings. The gray brown bill was a shade shorter in proportion to the head than the Lesser Yellowlegs, and a bit thicker.

Black-legged Kittiwake—

#2003-002 Sheboygan Co., 2 March 2003, T. Wood, Geiger.

This gull was similar in size to the Ring-billed Gulls with a more slender, black bill. The mantle was slightly darker gray than the Ring-billed mantles. On the folded wing a black carpal bar was evident. The tail was white with a dark terminal band. The white head had a faint dark smudge above the eye and a black vertical line behind the eye. A black streak was also noted across the nape. The legs were reported as black by the first observer. The second observer got a very brief look at what was felt to be the leg of the bird and noted pink. Two possibilities for this discrepancy exist. The more likely would appear to be the brevity of the look with perhaps the leg of an adjacent bird being seen. The second possibility would require there to be yet a second kittiwake at this spot, knowing that a very small percentage of them have pink rather than black legs. Otherwise both descriptions give enough

information to identify this bird as an immature Black-legged Kittiwake.

Eurasian Collared-Dove—

#2003-014 Green Co., 26 April 2003, R. M. Smith

#2000-067 Oconto Co., T. Wood.

This dove was slightly larger and bulkier than the associated Mourning Doves. The tail was wider and squared at the end. Its overall color was light beige-gray with a black crescent on the nape and primaries darker in color than the general plumage. The undertail was black proximally with dark gray undertail coverts.

The Oconto bird is the same bird/location reported since summer of 2000. The Green County bird is a new individual.

Common Nighthawk—

#2003-015 Sheboygan Co., 13 April 2003, S. Baughman.

Two slender-winged birds were observed in buoyant flight with quick changes of direction. The angle of observation precluded seeing the expected white wing patches, but the notched tail was noted. The notched tail eliminates other nightjars including Whip-poor-wills.

Yellow-throated Vireo—

#2003-036 Crawford Co., 18-21 April 2003, Martin.

This vireo was seen feeding at a suet feeder. The yellow breast, throat, eyering, and lore line were reported as were the white wingbars and white belly. This is Wisconsin's earliest spring record.

Barn Swallow—

#2003-016 Dane Co., 27 March 2003, Paulios.

This bird was loosely associating with a Tree Swallow flock. It was slightly longer winged then the Tree Swallows, with a deeply forked tail. The upperparts were dark, the underparts were orange.

This is the third March record for Wisconsin, March 15th and 23rd being the other, earlier records.

Northern Parula—

#2003-017 Milwaukee Co., 13 April 2003, Hagner.

This warbler had a blue-gray back and wings, with a greenish cast to the upper back. The eye had white crescents above and below, and there were two white wingbars. The chest was bright yellow, turning orange near the throat.

This the third earliest spring record for Wisconsin.

Western Tanager—

#2003-018 Dane Co., 7 May 2003, Westaway, (photo).

#2003-019 Winnebago Co., 12 May 2003, Rohrer (photo); 14 May 2003, Tessen.

This tanager was yellow with black wings, tail, and upper back. Of the two wingbars, the upper was yellow, the lower was white. The head was red-orange.

Savannah Sparrow—

#2003-020 Ozaukee Co., 6 March 2003, Frank.

This sparrow was on the ground under a bird feeder with White-throated Sparrow and juncos. It was noticeably smaller and shorter tailed. Its light brown back was streaked, the white breast had dark brown streaks coalescing into an upper breast spot. The crown had two wide brown stripes

adjacent to a central light streak. Light superciliary lines were lateral to the brown crown stripes. The ear area had a triangular light brown patch and there was a dark brown whisker mark. The central crown stripe, superciliary lines, and light malar stripe were washed with a light yellow, darkest closest to the bill. The conical bill was gray dorsally, pink ventrally. The legs were pink.

There are two January, two February and a March 11th record on the books for Wisconsin. This bird was felt to be a wintering bird seemingly displaced to a feeder by a light snowfall.

Painted Bunting—

#2003-021 Sheboygan Co., 13 May 2003, Hiebing (photo), S. Baughman.

This small bird had a purple-blue head, red underparts, a yellow-green upper back, rosy rump, red eyering, brown wings, and brown tail. The bill was finch-shaped.

This Wisconsin's tenth record, only the second since 1985.

Blue Grosbeak—

#2002-103 Waupaca Co., 10 July 2002, Hewitt.

This dark blue bird was first heard to be singing warbled notes. When it appeared the heavy, black grosbeak bill was evident. The area around the eye appeared so dark as to be black as well. Wingbars of rust color were also discerned. Interestingly, this sighting occurred during a Breeding Bird Survey.

Not Accepted

Barrow's Goldeneye—

#2003-008 Sheboygan Co., 9 March 2003.

This is a report probably of the accepted Barrow's Goldeneye seen by others in Sheboygan Co. that same day. This description relied solely on an all yellow bill as the diagnostic filed mark. Some female Common Goldeneyes can also have this characteristic. Without mention of the relatively smaller size of the bill nor the steeper rise to the forehead, a Common Goldeneye hasn't been ruled out.

Purple Gallinule—

#2003-010 Waupaca Co., 22 May 2003, (photo).

This crow-sized bird was observed along the edge of a river. It was described as all blue with a yellow beak. Photos were supplied that proved this bird to be a Green Heron.

Western Sandpiper—

#2003-011 Dane Co., 31 May 2003.

This individual was with 6 Semipalmated Sandpipers and appeared to be the same size. It appeared different in that the bill was slightly longer and drooped at the tip. The scapulars were reported as rustier. No indication was made of the rest of the plumage so non-breeding versus breeding plumage is left unknown. Specific note as to crown and auricular color was not made. With the limited description, consideration has to be given to a female Semipalmated Sandpiper which would have a longer bill than males, and at this time of year birds can show some variation in advancement into breeding plumage. The rustier scapulars could just be such variation. In breeding plumage a Western Sandpiper should have more spotting than streaking on the breast and more rust accents on the body. Although a bit larger than a Semi-

palmated Sandpiper, a White-rumped Sandpiper could also be considered having a slightly longer bill and rust to the scapulars.

Black-legged Kittiwake—
#2003-013 Sheboygan Co., 3 March 2003.

This report is of a suspected adult bird, an extremely rare occurrence in Wisconsin. It flew past the observer to give a report of a Ring-billed Gull-sized bird with a yellow bill, black wing tips, a dark eye, and dark coloration on the nape. No indication was given as to mantle color or leg color. In addition, no distance from the bird was given. Consideration of other potential species by the observer was limited to a Ring-billed Gull, but a 2nd year Mew Gull would also fit this description. Fly-bys in heavy wind are a tough way to observe birds in accurate comparisons. Without the dark leg color and absence of mantle color, it is difficult to distinguish the identity of this bird.

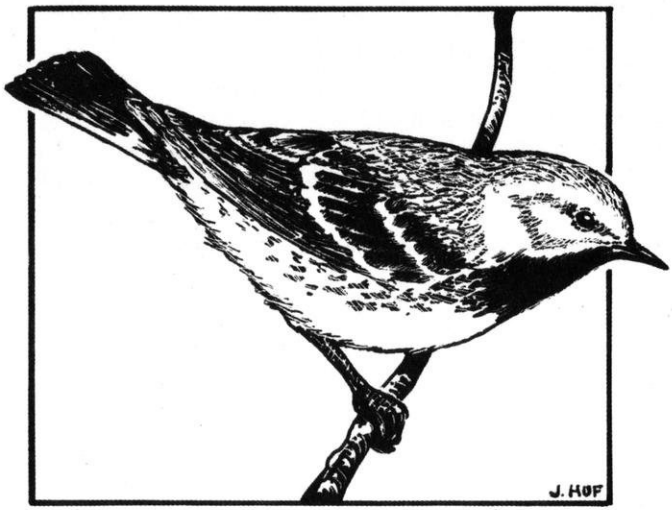
Palm Warbler—
#2003-027 Waukesha Co., 24 March 2003.

This report was limited to stating the individual was a Palm Warbler and the tail was wagging. Without size, shape, general classification of the bird as to a family or group, and plumage comments, this report doesn't identify a Palm Warbler, although it is very likely to have been a correct identification.

European Goldfinch—
#2003-023 Vernon Co., ?? May 2003 (photo only).

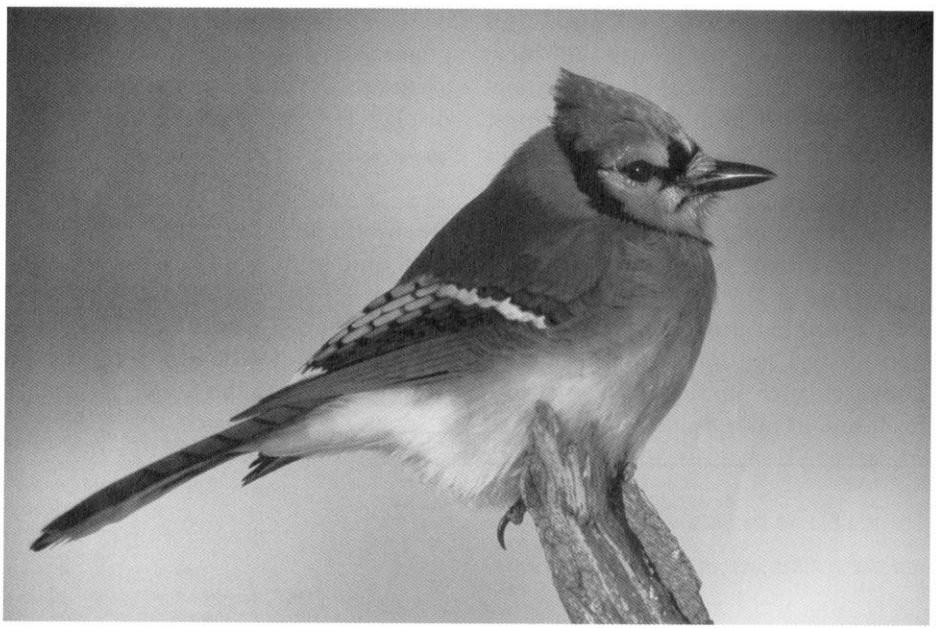
This is another in a growing collection of records for this species from southern Wisconsin in recent years. It is assumed to be an escaped bird.

Jim Frank *is a frequent contributor to this journal with the Records Committee Report, May Day and North American Migration Day Counts, as well as his own bird observations. He is a veterinarian in Milwaukee with an interest in avian medicine.*



Black-throated Green Warbler *by Judith Huf*

Black-and-white Warbler from the yard of *Dennis Malueg* in Waushara County



Blue Jay in Dodge County *by Jack Batholmai*

About the Artists

Jack R. Bartholmai is an amateur wildlife photographer and wood sculptor who lives in Beaver Dam. He is currently working on photographing the birds of Dodge County. his photos appear frequently in local newspapers, travel brochures, calendars, art shows, and bird publications.

David Brandon is a self-taught artist who has taught basic drawing and illustration at the college level. This award winning artist's interests are in nature and landscape painting. He does freelance illustration work from his home in minnesota.

Judith Huf has worked as an artist in many fields, from painting and sculpture to technical and scientific illustration and creating exhibits for nature centers and museums. She is a very generous volunteer in using her art abilities for WSO and WBCI, creating displays for both organizations.

Dennis Malueg is a serious amateur bird and wildlife photographer. The backyard, prairie, and 80-acre forest at his Waushara County home serve as his photo studio for capturing images of birds native to the area.

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THE WISCONSIN SOCIETY FOR ORNITHOLOGY

The Wisconsin Society for Ornithology is an educational and scientific non-profit organization founded in 1939 "to encourage the study of Wisconsin birds." The Society achieves this goal through programs in research, education, conservation, and publication.

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