Purple Finch: Midwinter reports came from *Coshocton, Cuyahoga, Lake, Hancock, Holmes,* and *Perry*. **B. Lund** had 11 at Lynx, *Adams*, on 25 Feb. 105 were reported on CBCs. This total is somewhat below the average for the past five or six years.

Pine Siskin: Very scarce, like all winter finches during this season. All reports: A single bird was at Lorain 19 Dec (**J. Pogacnik**). Another was seen at Lakeshore MP 2 Jan, while three or four visited the feeders at Lakeshore 21 Jan through the end of the period (**J. Pogacnik**). Finally, **D. Sapienza** reported "several at the feeders" in Lk Alma SP, *Vinton* [no date(s) given]. Nine CBCs reported a total of 29 birds.

American Goldfinch: Wintering *maxima* included 75 at Mohican SF on 22 Jan (**E. Schlabach**); 152 in *Hancock* on 8 Dec (**B. Hardesty**); and "up to 100 on snow days" in Lynx, *Adams* (**B. Lund**).

Evening Grosbeak: Extremely scarce. All reports: One bird was reported at Paint Cr Lk., *Highland*, 22 Jan (**J. McMahon**); another was seen at Girdled Rd MP, *Lake*, 10 Feb (**J. Pogacnik**). None were seen on any CBC this year.

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Weather-related Waterbird Groundings

by Donald L. Burton, MS, DVM

An unprecedented number of strictly aquatic birds presented for care at the Ohio Wildlife Center (OWC) in Columbus, Ohio, 13-20 January 1999. The cluster of admissions began with a red-throated loon *Gavia stellata* admitted 13 January. The following day had the largest number of admissions with nine horned grebes *Podiceps auritus* and one white-winged scoter *Melanitta fusca*. One additional red-throated loon, three common loons *Gavia immer*, and five horned grebes were received at OWC from 15-20 January. Though the number of birds presented is inconsequential in terms of populations, it nonetheless exceeded in one week the numbers of such species normally admitted over a year's time at OWC.

This unusual group of admissions prompted the author to review admission records at other rehabilitation centers across Ohio. There were at least 55 horned grebes presented at other rehabilitation centers during this week, with 13-15 January identified as the peak days of admissions. The vast majority of grebes (45 of 55, or 81.8%) were reported in the Cleveland area by the Lake Erie Nature and Science Center (with 23) and the Lake Metro Parks Wildlife Center (with 22). In this paper, I theorize that weather was responsible for this downing of birds. I will describe a series of factors leading up to these events and advance hypotheses to explain this *en masse* downing of birds.

A review of the seasonal weather patterns for late 1998 and early 1999 reveals a prolonged period of above-normal temperatures and reduced precipitation. August averaged 5°F above normal, September 6°F, October 2°F, November 3°F, and December 6.5°F. Early December produced record warmth in Ohio; 6 December, for example, showed a record 73°F high and 62°F low in Columbus. Nearly 80 record high temperatures east of the Rocky Mountains were set that day. In Ohio, the period including 22-31 December 1998 and the first 15 days of January 1999 was contrastingly cold, leading to the freezing of most surface waters of inland lakes, ponds, and rivers. Exceptionally low nightly temperatures in combination with above-normal levels of precipitation led to snow accumulation reaching 13 inches in central Ohio on 11 January (Jym Ganahl, pers. comm.). Low temperatures recorded at night in central Ohio from 22 December to 15 January exceeded 22°F only twice during this 25-day period.

Because their feeding habits enable them to find fish prey as long as the water remains free of ice, the mild temperatures of late fall 1998 led many horned grebes and loons to linger longer than normal on the Great Lakes and other large bodies of water. The abrupt change of temperatures in late December did not quickly lead to the freezing of the Great Lakes, but after two weeks of daily sub-freezing temperatures, conditions there deteriorated even for these cold-resistant species. It was, however, certain very specific weather conditions on 13 January that stimulated these late migrants to a remarkable mass movement.

During the day on 11 January, a front passed through Ohio, leaving clear, dry conditions and a low of 3°F that night. On the following day an "Alberta Clipper," a large cold air mass originating in the Canadian Yukon and Northwest Territories, swept across the United States along a front extending from Montana to Buffalo, New York. The characteristic west-to-east jet stream carrying this frigid air passed north of Ohio, allowing warm Gulf air from the southwest to warm Ohio to a 43°F high and 37°F low for the day. On 13 January the front sagged south over Ohio due to the influence of a low-pressure area developing over Arkansas. Low-pressure areas have a tendency to travel along such a front, in this case causing it to stall above Ohio (Jym Ganahl, pers. comm.). Results of these atmospheric conditions were strong, cold, northeasterly

winds at the surface and warm, more moisture-saturated air from the Gulf of Mexico advancing above the cold air mass in the opposite or northeasterly direction.

When warm, saturated air travels above very cold air, freezing rain and ice is produced at the surface. During the early hours of 13 January, rain, drizzle, and periods of freezing rain dominated. Temperatures fell throughout the day, reaching freezing at 1016 h EST. The precipitation progressed to icy freezing rain by sunset. The clouds were very low, with a 400-foot cloud cover and only 800 feet of visibility by 0800 h. Cloud cover ended averaging only 600 feet for the entire day. Winds were stiff from the northeast at 10-13 knots (11-14 mph) daylong (Daily Weather Maps 1999).

The strong northeasterly winds, cold temperatures and the nearly frozen Great Lakes stimulated a mass migratory movement of lingering horned grebes and loons on 13 January as an apparent effort to avoid frozen waters and severe weather. Birds' migratory movements are generally dictated by wind direction, with a strong tendency to move downwind from approaching poor weather (Kerlinger 1982, Elkins 1988). Unfortunately, movement dictated by wind direction on 13 January pushed the birds into even worse weather conditions involving freezing rain, 100% humidity, low cloud-cover and poor visibility.

Grebes, known as poor fliers, have wings with low aspect ratio (wing length to width), high wing loading (mass to wing surface), and lack a functional tail (Jehl 1998). These anatomical features prevent them from utilizing gliding flight and make it difficult for them to recover from flight deviations such as those undertaken to avoid obstacles. Once grebes become disoriented by weather conditions with poor visibility they are not easily able to alter or correct their course of flight, and they may strike objects or just plummet to the ground.

When grounded, grebes and loons become almost helpless; even their ability to stand upright is limited. Grebes and loons are strictly aquatic, and perfectly adapted for diving, with legs positioned caudally on their bodies. The legs and feet are anatomically positioned optimally for propulsion through the water, but become ineffective and counterproductive for terrestrial movement. On land they move awkwardly, lifting the body off the ground and dropping it forward with a thud. Sometimes wings assist as crutches in this unnatural-looking and minimally productive forward motion (Palmer 1962). To take flight from water, these species usually have to orient into the wind and then gain forward momentum by flapping and running along the surface. Only after a labored and awkward run are they able to take flight (Palmer 1962). Common loons have been reported as needing up to a quarter of a mile to take off from water under certain conditions (Palmer 1962). On the ground, these birds become victims of their anatomies and are unable to regain flight.

The number of horned grebes brought to Ohio rehabilitation centers from 13-20 January 1999 probably represents only a small percentage of those actually grounded during these weather conditions. Birds could have been grounded in remote areas, quickly preyed upon, or unnoticed. There is some evidence that grebes forced to ground tend to choose water, or terrain that resembles water, under such conditions. Many of those recovered during this incident were found on lighted roadways, lighted parking lots, atop large flat-roofed buildings, and in open fields near frozen water. If they came down on busy roadways, they could easily have been hit by cars or skirted into ditches where they went undetected.

Approximately 70 grebes were recovered and brought by the general public to Ohio's rehabilitation centers with 64.3% (45 of 70) reported from centers close to the southern shore of Lake Erie in the Cleveland area. The Ohio Wildlife Center in central Ohio received the third-highest number of downed horned grebes. Three common loons, two red-throated loons, and a white-winged scoter were the only loons or ducks

presented for care at OWC in this mass downing and were recorded only in central Ohio. Additionally, two pied-billed grebes *Podilymbus podiceps* presented to other Ohio rehabilitation centers during this period as a result of grounding. Although grounded by severe weather, the majority of these birds were not seriously injured. All 14 grebes presented at OWC were eventually released. Forty-five of 56 individuals (80.4%) presented to other rehabilitation centers across Ohio were also successfully released back into the wild. Those injuries noted on presentation which later prevented successful recoveries were traumatic wounds, with fractured wings and legs. These injuries may have resulted from flying into stationary objects such as utility wires or from the impact of hitting ice-covered ground. Head trauma was diagnosed in one horned grebe brought to OWC, with hemorrhage in the nares and oral cavity, but the bird recovered uneventfully and was later released.

The body weights of presenting grebes throughout Ohio varied dramatically depending on the date of presentation. Birds presenting on 13 and 14 January (N=14) weighed an average 425 grams, in marked contrast to grebes presenting between 16 and 18 January (N=4), which averaged only 277 grams. This suggests that all birds could have crash-landed on 13 and 14 January but were either not immediately found or were delayed in presenting to rehabilitation centers and therefore arrived in an advanced emaciated and dehydrated condition.

In the western United States, large-scale groundings of eared grebes *Podiceps nigricollis* have been reported as a result of snowstorms and severe weather conditions (Jehl 1993, 1996, 1998, Jehl *et al.* 1999). In 1928, Cottam (1929) documented a shower of grebes falling from the sky during a snowstorm. In January 1997, 35,000 eared grebes (3% of the population that stages at Great Salt Lake, Utah) were downed during a snowstorm, and in March 1997, 920 grebes were downed as a result of weather during the return northbound migration (Jehl *et al.* 1999). Populations of eared grebes in particular are thought to experience frequent mortality due to adverse weather conditions. Eared grebes stage in large numbers at Great Salt Lake and Mono Lake, California, in the fall, feeding primarily on brine shrimp. As the food source dwindles in the late fall or early winter, they migrate as large groups, predisposing a significant proportion of the population to the same migratory dangers (Jehl 1993).

Horned grebes do not stage during migration like eared grebes and are generally found singly or in small groups during migration. Occasionally, larger groups may amass during peak times of migration, as in Ohio during November when groups of 150-500 have been reported on Lake Erie (Peterjohn 1989). Weather-related downings of horned grebes as a large-scale phenomenon have to date gone unreported. The events leading up to and surrounding the grounding described here may be unique and thus unlikely to predispose the horned grebe population to catastrophes during migration similar to those suffered by eared grebes.

The Ohio Wildlife Center has received grebes and loons in previous years whose predicament was thought to be due to poor weather conditions, but usually only one or two individuals have been involved. One exception occurred during an ice storm on 9-12 February 1994. Three horned and three red-necked grebes *Podiceps grisegena* presented to OWC had been found in the lighted streets of metropolitan Columbus. These birds were shaken but not seriously injured, and were kept for two days until the severe weather passed, then released.

Examining this rare event suggests that wildlife rehabilitation centers can offer important data concerning the circumstances of birds' migrations, especially if precise records are kept. The two red-throated loons presented to OWC during this weather-related grounding in 1999 for example, offer documentation for this species in central Ohio in mid-January. Red-necked grebes presented 9-12 February 1994 may extend

the early migration dates northward of this species in Ohio. The presentation of even a single individual, such as a juvenile northern gannet *Sula bassana* presented to OWC in January 1993 and subsequently deposited in the OSU Museum, documented the first occurrence of this rare bird in central Ohio.

Admissions of multiple individuals of the same or related species sharing a particular habitat should be viewed as related, and will stimulate greater curiosity for investigating the cause or conditions surrounding such clustering admissions. Grouped admissions can also aid in documenting environmental hazards such as oil spills or pesticide/herbicide misapplications. The multiple admissions of horned grebes and other waterbirds to OWC in January 1999 was thought to be weather-related, and further research initiated by OWC led to the discovery of a statewide event, with suggestive consequences for others who seek to explain such phenomena.

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Birding Lake La Su An Wildlife Area

by Jeff Grabmeier

Williams County, in the far northwestern corner of the state, will never be a major destination for Ohio birders. Beyond its remoteness, fully 77 percent of the county is farmland, and less than inviting for wildlife. But in a way that's what makes Lake La Su An Wildlife Area such a productive and interesting spot for visiting birders. In contrast to its immediate surroundings, its 2,200-acres offer a variety of appealing habitats, including a riparian corridor along the St. Joseph River, 13 lakes and ponds, tracts of bottomland hardwoods and ridges forested in mature oaks and hickories, as well as upland fields. The result is an avian oasis in a mostly barren agricultural region.

A wide variety of birds can be found here in the proper season, some of them hard to find elsewhere in northwestern Ohio. During spring and fall, Lake La Su An acts as a migrant trap, sometimes attracting surprising birds for this area, such as American bittern and Virginia rail. Lake La Su An has also been home to some notable summering and breeding species. For the past two years, the site has hosted a breeding pair of brown creepers, the first confirmed nestings for the northwestern part of the state. Generally rare in this part of the state, prothonotary warblers, Henslow's sparrows, Louisiana waterthrushes, and hooded mergansers are among the other summer residents or breeders sometimes found here. Winter is probably the least productive time for birding at Lake La Su An; all the same, the upland fields attract a few northern harriers and, less commonly, short-eared owls. This past winter brought a northern shrike.

The best place to start birding Lake La Su An is at the fisherman's check station located at the south end of Lake La Su An itself. To get there, take State Route 20 west from Toledo to Williams County Road 7. Turn right (north) and follow it until it ends at County Road R. Turn left (west) and proceed less than a half-mile to the parking lot on the right side of the road. There are toilet facilities here and Wildlife personnel are available at the check station during open hours. One note of warning: because the wildlife area is open to hunting, birders should use caution when visiting during those seasons. The driving tour described below may be the best bet when hunters are around.

Once at the check station, be sure to walk out the pier. If you are visiting during spring or fall migration, scan the lake for waterfowl, including teal, shovelers, pintail, and diving ducks. The Division of Wildlife has introduced ospreys here, and they are usually easy to see during the summer. Bald eagles occasionally stop along the lake during migration.

One of the best ways to bird the wildlife area on foot is to hike the gravel service road that starts here at the check station and goes around Lake La Su An. This walk around the lake, a couple of miles in length, is particularly rewarding during spring migration and breeding season. From the parking lot, take the service road going clockwise around the lake. First you will pass some upland fields that feature the usual grassland and edge species, such as field sparrows, song sparrows, and blue-winged warblers. On the left, you will then see a small pine plantation that sometimes hosts nesting barred owls. The service road then passes into a wooded tract. A swamp with dead trees will be on the left. This is an excellent place to sit and watch during breeding season. The brown creepers have made this swamp their home for the past two years. A pair of prothonotary warblers occasionally nests here. Keep your eyes and ears alert for pileated and red-headed woodpeckers, green herons, wood ducks, and great-crested flycatchers. A Louisiana waterthrush can sometimes be seen and heard