

6-2012

Snowy Owl Invasion of 2011–12

Joel G. Jorgensen

Nebraska Game and Parks Commission, joel.jorgensen@nebraska.gov


Lauren R. Dinan

Nebraska Game and Parks Commission

Thomas J. Walker Jr.

Nebraska Game and Parks Commission

Follow this and additional works at: <http://digitalcommons.unl.edu/nebbirdrev>

 Part of the [Ornithology Commons](#), [Poultry or Avian Science Commons](#), and the [Zoology Commons](#)

Jorgensen, Joel G.; Dinan, Lauren R.; and Walker, Thomas J. Jr., "Snowy Owl Invasion of 2011–12" (2012). *Nebraska Bird Review*. 1294.

<http://digitalcommons.unl.edu/nebbirdrev/1294>

This Article is brought to you for free and open access by the Nebraska Ornithologists' Union at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Nebraska Bird Review by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

SNOWY OWL INVASION OF 2011-12

Joel G. Jorgensen^{1,3}, Lauren R. Dinan¹, and Thomas J. Walker, Jr.²

¹Nongame Bird Program, Nebraska Game and Parks Commission, Lincoln, NE 68503

²Southwest District, Nebraska Game and Parks Commission, North Platte, NE 69101

³Corresponding author, joel.jorgensen@nebraska.gov

The Snowy Owl (*Bubo scandiacus*) is an Arctic breeder that regularly migrates to and winters in southern Canada and the northern United States (Parmalee 1992). The number of Snowy Owls moving south and the extent and timing of southward movements in any one year are believed to be dependent on interactions between populations of Snowy Owls and lemmings, the owls' principal food resource (Parmalee 1992). Infrequently, relatively large numbers of Snowy Owls are observed in areas or regions where few are typically observed, and individuals are observed well south of the normal winter range. These occurrences are often referred to as "invasions" or "irruptions".

The Snowy Owl is considered regular, albeit rare, in Nebraska (Sharpe et al. 2001) with a small number (<5) reported annually or nearly so. Invasions have been noted in the past, such as in the winter of 1917-18 and the winter of 1954-55. As noted elsewhere, the winter of 2011-12 was a major invasion year and the first in Nebraska in which electronic media, such as internet listserves and email, improved communication and reporting of observations. The purpose of this note is to summarize the 2011-2012 Snowy Owl invasion.

METHODS

The Nongame Bird Program (NGB) at the Nebraska Game and Parks Commission (NGPC) compiled all reports received or collected. Reports were gleaned from the internet discussion group NEbirds (<http://groups.yahoo.com/group/NEBirds/>), through direct emails and phone calls to the Commission, from reports passed along to the NGB by Commission employees and partners, and from information provided by Raptor Recovery Nebraska. Reports were entered into a database and classified as either "confirmed" or "unconfirmed". Confirmed reports were those for which a specimen was recovered, a photograph of the bird was provided, a description that distinguished the bird observed from other species was given, or an observation was made by a birder or a Commission employee familiar with Snowy Owls and similar species. Unconfirmed reports were those where minimal information (e.g., date and location) was provided and no judgment of what was actually observed could be

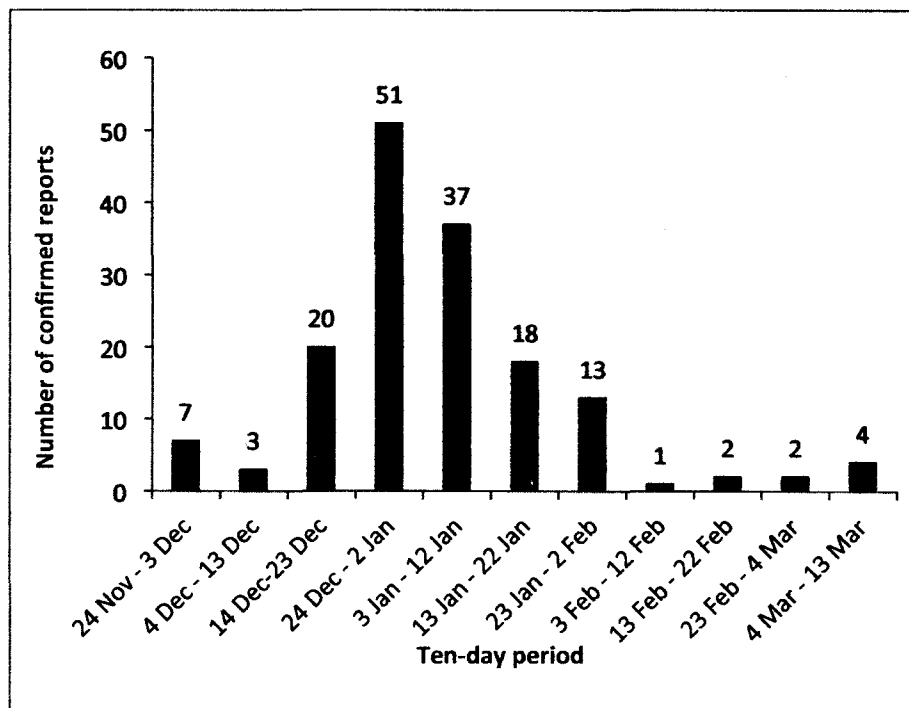


Figure 1. Number of confirmed Snowy Owl reports during the winter of 2011-12. Data are presented in ten day periods. The initial date was selected by using the first confirmed report.

made. Attempts were made to follow-up with observers to acquire definitive evidence, such as a photograph, when not provided initially.

We used confirmed reports to summarize the data both temporally and spatially. To summarize the data temporally, we created a histogram (Figure 1) showing the number of reports per ten day period, beginning with the first confirmed report as the start date. Confirmed reports where a specific date was not known were excluded from this histogram. To summarize the data spatially, we created a map (Figure 2) showing the location of all confirmed Snowy Owl reports.

RESULTS

Reports of 209 Snowy Owl observations were received, ranging from 8 November 2011 to 30 May 2012. Of the 209, 170 reports were confirmed and these ranged from 24 November 2011 to 30 May 2012. Of the 170 confirmed reports, 33 were recovered carcasses, 92 were photographed, 29 were reported by a birder or agency person, and 14 were supported by description. The 30 May report involved a

moribund Snowy Owl recovered by Raptor Recovery Nebraska near Big Springs that subsequently died. This record is an outlier; the second latest report, which was confirmed, occurred 12 March 2012.

Specific dates were available for 158 of the 170 reports. Based on the number of reports, the invasion peaked during late December and early January (Figure 1). Of the 158 confirmed reports with a specific date, 56% occurred during the twenty-day period 24 December – 12 January. Snowy Owls were confirmed statewide (Figure 2), with fewer reports from the extreme southeast, north-central, and extreme southwest.

DISCUSSION

The Snowy Owl invasion of 2011-12 appears to be unprecedented in terms of the number of total and confirmed reports. Modern reviewers (Sharpe et al. 2001, Johnsgard 1980, Rapp et al. 1958) of state bird occurrence have not identified years or winters when exceptional numbers of Snowy Owls were recorded in Nebraska. A review of *The Nebraska Bird Review's* winter field reports from 1993-94 to 2010-11 showed the highest number of Snowy Owls reported during those years was 4 during the winter of 2001-02 (Silcock 2002).

Snowy Owl invasions appear to have been more frequent in the years following settlement by European Americans. Bruner et al. (1904) described the species as “coming regularly” and “sometimes abundant”, but details on specific invasion years were not provided. Brooking (ca. 1920) accounted for 24 records during the winter

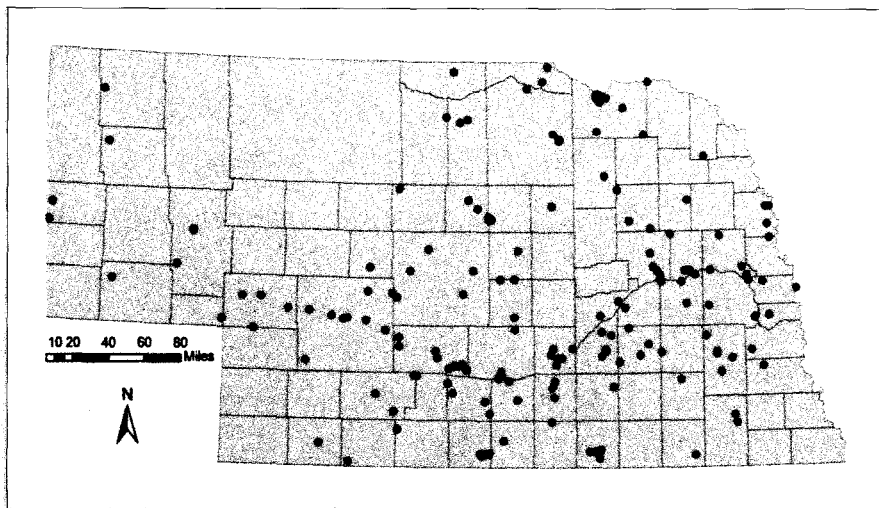


Figure 2. Spatial distribution of confirmed Snowy Owl reports in Nebraska during the winter of 2011-12.

of 1917-18 in south-central Nebraska, principally Adams, Clay and Webster Counties. Deane (1906) mentioned a report of 10 housed at one taxidermy shop in Omaha in December 1905. These are examples of the few instances where an accounting of Snowy Owl records has occurred, but it appears likely that these represent only a very small proportion of Snowy Owls observed in the state during those years.

Unlike in earlier invasion years, modern media, communications and electronics played an important role in the reporting and recording of observations during the 2011-12 invasion. The internet discussion group NEbirds allowed observers to report sightings in real-time. Several of the state's newspapers had articles about Snowy Owls, including feature articles with color photographs in the state's two major newspapers, the *Omaha World Herald* (Duggan 2011) and *Lincoln Journal Star* (Laukitis 2011). These articles also included requests that observers report Snowy Owl sightings to NGPC. Many of the 82 Snowy Owl reports from the general public that were received by NGPC were likely the result of information provided by media outlets or available on the internet. Many of these sightings were provided via email and included digital photographs, often captured with personal smart phones. The ability to capture and distribute information easily unquestionably translated into a higher proportion of observations being reported with definitive evidence. In a few instances, electronic reports and shared digital photographs ultimately revealed that two different owls were being observed in close proximity, but singly by different observers.

The Snowy Owl invasion of 2011-12 was remarkable and possibly unprecedented in regards to the number of documented Snowy Owls that have occurred in Nebraska. While other earlier invasions may have been of a similar magnitude and could have involved even more individuals, the capacity of early communication may have limited reporting. Modern communications and electronic devices unquestionably played an important role in the number of reports received and confirmed during the winter of 2011-12.

ACKNOWLEDGEMENTS

We thank the following individuals or organizations who reported sightings or provided information for this note: Darren Addy, Jeff Albrecht, Courtney Anthony, Dave Baasch, Jim Baird, Dina Barta, Stephanie Barwick, Dave Bean, Patty Bean, Dave Bergstrom, Ed Bishop, Ellen Boshart, Kent Boughton, Dave Brakenhoff, James Brennan, Terry Brentzel, Don Brockmeier, Mark Brogie, Bernice Crow, Custer Public Power District, Dale Davis, Becky Deterding, Stephen J. Dinsmore, Ray Dierking, Derek Downer, Paul Dunbar, Carol Eakins, Dave Ely, Cody Ervin, Betsy Finch, William Flack, Isaac Frecks, Jacob Fritten, Nic Fryda, Michele Fuhrer-Hurt, Angus Garey, Keith Geluso, Bob Grier, Darin Griess, Justin Haahr, Marsha Hansen, Robin Harding, Robert Harms, Gregory Henderson, Greg Hesse, Mark Ingwersen, Jan Johnson, Richard Johnson, Adam Kester, Doug Kapke, Doug Krueger, Thomas Labedz, Jeanine Lackey, John Laux, Roger Lawson, Chuck

Lesiak, Jill Liske-Clarke, Mike Luben, Dick Lutz, Joel Macklin, Mike Marshall, Jim McConnell, Brad McKinney, Bob Meduna, Dave Meyer, Jonathon Mohr, Wayne Mollhoff, Denise Morozov, Steve Morris, Sharon and Jerry Mulliken, Lucas Negus, Brian Nelson, Ann Nolon, John Norgaard, Steve Oberg, Perrenial Rural Electric Association, Stuart Pesek, Andrew Pierson, Doug Pollard, Mary Ann Pratt, Tom Rakow, Raptor Recovery Nebraska, Mark Rettig, Shawn Riley, Gary Roberts, Rich Routh, Ben Rutten, Rick Schmid, Ken Shuster, Kathy Schwery, Ami Sheffield, Andrew Sheldon, Gene Short, Albert Simants, Marie Smith, Rod Smith, Janet Stander, Ruth Stearns, Kirk Steffenson, Larry Stucklik, George Sund, Robert Sutherland, Cora Swanson, Gary Swingle, Chad Taylor, Dennis Thompson, Elaine Tipton, Janis Tordrup, Galen Truan, Tammy Vaughter, Greg Volzke, Tom Welstead, Scott Wessel, Brian Wragge.

LITERATURE CITED

- Brooking AM. ca. 1920. Bird specimen records. Unpublished manuscript in the Nebraska Ornithologists' Union Archives.
- Bruner L, Wolcott RH, Swenk MH. 1904. A preliminary review of the birds of Nebraska, with synopses. Klopp and Bartlett, Omaha (NE).
- Deane R. 1906. Unusual abundance of the snowy owl (*Nyctea nyctea*). *The Auk* 23:283-98.
- Duggan J. 2011. Sightings of snowy owl are big thrill. *Omaha World Herald* 30 December 2011, Nebraska edition.
- Johnsgard PA. 1980. A revised list of the birds of Nebraska and adjacent plains states. Occasional papers of the Nebraska Ornithologists' Union No. 6. Published by the author, Lincoln (NE).
- Laukitis AJ. 2011. Snowy owls fill Nebraska skies. *Lincoln Journal Star* 29 December 2011.
- Parmelee D. 1992. Snowy owl. In *The Birds of North America*, No. 10 (Poole A, Stettenheim P, and Gill F, Eds.). Philadelphia(PA): the Academy of Natural Sciences; Washington (DC): The American Ornithologists' Union.
- Rapp WF, Rapp JLC, Baumgarten HE, Moser RA. 1958. Revised checklist of Nebraska birds. Occasional papers of the Nebraska Ornithologists' Union No. 5. Published by the author, Crete (NE).
- Sharpe RS, Silcock WR, Jorgensen JG. 2001. *Birds of Nebraska: their occurrence and temporal distribution*. Lincoln (NE): University of Nebraska Press.
- Silcock WR. 2002. Winter field report, December 2001 to February 2002. *Nebraska Bird Review* 70(1): 2-21.