

THE RED-NECKED GREBE INVASION OF SPRING 2014

By John P. Herman

One to four Red-necked Grebes (*Podiceps grise-gena*) are usually reported during an Ohio spring. Larger numbers of these grebes have occurred at Ohio during the springs of 1994, 2003, and 2014. Prior to 1994, the largest number reported during an Ohio spring was fourteen during 1959 (Mumford 1959, Newman 1959). Thirteen Red-necked Grebes were reported in Ohio during spring 1962 (Graber 1962), and 11 during spring 1996 (Conlon and Harlan 1996).

During spring 1994, more than 100 Red-necked Grebes were reported in 24 Ohio counties, with the high count being 28 at Newell's Run, **Washington**, on 14 Feb (Harlan 1994). During Feb 1994, 61 Red-necked Grebes were reported in the state, including 41 inland (Peterjohn 2001). The high count of grebes during Mar 1994 was seven at Summit Lake in Akron on 20 Mar. The last grebe reported in Ohio that spring was on 09 May. Pennsylvania had about 300 Red-necked Grebes during spring 1994 (Grove 2014).

During spring 2003, at least 190 Red-necked Grebes were reported from at least 38 Ohio counties (Whan 2003), with a maximum of 61 near the Eastlake, **Lake**, power plant on 12 Mar. The last grebes reported during that spring were two birds at the Hocking River in **Athens** on 08 May. Pennsylvania had more than 1000 Red-necked Grebes reported, from 59 of their 67 counties during spring 2003 (Hoffman 2003).

During spring 2014, at least 377 Red-necked Grebes were reported from 58 Ohio counties. Carrie Gawne reported one Red-necked Grebe at Scranton flats, Cleveland, on 04 Feb, which may have been a bird attempting to over-winter (birding.aba.org/maillist/OH). John Kusnier reported the next grebe on the Maumee River at Waterville, **Lucas**, on 22 Feb (Matt Anderson, pers. comm.). Beginning 03 Mar, Red-necked Grebes were reported from multiple locations in the state. The last grebe reported during spring 2014 was at the Findlay Reservoirs on 24 May (Caldwell 2014). The high count for spring 2014 was 20 grebes at East Fork on 07 Mar. Seventeen grebes were at the Newtown gravel pits, **Hamilton**, on 27 Mar, 11 at Lake Logan, **Hocking**, on 07 Mar, and 10 at the Ross gravel pit, **Butler**, on 06 Mar (eBird.org, *vide* Craig Caldwell). During spring 2014, Pennsylvania had grebe records from 38 of its 67 counties, with three birds remaining into June, and one Red-necked

1994 Red-necked Grebes



2003 Red-necked Grebes



2014 Red-necked Grebes



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Grebe in Jul (Geoff Malosh, pers. comm.). The accompanying maps show the counties which generated reports during the three spring seasons just described.

The following is a list of the counties and a conservative count of the Red-necked Grebe numbers which were reported from each: **Ashland** (2 birds), **Ashtabula** (1), **Athens** (4), **Auglaize** (1), **Brown** (8), **Butler** (10), **Champaign** (5), **Clark** (7), **Clermont** (21), **Clinton** (5), **Columbiana** (1), **Coshocton** (1), **Crawford** (3), **Cuyahoga** (5+), **Delaware** (10), **Erie** (2), **Fairfield** (1), **Fayette** (1), **Franklin** (13), **Geauga** (21), **Greene** (16), **Hamilton** (41), **Hancock** (3), **Harrison** (1), **Highland** (4), **Hocking** (11), **Holmes** (1), **Huron** (1), **Jefferson** (3), **Knox** (1), **Lake** (4), **Licking** (2), **Lorain** (11), **Lucas** (12), **Mahoning** (8), **Marion** (1), **Medina** (5), **Montgomery** (31), **Morrow** (4), **Muskingum** (10), **Noble** (1), **Ottawa** (2), **Paulding** (2), **Perry** (1), **Pickaway** (2), **Portage** (19), **Richland** (8), **Stark** (10), **Summit** (10), **Trumbull** (4), **Tuscarawas** (3), **Union** (2), **Vinton** (1), **Warren** (11), **Washington** (4), **Wayne** (6), **Wood** (4), and **Wyandot** (4). Undoubtedly, Red-necked Grebes occurred in other counties as well but were not chanced upon by birders. **Sandusky** is the most surprising for not having any reported Red-necked Grebes for spring 2014.

One explanation for why so many Red-necked Grebes showed up in Ohio during the springs of 1994, 2003, and 2014 is the nearly-complete freezing of the Great Lakes in those years. The 40-year average peak ice coverage is just over 51 % (Bonaccorso 2014). According to the National Oceanic and Atmospheric Administration (NOAA), the Great Lakes' maximum ice coverage in the winter of 1993-1994 was 90%, and during the winter of 2002-2003 it was 80% (climate.gov). Over 90% of the Great Lakes' surface froze during the winter of 2013-2014 (Grove 2014). The record maximum percentage of the Great Lakes being frozen is 95 % in February of 1979. However, the hypothesis of the Great Lakes freezing causing the large numbers of Red-necked Grebes to be seen in Ohio the following springs has flaws. Only one to two Red-necked Grebes were reported during the springs of the late 1970s (Kleen 1977, 1978, 1979), a time when winters were brutal. In Bill Whan's spring 2003 *Ohio Cardinal* species account (Whan 2003), he discusses another possible reason for the number of grebes being seen in Ohio, that

Red-necked Grebes make a two-tier migration. This explanation postulates that when the Great Lakes are mostly frozen, Red-necked Grebes migrate from the East coast to rivers and other open water south of the Great Lakes and pause there to store energy for the remainder of the migration. The grebes then migrate from these areas to their nesting areas on the North American prairies after the Great Lakes thaw out. A third possible explanation for the Red-necked Grebe invasions is a phenomenon known as the North Atlantic Oscillation or NAO. The NAO affects currents, sea surface temperatures, salinity, and other characteristics of the ocean. (Hoffman 2003). The NAO is thought to have an effect on plankton populations, and thus on fisheries and ultimately, perhaps, piscivorous birds like grebes.

The author received only two reports of grounded Red-necked Grebes during spring 2014. One was found in a yard near Dundee on 04 March and was released below the Beach City dam spillway (both in **Tuscarawas**) (Robert Hershberger, pers. comm.). A friend of Cory Chiappone found a dead Red-necked Grebe near St. Clair Street and Erie Road, near Willoughby, **Lake**, (Cory Chiappone, pers. comm.) in early March. Six Red-necked Grebes were reported as being grounded during spring 1994. One was found in an Ada, **Hardin**, field on 02 Feb, and another at the Summit mall, **Summit**, on 12 Feb (Harlan 1994). The Ohio Wildlife Center received three Horned and three Red-necked Grebes after an ice storm on 09 to 12 Feb 1994 (Burton 1999). These grebes were found on the lighted streets of metropolitan Columbus; they were kept for two days and then released. Undoubtedly, ice and snow storms have grounded birds over the years that were not found by interested citizens.

Large numbers of Red-necked Grebes occurred in Ohio during the springs of 1994, 2003, and 2014. Though the numbers reported increased from each event to the next, much of the apparent growth is likely due to an increase in the number of observers, and their skill, since 1994. Explanations of why large numbers of grebes are being observed during Ohio springs are varied, with no one explanation being completely satisfying. Ecosystems are very complex with multiple variables causing the observed result. The low number of reported grounded Red-necked Grebes during these invasions is more a result of the birds' being found than the probable true

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numbers being grounded. Obviously, more study is needed concerning these large scale events. My question is, why did these Red-necked Grebe invasions seemingly not occur before 1994 on a scale which has been recently seen?

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