

## Horned Grebes downed by ice storm

*A widespread kill seems to have resulted from an unusual set of weather-related circumstances*

*Stephen W. Eaton*

ON JANUARY 9, 1978 at approximately 8 a.m. Pat Smith, in the area of Allegheny State Park, Cattaraugus County, New York saw a bird spiraling down through the snowstorm. It landed on the road ahead of his truck, and in picking it up, he discovered its right wing and shoulder area covered with ice. The bird, a Horned Grebe (*Podiceps auritus*) apparently unhurt, thawed out in his car and was liberated on open water below the dam of Quaker Lake.

Over the next three days approximately 53 Horned Grebes were located in the snow on the ice of nearby Quaker Lake. Some had an icicle two inches long, as wide as the upper mandible, and at least as heavy as a large ice cube hanging from the upper bill. These icicles prevented the birds from closing their bills. Four men in snowmobiles collected these birds from snowholes on the lake ice. The birds were thawed out and released on open water. Additionally twelve birds were found dead at this time and approximately three more later as the snow and ice melted in late March and early April.

It became obvious that the grounding at Quaker Lake was part of a more widespread phenomenon. An attempt was made to assemble information on the numbers and distribution of grebes grounded by this storm in western New York and northwestern Pennsylvania. Information was obtained on at least 124 grounded Horned Grebes. (See Table 1.) They appear to have selected frozen lakes, beaver ponds and plowed roads for landings. Those that landed in snow probably were not killed on landing, but many others were found elsewhere with broken bills, fractured skulls and crushed chests. The general area where birds were found was 75% or more wooded; it

may be assumed that many more birds died that night or morning but were never found.

The weather map for 7 a.m. January 8 showed a low associated with a stationary front just north of New Orleans, Louisiana, and another low just north of Detroit, Michigan. In about 24 hours these had combined near Montreal into a very powerful storm. Winds at 7 a.m. January 9 in western New York were northwesterly at approximately 35 m.p.h., with temperatures at 3°C. A large high was located near Winnipeg January 9 at 7 a.m., and this, combined with the low north of Montreal, set up the strong northwesterly winds with dropping temperatures. Rain changed to snow before dawn January 9 in western New York, creating hazardous driving conditions. Many main roads were closed. By Janu-

ary 10, the storm subsided, and people venturing forth began finding grebes in the snow.

Five autopsied birds from the Quaker Lake area ranged in weight from 341 to 567 grams and all were fat. The 567 gram weight is almost 100 grams heavier than the heaviest weight recorded by Palmer during nesting (1962. Handbook of North American Birds, vol. 1. Yale Univ. Press.). Subcutaneous fat averaged 4 mm thick over the breast, and when weighed along with the skin and feathers (readily separated from the flesh) amounted to 21%, 24%, 25%, 29%, and 33% of the bird's total weight. All had olive-drab feather wads in the gizzard, and in one the legs of insects, probably chironomid adults.

ONE MIGHT ASSUME owing to the wind direction and the distribution of grounded birds that grebes had started to winter on the Great Lakes, had been frozen out of this area, and were attempting to fly to the Atlantic coast (see Fig. 2). As they approached the Allegheny Plateau they were forced to gain altitude and ran into freezing rain which accumulated on their bills and backs, forcing them down. (This is not an infrequent occurrence in grebes. On a cold winter in the Niagara Frontier and Finger Lakes regions, when the fishable margins of the lakes freeze over, Horned Grebes are found in small numbers grounded far from open water. Beardslee and Mitchell (1965. Birds of the Niagara Frontier Region, Buffalo Soc. Nat. Scs.) and Todd (1940. Birds of Western Pennsylvania. Univ. of Pittsburgh Press).

No such massive winter kill as the one recounted here has been reported previously in western New York and north-



Fig. 1. Norm Jimerson holding Horned Grebe. Note the icicle hanging from the bird's bill. Photo/Rick Miller.

**Table 1. Information on Horned Grebes grounded by storm January 9-10, 1978 in western New York and northwestern Pennsylvania.**

Date found	Number of Grebes	State	County	Town and site	Authority
Jan 10	1	N.Y.	Chaut. <sup>1</sup>	Dewittville	James Davies
Jan 10	1	N.Y.	Chaut.	Harmony; Panama	Gerry Green
Jan 10	1	N.Y.	Chaut.	Carroll; Ivory	Paul Yagger
Jan 12	1	N.Y.	Chaut.	Carroll; Ivory	Clarence Beal
Jan 15	1	N.Y.	Chaut.	Poland; Harson Rd.	Arthur Sweat
Jan 12-13	53	N.Y.	Catt. <sup>2</sup>	Elko; Quaker Lake	Wm. Shirey <i>et al.</i>
Jan 12-13	15	N.Y.	Catt.	Elko; Quaker Lake	Wm. Shirey, S. Eaton
Jan 10	1	N.Y.	Catt.	Red House; Summit Rd.	Bonnie Shongo
Jan 10	1	N.Y.	Catt.	Red House; Camp 12, A.S.P.	Bonnie Shongo
Jan 10	7	N.Y.	Catt.	Red House; Headqtrs. A.S.P.	Bonnie Shongo
Jan 10	"some"	N.Y.	Catt.	Red House; Indian Res.	Bonnie Shongo
Jan 10	3	N.Y.	Catt.	South Valley; Bone Run	Laverne Davidson
Jan 10	1	N.Y.	Catt.	Randolph; Randolph	Archie Richardson
Jan 10	1	N.Y.	Catt.	Olean; Olean	John & Mary Forness
Jan 10	12	N.Y.	Catt.	Carrollton; 10 Mile Rd.	Forness, Greer, Eaton
Jan 12	1	N.Y.	Catt.	South Valley; Saw Mill Run	Francis Samuelson
Jan 12	1	N.Y.	Catt.	Portville	Fred Evans
Jan 12	1	N.Y.	Allegany	West Clarksville	Fred Evans
Jan 12	1	N.Y.	Allegany	Almond Area	Clarence Klingensmith
Jan 12	1	N.Y.	Allegany	Belmont	Lou Burton
Jan 12	1	Penna.	Warren	Sugar Grove	Ruth Grant
Jan 12	1	Penna.	Warren	Near Chandlers	Wm. Mathews
Jan 12	1	Penna.	Warren	between Spring Run & Garland	Dorothy Rathborn
Mid-Jan.	5	Penna.	McKean	Gibbs Hill	Guy Waldman
Mid-Jan.	8	Penna.	McKean	Bradford	Guy Waldman
Mid-Jan.	2	Penna.	McKean	Willow Creek	Guy Waldman
Mid-Jan.	1	Penna.	McKean	Norwich; Red Mill Brook	Denver McDowell
Mid-Jan.	several	Penna.	Erie		Bill Yochim (local newspaper)
Jan 12	1	Penna.	Warren	near Starbrick	Robert Waugaman

<sup>1</sup>Chautauqua. <sup>2</sup>Cattaraugus.

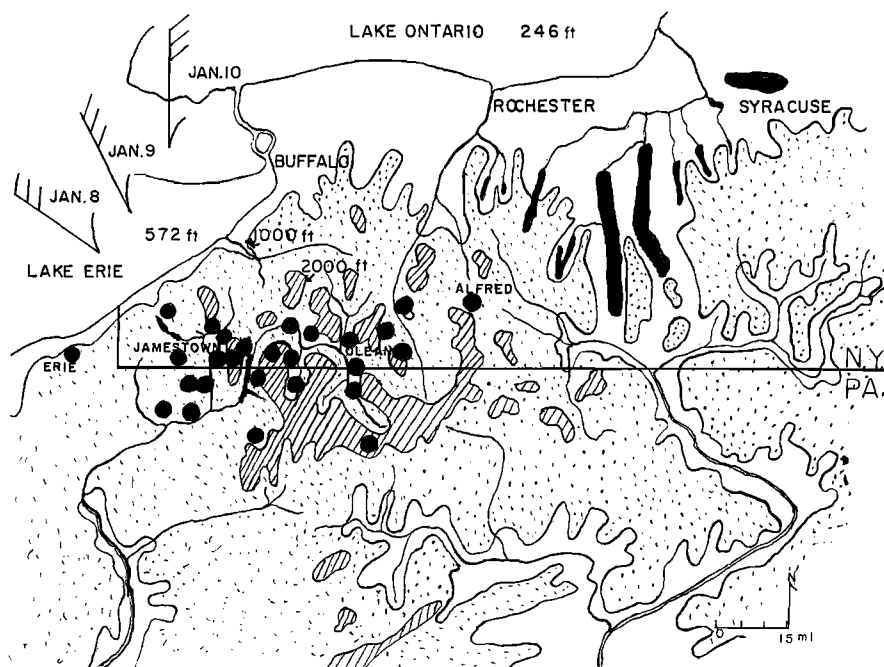


Figure 2. Large black dots indicate areas where downed grebes were found as listed in Table 1. Altitudes 1000 ft.-2000 ft. indicated by small dots, altitudes over 2000 ft. by crosshatching.

western Pennsylvania, although Beardslee and Mitchell, p. 84, tell of 36 Horned Grebes being carried over Niagara Falls in Spring, and Bull (1974. *Birds of New York State*. Doubleday Natural History Press.) reported a second kill in spring when 75 were found dead below the falls. Todd wrote of a few winter records but no large numbers.

The major fall passage of this species is normally completed by late November so both the time of arrival of these birds and the number of groundings were unusual. Areas where the birds were released January 10-15 were checked January 18 and no Horned Grebes were observed. It is assumed that they proceeded to other, safer wintering areas. Fat stores on those birds autopsied seemed sufficient to allow them to undertake migratory flight.

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