Waterbird Mortality

In New York Waters of Lakes Erie & Ontario - 2004

presented at the

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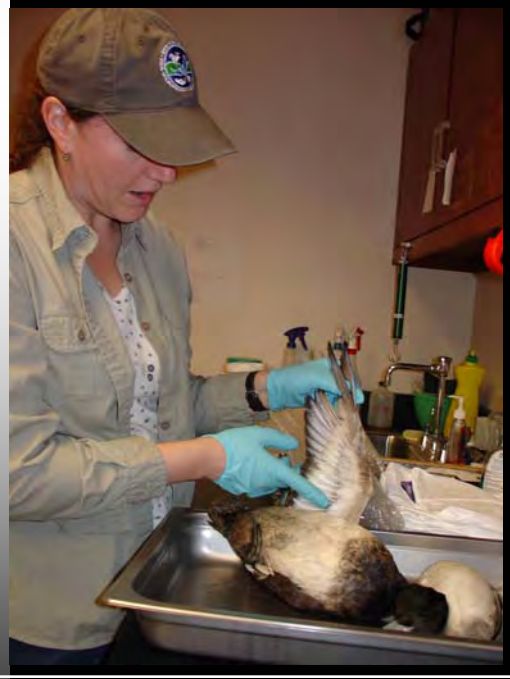
Eight loon carcasses recovered from Evangola State Park on one day, December 2004.

Long-tailed Duck collected from Lake Ontario, January 2005



Grebe & Scaup – collected from Lake Erie/Ontario

January 2005

Technicians gather measurements and feathers for analysis from each bird.

Data is analyzed by DEC's Pathology Lab and by Buffalo State College's Genetics Lab.

Specimens are tagged and shipped to DEC's Pathology Lab in Albany for analysis. When possible, specimens are shipped "fresh" for better blood recovery and subsequent testing.

Species Diagnosed as Positive for Type E Botulism Using The Mouse Protection Test

2004-2005

Testing by: University of Pennsylvania Diagnostic Laboratory

Lake Ontario:

Ring-billed Gull

Common Loon

Double-crested Cormorant

Herring Gull

Spotted Sandpiper

Lake Sturgeon

Lake Erie:

Ring-billed Gull

Common Loon

Long-tailed Duck

Herring Gull

Double-crested Cormorant

Lake Erie Botulism Mortality Surveys

500m Transect Survey Results

NYSDEC 9/21/04- 1/12/05

Species	Predicted Mortality	Upper Limit	Lower Limit
Common Loon	2771	4433	1109
Horned Grebe	18	54	0
Long-tailed Duck	2662	4810	514
White-winged Scoter	18	54	0
Ring-billed Gull	200	409	0
Herring Gull	200	356	44
Great Black-backed Gull	36	84	0
Unidentified Gull	18	54	0
Great Horned Owl	18	54	0
Total Birds	5943	9702	2184

Lake Erie Waterbird Mortality 2000-2004

New York Botulism Transect Survey Results

	2000	2001	2002	2003	2004
Common Loon	583	1149	2042	1969	2771
Horned Grebe	109	0	273	18	18
Long-tailed Duck	0	310	12616	219	2662
Red-breasted Merganser	2479	91	839	55	0
Ring-billed Gull	1714	510	273	292	201
Total Birds	5415	2862	17301	3008	5889

Two banded Common Loons were recovered in 2004. The US F&W Service bands were collected, providing this information:

#618-11101: Banded at Intermediate Lake, MI on 6/28/91 (as an adult)

Recovered at: Niagara River, Lewiston, Niagara Co., NY

0848-03825: Banded near Three Lakes, WI on 7/22/99 (banded in its hatching year)

Recovered at Lake Erie, Bennett Beach, Erie Co., NY

Lake Ontario Botulism Mortality
Surveys 500 m Transect Survey Results

NYSDEC 9/21/04-1/14/05

Species	Predicted Mortality	Upper Limit 95% conf.	Lower Limit 95% conf.
Common Loon	144	270	18
Red-necked Grebe	18	53	0
Double-crested Cormorant	216	432	0
White-winged Scoter	54	114	0
Long-tailed Duck	612	1033	192
Greater Scaup	18	53	0
Unidentified Scoter	36	107	0
Ring-billed Gull	270	483	57
Herring Gull	90	180	0
Great Black-backed Gull	18	53	0
Unidentified Gull	162	280	44
Glaucous Gull	36	85	0
Total Birds	1693	2428	958

Fish mortality observed along Lake Erie Botulism Survey Transects- 2004

Salmonid spp.	3
Steelhead	10
Carp	6
Muskellunge	1
Unknown	1
Perch spp.	4
Trout	4
Sucker	9
Shiner spp.	1
Channel catfish	1
Burbot	1
Walleye	1
Rainbow smelt	1
Smallmouth Bass	25
Sheepshead	10
Total	78

* Not all specimens submitted for testing

Fish mortality observed along Lake Ontario (Niagara County) Botulism Transect Surveys-2004

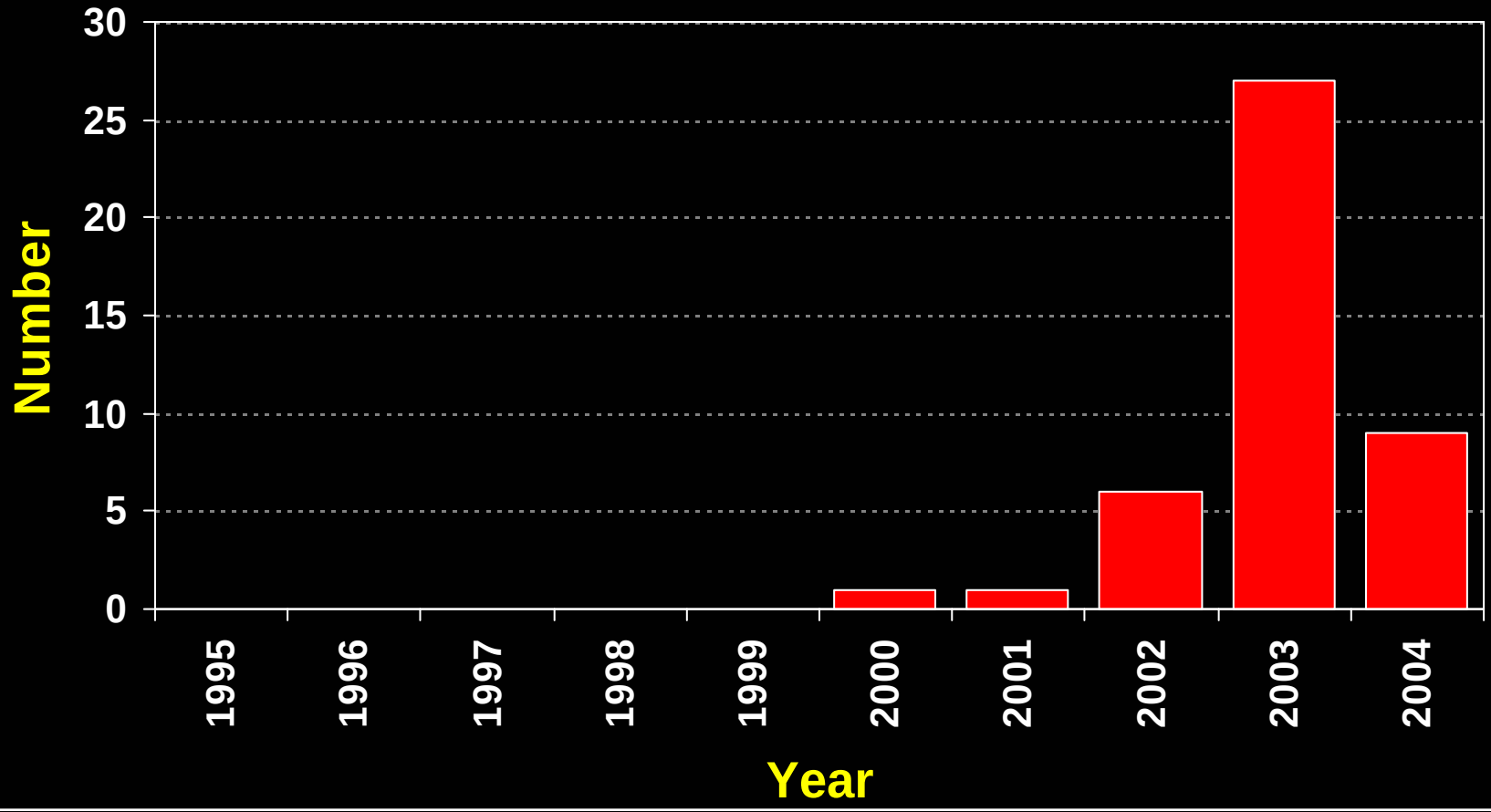
Salmonid spp.	20
Steelhead	29
Carp	12
Sturgeon	6
Unknown	8
Gizzard shad	1
Perch spp.	1
Trout	26
Sucker	14
Shiner spp.	63
Minnow spp.	3
Round Goby	72
Alewife	13
Rainbow smelt	4
Smallmouth Bass	14
Sheepshead	34
Total	320

* Not all specimens submitted for testing

Lake Sturgeon Mortalities

In Lake Ontario

Reported Sturgeon Mortalities Along Niagara Co., NY Shoreline of Lake Ontario



In Summary:

- Type E Botulism continued to cause bird mortality in Lake Erie, with Common Loons and Long-tailed Ducks being the most affected species in 2004
- The recovery of two banded Common Loons indicates Type E botulism may also be affecting mid-western US breeding populations
- Type E Botulism continued to cause bird mortality in Lake Ontario, with gull species and Double-crested Cormorants being most affected
- Lake Sturgeon mortality was again observed along Lake Ontario's Niagara County shoreline