

QUARTERLY WILDLIFE MORTALITY REPORT

July 1991 to September 1991

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LOCATION	STATE	DATES	SPECIES	MORTALITY	DIAGNOSIS	*REPORTED BY
<i>Atlantic Flyway</i>						
Key West	FL	07/15/91-07/15/91	Roseate Spoonbill	8	Open	NW
Broward County	FL	06/01/91-08/29/91	Muscovy Duck Double-crested Cormorant Green-backed Heron Freshwater Mussel	38	Toxicosis suspect	SC
Whitfield	GA	02/27/91-02/28/91	Common Grackle Red-winged Blackbird Brown-headed Cowbird	70 (e)	Open; toxicosis suspect	SC
Baltimore County	MD	07/19/91-08/15/91	Mallard	22	Botulism type C	NW
Centreville	MD	08/25/91-10/15/91	Mallard	6,500 (e)	Erysipelas/botulism type C	NW
Moosehorn NWR	ME	07/03/91-07/11/91	Canada Goose	12	Emaciation/open	NW
Charlotte	NC	07/14/91-07/25/91	Mallard Domestic Duck Canada Goose Domestic Goose	17	Botulism type C	NW
Bedford	NH	07/31/91-08/01/91	Canada Goose	8	Aspergillosis	NW
Barnegat NWR	NJ	07/20/91-07/27/91	Common Loon Canada Goose	8	Open	NW
Smithville	NJ	07/31/91-08/12/91	Mallard Laughing Gull Canada Goose Domestic Goose	30 (e)	Botulism type C	NW
Buffalo	NY	07/15/91-11/12/91	Mallard Hybrid Duck	700 (e)	Botulism suspect	NYS
Plattsburg	NY	08/01/91-08/29/91	Ring-billed Gull	17	Aspergillosis	NYS
Greenville	SC	07/17/91-08/08/91	Wood Duck Mallard	8	Botulism type C	SC
Virginia Beach	VA	07/11/91-07/11/91	Mallard	3	Toxicosis: organophosphorus compd.	NW
Prince George County	VA	09/01/91-09/15/91	Muscovy Duck	6 (e)	Open/ulcerative enteritis	NW

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<i>Atlantic Flyway cont.</i>						
Virginia Beach	VA	07/25/91-08/19/91	Mallard	10	Botulism type C	NW
Gloucester	VA	08/13/91-08/27/91	Laughing Gull	38	Open	SC
<i>Mississippi Flyway</i>						
Max McGraw	IL	06/29/91-07/09/91	Canada Goose	130	Emaciation	NW
Lincoln Park Zoo	IL	07/12/91-07/29/91	Mallard American Wigeon Wood Duck Northern Pintail Ring-necked Duck	31	Botulism type C	NW
Mt. Prospect	IL	07/08/91-07/15/91	Canada Goose Mallard Sandpiper	61	Open; botulism suspect	IL
Axehead Lake, Des Plaines	IL	07/30/91-08/01/91	Mallard	42	Botulism type C	NW
DuPage County	IL	08/06/91-09/15/91	Mourning Dove	50 (e)	Open	NW
Grayslake (Chicago area)	IL	06/28/91-08/12/91	Mallard	66 (e)	Botulism suspect	IL
Apple Valley	MN	09/10/91-09/20/91	Mallard Wood Duck Hooded Merganser Northern Pintail Ring-necked Duck	23	Botulism type C	NW
Mississippi River	MN	09/18/91-09/25/91	Double-crested Cormorant	75 (e)	Salmonellosis	NW
Yazoo NWR	MS	06/20/91-06/25/91	Cattle Egret Great Egret Snowy Egret Green-backed Heron Little Blue Heron	750 (e)	Toxicosis suspect	NW
Sandusky	OH	07/02/91-07/08/91	Mallard	25	Botulism type C	NW
Ottawa NWR	OH	07/03/91-07/11/91	Canada Goose	12	Open	NW
Aurora	OH	07/01/91-07/09/91	Canada Goose	14	Open	NW
Newark	OH	07/15/91-07/25/91	Domestic Duck	9	Trauma	NW

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<i>Mississippi Flyway cont.</i>						
Mansfield	OH	08/01/91-08/09/91	Mallard Kingfisher	26 (e)	Botulism type C	NW
Viroqua	WI	07/30/91-08/15/91	Pekin Duck	10	Botulism type C	NW
Appleton	WI	07/05/91-10/01/91	Mallard American Black Duck Spotted Sandpiper Ring-billed Gull Kingfisher	330	Botulism type C	NW
Beaver Dam Lake	WI	09/04/91-10/14/91	Mallard Wood Duck Green-winged Teal Blue-winged Teal American Coot	1,460 (e)	Botulism type C	NW
Horicon NWR	WI	09/09/91-09/15/91	Green-winged Teal American Wigeon Mallard Blue-winged Teal Northern Shoveler	116	Botulism type C	NW
Beaver Dam Lake, Fox Lake	WI	09/18/91-09/25/91	Tree Swallow	180	Open	NW
<i>Central Flyway</i>						
Bowdoin NWR	MT	07/17/91-09/28/91	Green-winged Teal American Wigeon Gadwall Unidentified Waterfowl	319	Botulism type C	NW
J. Clark Salyer NWR	ND	08/07/91-08/30/91	Canada Goose Mallard Ruddy Duck Blue-winged Teal Gadwall	233	Botulism suspect	NW
Long Lake NWR	ND	07/07/91-08/28/91	Blue-winged Teal	66	Botulism type C	NW
Grand Island	NE	08/01/91-08/06/91	Mallard	7	Toxicosis: organophosphorus compd.	NW
Kearney	NE	07/20/91-07/24/91	Domestic Duck	10 (e)	Toxicosis: organophosphorus compd.	NW

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<u>Central Flyway cont.</u>						
Sand Lake NWR	SD	08/10/91-09/27/91	Mallard Northern Pintail Wood Duck American White Pelican American Wigeon	227	Botulism type C	NW
Spring Lake	SD	09/01/91-10/01/91	Mallard Blue-winged Teal Northern Pintail American Coot Unidentified Shorebird	310	Botulism type C	NW
Swan Lake	SD	09/01/91-10/01/91	Mallard Blue-winged Teal Northern Pintail American Coot Gadwall	220	Botulism type C	NW
Grass Lake	SD	09/03/91-10/05/91	American White Pelican American Wigeon Mallard Green-winged Teal Gadwall	70 (e)	Botulism type C	NW
Freeport	TX	07/21/91-08/30/91	Black Skimmer	300 (e)	Open	NW
<u>Pacific Flyway</u>						
Cape Yakataga	AK	08/01/91-09/15/91	White-winged Scoter Surf Scoter Black Scoter	1,000 (e)	Emaciation	NW
Dutch Harbor/Unalaska	AK	09/08/91-09/12/91	Sooty Shearwater	750 (e)	Open	NW
Salton Sea NWR	CA	01/15/91-02/20/91	Canada Goose Snow Goose Ross' Goose Northern Pintail American Wigeon	2,000 (e)	Avian cholera	NW
Salton Sea NWR	CA	07/01/91-08/15/91	Gull-billed Tern Black Skimmer	12 (e)	Open	NW

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<i>Pacific Flyway cont.</i>						
Camp Pendleton	CA	07/12/91-08/20/91	Mallard Cinnamon Teal Green-winged Teal Ruddy Duck Gadwall	190 (e)	Botulism type C	NW
Goose Lake	CA	08/10/91-10/10/91	Mallard Gadwall American Wigeon Green-winged Teal Canvasback	1,200 (e)	Botulism type C	NW
Riverside County	CA	07/15/91-08/23/91	Mallard	200	Botulism type C	NW
Santa Cruz	CA	09/06/91-10/05/91	California Brown Pelican Brandt's Cormorant	40 (e)	Toxicosis: domoic acid (red tide)	CFG
Klamath Basin NWR	CA	07/25/91-10/01/91	Mallard American Coot Gadwall	1,000 (e)	Botulism suspect	NW
Brown's Lake	MT	05/10/91-05/20/91	American Coot Beaver	200 (e)	Open	NW
Benton Lake NWR	MT	07/24/91-09/25/91	Mallard Green-winged Teal Northern Pintail Gadwall Unidentified Shorebird	3,743	Botulism type C	NW
Stillwater NWR	NV	08/20/91-09/13/91	Green-winged Teal Northern Pintail Mallard Northern Shoveler Ruddy Duck	178	Botulism suspect	NW
Banks Island	SAS	04/15/91-06/01/91	Snow Goose	5,000 (e)	Open	SAS
Salt Lake City	UT	07/22/91-08/08/91	Domestic Duck	15 (e)	Botulism suspect	NW
Jordan River	UT	08/10/91-08/13/91	Mallard Hybrid	2 (e)	Botulism type C	NW

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<i>Pacific Flyway cont.</i>						
Harold Crane WMA	UT	08/15/91-09/30/91	Northern Shoveler Green-winged Teal Unidentified Shorebird American Coot Northern Pintail	470 (e)	Botulism type C	NW
Bear River MBR	UT	08/25/91-09/16/91	Green-winged Teal Northern Pintail Northern Shoveler American Avocet Black-necked Stilt	1,000 (e)	Botulism suspect	NW
Salt Lake City	UT	09/01/91-09/26/91	Pine Siskin	2 (e)	Avian pox suspect	NW
Cape Flattery	WA	07/22/91-08/19/91	Common Murre Tufted Puffin Auklet	4,000 (e)	Toxicosis: oil suspect	NW
Makah Indian Reservation	WA	08/19/91-09/30/91	Common Murre Tufted Puffin Auklet Unidentified Gull	750 (e)	Emaciation	NW

(e) = estimated mortality

*National Wildlife Health Research Center (NW); Southeastern Cooperative Wildlife Disease Study (SC); New York State Department of Environmental Conservation (NYS); Illinois Department of Conservation (IL); California Fish and Game (CFG); University of Saskatchewan Department of Pathology (SAS);

Written and compiled by Gregory Kidd, NWHRC. For specific information on these mortalities, contact the following NWHRC Resource Health Team members: Pacific Flyway, Louis Locke; Central Flyway, Linda Glaser; Mississippi and Atlantic Flyways, Kathryn Converse; Endangered Species and Legal Cases, Ron Windings.tad.
608-271-4640, FTS-364-5411 National Wildlife Health Research Center, 6006 Schroeder Road, Madison, WI 53711



Quarterly Wildlife Mortality Report. The following highlights mortality reported to the National Wildlife Health Research Center (NWHRC) from July to September 1991. NWHRC received 66 epizootic reports this quarter with 52% of the cases being botulism.

Benton Lake NWR in Montana reported the largest botulism outbreak this summer; 3,743 birds died, primarily ducks and shorebirds. In California, Modoc NWR reported botulism mortality of an estimated 1,200 waterfowl on Goose Lake, a large, shallow lake on the northern border, and at Klamath NWR, botulism is suspected to be the cause of death of approximately 1,000 waterfowl. In the Central Flyway, losses were lower than in previous years. All combined, less than 1,500 birds died. Botulism losses were the greatest at Long Lake NWR and J. Clark Salyer NWR in North Dakota, Sand Lake NWR, Spring Lake, and Swan Lake in South Dakota, and Bowdoin NWR in Montana. Over 1,460 waterfowl were picked up on marshes associated with Beaver Dam Lake in Winnebago County, Wisconsin; this botulism outbreak was suspected to have followed an extensive algal bloom. In the Atlantic Flyway, botulism type C caused the death of 700 mallard and "city park" ducks along the Niagara River in Buffalo, New York.

Canadian Wildlife Service personnel observed mortality of thousands of geese nesting on Banks Island in the Northwest Territories, Canada, during a spring aerial survey. The snow goose population on the Banks island is about 100,000 and was the primary species present and affected. The University of Saskatchewan, Saskatoon, confirmed avian cholera. Banks Island is the farthest north that avian cholera has been diagnosed.

An estimated 750 colonial waterbirds, primarily young of the year, were found dead in a rookery on the Yazoo NWR in Mississippi. Carcasses were too decomposed for diagnostic evaluation but samples of fly larva and egg shells were sent to the forensics lab for analysis of residual organophosphorus compounds. Similar mortality occurred in this rookery last summer. The suspected source of the organophosphate is nearby catfish farms.

In Centerville, Maryland, over 6,000 mallards died on a mallard farm during August and September. Early in the outbreak, Erysipelothrix rhusiopathiae was cultured from one dead duck by Maryland Department of Agriculture; all other ancillary tests were negative. Penicillin was added to the ducks' drinking water with a subsequent reduction in mortality. Mortality again escalated during September and botulism type C was confirmed in one duck sent to NWHRC. It is possible that initial mortality was due to erysipelas, then losses shifted to botulism through ingestion of maggots on carcasses.

An oil spill off the coast of Cape Flattery, Washington in August resulted in oiling of an estimated 4,000 seabirds, primarily common murrelets. During September, residents of Makah Indian Reservation reported seabirds were washing ashore dead or very weak and not obviously oiled; diagnostic examination by NWHRC showed all birds were emaciated, and some were oiled.

Seabird mortality occurred for the second consecutive year at Cape Yakataga, Alaska. Over 1,000 scoters died; the only consistent necropsy finding was emaciation. High levels of cadmium were found in samples from the 1990 dieoff. Also in Alaska, an estimated 500 shearwaters washed into Dutch Harbor on Unalaska Island. It is speculated that mortality occurs every fall when fish processing plants in the harbor close, thus reducing the available food supply. One bird, however, was found oiled.