

QUARTERLY WILDLIFE MORTALITY REPORT

July 1993 to September 1993

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LOCATION	STATE	DATES	SPECIES	MORTALITY	DIAGNOSIS	*REPORTED BY
<i>Atlantic Flyway</i>						
St. Vincents NWR	FL	07/30/93-09/01/93	Northern Gannet	10	Emaciation	NW
Merritt Point	MD	07/20/93-03/09/93	Mallard	45	Botulism suspect	NW
Sparrow's Point	MD	06/28/93-07/23/93	Mallard	60 (e)	Botulism type C	MD
Little Galoo Island-L. Ontario	NY	07/08/93-07/09/93	Double-crested Cormorant	10 (e)	Open	NW
John Heinz NWR	PA	08/01/93-09/22/93	Mallard Wood Duck Green-winged Teal Lesser Yellowlegs Black Duck	136	Botulism type C	NW
Lebanon	PA	08/08/93-09/03/93	Mallard Domestic Duck Canada Goose	250	Botulism type C	PA, NW
Loudon	VA	06/25/93-06/26/93	Canada Goose	4	Toxicosis: organophosphorus compound	NW
Virginia Beach	VA	07/06/93-07/11/93	Mallard	25 (e)	Botulism type C	NW
Irongate	VA	05/21/93-05/24/93	American Robin European Starling Unidentified Sparrow Unidentified Wren Northern Oriole	14	Toxicosis suspect	SC
Chincoteague Island	VA	09/09/93-09/22/93	Mallard	43	Botulism suspect	NW
Alexandria (Cameron Lake)	VA	07/06/93-07/20/93	Mallard Canada Goose Muscovy Duck Fish	70 (e)	Botulism type C	NW
Hampton	VA	08/15/93-09/03/93	Mallard Unidentified Blackbird Kingfisher	22	Open	NW
Pelican Cay, St. Thomas	VI	07/09/93-07/09/93	Laughing Gull	2	Botulism type C	NW
Kanawha County	WV	09/23/93-09/24/93	Mallard Muscovy Duck Pekin Duck	40	Toxicosis: diazinon	SC

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<u>Mississippi Flyway</u>						
Red Rock Reservoir	IA	07/27/93-07/30/93	Canada Goose	30	Botulism type C	NW
Cook County Forest Preserve	IL	06/29/93-07/07/93	Mallard	24	Botulism type C	NW
Buffalo Grove	IL	08/20/93-08/31/93	Mallard	15	Botulism type C	NW
New Ulm	MN	07/12/93-08/10/93	Western Grebe	400 (e)	Schistosomiasis suspect	NW
Lac Qui Parle WMA	MN	08/20/93-08/23/93	American White Pelican	6	Emaciation	NW
Bay Lake	MN	08/29/93-08/29/93	Mallard	11	Toxicosis: organophosphorus compound	NW
Oak Harbor	OH	08/06/93-08/08/93	Mallard	20 (e)	Botulism type C	NW
Marion Township	OH	09/06/93-09/09/93	Canada Goose	17	Lead poisoning	NW
Toledo Zoo	OH	09/15/93-09/29/93	Domestic Duck Mallard	24	Botulism type C	NW
Laurel Lakes	OH	09/01/93-09/15/93	Mallard	40 (e)	Botulism type C	NW
Buckeye Lake	OH	08/10/93-08/24/93	Mallard	25 (e)	Botulism type C	NW
Pigeon Forge	TN	08/01/93-09/20/93	Mallard Hybrid	100 (e)	Botulism type C	SC
Horicon NWR	WI	09/05/93-09/07/93	Mallard Canada Goose	5	Aspergillosis/botulism type C/emaciation	NW
<u>Central Flyway</u>						
Wichita	KS	06/16/93-09/05/93	Mourning Dove	15 (e)	Parasitism: trichomoniasis	NW
Cheyenne Bottoms WMA	KS	08/19/93-11/17/93	Green-winged Teal American Coot Blue-winged Teal Mallard Gadwall	1,700	Botulism type C	NW
Medicine Lake NWR	MT	07/01/93-07/27/93	American White Pelican	785	Open/exposure suspect	NW
Chase Lake NWR	ND	06/15/93-08/01/93	American White Pelican Double-Crested Cormorant Unidentified Gull	6,000 (e)	Open/exposure suspect	NW

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<i>Central Flyway (cont).</i>						
Dry Lake	ND	08/28/93-08/30/93	Redhead Duck Green-winged Teal American Coot Unidentified Grebe Unidentified Duckling	20 (e)	Trauma: hailstorm	NW
Audubon NWR Complex	ND	08/30/93-09/28/93	Gadwall American Coot Unidentified Duck Mallard Blue-winged Teal	1,176	Botulism type C	NW
Venturia	ND	08/28/93-10/01/93	American Coot Blue-winged Teal Northern Pintail Gadwall Mallard	2,737	Botulism type C	NW
Canton Lake	OK	07/25/93-09/15/93	Cattle Egret	1,000 (e)	Emaciation	NW
Mud Lake	SD	08/15/93-09/27/93	American Coot Mallard Blue-winged Teal Green-winged Teal Wood Duck	7,459	Botulism type C	NW
Grass Lake	SD	08/20/93-09/15/93	American Coot Gadwall Mallard Blue-winged Teal Green-winged Teal	500 (e)	Botulism type C	NW
Swan Lake	SD	08/25/93-10/01/93	Gadwall American Coot Mallard Blue-winged Teal Green-winged Teal	1,425	Botulism type C	NW
Goose Lake	SD	08/20/93-09/15/93	American Coot Unidentified Duck	100 (e)	Botulism suspect	NW
Freeport	TX	07/15/93-09/01/93	Black Skimmer	500 (e)	Nephrosis/renal gout	NW
Corpus Christi	TX	07/19/93-08/11/93	Boat-tailed Grackle	1 (e)	Avian pox	NW

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<i>Pacific Flyway</i>						
Buenos Aires NWR	AZ	07/12/93-08/05/93	Mule Deer White-tailed (Coues) Deer	10 (e)	Epizootic hemorrhagic disease	AZ
Point Loma Heron Rookery	CA	06/15/93-ongoing	Great Blue Heron Black-crowned Night Heron	20	Steatitis	NW
San Francisco Area	CA	07/01/93-07/18/93	Brown Pelican	30 (e)	Emaciation	NW
Sacramento NWR-Delevan	CA	07/10/93-07/13/93	Tri-colored Blackbird	12	Open	NW
Salton Sea NWR	CA	06/24/93-07/01/93	Brown Pelican	20 (e)	Open	NW
South San Francisco Bay	CA	08/08/93-ongoing	Mallard Green-winged Teal Snowy Egret Black-crowned Night Heron California Gull	213	Botulism type C	NW
San Diego County	CA	08/16/93-09/15/93	Mourning Dove	0	Avian pox	NW
Sacramento NWR-Sutter	CA	09/11/93-11/05/93	Northern Pintail Mallard American Coot American Wigeon Northern Shoveler	2,239	Botulism type C	NW
Comanche Hills Preserve	CA	09/15/93-09/23/93	Mallard	200 (e)	Botulism type C	CFG
Kern County	CA	06/23/93-07/15/93	Cinnamon Teal Gadwall American Coot Northern Shoveler Mallard	622 (e)	Botulism type C	CFG
Gibson Park	CA	07/23/93-07/23/93	Canada Goose	1	Lead poisoning	CFG
Hawaiian Islands NWR-Laysan	HI	01/22/93-02/12/93	Laysan Albatross	350 (e)	Open	NW
Hawaiian Islands NWR-Laysan	HI	06/18/93-06/30/93	Laysan Albatross	500 (e)	Open	NW
Malheur NWR	OR	06/10/93-06/24/93	Western Grebe Eared Grebe White Pelican	10	Emaciation/trauma	NW

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<i>Pacific Flyway (cont.)</i>						
Bear River MBR	UT	08/06/93-09/25/93	Green-winged Teal Northern Pintail Mallard American Wigeon American Avocet	2,100 (e)	Botulism type C	NW
Salt Lake City	UT	08/19/93-08/27/93	Mallard Mallard Hybrid Unidentified Swan	28	Botulism type C	NW
Salt Lake City	UT	08/26/93-09/02/93	Mallard Hybrid California Gull	4	Botulism type C	NW

(e) = estimate

* National Wildlife Health Research Center (NW); Maryland Department of Agriculture (MD); Pennsylvania Department of Agriculture (PA); Southeastern Cooperative Wildlife Disease Study (SC); Arizona Veterinary Diagnostic Laboratory (AZ); California Department of Fish and Game (CFG).

Written and compiled by Gregory Kidd, NWHRC. For specific information on these mortalities, contact the following NWHRC Resource Health Team Members: Pacific Flyway - Lynn Creekmore; Central Flyway - Linda Glaser; Mississippi Flyway - Ron Windingstad; Atlantic Flyway - Kathy Converse; Flyway Alternate - Kim Miller. (608) 271-4640, (608) 264-5411 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 - September 1993. In over 50% of the 58 dieoffs this quarter, botulism was confirmed or suspected.

Heavy midwest rains and subsequent flooding of fields, seasonal wetlands and lakes preceded large scale botulism outbreaks at Mud and Swan Lake in South Dakota, Venturia and Audubon NWR in North Dakota and Cheyenne Bottoms Wetland Management Area in Kansas. The greatest mortality occurred at Mud Lake on the border of South Dakota and Minnesota. A wide variety of ducks, coots and shorebirds died after lake levels declined from flooding. Swan Lake, in central South Dakota, reported botulism mortality with over half of the mortality involving gadwall and coots. Near Venturia, in south central North Dakota, a small seasonally flooded wetland grew in size to over 3,000 acres with 6-8 feet of water. Over 2,700 ducks died on the expanded area; it is speculated that a heavy hailstorm caused the first mortalities, and these carcasses initiated a carcass-maggot botulism cycle. At Bear River Migratory Bird Refuge in Utah, over 2,100 birds died from botulism out of a population of over one million ducks and shorebirds. Historically, this area has had severe botulism problems. Finally, in the central valley of California, Sutter NWR and surrounding areas reported botulism again this summer. The area that experienced the highest mortality (500+) had a botulism problem last year.

Two cases of avian pox were reported this quarter. The first involved boat-tailed grackles near Corpus Christi, Texas. Although only one bird was found dead, at least seven other grackles with pox-like lesions were seen in the area. Interestingly, NWHRC documented the first case of pox in a grackle from nearby Victoria, TX in 1989. Avian pox was also isolated from euthanized mourning doves submitted from banders in San Diego county, California. They have documented pox-like lesions in past years but have never had a confirmation of the virus. Fifty two of 2,400 mourning doves banded in urban areas were affected with no observed mortality. In contrast, 1,400 doves were banded in non-urban areas with no evidence of the disease.

Swan Lake, near New Ulm, Minnesota reported mortality in western grebes this summer in the same area where schistosomiasis was diagnosed last year as the cause of death for 450 grebes during the same time of year. Other waterfowl were present in the area but were not affected.

At Chase Lake NWR, North Dakota and Medicine Lake NWR, Montana, white pelicans died in association with unseasonably cold/wet weather. At Medicine Lake NWR, 785 pelicans, mostly young of the year, were found dead and "huddled" together in one area of the nesting colony. Pelican production was significantly reduced at Chase Lake NWR with less than 1,000 of 8,500 nests successful.

The cause of death of over 1,000 cattle egrets from Canton Lake, Oklahoma was undetermined with emaciation being the only consistent finding. The dieoff is noteworthy because sick egrets were dying in local chicken yards and residential neighborhoods, causing concern for domestic animals and public health.