

QUARTERLY WILDLIFE MORTALITY REPORT
July 1994 to September 1994

LOCATION	STATE	DATES	SPECIES	MORTALITY	DIAGNOSIS	*REPORTED BY
<u>Atlantic Flyway</u>						
Jackson	GA	07/13/94-07/13/94	Canada Goose	8	Open	SC
Big Libby Island	ME	08/05/94-08/08/94	Leach's Storm-Petrel	6	Trauma	NW
Washington County	ME	07/19/94-07/19/94	Cliff Swallow	5	Open	NW
Doylestown	PA	07/27/94-08/03/94	Mallard Canada Goose Unidentified Gull	20 (e)	Botulism type C	NW
Perry County	PA	06/20/94-06/30/94	Muscovy Duck	29	Duck plague	PA
Chincoteague NWR	VA	08/07/94-08/08/94	Laughing Gull	7	Open	NW
Richmond	VA	05/03/94-05/03/94	Purple Martin House Finch Purple Finch	5	Parasitism: tick paralysis	SC
<u>Mississippi Flyway</u>						
Upper Mississippi NWR	IA	07/15/94-08/31/94	Unidentified Sandpiper Mallard	500	Botulism type C	NW
Schaumburg	IL	07/27/94-07/27/94	Mallard	2	Botulism type C	NW
Chautauqua NWR	IL	09/10/94-09/24/94	Mallard Green-winged Teal Unidentified Wood Duck American Coot	112	Botulism type C	NW
Palatine	IL	09/06/94-09/10/94	Mallard	18	Botulism type C	NW
Lake Lemon	IN	07/06/94-07/06/94	Canada Goose	4	Toxicosis: organophosphorus compd. suspect	NW
Mud Lake	MN	08/01/94-09/23/94	Green-winged Teal Franklin's Gull Unidentified Coot Wood Duck Blue-winged Teal	422	Botulism type C	NW
Lorain	OH	07/20/94-08/01/94	Mallard	75	Botulism type C	NW

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<u>Mississippi Flyway cont.</u>						
Cleveland Marina	OH	07/29/94-08/15/94	Mallard	40 (e)	Botulism type C	NW
Middleton, Madison	WI	09/03/94-09/19/94	House Finch	5	Parasitism: coccidiosis	NW
Beaver Dam	WI	09/19/94-09/19/94	Mallard Wood Duck	2	Botulism type C	NW
Evansville	WI	09/27/94-09/27/94	Swainson's Thrush American Redstart	10 (e)	Trauma	NW
Milwaukee	WI	07/30/94-08/10/94	Mallard Hybrid Mallard	35 (e)	Botulism type C	NW
Neenah & Menasha	WI	06/25/94-06/29/94	Mallard Unidentified Teal	80 (e)	Botulism type C	NW
Little Lake Butte des Morts	WI	09/21/94-09/28/94	Mallard	99	Botulism suspect	NW
<u>Central Flyway</u>						
Denver Zoological Gardens	CO	07/01/94-09/20/94	Mallard Black-crowned Night Heron Wood Duck Canada Goose Redhead Duck	403	Botulism type C	NW
Cheyenne Bottoms WMA	KS	09/01/94-10/01/94	Mallard Green-winged Teal Blue-winged Teal Unidentified Shorebird Least Sandpiper	600	Botulism type C	NW
Medicine Lake NWR	MT	08/15/94-09/25/94	Mallard American Coot Eared Grebe Northern Pintail Gadwall	50 (e)	Botulism type C	NW
Lake Venturia	ND	07/01/94-09/27/94	Northern Pintail Blue-winged Teal Green-winged Teal Northern Shoveler Gadwall	16,950	Botulism type C	NW

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<u>Central Flyway cont.</u>						
Turtle Lake II	ND	07/25/94-09/09/94	American Coot Mallard Gadwall Blue-winged Teal Unidentified Duck	207	Botulism type C	NW
Long Lake Complex (4 sites)	ND	07/10/94-09/09/94	American Coot Blue-winged Teal Ring-billed Gull Unidentified Duck	212	Botulism type C	NW
Dry Lake	ND	08/01/94-09/28/94	Northern Pintail Unidentified Gull Mallard Northern Shoveler	1,357	Botulism type C	NW
Lake Nettie NWR-Mud Lake	ND	08/08/94-09/06/94	American Coot Unidentified Duck Blue-winged Teal Gadwall Mallard	268	Botulism type C	NW
Bader Lake	ND	08/10/94-09/26/94	Blue-winged Teal Northern Pintail Mallard American Wigeon American Coot	4,891	Botulism type C	NW
Foxley	NE	08/08/94-08/16/94	Unidentified Duck Wood Duck Blue-winged Teal Mallard American Coot	35	Botulism type C	NW
Filmore County	NE	09/10/94-09/13/94	Common Grackle Brown-headed Cowbird Yellow-headed Blackbird Mourning Dove Great Blue Heron	30 (e)	Trauma: powerline collision	NW
McPherson County	SD	08/10/94-09/22/94	Blue-winged Teal Mallard Northern Shoveler Northern Pintail American Coot	555	Botulism type C	NW

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<u>Central Flyway cont.</u>						
Sand Lake NWR	SD	08/10/94-09/22/94	Gadwall Northern Pintail Mallard American Coot Northern Shoveler	33	Botulism type C	NW
Swan Lake	SD	08/20/94-09/22/94	Mallard Blue-winged Teal	175	Botulism type C	NW
James River	SD	09/15/94-10/15/94	American Coot Mallard Unidentified Teal Northern Pintail	856	Botulism type C	NW
College Station/Bryan	TX	07/01/94-09/01/94	Cattle Egret	600 (e)	Emaciation	TA&M
Nasa Bay City Pond	TX	07/10/94-07/22/94	Domestic Mallard Muscovy Duck Pekin Duck	30 (e)	Botulism type C	NW
<u>Pacific Flyway</u>						
Scottsdale Pavilion	AZ	09/01/94-09/05/94	Boat-tailed Grackle Black-necked Stilt Mallard	20	Open	NW
Venice Beach	CA	06/18/94-06/22/94	Least Tern	130 (e)	Emaciation	NW
Klamath Basin Refuges	CA	07/16/94-10/15/94	Mallard Gadwall Redhead Duck Unidentified Scaup American Coot	10,000 (e)	Botulism type C	NW
South San Francisco Bay Slough	CA	07/21/94-10/31/94	Mallard Gadwall California Gull	110	Open/trauma	SF
Camp Pendleton	CA	06/25/94-07/26/94	Least Tern	5	Emaciation	NW
San Mateo	CA	07/01/94-09/01/94	Common Murre	30 (e)	Open	PH

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<u>Pacific Flyway cont.</u>						
Sacramento NWR Complex	CA	08/18/94-09/09/94	Mallard Black-necked Stilt American Wigeon American Coot Northern Pintail	300 (e)	Botulism type C	NW
Chula Vista Saltworks	CA	08/16/94-08/30/94	Western Gull Western Sandpiper	4	Botulism type C	NW
Sandpoint area	ID	06/15/94-07/15/94	Evening Grosbeak	40 (e)	Open	NW
Harriman State Park	ID	09/16/94-09/16/94	Trumpeter Swan	3	Pasteurellosis (type A:2,5)	NW
Missoula County	MT	09/01/94-ongoing	Pine Siskin Evening Grosbeak	17	Salmonellosis (<i>S. typhimurium</i>)	NW
Truckee River	NV	08/05/94-10/05/94	Mallard Rock Dove Unidentified Blackbird Pekin Duck European Starling	325 (e)	Botulism type C	NW
Deschutes County	OR	05/20/94-07/10/94	Evening Grosbeak Red Crossbill Unidentified Finch	30 (e)	Salmonellosis (<i>S. typhimurium</i>)	NW
Klamath Marsh Refuge	OR	07/21/94-08/02/94	American Coot Mallard Cinnamon Teal Unidentified Duck Ruddy Duck	183 (e)	Open	NW
Malheur Lake, Crane Pond	OR	08/04/94-10/10/94	Green-winged Teal Mallard Northern Pintail Gadwall Cinnamon Teal	4,550 (e)	Botulism type C	NW
Heron Lakes Golf Course	OR	08/25/94-09/09/94	Mallard	40 (e)	Botulism type C	NW
Salt Lake City	UT	08/11/94-08/19/94	Mallard Mute Swan Hybrid Mallard Domestic Swan Wood Duck	70 (e)	Botulism type C	NW

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<u>Pacific Flyway cont.</u>						
Great Salt Lake wetlands	UT	08/29/94-10/07/94	Green-winged Teal Northern Pintail Northern Shoveler Ruddy Duck Unidentified Shorebird	30,000 (e)	Botulism type C	NW
<u>Update</u>						
Multiple Counties	NY, NJ, PA VA, DE, MD CT, NC	03/21/94-ongoing	Northern Cardinal House Finch Purple Finch	100 (e)	Conjunctivitis	NW+
Point Loma	CA	05/03/94-09/30/94	Great Blue Heron Black-crowned Night Heron	18	Steatitis	NW
Bear River MBR	UT	06/29/94-09/22/94	American Wigeon White-faced Ibis American White Pelican Unidentified Gull American Avocet	292	Botulism type C	NW

(e) = estimated mortality

* Southeastern Cooperative Wildlife Disease (SC); National Wildlife Health Center (NW); Summerdale Diagnostic Laboratory, Pennsylvania (PA); Texas A&M (TA&M); San Francisco Bay Bird Observatory (SF); Peninsula Humane Society (PH).

Written and compiled by Gregory Kidd, NWHC. To report wildlife mortality or if you would like specific information on these mortalities, contact the following Resource Health Team Members; Pacific Flyway - Lynn Creekmore; Central Flyway - Linda Glaser; Mississippi Flyway - Kim Miller; Atlantic Flyway - Kathy Converse. (608) 271-4640, FAX (608) 264-5431 National Wildlife Health Center, 6006 Schroeder Road, Madison, WI 53711.



Quarterly Wildlife Mortality Report. The following highlights wildlife mortality reported to the National Wildlife Health Center (NWHC) from July through September, 1994. Fifty six epizootics were reported this quarter, 34 (61%) of which were attributed to botulism type C.

There were several botulism outbreaks with very high mortality this summer. Flooding of numerous areas the second year in a row and drawdown of water on some areas may have created ecological conditions conducive for the growth of *Clostridium botulinum* and subsequent toxin production as well as creating new habitat attractive to waterbirds. Over 23,800 waterfowl died during six North Dakota outbreaks with an estimated 17,000 dying on Lake Venturia, in the south-central part of the state. On Lake Venturia and nearby Dry and Bader Lakes, fields that were in hay production the past few years were under 10 feet of water. There were losses of under 1,000 ducks on several other areas with water level changes: a flooded area 10 miles south of Lake Venturia, in McPherson County, South Dakota; Brown county, South Dakota where flooding and subsequent drawdown left mudflats; Cheyenne Bottoms Wildlife Management Area in Kansas where construction of a new dike required a drawdown of water producing extensive mudflats; and flooded areas on Upper Mississippi NWR near Elk River Junction, Iowa. Further west in Colorado, occurrence of botulism in over 400 waterfowl and herons at Denver Zoological Gardens is once again thought to have started following production of maggots on fledgling Black-crowned night herons that fell out of their nests into a lake. In Utah, botulism occurred on Great Salt Lake but in different locations than recent years. Mortality on Bear River Migratory Bird Refuge, was less than 300 birds compared with losses of greater than 100,000 in previous years. However, losses at Farmington and Odgen Bays and Harold Crane Wildlife Management Area exceeded 30,000 of the 250,000 at risk. On the west coast, at Klamath Basin Refuges, California, botulism mortality was held to an estimated 10,000 waterfowl by aggressive pickup of carcasses that reduced the number of available maggots on carcasses. At Malheur Lake in south central Oregon, botulism mortality occurred on the same site under similar conditions surrounding last year's dieoff with mortality peaking at 115 birds picked up per day.

Metabolic bone disease was diagnosed by Texas A&M in cattle egret juveniles collected from four rookeries near College Station and Bryan, Texas. In one colony adjacent to a highway, fledglings were seen hobbling around the colony and some flew onto the highway and were killed. Necropsy of freshly dead egrets from the colony revealed emaciation and numerous leg and wing fractures. Clinical chemistry results had Ca:P ratios approaching 1:1 (2:1 is normal). Because leafhoppers were the only available insect food source this year, compared with a variety of insects in other years, it is speculated that their diet was low in calcium causing abnormally soft bone formation. Fractures resulted as birds fledged and became weight-bearing on improperly formed bones.

Reports of morbidity and mortality in house finches secondary to conjunctivitis have slowly decreased in the mid-Atlantic states while reports are increasing in New York and the New England states. Conjunctivitis and/or sinusitis has been reported in house finches in eight eastern states. Diagnostic tests are pending at several diagnostic facilities, special studies are in progress and additional studies proposed. *Mycoplasma gallisepticum* has been isolated from finches collected in Virginia, Delaware and North Carolina by two laboratories while similar culture methods on over 100 finches by other laboratories have not been positive for mycoplasma. Clinical signs in affected finches include one or both eyes swollen or crusted shut and often a clear to cloudy discharge. Birds have been observed unable to fly or eat properly due to poor vision.

Salmonella continues to be reported in birds using backyard feeders at several locations in Missoula County, Montana and salmonellosis was diagnosed in grosbeaks using backyard bird feeders in Deschutes County, Oregon.

In Perry County, Pennsylvania, Summerdale State Diagnostic Laboratory reported that an estimated 30 muscovies died from duck plague at a youth camp 7 - 10 days following the donation of 2 mallards. The mallards were immediately quarantined and remained unaffected.