

QUARTERLY DIE-OFF REPORT  
 April 1988 - June 1988  
 National Wildlife Health Research Center

| Location                             | State | Date              | Species  | Mortality | Causes                               |
|--------------------------------------|-------|-------------------|--|-----------|--------------------------------------|
| Colusa NWR                           | CA    | 12/01/87-01/22/88 | Goose, Snow<br>Goose, Ross'<br>Gull, California                                | 6         | Avian cholera<br>Botulism type C     |
| Various locations in VT,<br>NY, & NH | VT    | 02/08/88-04/15/88 | Siskin, Pine   | 100(e)    | Salmonellosis <sup>1/</sup>          |
| Forest Lake, Twin Cities             | MN    | 03/10/88-03/11/88 | Duck, Mallard  | 15        | Toxin: OP or Carbamate               |
| Imbler                               | OR    | 03/14/88-04/18/88 | Swan, Tundra<br>Duck, Mallard<br>Duck, Wigeon                                  | 27        | Avian cholera<br>Aspergillosis       |
| Corinth                              | VT    | 03/25/88-03/30/88 | Owl, Barred  | 4         | Open                                 |
| William L. Finley NWR                | OR    | 03/28/88-04/15/88 | Goose, Dusky Canada<br>Goose, Taverners Canada                                 | 2         | Open                                 |
| Columbus                             | OH    | 03/30/88-04/08/88 | Duck, Muscovy  | 4         | Duck plague                          |
| Alliance                             | NE    | 04/04/88-04/11/88 | Goose, Snow  | 17        | Avian cholera                        |
| Salton Sea NWR                       | CA    | 04/08/88-04/18/88 | Duck, Shoveler<br>Sandpiper, Western<br>Duck, Green-winged Teal<br>Duck, Ruddy | 324       | Botulism type C                      |
| Uintah                               | UT    | 04/08/88-04/08/88 | Crane, Sandhill  | 13        | Toxin: OP suspect                    |
| Kountze                              | TX    | 04/10/88-05/03/88 | Cardinal<br>Sparrow, Chipping  | 20(e)     | Salmonellosis                        |
| Needles                              | CA    | 04/15/88-05/15/88 | Dove, Mourning   | 20        | Trichomoniasis suspect <sup>1/</sup> |
| Appleton                             | WI    | 04/16/88-06/13/88 | Swallow, Tree  | 60        | Open/Emaciation                      |

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| Shady Acres Gun Club  | CA    | 04/21/88-05/05/88 | Duck, Shoveler<br>Duck, Green-winged Teal<br>Avocet, American<br>Duck, Ruddy | 595       | Botulism type C                      |
| Gettysburg            | SD    | 04/26/88-05/10/88 | Duck, Redhead<br>Duck, Ringnecked<br>Duck, Scaup<br>Sandpiper, Pectoral      | 400(e)    | Botulism type C                      |
| Allen's Pond          | MD    | 05/01/88-05/14/88 | Duck, Muscovy  | 12        | Duck plague <sup>1/</sup>            |
| Wells Beach           | ME    | 05/02/88-05/15/88 | Loon, Common   | 6(e)      | Open                                 |
| Cambridge             | MD    | 05/03/88-05/04/88 | Duck, Muscovy  | 1         | Duck plague <sup>1/</sup>            |
| Eagle River Flats     | AK    | 05/09/88-ongoing  | Duck, Mallard<br>Duck, Green-winged Teal<br>Duck, Shoveler<br>Duck, Pintail  | 33        | Open                                 |
| Hiawatha Nat'l Forest | MI    | 05/12/88-06/18/88 | Swallow, Tree  | 17        | Open <sup>1/</sup>                   |
| Waterloo              | WI    | 05/17/88-05/23/88 | Swallow, Tree  | 26        | Open/Emaciation                      |
| Corcoran Sewer Ponds  | CA    | 05/18/88-ongoing  | Coot, American<br>Duck, Mallard<br>Duck, Cinnamon Teal<br>Duck, Ruddy        | 102       | Suspect avian botulism <sup>1/</sup> |
| Puyallup              | WA    | 05/20/88-05/20/88 | Duck, Muscovy  | 2         | Duck plague <sup>1/</sup>            |
| Black Diamond         | WA    | 05/21/88-05/21/88 | Duck, Muscovy  | 1         | Duck plague <sup>1/</sup>            |
| Mt. Airy              | LA    | 05/23/88-05/30/88 | Heron, Little Blue<br>Egret, Snowy<br>Egret, Cattle<br>Heron, Louisiana      | 7         | Open<br>Intestinal nematodiasis      |

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| Woodhaven Shores      | VA    | 06/07/88-06/07/88 | Duck, Hybrid Mallard   | 1         | Duck plague <sup>1/</sup> |
| Long Lake NWR         | ND    | 06/07/88-ongoing  | Gull<br>Pelican, White<br>Duck, Shoveler<br>Duck, Mallard                | 300(e)    | Botulism type C           |
| Upper Mississippi NWR | WI    | 06/13/88-ongoing  | Duck, Mallard  | 250(e)    | Botulism type C           |
| Horicon NWR           | WI    | 06/13/88-ongoing  | Duck, Mallard<br>Duck, Unidentified Teal<br>Coot, American               | 53        | Botulism type C           |
| Eastern Egg Island    | ME    | 06/16/88-06/20/88 | Tern, Common<br>Storn-Petrel, Leach's                                    | 35        | Open                      |
| Medicine Lake NWR     | MT    | 06/17/88-ongoing  | Duck, Green-winged Teal<br>Duck, Gadwall<br>Duckling, Unidentified       | 35(e)     | Botulism type C           |
| Devils Lake WMD       | ND    | 06/20/88-ongoing  | Duck, Wood<br>Grebe, Eared<br>Duck, Mallard<br>Duck, Gadwall             | 150(e)    | Botulism type C           |
| Denver                | CO    | 06/22/88-ongoing  | Night-Heron, B. Crowned<br>Goose, Canada<br>Duck, Mallard<br>Duck, Pekin | 7         | Avian botulism suspect    |
| Cedar Point NWR       | OH    | 06/27/88-ongoing  | Duck, Mallard  | 5(e)      | Avian botulism suspect    |

(e) = estimated mortality

1/ = no specimens submitted to NWHRC

For specific information, contact the following Resource Health Team members:

National Wildlife Health Research Center Quarterly Mortality Report.

The following summarizes mortalities reported to NWHRC for April-June 1988.

NWHRC received reports of 37 wildlife disease die-offs. Avian botulism accounted for 30% of the die-offs and duck plague 16%.

The occurrence of duck plague in six areas of the United States in 1988 is noteworthy, as this disease was not reported to the Center in 1987. The die-offs in Washington state are the first reported to NWHRC from that area.

Salmonella typhimurium was isolated from pine siskins collected in Vermont. Salmonellosis was suspected to have caused mortality of hundreds of passerines including pine siskins, black-capped chickadees, house sparrows, evening grosbeaks, common redpolls, American goldfinches, cardinals, cowbirds, and grackles in late March and April in Vermont, New Hampshire, Massachusetts, and New York. As previously reported, Salmonellosis also caused the death of passerines at Devils Lake, Wisconsin during January; Shawano, Wisconsin in March; and Kountze, Texas, in May.

Approximately 20 mallards and pintails were found sick or dead in Yellowstone County, northeast of Billings, Montana. Necropsy examination of carcasses revealed a parasitic enteritis and massive numbers of flukes later identified as Sphaeridiotrema globulus. Stomach contents included remnants of snails of the family Amnicolidae, suspected to be the intermediate host.

Three epizootics in Wisconsin and Michigan involved tree swallows found sick or dead in bluebird boxes. Clinical signs included weakness and pasting of the vent. Birds submitted from Wisconsin had no gross lesions at necropsy; they were significantly underweight. Biologists suspect drought conditions reduced availability of insects for food.

Salton Sea National Wildlife Refuge and an adjacent duck club reported avian botulism losses after poor quality water entered the Refuge. Botulism usually occurs only in August and September on these areas.