



National Wildlife Health Center
Wildlife Health Bulletin 2016-06

Virulent Newcastle Disease Virus in Double-Crested Cormorants

To: Natural Resource/Conservation Managers
From: Dr. Jonathan Sleeman, Center Director, USGS National Wildlife Health Center
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The USGS National Wildlife Health Center is receiving reports of sick or dead double-crested cormorants (*Phalacrocorax auritus*), predominantly juveniles, from the Great Lakes region. Common clinical signs observed are increased fledgling mortality at rookeries, neck weakness, unilateral wing paralysis, incoordination, and tremors. Occasionally, concurrent mortality in other species including gulls and pelicans is reported. We are currently investigating events from multiple locations in central and southern Minnesota and Wisconsin.

Virulent Newcastle Disease virus (vNDV) has been confirmed by genetic sequencing in cormorants submitted from Mille Lacs County, Minnesota. Cormorants from Blue Earth, Rice, and Big Stone Counties in Minnesota and Dodge County in Wisconsin have also screened positive for avian paramyxovirus-1 (APMV-1) and further characterization of the virus is on-going to determine if it is vNDV. None of the dead gulls or pelicans collected in association with cormorant mortality have been positive for APMV-1. Our experience with previous vNDV outbreaks has shown that sympatric species are rarely affected by vNDV, and cause-of-death determination for the other species (e.g., gulls and pelicans) is on-going. All birds have screened negative for highly pathogenic avian influenza virus.

Wildlife and Domestic Animal Significance: Certain strains of APMV-1 can cause significant wild bird mortality, but these events are typically limited to juvenile double-crested cormorants. Some strains of APMV-1 classified as vNDV, including some strains isolated from cormorants, can also cause significant disease even in vaccinated poultry and are reportable to state and federal agricultural officials.

Human Health Considerations: APMV-1 can cause mild self-limiting conjunctivitis in humans, therefore the use of eye protection or face shields should be considered when investigating these events. As a routine precaution when handling any sick or dead birds, personal protective equipment including gloves, rubber boots, and disposable or cloth coveralls should be worn and hands should be thoroughly washed afterwards.

Disease Control and Biosecurity: Because of the potential for some strains of vNDV to cause mortality in domestic poultry, it is important to practice good biosecurity when investigating any mortality event involving double-crested cormorants. Wear boots, gloves, and outer clothing that can be cleaned and disinfected, bagged and washed, or bagged and discarded. Carcasses collected from these sites should be disposed of on-site (by burying or incineration) rather than transported to other locations for disposal. Equipment, including transportation vehicles, used at a morbidity or mortality site should be washed to remove organic material and mud, then disinfected with 10% household bleach solution (9 parts water:1 part bleach) or other suitable disinfectant, such as Virkon, as soon as possible after use. Limit visits to the affected site until young have fledged and moved off the colony. As a precaution, limiting contact with pet birds and poultry for 5 days is advised for any personnel that have recently visited an affected site or handled contaminated animals or materials.

Please continue to monitor your area and contact us (608-270-2480; NWHC-epi@usgs.gov) to report cormorant mortality in new locations and to coordinate potential submissions. In addition, please share your observations with your agency's wildlife health team. Poultry producers are encouraged to review their biosecurity measures. For backyard or poultry concerns, call your agricultural extension agent, local veterinarian, or the State veterinarian. Or, call the U.S. Department of Agriculture (USDA) toll-free at 1-866-536-7593.

Disease Investigation Services

To request diagnostic services or report wildlife mortality, please contact the NWHC at **608-270-2480** or by email at NWHC-epi@usgs.gov, and a field epidemiologist will be available to discuss the case. To report wildlife mortality events in Hawaii or Pacific Island territories, please contact the Honolulu Field Station at 808-792-9520 or email Thierry Work at thierry_work@usgs.gov. Further information can be found at <http://www.nwhc.usgs.gov/services/>. See also the [Wildlife Mortality Reporting and Diagnostic Services Request Worksheet](#).

If you have any questions or concerns regarding the scientific and technical services we provide, please do not hesitate to contact NWHC Director Jonathan Sleeman at 608-270-2401, jsleeman@usgs.gov.

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