



Introduction

Newcastle disease is caused by Avian Paramyxovirus (APMV-1). It affects both wild and domestic birds. Large outbreaks in the United States have occurred in double-crested cormorants (*Nannopterum auritum*).

Species Affected

Commonly affected wildlife are cormorants, pigeons, and certain psittacine species (parrots).

Clinical Signs

Common signs of infection with APMV-1 are sneezing, gasping, coughing, and nasal discharge. Generally, birds appear lethargic and may experience stiffness. Green feces is also common. Internally, it is common to see hemorrhaging in the trachea, proventriculus, and caecal tonsils. As shown below, cormorants that survive Newcastle disease may exhibit wing paralysis on one side.



A double-crested cormorant with one-sided wing paralysis from Newcastle disease. Photo courtesy of USGS by Milton Friend

Transmission

The fecal-oral route is the primary route of transmission. Contaminated surfaces and equipment can spread the disease between individuals. The virus can also be aerosolized and spread through respiration.

Diagnosis

Newcastle disease must be identified through confirmation of the presence of the virus and is clinically indistinguishable from avian influenza. This is typically done by oropharyngeal and cloacal swabbing, followed by PCR to detect viral RNA.

Epidemiology

Many different strains of APMV exist globally, with most being centralized in Asia and Africa. There are concerns in the United States that wild reservoirs for AMPV in cormorants and other species may spread the virus into domestic fowl operations.

Additional Information

[Newcastle Disease \(pa.gov\)](http://pa.gov)

Cover Image:

[Assessing the Effect of Cormorant Predation on Small Trout Stocked Ponds in New Jersey \(nj.gov\)](#)