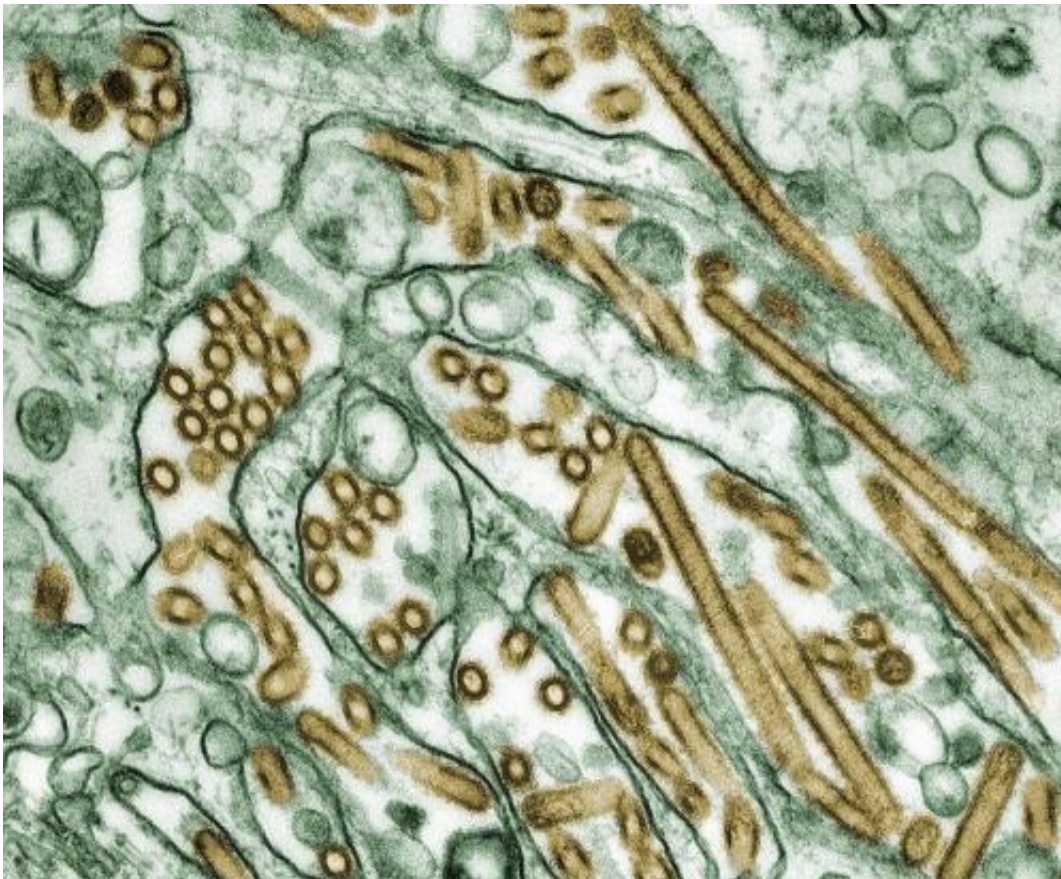


Circulation of highly pathogenic avian flu in North American birds

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Colorized transmission electron micrograph of Avian influenza A H5N1 viruses.
Credit: Public Domain

Highly pathogenic avian influenza (HPAI) H5 viruses of Eurasian origin continue to circulate and evolve in North American wild birds.

The U.S. Geological Survey and U.S. Department of Agriculture published the [genetic analysis](#) of a mixed-origin HPAI H5N1 [avian flu virus](#) in the journal *Genome Announcements* today. This [novel virus](#) was [discovered](#) in a green-winged teal in Washington State that was sampled at the end of 2014. It is a mixed-origin virus containing genes from the Eurasian HPAI H5N8 and genes from North American low [pathogenic avian influenza](#) from [wild birds](#). This H5N1 virus is different from the well-known Asian H5N1 HPAI virus that emerged in 1996.

This new publication follows a [recent article](#) describing the introduction of Eurasian HPAI H5N8 into North America at the end of 2014 and the detection of a different mixed-origin virus (HPAI H5N2) in wild birds. In March 2015, the HPAI H5N2 virus was detected in commercial turkey flocks in Minnesota, Missouri and Arkansas, in a backyard flock of mixed poultry in Kansas and in a wild bird in Wyoming.

"Such findings are not unexpected and might continue as the Eurasian lineage H5 circulates in the United States," said co-author Mia Kim Torchetti, a USDA Animal and Plant Inspection Service scientist.

The term 'highly pathogenic' refers to the ability of an [avian influenza virus](#) strain to produce disease in chickens. The population-level impact of these viruses on free-living wild bird species is currently unknown.

"This report describes the first detection of HPAI H5N1 virus in North America, and this virus has since been detected in a backyard flock in British Columbia, Canada," said Hon Ip, a USGS National Wildlife Health Center scientist.

As with the parental Eurasian H5N8 virus, **no human infections with this H5N1 virus have been detected**. However, similar viruses have infected people in other countries, according to the [Centers for Disease Control and Prevention](#). The public health risk posed by these domestic

H5N1 outbreaks is considered low at this time, but it is possible that human infections with these viruses may occur.

Each mixed-origin virus might carry different risks and surveillance of circulating H5N1 viruses is ongoing. The USGS and USDA scientists continue to monitor Eurasian H5 lineage viruses and provide stakeholders with timely information for management purposes.

Provided by United States Geological Survey

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