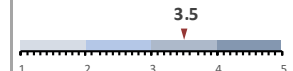


## SUMMARY: RELEVANT SIGNALS (includes all signals rated ≥3.0)

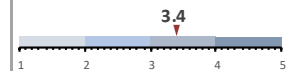
### Highly Pathogenic Avian Influenza

- ◆ **Peru** has reported a mass mortality of at least 585 sea lions and 50,000 birds due to HPAI H5N1; a pre-print on the mass mortality event has also been released indicating that the transmission pathway of H5N1 may have been through the close contact of sea lions with infected wild birds and direct transmission among sea lions cannot be ruled out
- ◆ Over the last week, **Canada** has reported outbreaks of HPAI H5N1 in commercial poultry in: **Quebec(3)**; and in non-commercial poultry in: **Nova Scotia(1)**
- ◆ In the **USA**, **Colorado** has identified several cases of HPAI in free-ranging wildlife; in a black bear from Huerfano County in October, a skunk from Weld County in November, and a mountain lion that died in Gunnison County was recently confirmed to have the disease
- ◆ **Cuba** has reported its first case of HPAI H5N1 in wild captive birds (sparrow hawks) located at the **Jardín zoológico de La Habana**; of the 570 birds listed as susceptible, 5 cases presented as positive, and the affected population also included chickens and common geese
- ◆ In the **UK**, HPAI H5N1 was found in four seals (one grey seal and three harbour seals) along the east coast of **Scotland** last week

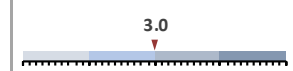
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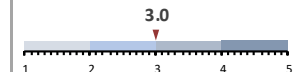
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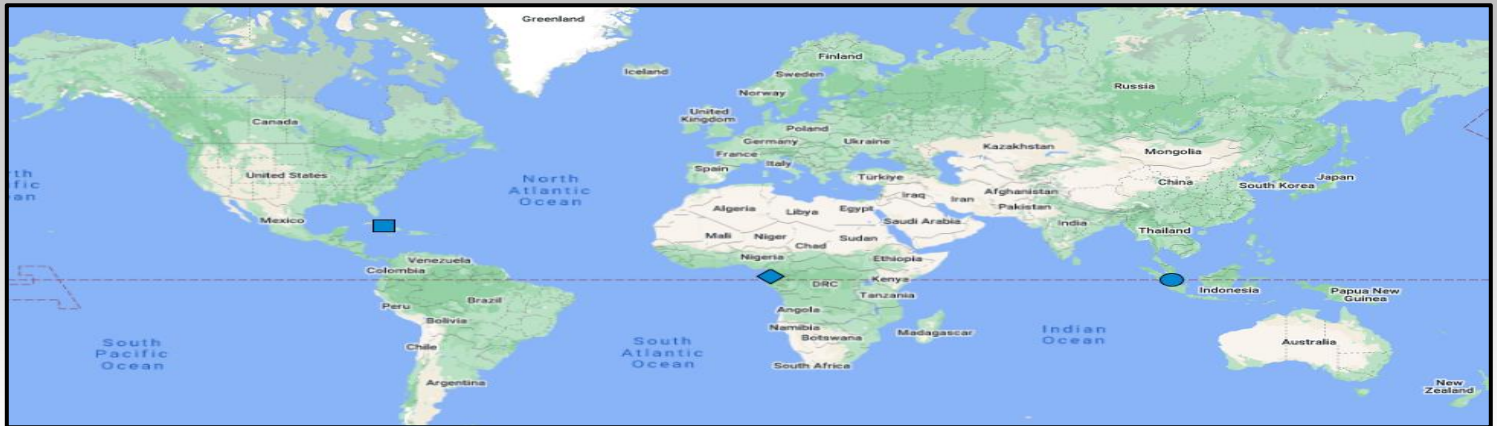
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## NEW EVENTS: (events rated > 2)



### Highly Pathogenic Avian Influenza H5N1 in Cuba

**Pathogen:** Virus; **Transmission:** Direct contact, aerosol, fomite; **Species affected in event:** Sparrow Hawk

① Cuba has reported its first case of HPAI in wild captive birds located at the Jardín zoológico de La Habana. Of the 570 birds listed as susceptible, 5 cases presented as positive. The affected birds included chickens, common geese and sparrow hawks. Cuban authorities applied several measures to curb spread, including disinfection and surveillance outside and inside the restricted zone. Quarantine and movement control have also been applied.

[Read More](#)

Avg. Rating	2.5 - 3.0
No. of Signal	5
No. of Ratings	4 - 6

### African Swine Fever in Singapore

**Pathogen:** Virus; **Transmission:** Direct contact, fomite, vector; **Species affected in event:** Wild boar

① One dead wild boar was found in a nature park in North-West Singapore on February 7, 2023. ASF virus DNA was detected from the carcass by real-time PCR and confirmed by sequencing. Singapore does not have any commercial or backyard pig farms for pork production.

[Read More](#)

Avg. Rating	2.4 - 2.6
No. of Signal	2
No. of Ratings	5

### Marburg Virus in Equatorial Guinea

**Pathogen:** Virus; **Transmission:** Direct contact, fomite; **Species affected in event:** Human

① Equatorial Guinea has confirmed its first-ever outbreak of Marburg virus disease. Preliminary tests carried out following the deaths of at least nine people in the country's western Kie Ntem Province turned out positive for the viral haemorrhagic fever. Samples were sent to the Institut Pasteur reference laboratory in Senegal to determine the cause of the disease after an alert by a district health official on February 7, 2023. Of the eight samples tested at Institut Pasteur, one turned out positive for the virus. So far nine deaths and 16 suspected cases with symptoms including fever, fatigue and blood-stained vomit and diarrhoea have been reported.

[Read More](#)

Avg. Rating	2.2 - 2.3
No. of Signal	3
No. of Ratings	4 - 5

## CONTINUED EVENTS: (events rated ≥ 2.4)

### **Highly Pathogenic Avian Influenza in South America** **No. of Signals: 17** **No. of weeks in report: 13** **Avg. Rating: 1.9 – 3.5**

- [Peru](#) has reported a mass mortality of at least 585 sea lions and 50,000 birds due to HPAI H5N1 ; reports have also mentioned the death of a [dolphin](#) as well as a [lion](#) due to HPAI
- [Costa Rica](#), [Colombia](#), and [Bolivia](#) have reported outbreaks of HPAI H5N1 in domestic poultry
- [Chile](#) has reported cases of HPAI H5N1 in wild birds
- [Ecuador](#) plans to vaccinate more than two million birds against HPAI; the vaccination process will begin in the next two months and Ecuador will import four million doses through a Mexican-Ecuadorian partnership

### **Highly Pathogenic Avian Influenza in North America** **No. of Signals: 03** **No. of weeks in report: 56** **Avg. Rating: 2.8 - 3.4**

- Over the last week, [Canada](#) has reported outbreaks of HPAI H5N1 in commercial poultry in: Quebec(3); and in non-commercial poultry in: Nova Scotia(1)
- Over the last week, the [USDA](#) has reported outbreaks of HPAI H5N1 in commercial poultry in: California, Mississippi, and Kansas; in WOAHP poultry in: Pennsylvania; and in WOAHP non-poultry in: Pennsylvania, California, Maine, and Wyoming
- [Colorado](#) has identified several cases of HPAI in free-ranging wildlife; in a black bear from Huerfano County in October, a skunk from Weld County in November, and a mountain lion that died in Gunnison County was recently confirmed to have the disease

### **Highly Pathogenic Avian Influenza in Europe** **No. of Signals: 19** **No. of weeks in report: 112** **Avg. Rating: 1.9 – 3.0**

- In the [UK](#), HPAI H5N1 was found in four seals (one grey seal and three harbour seals) along the east coast of Scotland last week
- [Russia](#) has reported that experts will be investigating the cause of death of seals in Dagestan starting in spring 2023; Kazakhstan has released their own analysis, concluding that the main cause of death of most Caspian seals found in November 2022 was virus-associated acute pneumonia as a result of an outbreak of mixed influenza and morbillivirus infections during the autumn concentration of animals in the Kazakhstani part of the sea
- [Germany](#), [Slovakia](#), [Russia](#), [Bulgaria](#), [Moldova](#), [Scotland](#), [Turkey](#), [Hungary](#), and [France](#) have reported HPAI H5N1 in domestic poultry
- [Serbia](#), [Belgium](#), [Poland](#), [Italy](#), [Sweden](#), [Romania](#), and [Belgium](#) have reported HPAI H5N1 in wild birds
- A summary of the overall HPAI situation in Europe is available [here](#)

### **African Swine Fever in the Caribbean** **No. of Signals: 01** **No. of weeks in report: 18** **Avg. Rating: 2.6**

- The ASF outbreak on [Hispaniola](#) is still ongoing; Haiti and the Dominican Republic are still experiencing a number of cases every week and experiencing a lot of production losses, biosecurity is challenging and its hard to clean and disinfect farms in the area

### **Nipah Virus in Bangladesh** **No. of Signals: 03** **No. of weeks in report: 04** **Avg. Rating: 2.0 - 2.4**

- As of February 3, 2023, [Bangladesh](#), has confirmed a total of 10 Nipah cases, along with 7 deaths; health authorities have marked 32 districts in Bangladesh as being at risk of the Nipah virus infection and directed physicians to take adequate precautionary measures while attending to patients with fevers

### **Highly Pathogenic Avian Influenza in Asia** **No. of Signals: 04** **No. of weeks in report: 89** **Avg. Rating: 2.0 – 2.3**

- [Nepal](#) has reported a reoccurrence of HPAI H5N1 on a commercial layer farm near Kathmandu; wild birds like crows and eagles have been seen near farm premises
- [Japan](#) has reported HPAI H5N1 in a white tailed eagle

## SCIENTIFIC FINDINGS & REPORTS:

### Coronavirus

- ◆ Pre-print: Taxonomical and ontological analysis of verified natural and laboratory human coronavirus hosts [Read More](#)
- ◆ Extended Viral Shedding of MERS-CoV Clade B Virus in Llamas Compared with African Clade C Strain [Read More](#)
- ◆ Evolutionary rate of SARS-CoV-2 increases during zoonotic infection of farmed mink [Read More](#)
- ◆ Pre-print: Investigations on SARS-CoV-2 and other coronaviruses in mink farms in France at the end of the first year of COVID-19 pandemic [Read More](#)
- ◆ Identification of coronaviruses in bats and rodents in northern and central Argentina [Read More](#)
- ◆ Versatile use of bat ACE2 for cellular entry by MERS-CoV-like viruses [Read More](#)
- ◆ Pre-print: Probable transmission of SARS-CoV-2 from an African lion to zoo employees [Read More](#)
- ◆ Pandemic danger to the deep: The risk of marine mammals contracting SARS-CoV-2 from wastewater [Read More](#)

### Influenza

- ◆ Pre-print: First Mass Mortality of Marine Mammals Caused by Highly Pathogenic Influenza Virus (H5N1) in South America [Read More](#)
- ◆ N-linked glycosylation enhances hemagglutinin stability in avian H5N6 influenza virus to promote adaptation in mammals [Read More](#)
- ◆ Phenotypic effects of mutations observed in the neuraminidase of human origin H5N1 influenza A viruses [Read More](#)
- ◆ Pre-print: Zoonotic avian influenza viruses evade human BTN3A3 restriction [Read More](#)
- ◆ Pre-print: Avian Influenza Virus Tropism in Humans [Read More](#)

### Mpox

- ◆ Case of apparent mpox reinfection [Read More](#)

### Other

- ◆ Mystery of fatal 'staggering disease' unravelled: novel rustrela virus causes severe meningoencephalomyelitis in domestic cats [Read More](#)
- ◆ Out of sight, out of mind? BSE 30 years on: continuing environmental risks to human health [Read More](#)
- ◆ Pre-print: Lumpy Skin Disease: A Comprehensive Review on Virus Biology, Pathogenesis, and Sudden Global Emergence [Read More](#)
- ◆ Species-specific immunogenicity and protective efficacy of a vesicular stomatitis virus-based Sudan virus vaccine: a challenge study in macaques [Read More](#)
- ◆ JMM Profile: Rift Valley fever: a zoonotic viral haemorrhagic disease [Read More](#)
- ◆ SHIC – February Global Disease Monitoring Report [Read More](#)

### Disclaimer

This intelligence report is intended to provide information to risk managers about emerging and zoonotic disease events that could pose a threat to Canada. It is based on information signals acquired and selected from twenty-one distinct disease surveillance sources via the Knowledge Integration using Web-based Intelligence (KIWI) tool hosted on the Canadian Network for Public Health Intelligence (CNPHI) informatics platform. The report is based on the activities of the CEZD Community of Practice and subject to change based on evolving user needs.