



Turkey pathogens in wild birds submitted for necropsy in Finland

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Biosecurity standards are strict in domestic poultry production in Finland. There is practically no interaction between commercially produced poultry and wild birds. In recent years, organic and free-range production have increased in popularity exposing domestic poultry to outside disease influences. The report “Animal disease hazards and biosecurity of organic and pastured turkeys”¹ identified the most important disease hazards posed by wild birds on pastured turkeys in Finland. These were identified as avian influenza virus (AI), Paramyxovirus-1 (Newcastle disease) and *Histomonas meleagridis* (histomonosis).

The Evira laboratory information system was searched for cases where avian influenza virus, Paramyxovirus-1 and *Histomonas meleagridis* were diagnosed in wild birds, to see how common these diagnoses are in the 1270 wild birds submitted to Evira for necropsy between 2011 and 2015. *Salmonella* spp. and *Campylobacter* spp., although potentially spread by wild birds, were not included in this study as their importance lies primarily in consumer food safety rather than turkey health.

Viral diseases

Between 86 and 181 wild birds were tested for avian influenza each year as part of the European Union AI surveillance program. **Low-pathogenic AI virus** was isolated from one Eurasian wigeon (*Anas Penelope*), four Mallards (*Anas platyrhynchos*) and four Eurasian teals (*Anas crecca*) as well as one common gull (*Larus canus*) and one lesser black-backed gull (*Larus fuscus*). High-pathogenic AI has never been diagnosed in Finland. **Paramyxovirus-1** was diagnosed in 13 wild domestic pigeons (*Columba livia*).

Parasitic diseases

Histomonosis is one of the biggest threats to outdoor turkey production. Severe losses have been seen in Central Europe after prophylactic treatment was banned in the European Union in 2003. Histomonosis is uncommon in turkeys in Finland. There were no identified cases of histomonosis in wild birds within the study period.

Bacterial diseases

The primarily soil-born pathogen *Erysipelothrix rhusiopathiae* (erysipelas) is likely to be one of the biggest threats to the health of pastured turkeys. Between 2011 and 2015 it was isolated as the primary cause of death from a Eurasian magpie (*Pica pica*), a Whooper swan (*Cygnus cygnus*) and a House sparrow (*Passer domesticus*). Erysipelas was also diagnosed in a White-tailed eagle (*Haliaeetus albicilla*). Erysipelas is a rare diagnosis in Finland and wild birds are unlikely to add to the overall disease pressure for this disease.

¹Schulman K, Sahlström L, Heikkilä J (2014). Animal disease hazards and biosecurity of organic and pastured turkeys (in Finnish). Evira Research Reports 2/2014, 47 pp.

