

# THE CANADIAN WILDLIFE HEALTH COOPERATIVE (CWHC)

*Assessing, Managing, and Communicating Risk*

*Damien Joly, PhD (he/him, il/lui)*





<https://www.snuneymuxw.ca/>

<https://www.snuneymuxw.ca/wp-content/uploads/2023/06/Snuneymuxw-Territory.pdf>

# THE CANADIAN WILDLIFE HEALTH COOPERATIVE (CWHC)

## *ASSESSING, MANAGING, AND COMMUNICATING RISK*

*Damien Joly, PhD (he/him, il/lui)*





World Organisation  
for Animal Health  
Founded in 1924



Fisheries and Oceans  
Canada

Pêches et Océans  
Canada



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada



Ontario



Public Health  
Agency of Canada  
Agence de la santé  
publique du Canada



CFIA-ACIA



Québec



Parks  
Canada



CANADIAN WILDLIFE  
FEDERATION



Gouvernement  
de  
Saskatchewan



UNIVERSITY OF  
SASKATCHEWAN



Université  
de Montréal



UNIVERSITY  
of Prince Edward  
ISLAND



UNIVERSITY  
of GUELPH



UNIVERSITY OF  
CALGARY

CANADIAN  
WILDLIFE HEALTH  
COOPERATIVE



RÉSEAU CANADIEN  
POUR LA SANTÉ DE LA FAUNE

# HISTORY

---

Founded in 1992 as a centre at the University of Saskatchewan

---

Designated as the first World Organization for Animal Health (WOAH) Collaborating Centre in 2007

---





# MISSION

To promote and protect the health of wildlife and Canadians [*and their animals*] through leadership, partnership, investigation, and action.



# WHAT DOES THE CWHC DO?

---

**Monitoring:** Mortality investigations, targeted surveillance (e.g., Avian influenza, SARS-CoV-2)

---

**Assessment:** Risk assessments, thought and opinion pieces, disease management strategies

---

**Knowledge Mobilization:** 28-30 scientific publications / year, advice, regular blog articles, regular news coverage

---

**Collaboration:** Ongoing collaborations with PT wildlife and agriculture agencies, DFO, ECCC, CFIA, PHAC, Parks Canada, WOA, academia

---



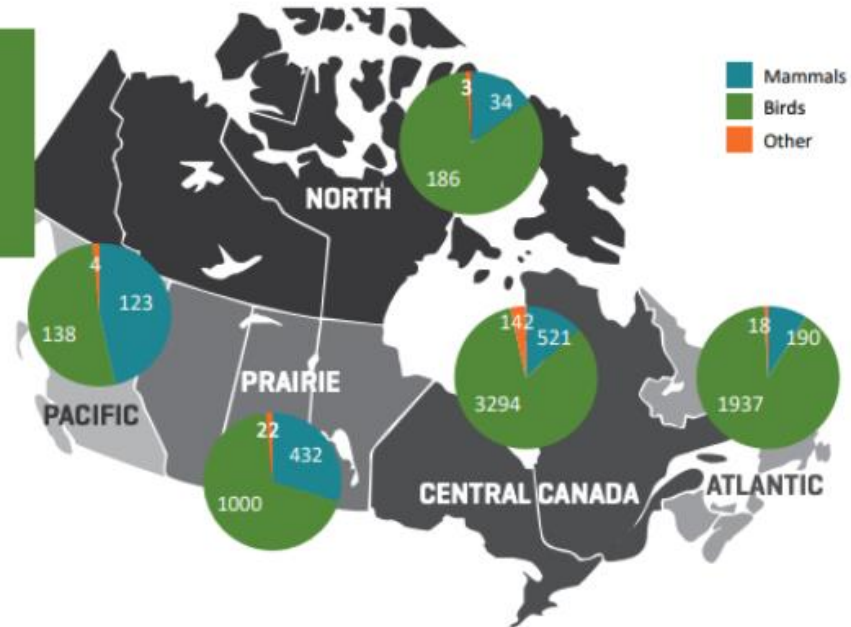


## ANIMALS SUBMITTED by region

8044 ANIMALS TOTAL

### REGION TOTALS

Pacific	265
Prairie	1454
Central Canada	3957
Atlantic	2145
North	223



1 April 2022 - 31 March 2023

## SELECTED DISEASES

Project	Examined	Positive
Avian Botulism	1779	0
Avian Cholera	1779	4
Avian Influenza	4929	2132
Bovine tuberculosis	255	0
Canine distemper	1019	48
Chronic wasting disease	246	39
Newcastle Disease	2713	1
Rabies	2154	21
Snake fungal disease	26	8
West Nile Virus	6440	136
White nose syndrome	230	4

*1 April 2022 - 31 March 2023*



5,486 SOCIAL MEDIA FOLLOWERS

3,896 Facebook

1,040 Twitter

550 Instagram



37 blog posts  
on [blog.healthywildlife.ca](http://blog.healthywildlife.ca)



110,775  
website page views  
from over 100 different  
countries  
*[10% increase from  
last year]*



62 MEDIA  
ENGAGEMENTS  
Including over 40 related  
to Highly-pathogenic  
Avian Influenza



53 PUBLICATIONS  
6 technical reports  
47 peer-reviewed articles

# **“PASSIVE” SURVEILLANCE**

# “PASSIVE” SURVEILLANCE

Advantages	Disadvantages
Relatively cheap	Biased
Broad coverage	Limited ability to demonstrate “freedom from disease”
Agnostic	Limited ability to detect rare events
Complements active surveillance	Limited comparability of data

The influence of sociodemographic and environmental factors on wildlife carcass submissions in urban areas: Opportunities for increasing equitable and representative wildlife health surveillance

Juliana A. Giacchi<sup>1,2\*</sup>, Sarah J. Robinson<sup>3,4</sup>, Shannon K. French<sup>5</sup>, David L. Peadar<sup>6</sup>, and Claire M. Jordan<sup>6</sup>

<sup>1</sup>Department of Pathobiology, Ontario Veterinary College, University of Guelph, 50 Stone Rd E, Guelph ON N1G 2W1, Canada; <sup>2</sup>Department of Population Medicine, Ontario Veterinary College, University of Guelph, 50 Stone Rd E, Guelph ON N1G 2W1, Canada; <sup>3</sup>Canadian Wildlife Health Cooperative, Ontario Veterinary College, University of Guelph, 50 Stone Rd E, Guelph ON N1G 2W1, Canada

\*Correspondence: [juliana.giacchi@uoguelph.ca](mailto:juliana.giacchi@uoguelph.ca)  
 \*These authors contributed equally to the work.

View by 12.1.13.234 on 04/26/21

Table 3. Mixed multivariable Poisson model with a random intercept for ward, exploring the association between environmental and sociodemographic factors and the number of submissions by ward in Hamilton and Toronto, Ontario, Canada.

Explanatory variable	Category	IRR	95% CI	P-value
City	Hamilton	Referent		
	Toronto	<b>0.19</b>	<b>0.12-0.31</b>	<b>&lt; 0.001</b>
Presence of a zoo in ward	No	Referent		
	Yes	<b>5.73</b>	<b>2.39-13.74</b>	<b>&lt; 0.001</b>
Proportion of LIM-AT households <sup>a</sup> in ward	< 20%	Referent		
	≥ 20%	<b>0.53</b>	<b>0.36-0.78</b>	<b>0.002</b>
Percent area covered by parkland in ward	< 20%	Referent		
	≥ 20%	<b>2.05</b>	<b>1.27-3.31</b>	<b>0.003</b>
Proportion owned housing in ward	< 60%	Referent		
	≥ 60%	<b>0.51</b>	<b>0.33-0.81</b>	<b>0.004</b>

Note: Significant results are indicated in bold. Random intercept for ward: variance = 0.30 (95% confidence interval [CI]: 0.15-0.58).

<sup>a</sup>After-tax low-income measure (LIM-AT), defined by Statistics Canada as the percentage of economic families or unattached individuals who spend 20% or more of their income than average citizens on food, shelter, and clothing.

# WEST NILE VIRUS

- CWHC coordinated national surveillance project for WNV in birds across Canada from 2001 until 2012
- In the early days, wild bird surveillance acted as a sentinel or early warning system

# WNV - TESTING RESULTS



OVERVIEW

TESTING RESULTS

LINKS

REPORTS

## SUMMARY BY PROVINCE 2023

Numbers correct as of November 1, 2023

Select year:

Province	Examined	Tested	Positive	Negative
British Columbia	0	0	0	0
Alberta	2	2	0	2
Saskatchewan	410	193	36	156
Manitoba	0	0	0	0
Ontario	828	148	61	87
Québec	621	92	41	48
New Brunswick	170	0	0	0
Nova Scotia	243	0	0	0
Prince Edward Island	136	0	0	0
Newfoundland and Labrador	64	0	0	0
Yukon	38	1	0	1
Northwest Territories	6	0	0	0
Nunavut	8	0	0	0
<b>TOTAL</b>	<b>2526</b>	<b>436</b>	<b>138</b>	<b>294</b>



# AVIAN INFLUENZA

### **A One Health Approach to Wild Bird Surveillance for Highly Pathogenic Avian Influenza**

- Environment and Climate Change Canada
- Canadian Wildlife Health Cooperative
- Canadian Food Inspection Agency
- Public Health Agency of Canada
- Parks Canada
- Canadian Animal Health Surveillance System
- Alberta Agriculture, Forestry, and Rural Economic Development Laboratory
- Animal Health Laboratory, Laboratory Services Division, University of Guelph
- Atlantic Veterinary College – Veterinary Laboratory and Pathology Services
- Manitoba Agriculture - Veterinary Diagnostic Services
- Ministère de l'Agriculture, des Pêcheries et de l'Alimentation du Québec - Laboratoire de santé animale
- New Brunswick Department of Agriculture, Aquaculture and Fisheries - Veterinary Laboratory and Pathology Services
- Prairie Diagnostic Services
- Government of Alberta
- Government of British Columbia
- Government of Manitoba
- Government of New Brunswick
- Government of Newfoundland and Labrador
- Government of Northwest Territories
- Government of Nova Scotia
- Government of Nunavut
- Government of Ontario
- Government of Quebec
- Government of Saskatchewan
- Government of Yukon

**HIGH PATHOGENICITY**  
By CFIA, NEIOC

**Most Recent**

Bird Group  
Collection Date  
Common Name  
Province  
Result  
Result Authorised Date  
Last update: 19 minutes ago

**Total Number of Samples Collected**  
**2,500**

Highly pathogenic  
Pending: Confirmatory testing pending  
Suspect: Sample positive for avian influenza  
pathogenicity  
Confirmed: Sample confirmed as avian influenza  
Last update: 19 minutes ago

Environment and



**Province**

- British Columbia 315
- New Brunswick 14
- Newfoundland and Labrador 186
- Nunavut 0
- Nunavut 0
- Saskatchewan 324
- Prince Edward Island 142
- Quebec 401

**Cases Over Time**

2023 Jul

**Health Canada**  
Government of Canada

# RISK AND COMMUNICATION

- CWHC and our partners play critical roles in:
  - providing the health intelligence necessary for risk assessment
  - providing a platform for communication

# SANTÉ DE LA FAUNE AU CANADA

## WILDLIFE HEALTH IN CANADA



CANADIAN  
**WILDLIFE HEALTH**  
COOPERATIVE



**RÉSEAU CANADIEN**  
POUR LA SANTÉ DE LA FAUNE