

# Summary of Rabies Testing Results in British Columbia

## 2025 Update

### Key Messages

#### In 2024:

- 12 specimens submitted to the CFIA for rabies testing following contact with humans and/or domestic animals were positive. All were bats.
- Domestic cats represented comparatively large proportions of submissions with human contact only or with human and domestic animal contact compared to other non-bat species.

#### **Between 2000 and 2024, the number of rabies-positive specimens with reported human or domestic animal contact has remained low overall.**

- Of submissions with human and/or animal contact, bats represented the majority of total submissions (85%) as well as the majority of rabies-positive animal submissions (98%).
- The annual proportion of bat submissions with human and/or domestic animal contact that tested positive for rabies ranged from 1.2% to 13.6% (median: 7.1%).

#### **Additional things to know:**

- Multiple consecutive annual increases in the number of specimen submissions with human or animal contact are apparent in years during and/or after rabies cases in humans (one in 2003 and one in 2019) and domestic animals (one cat in 2007) were reported in BC.
- All rabies cases in Canada since 1967 have resulted from exposure to bats or were acquired during travel to another country.
- Over the past five years, seasonal increases in the number of bat submissions with human or domestic animal contact increase in May, peak in July/August, and remain elevated until October.
- Cats represented a comparatively large proportion of submissions to the rabies lab in 2024 compared to other non-bat species.
- Keeping pets up to date with rabies vaccination is important both to prevent infection with rabies and also to improve risk assessment and management of pets that develop neurological signs and/or demonstrate behaviours that could be compatible with rabies.

# Background

Bats are the only known reservoir of rabies in British Columbia (BC), although importation of other infected animals and spillover from bats to other animals can also occur. Rabies poses a serious threat to human and animal health as rabies infection is nearly always fatal once clinical symptoms appear. A robust surveillance and exposure management system is essential for detection, control, and prevention of rabies. Fortunately, cases of human rabies in BC remain rare.

In Canada, rabies management is the shared responsibility of the public, veterinary and health professionals, provincial and territorial authorities, the Public Health Agency of Canada, and the Canadian Food Inspection Agency (CFIA). The CFIA provides testing for animals that have potentially exposed a person or domestic animal to rabies in BC, as well as testing of suspect human cases. This report summarizes the results of rabies testing of human and animal specimens submitted to the CFIA Rabies Laboratory from BC between 2000 and 2024, with a focus on bats with documented human and/or domestic animal contact. Bats that come in contact with humans or domestic animals are more likely to carry rabies and pose a risk of transmitting rabies to humans and animals.

## Findings

### Rabies-positive submissions

In 2024, there were 166 submissions with human and/or domestic animal contact and twelve specimens tested positive, all of which were bats.

From 2000 to 2024:

- 180 specimens with human and/or domestic animal contact submitted to CFIA for rabies testing were positive (Table 1).
- The majority (98%) of rabies-positive animal specimens with human and/or domestic animal contact were bats.

Other positive submissions with human and/or domestic animal contact include:

- Domestic cats (1 in 2007)
- Humans (1 in 2003 and 1 in 2019)
- Skunks (1 in 2004 and 1 in 2021)

**Table 1.** Annual number of rabies-positive specimens with human and/or domestic animal contact, by species, BC, 2000 – 2024.\*

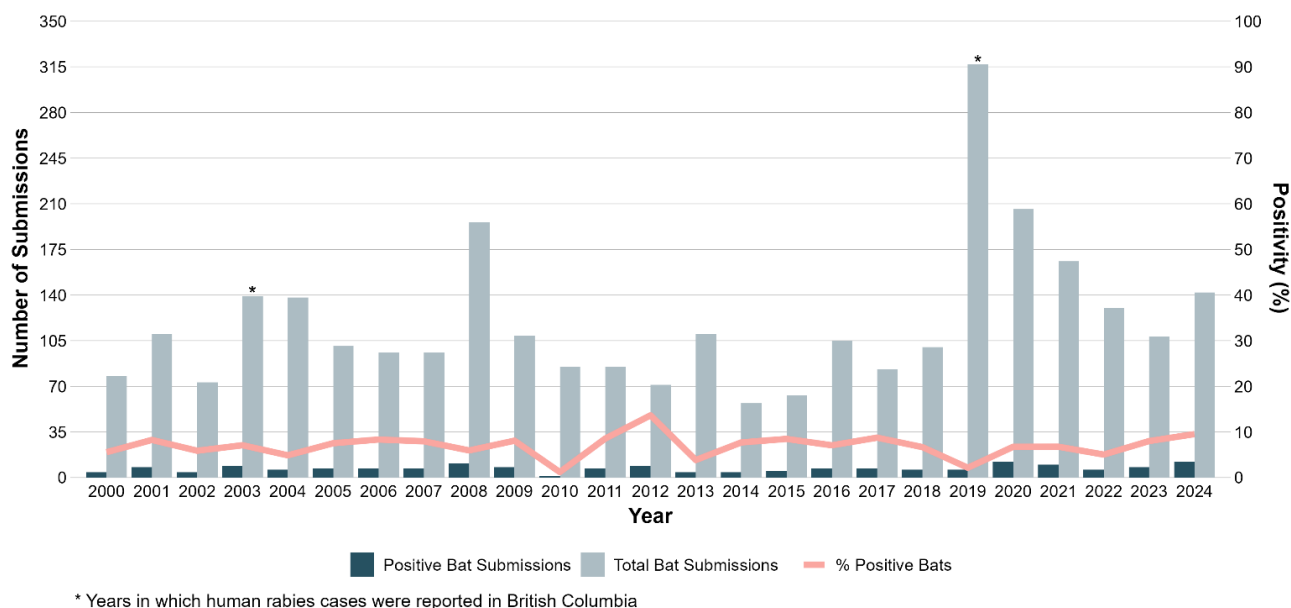
Year	Bats	Domestic Cats	Humans	Striped Skunks	Total Positive	Total Submissions
2000	4				4	164
2001	8				8	180
2002	4				4	142
2003	9		1		10	214
2004	6			1	7	220
2005	7				7	177
2006	7				7	163
2007	7	1			8	190
2008	11				11	291
2009	8				8	180
2010	1				1	133
2011	7				7	147
2012	9				9	124
2013	4				4	168
2014	4				4	81
2015	5				5	87
2016	7				7	128
2017	7				7	112
2018	6				6	120
2019	6		1		7	344
2020	12				12	235
2021	10			1	11	227
2022	6				6	163
2023	8				8	138
2024	12				12	166
Total	175	1	2	2	180	4294

\*The total number positive and submitted specimens per year are available on the [CFIA website](#).

## Total bat submissions

The annual number of submitted specimens with reported human or domestic animal contact ranged from 81 to 344 per year (median: 164 specimens). However, the proportion of these specimens testing positive for rabies has remained low, from 0.8% to 8.0% annually (median: 4.8%, Figure 1).

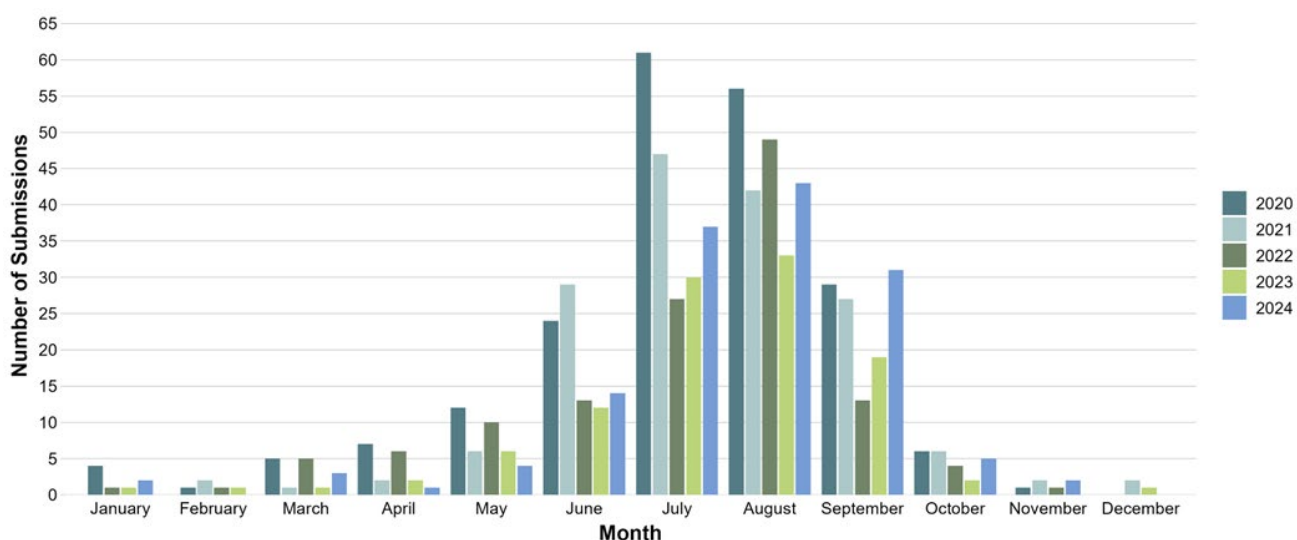
The annual proportion of bats with reported human or domestic animal contact that tested positive for rabies ranged from 1.2% to 13.6% (median: 7.1%).



**Figure 1.** Annual number of submitted and rabies-positive bats with reported human or domestic animal contact, BC, 2000 - 2024.

## Seasonality of bat submissions

Bat submissions with reported human or domestic animal contact **typically increase from May to October, peaking in July/August** (Figure 2).



**Figure 2.** Submissions of bats with reported human or domestic animal contact by month, BC, 2020-2024.

This seasonal pattern may be explained by seasonal bat migration and activity patterns, depending on the species of bat (Brigham, 2021). Humans and their animals also tend to spend more time outdoors in the warmer months which increases opportunities for bat encounters.

## Specimen submissions from 2024

150 submissions with reported human or domestic animal contact were tested by CFIA. Of these:

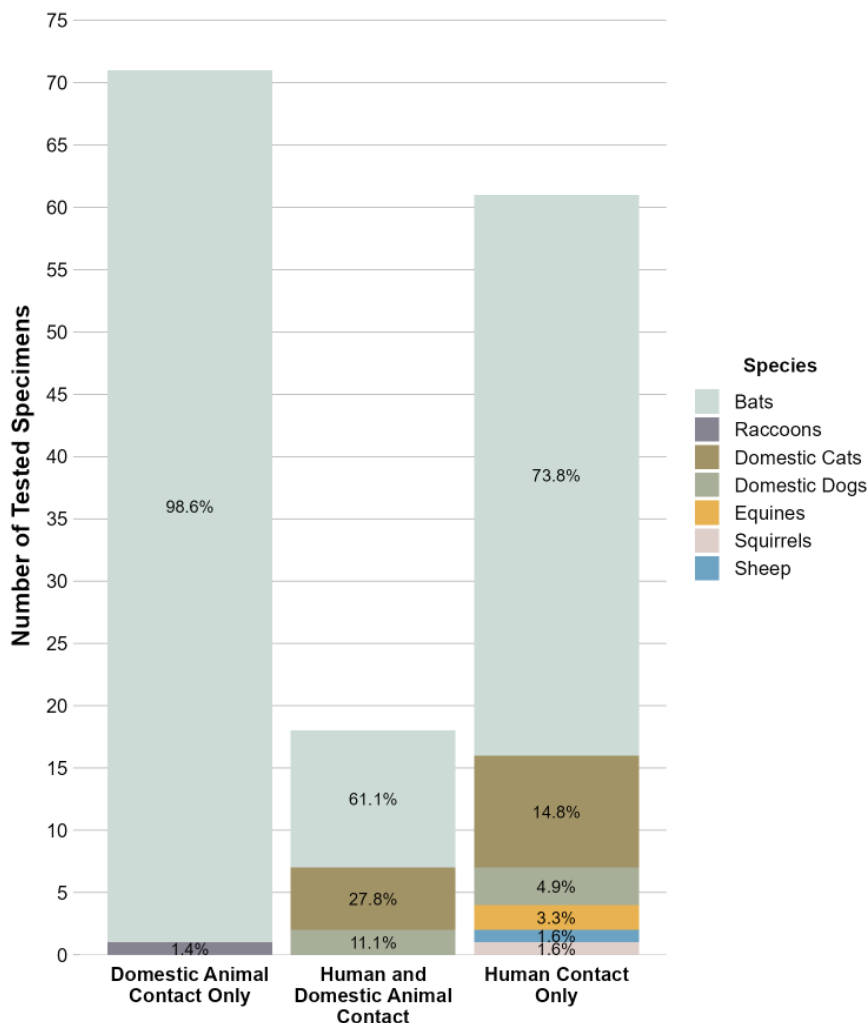
- 12 (8%) bats tested positive,
- None of the non-bat submissions tested positive,
- 71 (47%) had contact with domestic animals only,
- 61 (41%) had contact with humans only, and
- 18 (12%) had contact with both humans and domestic animals.

Across all three groups (domestic animal contact only, both human and domestic animal contact, human contact only), **the majority of tested submissions were bats.**

Of those with human contact only, companion animal submissions were also common with 14.8% for cats and 4.9% for dogs (Figure 3).

There was higher diversity of species in submissions with human contact only as compared to domestic animal contact only, with submissions from equines, squirrels, and sheep in addition to bats, cats, and dogs.

Apart from bats, there was only one other species, a single raccoon, with domestic animal contact only. Submissions with both human and domestic animal contact were from bats, cats, or dogs.



**Figure 3.** Number and proportion of tested submissions by species and contact type, BC, 2024.

## Conclusion

- The incidence of rabies in BC has remained low.
- Bats are the only known reservoir of rabies in BC.
- In prior years, bat-variant rabies virus has also been detected in skunks, domestic cats, and humans, indicating rare spillover events, but there has been no evidence of continued transmission within these species in BC.
- The human rabies cases in 2003 and 2019 were both the result of direct contact with rabid bats.
- The number of bat submissions with reported human or domestic animal contact increased in the warmer months between May and October and highlight a period of increased risk for rabies exposure.
- The apparent increase in annual number of specimen submissions involving human or animal contact in years during and/or after rabies cases in humans and domestic animals have occurred may be due to a heightened perception of risk for infection after the positive cases were reported.
- Domestic cats represented comparatively large proportions of submissions with human contact only and submissions with human and domestic contact in 2024 compared to other non-bat species. It is important to keep household pets up-to-date with rabies vaccinations to prevent them getting rabies and passing it to humans and also to support exposure risk assessment and the appropriateness of testing domestic animals for rabies.

## Additional Resources

- For more information on assessing the risk of rabies, managing exposures, and when rabies testing of cats and other animals should be considered, please refer to the [BCCDC Communicable Disease Manual](#) and the [BC Rabies Guidance for Veterinarians](#).

## Acknowledgements

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## References

- Brigham, M. (2021). *Bats of British Columbia*. E-Fauna BC: Electronic Atlas of the Fauna of British Columbia. <https://ibis.geog.ubc.ca/biodiversity/efauna/BatsofBritishColumbia.html>
- Government of Canada. (2024). *Rabies: Monitoring*. <https://www.canada.ca/en/public-health/services/diseases/rabies/surveillance.html>