



**Wildlife
Health**
AUSTRALIA



Australian bat lyssavirus: A One Health Disease

Keren Cox-Witton
Program Manager - Surveillance
Pacific Wildlife Health Network, May 2023

Photo: Duncan McCaskill/Flickr (CC)

Today

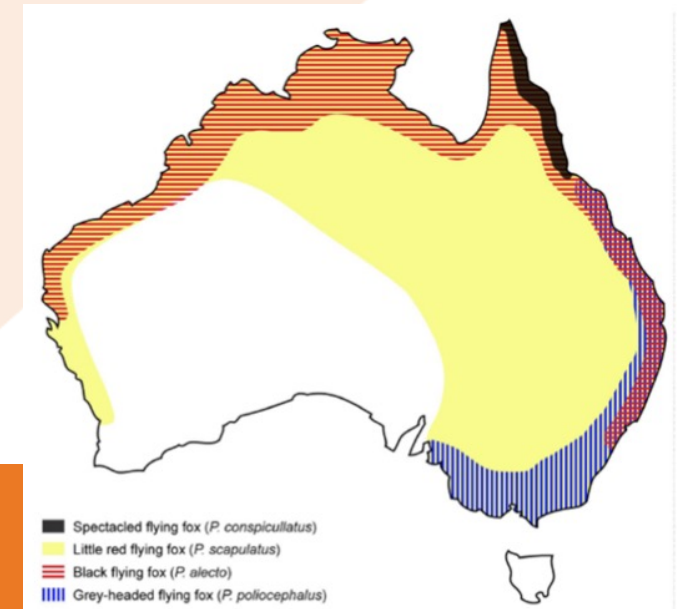
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- Australian bat lyssavirus:
 - Background
 - Bat Health Focus Group
 - National dataset
 - Management
 - Messaging

Background – Australian bat lyssavirus

- ABLV is a rhabdovirus, similar to **but distinct from** rabies virus, first recognised in 1996 (bats and human)
- All Australian bats are considered susceptible to ABLV: flying-foxes (*Pteropus*) and smaller insectivorous bats
- Infection found in all 4 mainland flying-fox species - *Pteropid-ABLV* variant and yellow-bellied sheath-tail bat (*Saccolaimus flaviventris*) - *YBST-ABLV* variant. Serological evidence in a broad range of other microbat species
- As for other lyssaviruses: Transmitted by saliva introduced via a bite or scratch, or contamination of mucous membranes or broken skin. Causes neurological signs and death. ABLV can spill over from bats into other species.



ABLV - One Health impacts

- **Conservation:** Bats are the natural reservoir hosts. Prevalence in the wild population appears to be low. Individual bats get sick and die, but no known impact on the population as a whole.
- **Humans:** Three deaths in Australia (1996, 1998, 2013) following a bat bite or scratch. Pteropid variant (2 cases), YBST variant (1 case).
- **Domestic animals:**
 - Two horses in Queensland (2013) - first known case in a domestic animal, pyrexia and progressive neurological signs, YBST variant.
 - Dog that had caught/eaten a flying-fox was antibody positive, but FAT & PCR negative.
 - All mammal species likely susceptible to infection, as for other lyssaviruses.



Photo: © Sarah Curran

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Bat Health Focus Group

- Considers bat health issues within the context of public health, domestic animal health, biosecurity and environmental impacts in Australia
- Diverse One Health membership:
 - Commonwealth and State / Territory Government – Public Health, Agriculture, Environment
 - CSIRO – Australian Centre for Disease Preparedness
 - Veterinarians, biologists, ecologists, virologists, epidemiologists
 - Australasian Bat Society
 - Bat rehabilitators
 - Australian Speleological Federation

**Collaborative One Health
approach**

Bat Health Focus Group - activities

- National Australian bat lyssavirus (ABLV) bat testing dataset & publication of 'ABLV Bat Stats'
- Guidelines & resources:
 - PPE information for bat handlers, COVID-19 & bats, white-nose syndrome preparedness, flying-fox translocation
- Input into national veterinary and public health policy
- Countering misinformation on bat health & zoonotic diseases in the public domain
- Working groups
 - Advice for organisations with volunteers and students handling bats, public health messaging, national microchip database



Photo: Alan Wynn/Flickr (CC)

National ABLV dataset

- WHA collates a national ABLV dataset in the 'eWHIS' database
- Data provided by State/Territory WHA Coordinators, Zoo, Sentinel Clinic and University programs, Public Health agency, ACDP
- Data used by public health and biosecurity agencies, veterinarians, rehabilitators

WHA eWHIS Surveillance Data

Search Surveillance Data Add Surveillance Data Tutorial Update Profile

Search Surveillance Data

Search

Record Manager: Please Choose

Record Source Type: All

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Event ID: [Text Input]

Start Date (DD/MM/YYYY): From [Date Picker] To [Date Picker]

Species: Select from [list of species](#) (opens in new window)

Location (Name, Description & Suburb/Town): [Text Input]

Contains all of these words Contains any of these words

State/Territory: Please Choose

Australian Bat Lyssavirus: Analysis of National Bat Surveillance Data from 2010 to 2016

by Rachel Iglesias ^{1,*} Keren Cox-Witton ² Hume Field ^{3,4}
 Lee F. Skerratt ⁵ and Janine Barrett ⁶

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Iglesias, R., Cox-Witton, K., Field, H., Skerratt, L. F., & Barrett, J. (2021). Australian bat lyssavirus: Analysis of national bat surveillance data from 2010 to 2016. *Viruses*, *13*(2), 189.

ABLV BAT STATS

Australian Bat Lyssavirus Report - December 2022

Cases of ABLV infection - January to December 2022

There were 12 cases of Australian bat lyssavirus (ABLV) infection reported in bats in Australia between January and December 2022. This includes 8 from Queensland and one each from the Northern Territory, New South Wales, South Australia and Victoria (Table 1).

Queensland

Five flying-foxes and one yellow-bellied sheath-tail bat were found positive for ABLV in the first half of 2022, the details of which are available in *ABLV Bat Stats June 2022*. In the second half of the year, two further flying-foxes were found to have ABLV. A grey-headed flying-fox (GHFF) presented with neurological symptoms including self-trauma and seizures. A black flying-fox was observed on the ground and climbing a low tree. It presented with dehydration, weakness and difficulty swallowing. The next day it became hypothermic and non-responsive, with flaccid paralysis.

Northern Territory

A little red flying-fox (LRFF) was collected by a wildlife carer after a member of public found it hanging in the backyard. The carer noted the bat was lying on its back, making unusual lip-smacking motions and tongue movements. The LRFF died overnight, and tested positive for ABLV. There was possible contact with a pet dog, and advice was given accordingly. ABLV detections are unusual in the NT. There was one case in 2021, which was the first since 2016 (Table 1).

New South Wales

A GHFF was found to be positive for ABLV in August. The bat was found in the grounds of a school and collected by a wildlife carer.



Black flying-fox
Photo: Duncan McCaskill Flickr (CC)

Table 1: ABLV infection in Australian bats^A

YEAR	NSW	NT	QLD	VIC	WA	SA	Total
1995	0	0	1*	0	0	0	1
1996	1	0	9	1	0	0	11
1997	7	1	27*	0	0	0	35
1998	1	0	26*	0	0	0	27
1999	0	0	6	0	0	0	6
2000	1	0	14	0	0	0	15
2001	0	0	9	1	4	0	14
2002	4	0	10	2	1	0	17
2003	5	0	3	2	0	0	10
2004	5	0	6	1	0	0	12
2005	6	0	5	0	0	0	11
2006	2	0	4	0	0	0	6
2007	6	0	2	0	0	0	8
2008	0	0	0	0	0	0	0
2009	2	0	8	0	0	0	10
2010	0	0	8	0	1	0	9
2011	0	0	4	2	0	0	6
2012	1	0	3	0	0	1	5
2013	3	0	11	0	0	0	14
2014	5	1	14	1	11	0	32
2015	10	1	11	0	0	0	22
2016	5	1	8	1	0	0	15
2017	4	0	19	3	2	0	28
2018	5	0	5	1	0	0	11
2019	6	0	1	0	0	0	7
2020	5	0	9	4	0	0	18
2021	10	1	17	5	0	2	35
2022	1	1	8	1	0	1	12
Total	95	6	248	25	19	4	397

^A Infection confirmed by FAT, PCR, IHC and/or virus isolation. ACT and TAS have not recorded any cases of ABLV infection that satisfy this case definition.
^B A BFF from QLD was diagnosed retrospectively in 1996, when ABLV was first recognised.
^C Higher numbers of ABLV infected bats were associated with peak years of testing in 1997-1998.

South Australia

One GHFF was found to be infected with ABLV in May as reported in *ABLV Bat Stats June 2022*. There were no further ABLV infections in SA in 2022.

Victoria

One GHFF tested positive for ABLV in March as reported in *ABLV Bat Stats June 2022*. There were no further cases reported in 2022.

Human contact

Potentially infectious contact with humans was reported for one of the ABLV infected flying-foxes. Clinical advice was provided by an experienced public health official.



Grey-headed flying fox
Photo: Leo Flickr (CC)

Why are bats submitted for ABLV testing?

Bats are submitted for ABLV testing for a variety of reasons. A common reason is contact between the bat and a person with the potential for ABLV transmission (e.g. a bite or scratch). Bats are also regularly submitted following contact with a pet dog or cat (Figure 1). Bats displaying unusual or aggressive behaviour or other neurological signs may be tested; these signs can occur with ABLV infection but can also be due to a number of other diseases. Bats that show other clinical signs e.g. respiratory signs, bats that die or are euthanased due to trauma, and bats that are found dead may also be submitted for testing.

Figure 1: ABLV tested bats – Contact with people and pets

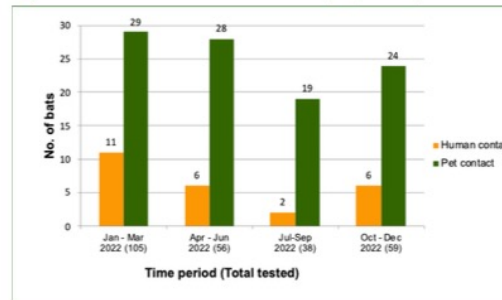


Figure 1 presents reported human-bat contacts which, based on Young & McCall 2010,¹ is an underestimate of the true contact frequency. Not all bat contact is reported, and for the majority of reports the bat is not available for testing.

If bats had both human and pet contact, they are only reported as human contact in the figure.

ABLV prevalence in bats and public health significance

There are no recent surveys on the prevalence of ABLV infection in wild bats. Surveys of wild-caught bats in the early 2000s indicated an ABLV prevalence in the wild bat population of less than 1%.² ABLV infection is more common in sick, injured and orphaned bats, especially those with neurological signs.³ People are more likely to have contact with bats that are unwell or debilitated, as these bats may be found on or near the ground.⁴



Chocolate wattled bat
Photo: Lindy Lumsden

ABLV infection causes a range of clinical signs in bats, which can include abnormal behaviour such as uncharacteristic aggression, paralysis or paresis, and seizures. The behavioural changes may increase the likelihood of a person or pet being bitten or scratched when coming in contact with the bat. The likelihood of a person developing ABLV disease from contact with a bat is influenced by a number of factors including whether the bat was ABLV-infected, the type of contact e.g. bite or scratch, the vaccination status of the person, and whether the person sought medical attention.

ABLV prevalence in bats submitted for testing

Some of the bats that come into contact with people or pets are tested for ABLV. The percentage of ABLV infection in bats submitted for testing is of interest as an indicator of public exposure, however it is also heavily influenced by factors affecting which bats are submitted for testing.

A total of 258 bats were tested for ABLV in Australia between January and December 2022 (Table 2). This is comparatively low compared to previous years and is the lowest number of bats tested since 2012. There were 12 cases of ABLV infection reported in bats (4.7% of the bats submitted for testing) (Table 3). There were 11 cases in flying-foxes (5.8% of flying-foxes tested), and one in a microbat. As described above, testing of unwell bats is not representative of the whole bat population; consequently these results over-estimate the level of ABLV infection in the wider bat population.

The 'flying-fox paralysis syndrome' event that has occurred over the last two summers in northern NSW and southeast QLD extended further into the colder months this year (WHA website; AHSQ 2021).⁵

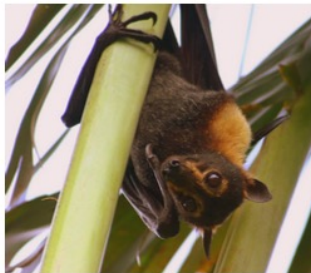
Table 2: ABLV testing by bat species (Jan - Dec 2022)

Species	No. tested	No. ABLV infected
Flying-foxes		
<i>Pteropus alecto</i> /Black flying-fox	91	5
<i>Pteropus poliocephalus</i> /Grey-headed flying-fox	82	4
<i>Pteropus scapulatus</i> /Little red flying-fox	12	2
<i>Pteropus conspicillatus</i> /Spectacled flying-fox	3	0
<i>Pteropus</i> spp.	2	0
Insectivorous microbats		
<i>Chalinolobus gouldii</i> /Gould's wattled Bat	10	0
<i>Nyctophilus geoffroyi</i> /Lesser long-eared Bat	12	0
<i>Vespadelus vulturnus</i> /Little forest bat	7	0
<i>Nyctophilus gouldi</i> /Gould's long-eared bat	4	0
<i>Molossidae</i> spp.	2	0
<i>Myotis macropus</i> /Large-footed bat	2	0
<i>Nyctophilus arnhemensis</i> /Arnhem long-eared bat	2	0
<i>Scotorepens</i> spp.	2	0
<i>Vespertilionidae</i> spp.	2	0
<i>Chalinolobus morio</i> /Chocolate wattled bat	1	0
<i>Chalinolobus</i> spp.	1	0
<i>Emballonuridae</i> /Sheath-tail bats	1	0
<i>Falsistrellus tasmaniensis</i> /Eastern false pipistrelle	1	0
<i>Miniopterus australis</i> /Little bent-wing bat	1	0
<i>Nyctophilus bifax</i> /Eastern long-eared bat	1	0
<i>Saccolaimus flaviventris</i> /Yellow-bellied sheath-tail bat	1	1
<i>Scotorepens orion</i> /South-eastern broad-nosed bat	1	0
Microbat; species not specified	17	0
TOTAL	258	12



Little forest bat
Photo: GB Baker © Australian Museum

*ABLV Bat Stats is published twice a year. The June issue presents data from the 6 month period of January to June. The December issue presents 12 months of data for the calendar year. Some data from this and previous periods has not been reported due to resourcing issues with data submission.



Spectacled flying fox
Photo: Shek Graham/ Flickr (CC)

Table 3: ABLV infection (%) in bats submitted for testing (Jan - Dec 2022)

	No. tested	No. infected	% infected*
Flying-foxes	190	11	5.8%
Microbats	68	1	1.5%
TOTAL	258	8	4.7%

* This figure represents the percentage of ABLV infection in the bats tested. The level of ABLV infection in the wider bat population is estimated to be significantly lower.

Bat facts

- ❖ **ABLV is a virus** that infects Australian flying-foxes and insectivorous bats.
- ❖ **ABLV is closely related to**, but distinct from rabies virus.
- ❖ **ABLV can infect people and other mammals with a fatal outcome.** ABLV infection has led to the deaths of three people, two horses and many bats in Australia.
- ❖ **Community members should not handle bats.** If you find an injured or sick bat, contact a wildlife care organisation or your local veterinarian.
- ❖ People trained in the care of bats **should be vaccinated and always use appropriate protection** when interacting with bats.
- ❖ **ABLV is transmitted** by the saliva of an infected animal introduced via a bite or scratch, or by contamination of mucous membranes or broken skin. In the event of a bat bite, scratch or other significant contact, **seek medical attention URGENTLY.** Bite or scratch wounds should immediately be washed thoroughly with soap and copious water for approximately 15 minutes and a virucidal antiseptic applied.* Bat saliva in the eyes or mouth should be rinsed out immediately and thoroughly with water.
- ❖ **For more information** contact your local Public Health agency for advice.
- ❖ **ABLV can also be transmitted to other mammals.** Prevent pets and other animals from coming into contact with bats. If an animal might have been bitten or scratched by a bat, **seek urgent veterinary advice.**
- ❖ ABLV is a nationally notifiable disease in Australia. **If you suspect a bat is infected with ABLV** contact your department of agriculture or primary industries, or call the Emergency Animal Disease Watch Hotline on 1800 675 888.
- ❖ **Where to find more information:** See page 5 & 6.

* Department of Health. Rabies Virus and Other Lyssavirus (including Australian Bat Lyssavirus) Exposures and Infections. CDNA National Guidelines for Public Health Units. Canberra. 2022. Available from <https://www.health.gov.au/resources/publications/rabies-and-other-lyssavirus-cdna-national-guidelines-for-public-health-units>

Clinical signs of ABLV

An ABLV infected bat may display any of these clinical signs:

- Abnormal behaviour such as excitation / agitation / aggression
- Paralysis or paresis
- Unprovoked attacks
- Unusual vocalisation
- Inability to fly
- Convulsions / seizures / tremors

Apparently healthy bats with normal behaviours may still be infected with ABLV

DO NOT ATTEMPT TO HANDLE an injured, unwell or aggressive bat.

REPORT it to your local wildlife service, vet or bat carer group



Eastern false pipistrelle
Photo: Michael Pennay/ Flickr (CC)

Recent news and publications

Lyssavirus alert after dead bat found in Brisbane's south

4/08/2022 *The Courier Mail* (subscribers only): "The state health department is warning people across the southeast not to touch dead or distressed bats after a dead bat was found on Brisbane's southside this week and following a number of reported injuries..."

Warning of bat lyssavirus [SE Qld]

8/09/2022 *South Burnett*: "Residents are being urged not to 'wing it' when it comes to sick or injured bats, after a confirmed case of Australian Bat Lyssavirus (ABLV) at Kingsthorpe. The injured animal was found in a backyard in August, with the residents alerting appropriate authorities. Darling Downs Health Director of Public Health Dr Liam Flynn commended the members of the community for following all the right steps. "They didn't touch or handle the bat in any way which is really important, and means that no one was exposed," Dr Flynn said. "A trained bat handler visited the property, collected the animal, and transported it to RSPCA..."

Hunter New England Health warns Tamworth residents to stay away from flying foxes amid lyssavirus incidents

13/11/2022 *The Northern Daily Leader* (subscribers only): "Health authorities have warned Tamworth residents about a potentially deadly disease after three recent reports of bat exposures in the district..."



Common sheath-tail bat
Photo: Hans & Judy Beste © Australian Museum

Are you interested in bat health?



Wildlife Health Australia collates recent media articles and publications relating to bat health into a monthly 'Bat News' email. If you would like to receive the monthly email, please contact WHA: admin@wildlifehealthaustralia.com.au

Little red flying-foxes
Photo: Paslie Hadley/ Flickr (CC)

Wildlife Health Australia (WHA)

www.wildlifehealthaustralia.com.au

- Wildlife disease fact sheets, including *Australian Bat Lyssavirus* and *Zoonoses in Australian Bats*
- Links: Useful links to wildlife and animal health organisations and agencies in Australia and overseas

State/Territory departments of agriculture, health and environment

See WHA Resources for links to agency websites:

- Queensland >>
- New South Wales & ACT >>
- Victoria >>
- South Australia, Western Australia & Northern Territory >>

Commonwealth Department of Health and Aged Care

- For current information for medical professionals, see the Series of National Guidelines on Rabies & ABLV: <https://www.health.gov.au/resources/publications/rabies-and-other-lyssavirus-cdna-national-guidelines-for-public-health-units>
- For vaccination information contact your local or regional Public Health Unit, or see the immunisation handbook: <https://immunisationhandbook.health.gov.au/contents/vaccine-preventable-diseases/rabies-and-other-lyssaviruses>

AUSVETPLAN

For current policy on surveillance and management see AUSVETPLAN - Lyssaviruses:

https://animalhealthaustralia.com.au/wp-content/uploads/dim_uploads/2021/05/AUSVETPLAN-ResponseStrategy_Lyssaviruses-1.pdf

ABLV BAT STATS



WHA Bat Health Focus Group

This document has been approved by the Wildlife Health Australia (WHA) Bat Health Focus Group. Using a collaborative One Health approach, the Bat Health Focus Group considers bat health issues in relation to the broader context of biosecurity, public health, livestock health and environmental impacts in Australia. Members come from organisations including Australian and State Government departments of agriculture, public health and environment; CSIRO Australian Centre for Disease Preparedness, universities, the Australasian Bat Society and the Australian Speleological Federation. Members include veterinarians, biologists, ecologists, virologists, epidemiologists and wildlife/bat carers.

Information sources

This report presents the latest information on ABLV testing across Australia. Information has been made available by CSIRO Australian Centre for Disease Preparedness, Janine Barrett PhD thesis 2004 (with permission), QLD Health, zoo & wildlife veterinarians, universities, Wildlife Health Australia members, and State/Territory WHA Coordinators (representatives of Chief Veterinary Officers), and is collated by Wildlife Health Australia. More detailed information is available in the electronic Wildlife Health Information System (eWHIS).

References

- ¹ Young MK & McCall BJ (2010). Potential exposure to Australian bat lyssavirus in South East Queensland: What has changed in 12 years? *Comm Dis Intell*, 34(3), 334-8 www1.health.gov.au/internet/main/publishing.nsf/Content/cda-cdi34031.htm
- ² Field HE (2005). The Ecology of Hendra virus and Australian bat lyssavirus. PhD thesis, The University of Queensland <https://espace.library.uq.edu.au/view/UQ:13859>
- ³ Barrett J (2004). Australian Bat Lyssavirus. PhD thesis, The University of Queensland <https://espace.library.uq.edu.au/view/UQ:3486>
- ⁴ McCall B, Field HE, Smith GA, Storie GJ, Harrower BJ (2005). Defining the risk of human exposure to Australian bat lyssavirus through potential non-bat animal infection. *Comm Dis Intell*, 29(2), 200-203 www1.health.gov.au/internet/main/publishing.nsf/Content/cda-cdi2902k.htm
- ⁵ Cox-Wilton K, Gordon A (2021). Paralysis event in flying foxes in Queensland and New South Wales. *Animal Health Surveillance Quarterly*, 26(1), 25-26 www.scicquest.org.nz/browse/publications/article/165929

State/Territory WHA Coordinators

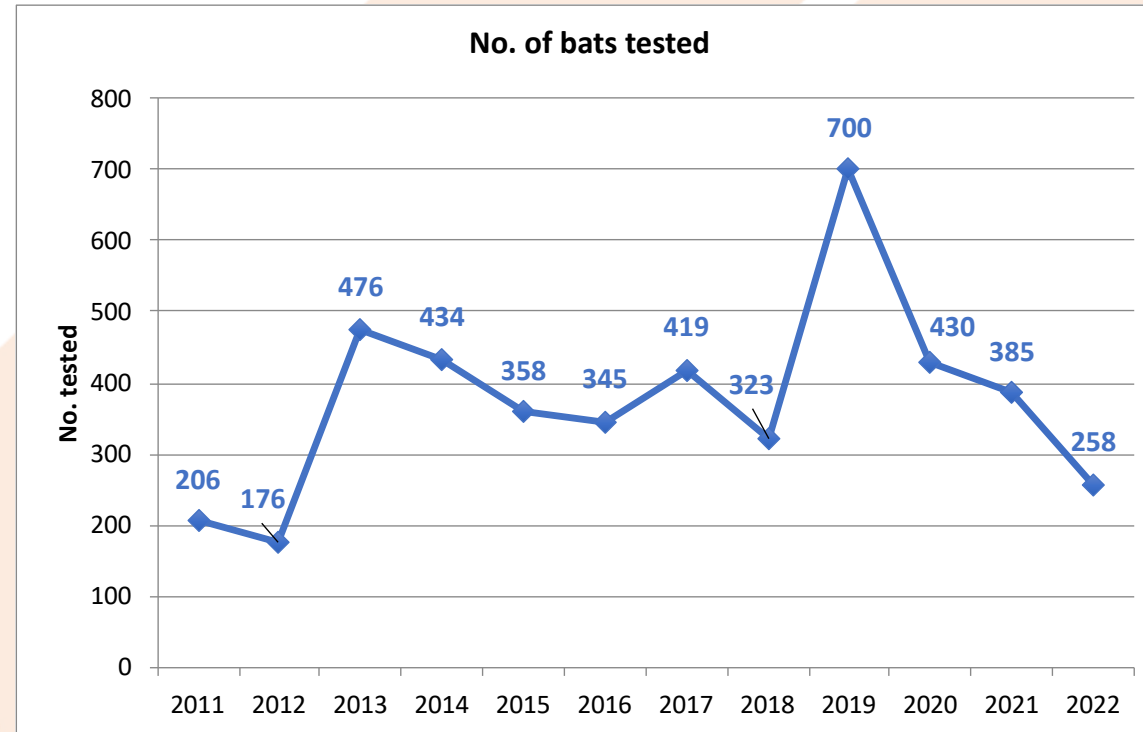
Contact your state/territory department of primary industries/agriculture or WHA Coordinator for more information on ABLV testing, or to report a suspected ABLV infected bat.

STATE	CONTACT	PHONE	EMAIL
ACT	Kyeelee Driver	(02) 6207 2357	kyeelee.driver@act.gov.au
NSW	Cecily Moore	0437 405 202	cecily.moore@dpi.nsw.gov.au
NT	Cathy Shilton	(08) 8999 2122	cathy.shilton@nt.gov.au
QLD	Anita Gordon Stephanie Grimmatt	(07) 3708 8762	bsiwildlife@daf.qld.gov.au
SA	Allison Crawley	(08) 8429 0866	allison.crawley@sa.gov.au
TAS	Annie Philips	0400 954 295	annie.philips@dpiwve.tas.gov.au
VIC	Mark Hawes	(03) 9032 7275	mark.hawes@agriculture.vic.gov.au
WA	Siva Thayaparan	0468 462 223	sivapiragasam.thayaparan@dpird.wa.gov.au

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ABLV testing in bats



> 4,000 bats tested in 10 yrs from 2013 to 2022

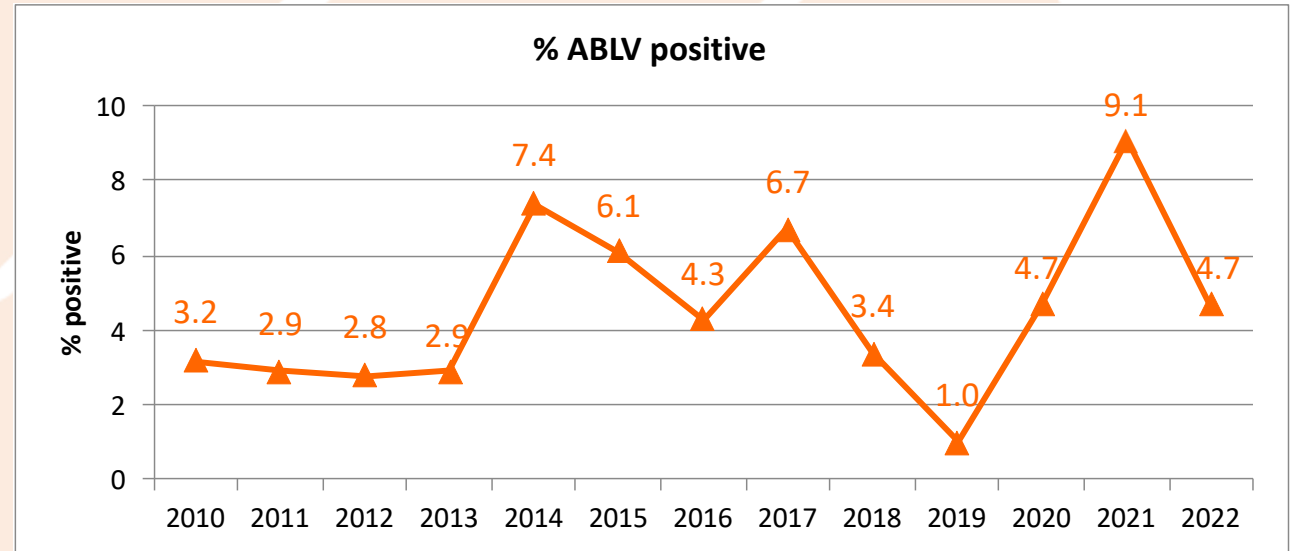
- Human contact (bite, scratch, etc)
- Pet contact
- Unusual behaviour, neurological signs
- Found dead, trauma, other clinical signs

Increased submission of bats for testing:

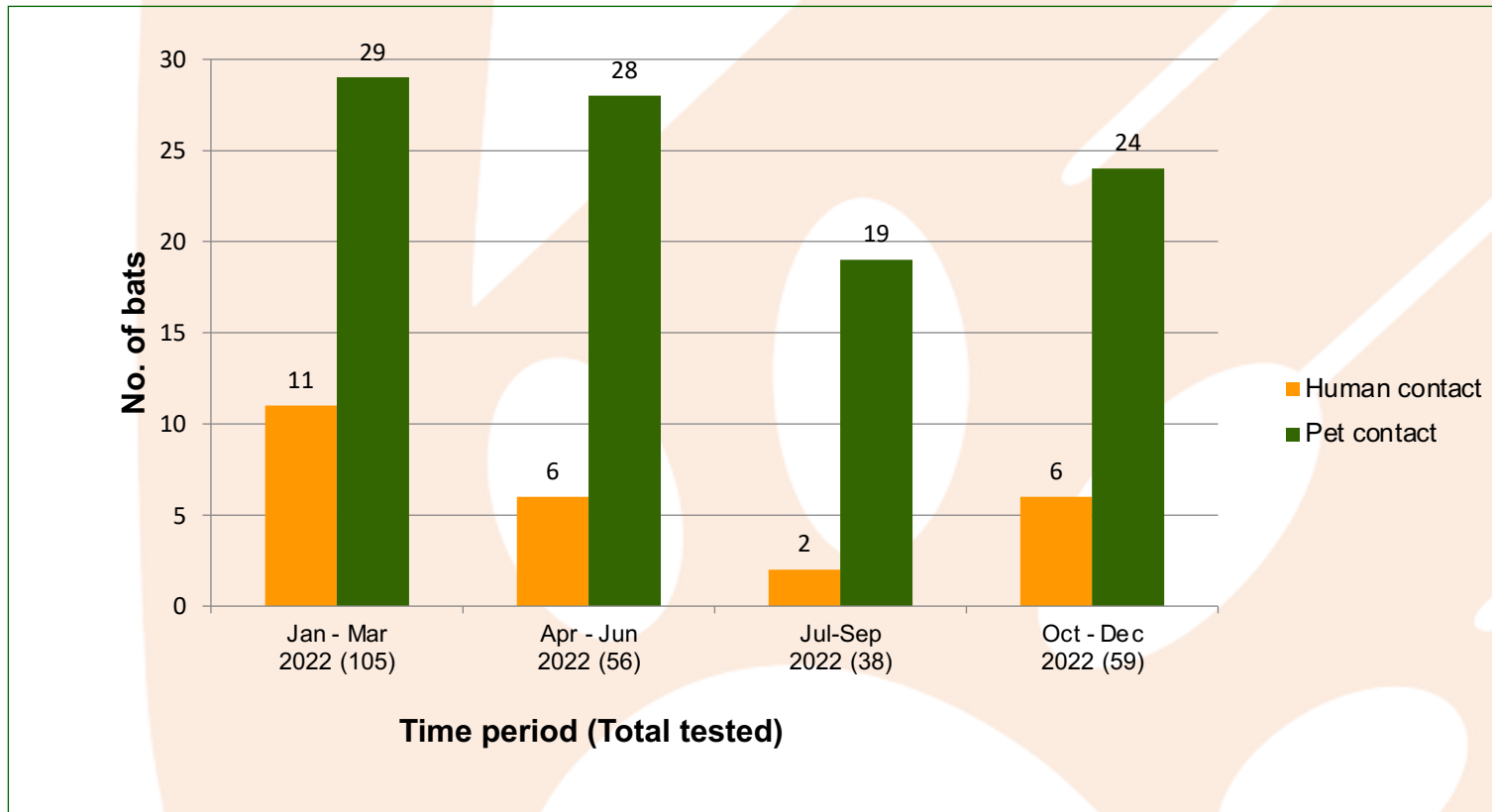
- *Human factors* e.g. 2013 media coverage of human case & horse cases of ABLV infection
- *Bat factors* e.g. mortality/morbidity events, 2019 heat stress, starvation events, bushfires

Bats & ABLV - prevalence

- Prevalence low in wild bats (<1%).
- Prevalence in bats submitted for testing is not representative of the wider bat population.
- Higher prevalence in sick and injured bats, especially with neurological signs. These are the bats that come in contact with people.
- Variation in prevalence: real effect (e.g. ABLV clusters) OR change in why bats are submitted e.g. 2019 – high number of bats submitted, low % positive



ABLV tested bats – contact with people & pets



Data under-represents actual contacts:

- Human/pet contact not always reported
- Only where bat available for testing (minority of cases)

Management of ABLV events

- AUSVETPLAN manual: national policy on surveillance and management for lyssaviruses including ABLV
- State/territory government biosecurity agency responsible for management of ABLV in animals
- Human contact: Biosecurity (bat testing), Health (human follow-up e.g. PEP)
- Pet contact: Biosecurity (bat testing, advice), local veterinarian (e.g. post-exposure rabies vaccination)



Photo: Paislie Hadley/Flickr (CC)

Messaging - protection from ABLV

- Members of the public should not handle bats
- Always use appropriate PPE when handling bats
- Maintain current rabies immunity – vaccination & titre checks
- First aid and medical attention for a bite, scratch or other significant contact

Bat facts

- ❖ **ABLV is a virus** that infects Australian flying-foxes and insectivorous bats.
- ❖ **ABLV is closely related to**, but distinct from rabies virus.
- ❖ **ABLV can infect people and other mammals with a fatal outcome.** ABLV infection has led to the deaths of three people, two horses and many bats in Australia.
- ❖ **Community members should not handle bats.** If you find an injured or sick bat, contact a wildlife care organisation or your local veterinarian.
- ❖ People trained in the care of bats **should be vaccinated and always use appropriate protection** when interacting with bats.
- ❖ **ABLV is transmitted** by the saliva of an infected animal introduced via a bite or scratch, or by contamination of mucous membranes or broken skin. In the event of a bat bite, scratch or other significant contact, **seek medical attention URGENTLY.** **Bite or scratch wounds** should immediately be washed thoroughly with soap and copious water for approximately 15 minutes and a virucidal antiseptic applied.* Bat saliva in the eyes or mouth should be rinsed out immediately and thoroughly with water.
- ❖ **For more information** contact your local Public Health agency for advice.
- ❖ **ABLV can also be transmitted to other mammals.** Prevent pets and other animals from coming into contact with bats. If an animal might have been bitten or scratched by a bat, **seek urgent veterinary advice.**
- ❖ ABLV is a nationally notifiable disease in Australia. **If you suspect a bat is infected with ABLV** contact your department of agriculture or primary industries, or call the Emergency Animal Disease Watch Hotline on 1800 675 888.



PERSONAL PROTECTIVE EQUIPMENT (PPE) INFORMATION FOR BAT HANDLERS

This document provides information on personal protective equipment (PPE) aimed at preventing the transmission of ABLV and other bat-borne pathogens through bat bites and scratches, or via contact with infected urine, faeces, saliva or aerosols. It is intended to provide information for vaccinated bat rehabilitators, researchers, ecologists, veterinarians and associated workers. Use of appropriate PPE will also help prevent disease transmission from the person to the bat. For more information on biosecurity measures for working with Australian wildlife, see the [National Wildlife Biosecurity Guidelines](#).

Only people who are [appropriately vaccinated](#) and [maintain ongoing immunity](#) should handle bats. If you are unvaccinated and find an injured or sick bat, do not handle the bat and contact a wildlife care organisation or your local veterinarian.

Bat-borne zoonotic pathogens circulate in Australian bat populations, meaning there is always some risk of transmission from bats to people. Risk is best minimised via a combination of appropriate PPE and manual handling techniques. PPE that allows for a good feel of the bat and its body parts is essential for reducing handling stress, getting the job done well and quickly and staying in control of the bat with a minimum of force. These factors combine to keep the bat calm and so help to avoid bites and scratches.

Summary

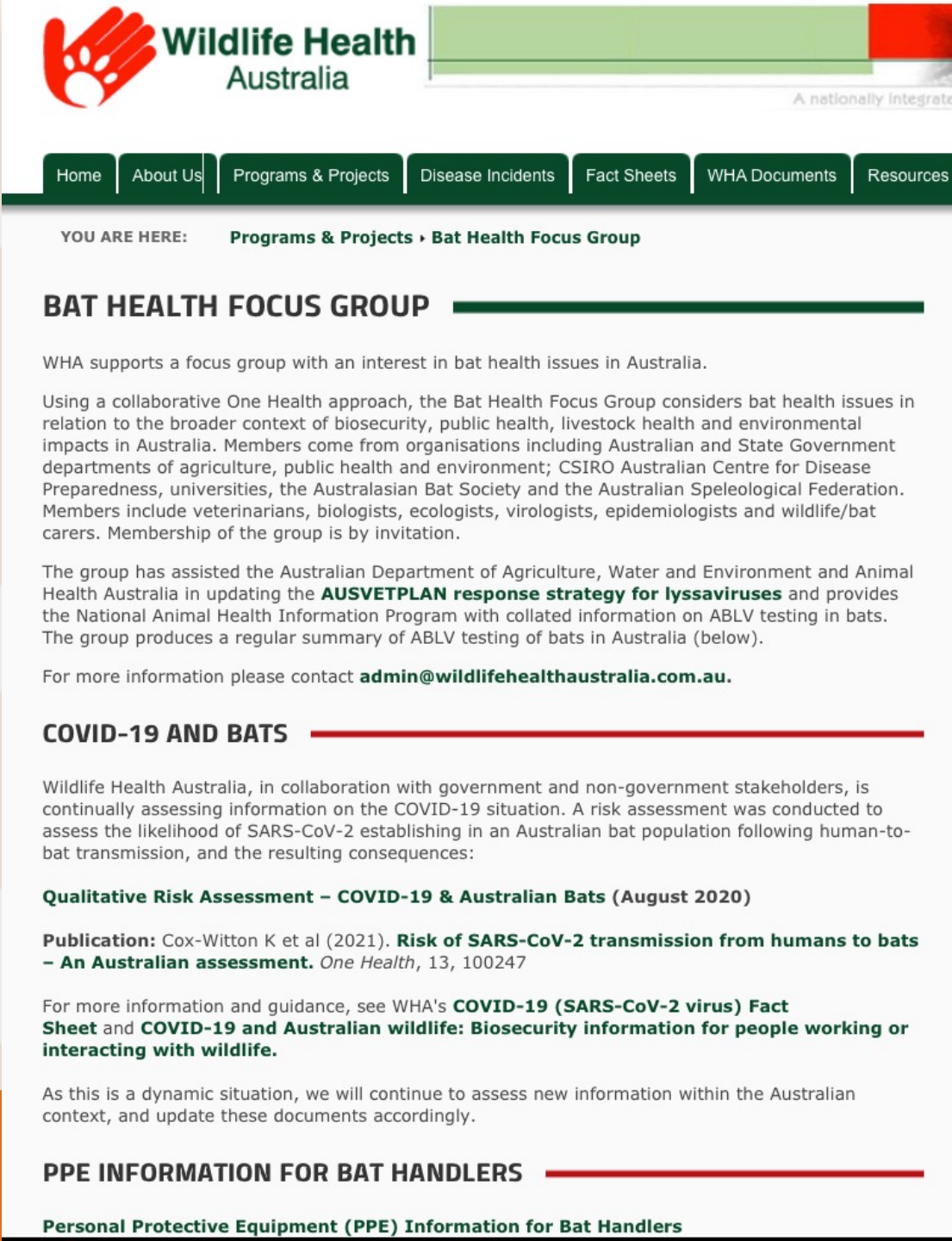
- ABLV is a true **'One Health'** disease.
- Bats are the natural reservoir hosts. ABLV can **spill over** from bats into other species – human & horse cases.
- **Prevalence** in submitted bats: 1.0 to 9.1%. Much lower in healthy wild populations (<1%).
- How can **surveillance** help?
 - Identify risk factors
 - Inform development of policy e.g. management of in-contact animals
 - Inform public health activities – help prevent human cases e.g. seasonal media releases



Photo: Paislie Hadley/Flickr (CC)

More information

- Wildlife Health Australia website - Bat Health Focus Group page: www.wildlifehealthaustralia.com.au
 - ABLV Bat Stats
 - PPE Information for Bat Handlers
 - COVID-19 & Bats
 - White-nose syndrome



The screenshot shows the Wildlife Health Australia website. At the top left is the logo, a red hand with a paw print, next to the text "Wildlife Health Australia". To the right of the logo is a green and red horizontal bar with the text "A nationally integrated" below it. Below the logo is a dark green navigation menu with white text for "Home", "About Us", "Programs & Projects", "Disease Incidents", "Fact Sheets", "WHA Documents", and "Resources". Below the navigation menu is a breadcrumb trail: "YOU ARE HERE: Programs & Projects > Bat Health Focus Group". The main content area has a dark green header for "BAT HEALTH FOCUS GROUP" followed by a horizontal line. The text below states: "WHA supports a focus group with an interest in bat health issues in Australia. Using a collaborative One Health approach, the Bat Health Focus Group considers bat health issues in relation to the broader context of biosecurity, public health, livestock health and environmental impacts in Australia. Members come from organisations including Australian and State Government departments of agriculture, public health and environment; CSIRO Australian Centre for Disease Preparedness, universities, the Australasian Bat Society and the Australian Speleological Federation. Members include veterinarians, biologists, ecologists, virologists, epidemiologists and wildlife/bat carers. Membership of the group is by invitation. The group has assisted the Australian Department of Agriculture, Water and Environment and Animal Health Australia in updating the **AUSVETPLAN response strategy for lyssaviruses** and provides the National Animal Health Information Program with collated information on ABLV testing in bats. The group produces a regular summary of ABLV testing of bats in Australia (below). For more information please contact admin@wildlifehealthaustralia.com.au." Below this is a red header for "COVID-19 AND BATS" followed by a horizontal line. The text states: "Wildlife Health Australia, in collaboration with government and non-government stakeholders, is continually assessing information on the COVID-19 situation. A risk assessment was conducted to assess the likelihood of SARS-CoV-2 establishing in an Australian bat population following human-to-bat transmission, and the resulting consequences: **Qualitative Risk Assessment – COVID-19 & Australian Bats (August 2020)** **Publication:** Cox-Witton K et al (2021). **Risk of SARS-CoV-2 transmission from humans to bats – An Australian assessment.** *One Health*, 13, 100247 For more information and guidance, see WHA's **COVID-19 (SARS-CoV-2 virus) Fact Sheet** and **COVID-19 and Australian wildlife: Biosecurity information for people working or interacting with wildlife.** As this is a dynamic situation, we will continue to assess new information within the Australian context, and update these documents accordingly." Below this is a red header for "PPE INFORMATION FOR BAT HANDLERS" followed by a horizontal line. At the bottom is the text: **Personal Protective Equipment (PPE) Information for Bat Handlers**

Interested in bat health?

WHA Bat News

A monthly collation of recent media articles and publications

admin@wildlifehealthaustralia.com.au

WILDLIFE HEALTH AUSTRALIA

Bat News – April 2023

A collation of the latest news articles and publications relating to bat health

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Australian bat lyssavirus

- [Lyssavirus warning after sick bat found on Gold Coast](#)
- [Battle to bust common myth after reports bat 'attacked' wedding guests](#)

COVID-19, coronaviruses & bats

- [COVID-19 / SARS-CoV-2 and Bat Group Activities \[UK\]](#)
- [Human disturbance increases coronavirus prevalence in bats](#)
- [EcoHealth Alliance receives NIH grant for collaborative research to disrupt bat coronavirus spillover and spread in Myanmar, Laos, and Vietnam](#)
- [Severe acute respiratory syndrome coronavirus-2 detection in domestic animals as a reservoir for the virus transmission to humans in Yogyakarta, Indonesia](#)

White-nose syndrome

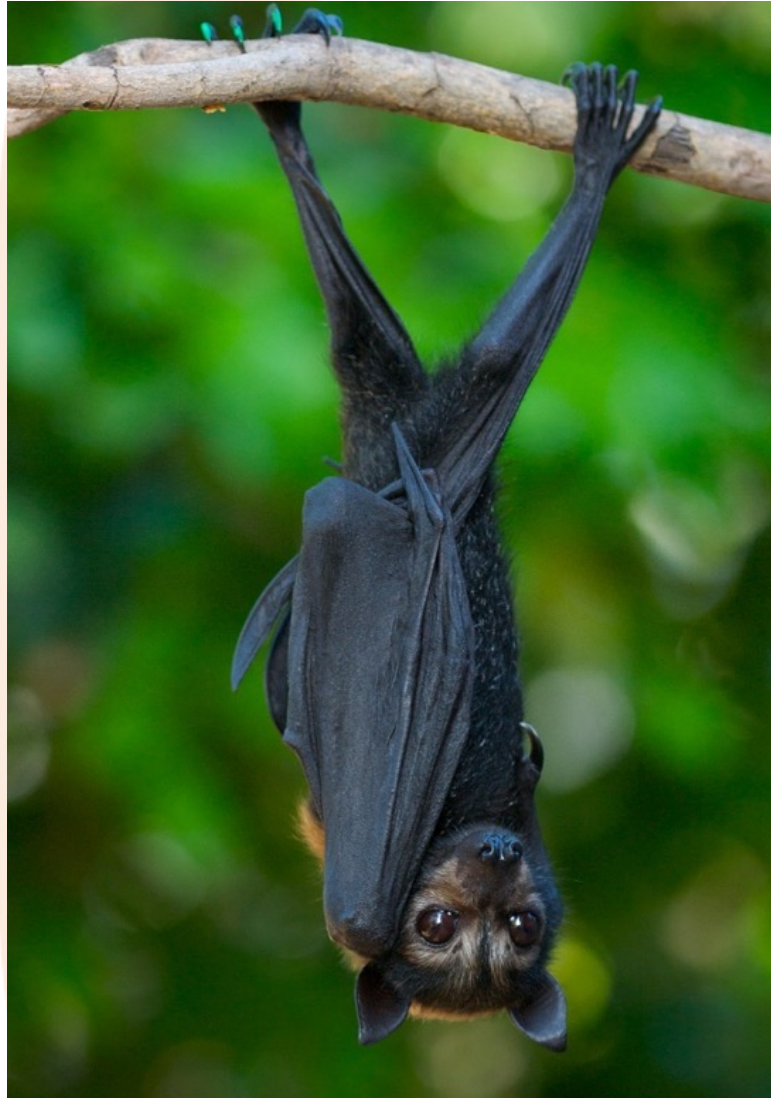
- [Bat fungus that causes white nose syndrome detected in British Columbia](#)
- [State of the Bats - North America - 2023](#)

Other news

- [International Bat Appreciation Day – 17th April](#)
- [People might have to face microbats entering their houses](#)

Publications

- [Fatal human rabies infection with suspected host-mediated failure of post-exposure prophylaxis following a recognized zoonotic exposure—Minnesota](#)
- [Transmission dynamics of lyssavirus in *Myotis myotis*: mechanistic modelling study based on longitudinal seroprevalence data](#)
- [Comparison of pan-lyssavirus RT-PCRs and development of an improved protocol for surveillance of non-RABV lyssaviruses](#)
- [Portable reduced graphene oxide biosensor for detection of rabies virus in bats using nasopharyngeal swab samples](#)
- [Antimicrobial resistance in physiological and potentially pathogenic bacteria isolated in Southern Italian bats](#)
- [Factors impacting successful rehabilitation of big brown bats \(*Eptesicus fuscus*\) in a Wisconsin wildlife rehabilitation center: A 5-year retrospective](#)
- [Admittance to wildlife rehabilitation centres points to adverse effects of climate change on insectivorous bats](#)
- [Disease ecology of bats – the Canadian scene](#)
- [Trends in bacterial pathogens of bats: global distribution and knowledge gaps](#)
- [Bats & viruses – other publications](#)
- [Bats & other diseases – publications](#)



Acknowledgements

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- WHA Bat Health Focus Group
- All our data submitters & surveillance program coordinators

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Thank you

