

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[^]

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

[^] 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.

[#] A BFF from QLD was diagnosed retrospectively in 1996, when ABLV was first recognised.

⁺ 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

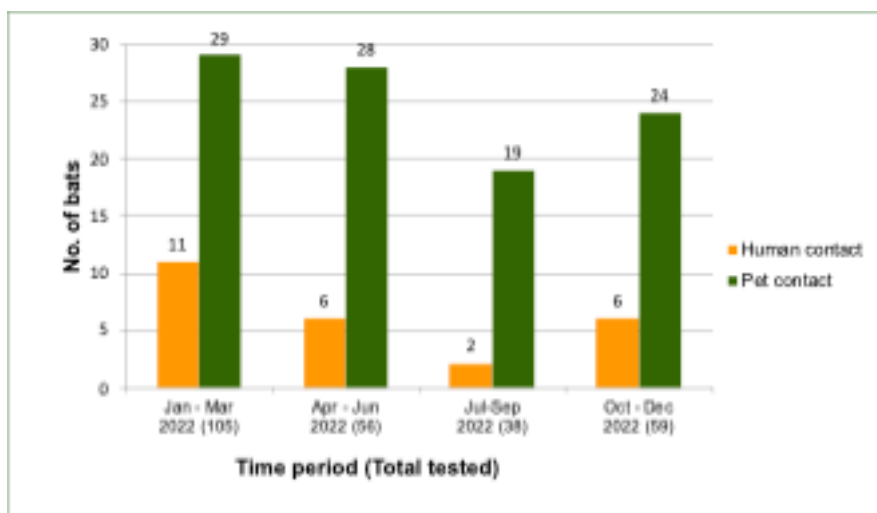


Figure 1 presents reported human-bat contacts which, based on Young & McCall 2010,¹ is an underestimate of the true contact frequency. Not all bat contact is reported, and for the majority of reports the bat is not available for testing.

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



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.

Chocolate wattled bat
Photo: Lindy Lumsden

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.



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	12	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.

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

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: Paislie 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/dlm_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-cdi3403l.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:9486>
- 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-Witton K, Gordon A (2021). Paralysis event in flying foxes in Queensland and New South Wales. *Animal Health Surveillance Quarterly*, 26(1), 25-26 www.sciquest.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 Grimmett	(07) 3708 8762	bslwildlife@daf.qld.gov.au
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