WILDLIFE HEALTH AUSTRALIA

HOW TO REPORT A SUSPECT CASE OF WHITE-NOSE SYNDROME

This document provides information on white-nose syndrome (WNS) for people in Australia who come into contact with microbats (e.g. bat/wildlife carers, ecologists and other researchers and students, cavers, cave managers, park rangers, members of the public).

Members of the public should not handle bats. Contact with bats such as bites and scratches carry a risk of infection with Australian bat lyssavirus (ABLV) and requires urgent first aid and medical attention. For more information, see Human Health Precautions below. If you find an injured or sick bat, contact a wildlife care organisation or your local veterinarian.

Only people who are experienced, wearing appropriate protection and vaccinated should handle bats.

Veterinarians should refer to the National guidelines for sample submission[1] document for guidance on appropriate collection and submission of samples to facilitate the exclusion of WNS in Australia.

If you see signs consistent with white-nose syndrome, or any other unusual signs of disease or deaths in wildlife, you should contact:

- **Your local State / Territory Wildlife Health Australia (WHA) Coordinator[2]**
- **The 24 hour Emergency Animal Disease Watch Hotline[3] on freecall 1800 675 888**
- **Your local veterinarian**
- **Wildlife Health Australia[4]**

Cave managers or park rangers should also be notified if WNS is suspected.

WNS OVERVIEW

a. Microbats play a very important role in balanced ecosystems

Microbats are fascinating animals that are vital for healthy environments. They eat an enormous volume of insects so bat populations can reduce the number of pest insects, which has benefits for Australia's native bushland, agricultural industries and human health.

b. WNS has devastated microbat populations across North America

Millions of microbats have died following infection with *Pseudogymnoascus destructans,* the fungus that causes WNS, since it was first discovered there in 2006. Experts are concerned that some species are threatened with extinction in certain regions. WNS is estimated to have killed more than 5.5 million microbats in northeast USA and Canada. In some sites, 90-100 percent of microbats have died (US Fish and Wildlife Service[5]).

[1] www.wildlifehealthaustralia.com.au/ProgramsProjects/BatHealthFocusGroup.aspx#WNS
[2] www.wildlifehealthaustralia.com.au/AboutUs/ContactDetails.aspx
[3] www.outbreak.gov.au/report-outbreak
[4] https://www.wildlifehealthaustralia.com.au
[5] www.whitenosesyndrome.org/sites/default/files/november_2015_wns_fact_sheet.png

c. WNS has not been identified in Australia

The fungus that causes WNS has **not** been detected in Australia. However, Australia is home to a number of microbats that are closely related to those affected by WNS in North America. If similar signs to those described for WNS in North America are observed in any Australian species of microbat, these should be investigated by a veterinarian. WNS should also be ruled out for any mass mortality of Australian microbats, with or without signs consistent with WNS.

Only microbats are known to be affected by WNS. Australia's flying-foxes/fruit bats are not considered at risk of WNS.

d. Clinical signs of WNS in microbats

Testing for WNS should be considered when Australian microbats display any of the following signs:

- Presence of white or grey powdery fungus on the face, fur, skin or wings (see Figure 1)
- Wing damage (membrane thinning, discolouration, flaky appearance or holes)
- Mass mortality (multiple deaths)
- Abnormal behaviours (such as flying during the day).

Figure 1 – Clinical signs of white-nose syndrome in microbats

Image 1

KAREN VANDERWOLF/NB MUSEUM
http://blog.cwf-fcf.org/?author=5

Image 2

KAREN VANDERWOLF/NB MUSEUM
http://blog.cwf-fcf.org/?tag=geomyces-destructans

Image 3

KAREN VANDERWOLF
http://blog.cwf-fcf.org/?tag=pseudogymnoascus-destructans

More images of WNS in microbats are available on the USGS National Wildlife Health Center[6] website

The WHA White-Nose Syndrome Fact Sheet[7] is available on the WHA website and provides further detailed information on WNS.

[6] www.nwhc.usgs.gov/disease_information/white-nose_syndrome/

[7] www.wildlifehealthaustralia.com.au/FactSheets.aspx

HOW TO REPORT A SUSPECT CASE

Based on the clinical signs described above, if you suspect WNS, you should contact:

- Your local State / Territory Wildlife Health Australia (WHA) Coordinator[8]
- The 24 hour Emergency Animal Disease Watch Hotline[9] on freecall 1800 675 888
- Your local veterinarian
- Wildlife Health Australia[8]

Cave managers or park rangers should also be notified if WNS is suspected.

To assist with the investigation and management of suspect cases, the following may be helpful to record ***(where possible and safe to do so)***:

- Record the exact location of the suspect bat(s)
- Record other details if known e.g. total number of bats, number of affected/dead bats, species, any unusual behaviour
- Take a photograph
- If a suspect bat was observed in a cave, to prevent the possibility of spreading the disease, on leaving the cave follow the decontamination instructions below

If a suspect bat has been captured in a trap during fieldwork, decontaminate equipment that has been in contact with the bat. If the bat is to be held for any period, isolate it to prevent physical contact with other bats (see Disease Transmission below).

HUMAN HEALTH PRECAUTIONS

No human health risk from WNS has been identified. For further information, see the US Fish and Wildlife Service website[10]. However, there is a risk of exposure to other diseases such as Australian bat lyssavirus (ABLV) when handling bats.

Members of the public should not handle bats. If you find an injured or sick bat, contact a wildlife care organisation or your local veterinarian.

Only people who are experienced, wearing appropriate protection and vaccinated should handle 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 5 minutes and a virucidal antiseptic applied[11]. 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.

[8] www.wildlifehealthaustralia.com.au/AboutUs/ContactDetails.aspx

[9] www.outbreak.gov.au/report-outbreak

[10] www.whitenosesyndrome.org/national-plan/wns-response-strategy

[11] Department of Health. Rabies Virus and Other Lyssavirus (Including Australian Bat Lyssavirus) Exposures and Infections. CDNA National Guidelines for Public Health Units. Canberra. 2014. Available from www.health.gov.au/internet/main/publishing.nsf/Content/cdna-song-ablv-rabies.htm

For experienced bat handlers, the Queensland Government Workplace Health and Safety website provides further information on rabies vaccination, PPE and other ABLV risk management considerations (Australian bat lyssavirus and handling bats[12]). The website also provides a safe bat handling[13] video, with further information on PPE[14].

DISEASE TRANSMISSION AND SPREAD OF DISEASE

Transmission of WNS occurs via direct contact between microbats. The fungus has also been found to survive in the environment for long periods without the presence of microbats, and this provides the opportunity for microbats to become infected from environments contaminated with the pathogen. Humans may also facilitate the spread of the disease to new locations by transferring spores on clothing, equipment or other fomites. It has been suggested that WNS was introduced to North America from Europe by a cave visitor.

Any microbat where WNS is suspected should be kept separately and isolated from all other microbats and animals to reduce the risk of disease transmission.

The use of PPE and decontamination (see below) should be adopted to minimise the potential transfer of the fungus between individual microbats, and between microbats and the environment, and to limit the spread within the environment. Consideration should be given to how clothing and equipment will be decontaminated (see below) before any contact with suspect cases.

DECONTAMINATION

Guidelines for the disinfection of materials and equipment exposed to the fungus have been published in the USA and Canada. These decontamination procedures largely aim to address the inherent risks of humans transferring the fungus between affected and non-affected sites/caves; however many of the recommendations for disinfection can be equally applied in other settings. For example, the most universally available option for treatment of clothing, footwear and equipment that can be immersed in water is submersion for a minimum of 20 minutes at a temperature of at least 55°C. The National White-Nose Syndrome Decontamination Protocol (US)[15] details specific, effective disinfectants for porous and non-porous surfaces and PPE.

[12] www.worksafe.qld.gov.au/agriculture/workplace-hazards/diseases-from-animals
[13] www.worksafe.qld.gov.au/forms-and-resources/films/safe-bat-handling
[14] www.worksafe.qld.gov.au/forms-and-resources/guides-and-fact-sheets
[15] www.whitenosesyndrome.org/topics/decontamination