Bat Conservation Trust

White-nose Syndrome: Guidelines for Bat Workers and Cavers

1. Background

White-nose syndrome (WNS) has been associated with the deaths of over 100,000 bats in North East USA. In some hibernation sites, numbers have declined by 80-100% since 2006 when the condition was first identified.

Named after the distinctive white-fungal growth found on many of the affected bats, WNS is still poorly understood. Researchers know very little about its spread and transmission and it is unclear whether the fungus itself is killing the bats, or whether the fungus is a secondary infection. Human health implications are not known, but there is no information indicating that people have been affected after visiting sites where WNS has been found.

Although there has not yet been a confirmed diagnosis of WNS in the UK or mainland Europe, bats with fungal growths have recently been reported in the Netherlands and Germany, prompting concern that WNS might occur in Europe. As a precautionary measure, BCT has set up a surveillance system to monitor the observations of bat workers in the UK.

The purpose of this surveillance is to:

Facilitate quick identification of suspected cases at a national level
Raise awareness and promote vigilance
Ensure consistency of approach
Provide a framework to ensure effective communications

This guidance documents commonly reported symptoms of WNS in the US to help identification of suspected cases in the UK; details how bat workers and others can contribute to the national surveillance programme; and gives advice on how all cave users can help minimise the risk of spread.

2. What to look out for

In the US, WNS has commonly been associated with:

- bats with white fungus, particularly around the nose, but also on the wings, ears and/or tail;
- bats clustered near the entrance of hibernacula, or in areas not normally identified as winter roost sites
- bats flying outside during the day in temperatures at or below freezing
- dead or dying bats near hibernation sites

Bats affected with WNS often exhibit fungal growth on their noses and occasionally other parts of their bodies. However, it is becoming clear that not all of the dead or dying bats have obvious visual signs of the fungus.

At sites where WNS has been confirmed, bats have been recorded behaving erratically, sometimes clustering near hibernacula entrances, or other areas where hibernating bats are not normally encountered.

Many affected bats have also been seen flying outside their hibernacula during winter, and members of the public are reporting unusually high numbers of dead or dying bats near underground hibernation sites.

Dead and dying bats may be individuals affected by WNS that have used up fat reserves long before the winter is over. Alternatively, if affected bats disturb the whole colony, otherwise healthy bats may become active and also use up valuable fat reserves as a result of this disturbance.

In isolation, these symptoms do not necessarily indicate WNS. For example, WNS is not the only cause of white fungus on hibernating bats, and not all bats affected with WNS will necessarily have the white fungus. Therefore, it is important to be vigilant for all symptoms.

3. How to contribute to the national surveillance programme

All UK bats and their roosts are fully protected under UK and European legislation. This means that you should not enter a known hibernaculum without an appropriate licence, or a licensed bat worker.

We request that all licensed bat workers who take part in hibernation surveys whether as part of the National Bat Monitoring Programme (NBMP), or other voluntary activities, please complete a short questionnaire after surveying underground sites. A copy of the form can be found in Appendix 2 and is also available from the BCT website at www.bats.org.uk/pages/white-nose_syndrome.html. This form will only take a couple of minutes to complete, but the data generated will be invaluable in gaining a UK and subsequently European picture of WNS. Forms can be submitted on-line at the web address above; emailed to nbmp@bats.org.uk; or posted to NBMP, FREEPOST, LON10138, London SW8 4BR.

Anyone who observes any unusual activity of bats flying during the day in cold temperatures, especially near hibernation sites, is asked to report those observations as well.

4. How to minimise risk of spread

If you see live or dead bats with white fungus, please do not touch them. Where possible, photograph the potentially affected bat(s) and exit the site immediately. Make an accurate recording of where the bat was found within the site and call the Bat Conservation Trust at 0845 1300 228 to report the incident.

Photographs are requested to speed up identification of suspected cases, as they will be passed on to specialists from around the world. This is important due to the high potential risk that WNS poses to bat populations. However, please note that only appropriately licensed bat workers are permitted to photograph live bats; and furthermore, that any such photography must be incidental to their licensed work, causing no additional disturbance to bats.

Keep up to date with sites of suspected and confirmed WNS by regularly checking the BCT website www.bats.org.uk/pages/white-nose_syndrome.html.
Researchers are still unclear whether WNS can be transferred between underground sites by bat workers and others. Therefore, it is important that precautionary measures are taken until more is known. Travel between underground/hibernation sites in or near suspected or confirmed regions (and countries) should be avoided. Where this is not possible, decontaminate all equipment used and any surfaces that that equipment came into contact with (e.g., car trunk), following the US Fish and Wildlife Service recommended decontamination process (see Appendix 1). Note that clothing, footwear, and equipment, such as harp traps, bat bags, weighing tubes, rulers, and gloves, have not yet been ruled out as vectors of WNS.

5. Is there a risk to human health?

Human health implications from WNS are not suspected: there is no information indicating that people have been affected after exposure to WNS. However, because we are still learning about WNS, we do not

know if there is a risk to humans from contact with affected bats, and we cannot advise you about human health risk.

6. The future

Research is currently being undertaken to investigate the source and possible spread of WNS. The focus of current efforts (largely in the USA) is on determining the cause of bat deaths. Until the cause is known, it is not possible to determine how the ailment is spread and evaluate possible treatments.

In addition to providing general guidelines for those who may come into contact with WNS, BCT will provide up-to-date information on WNS and links to other sites on its website. Furthermore, potential WNS sightings will be documented, and affected sites will be tracked by use of an online submission form on the website. Countries and regions with suspect and confirmed cases of WNS will be reported on the BCT website, which will be updated regularly.

7. Further reading

Containment and decontamination procedures:
http://www.fws.gov/northeast/whitenosemessage.html#containment

U.S. Fish and Wildlife Service information and guidelines (including photos):
http://www.fws.gov/midwest/Endangered/mammals/inba/BatAilment.html

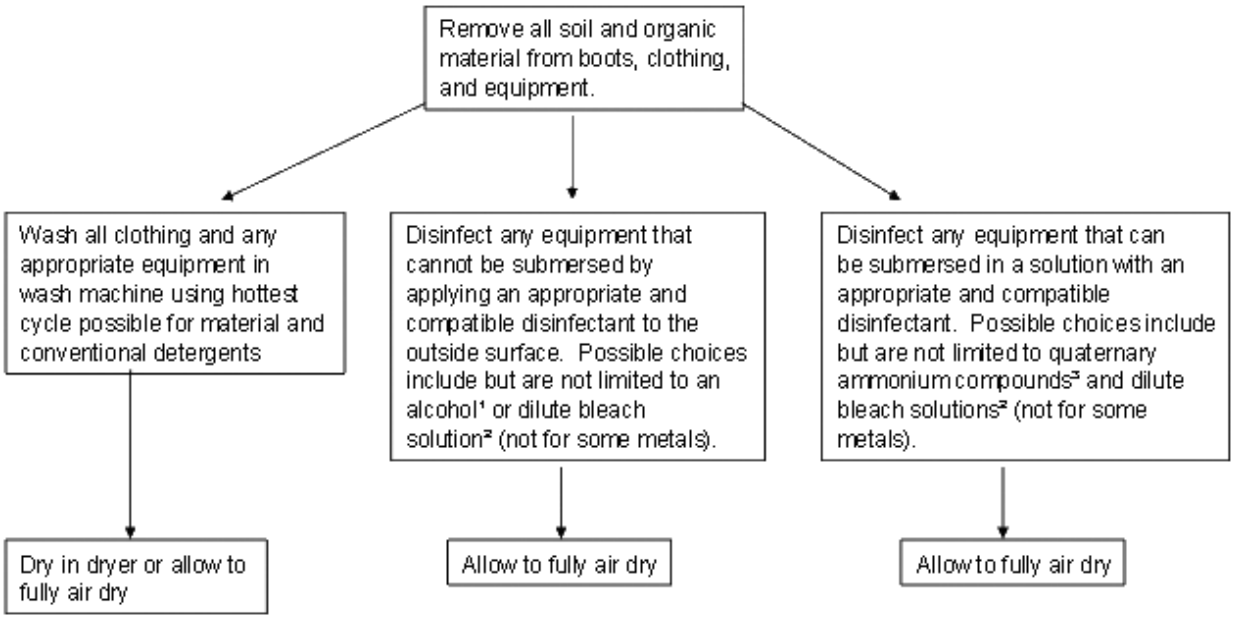
White nose syndrome FAQs:
http://www.fws.gov/northeast/pdf/white-nosefaqs.pdf

Article on White nose syndrome in the US:
http://www.fws.gov/northeast/white_nose.html

Appendix 1 Recommended decontamination process

From: US Fish and Wildlife Service, NE Region
http://www.fws.gov/northeast/whitenosemessage.html#containment

The first step of decontamination is to remove all soil and organic material from equipment, clothing and boots using repeated rinses with water. This is especially important as organic material can inactivate many cleaning and disinfectant agents.



Product guidelines should be consulted for compatibility before using any disinfectant on specific equipment.

Boots need to be fully scrubbed and rinsed so that all soil and organic material is removed. The soles of the boots can then be disinfected with an appropriate disinfectant, including but not limited to, quaternary ammonium compounds3 and dilute bleach solutions2 (not for some metals).

Remember, clothing, footwear and equipment are all potential vectors for spread of WNS.

Appendix 2 Surveillance form

White Nose Syndrome – field observation report

(PLEASE SUBMIT YOUR OBSERVATIONS ONLINE IF POSSIBLE AT www.bats.org.uk/pages/white-nose_syndrome.html)

Your Details		
Name		
Address		
Postcode		
Daytime telephone		
Email		
Site details		
Site name		
Site location (including county)		
Grid reference		
Site code (if NBMP site)		
Date of visit		
Observations		
Bats with white fungus present	Y / N	If you answered 'yes' to any of the observations list, please provide more detail:
Bats clustered near the entrance of the hibernaculum, or in areas not normally identified as winter roost sites	Y / N	
Bats flying outside during the day, in temperatures at or below freezing	Y / N	
Dead or dying bats	Y / N	
Any further comments: Please write on reverse if necessary		

If you see live or dead bats with white fungus, please do not touch them.

Where possible, photograph the potentially affected bat(s). Then exit the cave immediately and call the Bat Conservation Trust at 0845 1300 228 to report the incident.

Please send photographs if you have any to:

NBMP, FREEPOST LON10138, London SW8 4BR (or attach to the online submission form).