

Disinfection protocol fieldwork



Background

This document provides simple but effective measures that can help limit the spread of fungi and viruses pathogenic to amphibians in disease free areas. The advice listed below only encompasses “standard” field research methods. In case of reintroductions, translocation of animals, etc. stricter hygienic requirements are in order.

Many emerging infectious diseases, among which the chytrid fungi *Batrachochytrium salamandri-vorans* and *B. dendrobatidis*, but also ranaviruses, currently pose a significant threat to amphibians in Europe. Anthropogenic spread of pathogens has been identified as a considerable threat to amphibian health. We encourage all biologists, researchers and volunteers to disinfect their field material.

This way, we can reduce the spread and ‘buy’ time while both field- and laboratory trials are run in order to counter/mitigate the effects of these disease agents.



Advice

- Only handle amphibians when absolutely necessary. There are no limitations in the field as long as precautionary measures are taken in account.
- Also take precautionary measures in account when you work with freshwater fish, aquatic invertebrates or aquatic plants.
- Always return amphibians to the exact location¹ where they were caught.
- When handling amphibians one needs to wear disposable (powderless) gloves. Nitril gloves are recommended. Non-perfumed hand sanitizer (which contains ethanol) is also effective for disinfecting your hands afterwards.
- All materials used on a location¹ need to be disinfected before using them at another site.
- Boots and wading suits that have been in direct contact with water or muddy soil need to be disinfected thoroughly.
- Park your vehicle preferably on paved road and not in soft, muddy soil or vegetation.
- Dead and sick amphibians can pose a high ecological risk. Only handle them with disposable gloves, report them to the proper authorities and if possible – and legally allowed to – take them with you (dead animals). Transport dead animals in two plastic bags in order to prevent leakage. Report dead and sick salamanders directly to your research institute.



Disinfect your field material



Handle dead amphibians with disposable gloves.

Help to prevent mass mortality.



¹ A location is defined as a unique pond or stream system that is not directly connected to other waters in the area.

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Cleansing and disinfection

1. Remove plant residues and muddy soil from boots, field materials, etc.
2. Rinse with water. Water from a pond is sufficient. Make sure the materials are as clean as possible.
3. Always disinfect materials as follows: from a long distance of any surface water (ponds, streams, etc.) and try not to contaminate the environment with the residue. Use a bucket or large container to disinfect your materials. Dispose the disinfectant at home (as prescribed). It is preferable to use two or more sets of field materials in order to limit the use of chemical disinfectants.
4. Virkon S (1% solution) is the preferred disinfectant. Other effective disinfectants are bleach (at least 1.6% sodium hypochlorite), Nolvasan (0.75% solution) and 70% ethanol or spirit (85% alcohol content). Always use "fresh" solutions as their disinfectant properties may be lost over time.
5. Place the materials in the solution or spray the solution on the materials. Let materials soak for at least five minutes.
6. Rinse the materials after disinfection with clean (tap) water.
7. If cleaning the materials on site is not possible, then remove mud and plant residues and rinse with water. Take the material home in plastic bags (separately) and clean/disinfect them at home.
8. Wash your hands with a disinfectant or disinfect them with a hand sanitizer with disinfectant properties.

Dispose of disinfectant solution

Dispose of the disinfectant solution via the prescribed means. Preferably take it with you. Never dispose of it in nature.



Avoid direct contact

The disinfection solutions described in this document may be harmful for humans but also for amphibians, fish and other organisms. Use carefully.



Checklist

- Heavy duty brush
- Bucket
- Sponge
- Disinfectant
- Plastic bags
- Disinfectant hand sanitizer
- Disposable gloves
- Spray bottle



More information

For the most recent version of this hygiene protocol and additional information please visit:
<https://bsalinfoeurope.wixsite.com/eubsalmitigation2017/>

