

Appendix X

Pathogen Transfer



Contents

X. PATHOGEN TRANSFER	1
<i>X.1 General Practices</i>	<i>1</i>
<i>X.2 Site Definition</i>	<i>1</i>
<i>X.3 Site Procedures</i>	<i>1</i>
X.3.1 Disinfection and disposal	1

X. PATHOGEN TRANSFER

MRC recognizes that there is potential for research and monitoring to increase the transmission of pathogens. We have considered strategies to reduce or decrease these risks. Below are some of these strategies—primarily formulated for aquatic pathogens, but potentially applicable to terrestrial pathogens as well.

X.1 General Practices

- MRC will develop a hierarchy of risk for specific sites using both the conservation status of species and the status of chytridiomycosis, ranaviral disease, whirling disease and other pathogens discovered at the sites.
- MRC will use this hierarchy of risk to
 - Minimize the possibility of spreading pathogens.
 - Minimize the impact severity of an introduced pathogen.
- MRC will (if feasible) sequence work to proceed
 - From sites in which there is low prevalence and density of pathogens to sites of higher prevalence and density (i.e., minimize potential for spread).
 - From sites with high conservation status to sites with lesser conservation status (i.e., minimize impact on amphibian and fish population).
 - From upstream transects to downstream transects, when working in river systems.
- MRC will not move amphibians and fish between sites.

X.2 Site Definition

A site is a location or place where the proximity of individual amphibians and fish is such that transmission of pathogens is likely. Site definition depends on the particular pathogen and physical characteristics of the location:

- Within river systems, separate watersheds constitute separate sites.¹
- Within isolated water bodies, such as lakes, ponds and dams, separate water bodies constitute separate sites.

X.3 Site Procedures

MRC will strive to prevent researchers from introducing pathogens into any site, even if pathogens are already present at that site. When working at a site or between 2 or more sites, we will carry out disinfection procedures to kill all pathogens on personnel and their equipment.

X.3.1 Disinfection and disposal

MRC will instruct aquatic researchers in the following standard procedures:

1. Wash equipment in water to remove any visible organic debris.
2. Wear disposable latex gloves throughout the entire disinfection procedure.
3. Apply an effective disinfectant, such as 10% solution of household chlorine bleach, to all equipment for 10 minutes—by spray, immersion, or wipes.
4. Dry equipment, if possible, between sites; drying alone for 3 hours will kill *B. dendrobatidis*, but not ranaviruses or whirling disease.
5. Dispose of disinfection materials, including used wipes and latex gloves, in plastic bags.
6. Flush any immersion solution down a toilet.

¹ A watershed is a biologically-based scale.

7. Store unused disinfection solution in a sealed container for recycling.