

## Exploring Vernal Pools and Other Wetlands

### Disinfecting Waders, Knee Boots and Survey Equipment

(Adapted from MDNR Reptile and Amphibian Disinfection Protocol 2016)

An important issue in surveying vernal pools, and really any wetland, is to avoid cross-contamination between water sources. Several varieties of aquatic life become dormant as tiny eggs or cysts once the water disappears and can be carried from one wetland to another in boot soles. Disease transmission between reptile and amphibian populations is becoming an important issue. For example, the “red leg” disease” caused by the *Chytrid* fungus can wipe out all amphibian life in a pool within two weeks, and can be transferred between wetlands. Additionally, the movement and spread of aquatic invasive species continues to impact and threaten ecosystems across the state.

Scrubbing and disinfecting equipment ensures the safety of the wildlife in vernal pools and other wetlands. To prevent disease and invasive species transmission between study/monitoring sites that are not “water connected” or that animals don’t move freely between, the following disinfection protocols are provided. The procedure should be used on all gear/equipment that may have touched site water or was used to handle animals, including but not limited to: waders, shoes or knee boots, dip nets, plastic containers, buckets and tubs, thermometers, magnifying bug boxes, measuring stick/meter stick, etc.

#### Materials that will be needed for disinfecting equipment include:

- Plastic bucket
- Gallon of chlorine bleach (6% concentration of sodium hypochlorite)
- Two stiff scrub brushes, one for sterilization and one for cleaning off mud/dirt
- Rubber dishwashing gloves
- Spray bottle

#### Disinfection Procedure:

- 1) Before leaving the pool, visually inspect and wash off as much of the mud/dirt from equipment and gear in the pool, removing any vegetation or detritus attached.
- 2) Disinfect boots/equipment at your car/in a parking area BEFORE leaving the study area, if possible. If this is not possible, disinfection should be performed at home immediately after surveying the pool. NOTE: All sterilizing with bleach solution should be done well away from streams or ponds.
- 3) Wash and scrub the equipment/boots with clean water to remove as much of the mud/dirt and other debris as possible, and remove any vegetation or detritus.
- 4) Fill bucket with two gallons (8 quarts/32 cups) clear water.
- 5) Add 36 capfuls (1 cup) of bleach to bucket (a 3% concentration) and stir to mix.
- 6) Immerse the equipment in the disinfectant/bleach solution and scrub it with a brush, or completely wet the equipment with the solution.
  - a. Dip shoes in solution and scrub and shake off.
  - b. Dip and scrub waders in bucket or lay them on the ground and pour solution on them. A spray bottle can also be used to apply solution.
  - c. Sterilize brushes in solution.
- 7) Rinse equipment/boots with clear water, until bleach odor is removed.
- 8) If possible, save any remaining sterilization solution in a sealable container for future use. If solution must be discarded, dispose of on asphalt, cement or hard roadbed, away from any water bodies.
- 9) Allow gear and equipment to dry completely before use at next site, if possible.