Assessing The Effects Of Eutrophication On The Prevalence Of *Ribeiroia Ondatra* Infection In Planorbid Snails Within Forested Vs Agricultural Landscapes

**Summary:**

The study assesses the relationship between water quality, planorbid snail abundance, and parasite (*Ribeiroia Ondatra*) prevalence among eight naturally occurring wetlands (four adjacent to agriculture and four wetlands buffered by forests) across central and southern Indiana. The study aims to understand how environmental perturbations, such as increased aquatic nutrient loads, affect host populations and the prevalence of the parasite. The goals include collecting and analyzing water samples, sampling planorbid snails, and analyzing collected snails for the presence of the trematode cercariae.

**Goals:**

1. Collect and analyze weekly water samples from eight naturally occurring wetlands for levels of nitrogen, orthophosphate, and chlorophyll a.
2. Sample Planorbid snails from each site in order to estimate population densities.
3. Analyze collected snails for the presence of the trematode cercariae.

**Current Activities:**

Beginning in March 2009, we collected and analyzed weekly water samples from each site for levels of nitrogen, orthophosphate, and chlorophyll a. Snails were sampled at each site weekly to estimate population densities, and collected snails were brought to the lab for analysis of trematode cercariae. In order to calculate infection prevalence, collected snails were exposed to intense fluorescent light to determine presence of shed cercariae, after which they were dissected to confirm infection. Infected snail tissue was preserved and will be used in genetic analysis of the parasite beginning fall 2009.

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