Project Highlight – SD State Wildlife Grant

Project Type Wildlife disease monitoring

Title Prevalence of an emerging disease in South Dakota amphibian populations

In a nutshell Chytrid fungus, also known as *Batrachochytrium dendrobatidis* (Bd), is causing widespread extirpation of amphibians around the world. This was a 2-year survey to detect Bd presence in South Dakota amphibians. The project also included experimental work on impacts of chemical stressors on disease susceptibility. The project involved extensive collaboration with South Dakota herpetologists and provided an educational opportunity for students at Oglala Lakota College.

Relevant Species of Greatest Conservation Need

- Blanchard's cricket frog (*Acris blanchardi*)

Relevant Habitats various wetland types supporting amphibians

Cooperators University of South Dakota (Dr. Jacob Kerby; graduate student Jennifer Brown)

Purpose

- Survey the prevalence of the chytrid fungus in amphibian populations across South Dakota
- Use an Amphibian Disease Testing Center to provide timely and cost-efficient evaluations of amphibian disease outbreaks for researchers working in the state of South Dakota
- Disseminate information concerning the chytrid fungus to both wildlife biologists and the general public

Timeframe 2009 – 2011

Location Samples gathered from a variety of sites around South Dakota

Summary or Important Findings

- Total of 1,525 amphibians from 10 species swabbed for chytrid fungus during the study; focused survey efforts on northern leopard frog
- Chytrid fungus present in every region sampled; widespread occurrence but low prevalence
- Based on the 2-year survey, chytrid fungus not believed to be causing massive die-offs in South Dakota's amphibian populations, although fungus may have spread through South Dakota in the past.
- Recommended additional surveys in the Black Hills.
- Sampled sites in the Missouri National Recreational River and found atrazine at 15 of 20 sites; additional pesticides detected at 5 sites.
- Agricultural practices likely indirectly impacting amphibian populations.

Best contact person Dr. Jake Kerby, USD

More Information

Brown, J. 2011. Impacts of chytrid fungus and contaminants on amphibians of the Missouri River. M.S. Thesis, University of South Dakota.

Kerby, J. 2011. Prevalence of an emerging disease in South Dakota amphibian populations. Final Report for T-2-3-R-1.