Project Highlight – SD State Wildlife Grant

Project Type Species inventory

Title Conservation status of the Mountain Sucker in South Dakota

In a nutshell The Mountain Sucker inhabits cold, clear mountain streams, such as those found in the Black Hills, which is the easternmost portion of the species' range. This research helped determine current distribution and factors that influence population status.

Relevant Species of Greatest Conservation Need
- Mountain Sucker (*Catostomus platyrhynchus*)

Relevant Habitats mountain streams of Black Hills

Cooperators South Dakota State University (Dr. Katie Bertrand; graduate student Luke Schultz)

Purpose
- Document the current distribution and abundance of Mountain Sucker in South Dakota for comparison with historical data.
- Evaluate the potential influence of physical and biological factors on the abundance and distribution of the Mountain Sucker.
- Inform management recommendations related to the conservation of Mountain Suckers in South Dakota.

Timeframe 2009 - 2011

Location Black Hills of South Dakota

Summary or Important Findings
- Mountain Suckers appeared to be extirpated at 14 sample reaches, while persisting at low densities in 12 streams and 8 watersheds.
- Populations exceeding 0.01 fish m^{-2} found only in a few sites.
- Modeling showed Mountain Sucker presence best predicted by a combination of habitat, geomorphic, and fish assemblage variables; trout density greater than 0.15 fish m^{-2} was associated with absence of Mountain Suckers.
- Mountain Sucker thermal tolerance was assessed; the species is not currently thermally limited in the Black Hills, but climate change could affect future habitat suitability.

Best contact person Dr. Katie Bertrand, SDSU or Chelsey Pasbrig, SDGFP

Links to

Schultz, L. D. 2011. Environmental factors associated with long-term trends of mountain sucker populations in the Black Hills, and an assessment of their thermal tolerance. M.S. Thesis, South Dakota State University, Brookings. 102 pp.

Scientific publications resulting from this project:

Schultz, L. D. and K. N. Bertrand. 2011. An assessment of the lethal thermal maxima for mountain sucker. Western North American Naturalist 71(3):404-411.

Schultz, L. D. and K. N. Bertrand. 2012. Long term trends and outlook for mountain sucker in the Black Hills of South Dakota. American Midland Naturalist 167:96-110.

Schultz, L. D., S. J. Lewis, and K. N. Bertrand. 2012. Fish assemblage structure in Black Hills, South Dakota streams. Prairie Naturalist 44:98-104.

Breeggemann, J.J., C.A. Hayer, J.R. Krause, L.D. Schultz, K.N. Bertrand, and B.D.S. Graeb. 2014. Estimating the ages of Black Hills Mountain Sucker: Precision, population dynamics, and management implications. Western North American Naturalist 74:299-310.