

Project Highlight – SD State Wildlife Grant

Project Type Species inventory

Title Glacial relict fishes in spring-fed headwater streams of South Dakota's Sandhills region

In a nutshell The Sandhills area of South Dakota is a unique ecosystem that is home to many rare species, including four SGCN. Many of these are relict of Pleistocene Glaciation, representing disjunct populations from their central ranges. This research identified current distribution, status, and habitat requirements for these rare species.

Relevant Species of Greatest Conservation Need

- Finescale Dace (*Chrosomus neogaeus*)
- Northern Pearl Dace (*Margariscus nachtriebi*)
- Northern Redbelly Dace (*Chrosomus eos*)
- Blacknose Shiner (*Notropis heterolepis*)

Relevant Habitats spring-fed headwater stream habitats in the Little White and Keya Paha river drainages

Cooperators South Dakota State University (Dr. Katie Bertrand and graduate student Eli Felts).

Purpose

- To assess the occurrence of Finescale Dace, Northern Pearl Dace, Northern Redbelly Dace, Blacknose Shiner, and Plains Topminnow in the Sandhills of South Dakota and to provide recommendations for an effective long-term monitoring plan for glacial relict fishes in spring-fed headwater streams.

Timeframe July 2010 – December 2013

Location Tributaries to the Little White and Keya Paha rivers in south central South Dakota

Summary or Important Findings

- Thirty-two species were sampled, including Plains Topminnow, Northern Pearl Dace, Northern Redbelly Dace, and a single Blacknose Shiner. No Finescale Dace were sampled.
- Plains Topminnow and Northern Pearl Dace were more common, sampled at >30% of sites, however typically in low abundance (<1 fish/min).
- Sampled abundance ranged as high as 7.5 fish/min for Plains Topminnow, 25 fish/min for Northern Pearl Dace, and 3 fish/min for Northern Redbelly Dace.
- SGCN were limited by stream (perennial headwater streams with cool groundwater influence) and habitat (backwater areas and areas created by beaver dams) types.

Best contact person Chelsey Pasbrig, SDGFP

Links to

- Felts, E. and K. Bertrand. 2013. Ecology of glacial relict fishes in South Dakota's Sandhills region. MS thesis. South Dakota State University, Brookings, SD. 85 pp.
- Felts, Eli A., and Katie N. Bertrand. 2014. Conservation status of five headwater stream specialists in southwestern South Dakota. *American Midland Naturalist* 172(1): 131-159.
- Felts, E.A., K. Bertrand, and B.D.S. Graeb. 2014. Northern Pearl Dace Population Dynamics in Southwestern South Dakota Streams. *Prairie Naturalist* 46:70-75.