

Select Sitting Bull College Research

The Sitting Bull College Environmental Science Program requires original research projects at all levels.

Below are selected examples:

SBC Research Projects Prior to 2016

From the Environmental Science 2006-2010 Program Review

Guinn, J.E. and A. Two Bears. *In Press*. Morphological characteristics of western painted turtles on Standing Rock Reservation. *Prairie Naturalist*.

Guinn, J.E. and P. Isakson. *In Press*. Spiny softshell turtle range expansion to North Dakota and Standing Rock Reservation. *Prairie Naturalist*.

Guinn, J.E. and K. Haas. (No Date). Long-tailed weasel nest predation of Loggerhead Shrike in North Dakota. Reviewed and returned by *Wilson Journal of Ornithology*.

PLATFORM/ORAL PRESENTATIONS:

Jones, D. 2009. *Morphological variation of Rhamdia guatemalensis in Costa Rica's anthropogenic and natural river systems*. FALCON (First Americans Land-grant College Network) Conference, Las Vegas, NV.

Two Bears, A., K. Haas, C.A. Haas, J.E. Guinn. 2008. *Initial fledgling dispersal of Loggerhead Shrike determined by radio telemetry*. FALCON (First Americans Land-grant College Network) Conference, Las Vegas, NV.

Two Bears, A. and J.E. Guinn. 2008. *Morphological characteristics of western painted turtles on Standing Rock Reservation*. North Dakota Chapter of The Wildlife Society Meeting, Grand Fork, ND

Stonefish, D. 2008. *Testing optimal foraging theory at a reservoir lake in North Dakota*. American Indian Heritage Day, National Science Foundation, Washington, D.C.

Stonefish, D. 2007. *Testing optimal foraging theory at a reservoir lake in North Dakota*. National AISES Conference, Phoenix, AZ. (**Best Presentation Award**)

Two Bears, A. 2007. *Morphological characteristics of western painted turtles on Standing Rock Reservation*. National AISES Conference, Phoenix, AZ.

POSTER PRESENTATIONS:

Two Bears, A. and J.E. Guinn. 2010. *Nesting responses of Loggerhead Shrike and Brown Thrashers to annual precipitation and temperature from 1994-2009*. North Dakota Chapter of The Wildlife Society Annual Meeting, Mandan, ND.

Stonefish, A.J. and D. Buresh. 2010. *Assessing the impact of rice and sugar cane agriculture on the water quality of anthropogenic water systems in Costa Rica: a study using macroinvertebrates as water quality indicators*. North Dakota Chapter of The Wildlife Society Annual Meeting, Minot, ND.

Shields, C. and J.E. Guinn. 2010. *Northern leopard frog distribution and morphology in Sioux County, North Dakota*. North Dakota Chapter of The Wildlife Society Annual Meeting, Minot, ND.

Black Hoop, H.L. and D.J. Buresh. 2010. *Impacts on water infiltration rates resulting from prairie dog inhabitation: a comparison of prairie dog colonies and adjacent lands*. North Dakota Chapter of The Wildlife Society Annual Meeting, Minot, ND.

White Mountain, S. and D. Buresh. 2010. *Comparison of water quality associated with 2009 water levels in Sioux County Stock Dams*. North Dakota Chapter of The Wildlife Society Annual Meeting, Minot, ND.

Montclair, C.L. and D.J. Buresh. 2010. *Occurrence of minnow species in new versus permanent water systems in Sioux County*. North Dakota Chapter of The Wildlife Society Annual Meeting, Minot, ND.

Jones, D. 2009. *Morphological variation of Rhamdia guatemalensis in Costa Rica's anthropogenic and natural river systems*. Palo Verde National Park NUTRO Seminar Series, Guanacaste, Costa Rica.

Luger, P. and J.E. Guinn. 2009. *Geospatial analysis of the effects of human-induced wetland fire on semi-fossorial turtles in Palo Verde, Costa Rica*. Northern Plains Biological Symposium, Grand Forks, ND.

Two Bears, A., K. Haas, C.A. Haas, and J.E. Guinn. 2009. *Initial fledgling dispersal of Loggerhead Shrike determined by radio telemetry*. North Dakota Chapter of The Wildlife Society, Mandan, ND.

Jones, D., J.E. Guinn, and J. Ducheneaux. 2009. *Importance of grassland habitat for overwintering rough-legged hawks (Buteo lagopus) on Standing Rock Reservation, South Dakota*. North Dakota Chapter of The Wildlife Society, Mandan, ND.

Murphy, J., A. Rookey, J.E. Guinn, and P. Isakson. 2008. *Spiny softshell turtle range expansion*, North Dakota Chapter of The Wildlife Society meeting, Grand Forks, ND. **(Best Poster Award)**.

Jones, D., J.E. Guinn, and J. Ducheneaux. 2008. *Importance of grassland habitat for overwintering rough-legged hawks (Buteo lagopus) on Standing Rock Reservation, South Dakota*. Raptor Research Foundation conference, Missoula, MT.

Murphy, J., A. Rookey, J.E. Guinn, and P. Isakson. 2008. *Spiny softshell turtle range expansion*. American Indian Heritage Day, National Science Foundation, Washington, D.C.

Stonefish, D. 2007. *Indigenous knowledge and animal husbandry of Reindeer in Norway*, National FALCON Conference, Las Vegas, NV.

From the Environmental Science 2010-2015 Program Review

- Adam Baker – *Impacts on Groundwater Resulting from Cattle Inhabitation*
- Audra Stonefish – *Using Macroinvertebrates as indicators of Water Quality in Anthropogenic Water Systems of Costa Rica*
- Bruz Van Dusen – *Tracking Northern Pike Movement on Froelich Dam Using Radio Telemetry*

- Erica Loafer – *Pilot Study Examining the Use of Clove Oil Anesthetic on Northern Pike (Esox lucius)*
- Harriet Black Hoop – *Analyzing Mercury in Turtle Shells and Claws: A Comparison of Snapping Turtles and Painted Turtles*
- Palani Luger – *Determining Movement Patterns of Guatemalan Catfish (Rhamdia guatemalensis) in Rice Field Canals of Costa Rica Using Radio Telemetry*
- Sean White Mountain – *Small Mammal Response to Rangeland Fire*
- Sunshine Claymore – *Banded Tetra (Astyanax aeneus) in Anthropogenic Water Systems of Costa Rica: A Study Determining Population Estimates*
- Maurice Little Bear – *Occurrence of Escherichia coli 0157:H7 in Watering Points around open Pasture Cattle in Ranches on the Standing Rock Sioux Reservation*
- LaLynn Antell – *Nutrient Status of Vegetation around Prairie Dog Infested Rangelands*
- Bruz Van Dusen – *Indigenous Corn Reintroduction*
- Ann Solano – *A Comparative and Multi Element Analysis of Water Quality on Lake Sakakawea.*
- Koby Sommer – *Mosquito Genera Comparisons Within Various Habitats in a Tropical Dry Forest Biome*
- Jonathan Holmes – *Determining Movement Patterns of Tilapia (Oreochromis niloticus) in Rice Field Canals of Costa Rica Using Radio Telemetry*
- Bruz Van Dusen – *Comparing Soil Characteristics Among Rice Fields, Cane Sugar Fields, and Natural Marshes of the Costa Rican Tropical Dry Forest Biome*
- Sunshine Claymore – *Effects of Vegetation on the Microclimate of a Mango Tree Stand in Costa Rica*
- Tonya Tuntland – *Sediment Properties of Benthic Environments of Lentic System on Standing Rock Sioux Reservation*
- Maurianna Loretto – *Understanding Behavior and Ecology of Bison on Standing Rock Sioux Reservation*
- LaLynn Antell – *Biosorption of iron (Fe) and lead (Pb) in Aqueous Solution Using Banana Peels*
- Jaimie Archambault, *Comparison of raptor species richness and abundance during winter and spring migration surveys*
- Kylie Harrison, *Effects of selenium on plant survival, growth, and reproduction*
- Jaimie Archambault, *Macroinvertebrate communities in an irrigation canal system in Guanacaste Region of Costa Rica.*
- Curtis Codotte, *Effects of different cultivation techniques on the growth of native prairie plants*
- Chelsea Chasing Hawk, *Effects of disturbance on macroinvertebrate communities in the Grand River*
- Sheena Gladue, *Behavior of the green iguana (Iguana iguana): effects of microclimate and body size*
- Kylee Harrison, *Factors affecting microclimate conditions in a dry tropical forest, Costa Rica*
- Melanie Howard, *Comparison of winter and spring diets of coyotes (Canis latrans) in mixed-grass prairie and rangeland*
- Frankie Howard, *Effects of different soil inoculations on the establishment and survival of the prairie turnip (Psoralea esculenta)*
- Paul Miner, *Effects of bison grazing on soil properties*
- Tonya Tuntland, *A Survey of Amphibian (frogs/toads) Using Calls to Identify Species Type*
- Larissa Wolf Necklace, *Migration of Western Painted Turtles on Standing Rock*
- JP Holmes, *Ecological Interactions between Snakes and Bison: A Herpetofauna Diversity Survey of Snakes on a Bison Grazing Pasture on the Standing Rock Sioux Reservation (NARCH)*
- Josh W. Silk, *Effects of Microbial Biodegradation on Sustainable Bio-based Polymers (EPSCoR)*
- Saul Bobtail Bear, *Fish Diversity in Tributaries along the Missouri River*
- Josh W. Silk and Saul Bobtail Bear, *Understanding the Synthesis Procedure for a Model Compound Polymer with Photo-degradation Ability made from FDCA and a Nitro-Phototrigger (EPSCoR)*
- Josh W. Silk, *Effects of Sustainable Bio-based Polymers on Microbial Growth (EPSCoR)*

- Clayton Lupe, *Lead Concentrations in River Sediments as Affected by Clay Content* (NSF-TCUP and American Indian College Fund)
- Margaret Knox (Faculty), *Preventing Collapse in Tribal Bison Herds* (USDA-NIFA-AFRI-CARE)
- Mafany Mongoh (Faculty), *Sustainable Polymer Biodegradation Using a Microbial Pathway* (EPSCoR)
- Mafany Mongoh, *Novel Energy/Resource-Efficient Building Material Derived from Rapidly Renewable Materials* (EPSCoR Emerging Competitive Seed Award)
- Mafany Mongoh (Faculty), *Ecological Interactions at the Micro-scale: Applying Concepts of Parasitology and Zoonoses to Habitat Processes* (NARCH)