

A Preliminary Amphibian and Reptile Survey of the Rosebud
Sioux Indian Reservation, Todd County, South Dakota

A Research Report
Submitted by

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INTRODUCTION and BACKGROUND

The current status of the herpetofauna of South Dakota is poorly known. The first state-wide assessment of known species was published by Over (1923). Dunlap (1967) published a compilation of records in which he reported extensions to known ranges of species originally reported by Fishbeck and Underhill (1959). The majority of specimens recorded in both of these accounts are collected museum specimens. Other publications have concentrated on specific parts of the state. Fishbeck and Underhill (1960) reported on amphibians in eastern parts of the state, while Smith (1963) and Smith et al. (1966) published on reptiles and amphibians of western parts of the state. More recently, Malaret (1977) reported on the herpetofauna of the LaCreek National Wildlife Refuge in Bennett County, SD, Chiszar et al. (1994) published observations of herpetofauna on the Pine Ridge Indian Reservation in southwest SD, and Smith et al. (Submitted A,B and In Preparation) have surveyed herpetofauna in South Dakota's Wind Cave National Park, Fall River Ranger District, and Badlands National Park respectfully. In addition, Ballinger et al. (2000) published a checklist and distribution maps for herpetofauna of SD based on museum specimens.

Most of South Dakota is in need of formal systematic herpetofaunal field surveys. The Rosebud Sioux Indian Reservation has never been systematically surveyed. The only known data for species present are a few disjunct accounts of museum specimens collected between 1942 and 1974. Many of the specimens have no specific locations and/or dates of their discovery.

PROJECT OBJECTIVES

The primary objective of this project was to conduct a preliminary survey of the current herpetofauna of the Rosebud Sioux Indian Reservation in order to better prepare for a more organized, systematic survey in the future. The secondary objective is to survey for some of

the rare species of concern to the South Dakota Department of Game, Fish and Parks including Blanding's turtle (*Emydoidea blandingii*), softshell turtle species (*Apalone* sp.), milk snake (*Lampropeltis triangulum*), cricket frog (*Acris crepitans*), ornate box turtle (*Terrapene ornata*), and others. Basic data has been collected on all specimens captured so as to give a preliminary indication of the status of various populations.

PROJECT METHODS

This preliminary survey was conducted from May until August, 2000 and 2001.

Participants included this report's authors and students from the Herpetology course (BI 390) at Sinte Gleska University. Students were used from both the June 2000 and June 2001 courses. These students were not paid field assistants. Surveys were not conducted systemically during the May to August time periods. Surveys were conducted when time and logistics allowed. The time in the field during 2000 was deemed unsatisfactory, so an extension to this project was requested and granted.

Techniques used in this survey included trapping for turtles using baited hoop nets, drift fences with pitfall traps, visual encounter surveys, amphibian calling surveys, and roadkill observations. Data collected includes identification, date, time, locality, and usually weather conditions, habitat type, and size/mass.

PROJECT RESULTS

With the exception of a few species, amphibians and reptiles of South Dakota in general are the most abundant around wetland areas. Therefore we concentrated our survey to areas in or around local wetland areas. Many of these sites were located in an area of the Rosebud Sioux Reservation known as the Grass Mountain Community. The survey sites were not picked at random but picked due to suspected and confirmed populations of various species.

Even with the project extension granted us, we feel that our time spent in the field could have been much more extensive. Personal reasons prevented us from spending as much time in the field as we would have liked. As indicated above, no paid field assistants were used in this project, something that needs to be looked at in the future. Funds paid to us thus far have been used to purchase field equipment such as waders, turtle hoop nets, turtle calipers, snake field hooks, snake sexing probes, and drift fence supplies.

Of South Dakota's 7 turtle species, the painted turtle (*Chrysemys picta*) and common snapping turtle (*Chelydra serpentina*) are clearly the most abundant turtles on the Rosebud Reservation. We found them in almost every body of water in which we set a trap. In two particular lakes on the reservation, we have begun to mark painted turtles. Once trapped, a turtle was given a unique number using the shell notch system, sexed, mass/length data taken, and the turtle was released. This data will hopefully provide for a possible population study in the future. Of South Dakota's amphibians, we found bullfrogs (*Rana catesbeiana*), northern leopard frogs (*Rana pipiens*), chorus frogs (*Pseudacris triseriata*), and Woodhouse's toads (*Bufo woodhousii*) to be the most abundant amphibians encountered or heard in calling surveys.

Large populations of the six-lined racerunner (*Cnemidophorus sexlineatus*) and northern fence lizard (*Sceloporus undulates*) were found in select few areas of Grass Mountain. Of South Dakota's 16 snake species, common species included the red-sided garter snake (*Thamnophis sirtalis*), plain's garter snake (*Thamnophis radix*), and bullsnake (*Pituophis melanoleucus*) with the yellow-bellied racer (*Coluber constrictor*) and prairie rattlesnake (*Crotalus viridis*) occasionally found.

Of the rare species of concern to the South Dakota Department of Game, Fish and Parks, one ornate box turtle (*Terrapene ornata*) was found dead on road (DOR) in the Grass Mountain area. The particular area where the turtle was found will be further surveyed.

We believe the data collected so far does indeed give a better idea of the amphibian and reptile species found on the Rosebud Sioux Indian Reservation. This survey has resulted in an increase in herpetofauna records so as to provide better baseline data for a systematic survey in the future.

FUTURE PROJECT DIRECTION

Future surveys are unquestionably needed. We plan to continue to survey the Rosebud Sioux Reservation in a similar fashion to gather preliminary data and look for some of the rare South Dakota herpetofauna species. Of these rare species, the softshell turtles (*Apalone* sp.) remain the most elusive to us. Although no records exist for them from Todd County and we have thus far been unable to trap one, we know they are located here. The ornate box turtle needs further surveying as well as the Blanding's turtle (*Emydoidea blandingii*) which we also suspect is located here.

QUALIFICATIONS OF AUTHORS

Both authors of this report are well qualified to do this kind of survey work. Both are biologists and science instructors at Sinte Gleska University, Mission, SD. Julie A. Hibma has a Bachelor of Science and Master of Science degree from Central Michigan University in Mt. Pleasant, Michigan. Jody C. Hibma has a Bachelor of Science degree from South Dakota State University in Brookings, SD and a Master of Science degree from Central Michigan University in Mt. Pleasant, MI. Both authors have Master degree specialization in Herpetology. Both authors also have field and herpetofauna survey experience. Student participants were always under the supervision of at least one of the authors of this report.

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