

## **A DNA BAR-CODING APPROACH TO ASSESS THE BIODIVERSITY OF BLACK HILLS ARACHNIDS**

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### ABSTRACT

The purpose of this study is to collect data on Arachnid (infraorder araneomorphae) populations in the Black Hills of South Dakota, which has not previously been studied. This lack of information is a serious impediment to any detailed studies in this field. Collecting arachnid specimens and genetic data for use in taxonomic identification creates a foundation for research into arachnid species distribution, genetics, and ecology. We have been able to preserve morphological integrity of specimens while extracting DNA, enabling the preservation of both molecular and morphological characteristics for taxonomic identification. Ideally, this method of DNA extraction will provide a means to collect genetic sequence data from holotypes while preserving the integrity of the specimen in future studies. The creation of a database of genetic bar codes for arachnids will be of great value to the arachnological community, as will the data regarding species occurrences in the Black Hills.