

INTRODUCTION

There is a wide diversity of species found throughout North Carolina and many of these species are well documented within their known ranges. With that said, there are still counties within the state that have very little species data and Cleveland County is among the lowest when it comes to the number of its species that are documented. The goal of this study was to document many of the fauna found within the county and help to give further details to the ranges that these species encompass.

MATERIALS AND METHODS

The study took place from from June 25, 2021 to July 27th, 2021. Throughout this time period, specimens would be collected each day and brought to the lab for pictures and measurements. DNA samples were collected from harder to identify species and a PCR was run to prepare the DNA to be sent to the lab. The DNA was sent to Psomagen’s laboratory in Rockville, Maryland. The DNA sequences received from the laboratory were then used to identify the specimens. The locations used for species collection were on Gardner-Webb’s campus, the South Mountain Game Lands, and the Broad River Greenway.



Species Found

Amphibians	<i>Conocephalus fasciatus</i>	<i>Norape ovina</i>	<i>Tabanus fuvulus</i>
<i>Bufo (Anaxyrus) fowler</i>	<i>Cotinis nitida</i>	<i>Notonecta irrorate</i>	<i>Trigonopeltastes delta</i>
<i>Desmognathus conanti</i>	<i>Cratichneumon sublatus</i>	<i>Orthosoma brunneum</i>	<i>Typocerus velutinus</i>
Crayfish	<i>Darapsa myron</i>	<i>Pelidnota punctate</i>	Non-Insect Invertebrates
<i>Cambarus Complex C- (Broad River)</i>	<i>Dasymutilla vesta</i>	<i>Photinus consanguineous</i>	<i>Apheloria polychroma</i>
<i>Cambarus lenati</i>	<i>Datana drexelii</i>	<i>Photinus pyralis</i>	<i>Dolomedes albineus</i>
Fish	<i>Dorcus brevis</i>	<i>Phyllopalpus pulchellus</i>	<i>Dolomedes vittatus</i>
<i>Clinostomus funduloides</i>	<i>Euschistus tristigmus luridus</i>	<i>Polistes fuscatus</i>	<i>Limax maximus</i>
<i>Hybopsis hysinotus</i>	<i>Gerris insperatus</i>	<i>Popilla japonica</i>	<i>Narceus americanus</i>
<i>Lepomis auratus</i>	<i>Harpalus erythropus</i>	<i>Prionus pocularis</i>	Reptiles
<i>Lepomis macrochirus</i>	<i>Hexagenia limbate</i>	<i>Prolimacodes badia</i>	<i>Anolis carolinensis</i>
<i>Notropis lutipinnis</i>	<i>Homalodisca vitripennis</i>	<i>Prosapia bicincta</i>	<i>Eumeces (Plestidon) fasciatus</i>
Insects	<i>Hypercompe scribonia</i>	<i>Psephenus herricki</i>	<i>Pseudemys concinna</i>
<i>Alaus oculatus</i>	<i>Lichenophanes bicornis</i>	<i>Rugosana querci</i>	<i>Terrapene carolina</i>
<i>Alydus pilosulus</i>	<i>Macrurocampa marthesia</i>	<i>Scaphinotus andrewsii</i>	<i>Trachemys scripta</i>
<i>Antheraea polyphemus</i>	<i>Megalopyge opercularis</i>	<i>Scarites subterraneus</i>	
<i>Apantesis vittata</i>	<i>Neandra brunnea</i>	<i>Sinea incognita</i>	
<i>Ceruchus piceus</i>	<i>Necrophila americana</i>	<i>Spilosoma congrua</i>	
	<i>Nemoria bistriaria</i>	<i>Stictocephala bisonia</i>	

DISCUSSION AND CONCLUSIONS

During the study, some of the crayfish and millipedes had to be identified with the use of DNA samples. DNA sequences from some of the crayfish and a millipede in the genus *Narceus* were found to be part of complexes. The crayfish complex (*Cambarus Complex C*) has been researched around the Catawba River but the specimens in this study were found in the Broad River system. Further research will need to be conducted to see if these two groups are genetically the same. More research will also have to be done to identify specific species within these complexes. Each of the documented species were added to the iNaturalist data base and a full list is being finalized to be sent to the North Carolina Biodiversity Project.

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