SEASONAL VARIANCE OF HEMATOLOGIC AND PLASMA CHEMISTRY OF THE TIMBER RATTLESNAKE (*Crotalus horridus*) IN SOUTHERN INDIANA

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**Goals:**
1. Determine packed cell volume
2. Analyze plasma to measure the concentration of total solids with a TS400 refractometer.
3. Examining blood slides for parasites or inclusions.
4. Measure plasma parameters using an Avian/Reptile Profile Plus rotor in a Vetscan Classic Analyzer

**Statement of Problem:**
Timber rattlesnakes are endangered in the state of Indiana. This species is restricted to large patches of forest in the south-central part of the state (Macgowan 2011), as they prefer deciduous or mixed deciduous hardwood/coniferous forests with hilly, rugged terrain. However, the habitats they utilize vary considerably due to their large geographic range (Center 2003). In the Midwest they are most commonly found in large patches of mature forest with rugged, hilly terrain that is somewhat rocky or along rocky bluffs. Habitat selection by timber rattlesnakes is influenced by numerous factors such as, reproductive condition, age class, and availability of suitable overwintering habitat. Hematology analysis is useful for describing the health of a species population over a period of time by revealing viral pathogens, such as West Nile virus, and Ophidian paramyxovirus as well as other parasites or inclusions within the blood. It can also act as a test of the degree of relatedness between a population’s health and the quality of habitat in the region.

**Current Activities:**
All fieldwork, lab work, and analyses are finished and I am in the process of writing the manuscript for this research.