

## **MS Thesis Defense**

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**Title:** Habitat Selection, Movement, And Survival Of Hatchling Wood Turtles (*Glyptemys Insculpta*) In An Atypical Habitat

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### **ABSTRACT**

Hatchling turtles are the least understood life stage of North American turtles because they are cryptic and difficult to follow in their environment. Although few field studies have been conducted, data suggests that hatchling turtles have higher mortality rates than adults due to their smaller size, more potential predator species, and an increased vulnerability to fluctuating environmental conditions. Therefore, understanding the factors that influence survival in this critical life stage is a crucial step for turtle conservation. The North American wood turtle is considered endangered by the IUCN due to habitat loss, poaching for the illegal trade, increased abundance of predators, and climate change. Nevertheless, little is known about the first two months post hatching in this species as few studies have examined hatchling behavior, and only one study has followed hatchling wood turtles from emergence until hibernation. This study site, at the southern end of the range, is unlike typical wood turtle habitat in that it lacks natural sand beaches along the stream; therefore it is probable that hatchling turtles emerge in habitats less conducive to survival. I found that hatchlings move in straight directions from the nest to the stream, and are more likely to migrate when the weather is overcast or raining, thus preventing desiccation. Once the hatchlings reached the stream they selected micro-habitats that offered lots of cover along the bank of the stream. Survival varied greatly by year, and was influenced by the time it took hatchlings to migrate to the stream. Hatchlings that delayed migration had higher survival rates. This study demonstrated that weather, habitat, and behavior all play important roles in the early stages of wood turtles. Future studies should investigate how hatchling wood turtles behave in their more typical nesting habitats where migration is not a factor.