

**** Snapping Turtle (*Chelydra Serpentina*) Nesting Habitat on a Tributary of The Yellowstone River (Poster)**

Miranda Gallagher, Environmental science, Rocky Mountain College, Billings, MT

*Indicates Presenter

**Indicates Student Presentation

Snapping turtles (*Chelydra serpentina*) are considered a “Species of Concern” in Montana due to the lack of knowledge of their life history and distribution. Information on turtle home ranges, adult survival, and female nesting locations are critical for understanding the viability of snapping turtle populations. We used geospatial data about snapping turtle movement along Razor Creek (a tributary of the Yellowstone River) and environmental factors (slope, aspect, land use, proximity to water) to map linear home ranges and identify suitable nesting habitat. The study area is at the northwestern-most range edge of the species distribution, where no previous studies have occurred. Snapping turtle location data and attributes were collected with standardized trapping to document movements, and randomly selected turtles of both sexes were fitted with radio-telemetry tags to facilitate a more comprehensive analysis of habitat use and linear home range sizes. For nest habitat modeling we selected adult female locations during the nesting season (May - June). The resulting datasets were processed using ArcMap 10.5 GIS software. Geoprocessing workflows were then used to identify potential nesting areas based on the following factors known to influence nesting habitat: distance from water, land use, aspect, and slope. Average linear home ranges were longer for females (3,079 m) (n = 6) when compared to males (2,914 m) (n = 6) but not significantly different. Of the total accessible nesting habitat in our study area, 40% was deemed as “suitable nesting habitat”. Of the total “suitable nesting habitat” area, 58% was located on private lands. This refined area will guide nest searches next spring and hopefully lead to the documentation of the first snapping turtle nests in Montana, a better understanding of nesting habitat, and improved efforts to conserve this species.