Sexual Dimorphism in Red Eared Sliders

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I chose this project while working this past summer. It was noticed that Trachemys Scripta Elegans had three qualitative shapes on the second vertebral scute (V2) region of the carapace, consisting of either having no ridge, incomplete ridge, or a complete ridge. Because I noted that males tend to have no ridge on their (V2) scute region, and females tend to have a complete ridge. The purpose of this project is to determine if male or female Trachemys Scripta Elegans have different carapace shapes in the (V2) region. “I hypothesize that by just observing the carapace you will be able to determine rather if it's a male or female Trachemys Scripta Elegan.” My null hypothesis is that there would be no difference in carapace shape in the V2 region between males and females. The following procedures were to sample red ear sliders using commercially available turtle hoop nets in four tributaries on the Sequoyah National Wildlife Refuge Turtles were identified, sexed, measured then released at their site of capture. I scored V2 carapace shape as no ridge = 0, incomplete ridge = 0.5, and complete ridge=1. I tested the null hypothesis using a Mann-Whitney U Test, instead of a standard two-sample T-Test, due to unequal sample sizes. In conclusion I found that males differed from females, in that males tended to lack V2 ridges, and females typically had complete ridges, P = 0.0001. I rejected the null hypothesis that males and females do not differ in V2 region carapace shape.