Rise of the Slider: Recordings of Turtles from AZ, MO, and AL

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Introduction and Objectives

Trachemys scripta (Pond Slider) is arguably one of the most invasive species around the world (1). A major driver of this rapid spread has been the Pond Slider's popularity in the pet trade (2).*T. scripta* is native to the Southeastern United States, including Alabama (AL) and Southern Missouri (MO) (3). It has an incredibly diverse diet in comparison to other freshwater turtles in the area, which contributes to their spread at the expense of more specialist freshwater turtles (3,4,5). They are invasive in Arizona (AZ) and may pose consequences for the native turtles of the Sonoran Desert (6).

I want to measure the rate of population increase in a state where it is native (AL) and non-native (AZ, North MO). My hypothesis is that the rate of change for*T. scripta* posts per year is different in Arizona and Missouri than in Alabama because of the turtle's invasive nature in the first two states.

Methods

Research grade data of observations posted to iNaturalist in AZ, MO, and AL between 14 Oct. 2018 – 24 Oct. 2023.

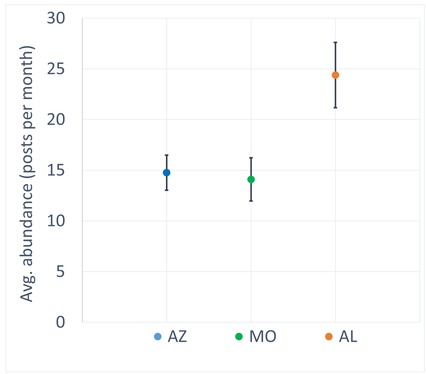

Fig 1. Average abundance of *T. scripta* with N = 60

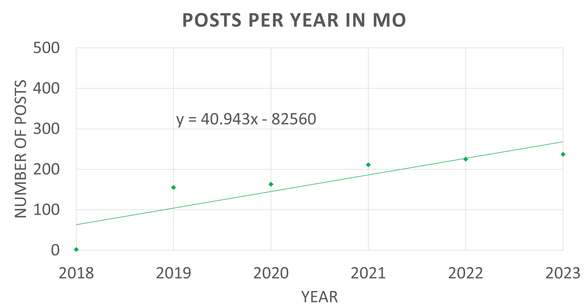

Fig 2. Posts per Year in MO

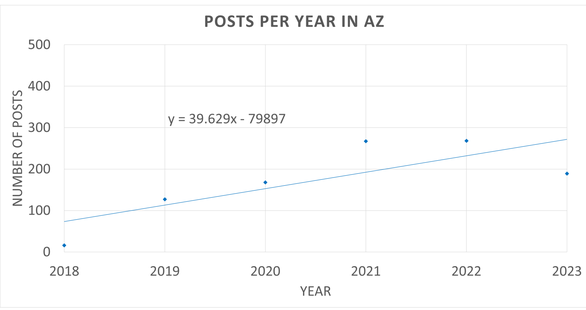

Fig 3. Posts per Year in AZ

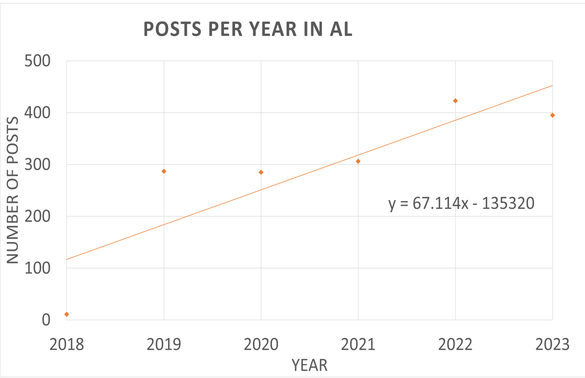

Fig 4. Posts per Year in AL

Results

The baseline value for the increase of yearly posts is 49 posts per year. Alabama, Missouri, and Arizona post per year increases were 40, 41, and 68 posts per year respectively. Arizona and Missouri are closer to each other & to the baseline, while Alabama has a much higher rate of increase. There is a difference in rate of population change between states where *T. scripta* is native and non-native, however, the population increases more prolifically in native than non-native habitat.

Fig 5. Red-Eared Slider (*T. s. elegans*)

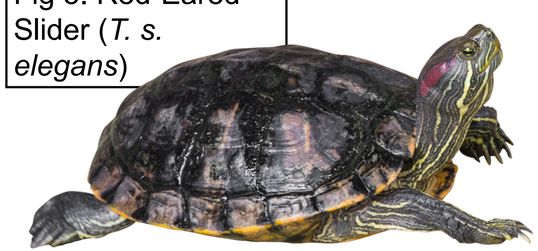

Fig 6. Yellow Bellied Slider (*T. s. scripta*)

Conclusions

Arizona and Missouri have similar monthly post abundance as well as growth shown by post increase from 2018 – 24 Oct. 2023. This means invasive species growth may have similar patterns.

Turtle populations are declining across the United States, which creates more unoccupied niches for *T. scripta* to fill. This is something to look for in future population surveys.

References & Acknowledgements

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