

## **BASIC REPORTING**

I find no problems with the basic reporting. The article is well written in excellent English. I have provided some additional suggestions on word choice below. The literature cited and background/context is sufficiently developed. The tables, figures, and raw data are appropriate. The results and hypotheses are connected and relevant.

## **EXPERIMENTAL DESIGN**

The methods are improved from the previous submission and adequately address the concerns and suggestions of reviewers. I have not used random forest methods, so I don't feel qualified to comment on the specifics of this technique. The supplemental tables allow for replication in the field if needed.

## **VALIDITY OF FINDINGS**

The conclusions are well stated, are linked to the original research question, and are limited to supporting results. I found no indication of social spiders in the raw data. I feel the authors should include additional discussion on lag time (in years) between early snake detections and habitat surveys, as well as a more detailed discussion of the potential impact of imperfect detection on their surveys.

## **SPECIFIC COMMENTS**

### **Abstract**

Line 28: Remove "such as habitats with"

Line 31: change "was" to "is"

### **Introduction**

Line 40: Change "Most" to "Many"

### **Materials and Methods**

#### **Survey Methods**

Include the years surveyed in the beginning of this paragraph (in addition to on Line 114 where it is already).

Include the average transect length so readers do not have to figure it out from the supplemental table.

Line 109: please clarify how the transects were surveyed. Were the transects surveyed 10 m on each side of the line, or 10 m total (5 m on each side?) Were the 5 observers spread equally along the transect?

### **Statistical Analysis**

Line 168: I'm not sure how to interpret this sentence: "We first listed the models under the combination of variables, that is, the combination model of independent variables from a single variable to multiple variables." Please clarify.

Line 174-178: The sentence starting with "The AIC..." is not needed.

### **Results**

### **Discussion**

Line 233: The sentence starting with "Caudal luring" is not needed.

Line 241-245: This anecdote is extremely interesting! I wonder how often that happens throughout the world. This is certainly something to think about when it comes to snake conservation.

Line 255: This may be a good place to bring up the concept of detection probabilities. Are snakes easier to find if there is low herb cover?

Line 286: While I like the word "mysterious," I think "cryptic" would be a better word to use.

Final Paragraph (starting at line 285): I think this paragraph should focus less on the ways the observers were trained to maximize detection of the pitviper, and more about how the results may be biased towards snakes that are more easily found. For example, are gravid females more likely to be exposed due to thermoregulatory needs? What about individuals who recently fed?

### **Conclusions**

The concept of constructing artificial logs for snakes is very interesting, similar to the construction of artificial hibernacula for pine snakes and hellbender salamanders in North America. I hope you get a change to test this idea and I look forward to seeing those results!