Peer Review of:

Road mortality of water snakes in light of landscape structure traffic intensity in northeastern Hungary

- ***Abstract:*** *The opening sentence could best be divided into two sentences, with "however" beginning sentence two.
  *"*Once every two weeks in three years*" should be more indicative of the gap between 2013 and 2020, as the current language suggests a continuous three year study.
  * Refrain from redundancy in the excessive usage of personal pronouns, such as "our" or "we" and replace with "the study" or "the results", or similar.
- ***Intro:*** *The introduction begins well by explaining the general reason for the study and introducing subjects and variables. References are relevant to subjects given in appropriate context. Language is understandable, with variables listed in order of importance, and all potential factors are appropriately cited. A comma should be placed after "*year*" in paragraph 2, line 1. The goal of the study is clearly stated in the last paragraph. Questions to be investigated are stated in the last line. These could probably be bullet-listed for clarity, or otherwise organized on separate lines in the center of the paragraph.
- ***Materials/Methods:*** Breaking the various aspects into paragraphs arranged by emboldened introductory key words applies sound structure to this section. Description of the area is very thorough, as are descriptions of the species (appropriate brevity, with aspects of natural history limited to relevance of the study), and field methods section is very descript and appropriately cited where applicable. Replacing some words with synonyms (such as "*first*" with "*primarily*") [section: study species, line 1] or "*fish eater*" with "*piscivorous*" or "*snakes get killed on the roads*" to "*were most readily susceptible to vehicular casualty*" or "*road mortality*" could improve text to appear more professional. Analysis section is explanatory and clear, with thorough references to tables/graphs where necessary.

"About" to "In" ... "the initial question raised in this study concerned which species of local native snakes were most subject to vehicular casualty. To accomplish this, each snake carcass encountered within the parameters of the study site was surveyed. Results revealed that two species (x & y) were predominant. Other species encountered in smaller numbers were excluded from analysis due to low sample size."

In 'Field Methods' section, description of acquired data and methods is clearly explained, with appropriate reason as to why this data was gathered and in what manner. There are several assumptions (all stated as thus) that could have been strengthened by additional data, but these are in concordance with the sizable gap between study dates, are appropriately addressed, and statistical analysis is sound and sufficient to compensate for these suppositions.

* In the final paragraph, line 4-5, avoid redundancy of introductory sentences "*We then..."* ... "*We then"*... as this reads as a listing and detracts from the importance of the focus of analyses on an individual basis. (Perhaps combine to form a single sentence, bridged by an appropriate synonym). Again, sentence structure using pronouns could be improved (ex: *"We ran simple*

linear regressions" to *"simple linear regressions were conducted"*). All methods were appropriately cited, and accompanied by concise explanations.

- ***Results:*** Sections were correctly separated, titled, and divided, with reference to figures. Structural use of sentences, such as "*There was no intersection between months"*) under sec: "Temporal Patterns", par. 2, line 2, to "*No correlation was found between months"*) would help strengthen the overall context of this section as well, deviating text from personal to general. Emphasis on less concrete wording (ex: "*showed"* to "*suggested"*) would make the text flow more smoothly.
- ***Discussion:*** Suggest bulleted first 2 points of key results. These may be better introduced as a colon replacing the period in par. 1, sent. 1, with the word "*finally"* eliminated, beginning the last sentence with "*These*." Weaknesses in the study are well addressed, with proper suggestions regarding improvement in future studies.
  *Par. 2, sent. 5, change "*second"* to "*secondly".*
  * Citations are appropriately given. Strengths (in comparison to previous studies, ie; bicycle vs. car, are also stated, which provides balance to the aforementioned weak points).
  *Results are well-explained, with referenced suggestions of explanations of each and all. The inclusion of the Conservation Implications' section provides a beneficial brief summation of the restated results and their importance, with suggestions as to how the situation can be improved upon (ie; culvert passages) feasibly, with the goal clearly stated (reduce snake road mortality). An alternative suggestion is offered (manmade construction hibernacula directing snakes from densely populated areas where culvert passages are not feasible) and is a beneficial addition to this subsection.

- ***Tables/Figures:*** All tables and figures are accurately described, well constructed, and accessible, with aesthetic quality.
- ***General Comments:*** Language throughout text is clear and concise. Some improvement could be made in regard to redundancy, usage of synonyms to improve overall appearance of scientific professionalism, and redirection from personal tense to a more ambiguous tense (see notes). Literature is well-cited and well-placed. The article is structured, although some minimal usage of listings (either through bullet points or separated, numbered sentencing) may be helpful (see notes). Results are relevant to hypothesis (or, in this case, introduction of research in question).
- ***Experimental Design:*** Research question is well-defined and relevant, with methods cited and explained in rigorous technical detail (see notes throughout). Study is lengthy, occurring over a longer span of time than the majority of similar studies, which adds to the validity of the research and overall strength of findings.
- ***Validity of Findings:*** Research findings are concisely described, with reference to strengths and weaknesses of the study (see notes). Applications for improvement of situation is addressed in conjunction with conclusion and supported by stated data and its acquisition, and figures further supporting analysis of said data. Methods are sound and controlled. Conclusion is clear and does not deviate from the original goal introduced in abstract/ introduction. No superfluous or warrentless conclusions are included, and as a whole the paper is very thorough and uncommonly unique.