UJFM-2023-0050.R1: Evaluation of shoreline rotenone application to control Largemouth Bass recruitment in small impoundments

I provided previous comments on this manuscript as Reviewer 1 and was asked to provide comments on the revision as well. Overall, I thought the manuscript was well written and informative, but I had concern with excessive wordiness that bogged down fluidity of reading. This was largely attributed to explaining results from two impoundment size classifications that the authors have since abandoned. Removal of much of this verbiage has greatly improved clarity and flow in the methods. The results are still a bit cumbersome to read through but that's just related to the large number of models used in this experiment. I don't think there's much that can be done about it other than further reducing the number of models (which I do not recommend), but I do encourage the authors to ensure things are presented in a consistent order to ease interpretation.

I do have some issue with the rotenone application section in the methods not being repeatable. The authors go into detail about how the chemical was applied but miss some key points. Most important is noting active concentration applied. It is unclear if the 0.5 L / 90 m of shoreline represents the Prenfish solution or just the active rotenone in the solution. Secondarily, actual application logistics are confusing to me. I assume total shoreline distance was measured and the appropriate amount of Prenfish was calculated. Was this amount distributed equally between the two tanks and the tanks filled with water before application? How was chemical distributed evenly while ensuring it ran out at the end of a single pass? Writing reproducible methods concisely will be difficult in this instance, but I believe it's important.

Introduction

Line 83: Need to specify that fall electrofishing *removal* occurred somehow. Consider… "…rotenone treatments and removal via electrofishing in fall to reduce bass…"

Methods

Lines 104-107: Not sure why I'm having such a hard time with this. Consider something like… "Rotenone was applied to selected impoundments during summer of 2017 and 2018. Electrofishing was used to monitor fish populations in spring of 2017 to 2019. Seine samples were collected during summer of 2017 and 2018 to measure immediate effects of rotenone treatment. A "treatment period" was considered to consist of spring electrofishing, rotenone application if selected, summer seining, and spring electrofishing the following year (Table 1)."

Line 127: Is this referring to active rotenone? Was there 0.5 liters of Prenfish applied or 10 liters of Prenfish applied? There is some confusion in published literature about whether active concentration is reported. If the former, consider noting that 0.025 liters of active rotenone were applied per 90 m of shoreline. If the latter, consider noting that 0.5 liters of active rotenone were applied per 90 m of shoreline.

Results

Be consistent with reporting decimal places with p-values. For example, three are reported in line 226, two in line 228, and four in line 229.

Line 227: The word ‘also’ here is throwing me. The previous sentence says that rotenone treatment resulted in immediate reduction of Largemouth Bass. The sentence in question says that Bluegill catch also wasn’t affected. This seems contradictory. Maybe I’m misunderstanding what model was used where?

Discussion

Lines 275-277: What are the odds that the seined areas still had residual rotenone that fish were simply avoiding? This could also explain the reduction in Bluegill (lines 228-230). This is addressed a bit with the day 42 sampling for both species but might be worthy of discussion about interpreting immediate response.

Lines 355-363: I appreciate that the funding and questions leading to this project differentiate between large and small small impoundments. However, addition of the terms here introduces unnecessary confusion. Perhaps just mention larger impoundments rather than larger small impoundments?

Line 377: Same comment as above.

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