Review of: "Comparison of Vegetation Community Diversity, Biomass, and Sediment Properties among Constructed and Reference Salt Marshes at Deer Island, Mississippi, U.S.A."

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Potential competing interests: No potential competing interests to declare.

This is a timely, thoughtful study on evaluating an increasingly common restoration practice. I think this article will be a helpful resource for our ongoing research, and for the field of ecological restoration in general.

Generally, I think the article could be most improved by tightening the presentation of results to emphasize the most relevant takeaway points. The conclusion section is a neat, easy-to-follow listing of relevant results, but those results get somewhat lost in the results section among the numerous metrics, comparisons, and tables.

I have provided some additional, specific feedback below. Overall, I think it is a strong article and I thank the authors for sharing!

Abstract

The abstract could use a stronger concluding sentence, highlighting a significant contribution of this study, beyond evaluating these two specific marshes.

Introduction

I'm not sure how this study addressed objective 2: the role of planted vegetation versus natural recruitment. Both sites had different treatments in terms of the assemblage of vegetation planted at various time points. I don't think you can interpret differences between the sites as being solely due to differences in what vegetation was planted at each site.

Methods

Why does the description of the inundation range follow an explanation of the elevation data collection? Do the elevation contour maps confirm the inundation regimes for the various sites? I suggest making this more explicit.

Were species richness, etc. calculated on a transect basis, or per quadrat? Were those metrics averaged across the low/med/high marsh quadrats on each transect? Perhaps we should see how these different marsh zones compare across sites. However, I realize that might further complicate the results.

Results

In evaluating marsh elevations, is there an interest in examining marsh slopes of constructed versus reference marshes, in addition to the mean site elevation? What about the elevations for the “low”, “mid”, and “high” marsh?

Would it be possible to compare the relative extents of the low/mid/high marsh for each site? This is briefly addressed in multiple parts of the discussion but it could be a very relevant result to present earlier.

Table 3. Consider sorting species by descending occurrence rather than alphabetically. I’m not sure what “Total Cover” refers to in the context of percent occurrence, or why it is helpful to report 100 percent total cover for all three sites.

The narrative for the change in percent cover seems selective. The authors alternate between reporting the Fall-to-Fall cover versus the Spring-to-Spring cover. My impression is that it would be more valid to separately consider Fall-to-Fall trends versus Spring-to-Spring trends when comparing sites. It might also make sense to discuss how the seasonal variability may differ for each site.

I would argue that Table 4 belongs in the appendix. Instead of reporting the diversity metrics for each site in each season, I would show a table of the anova results indicating whether season or site explained differences among the diversity metrics. The authors describe running these anovas but I do not believe they are in the main tables or the appendix.

Is Table 5 redundant to Figure 5? And Table 6 to Figure 6? I prefer the figures over the tables.