For this assignment, you will look at the compiled presentation of the two best figures from all students, and submit a Word document with written feedback on at least eight figures (2 each from 4 students) who you did not provide feedback on in the previous peer review session. Submit your Word document to Canvas in the following format:

Student name, figure number, comments.

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I will compile the resulting comments, add my own, and email them to each student.

Comments on eight figures; two students before and two students after my name (Beka Stiling) in the class slideshow.

Christina Rathwell, Porzio Figure 1 A/B/C,

Strengths: I like how cleanly you fit your three plots together (plus the plots that make C), it looks nice and took a lot of precision. I also agree that the overall take home (abundance and richness) was more important than the main species, which you noted in plot B.

Comments:

* Maybe in plot B you could annotate the species richness for each phylum? Or add a tiny thin white or gray line between the abundance values so you can see that the large pink bar is comprised of 13(?) species, whereas the S3 is only 3? That will help tell the story about richness changes along with abundance changes.
* For your X axis, consider writing the pH levels rather than the sector, given you’ve titled the axis “pH”. Alternately, give the axis the title “Sector” and just write 1,2,3.
* We will need legend for C that indicates the circle and gray scales. I know that if you only use one legend, you will not be able to align=”v” and have them line up. But the work-around is to plot the plots like you did, and then three vertical legends, (two are actually blank place-holder legends) then put those two columns together. I read about here: <https://stackoverflow.com/questions/41569817/align-multiple-plots-in-ggplot2-when-some-have-legends-and-others-dont> I like Mark Peterson’s answer (partly down the page) best. I think it is the most straightforward, using the “get\_legend()” call, even though it doesn’t have the most votes.
* Consider a different order for your macroalgae, rather than alphabetical. Maybe overall abundance? Or maybe I ordered them by largest change between sector 1 and 3, which I tells the story of change well.

Christina Rathwell, VIRUSES!!! Figure 3 A/B,

Strengths: I like your use of vibrant contrasting colors, and again, a nicely composed set of plots. I also like the simplicity of the x-axis in plot B (frequency)

Comments:

* For plot A, if the goal is just the overall big picture, this gets at it, but there is so much happening in the lower left quadrant that might be visible if you log transformed this data?
* What is the role of plotting 0% complete? Is that a real thing or could those be dropped from the dataset?
* What if you got rid of the top black line and far right black line, and removed the boxes around the legends? Does that look OK? Does it allow you to share the legend between plot A and B for phylum? Can you make the dots larger in the phylm legend?
* Can you reorder the bars from largest to greatest within the phylum? What if they are largest to smallest overall?

Rory Spurr, Figure 4 Porzio,

Strengths: I like your heatmap, it is a nice clean presentation of the data. I like the purple as well…Go Huskies!

Comments: Is there a way to differentiate between the pH’s rather than only in the figure caption? Maybe use different colors for each sector, either the points or the background? Is there a different order you could present the data? It roughly goes from stuff in microalge in S1 to microalgae in S3, but I cannot tell if there is a true order to the macroalgae beyond Porzio’s order. To automatically order my data, I made a smaller data frame that still had the values I was after (I was after the difference, by species, between mean abundance in S1 and S3, but you could use any system). Then I ordered my data by that difference using the arrange function, then I added a value column to that order which I called “rank” then I joined it back with my overall datafram. Depending on what method you wanted to sort your data, you could do a similar thing:

ranked <- arrange(coverage, dif) *[I made my “coverage” dataframe with filter(), group\_by() and summarize() to get at what I was curious about, but you could use any sorting and summarizing to get at what you wanted, maybe overall abundance across all sites.]*

ranked$rank <- 1:nrow(ranked)

porzio <- left\_join(porzio, ranked, by = "algae")

Rory Spurr, Figure 2 hyplotypes,

Strengths: I think your map is quite lovely! Very simple and clean and a well-coordinated color palate.

Comments:

* Your map needs a legend. You may want to add a tiny North direction too, if you want.
* I am unclear if you are presenting frequency (which you wrote and I would expect to be counts) or *relative* frequency (turning your values into a portion).
* You were very creative in how you arranged the labels in plot A, but what if you used coord\_flip()? Then your text labels would be horizontal. You could also rotate your map and locate North to the right.
* The first figure has a lot of similar sites (anything with only Haplotype I or III) can you collapse that information into a larger map, and then just do tiny histograms for the exceptions (Georgia, Puget Sound, etc)?

Ashley Townes, Polar Coordinates plot,

The polar coordinates plot is cool; it communicates to me that the density of sockeye is different all over the place. I’m curious if these locations are random, if so, this seems like a reasonable plot to use. However, if there is a longitudinal or spatial relationship between these locations, for example if they are upstream and down stream of each other, I think a standard bar plot that includes river-mile info along with section labels would work better. To me to circular plot would only work if there is not a relationship between locations

I think your legend needs to match up with the colors more precisely. It looks like the red values are great than 1.5, but your caption states the highest is 1.5 that seems a bit of a mis-match.

Ashley Townes, Sockey Run duration,

This plot is so fun! The use of images as your data points and the underwater photo sparks joy! I think it would be cleaner without the gray background at all and slightly larger axis text. I’d like to fish to line up exactly with the year (they look a little bit after the year and a little bit not centered between years.) The fish also look a little bit squished, so if there is a more precise side view available, I’d use that image instead..

Kerry Accola, Figure C,

Strengths: It makes a lot of sense to present the count data on the log scale, I also like that you picked a color scheme that matches the color of the water along the seawall, that is fun.

Comments: When I consider your project, I (personally) am most curious about how and when there is a difference in how fish used the new vs old structure. That is my first question and then, second, I’m curious about day vs night or each of the locations in the structure. So if you were to keep a six panel grid like this, I think I would want to see the comparisons of new vs old as clearly as possible within the same plot, then maybe one row for day, and one row for night. That could be points, like you have, or thin bars.If you keep points, it might look nice to add some transparency and maybe a border to your points. If you’ve looked at this enough that the most important distinction is time of day, then keeping the day/night in the same plots makes sense. I also don’t know if the annotated values add to the plot. Maybe if just a few were added in the high values, that could be helpful. Or write only on the first day of each month. I think I can see there is trend where numbers dramatiocally diminish with time, but I don’t need to know the exact values. How to visibly share information about how counts vary with these three factors (seawall age, location, sun) and temporal variation is tricky.

Re: box around legend, try: ‘theme(legend.box.background = element\_rect(colour = "black"))’

Kerry Accola, Figure A/B,

Sweet maps! Can you put the legend along the bottom? It could be an inset across the open water of the two plots, or just below both plots. I recommend you color the OLD seawall points in one color and the new seawall points in another color rather than use white for both. (Maybe a weathered gray-brown color for the old ones?) Also, what do these points look like with a little bit of transparency for the fill, but a solid perimeter around each point?

I don’t think you need to label each point if the label provides the same information as the color of the point. Regarding the actual count values: although I am a peripheral person to the project, I am not that curious about the actual numbers of fish you saw! I’m too removed from fish migration to recognize if 1000 fish is a lot of fish or a just a few. But I can, even as an outsider, recognize differences. My suggestion is that as you plot, any time YOU distinguish differences between treatments in the data, then use color or shape, to highlight those differences for people like me. I see, between A and B, that the green circle gets bigger in the new seawall sites compared to the old pier sites.