

## EEB 2208

### EXAMPLES OF GOOD “SURPRISE” STATEMENTS FOR DISCUSSION SESSIONS

Here are some examples of good student responses to the first writing assignment. In each case the second (“why?”) part makes clear the reason why the finding was surprising by contrasting it with an alternative outcome that makes logical sense.

*What surprised me was to read that often times in areas with the largest number of people (or densest population) there also is unique and varied biodiversity. It seems that in largely populated areas there often times is [sic] the most urbanization and environmental degradation.*

*I was surprised that the two cities with higher than predicted extinction rates were from Massachusetts. This is because I would consider the two cities relatively small cities. I would think the higher than predicted rates would come from more densely populated cities like N.Y. and Singapore.*

*I was surprised that type III cities (those recently urbanized) had less plant extinction than type I or II cities. Having experienced expansion in a time when power equipment, such as bulldozers, backhoes, etc. were used, I would have thought that these factors along with the larger population of people producing trash would have led to more extensive destruction.*

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Here are some examples that I came up with:

*I was surprised that there wasn't more of a European bias in the cities included in the study given the long history of ecology & natural history in European compared to the rest of the world. (Note that if non-English language papers had been included in the review, then I might also have expected more Asian cities.)*

*I was surprised that more comprehensive modern surveys are not being done today in places where there are historical data sets, because there are more ecologists than ever before and the survey methods are quite simple, so repeating surveys should not be difficult.*

*I was surprised that the regression analysis described on p. 1168 included the constraint “that there were no extinctions without land conversion” because there are other reasons why plant species can go extinct (e.g., introduced disease, overharvest).*

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Here's another example that came up in a class discussion about the hotspot map in a previous year. First, the following observation of surprise was made:

*It was surprising that there is a species richness hotspot in southwestern Australia.*

That sentence would get you 1/2 point if given in a written assignment. I then asked why this was surprising and was told:

*Because western Australia is quite far south, close to Antarctica.*

On a writing assignment, this answer alone would not be enough for the full point because it only lays out part of the explanation. I.e., I still don't know why one would be surprised to find a species hotspot close to Antarctica. But, the person went on to say that:

*Species richness usually declines as one moves away from the equator towards the poles.*

This last part completes the explanation by showing why a richness hotspot close to Antarctica is not what you might expect. The collection of these three statements would get full points.