**Decoupling of taxonomic and ecologic severity of Phanerozoic marine mass extinctions by Drosser, Bottjer, Sheehan, & McGhee**

This article takes a look at two of the mass extinctions in the Paleozoic, and the effects that the loss of biodiversity had on the ecosystems at the time. To define the changes seen in paleoecological systems the authors used scales of change made up of four levels with the first being the advent of a new ecosystem, the second being major restructuring of an ecosystem, the third being shifts in community-types within an ecosystem, and the last being changes the communities present. Despite having a large number of taxonomic losses in the Late Ordovician extinction, the authors found that this only resulted in third- and fourth-level changes in the paleoecosystems. However, the Late Devonian mass extinction resulted in second-level changes, despite the slightly larger taxonomic loss in the Late Ordovician. This is attributed to the loss of dominant taxa in the paleoecosystems which many other organisms may use for energy or habitat. The upshot to the article is that simply trying to maintain diversity may not be the best way to avert the destruction of an ecosystem, rather, the focus should be put on maintaining the dominant taxa upon which the ecosystem relies.

I like that this article was short, sweet, and to the point. It was clearly not primary scientific literature, but it served its purpose in explaining the changes resulting from both of the extinctions addressed. I thought the discussion was relevant because I remember learning about dominant taxa in General Ecology, and Peter Vitousek, one of the authors referenced, actually gave us a lecture in that class. It seems to make sense that simply maintaining biodiversity, while ideal, is not feasible in the long term. Maintaining the dominant taxa of an ecosystem may allow that ecosystem to recover more quickly from all of the damage done due to any of a number of catastrophic events, both natural and anthropogenic. I liked to see them include examples of specific cases of extinction and restructuring that are observed in the fossil record such as the loss of cricoconarids and turnover of conodonts in the Late Devonian mass extinction.

I would have liked to see how they came up with these conclusions. They did include some of the overarching ideas that led to the conclusions presented, but I would have liked to see some data. I suppose I could read all of the other papers, but I am a busy student. I am also not quite sure what a Bambachian megaguild is; I tried to look it up, but all I found were references to a paper by Bambach in 1983, and like I said, I do not have time to read another paper. I assumed that it encompasses a wider range of species than a guild does, and I think that was enough to understand its use in the article. Maybe it is only because this article is a bit old, but I feel like I did not really learn anything that I was not already aware of while reading it. There is no “Ah-Hah!” moment. I also do not really feel inclined to go read more about this subject, but I do understand the importance.

The table describing the paleoecological levels used in defining the changes occurring during each mass extinction was clear and helped to clarify what the different criteria they used to define each level were. The figure was kind of boring, to be honest. I feel like they could have included much more. The article was short, so why not throw in a full page of graphs showcasing examples like brachiopods and bivalves across both extinctions. It just seems a bit superfluous when it is already described well enough in the text in my opinion, but graphs are easier to read, I suppose.