Adam Watson

Write-up 4

Authors, Zaffos and Miller write about marine bivalve genera from the Miocene to the Pleistocene. More so, the paper looks at how the distribution of genera first occurs in the tropics and end in the extratropics. The authors suggest a the potential explanation is “latitudinal distributions preferentially move in a poleward direction”. To determine if this is true the authors suggest a number of questions that need to be answered… Is there latitudinal poleward movement, second is the center of distribution shifted or is it geographic range of a species. Third, how big are the shifts in population and do geologic events effect there movements and lastly, are there variations to the changes and how does time factor into the changes. To begin, Zaffos and Miller parameterixe a unimodal response curve and calculate the latitudinal tolerance and preferred latitude parameters for each taxon in each of the time intervals that span the Cenozoic. Further, the analytical methods used measure the “poleward vs. equatorward drift, and latitudinal tolerance expansion vs. contraction”.

In all, this paper is easily among the easiest to understand that has been assigned. To begin, the intro breaks down the direction the paper is going to take with a well-defined list of questions. It never leaves the reader searching for more information and makes very few assumptions about the reader’s current knowledge of the subject matter. Earlier works by the author are quoted and explained relatively well, not leaving the reader to wonder or search for more material which usually makes a paper feel cumbersome and harder to understand. The analytics of the paper are laid out quite clearly, with most equations shown after the paragraph that describes the methods being used. Albeit, some of the maths might be foreign to many, with a bit of searching it’s not overly hard to understand. Lastly, the results and discussion sections where quite good and brought the paper as a whole back around to the beginning and made clear points and more or less conclusions.

The authors Zaffos and Miller, put together a paper, that could be condenced a bit to keep things a more fluid and clearer without getting lost in detail. While the paper as a whole is good the reader might get lost, as I did, in the analytical methods section. I found the maths a bit difficult to understand, as I haven’t really discussed much or put into practice these methods. Although with a bit of contemplation, the methods become almost clear, I was always left wondering if I was thinking of the methods correctly.

The figures and graphs section of the paper are almost certainly necessary. Without them it would be quite difficult to picture some if not most of the results of the paper.