

Second revision of the manuscript entitled “Factors controlling shell carbon isotopic composition of land snail *Acusta despecta sieboldiana* estimated from lab culturing experiment” by Zhang et al.

This version of the manuscript is significantly improved and the authors addressed most reviewers' comments. In my opinion, this study seems acceptable for publication in its present form. However, I have some additional minor comments for your consideration.

Lines 27-29. Page 1. The authors concluded from their culture experiments that “*snails discriminate plant species as food*”. This statement is, in my opinion, too strong and not supported by the presented data. Published data suggest that in the field, individuals from the same species consume C3 and CAM plants in relation to their relative abundance in the landscape (see a recent study in Yanes et al., 2013: Quaternary Research). I think that a different experiment design, with snails having access to a variety of food resources, should be conducted if the authors want determine whether or not snails indeed select plant species. Bottom-line, I'm not convinced by the presented results that snails select plant species. Note that the authors used food resources (lettuce and corn) that are not present in the natural landscape. Also, the authors have studied one single species. Will all land snail species behave equally?

Lines 8-14. Page 4. I recommend adding a sentence that justify why the authors selected this species. As a reader, I wonder why the authors chose this species over others. Is there a local fossil record of this species? Is this species the dominant in the region? Why this species and not others? Other culture experiments (Stott, 2002, Metref et al., 2003) have used always *Cornu aspersum* because is widely distributed and abundant, and has been intensively studied in terms of its physiology and ecology.

Lines 22-30. Page 13. Even though some studies may have suggested that some snail species tend to select plants, other studies suggest the opposite (see Yanes et al., 2013: Quaternary Research). It might depend on the target species.

Lines 7-10. Page 14. I kind of disagree with this statement. The great majority of land snail species are generalized herbivorous and tend to consume plants in relation to their abundance in the landscape. I am not convinced by the presented data that the target species selected food (see also comments above).

Lines 12-26. Page 15. You can actually calculate potential differences in metabolic rates among individuals using the model by Balakrishnan and Yapp (2004). (See also Yanes et al., 2013:Quaternary Research).

Lines 3-5. Page 16. Are the authors suggesting that the carbon isotope values of land snails are better indicators of temperature than vegetation? If so, I disagree with this statement. Even though they speculate that atmospheric CO₂ can be an important controlling factor of the carbon isotope composition of the shell, they have not monitored this variable.

Perhaps some parts of the main text may need some grammar refinement by a native English speaker.