

Interactive comment on “A positive correlation between plant diversity and productivity is indirectly caused by environmental factors driving spatial pattern of vegetation composition in semiarid sandy grassland” by X. A. Zuo et al.

X. A. Zuo et al.

zuoxa@lzb.ac.cn

Received and published: 27 February 2012

General comments: This paper is to discuss the divers of the diversity-productivity relationship. According to my experience, “Environment factors control the distribution and composition of plant communities, which in turn control the pattern of species diversity and productivity” is true. I believe that to verify that the diversity-productivity relationship is environment-dependent is proper. However, I do not understand why “a positive correlation between plant diversity and productivity is along the environment gradient in sandy grassland “ is hypothesized. Is it consistent for all ecosystems? And

C5896

is it important to hypothesize it in this paper? The paper is not concisely written. In addition, there are a lot of grammatical errors. Some long, complicated sentences are not easy to understand.

Re: All the comments given by the reviewer are very valuable. Thanks for reviewer's valuation. Concerning the writing of paper, Knops who is one of editor in Ecology Letter, helped me revise the English Language. Also he is one of authors in this paper. In addition, I have revised the first hypothesis as "plant diversity and productivity are influenced by both environmental factors and community composition in sandy grassland". We have found that that is more suitable and important in paper.

The paper can be accepted for publication after a revision is made.

Re: Thanks for reviewer's valuation.

Specific comments:

1. The title is too long, it should be more concise. I prefer a title like “The relationship between plant diversity and productivity is driven by environmental factors in the semiarid sandy grassland ”

Re: The reviewer's comments are right. According to referee 1, we have changed the title as the reviewer recommendation " Indirect drivers of diversity-productivity relationship in semiarid sandy grassland".

2. The Abstract needs to be rewritten to make it more concise and understandable. For instance, the first two sentences can be incorporated into one sentence as “Several patterns have been observed in the relationship between plant diversity and ecosystem productivity in both natural and experimental ecosystems, responding to spatial variability of environmental factors and vegetation composition.”

Re: The comments of reviewer are very valuable. We have revised them.

3. The Introduction can be made more concise. I do not think the first hypothesis is so

C5897

important for this paper. In addition in the Introduction section, why it is raised is not clear.

Re: We have revised them and the first hypothesis was changed as "plant diversity and productivity are influenced by both environmental factors and community composition in sandy grassland".

4. Page 11797, line 2. ".. ecosystems include.." should be "ecosystems, including..".

Re: We have revised it.

5. Page 11797, lines 11-14, this sentence is completely unclear.

Re: The comments of reviewer are very valuable. We have revised them.

6. Page 11797, lines 19, ".. environment gradient is.." should be "..environment gradients are..".

Re: The comments of reviewer are very valuable. We have revised it.

7. Page 11801, line 11, "..ter Braak and Smilauer 2002".. should be "..ter Braak and Smilauer, 2002..".

Re: We have revised it.

8. Page 11807, line 19, ".. influence.." should be ".. influences..".

Re: We have revised it.

9. Page 11807, lines 22-25, this sentence is unclear.

Re: We have revised it.

10. Page 11810, lines 1-3, this sentence is unclear.

Re: We have revised them.

11. Page 11810, lines 6-8, this sentence is unclear.

C5898

Re: We have revised them.

12. Page 11810, lines 8-11, this sentence is too long and unclear.

Re: We have revised them.

13. Page 11810, lines 14-18, this sentence is hard to understand.

Re: We have revised them.

Interactive comment on Biogeosciences Discuss., 8, 11795, 2011.

C5899