

Interactive comment on “A probe into the different fates of locust swarms in the plains of North America and East Asia” by G. Yu et al.

Anonymous Referee #1

Received and published: 24 August 2012

Review: bgd-9-11179 General comments This paper discussed the fate of locust in NAP and EAP in the recent hundred years based on climate factor after pesticides treatment in both regions. It is significant to study why they are so active in the following decades in EAP. The authors examine the climate trend and extreme climate to analysis the possible reasons. They found that climate trend in EAP favors the prosperity of locust while climate trend in NAP restrains the locust. And suggest that global warming is a possible factor that should be careful for the returning of the locust in NAP. The paleoclimate analysis is acceptable and there do exist some conditions in climatic trends that favor locust in EAP. It is interesting to obtain this observation in this study. However there are still some specific comments listed in the following:

Specific comments

C3511

1. In Fig. 3, the Restraint locust year and the induced locust year are from record of EAP, but P.11190 line 23 “The combination of cold winter and low temperature during growing season and higher precipitation in spring and summer in NAP greatly restrained locust outbreaks and may have contributed to their decline and extinction soon after 1900AD” Does the locusts history in NAP show that they are also the kind of species prosperous under warm-dry (warm in winter and dry in spring and summer) conditions? If they do, should be mentioned, that will strengthen the argument.
2. The locust species from different subfamilies may have different responds for the pesticides. The point is that a hypothesis should be mentioned “ responds of locust in both regions to the pesticides are similar” since they are different species in NAP and EAP .
3. P.11182 line 4-5 in EAP “extensive application of more effective chemical pesticides at higher intensity. “ Different kinds of pesticides may result in different effects on the locust swarms. It seems that the chemicals which being used in NAP and EAP are not the same? or possibly they are very similar, both are Arsenic baits? Please explain.

Interactive comment on Biogeosciences Discuss., 9, 11179, 2012.

C3512