

***Interactive comment on “Annual net primary productivity of a cyanobacteria dominated biological soil crust in the Gulf savanna, Queensland, Australia” by Burkhard Büdel et al.***

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Dear Matthew,

thank your very much for your very helpful comments. I will include and respond to all your excellent comments. Some of them I already had prepared as for example an explanation why cyanobacteria-dominated biocrust's resurrection is largely a regrowth: It seems that lichens provide an environment for cyano- and chlorobionts that allows considerably higher survival rates (near to 100%) for the cyanobacterial-/algal cell than their natural non associated colonies. It is known from Literature that in cyanobacteria colonies only a certain number (5-30%) of cells survive drought periods, depending

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on onset, duration and rewetting of droughts. High respiration rates are the result of an increased resurrection. However in lichens the whole consortium is coming back to live and they can start after a few hours or, more rarely, days with positive net photosynthesis.

I will extend the introduction and discussion according to your suggestions and will also try to minimize the number of figures..

Best wishes and thank you once more, Burkhard

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