

Interactive comment on “Biological soil crust communities 12–16 years after wildfires in Idaho, USA” by Heather T. Root et al.

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I would like to thank Referee #1 for a quick review that will prompt several clarifications in the manuscript (e.g., making it clear that several species of sagebrush in the region do resprout). In response to the major issue suggested by referee #1, that we actually sampled forest not sage steppe, I wanted to write a quick response to clarify that we actually sampled sage/steppe. Please see the attached pictures of actual plot sampling at the Texas Fire (TX) and the Table Mountain fire (TM) for examples.

As we tried to make clear (page 4 line 5) we sampled a number of *Artemisia* species in this study (and hybrids), not just big sagebrush (*A. tridentata*). Several of these species actually do resprout following disturbance (e.g., *Artemisia tripartita*, *Artemisia arbuscula*, and especially *Artemisia cana*; See e.g., Schultz 2012

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Pocket Guide to sagebrush). *A. cana*, in particular, is widespread (second only to big sagebrush) and can resprout vigorously following fire from roots, root crowns and rhizomes. Because this is outside the scope of our paper on BSCs please see the Forest Service Fire Effects Information System for greater detail and supporting documentation: Howard, Janet L. 2002. *Artemisia cana*. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/plants/shrub/artcan/all.html> [2017, May 17]. This is the likely a strong contributor to the recovery of shrub cover within 12-16 years (as opposed to not sampling sage steppe vegetation).

There were no trees (live or dead) on any of our plots and there was no evidence of trees (logs, stumps) on any of our plots. In contrast, there was evidence of burning (e.g., burned sagebrush stumps) in every burned plot we sampled.

We also made no attempt to quantify grazing effects on BSCs. Many of the burned and unburned plots were within the same grazing allotment (no fences between). Collection of cowpie cover and analysis was just to determine if there was a strong difference between burned and unburned plots (and there was no evidence for this visually in the field or with cowpie cover data).

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Fig. 1. Texas Fire sampling

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Fig. 2. Table Mountain Fire sampling

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