**READING QUESTIONS**

Hungate et al. 2003: Nitrogen and Climate Change

1. Previous IPCC reports assume a certain ability of carbon reservoirs within the biosphere and critical zone to help buffer the effects of rising CO2 levels. What are three of these larger reservoirs discussed in this paper?
2. In these previous IPCC reports, what is missing from many of the global climate models according to Hungate et al.? As a results what are the problems with the current climate models?
3. What is the big take-home message from this article?
4. Examine the figure. The authors distinguish between “CO2-only” and “CO2 and Climate.” What effects are they referring to in this figure and how would changes in “CO2” and “Climate” effect photosynthesis?
5. Considering the nitrogen limitation story presented by Hungate et al. is applying large amount of fertilizer to forests, for example, a possible mechanism to promote carbon sequestration?