Letter to the Editor

To the Editor:

The authors of “Dutchwoman Butte Revisited” (*Rangelands* 29[6]:21–34) have examined a fascinating comparison of grazed and un-grazed sites in central Arizona, and have shown that perennial grasses declined more during the severe drought of 2002 on the un-grazed site. However, I think they draw broader conclusions from the evidence than is warranted. The data indicate differences in the drought tolerances of the dominant perennial grass species at each site (mid-grasses at the un-grazed site, curly mesquite at the grazed site), but hardly signal a new paradigm in rangeland ecology.

The authors acknowledge, but minimize, the difference in soils between the two sites (“both study sites were as similar as we could make them” [p. 29]). The un-grazed site has a loam A horizon a full 6 inches deeper than the grazed site (7 inches vs. 1 inch), a difference that is undoubtedly significant to perennial grasses. Specifically, the deeper soil favors sideoats grama and green sprangletop, whereas the thin surface loam over clay favors curly mesquite. Thus

the initial conditions at the onset of drought were quite different between sites.

The resulting differential declines in perennial grass cover and frequency can be wholly attributed to the relative drought tolerance of curly mesquite, most plants of which may have shrunk in cover but survived while the more vulnerable mid-grasses died. These results do not indicate that grazing in general confers “resilience” on ecosystems, nor is it necessary to invoke “diverse age classification” of the community or enhanced photosynthesis of grazed plants. Although the results do contradict the dogmas that grazing-tolerant plants indicate degradation and that non-grazing is always better for biodiversity, few knowledgeable people still cling to those dogmas anyway. The study results are very valuable for tracking the effects of a major climatic event and for illustrating the importance to community dynamics of species differences in drought tolerance.

Pete Sundt, Rangeland consultant
Safford, AZ, USA
psundt@zekes.com