

Old Trees
A Significant Assessment Issue
Re: Loss of biodiversity and ecological complexity

Grand Canyon Trust

Significant Issue

- Old trees play ecological roles not played by other stages of trees. They may, for instance, support insects, bryophytes, or nesting sites not associated with younger trees.
- Old trees may be particularly vulnerable to insect attack, dieback, or fire.
- A national forest can allow for large-scale landscape planning for retention and replacement of old trees.
- Examples of concern on the Manti-La Sal NF can be (a) projects that thin or eliminate junipers, some of which may be old; and (b) loss of the last, old aspen in particular clones that lack recruitment (e.g., on Gentry Mountain), thus posing a threat to the loss of that particular clone with its unique genetic variation.
- As noted in Lindenmayer, et al. (2014):

In some cases, rather than a given tree species going extinct, its large old tree life stage may go extinct temporarily or permanently. Hence, there is ‘functional extinction’ where the key ecological roles of large old trees are lost even though the particular tree species remains extant.

Information Provided

Lindenmayer, DB, WF Laurance, JF Franklin, GE Likens, SC. Banks, W Blanchard, PGibbons, K Ikin, D Blair, L McBurney, AD. Manning, & JAR. Stein. 2014. New policies for old trees: averting a global crisis in a keystone ecological structure. *Conservation Letters* 7(1), 61–69

Assessment Needed

Demographic modeling of the major tree species in the Manti-La Sal NF should allow discussion of the status of old growth trees and their particular vulnerabilities in this national forest.

That is, where are the old stands (and how old) of particular tree species on the Manti-La Sal NF, and what threats do they face?
This can lead to forest planning for retention of old trees and long-term recruitment of old trees.