

The Aspen Fire on Mount Lemmon and its impact on a Healthy Forest

Brenda Dickason, Safford K-8, & Constance Eisenman, Gridley Middle School, Tucson, AZ Earth Camp for Educators 2013



The Power of Perspective

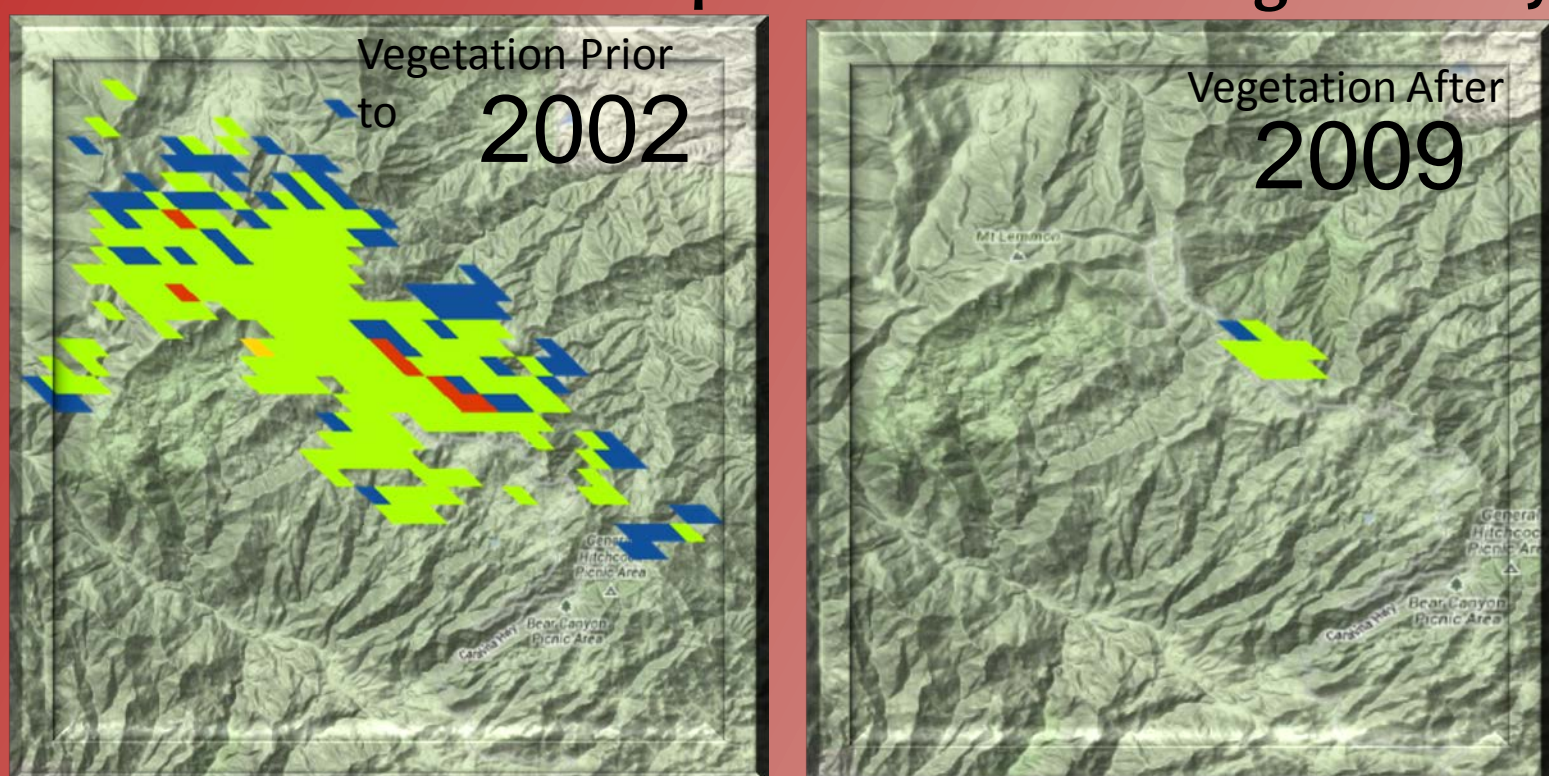
Artist's view of a U.S. Landsat satellite. Credits: NASA.

The Aspen Fire (2003) devastated parts of Mt. Lemmon. It was a high intensity fire that burned both mature and understory trees.

The recovery process is slow and is affected by a number of environmental factors.

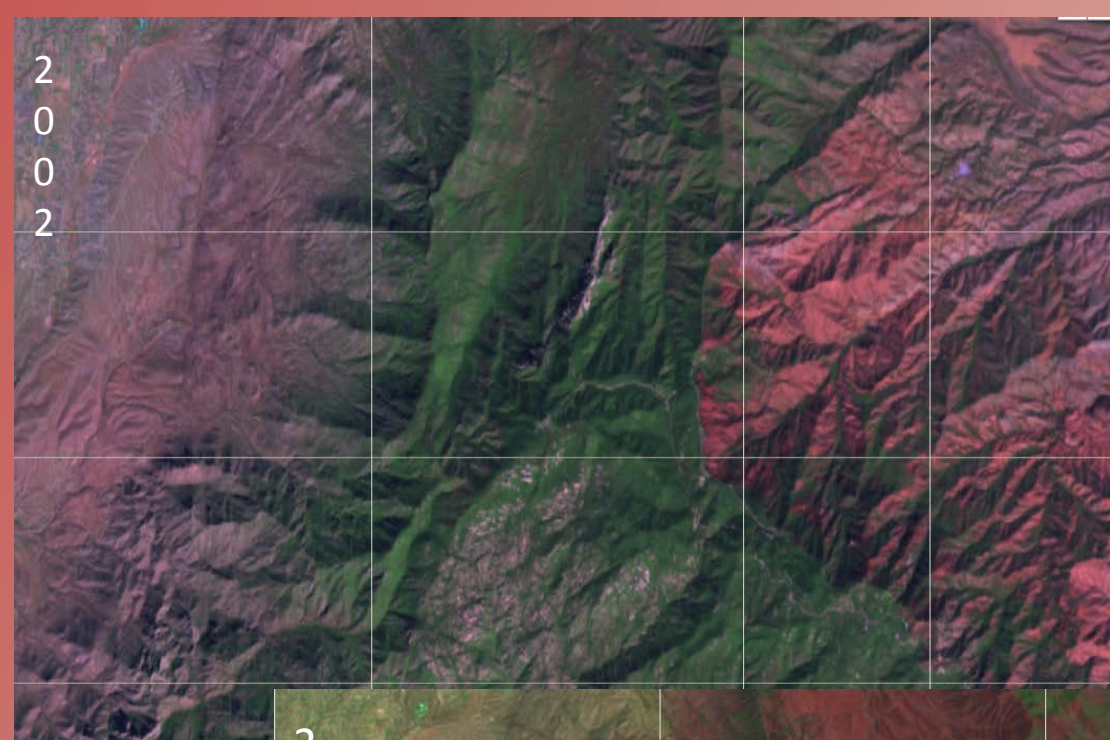
It will take decades for the forested areas on Mt. Lemmon to regenerate, and the mix of trees will evolve for the next century.

MODIS classification maps show different vegetation types



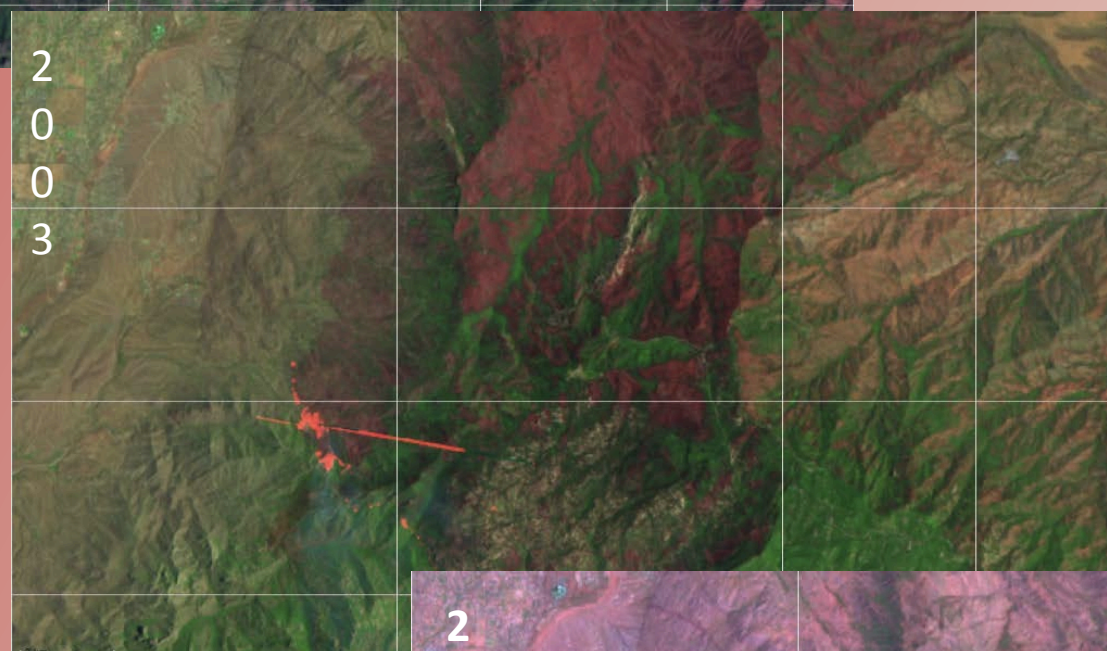
Landsat false color images show vegetation vs. burned area. The red in the second image correlates with the burned area.

These images were accessed courtesy of Google Earth Engine's Trusted Tester Program.

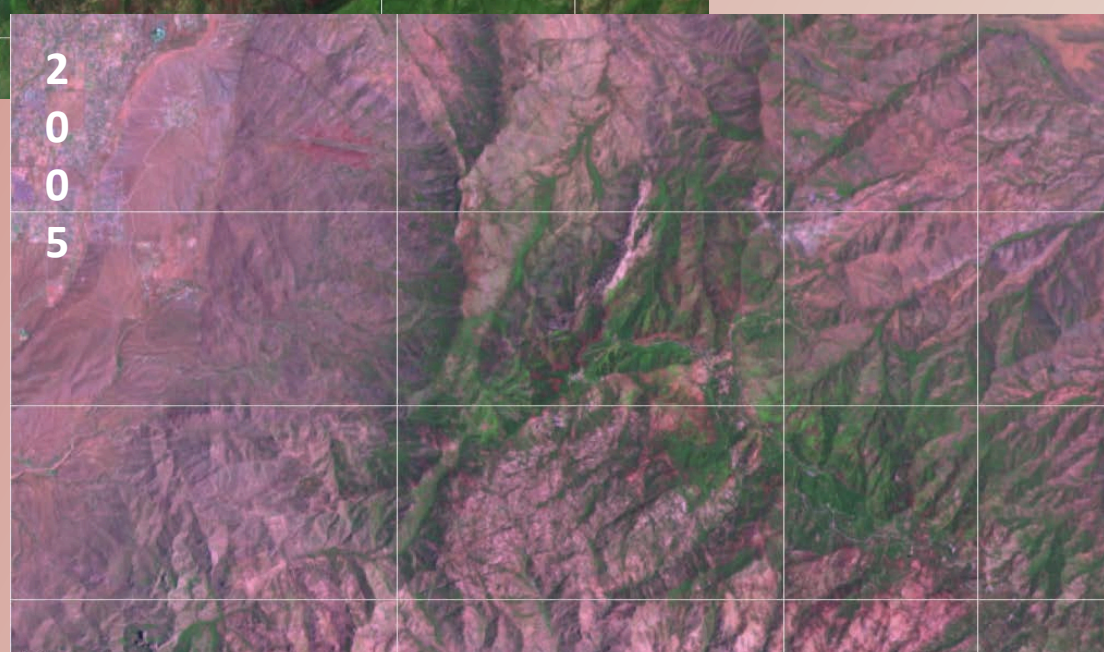


Mt. Lemmon's forested area before the Aspen Fire

This image shows the areas burning during the Aspen Fire



The green area is what is left of the forested area after the fire on Mt. Lemmon.



Higher elevations on Mount Lemmon are dominated by Southwest White and Ponderosa Pines, with mixed conifer forest of Pine and Douglas Fir at the very top.



Forest Prior to Fire



The Aspen Fire burned on Mt. Lemmon from June 17, 2003 until July, 2003. The fire burned 84,750 acres and destroyed 340 homes and businesses. wikipedia.org/wiki/Aspen_Fire



2003 Aspen Fire



High-intensity fires consumed half to all of the forest canopy and everything on the forest floor. <http://cals.arizona.edu/pubs/natresources/az1294/>



After Fire

This exhibit is based upon work supported by NASA under award #NNX10AK14G. Any opinions, findings, conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Aeronautics and Space Administration.