Brandon Prehn

31 January 2016

"Fire on the Mountain – The function of fire in ecology and global processes"

I. Introduction: PINEMAP, an overview of the forestry profession, and objectives
   a. PINEMAP, what is it and why am I here?
   b. Forestry and science
      i. Collaboration between industry and academia
      ii. Perception vs reality, without wood product demand we wouldn't have forests
   c. Class objectives: understand and describe the role of fire in the carbon cycle, ecology, and management challenges
II. Fire: Conditions before, during, and after the fire
   a. The fire season, ideal conditions for fire
      i. Fire triangle
      ii. Weather and fuels
   b. Inside the fire
      i. Show video "Inside the fire" from the International Crown Fire Modeling Experiments
   c. After the fire
      i. Fire tolerant species, mechanisms for survival
      ii. Colonizing species and how they spread to disturbed habitats
      iii. Demonstration of serotinous cone opening (During lecture)
III. Why is fire important?
   a. Evolution of species with fire
      i. Fire dependent species
      ii. Adaptations
   b. Role in the carbon cycle and climate change considerations
      i. Trees made of carbon, total carbon stored as forest biomass
   c. Consequences of suppressing fire
      i. Loss of habitat (grasslands, etc.)
      ii. Species loss
      iii. Fuels (touch on the history of firefighting and the Yellowstone fire as a result. Show imagery? NIR?)
   d. Management uses and considerations
      i. Prescribed burning
      ii. Wildland-Urban Interface
IV. Conclusion
   a. Fire is essential on the landscape
   b. With increased urban sprawl, managers will only be more limited
   c. Questions