



Fire, Insects, and Wildlife

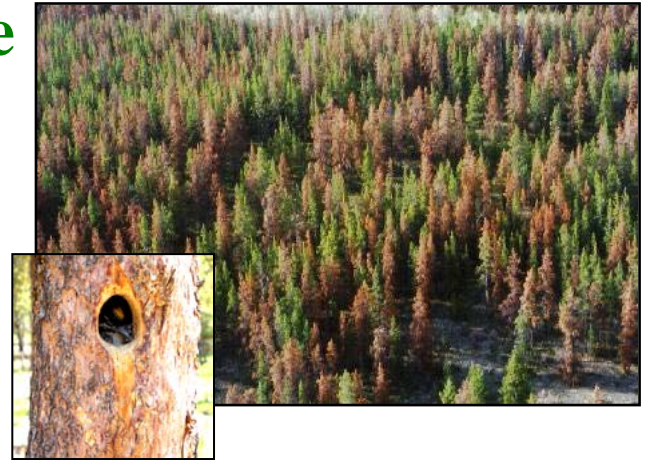
FY 2011 President's Budget

ISSUES

A primary concern is the accumulation and continuity of fuels and changes in climate, leading to an increased frequency of large-scale, high-intensity wildfires and insect outbreaks. Managers need to understand the ecological tradeoffs of various vegetation management options for managing wildfires and insect outbreaks, and reducing risks of catastrophic fire and large insect outbreaks on numerous natural resource components, including wildlife populations, communities and habitats.

IMPORTANCE

The decision time for managers is changing as fire seasons become longer, fire behavior intensifies, and beetle outbreaks expand. Future increases in fire and insect outbreaks will also present more opportunities for salvage logging. Land managers face significant challenges because they are required to implement post-fire and bark beetle management policies, and concurrently meet the requirements of existing laws to maintain habitat for wildlife species associated with deadwood materials. Models of habitat suitability in landscapes affected by wildfire and bark beetle outbreaks are needed by land managers to make timely decisions regarding timber harvest and other management activities. Postfire and pest management policies on public lands and, in particular, salvage logging, are often at the center of legal controversies regarding management decisions. Litigation over salvage logging often reflects that the Forest Service is struggling to demonstrate in a legally defensible manner that critical habitat is being maintained for key wildlife, including threatened, endangered, and sensitive species.



Mountain pine beetle outbreak & Three-toed Woodpecker in central Idaho.

EXPECTED OUTCOMES

We will develop new and field test existing (postfire) predictive models that will integrate climate change, fire, and insects into management decision-making for salvage logging and concurrently wildlife habitat. Remote sensing tools for managers are being developed to predict the most likely distributions of breeding woodpeckers, those species strongly tied to deadwood materials, in landscapes affected by wildfire and by insect outbreaks. Such tools will allow managers to select areas for salvage logging to obtain economic benefits, reduce fuels, and concurrently maintain habitat for key wildlife species.

PARTNERS AND COLLABORATORS

Our efforts to more fully understand the consequences of climate change and subsequent increases in fire and insects on native animals are proceeding in cooperation with:

- USDA Forest Service National Forest System
- USDI Bureau of Land Management
- Numerous state agencies
- Non-governmental organizations (e.g., The Nature Conservancy and Audubon Society)
- Numerous universities