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Title of Paper or Poster

Fire effects on chaparral-associated mammals: responses to fire severity and distance from unburned edge.

Abstract Text: (300 words or less.)

We present interim results from a 3-year study of chaparral-associated mammal species' recovery from wildfire, focusing on the effects of fire severity and distance from unburned edge. Beginning about 13 months post-fire, we repeatedly sampled mammal assemblages using a combination of small mammal trapping grids, remotely triggered camera stations, baited track stations, and bat echolocation devices. Sample sites varied in burn severity (including unburned) and ranged from near the burn edge to ~8 km inside the perimeter. Within each of the three broadly defined taxa surveyed (rodents, carnivores, bats), some species showed clear preferences for burned or unburned habitat, resulting in differences in overall community composition. Within burned habitat, fire severity effects were examined for rodents only, while distance from edge effects were examined for all taxa. Responses varied within and among taxa. Among rodents, the rate of increase in abundance over time was slightly higher on more severely burned plots for kangaroo rats, deer mice, and California mice. Only pocket mice showed a response to distance from edge, with slightly higher abundances close to the burn perimeter. Among carnivores, coyotes were less common at sites far from the burn edge while gray fox were more common in the burn interior. No clear effects of distance from edge were evident for bats, although only the total number of calls recorded has been examined so far. Our results indicate a complex suite of post-fire responses among chaparral-associated mammal species. Despite some differences due to fire severity and distance from edge, most species were detected in burned as well as unburned habitat, indicating a positive prognosis for post-fire recovery.

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