

PATTERNS OF MOVEMENT IN BLACK-BACKED WOODPECKERS

Jennifer C. Woolf, Wildlife Biology Program, University of Montana, Missoula, Montana 59812

Fred W. Allendorf, Division of Biological Sciences, University of Montana, Missoula, Montana 59812

Michael Schwartz, USDA Forest Service, Rocky Mountain Research Station, Missoula, Montana 59801

Black-backed woodpeckers (*Picoides arcticus*) inhabit recently burned forests, forcing both sexes to regularly disperse during the course of their lifetime. Yet we know little about their pattern of dispersal, including both distance traveled and the range of habitat types colonized for reproduction. We collected genetic samples from 274 black-backed woodpeckers across North America. We found a large amount of gene flow across the boreal forest and used a simulation approach to test if this pattern is best explained by frequent colonization of burned patches. We then used the fire history in the boreal forest to estimate the average distance between fires to determine if burned patches are readily available for colonization. Finally, we estimated the average dispersal distance based on the genetic relatedness among birds in our study. In combination, this information can be used to help prioritize land management decisions, such as salvage logging, that affect black-backed woodpecker populations.