Abundance and Nesting Success of Cavity-nesting Birds in Unlogged and Salvage-logged Burned Forest Patches[TWS]

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Three years of post-fire censusing for cavity-nesting bird (CNB) nests was conducted in a northwestern Montana forest which had been partially salvage-logged. Over all three years, nest density was consistently higher in unlogged patches (27.1 8 - 48.33 nests/40ha) vs. salvage-logged patches (7.74 - 21.4 3 nests/40 ha). Diversity of CNB species was higher in unlogged patches with 19 species nesting there compared to only seven nesting in salvage-logged patches. Cavity trees were marked and re-checked each year. Cavity re-use rates were higher in salvage-logged vs. unlogged patches. Habitat characteristics thought to be important in determining suitable nest trees were measured at active nests and at random trees. Tree species, tree size (DBH and height), tree status, and tree density were all important habitat characteristics for most species. Nesting success was monitored in unlogged and salvage-logged patches for one breeding season for the three most common species
(Northern flicker (*Colaptes auratus*), Mountain bluebird (*Sialia currocoides*), and house wren (*Troglodytes aedon*). Northern flickers had significantly higher daily survival rates in unlogged vs. salvage-logged patches. The trend was similar for Mountain bluebirds, but the difference was not significant. House Wrens did equally well in either treatment type. Surprisingly, none of the habitat variables measured correlated with either successful or failed nests. Other factors were likely responsible for lowered nesting success in salvage-logged patches. Identifying, ideal nesting habitat for cavity-nesting birds may help mitigate future salvage logging activities.