

USING TAXA-BASED CONSERVATIONS PLANS TO EVALUATE ECOLOGICAL EFFECTS OF FIRE MANAGEMENT: INSIGHTS FROM BIRD MONITORING IN OAK WOODLANDS

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Abstract: To evaluate impacts of fuels treatments on oak woodland birds, we used bird monitoring to test predictions generated with a Partners In Flight regional conservation plan. Over a two-year period, we compared vegetation structure and bird abundance in untreated oak woodlands to woodlands where shrub-cover had been removed to reduce landscape fire-hazard. We found little evidence that this treatment had an effect on species predicted to respond either positively or negatively to shrub-cover reduction. We suggest that this is a result of the spatial scale of treatments and the retention of shrub patches in treated areas. The most striking difference in bird abundance was a consistently greater number of Western Wood-pewees (*Contopus sordidulus*) in treated areas. This difference is consistent with the prediction from the conservation plan that this species should increase when management activities increase the amount of edge habitat. Greater numbers of Olive-sided Flycatchers (*Contopus cooperi*) and Purple Finches (*Carpodacus purpureus*) at treated stations were the only consistent trends during both years. These species are also associated with edges, providing additional evidence that this treatment changed the bird community by increasing edge habitat. This demonstrates the ability of bird monitoring to identify ecologically important changes that occur as a result of fuels management activities. Monitoring birds is a critical tool for understanding the effectiveness of various treatments in mimicking the effect of fire disturbance as it relates to the maintenance of diversity and processes associated with fire-adapted ecosystems.