

USING ADJUNCT FOREST INVENTORY METHODOLOGY TO QUANTIFY PINYON JAY HABITAT IN THE GREAT BASIN

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Abstract—Pinyon jays (*Gymnorhinus cyanocephalus*) are the principal dispersal agent for pinyon pine seeds in the Great Basin region of the Intermountain West. However, Pinyon jays have exhibited significant population declines over much their range in recent decades, even as pinyon-juniper woodlands appear to have been expanding over the past 150 years. In order to identify and quantify habitat preferences for nesting, seed caching, and general foraging within the woodlands of the Great Basin, we measured stand and tree parameters of Pinyon jay nest, forage and cache sites in Idaho and Nevada using U.S. Forest Service Forest Inventory and Analysis (FIA) survey methodology. We then compared mean values of site characteristics to data collected from standard Forest Inventory plots in order to quantify habitat across Nevada, which contains most of the Great Basin land area. Sites differed in physical structure, with caching sites having lower canopy cover and higher snag basal area than other sites, and foraging sites having higher shrub cover than other sites. About 26 percent of Nevada's pinyon-juniper woodlands resemble the caching habitat preferences of the birds in our study, and about 32 percent resemble nest site preferences. However, only about seven percent of the woodlands meet general foraging habitat used in our study. This research identifies a potential limiting resource for pinyon jays in the Great Basin while also showing the utility of adjunct inventory using FIA methodology.

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