Research Notes

NIGHT ROOST HABITAT OF RADIODTAGGED NORTHERN GOSHAWKS ON LASSEN NATIONAL FOREST, CALIFORNIA

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The northern goshawk is a forest habitat generalist that uses a variety of forest types, structural conditions, and successional stages (Reynolds et al. 1992); however, nests are typically in mature forests (Squires and Reynolds 1997). The U.S. Forest Service listed the goshawk as a sensitive species in the Intermountain, Southwest, Pacific Northwest, and Pacific Southwest regions of the United States. Designation of the species as sensitive was due in part to concern about the status of goshawk populations, particularly in timber harvest areas (Reynolds et al. 1992).


However, other goshawk activities that are critical to recruitment and survival, including roosting, were also identified as management concerns (Kennedy et al. 1994). Selection of sheltered microhabitats as roost sites as a means of reducing thermoregulatory energy expenditures was described for several bird species, including bald eagles (Haliaeetus leucocephalus; Stalmaster 1981), northern spotted owls (Strix occidentalis caurina; Barrows and Barrows 1978, Barrows 1981), boreal owls (Aegolius funereus; Hayward et al. 1993), and starlings (Sturna vulgaris; Kelty and Lustick 1977), and this selection was also suggested for northern shrikes (Lanius excubitor; Atkinson 1993) and great gray owls (Strix nebulosa; Winter 1986). Savings in thermoregulatory energy during night roosting may increase in importance during fall and winter due to lower temperatures and a greater number of nighttime hours than daytime hours during a diel cycle. In fall and winter, diurnally active birds may spend more time on a single branch while night roosting than in any other location during a 24-hour period.

We investigated night roosting habitat of northern goshawks, which have not previously been described (Squires and Reynolds 1997). Our objectives were to (1) describe the night roost habitat characteristics of goshawks, (2) compare habitat characteristics of night roosts to goshawk nests and silviculturally thinned areas (STAs), and (3) assess the influence of season on night roost selection.

Study Area

Our study area was located on the Eagle Lake Ranger District (ELRD), Lassen National Forest, in northeast California, USA, within the eastside pine region of the South Cascades. Elevation ranged from approximately 1,520–2,130 m. Topography was typified by isolated volcanic buttes separated by broad valleys. Conifer forests on lower elevations included areas dominated by lodgepole pine (Pinus contorta) and eastside pine (comprised of ponderosa [P. ponderosa] and Jeffrey pine [P. jeffreyi]). Mixed conifer habitats typically occurred on upper slopes, were dominated by white fir, and included ponderosa and Jeffrey pine, sugar pine (P. lambertiana), and incense

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