

FEATURE ARTICLES

**FACTORS INFLUENCING NEST SUCCESS OF SONGBIRDS IN ASPEN AND
WILLOW RIPARIAN AREAS IN THE GREAT BASIN**

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Abstract. Recent studies have examined the effects of livestock grazing, agriculture, and human habitation on nest predation and brood parasitism in riparian areas in the western United States. However, we know little about factors influencing nest success in riparian areas lacking such anthropogenic influences, in part because the influences are so pervasive. We studied riparian bird communities in a 115 000 ha wildlife refuge where livestock grazing was discontinued >10 years ago, and which has little nearby agriculture or human habitation. We monitored nests on 24 aspen (*Populus tremuloides*) and 10 willow (*Salix* spp.) plots. Brood parasitism rates were substantially lower than at other western sites and did not differ between aspen and willow habitats. Nest success in aspen was relatively high compared to that reported for other western sites and higher than in willow. Predators may have been able to find nests more efficiently in willow than in aspen because territory densities were higher in willow (40 versus 30 pairs per ha, respectively), because willow had less structural heterogeneity, or both. We did not find strong evidence that nest success was influenced by aspen patch size or distance to riparian edge, indicating that even small aspen patches provide valuable nesting habitat. Weather was an important cause of nest failure, particularly at higher elevations during late-spring snowstorms. Our results indicate that riparian areas without major anthropogenic impacts, especially aspen stands, constitute high-quality breeding habitat and warrant conservation focus.

Key words: aspen, brood parasitism, livestock grazing, nest success, riparian birds, willow, Yellow Warbler.