Factors Affecting Nest Survival of Three Species of Migrant Songbirds in the Greater Yellowstone Ecosystem

Robin Carle and Jay Rotella, Ecology Department, 310 Lewis Hall, Montana State University, Bozeman, MT 59717

Throughout the Greater Yellowstone Ecosystem (GYE), low-elevation deciduous aspen and cottonwood habitats are sources of high net primary productivity and species richness. However, high rates of human population growth and accelerated expansion of rural development and agriculture at low elevations favor the presence of nest predators and parasitic Brown-headed Cowbirds (*Molothrus ater*). This may threaten Neotropical migrant songbirds, whose breeding populations may depend on the productivity of low-elevation deciduous habitats. We searched plots of aspen and cottonwood in varying proximities to residential development across southwestern Montana and adjoining portions of Idaho for nests of Dusky Flycatchers (*Empidonax oberholseri*), Warbling Vireos (*Vireo gilvus*), and Yellow Warblers (*Dendroica petechia*). Our objective was to evaluate nest survival of these species across nest-level, patch-level, and landscape-level spatial scales to gain a better understanding of patterns of nest success and failure throughout the GYE landscape. Data will be presented showing how multiple spatial scales influence the nest survival of these three species, and results for each species were compared.