
****ACOUSTIC MONITORING OF NOCTURNAL MIGRANTS IN THE BITTERROOT VALLEY, MONTANA**

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Acoustic monitoring of passerine nocturnal migration represents a unique and passive way to study bird movements. As migrant songbirds pass over the landscape, many emit nocturnal flight calls (NFCs) to presumably echolocate and maintain communication with other birds. Capture of these calls with autonomous recording units (ARUs) allows generation of spectrograms, and species-level identification. In September 2012, MPG Ranch began an

NFC monitoring project that now includes the fall 2012, spring 2013 and fall 2013 migrations. Each season, we installed three ARUs at low-, mid-, and high-elevation sites, and extracted over 2700 NFCs from the recordings. Analyses indicate spatial and temporal trends between sites and between seasons. We detected substantially fewer NFCs during the spring migration compared to the fall seasons. Spring migrant NFC detections were consistent throughout the season at the low-elevation site, but only occurred later in the season at the higher elevation sites. During fall migration 2013, peak migration occurred in late August to mid-September when the mid-elevation site consistently saw higher numbers of NFCs than the low- and high-elevation sites. The low-elevation site continues to detect previously undocumented species on the property, including the Barn Owl and Virginia Rail. In 2014, we plan to monitor fall and spring migration to determine if spatial and temporal trends persist.