
****THE EFFECT OF WILDFIRE SMOKE ON MIGRATORY BIRD SPECIES USING NOCTURNAL FLIGHT CALL MONITORING (Poster)**

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Many migratory songbirds travel at night and produce unique calls while in flight. These species-specific calls are referred to as nocturnal flight calls (NFCs) and function as a way for the birds to communicate with other individuals, echolocate, and maintain flock formation in the darker night hours. This study focused on the impact wildfire smoke density had on the frequency of NFCs recorded. The NFCs were recorded using a 21C bucket microphone from Oldbird.org, and placed at Florence-Carlton High School (FCHS), the floodplain of the MPG Ranch, and Seeley-Swan High School (SSHS). The smoke data, provided by the Montana

Department of Environmental Quality (MT DEQ), were collected by monitors located in Florence and Seeley Lake. These monitors tracked the concentration of pollutant particulate matter less than 2.5 microns (PM_{2.5}) produced by the wildfires. No previous research on the correlation between smoke and NFCs has been found. By comparing the frequency of NFCs with smoke particulate density throughout the month of August, we hope to gain a better understanding of the impact wildfire smoke has on NFC production and potentially on migration timing and patterns.