

# When Every Bird Counts - Maximizing Survey Efforts for the Elusive Black Swift

Lisa Bate\*, Science and Resource Management, Glacier National Park, West Glacier, MT

Amy Seaman, Montana Audubon, Helena

Chris Hammond, Montana Fish, Wildlife and Parks, Kalispell

\*Indicates Presenter

\*\*Indicates Student Presentation

Black Swifts (*Cypseloides niger*) are an unusual Neotropical migrant bird that initiates nesting in Montana when most other birds are completing their breeding seasons (late June/early July). They are considered at high risk of extirpation, due to climate change, as they rely on perennial streams to create the waterfalls they nest behind or near. Biologists in Canada listed Black Swifts (BLSW) as endangered in 2015 due to significant population declines. In Montana, BLSW are a species of greatest conservation need (S1B) and a species of greatest inventory need. Prior to 2011, biologists surveyed for colonies mid-day or late evening, and only three known BLSW nesting colonies had been identified in Montana. Since 2012, we have collaborated with multiple agencies and organizations to identify as many colonies as possible using systematic late evening surveys. Then in 2019, we began to conduct both evening and morning surveys at each site and recorded the high count of BLSW observed at any point during the survey. We conducted 37 paired tests to compare whether there was a difference in evening and morning surveys. We counted significantly more birds in morning surveys. We will use the high-count morning numbers to monitor trends in occupancy and abundance over time. We discuss strategies for monitoring BLSW abundance and population trends and share current maps of BLSW occupancy at Montana waterfalls.