AS THE SPARROW FLIES: HOW BACHMAN'S SPARROWS TRAVERSE A FRAGMENTED LANDSCAPE

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Abstract: Habitat fragmentation is a dominant factor in the decline of many North American breeding bird populations. In addition to the direct loss of total suitable habitat, suitable patches of habitat become more isolated, potentially affecting dispersal and colonization, which may alter population dynamics. Bachman's Sparrow (*Peucaea aestivalis*) is a resident songbird of frequently burned (≤3 years) pine that has been declining due to loss of habitat through development, fire suppression, and fragmentation. Throughout the Bachman's Sparrow's range, patches of suitable habitat occur that are unoccupied, suggesting that dispersal and colonization may be impeded by barriers that result from fragmentation. We conducted a pilot study to investigate the effects of fragmentation and habitat barriers on the movement of Bachman's Sparrows at Ft. Benning, GA. Individuals were equipped with radio transmitters (N = 4) and relocated from their territories across a habitat barrier and released. We then monitored movement to determine whether or not each individual would return to its territory, and if so, whether or not it traversed unsuitable habitat. All individuals returned to their territories; however, 50% of the individuals avoided unsuitable habitat on their return path.