

Abstract: As apex predators, hawks are sensitive to changes in the food chain below them, and so are good indicators of an ecosystem's health. Being dispersed during breeding, during migration when they often concentrate is an ideal time to monitor their populations. In Virginia, migratory counts have primarily been done either from mountain ridges or along the coast, with few observations having been made in the Piedmont. The focus of our study was a comparison of the species composition of the fall hawk flight between a lookout in the inner Piedmont of central Virginia, operated by Liberty University's Biology Department, and a lookout on the Blue Ridge. Broad-wing Hawks predominantly use soaring flight during migration, while many other hawks make less use of soaring flight and employ more flapping flight. Because thermals used by soaring species are more readily available in the Piedmont, while ridge updrafts used by other species are more prevalent along mountain ridges, we hypothesized that Broad-winged Hawks might occur in greater proportions at our Piedmont lookout than at a ridge lookout. We performed visual counts of migrating hawks at Candler Mountain in 2018 between September 13th and October 3rd during the peak Broadwing migration and compared these data to corresponding data from Rockfish Gap on the Blue Ridge. Candler Mountain averaged 95.0% Broad-wings while Rockfish Gap averaged 87.4%. Although a T-test indicated that this was not a significant difference ($P=0.089$), the results were suggestive of a possible difference, and a small sample size may have prevented finding a significant difference. Future investigation is warranted to determine if the difference suggested might be significant. If so, this might reflect a real difference in species composition between lookouts, although potential systematic biases in counts at the two lookouts also need to be considered.