



Presenter

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[Leveraging citizen science data to study climate impacts using a backyard bird](#)

Migrating birds are sensitive to climate change as shown in species' seasonal arrivals, departures, and modifications to breeding ranges. Citizen science observations can help to quantify these changes as well as help inform conservation practitioners and the general public on the effects of our changing climate. Between 2007-2012, my colleagues and I carried out a study on Painted Buntings (*Passerina ciris*) entitled, the "Painted Bunting Observer Team Citizen Science Project for North and South Carolina." The Painted Bunting is an iconic species, popular at backyard bird feeders in the Carolinas and along the Atlantic Coastal Plain in the Southeast. We hypothesized that: 1) arrival and departure dates for the buntings in the Carolinas will change due to climate change effects on temperature, and/or habitat characteristics; and, 2) the Painted Bunting breeding range will change over time because of climate change. We predicted that warmer temperatures would cause the birds to arrive earlier in spring and stay later in fall. We also predicted that the breeding range would move north and west of its established range. Data for the study was contributed by scientists working with citizen science observers, allowing for a greater exchange of information about the biology of the birds and their changing environment with the general public. We believe that our data show a trend towards climate resilience for this species. Not all bird species exhibit resilience, and therefore, our results may not be indicative of other species. Future study should focus on habitat change due to climate impacts, and the critical resources necessary for the longevity of many of our common migratory bird species.