

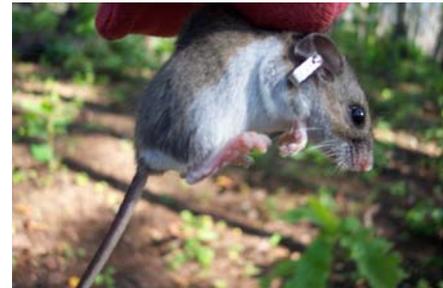
WILDLIFE RESPONSE TO DISTURBANCE



Understanding how natural disturbances affect vertebrate communities is key to developing and gauging the success of ecosystem and forest management activities. Yet little is known about how disturbance-generated forest features affect wildlife species or communities, or wildlife habitat quality of upland hardwood forest types. Working with several

collaborators and partners in [Alabama](#), [Tennessee](#), [North Carolina](#), [South Carolina](#), and [Florida](#), the Upland Hardwood Ecology and Management RWU 4157 is studying the response of wildlife communities, including rodents, shrews, reptiles, amphibians, birds, and arthropod prey to [forest disturbances](#) such as prescribed [fire](#), wind disturbance, and forest management practices. Our research in upland hardwood forest addresses:

- Bird, rodent, shrew, reptile, amphibian and arthropod community response to fuel reduction treatments in southern Appalachian hardwood forest of [North Carolina](#). This study is part of the multidisciplinary National Fire and Fire Surrogate Study (<http://www.srs.fs.fed.us/ffs>). (Contact: Cathryn H. Greenberg).
- Bird, rodent, shrew, reptile, and amphibian response to wind disturbance and coarse woody debris in the southern Appalachians of [North Carolina](#) (Contact: Cathryn H. Greenberg).
- Long-term changes in bird community composition, and arthropod prey as forests mature after 2-age harvests in the southern Appalachians of [North Carolina](#) (Contact: Cathryn H. Greenberg).
- [Bat](#), bird, rodent, shrew, reptile, and amphibian response to 3 oak



regeneration treatments including prescribed [fire](#), midstory reduction, and shelterwood-burn in [Tennessee](#) and [North Carolina](#). This study is part of a regional [ecosystem restoration](#) study. (Contact: Cathryn H. Greenberg or Callie Schweitzer).

- Long-term changes in forest food resources for wildlife, including [fleshy fruit](#) and hard mast ([acorns](#), hickory nuts) production as forests mature after 2-age harvests in the southern Appalachians of [North Carolina](#) (Contact: Cathryn H. Greenberg).
- Effects of fire frequency and tree thinning on birds, reptiles and amphibians in pine-hardwood forest on the southern Cumberland Plateau, [Alabama](#) (Contact: Callie Schweitzer).
- Cerulean warbler populations, breeding status, habitat-landscape relationships, and GIS predictions of occurrence (Contact: Callie Schweitzer).
- Effects of forest management on [bat](#) habitat use and populations in [South Carolina](#), [North Carolina](#), and [Kentucky](#) (Contact: Susan Loeb)
- Whether National Parks versus National Forests in the southern Appalachians of [North Carolina](#) and [Tennessee](#) function as “sources” or “sinks” for early succession bird species (Contact: Kay Franzreb).
- Bird response to clearcut and shelterwood harvests in the southern Appalachians of [North Carolina](#) and [Tennessee](#) (Contact: Kay Franzreb).
- Bird response to the loss of Fraser fir and eastern hemlock in the southern Appalachians of [North Carolina](#) and [Tennessee](#) (Contact: Kay Franzreb).
- Predicting changes in the distributions of select bird species in response to global climate change (Contact: Kay Franzreb).
- Assessment of southern National Forest bird monitoring program (Contact: Kay Franzreb).
- Reproductive success of high elevation songbirds in response to acid deposition and consequent calcium depletion in an important prey item – snails! in the southern Appalachians of [North Carolina](#) and [Tennessee](#). (Contact: Kay Franzreb).

Working with several [collaborators and partners](#), our scientists also maintain some studies within coastal plain ecosystems, including:

- Red-cockaded woodpeckers in [South Carolina](#) (Contact: Kay Franzreb).
- [Florida](#) scrub-jays (Contact: Kay Franzreb).
- Long-term landscape scale monitoring of amphibians at ephemeral ponds in regularly burned versus hardwood-invaded Florida longleaf pine-wiregrass uplands of the Ocala National Forest, [Florida](#). (Contact: Cathryn H. Greenberg).