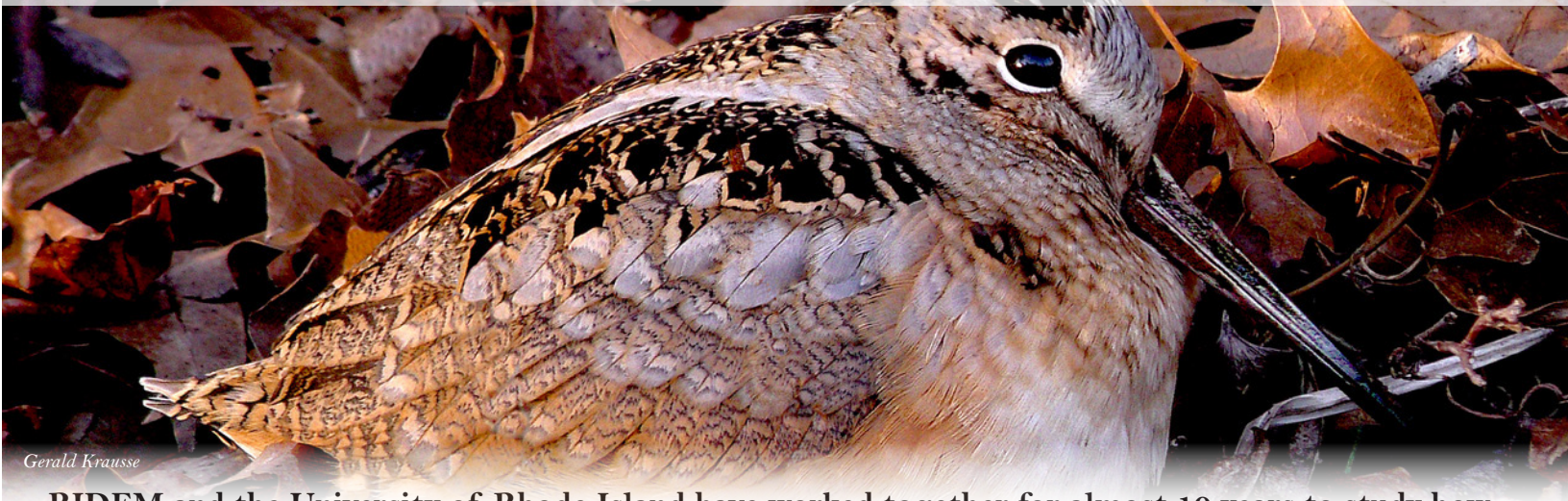


# University of Rhode Island & RIDEM

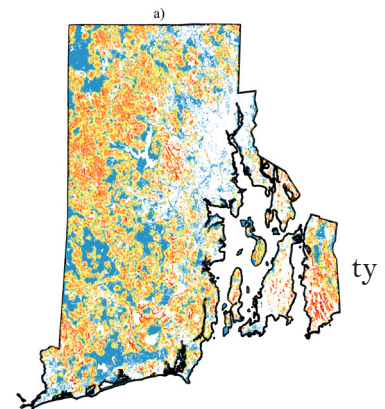
## Early-successional Forest Research Collaboration



RIDEM and the University of Rhode Island have worked together for almost 10 years to study how forest management affects the movement and habitat use of the American Woodcock, a migratory bird of conservation concern in the Northeast, and associated wildlife. Although woodcock are shorebirds by heritage, they avoid beaches like their brethren and instead mostly inhabit young, early-successional forest in the eastern U.S. Consequently, woodcock require some type of forest management to thrive, and our collaborative research has focused on where and what type of forest management is best for woodcock and other associated wildlife.

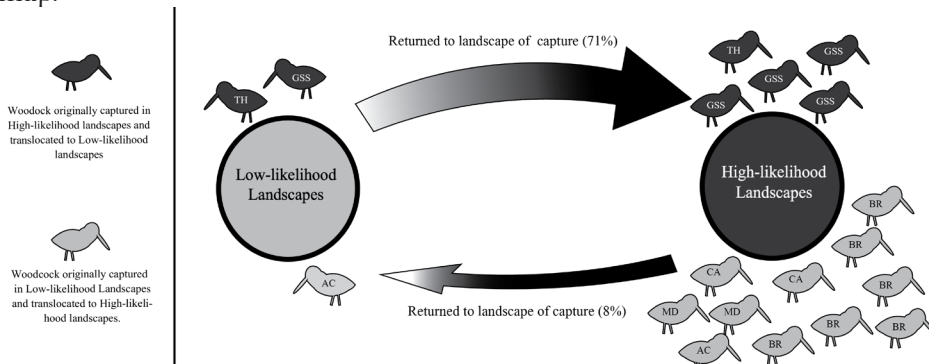
### Mapping Rhode Island's Forests

An early essential task was to map existing forest types in Rhode Island, including the <3% of the state that constituted upland young forest. **We have radiotracked > 100 woodcock to determine their movements and habitat requirements and to build a predictive model of resource use.** These were then combined to create a 'likelihood of use' map that classifies all forested areas in the state based on where woodcock are likely to occur. We also showed that young forest habitat created for woodcock benefits other wildlife including other migratory birds that are also high on the Rhode Island list of wildlife of conservation concern. This probability of use map has been used by RI DEM and the Natural Resources Conservation Service to guide forest management on public and private lands - in short, it shows where forest management can get the best 'bang for its buck'.



### Tracking American Woodcock

We recently validated and tested this model of woodcock resource use by conducting a reciprocal transplant experiment - we relocated male woodcock between managed RIDEM areas that were classified as high- or low-likelihood of use. The expectation was that birds moved from low- to high-likelihood-of-use areas (or 'landscapes') would stay once moved, while those moved from high- to low likelihood-of-use areas would return to where they were first caught. The woodcock in our study overwhelmingly selected and returned to landscapes that ranked higher in likelihood-of-use on the statewide map.



*Map of RI showing the probability of habitat use by American woodcock*



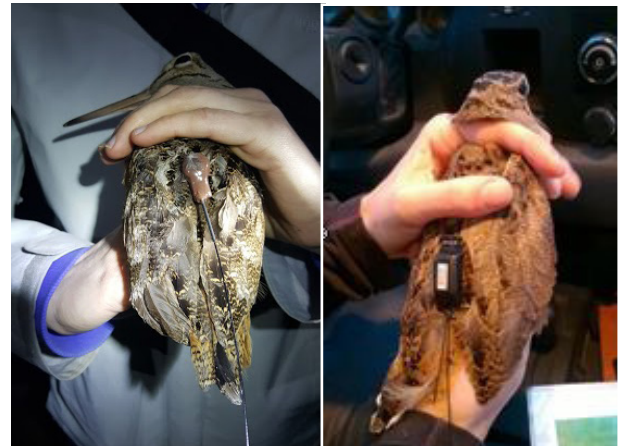




**These findings are particularly relevant for young forest management within RI, as they emphasize the importance of creating new habitat within landscapes that are a) already favorable to woodcock, and b) in close proximity to other managed young forest areas.**

A recent spatial dataset on tree height (LiDar) procured by RIDEM has made possible a more accurate classification of forest types. We used this data along with 2018 imagery to produce an updated map of young forest habitat in RI. We then updated the “likelihood of use” map for woodcock and prepared a statewide map with ratings of how much a new clearcut in any location would improve the suitability of the area for woodcock. Our maps are available to the public on the Rhode Island Woods website (<https://rhodeislandwoods.uri.edu/>).

**Recent advances in radiotransmitter technology have produced miniaturized GPS backpacks for woodcock; this has made possible for the first time the tracking of Rhode Island woodcock during fall, winter, and spring when they presumably move south to regions unknown.** This satellite-based tracking system will establish when woodcock depart in fall, the pace of fall migration and the location of key stopover sites. In addition, we will learn when and where mortality of woodcock occurs during the year, their patterns of habitat use during winter, and the timing and key stopover sites used during spring migration. This RI study is part of the larger Eastern Woodcock Migration Research Collaborative, a multi-state group of researchers, who are using the same GPS-satellite technology to study populations of woodcock throughout the Atlantic Flyway.



*Left: American woodcock with backpack GPS tracker  
Right: American woodcock with standard VHF transmitter*

## Citizen Science

We have also created the first citizen-science-based, state-wide survey of woodcock distribution and abundance (<https://facebook.com/ProjectTimberdoodle>). This project produces a regular population estimate of woodcock and allows us to further refine our models of woodcock resource use in relation to certain forest management. Project Timberdoodle also helps us to engage with a diverse public audience that includes non-hunters who are naïve about the importance of forest cutting to produce wildlife habitat. **After two years of Project Timberdoodle, we have engaged over 130 Rhode Island residents and completed roughly 100 singing ground survey routes throughout Rhode Island.** Additionally, our data suggests that many more participants now understand what young forest is and why it's important.

## Relevant Publications

Publications produced by this collaborative work may be accessed at: <https://web.uri.edu/forestry/project-reports/>

