

Young forest management: Conservation that's for the birds!



The conservation conundrum

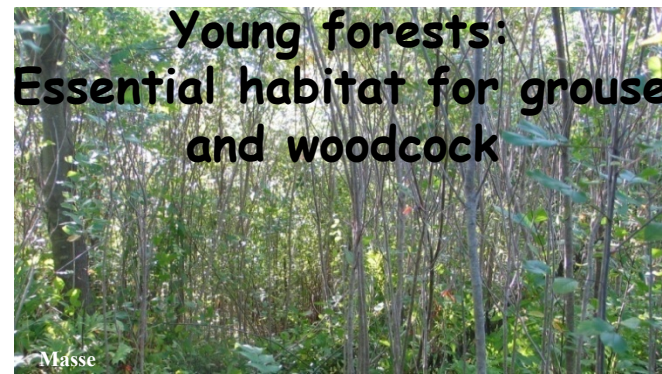
Early successional forest and shrubland vegetation types (hereafter young forests) are short-lived and easily lost to other land uses (e.g., development) or degraded as forests naturally grow older.

Conserving young forests in the Northeast, USA, is an important management concern because young forests and associated wildlife species are relatively rare and require active management. Accordingly, conservation agencies in Rhode Island are actively promoting forest management practices such as



clearcutting to create young forest on government and private lands to benefit young forest birds and other wildlife. Our research increases understanding of ecology and management issues, and strengthens outreach programs to promote more efficient forest management in southern New England.

Young forests: Essential habitat for grouse and woodcock



Populations of Ruffed Grouse and American Woodcock have declined across the eastern, USA, since the 1960's. Despite their popularity as upland game birds, hunter-induced mortality is not thought to be driving population declines. Rather, loss and degradation of preferred young forest habitat is the principle factor influencing population trends.



We study populations of grouse and woodcock using a combination of statistical modeling and radiotelemetry to determine how these birds respond to certain forest management practices and select habitat on modern-day landscapes. For example, on wildlife management areas in Rhode Island, grouse population persistence is most strongly influenced by survival and recruitment.

Young forests are the most consistent component of habitat used by grouse and managing fewer larger (e.g., 100-ha) patches of young forest is more beneficial than managing more smaller (e.g., 25-ha) patches.

Moreover, managing patches of young forest and forest openings increases probability of use by woodcock of adjacent forests.



Forest openings: Important areas where woodcock breed and roost



Young forests provide important daytime cover where woodcock rest and feed, but forest openings such as recent clearcuts, agricultural fields, and meadows are required for breeding and roosting during spring and summer nights, respectively.

Importantly, woodcock frequently move between these different vegetation types at dawn and dusk.



We study the movements of woodcock between forests and fields using intensive radiotelemetry to understand the benefits gained by woodcock that commute during summer. At dusk, woodcock move from moist forests where preferred foods (e.g., earthworms) are 3–4 times more abundant to drier forest openings where mammalian predators such as raccoons, foxes, coyotes, and fishers are less active. Thus, predator avoidance is a critical benefit gained by woodcock that commute. Moist



young forests provide areas for woodcock to feed by day while drier forest openings provide areas to safely roost (on the ground!) by night.

More bang for the buck: Managing woodcock habitat benefits non-game birds too



The most efficient method for managing woodcock habitat involves clearcutting patches of older forest to provide necessary young forests and forest openings. When implemented responsibly, clearcutting can mimic natural disturbances that once created patches of young forest by setting back forest succession or aging. We study the breeding bird communities associated with managed woodcock habitat using standard point count surveys to document

which non-game birds also benefit from woodcock habitat management practices. At least 28 other bird species are associated with woodcock singing grounds, the forest openings where woodcock breed, and the number and diversity of birds at these sites are at least 1.5 times greater than random forest sites.

As a result, public and private

land managers concerned with bird conservation can adopt woodcock best management practices and be confident that other species of young forest birds will also be conserved.



"A diversity of wildlife requires a diversity of habitats"



The Northeast, USA, is dominated by forested land, but most forest stands are ≥ 60 years old and will continue to grow older each year.



For some species, older forests represent optimal habitat. For others, such as young forest wildlife, older forests represent degraded habitat at best and non-habitat at worst. Without active forest management on federal, state, and private lands, young forests will continue to become less common and populations of young forest wildlife will most likely continue to decline. Unfortunately, young forest management practices might be viewed negatively by some land managers. However, research highlighting the importance of young forests for the ecology of key wildlife and conservation of wildlife diversity as a whole can help garner public support for the types and amount of young forest management necessary to curb population declines.



Additional information

For additional information including links to relevant websites, outreach programs, and other resources please visit web.uri.edu/forestry.

Articles published in the following peer-reviewed journals can also be found at the above web address:

- Northeastern Naturalist
- Wildlife Biology
- Journal of Wildlife Management
- Behavioral Ecology
- Forest Ecology and Management



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