

Title: Condition varies with habitat choice in postbreeding forest birds

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Year: 2013

Publication: The Auk. 130(3): 417-428.

Key Words: [body condition](#), [clearcut](#), [early-successional forest](#), [habitat choice](#), [mature-forest birds](#), [postbreeding period](#)

Abstract: Many birds that are experiencing population declines require extensive tracts of mature forest habitat for breeding. Recent work suggests that at least some may shift their habitat use to early-successional areas after nesting but before migration. I used constant-effort mist netting in regenerating clearcuts (4-8 years postcut) and dense mature-forest understories to assess (1) whether most bird species of mature forests show habitat shifts after breeding; and (2), on the basis of several measures of condition, whether birds using early-successional habitats garnered any benefits or penalties, compared with those that remained in forests. I captured 3,845 individual birds of 46 species at four pairs of sites in mature Allegheny hardwood forests in northwestern Pennsylvania during the postbreeding periods of 2005-2008. Most, but not all, forest birds were captured at higher rates in cuts than in forests, and that pattern persisted through the postbreeding season. Using an information-theoretic approach, I found strong support for a species-habitat interactive effect on both molt progression and body condition as measured by residuals from species-specific regression of mass on wing chord. Some, but not all, forest birds appeared to be in better condition when captured in cuts than when in forests. I found no support for a habitat effect on presence of fat or ectoparasites. My results reveal that habitat choice in the postbreeding season is correlated with physiological condition for a subset of forest birds, which suggests that the maintenance of such early-successional habitats in mature forest may benefit these species.