Survey of Breeding Birds at the Coopers Rock Crop Tree Demonstration Area

Summarized by
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Crop Tree Management treatments can provide suitable habitat for both forest-interior and edge-tolerant species. Both groups established territories and nested within the harvested areas during the survey period.

From 1995 to 1997, breeding bird territories were drawn for forest interior and edge-tolerant species inhabiting the Coopers Rock Crop Tree Demonstration Area. Maximum (32 crop trees released), Moderate (25 crop trees per acre released), Minimum (21 crop trees per acre released) Crop Tree Management treatments resulted in a greater number of territories for both groups. Harvesting opened the canopy which allowed understory and midstory structure to develop, while the remaining crop trees provided suitable habitat in the canopy. Crop Tree Management applications were compared with a traditionally thinned treatment and unharvested (untreated) areas.

FOREST-INTERIOR SPECIES

Many forest-interior species, like this scarlet tanager, use crop trees in the main crown canopy. Free-to-grow crowns provide better viewing opportunities for bird-watching landowners.

The scarlet tanager, a particularly attractive forest-interior species to many landowners, had almost 3 times as many territories in the harvested areas as it did in the unharvested areas. Hooded warblers, black and white warblers, and American redstarts, all forest-interior species, had many more territories in the treated areas. Hooded warblers were especially abundant in the Moderate and Maximum Crop Tree Management units. Ovenbirds used the harvested areas only slightly more frequently than the unharvested areas.

The only forest-interior species with more territories in the untreated area was the black-throated green warbler. In a previous study in northern hardwoods, it showed sensitivity to heavy logging (>50% of the volume) but not light logging (<25% of the volume). In this study, the areas receiving the lightest harvesting treatments were not as desirable as the unharvested areas for this species.

For forest-interior species, few nests were found, probably because many of these species were canopy nesters and their nests are difficult to locate. Therefore, the effects of crop tree management prescriptions on nesting success could not be thoroughly evaluated. However, of the three forest-interior species nests found (2 Hooded Warblers and 1 American Redstart), two of these three nests successfully fledged young.

EDGE-TOLERANT SPECIES

As expected, edge-tolerant species were most abundant on the Maximum and Moderate Crop Tree Management treatments where dense mid-story vegetation provided their traditional nesting habitat. The wood thrush was the most common edge-tolerant species with the greatest number of territories and the most nests monitored. Nine wood thrush nests were found on the harvested plots and seven of these successfully fledged young. No wood thrush and no gray catbird nests were found in the untreated area. Nests of other edge-tolerant species monitored on the harvested plots included eastern towhee (1 nest, 1 successful), eastern wood-peewee (1 nest, 1 successful), gray catbird (3 nests, 1 successful), and red-eyed vireo (2 nests, 1 successful). Of 16 nests monitored for edge-tolerant species, 11 successfully fledged young.

As expected, edge-tolerant species like the rufous-sided towhee reproduce very well in the dense understory and midstory vegetation that often develops following a Moderate or Maximum Crop Tree Management treatment.

SUMMARY

Forest-interior species had more than twice as many territories in harvested areas as they did in unharvested areas. Edge-tolerant species had more than three times as many territories in harvested habitat. Of the harvested plots, the traditional thinning had the fewest territories (forest-interior and edge-tolerant), and the Moderate Crop Tree Management treatment had the most. Landowners interested in having a variety of bird species on their property should consider crop tree management prescriptions to help attain that goal.

Note: This article was summarized from information found in BREEDING BIRD USE OF CROP TREE RELEASE HARVESTS, COOPER'S ROCK STATE FOREST, WEST VIRGINIA by Petra Bohall Wood, West Virginia University; John B. Churchill, West Virginia University; and Toni McClellan, USDA Forest Service, Northeastern Area, State and Private Forestry; in press.