APPALACHIAN MOUNTAINS JOINT VENTURE

FULL ROTATION CONSERVATION PLANNING

Just as we are beginning to recognize the importance of conserving birds across their full annual cycle, we propose a similar framework for considering the management of forests across the entirety of their harvest rotation. **Full Rotation Conservation Planning offers a prioritization framework for active forest management that allows for the integration of various species priorities within the same landscape.** By considering the landscape-level habitat needs of a comprehensive suite of target species, we can identify the highest priority areas to provide high-quality habitat throughout all successional stages.

THE NEED

Most commonly, habitat management for priority species begins with biologists researching and compiling stand-level management recommendations for each species, and sharing these recommendations with foresters and land managers. It is then left to foresters and land managers to assess a stand and decide which priority species they should target in the stand, and then apply the recommended best management practices when planning the harvest or other treatment. This is problematic for a few reasons. First, this approach sets up the idea that priority species are competing with one another-that only one target species can be selected for a stand, to the detriment of other priority species. Second, this approach offers no guidance to land managers about where on the landscape the management should be planned. It provides land managers with lists of priority species and stand-level management recommendations, but provides no direction on which areas should be targeted for management for the various species.

A NEW APPROACH

The goal of Full Rotation Conservation Planning is to prioritize forest management in stands that are embedded within landscapes that have features that are suitable for multiple priority species. Within these prioritized stands, management work may not create suitable habitat for all of these species at the time of management, but can benefit each species over time as the stand ages through the full harvest rotation.

Full Rotation Conservation Planning begins with the development of a list of priority species and the identification of landscape-scale features important in their habitat occupancy. A comparison of the landscape-scale habitat features important for our Virginia Highlands Focal Landscape's priority species shows that it is possible to meet the landscape-level needs of many species by prioritizing stands with certain characteristics (bolded in table at right). A GIS analysis to identify forest stands exhibiting these landscape-scale characteristics creates a map highlighting forest blocks with the greatest potential to offer habitat for priority species throughout the full harvest rotation (figure below). For example, in a prioritized stand, a shelterwood harvest will offer habitat for Cerulean Warblers, while years later, following an overstory removal and additional growing time, the same stand will be in the correct landscape position to offer habitat for Ruffed Grouse. As the stand ages, a thinning will improve habitat for Wood Thrush in a stand that already meets their landscape-level needs. Recommendations for stand-level management for priority species will be synthesized by common management practices, such as thinning, shelterwood, and more. More limiting landscape-scale characteristics (indicated with an asterisk) can be incorporated into stand-level guidance as well.

Species	Landscape-scale Features (if known)
Allegheny Woodrat	*Near existing woodrat populations
Cerulean Warbler	**>70% Forest Cover within 6 mi** Surrounding large blocks of closed-canopy forest **within 5 miles of CERW population**
Wood Thrush	**Forest blocks over 250 acres** **> 80% forest cover within 1 mi** > 65% forest cover within 3 mi
Ruffed Grouse	**within 5 miles of existing grouse observations** >75% forest cover
Eastern Whip-poor-will	
Kentucky Warbler	Forest blocks over 125 acres Near streams
Timber Rattlesnake	*south to southwest facing slopes
Eastern Spotted Skunk	>200 acre forest patch size
Golden Eagle (Wintering)	*north-south oriented cliff lines
Black-billed Cuckoo	
American Woodcock	**within ½ mile of a stream, wetland, or waterbody**
Yellow-billed Cuckoo	
Fisher	*>50% mature forest
Rusty patched Bumble Bee