



KENTUCKY HEARTWOOD

Protecting the Beauty and Wellbeing of Kentucky's Native Forests

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Elizabeth Robinson
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RE: Redbird Midstory Removal Proposal

March 15, 2010

Dear John & Elizabeth,

Over the last year and a half I've had the opportunity to get to know and respect many of the personnel at the Daniel Boone National Forest. While we may have disagreements on issues of policy, philosophy, or our interpretation of the landscape, I have nevertheless thought highly of most of the people I have met. It is with this in mind that I sadly say how overly disappointed I am in this proposal, for it is not only substantially biased, but it is indeed misleading and perhaps even fraudulent.

Before I get into details, I also think it is appropriate for me to point out here that I have no interest in procedure for procedure's sake, or for pointing out every little mistake to make your professional lives more difficult. The issues I present here are substantial and I hope that you will take them seriously. What follows gets to the heart of why much of the public, including respected members of the research community, has little trust in the U.S. Forest Service.

I. Purpose and Need: Wildlife Habitat

The proposal presents a list of species that will benefit from this proposal, most of which are bird species. Upon taking this list to Dr. Gary Ritchison, ECU Foundation Professor and foremost ornithologist in Kentucky (a Google Scholar query of his name will yield many dozens of published papers), I was met with the response: "Wow, they're just making this stuff up." Dr. Ritchison was kind enough offer some initial thoughts species presented by the Daniel Boone as benefiting from this proposal.

- The Cerulean warbler is a canopy species, and doesn't have much care for the midstory. Ironically, the Group One project degrades some of the best Cerulean habitat in the District, and now this project which will do nothing to help (and will indeed harm it when the intended shelterwood cuts are proposed and implemented) is listed as a species being helped by the project.
- The Sharp-shinned hawk relies primarily on dense conifer stands. The project area is not typical Sharp-shinned hawk habitat
- Turkey occur just about everywhere that there is mast, and are exceedingly common.
- Wood thrush is most associated with old-growth type deciduous forests. These types of forests are associated with multiple age classes, as opposed to the simple and forced two-aged structure resulting from this project. In Dr. Ritchison's opinion, removing the midstory would destroy Wood thrush habitat and cause it to not nest there, contrary to what is presented in the project proposal.
- Worm eating warblers are associated with the forest floor, not the midstory.

- Swainson’s warbler likes dense rhododendron thickets. A dense midstory should be of no concern to this species.
- Ovenbirds and Kentucky warblers use the midstory for singing. Removing the midstory would likely degrade Ovenbird habitat
- Towhees are everywhere
- Nuthatches are ubiquitous

Further, the list of species aided by this proposed action includes endemic salamanders and corn snakes, both terrestrial mammals that should not be impacted by the presence or absence of midstory trees.

I cannot stress enough how problematic this is, both ethically and legally.

NEPA regulations state:

TITLE 36--PARKS, FORESTS, AND PUBLIC PROPERTY CHAPTER II--FOREST SERVICE,
DEPARTMENT OF AGRICULTURE PART 219_PLANNING--

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Subpart A_National Forest System Land Management Planning

Sec. 219.11

Role of science in planning.

(a) The responsible official must take into account the best available science. For purposes of this subpart, taking into account the best available science means the responsible official must:

(1) Document how the best available science was taken into account in the planning process within the context of the issues being considered;

(2) Document that the science was appropriately interpreted and applied.

(b) To meet the requirements of paragraph (a) of this section, the responsible official may use independent peer review, a science advisory board, or other review methods to evaluate the consideration of science in the planning process.

The Wildlife Habitat descriptions in the proposal do not meet these standards. To be clear, this is not an issue of “gray areas” or interpretation, or of one or two species being mistakenly included. The vast majority of species being listed with either not be affected or will be affected negatively by this proposal.

NEPA requires the agency to inform the public. The information misleads rather than informs (who wouldn’t want to help all of those species, right?), and dramatically fails to meet the standards for best available science as provided above.

II. Purpose and Need: Vegetation

There are several problems with the presentation of forest dynamics in this proposal. From the literature review provided me by Elizabeth Robinson, it appears clear that the Forest Service is interested primarily the production of oaks following shelterwood cuts, and is ignoring the large body of science regarding native forest composition and dynamics in this region.

The proposal, in essence, forces an even-aged (two-aged, or single-aged following shelterwood cut) stand structure in a forest that, in its native condition, is without argument and mixed-age forest. The mixed oak and mixed mesophytic forests of the region evolved through large and small gap disturbances. Occasional disturbances of greater extent and severity may have impacted these forests, but stand replacing events (other than logging) are nearly unheard of. And, certainly, there are no natural disturbances that selectively remove the midstory.

The proposal asserts that removing the midstory will increase the resiliency of this forest in the face of disturbance. However, a complex age and size structure in these forests is precisely what allows the forest to respond well to the types of canopy disturbances that happen naturally. Again, there is a substantial body of literature on these dynamics, all of which appears to have been ignored.

The proposal states:

“Decreased levels of oak reproduction appears to be a product of multiple factors: the absence of significant disturbance (either natural, or human-caused), increased vegetative competition on rich sites, increased herbivory and forest pathogens (such as chestnut blight, Dutch elm disease, emerald ash borer). These disturbances played a major role in the formation and maintenance of oak-dominated forests. Without such disturbance (catastrophic wildfire, wind event, management activities), very dense layers of vegetation develop to create a competitive environment where water and nutrient resources are limited.”

It continually amazes me how the Forest Service insists that logging is required to mimic natural disturbance for oak reproduction, yet when natural disturbance happens it is presented as a “forest health” issue and salvage logging must commence. But, more to the point, the problem with these forests is not that they haven’t had enough disturbance. The problem is that they haven’t had time to recover from the severe and ecologically novel disturbance of “the great cut.” They are still in period of reaction, and repeatedly “knocking them back” is not helpful if the real goal is to restore our forests to the best of our abilities. Of course if your goal is getting timber out, that’s another story.

But natural disturbances happen with pretty much the same frequency as they have over the historical period. By this account, the problem is not the absence of disturbance.

This same paragraph lists the forest pathogens of chestnut blight, Dutch elm disease, and the emerald ash borer as being a factor in the lack of oak success. Displaced herbivory from the loss of the chestnut may indeed be significant, but not only to Dutch elm disease and the emerald ash borer not affect oaks, these tree species shouldn’t even be significant in these stands and thus would not affect oak regeneration here. So why is this included? Is this just more fluff?

The end of the paragraph states:

“Without such disturbance (catastrophic wildfire, wind event, management activities), very dense layers of vegetation develop to create a competitive environment where water and nutrient resources are limited.”

This sounds remarkably like the conditions after much of the overstory is removed by logging, in which case it’s *not* considered a problem. Of course, when this happens naturally through a wind or ice storm, then it *is* considered a problem. Such incontinences destroy the credibility of the Forest Service. If your goal is to produce timber, then fine: say that. We (and a majority of the public, as demonstrated by Forest Service and independent polls) don’t agree, but please at least be honest.

It is clear that the type of disturbance the Forest Service is interested in preparing these stands for is shelterwood or other forms of anthropogenic removal of the canopy. It may be true that removal of the midstory will assist in this goal. But this is not how to make a forest naturally resilient or assist in recovery of native forest structure and function. To present it as such, as has been done in this proposal, misleads the public.

At least be honest with the public and state that this is not about native forests, but timber rotations. You have no qualms about these goals, and so should not try to fool the public with pretty ecological language about resiliency and wildlife habitat.

III. About our Oaks

It is true that oaks are diminishing in importance in the forest, and that this will have impacts on some wildlife. However, it is important to recognize that many successional factors are playing out as some historic oak forests are in flux, responding to multiple drivers.

A recently accepted, though currently unpublished, paper by Neil Pederson (EKU) and Ryan McEwan (University of Dayton) discusses at length how the apparent oak to maple shift is a result of multiple ecological drivers. Some of the issues discussed in the paper include:

- The instrumental and tree-ring reconstructed Palmer Drought Severity Index for the eastern hardwood region reveals a slightly cooler/wetter period concurrent with the increased success of maple and decreased success of oak. The more mesic conditions favor maple. Further, another study by McEwan found that oak recruitment at Lilly Cornett was decreased on more mesic sites, but fine on more xeric sites.
- Increasing deer populations along side the loss of *Castanea dentata* (a preferred food source) may have led to significant displaced herbivory, decreasing the available acorns for successful germination, and adding further pressure to oak seedlings
- For anthropogenic fire to be the primary driver behind historic (and prehistoric) oak regeneration, there must have been a remarkable homogeneity of native anthropogenic behavior across cultures and regions and covering nearly every acre of the eastern oak forests. This is highly unlikely
- Most remaining old-growth oak forests (and presumably previously existing old-growth oak forests) initiated during the depopulated period, where native populations plummeted by as much as 90%. With such radical decreases in population and disruption to cultural practices, it does not logically follow that fire would have been so ubiquitously applied across the landscape during that period.

Other issues relating to oak recruitment include:

- The often cited research by Abrams looking at fire scars in an old-growth oak forest (in Maryland, if I recall correctly) to reconstruct the relationship between oaks and fire had a fundamental flaw: Abrams did not accurately cross-date and so reporting of fire events is not accurate.
- Ongoing research by Neil Pederson and Ryan McEwan is looking at the first long-term fire chronology in Kentucky, examining basal area cross-sections from downed trees at Lilly Cornett Woods. The samples go back to the mid-1600's. While the results have yet to be tabulated, initial scans of the samples indicate very little fire in this premier old-growth forest with an abundance of oak. I have been examining these samples first-hand.
- Historical and dendrochronological data indicate the severe droughts (well beyond the range seen in the 20th century) may have acted ecological filters, killing off less drought tolerant species while creating successional conditions conducive to oak recruitment and success. The oak dominated forests encountered by Europeans may have been a result of these climatic fluctuations

It is true that oaks are important, and also true that some silvicultural techniques can be used to promote oak recruitment. However, the cost is that our forests are not allowed to continue to grow old, accumulate biomass and critical nutrients, develop a more historically representative complex architecture, build coarse woody debris (a key component of late successional forests), and develop significantly large snags that are important habitat for several species.

While this project does not cover the whole of the Redbird District, it is just one of many projects aimed at the same goals. Whether previous midstory removals, recently approved clearcutting from the Group One proposal, or one of a number of other such proposals, the end result is management aimed at the production of timber at the expense of the redevelopment of the old forests that were.

The Forest Service does have a multiple use mandate, but what is evidenced here is a clear imbalance.

IV. Cumulative Effects

This project is designed to prepare the ground for shelterwood and other overstory removals. While the stated reasons include this and allowing for “resilience” in the face of natural disturbance, it is clear that the former is the primary intent of this project. As such, the Forest Service should disclose and analyze the impacts.

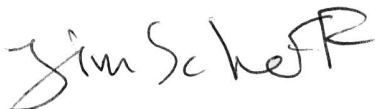
V. Preparing an Environmental Analysis, Further Public Disclosure

The carelessness with which this proposal has been prepared and presented indicates a strong need for an environmental analysis. Clearly the Forest Service does not even have the basic information regarding the species stated as benefiting from this proposed action. As such, the Forest Service cannot make a reasonably informed decision about the impacts of this proposal, making a Categorical Exclusion inappropriate. NEPA does not allow for faith-based decision making, and without truthful, accurate, defensible information, the deciding officer can only be said to be operating on faith.

Further, the Forest Service needs to reissue the proposal addressing the many inaccuracies and misrepresentations present in this proposal in order for the public to realistically evaluate proposal based on valid and unbiased information.

VI. Conclusions

As I said at the beginning of this comment letter, I sincerely like and respect most of the people I have met at the Daniel Boone National Forest. I do not mean to disparage anyone personally. However, this proposal is unprofessional, sloppy, and rife with bias. It does not meet the basic thresholds of NEPA for scientific integrity and public disclosure, let alone for a Categorical Exclusion, and misleads the public regarding impacts to species and forest dynamics.

A handwritten signature in black ink that reads "Jim Scheff". The signature is written in a cursive, slightly slanted style.

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