

Use of Seed Tree Cuts as Colony Sites
by Red-cockaded Woodpeckers

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A "seed tree" cut is a forest management practice in which a forest is clearcut except for single large trees of the desired species left standing at widely spaced intervals such that seed from them will naturally "replant" the area. Once seedlings are established, the remaining large trees are removed. On 1-2 June 1979, we discovered two active Red-cockaded Woodpecker (*Picoides borealis*) colonies, both with nestlings, in seed tree cuts on Bienville National Forest, Scott County, Mississippi. Both cuts had been made in the previous four years and Forest Service personnel (Tom Darden, pers. comm.) indicated that no Red-cockaded Woodpecker cavities had been present at the time of the harvest. Both cuts had left mature loblolly (*Pinus taeda*) and shortleaf (*P. echinata*) pines spaced 20-25 m apart.

Systematic search of the adjacent forests revealed recently abandoned cavity trees within 300 m of each of the nest trees in the seed tree cuts. Habitat at the abandoned cavity trees consisted of mature loblolly and shortleaf pines, mature hardwoods, and a dense hardwood understory. The tops of the hardwoods obscured many of the cavity entrances and were approaching the others. The colony in one seed tree cut included two active cavities and one active cavity start; the other colony included two active cavities and five cavity starts.

During approximately two hours of observation, the birds at one site repeatedly flew 300+ m across the open seed tree cut to forage in the tops of pines within the adjacent intact forest. Foraging sites of birds from the other colony were not observed, but were not within view of the nest tree.

These observations provide further insight into the complex relationships between this endangered species and its environment. Hooper et al. (1980) note that the Red-cockaded Woodpecker requires mature open pine forest in which to nest. The observations reported here provide further evidence that suggests the birds will abandon cavity trees (or colony sites) with hardwood understory that reaches cavity height. They also suggest that elimination of the dense hardwood understory around mature pines might "lure" birds from a less open site that is nearby. The management implications here are twofold: (1) as suggested by Hooper et al. (1980) and by the

Red-cockaded Woodpecker endangered species recovery plan (Jackson et al. 1979), opening up the forest understory may help sustain a colony at a given site, and (2) if movement of a colony from one site to another is desired, it might be effected by selective management of the desired site while allowing a hardwood understory to develop at the other site.

I do not, however, feel that seed tree cuts are a good management practice for Red-cockaded Woodpeckers. While the birds did move into the two seed tree cuts described here (and into other seed tree cuts elsewhere on Bienville National Forest; Tom Darden, pers. comm.), the young pines will, within a few years, grow to obscure cavity entrances. Furthermore, the widely spaced large trees in a seed tree cut do not allow cavity trees to be clustered as is typical of healthy, natural colonies. Jackson (1978) has noted that such widely spaced cavity trees are subject to greater competition from cavity competitors than are clustered cavity trees. Each competing species would be limited to one pair per cluster of cavity trees by the species' territorial behavior, but with scattered cavity trees, each tree might be competed for by a different pair of each competing species. Very open sites, such as seed tree cuts, might also (1) expose the birds to greater risk from predators as they fly across open areas, and (2) reduce the birds' ability to raise young as a result of the increased distances they have to fly to find food.

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Literature Cited

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