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PERFORMANCE REPORT

SECTION 6

ENDANGERED SPECIES ACT

OKLAHOMA
DEPARTMENT OF WILDLIFE CONSERVATION

FEDERAL AID PROJECT E-21-3

Red-cockaded Woodpecker (Picoides borealis) Recovery
on the McCurtain County Wilderness Area (MCWA)

MARCH 1, 1994 - FEBRUARY 28, 1995

ANNUAL PERFORMANCE REPORT

State: Oklahoma **Project No:** E-21-3

PROJECT TITLE: Red-cockaded woodpecker (RCW) (Picoides borealis) recovery on the McCurtain County Wilderness Area (MCWA)

I. PROGRAM NARRATIVE OBJECTIVE

Recover the RCW population on the MCWA to 45 active clusters by implementing procedures outlined in the MCWA Implementation Plan.

II.JOB PROCEDURES

1. Monitoring

a. Locate, tag, and map new cavity trees within 300 yards of active clusters.

b. Determine the status of each cavity tree and cluster, especially during the nesting period.

c. Band adult and nestlings to obtain data on production, dispersal, and mortality and to aid in identifying single bird clans that would benefit from augmentation.

2. Colony Stand Management

a. Reduce hardwood midstory and understory trees within 10 acre blocks adjacent to active clusters.

b. Control the hardwood midstory within clusters by cutting and fire (controlled burns will be done under the Wildlife Restoration Act).

3. Recruitment Stand Management

Identify, mark, and control hardwoods within blocks of suitable habitat within 1/2 mile of active clusters.

4. Corridors

When needed and feasible, maintain or develop corridors among clusters and recruitment stands.

5. Restrictors and Predator Guards

a. Place restrictors on RCW cavities to prevent enlargement by other woodpeckers and rehabilitate enlarged cavities.

b. Install predator guards on all active cavity trees.

c. Place squirrel guards on trees where flying squirrels have taken over cavities.

6. Artificial Cavities

Install cavity inserts in active clusters to provide at least 5 usable cavities at each site. Install 3 inserts at recruitment sites. When inserts at recruitment stands are activated, install 2 additional inserts.

7. Augmentation

Identify single male clans and move subadult females to the sites.

III. SUMMARY OF PROGRESS

1. Clusters

The number of active clusters decreased from 11 to 9 during the reporting period (Table 1). Cluster 21 was abandoned in April, 94. The male disappeared early in the month and female left by the third week. The female was later observed in cluster 109; the male was not subsequently observed. Monitoring of cluster 112 on February 22 and 23, 1995 indicated that the 3 resident RCW's had left the site. The birds were present when checked in January, 95.

2. Cavity Trees

The status of each cavity tree within active clusters was monitored throughout the year. During the spring and summer, the monitoring interval ranged from 1 to 2 weeks. During the fall and winter, the interval was approximately 3 weeks. If a cavity appeared inactive, the cavity was inspected for the presence of flying squirrels or other problems. During the year 2 new cavities were located.

Nineteen cavity trees, not including inserts, were active as of February 1, 1995 (Table 1). In addition to the 19 natural cavity trees, 9 inserts were active.

3. Restrictors and Predator Guards

Thirty of the 31 natural cavities have been restricted and 10 squirrel guards (on natural and insert trees) have been installed in active clusters. When restricted, active cavities were observed until the RCW entered. During cavity checks, restrictors were routinely adjusted as needed to prevent larger woodpeckers from entering.

A 2- or 3-foot section of flashing was added to the existing predator guards on active cavity trees to increase their effectiveness.

4. Population

During the 1994 nesting period, 9 nests (Table 2) were located. At these nests, 29 eggs were laid, 24 hatched, and 14 nestlings were banded (right leg). Only 1 egg was laid at 107 and the nest was not completed. The nestlings at cluster 31 disappeared when approximately 20 days old. Nests were rechecked 2 days subsequent to banding to assure that the procedure had not induced injury or mortality. All banded nestlings were active and unharmed.

The number of RCW's fledged in 1994 was approximately 10. This number was estimated by checking the nests 1 week prior to the fledging date. Five of the 10 fledglings were recaptured and color leg bands were added.

Four adult male and 3 adult female RCW's were trapped in 1994. Each cluster was monitored during the fall and winter and no single bird clans were identified. Cluster 21 had a single female for 2 to 3 weeks following the male's disappearance around April 1.

5. Stand Management

Seventy-three acres were thinned to control the hardwood midstory. This area was comprised of 20 acres at 4 recruitment stands and 53 acres at 10 active and one inactive clusters. At recruitment stands, 5 acre blocks were thinned adjacent to the ones treated in 1993. At clusters, the areas thinned ranged from 2.1 to 8.7 acres. These areas were selected to provide movement corridors among cavity trees and to connect isolated cavity trees with others within the cluster.

Because of an unusually wet spring, no compartments were burned in 1994. Fire guards have been completed for compartment 2 and 3 for the controlled burn scheduled for spring, 1995. A contract has been made to construct a fireguard for compartment 1, which is also scheduled for burning in spring 1995. Compartment 6 will be burned in July, 1995 if analyses of the experimental growing season burns

on the Ouachita NF are completed in time to provide the needed burning parameters.

Few trees on the area and no cavity trees were lost to southern pine beetles in 1994. A single large beetle outbreak (approximately 10 acres) was observed on the north slope of White Oak Mountain. This outbreak was first noted on February 2, 1995. Cooperative monitoring of the southern pine beetle population with the Oklahoma Division of Forestry, completed in May, 1994, indicated that the beetle population was relatively low and the predator population high. Beetle monitoring will continue in 1995.

Analysis of the stem density of shortleaf pine seedlings/sprouts in compartment 1 indicated no significant difference between pre- and post-burn average stem densities (Table 4). The stem densities were somewhat lower in 1992 (postburn), but this variation is normal from one year to the next depending on the seed crop.

6. Artificial Cavities

Forty-three inserts have been installed in active clusters. Nine of these are currently active. Two inserts at cluster 12 were replaced because their back walls were opened by RCW's. Fifty-eight inserts have been placed in 15 recruitment sites and inactive clusters. None of the inserts outside active clusters were active for more than a few weeks. In preparation for 2 bird augmentations, two additional inserts were installed at 2 recruitment stands, which brought the total at each site to 5.

7. Corridors.

Corridors were constructed to connect isolated cavity trees with others within clusters.

8. Augmentation

Two pairs of juvenile RCW's were moved from the Sam Houston NF, TX to the MCWA. The pairs were captured and transported and the release sites prepared according to the procedures outlined by Carrie (1993). Forest Service Biologist, Warren Montague, assisted in all aspects of the translocations.

The female of the pair captured on January 18 was found dead in the cavity the morning of the release. The mortality was reported to the U.S. Fish and Wildlife Endangered Species Office in Albuquerque and the carcass was labeled and frozen. The release site was monitored for 3 evenings following release but the male was not observed.

Both RCW's captured on January 26 left their cavities and foraged briefly in the release site. The female, alone, returned to the site the evening of the release. Neither bird has been observed since. Monitoring of recruitment stands and clusters will continue to locate the released birds.

9. Other Activities

No road or trail construction occurred on the area. Approximately 8 miles of interior roads were graded. One controlled deer hunt was conducted. Monitoring of the clusters in the hunt areas indicated no adverse effects to the RCW's.

IV CONCLUSIONS

Two RCW clusters were abandoned in the reporting period. No cause of the abandonments is known. Possibly the breeding males were lost to accipiter predation.

Monitoring of clusters will continue throughout the year. If a single bird cluster is found, attempts will be made to move a surplus RCW from a donor population to the site. Establishment of new clusters by translocating juvenile RCW pairs from donor populations will also continue. Translocations are important in maintaining and increasing not only the population's size but also its genetic diversity.

The habitat for the RCW on portions of the MCWA, especially the eastern half, has become fragmented due to the shift from a pine to a hardwood dominated forest. Aggressive controlled burning will be required over many years to shift the species dominance back to pine and provide the habitat required by the RCW's in these areas.

Although southern pine beetle activity at this time is low, plans should be developed to deal with future significant outbreaks.

V. DEVIATIONS

No controlled burning was accomplished in 1994 because weather conditions were unfavorable through much of the spring burning season.

VI. Prepared by: John Skeen

John Skeen, Biologist

VII. Date: March 14, 1995

VIII. Approved by: Harold E. Namminga

Harold E. Namminga,
Federal Aid/ Research Coordinator

Table 1. Cavities at Active Colonies

Colony	Natural Cavities T	A	R	Inserts T	A
137	3	3	3	4	1
*112	3	3	3	7	0
111	5	3	5	4	0
109	3	1	3	4	2
16	2	2	2	4	1
105	2	1	1	4	2
107	2	1	2	4	2
31	3	1	3	5	1
32	4	2	4	3	0
12	4	2	4	4	0
Total	31	19	30	43	9

T- Total cavities

A- Active cavities

R- Restricted cavities

* Cluster 112 was active until February, 1995

Table 2. Nesting and Fledging in 1994

Cluster	Nest Initiatio	No. Eggs	No Hatched	Nestlings Banded	Nestlings Fledged	Juveniles Banded
137	5/13 *	3	2	1	1	0
112	5/11	4	2	1	1	1
111	____	0	0	0	0	0
109	5/16	4	4	2	2	1
16	5/13	4	3	2	1	1
105	5/9	2	2	1	1	1
107	5/9	1	0	0	0	0
31	5/4	4	4	2	0	0
32	5/15	3	3	2	2	1
12	5/6	4	4	3	2	0
Total		29	24	14	10	5

* Date eggs first observed

Table 3. Adult RCW's Trapped in 1994

Band Number	Sex	Year Banded	Age Banded	Cluster Banded	Recent Observati
209	F	92	J	21	109 *
221	M	92	A	137	137
222	F	92	A	137	137
223	M	92	A	112	112
225	M	92	A	111	109
233	M	92	A	107	105
255	F	93	A	105	105
259	F	93	J	12	12

* Cluster number

Table 4. Mean density (stems/ac) of shortleaf pines <4 in. dbh and height <1 M before prescribed fire in 1990 and after prescribed fire in 1992 on compartment 1.

Year	N	Mean	Std Error	T	Prob>|T|
90	76	252.63	88.58	0.9430	0.3476
92	75	156.00	51.51	0.9399	0.3488