PERFORMANCE REPORT

SECTION 6

ENDANGERED SPECIES ACT

OKLAHOMA
DEPARTMENT OF WILDLIFE CONSERVATION

FEDERAL AID PROJECT E-21-1

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

MARCH 1, 1992 - FEBRUARY 28, 1993

ANNUAL PERFORMANCE REPORT

State: Oklahoma **Project No:** E-21-1

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 colonies 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 colonies.

b. Determine the status of each cavity tree and colony, 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 colonies.

b. Control the hardwood midstory within colonies 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 colonies.

4. Corridors

When needed and feasible, maintain or develop corridors among colonies 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 colonies to provide at least 5 usable cavities are available 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. Colonies

The number of active colonies (9) remained the same throughout the period (Table 1). Of the 3 that were abandoned in 1991, one was likely due to a storm with high winds which resulted in numerous wind throws within the colony. Two other abandoned colonies were at sites having encroaching mid-story hardwoods.

2. Cavity Trees

The status of each cavity tree within active colonies 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 4 weeks. If a cavity appeared inactive, the cavity was inspected for the presence of flying squirrels or other problems. During the year 7 new cavities were located.

Twenty-four cavity trees, not including inserts, were active as of March 1, 1993 (Table 1). However, 7 of these trees are dying from infestations by the southern pine beetle. In addition to the 24 natural cavity trees, 5 inserts were active.

3. Restrictors and Predator Guards

Twenty-three cavity restrictors and 4 squirrel guards were installed in active colonies. Active cavities were observed until the RCW entered. Only in one case did the bird refuse to enter, and the restrictor was removed.

Predator guards were placed on all active cavity trees and on insert trees when activated.

4. Population

During the 1992 nesting period, eight nests (Table 2) were located and 20 nestlings banded (Table 3) with U.S. Fish and Wildlife Service aluminum bands on the right leg. Nests were rechecked 2 days subsequent to banding to assure that the procedure had not induced injury or mortality. All nestlings were active and unharmed. Nests could not be checked during the week prior to fledging, and thus, no estimate of the fledging rate was obtained.

Twenty adult and subadults were banded with aluminum and color leg bands. The 2 subadults had been initially banded as nestlings. This is the entire population except for 3 birds which have not yet been banded.

No single male clans were identified.

5.Stand Management

Ten-acre blocks adjacent to each active colony were delineated and treated (cutting with chainsaws) to control the hardwood midstory. Dominant and codominant hardwoods were not cut. Also, a number other hardwoods within the blocks were left to possibly hinder the movements of pine beetles. In addition to the 9 active sites, hardwoods were treated at 3 inactive sites that will serve as recruitment stands. Treatment was accomplished by a $10,000 grant from the Weyerhaueser Company Foundation. No Section 6 grant funds were used for this activity.

On March 14, 1992 Compartment 1 comprising approximately 1,000 acres was control burned. A survey of 150 pines (>12 inches dbh) was conducted in September 1992. No direct mortality resulted from the fire. Six trees (4 percent) were killed by southern pine beetles. This survey will be repeated for 2 years following each burn.

Vegetative data collected pre- and post-burn are being analyzed and will be used to evaluate the response of the plant community to the treatment and to fine-tune the burning regime. These data will indicate the percentage of young pines (< 12 inches dbh) that was killed by the burn and the percentage of top-killed pines that resprouted. Burning was accomplished using Wildlife Restoration Act funds rather than Section 6 grant funds.

6. Artificial Cavities

Twenty-six inserts were installed in active colonies. Five of these have been activated (Table 4). Sixteen inserts were placed in 5 recruitment sites, none of which were activated.

7. Corridors.

Adequate habitat exists between colonies and recruitment stands and no work was directed to establishing or improving corridors among the sites.

8. Augmentation

Because no single bird clans were identified, no augmentation occurred.

9. Other Activities

No road or trail construction occurred on the area. Approximately 12 miles of interior roads were graded. No hunts were conducted.

IV CONCLUSIONS

The RCW population on the MCWA steadily declined from 1977 to 1991, with an average loss of 1 to 2 colonies per year. After initiation of the recovery efforts in 1992, no colony has been abandoned. The RCW seems to be responding positively to the hardwood treatments, cavity protection with restrictors, artificial cavities, and other recovery activities.

V. DEVIATIONS

Endemic southern pine beetle infestations are a serious problem to the recovery work. Seven of the 24 natural cavity trees are currently infested and dying and 4 others were killed by beetles in 1992. For reasons not yet understood, beetles apparently home-in on active RCW cavity trees. These trees experience a much greater rate of infestation than non-cavity trees or inactive cavity trees (Forrest Oliveria, U.S. For. Ser., Forest Pest Management, pers. commun., 1993).

A partial survey of the area conducted Feb. 4, 1993 showed 9 active beetle spots on the area. Three spots were in compartment 1 which had been burned and 6 spots in areas which had not been burned. No beetle activity, except for that noted for cavity trees, was observed within the blocks treated to reduce hardwoods. An environmental assessment for a pine beetle suppression program will be prepared before a comprehensive beetle suppression program is initiated.

Sufficient monitoring of colonies to determine movements and ascertain the composition of each clan was not possible during the fall and winter due to the lack of trained manpower. Accomplishment of this activity will require an additional project employee or volunteers. Prospective volunteers have been invited and a request for reassignment of Department employee(s) has been made.

The number of RCW's fledging was not obtained because the principal investigator was ill with tick-borne tularemia and no other trained person was available to make the nest checks. A full-time assistant or other personnel trained to carry out nest checks would be required to preclude a similar future occurrence. An accurate estimate of fledging 2 to 3 months after the birds leave the nest is not possible because they usually roost in tree tops and are not likely to be observed (Warren Montague, U.S. Forest Service, pers. commun., 1992).

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VII. Date: May 3, 1993

VIII. Approved by: Harold E. Namminga

Harold E. Namminga,
Federal Aid/ Research Coordinator

Table 1. Cavity Status at Active Colonies

Colony	No.Active/ Inactive Cavity Trees	No. Dead/ Dying Cavity Trees	No Cavities Restricted*
137	3/1	0/2	3
112	2/2	0/1	3
111	5/1	0/0	6
109	3/2	1/0	4
16	2/0	0/0	2
107	2/1	1/0	2
32	2/1	1/0	2
12	3/2	1/2	0
21	2/0	0/2	1
Total	24/10	4/7	23

* Includes trees with multiple cavities

Table 2. Nesting and Banding Data

Colony	Initiation Date *	Banding Date	No. Eggs	No. Nestlings Banded	No. Adults/ Subadults Banded
137	4/27	5/14	4	2	3
112	**	5/29	**	2	2
111	4/28	5/14	4	3	4
109	4/28	5/14	4	3	2/1
16	---	---	-	-	1
107	5/8	5/19	4	1	2
32	5/1	5/19	4	2	2
12	4/30	5/19	4	4	2/1
21	4/24	5/14	4	3	0
Total			28	20	18/2

* Date eggs first observed
** Cavity tree was not located until eggs had hatched

Table 3. Banding Summary

Nestlings	Subadults		Adults		Total	
	M	F	M	F	M	F
20	0	2	10	8	10	10

Table 4. Acres of Hardwoods Treated and Number of Inserts Installed at Colonies and Recruitment Stands

Site	Status	Acres Treated	No. Inserts/ Activated
137	Active	10	2/0
112	Active	10	3/0
111	Active	10	1/1
109	Active	10	3/1
16	Active	10	4/0
107	Active	10	4/2
32	Active	10	3/0
12	Active	10	2/0
21	Active	10	4/1
105	Abandoned	10	4/0
31	Abandoned	10	4/0
15	Abandoned	*	4/0
45	Abandoned	10	2/0
R1	Recruitment	**	2/0
Total		120	42/5

* Approximately 4 acres were treated in 1991.
** Hardwood removed from within 50 feet of insert trees