



United States Department of the Interior

FISH AND WILDLIFE SERVICE

75 SPRING STREET, S.W.
ATLANTA, GEORGIA 30303

SEP 18 1979

Mr. Francis B. Roache
Director of Real Property & Natural
Resources
Department of Defense
Pentagon, Washington D.C. 20301

Dear Mr. Roache:

The U.S. Fish and Wildlife Service in cooperation with the U.S. Forest Service has designed a range-wide Red-cockaded Woodpecker Survey. The purpose of this survey is to provide better population data needed and required by the Endangered Species Act to review the status of the species.

The ad hoc Committee that has been working on this survey will discuss the survey at the Endangered Species meeting on October 21, 1979, and at the Military meeting on October 24, 1979, at the Southeastern Conference of Fish and Wildlife Agencies, Hot Springs, Arkansas.

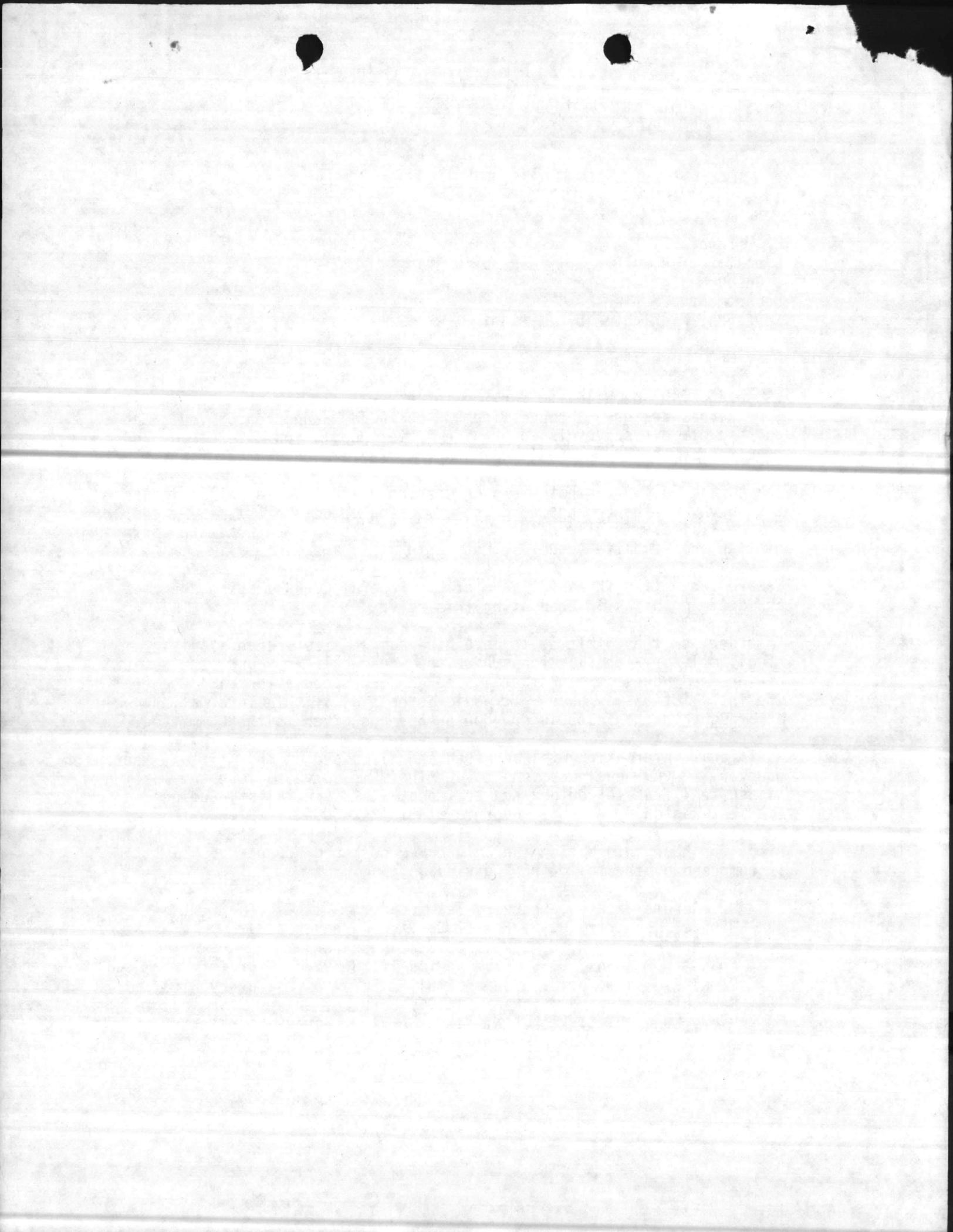
We are requesting the assistance of all Federal Land Managing Agencies and State Agencies in conducting this survey.

In order for the Committee to determine sample size we need a list of all military installations where the woodpecker is found, the number of forested acres at each installation and any population data you or the installation may have. It would be helpful if this information could be brought to the Southeastern Conference and given to the Committee.

Additional information will be given and discussed at the Military meeting; however, if you have questions concerning this survey before the meeting please feel free to contact Ken Chitwood, Staff Specialist, Endangered Species, Region 4, Atlanta, Georgia at FTS 242-3580.

Also, for your information the ad hoc Red-cockaded Woodpecker Committee is composed of the following individuals:

Dr. Jerome Jackson, Recovery Team Leader
Michael Lennartz, U. S. Forest Service Research
Richard Harlow, U. S. Forest Service Research
Chandler Robbins, U. S. Fish & Wildlife Service, Migratory Bird Lab
P. H. Giessler, U. S. Fish & Wildlife Service, Migratory Bird Lab
Ken Chitwood, U. S. Fish & Wildlife Service, Survey Coordinator
Randy Long, U. S. Fish & Wildlife Service, Survey Coordinator

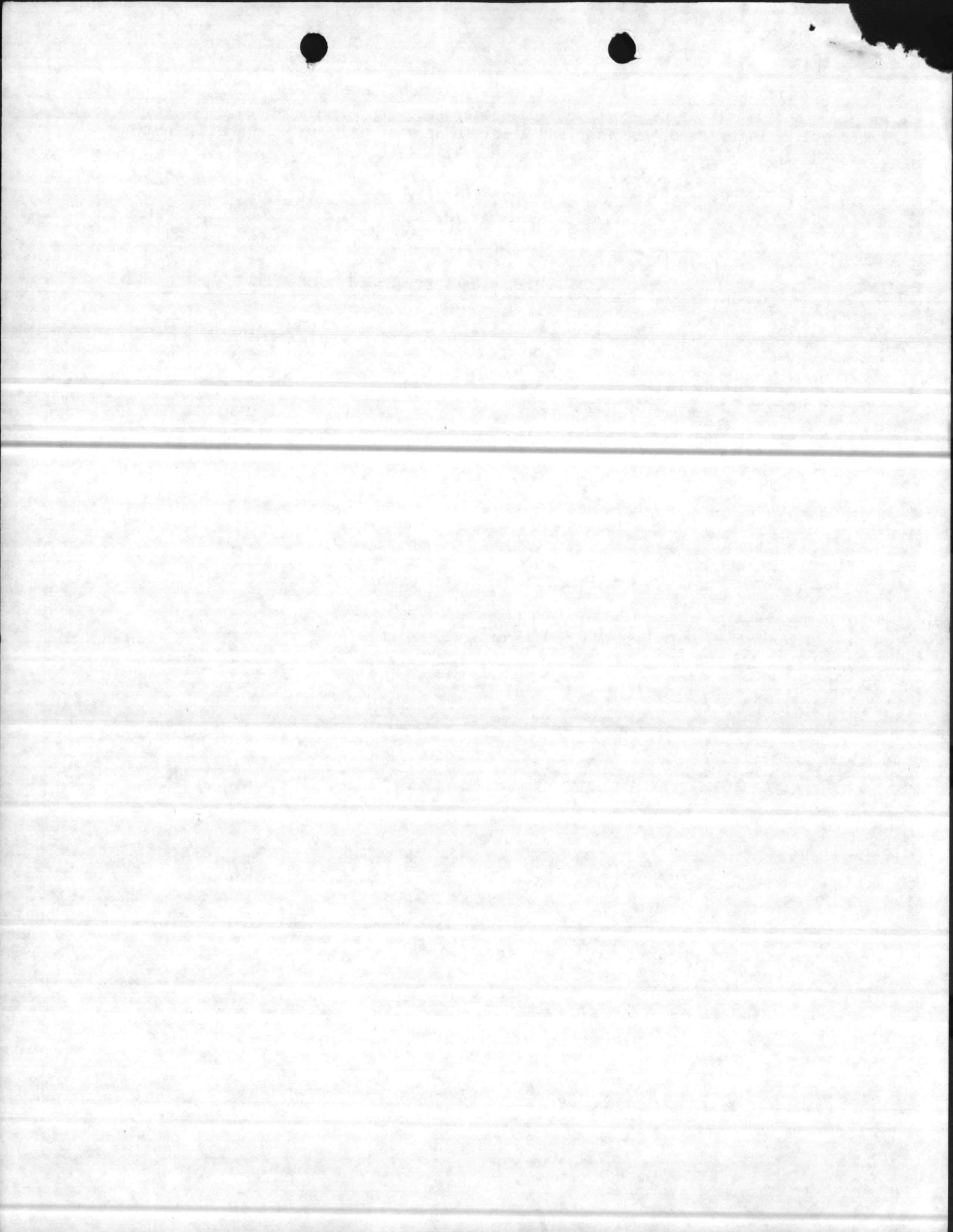


In addition, the Red-cockaded Woodpecker Recovery Plan has been approved by the Director of the Fish and Wildlife Service and we will be distributing the approved Plan when copies become available.

Sincerely yours,

Frank L. Richardson

Acting Regional Director





United States Department of the Interior

FISH AND WILDLIFE SERVICE

75 SPRING STREET, S.W.
ATLANTA, GEORGIA 30303

OCT 2 1980

Mr. Robert C. Beam
Real Estate Division
Department of the Navy
Naval Facilities Engineering Command
Norfolk, Virginia 23511

Dear Mr. Beam:

The Red-cockaded Woodpecker Rangewide Survey Committee is trying to finalize the rangewide red-cockaded woodpecker survey, and we appreciate the information and data you have provided the committee.

The committee is attempting to have all the survey information available at the Military Meeting on November 12, 1980, which is held annually in conjunction with the Southeastern Conference of Fish and Wildlife Agencies, Nashville, Tennessee.

In order for the committee to complete the sample size for Camp Lejeune, North Carolina, they will need to receive a map of that installation with the pine acreage shaded in. The map scale should be 1:24,000 or larger and the total pine acreage shaded in. We would appreciate your sending this information to Ken Chitwood at the above address by October 17, 1980.

Once the committee receives the requested maps, they will draw 1,000-acre compartments on each map and assign a number to each compartment. The sample size for each military installation will then be determined and the compartments to be surveyed will be picked at random. Each military installation asked to participate in this survey will then be sent a map with the compartments to be surveyed identified along with instructions on how to conduct the survey and survey data forms.

The committee will try to have all this information available at the Military Meeting on November 12, 1980.

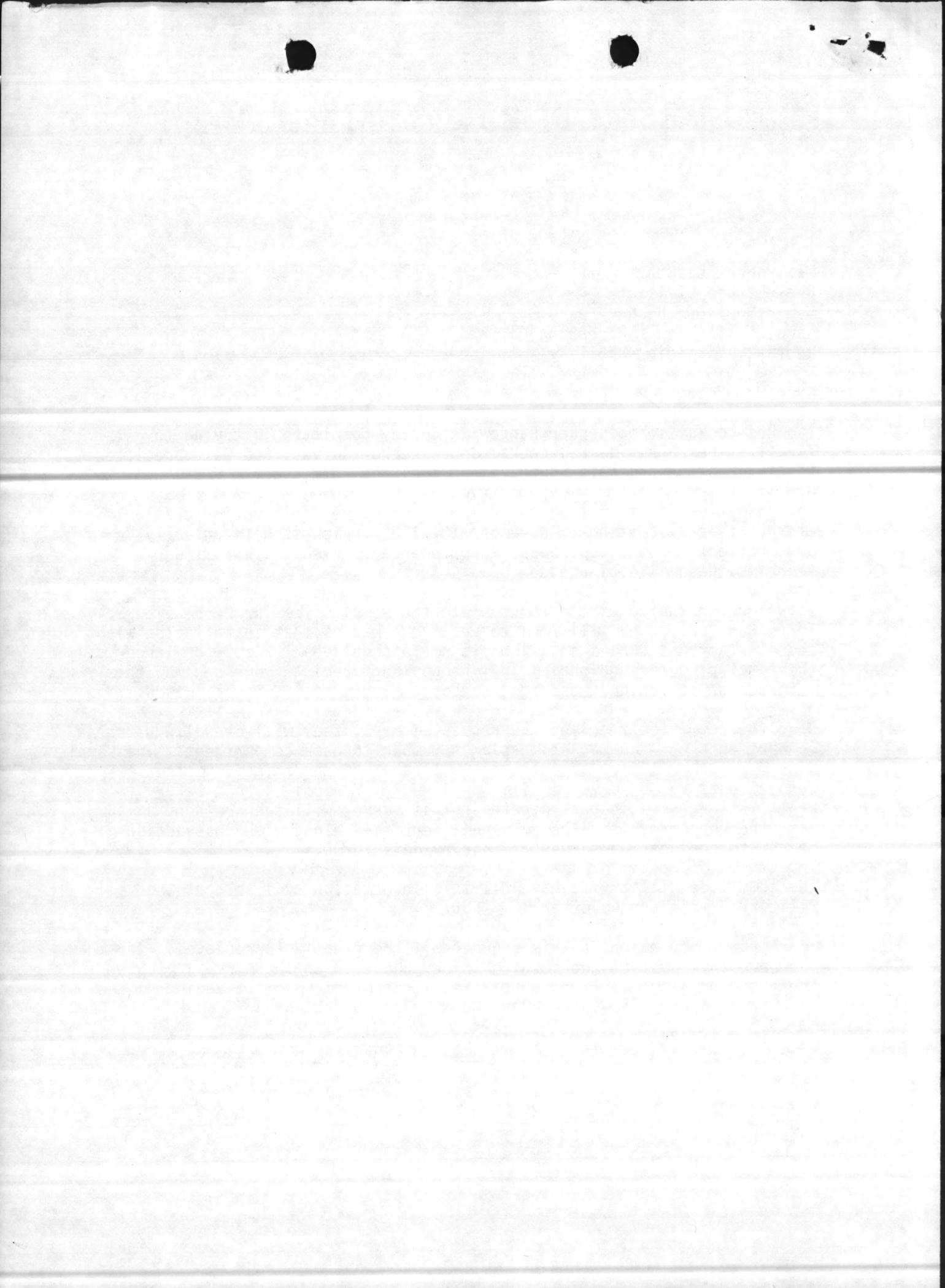
Your prompt attention to this request will be greatly appreciated. If you have any questions concerning this request or on the survey, please contact Ken Chitwood, Staff Specialist, Endangered Species, Region 4, Atlanta, Georgia, FTS 242-3580 or Commercial 404/221-3583.

Sincerely yours,

Walter O. Stegloff

Acting

Regional Director





DEPARTMENT OF THE NAVY
OFFICE OF THE DEPUTY UNDER SECRETARY OF THE NAVY
WASHINGTON, D.C. 20350

6 March 1981

Mr. Walter D. Stieglitz
Regional Director
U.S. Department of Interior
Fish and Wildlife Service
75 Spring Street, S.W.
Atlanta, Georgia 30303

Dear Mr. Stieglitz,

Thank you for bringing me up-to-date on the work and plans for the Red-cockaded Woodpecker Survey.

Your survey methods appear to be cost-effective in the case of the Navy, in as much as we have some data in hand. However, the actual on-the-ground surveys will require time and personnel. Since we anticipate no Sykes Act dollars for the coming three years, funding for this project will have to fall in line with all other priorities. The combination of working around dollar shortages and major mission training schedules notwithstanding, the Navy Marine Corps will do their best to support this survey. We recognize that it is in our own best mission interests to commit to the survey.

If you have any problems or questions, please let me know. I can be reached at 202-695-6907.

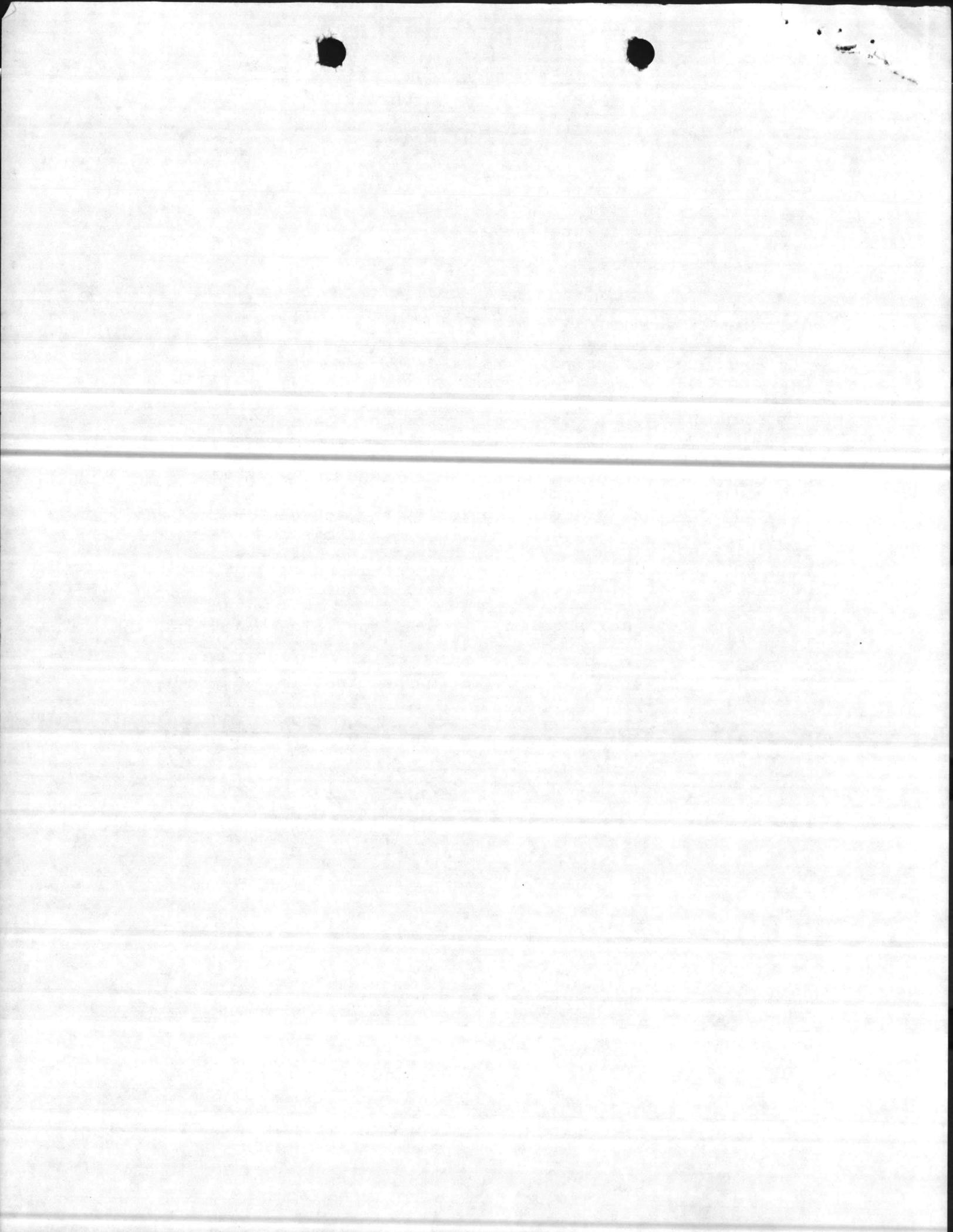
Assuring you of our cooperation and thanking you for your efforts, I am,

Sincerely yours,

Mary Margaret Goodwin
Special Assistant for the
Environment

Copy to:

General Barker - Camp Lejeune
Marlo Aycock - Marine Corps Headquarters ✓



YR copy

BASE MAINTENANCE DEPARTMENT
Marine Corps Base
Camp Lejeune, North Carolina 28542

From: Assistant Maintenance Officer

To: *ALFA*

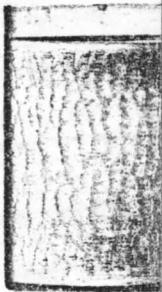
Subj: *Via: BMW D. Jones*

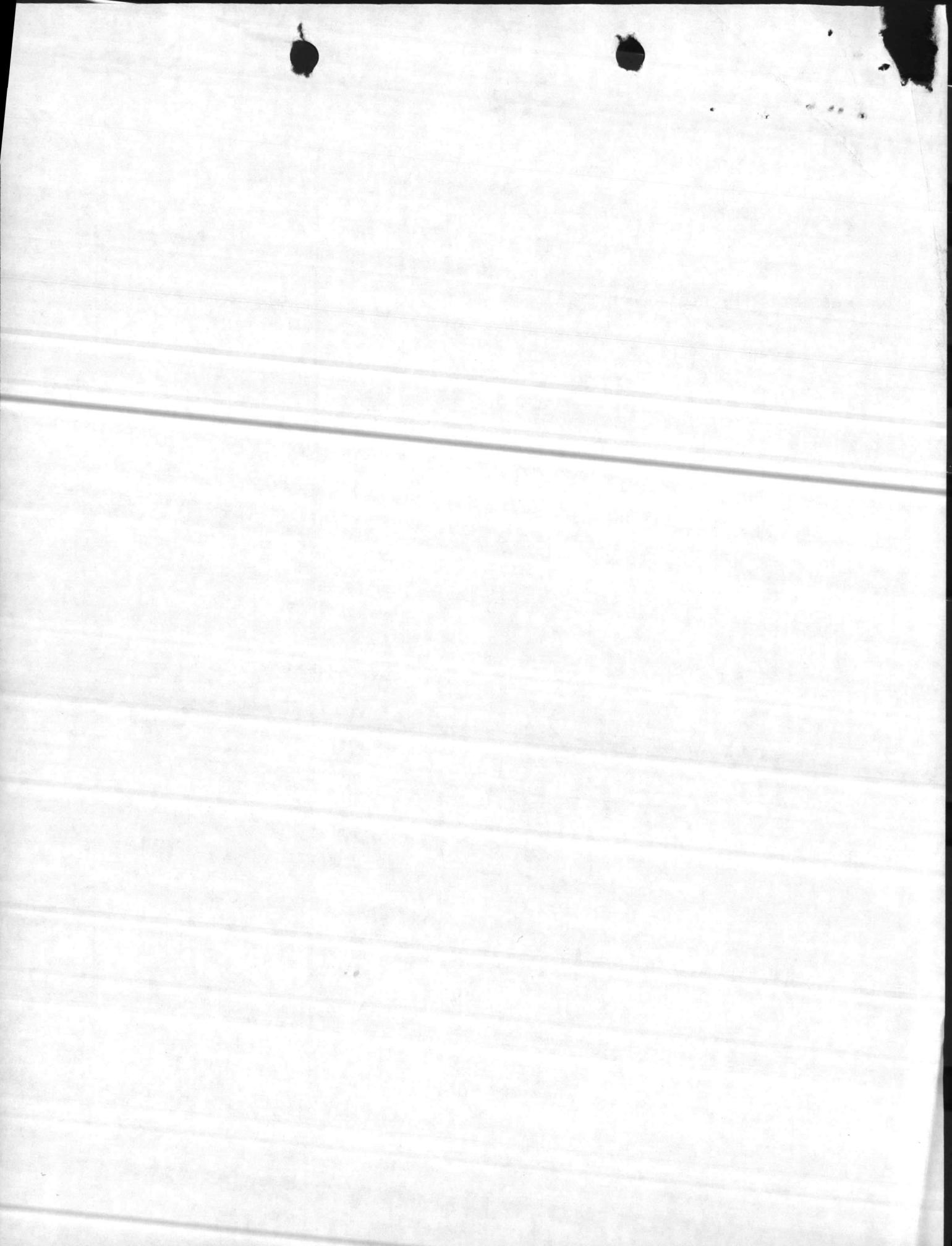
BMW

*Mahn send
SJA
TRNG*

*get / have copies
made 9/28
for SJA, Trng
Beck*

*DLW
100799*







OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301

MANPOWER,
RESERVE AFFAIRS
AND LOGISTICS

9 OCT 1979

MEMORANDUM FOR Assistant Secretary of the Army (IL&FM)
Assistant Secretary of the Air Force (MRA&I)
Deputy Under Secretary of the Navy

SUBJECT: Red-cockaded Woodpecker Survey

Forwarded for continuation of action is a copy of the September 18, 1979 letter from the U.S. Fish and Wildlife Service (USF&WS) which advises of a range-wide survey of the endangered Red-cockaded Woodpecker population. The letter requests specific information on all military installations where the woodpecker is found including the number of forested acres at those installations.

It is requested that you furnish the desired data directly to the USF&WS by mail to the Atlanta Regional Office or by delivery to the Southeastern Conference of Fish and Wildlife Agencies if you will be represented there.

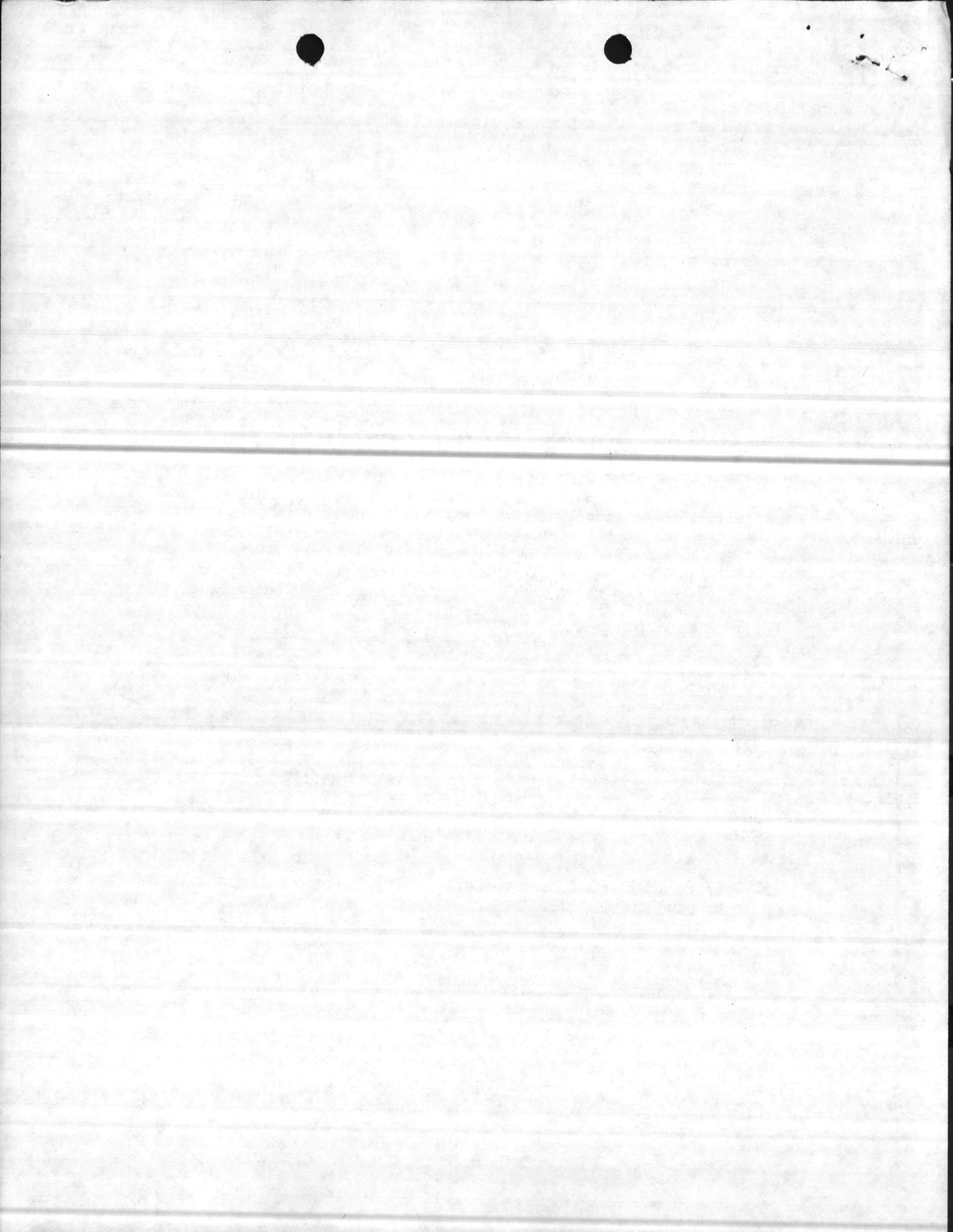
Signed

Perry J. Fliakas
Deputy Assistant Secretary of Defense
(Installations and Housing)

Enclosure

cc: Mr. Stultz
HQ USMC (I&L)





Charles

Study Title: Effects of Mechanized Training on Red-cockaded Woodpeckers
LFF-2:MGA:gdj

30 JUN 1981

LFF
6/30
R/M

From: Commandant of the Marine Corps
To: Commanding General, Marine Corps Base, Camp Lejeune,
North Carolina 28542

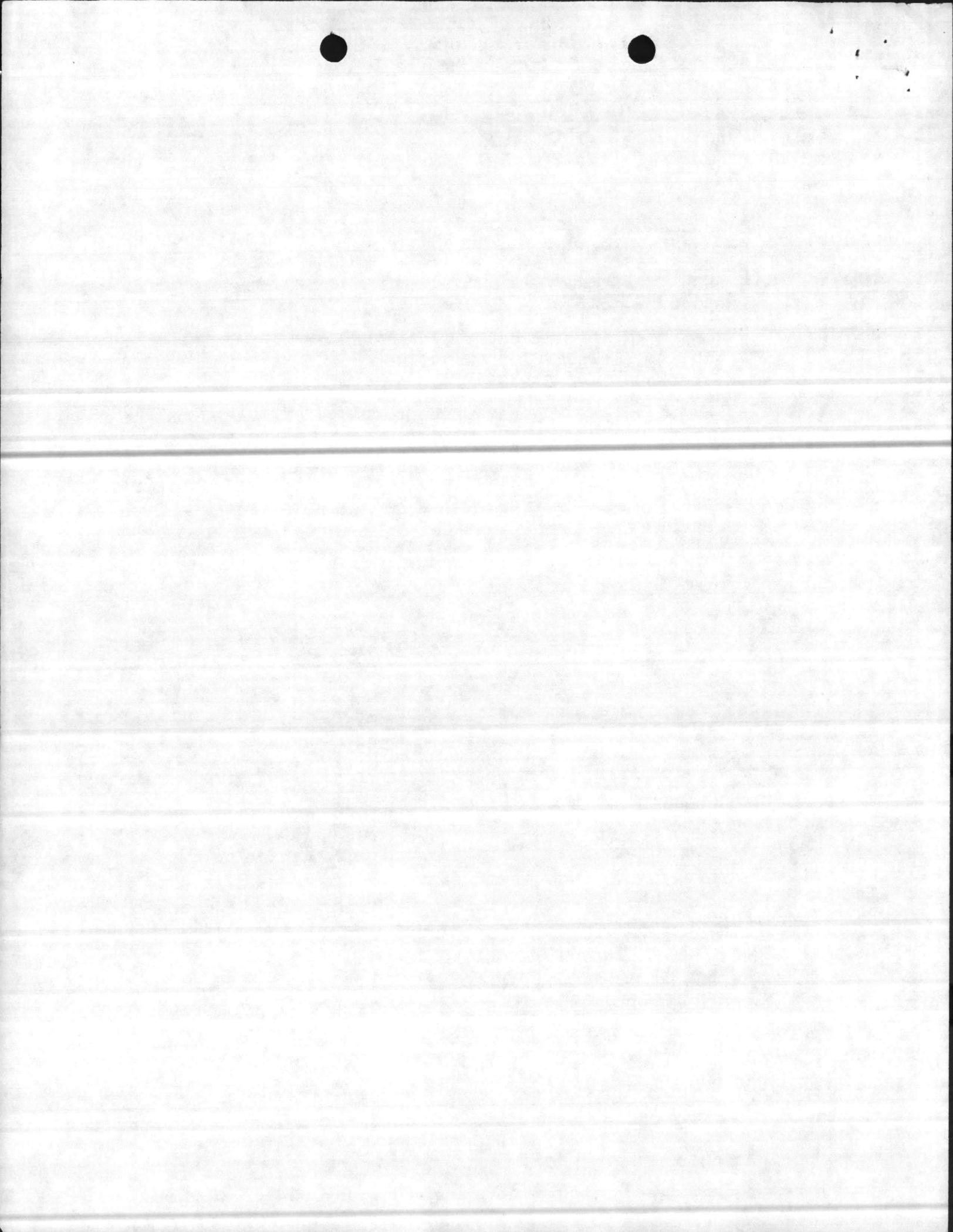
Subj: Proposed Red-cockaded Woodpecker Study

Encl: (1) OASN, MRASL ltr to Dr. Phillip D. Doerr of 24 June 81
(2) Study title: Effects of Mechanized Training on Red-cockaded Woodpeckers.

1. Enclosures (1) and (2) have been received by this Headquarters for appropriate action.
2. It is requested that enclosure (2) be reviewed and comments provided this Headquarters (Code LFF) by 17 July 1981. Point of contact is Mr. Marlo Acock, 224-1425/2171/3304.

Frank E. PETERSEN
By direction

6/30



1. DATE

28 July 1981

2. OPERATION CODE

- X ORIGINATOR OR OFFICE AFFIXING ROUTING SHEET
- A APPROPRIATE ACTION
- B GUIDANCE
- C SIGNATURE
- D COMMENT
- E RECOMMENDATION
- F CONCURRENCE
- G INFORMATION
- H RETURN TO LFF-2
STOP 82
- I INITIAL
- J DISPOSITION
- K DECISION
- L RETENTION
- O (OTHER)

3. SUBJECT

Proposed Red-Cockaded Woodpecker Study

ROUTING - Use numbers to show order of routing

4. RTG.	5. OPR. CODE	6. ADDRESSEES	7. DATE		8. INITIALS		9. NATURE OF ACTION REQUIRED	ORIGINATOR'S INITIALS	DUE DATE (If any)
			IN	OUT	CONCUR	NON-CONCUR			
		COMMANDANT CMC					ROUTINE	<i>[Signature]</i>	
		MILITARY SECY TO CMC					URGENT		
		ASSTN COMMANDANT & C/S ACMC							
		SECY GEN STAFF							
		DIR SPL PROJ SPD							
		DC/S AVN A							
		DC/S MPR M							
		DC/S PP&O P							
		DC/S I&L L							
		DC/S RD&S RD							
		DC/S RESAFF RES							
		DC/S R&P RP							
		FDMC FD							
		IGMC IG							
		MED OFF MED							
		DIR C4 SYS DIV CC							
		DIR INTEL INT							
		DIR JAD JA							
		DIR PA PA							
		DIR TRNG TR							
		LEGIS ASSTN OLA							
		COUNSEL FOR CMC CL							
		DIR MCH&M HD							
		DIR HQSPT HQS							
		DENT OFF DEN							
		CHAPLAIN REL							

10. REFERENCES HELD BY (Name, Grade, Office Code, Telephone Extension)
Mr. M. G. Acock LFF-2/43302

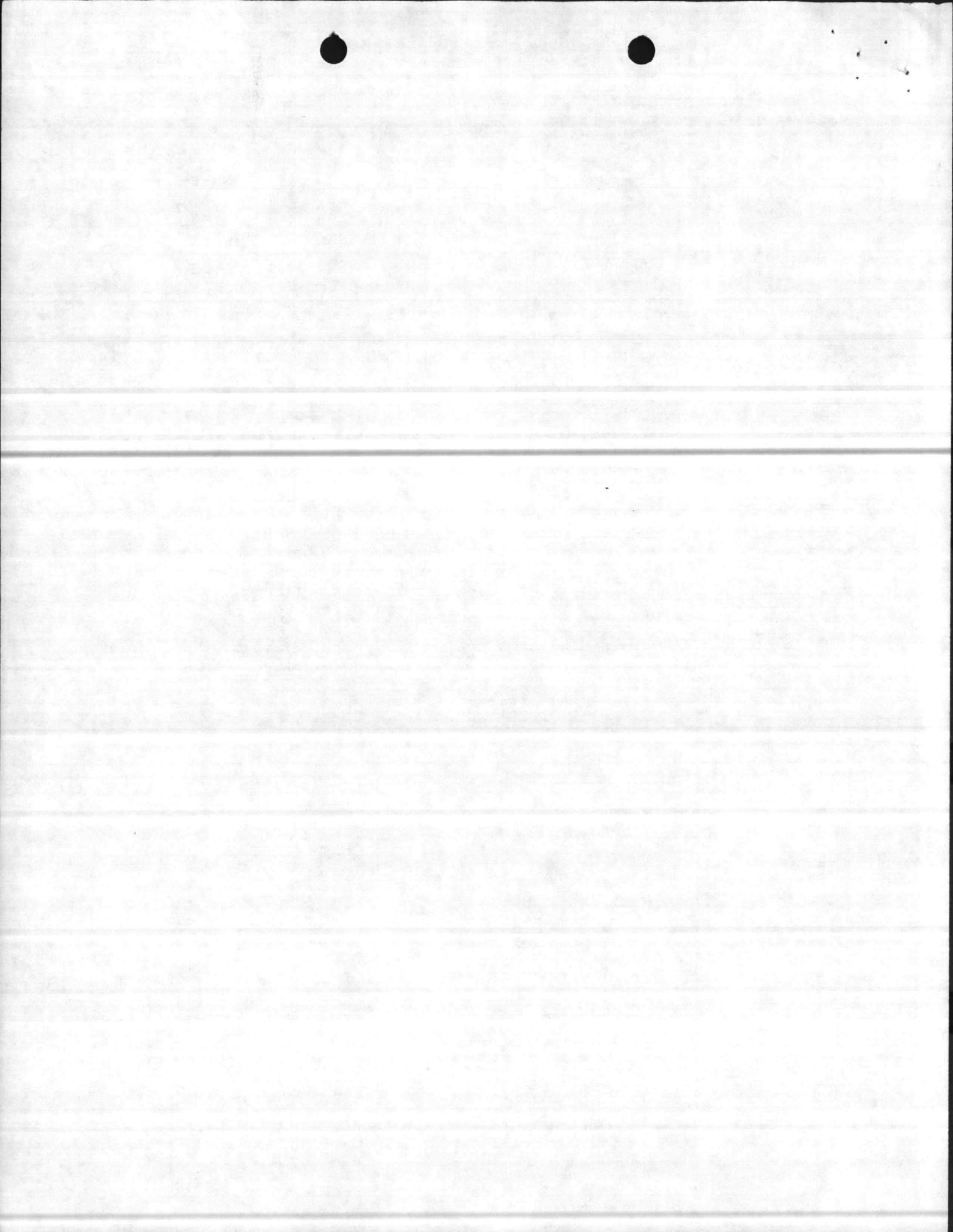
11. REMARKS AND SIGNATURE (If additional space is necessary, attach plain paper)

1. A reply direct to Dr. Doerr was requested by Ms Mary Margaret Goodwin in reference to Dr Doerr's proposed Woodpecker Study. Even though the study is supported by Ms Goodwin, it is not legally required or sufficiently high in priority to warrant funding at this time. Ms Goodwin's letter to Dr Doerr, and Major Gen. Cooper's recommendation are provided as background.

[Signature]

		DC/S for I&L L							
		ADC/S for I&L L							
3a	F	Executive Asst L							
		Admin Branch L							
		JtPlns Br LBJ							
		Systems Br LPS							
		Proj&ProgrMgr Br LPF							
		Plans & Policy LPP							
		Materiel Div LM							
2	FC	Fac & Svcs Div LF	7/29						
1	F	Facilities Br LFF	7/28						
		LFF-1							
	X	LFF-2							
		LFF-3							
		Proc Div LB							

L-1435



OFFICE OF
THE ASSISTANT SECRETARY OF THE NAVY
S&L

MEMORANDUM
SPECIAL ASSISTANT FOR THE ENVIRONMENT

24 June 81

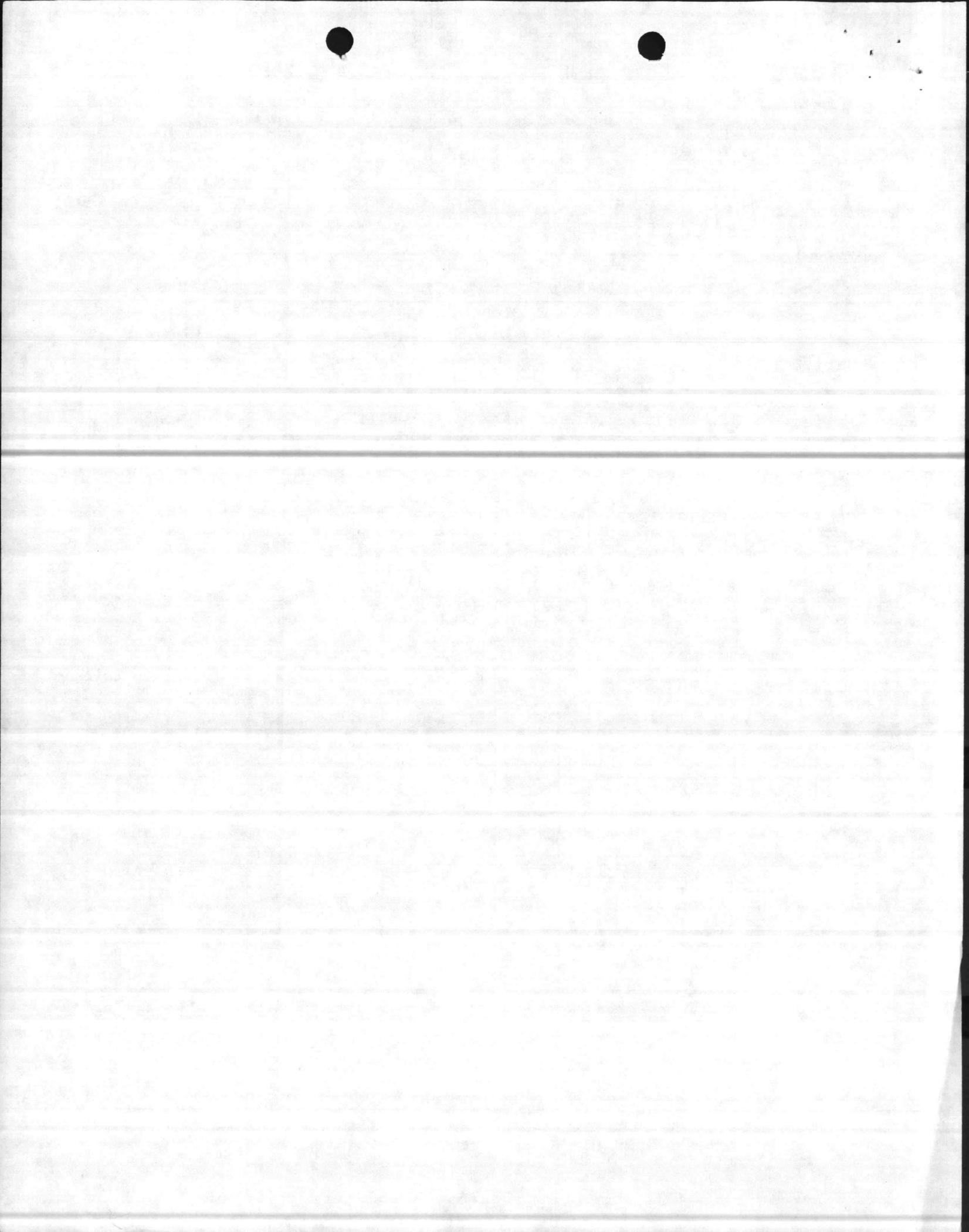
Marlo,

Enclosed is the Doerr proposal and my letter to Dr. Doerr. Please work with Camp Lejeune to see what can be done. If you need help with a sponsor let me know.

Keep me informed on what happens to this.

Thanks,

Mary Margaret





DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(MANPOWER, RESERVE AFFAIRS AND LOGISTICS)
WASHINGTON, D. C. 20350

24 June 1981

Dr. Phillip D. Doerr
Associate Professor
North Carolina State University
Department of Zoology
P.O. Box 5577
Raleigh, N.C. 27650

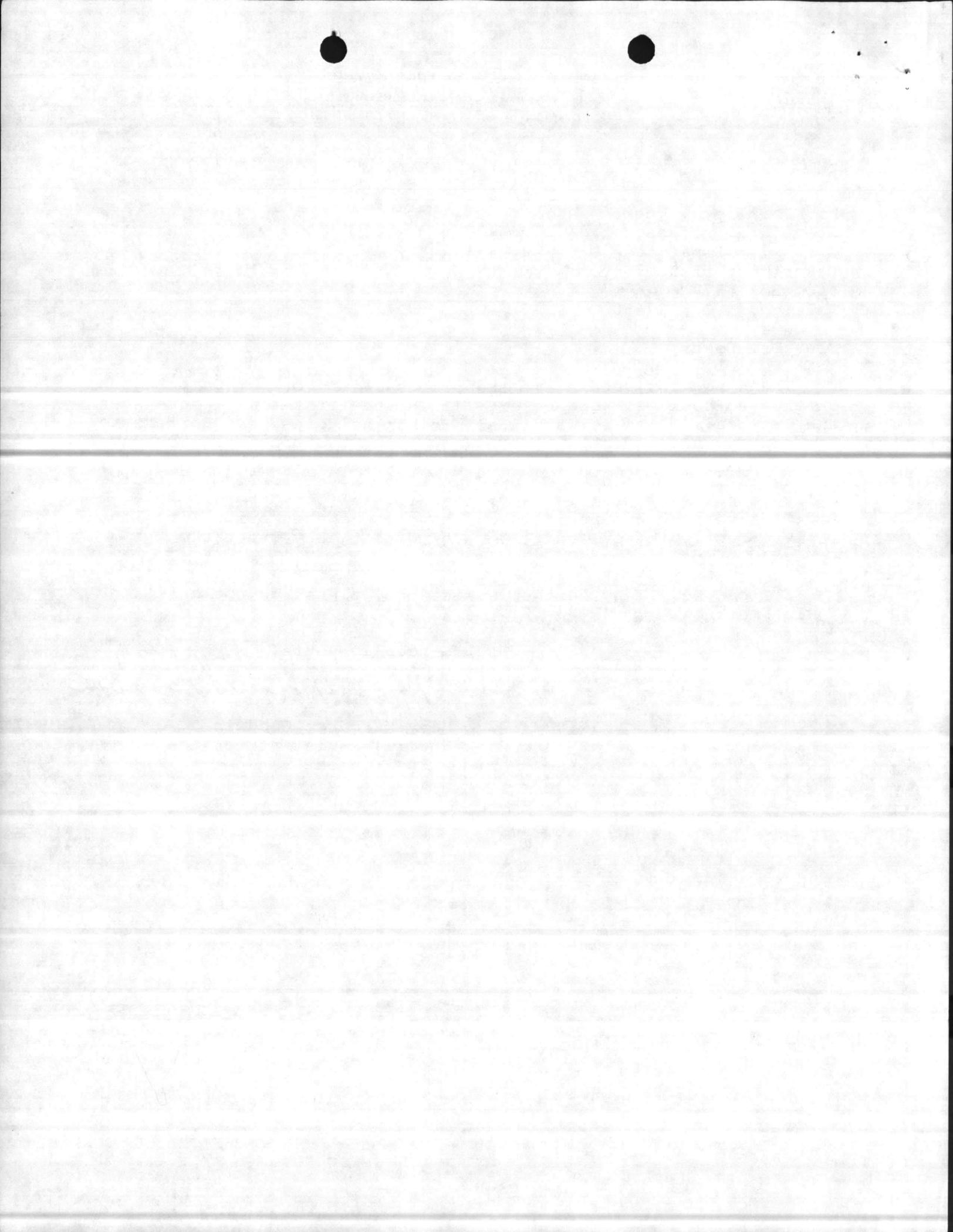
Dear Dr. Doerr,

Thank you for sending me the proposal for work at Camp Lejeune on the Red-cockaded Woodpecker. It is the first time I have seen the proposal. I am forwarding it to Marine Corps headquarters to the appropriate office. As you know the USFWS population survey is about to commence. So far we have not resolved the issue of who is paying for that one for Camp Lejeune. Therefore, I truthfully do not know what funding is available for your proposal. But I do very much support it. I have asked the Marine Corps to reply directly to you, and I am urging that they undertake the study.

If I can be of any further assistance, please do not hesitate to let me know.

Sincerely yours,

Mary Margaret Goodwin
Special Assistant for the
Environment





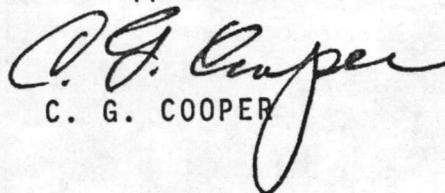
UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO
MAIN/JIW/th
11015
17 Jul 1981

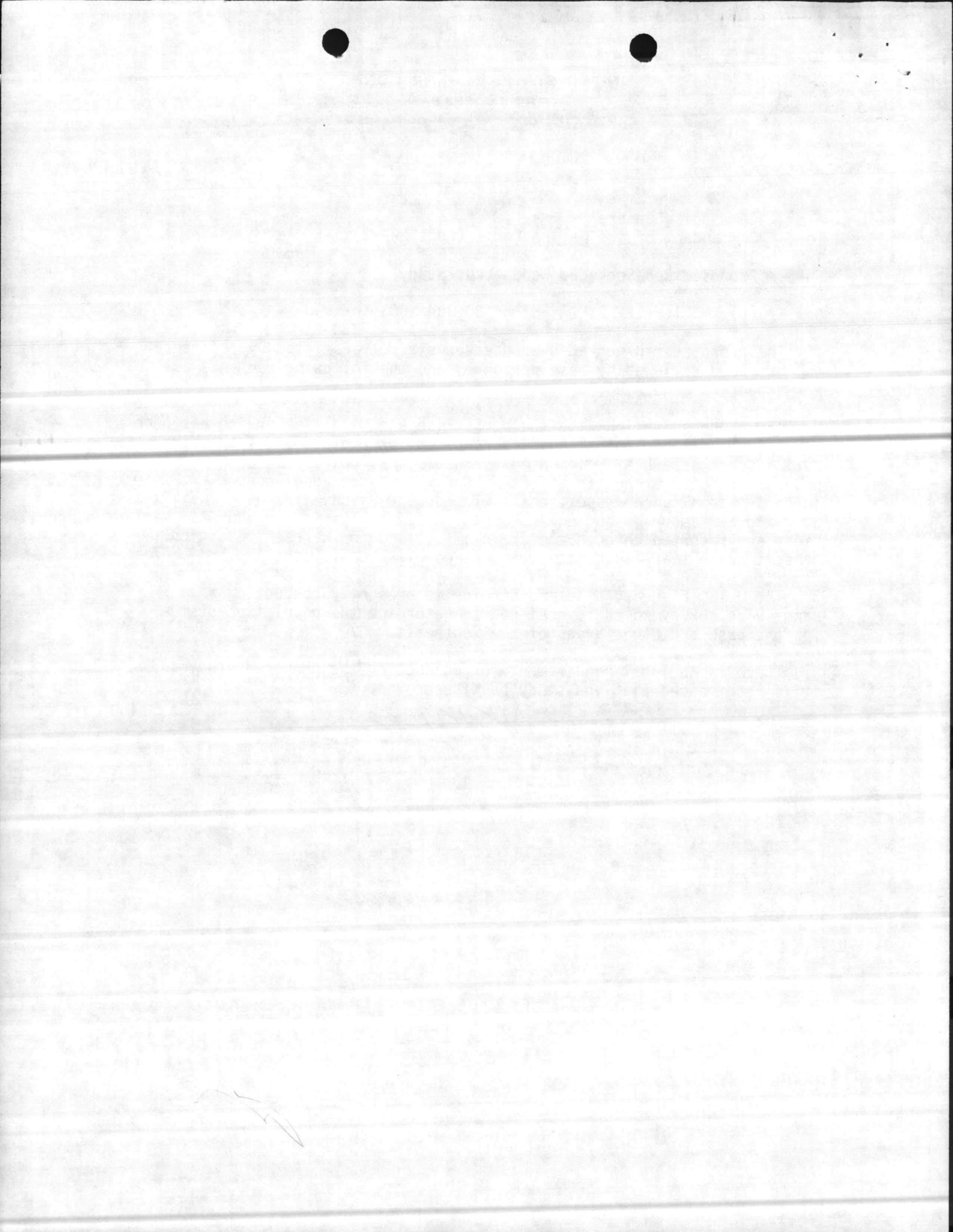
FF
130
2/11

From: Commanding General
To: Commandant of the Marine Corps (Code LFF-2)
Subj: Proposed Red-Cockaded Woodpecker Study
Ref: (a) CMC ltr LFF-2:MGA:gdj of 30 Jun 1981

1. The proposed red-cockaded woodpecker study transmitted by reference (a) has been reviewed by base personnel and the following comments are forwarded, as requested.
2. Formal consultation with the U. S. Fish and Wildlife Service has been conducted and a biological opinion rendered for protection of the bird. Marine Corps Base has implemented the biological opinion through a Base Training Order now in effect. Weekly, red-cockaded woodpecker guideline compliance inspections are conducted by Base Training Facilities and Natural Resources and Environmental Affairs Division personnel. Violations are reported through the chain of command for corrective action. Present actions are adequate to insure compliance with the law.
3. The U. S. Fish and Wildlife Service is presently conducting a range-wide survey which is designed to determine the population status for the base and other areas of the Southeast.
4. There is no legal requirement for conducting the proposed study and it is recommended that the study be disapproved.


C. G. COOPER

Gr
18





DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380



IN REPLY REFER TO
LFF-2:MGA:lw

3 AUG 1981

Dr. Phillip D. Doerr
Associate Professor
North Carolina State University
Department of Zoology
P.O. Box 5577
Raleigh, NC 27650

Dear Dr. Doerr:

A copy of the proposed study entitled, "Effects of Mechanized Training on Red-cockaded Woodpeckers", and a copy of the 24 June 1981 letter from Ms. Mary Margaret Goodwin were provided to the Commanding General, Marine Corps Base, Camp Lejeune for review and comment.

Upon completion of this review, it has been determined that existing habitat and population information is sufficient to insure Marine Corps compliance with the Endangered Species Act as it applies to the Red-cockaded Woodpecker colonies aboard Marine Corps Base, Camp Lejeune. Further, the U.S. Fish and Wildlife Service is presently conducting a range-wide survey designed to determine the woodpecker population throughout the Southeast. Accordingly, the proposal for additional study is not required at this time.

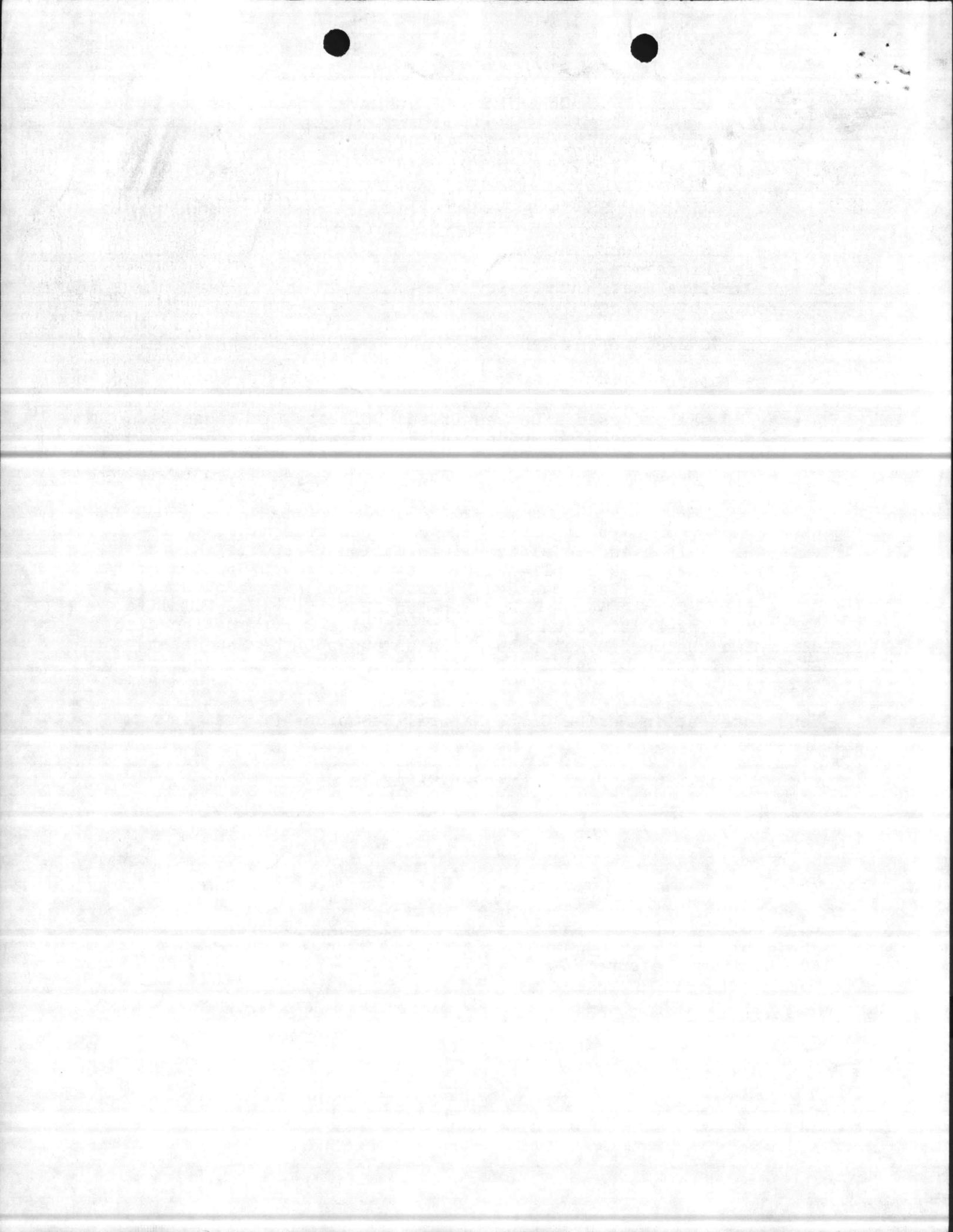
Your interest in Marine Corps Natural Resources Program is appreciated.

Sincerely,

V. J. WALLS
Assistant Deputy Chief of Staff
for
Installations and Logistics
the Commandant of the Marine Corps

Copy to:
ASN(S&L)
CG, MCB Camp Lejeune NC

Walls



DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380

IN REPLY REFER TO
LFF-2:MGA:lw

8 AUG 1981

Dr. Phillip D. Doerr
Associate Professor
North Carolina State University
Department of Zoology
P.O. Box 5577
Raleigh, NC 27650

maint.

Dear Dr. Doerr:

A copy of the proposed study entitled, "Effects of Mechanized Training on Red-cockaded Woodpeckers", and a copy of the 24 June 1981 letter from Ms. Mary Margaret Goodwin were provided to the Commanding General, Marine Corps Base, Camp Lejeune for review and comment.

Upon completion of this review, it has been determined that existing habitat and population information is sufficient to insure Marine Corps compliance with the Endangered Species Act as it applies to the Red-cockaded Woodpecker colonies aboard Marine Corps Base, Camp Lejeune. Further, the U.S. Fish and Wildlife Service is presently conducting a range-wide survey designed to determine the woodpecker population throughout the Southeast. Accordingly, the proposal for additional study is not required at this time.

Your interest in Marine Corps Natural Resources Program is appreciated.

Sincerely,

V. J. WALLS

Assistant Deputy Chief of Staff
for

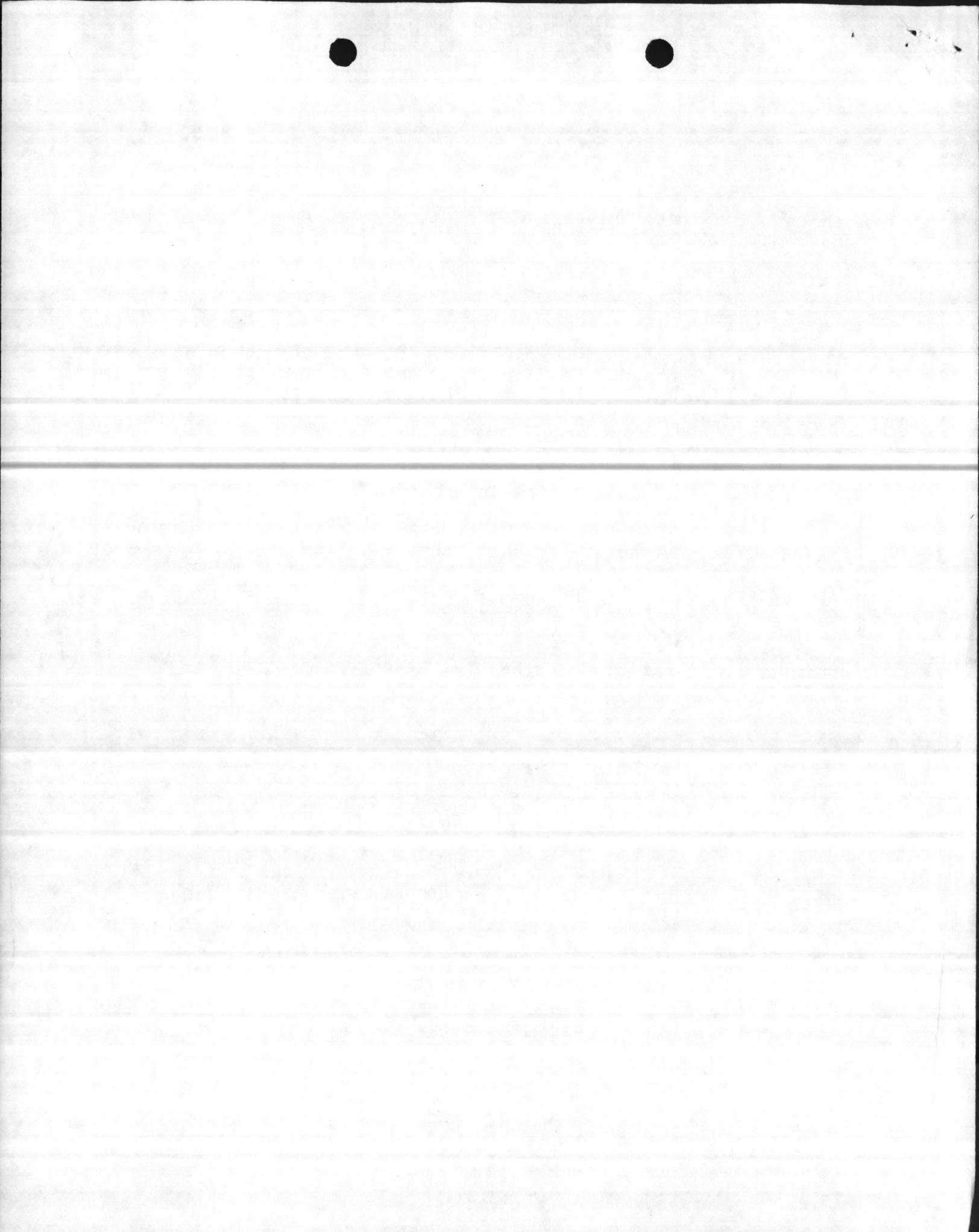
Installations and Logistics
on the Commandant of the Marine Corps

Copy to:
ASN(S&L)
CG, MCB Camp Lejeune NC

FAC ROUTING

	ACTION	INFO	INT
FACO			
1A			
3B			<i>rec</i>
4C			
4D			
4G			
4LC			<i>[Signature]</i>

Copy sent dmo

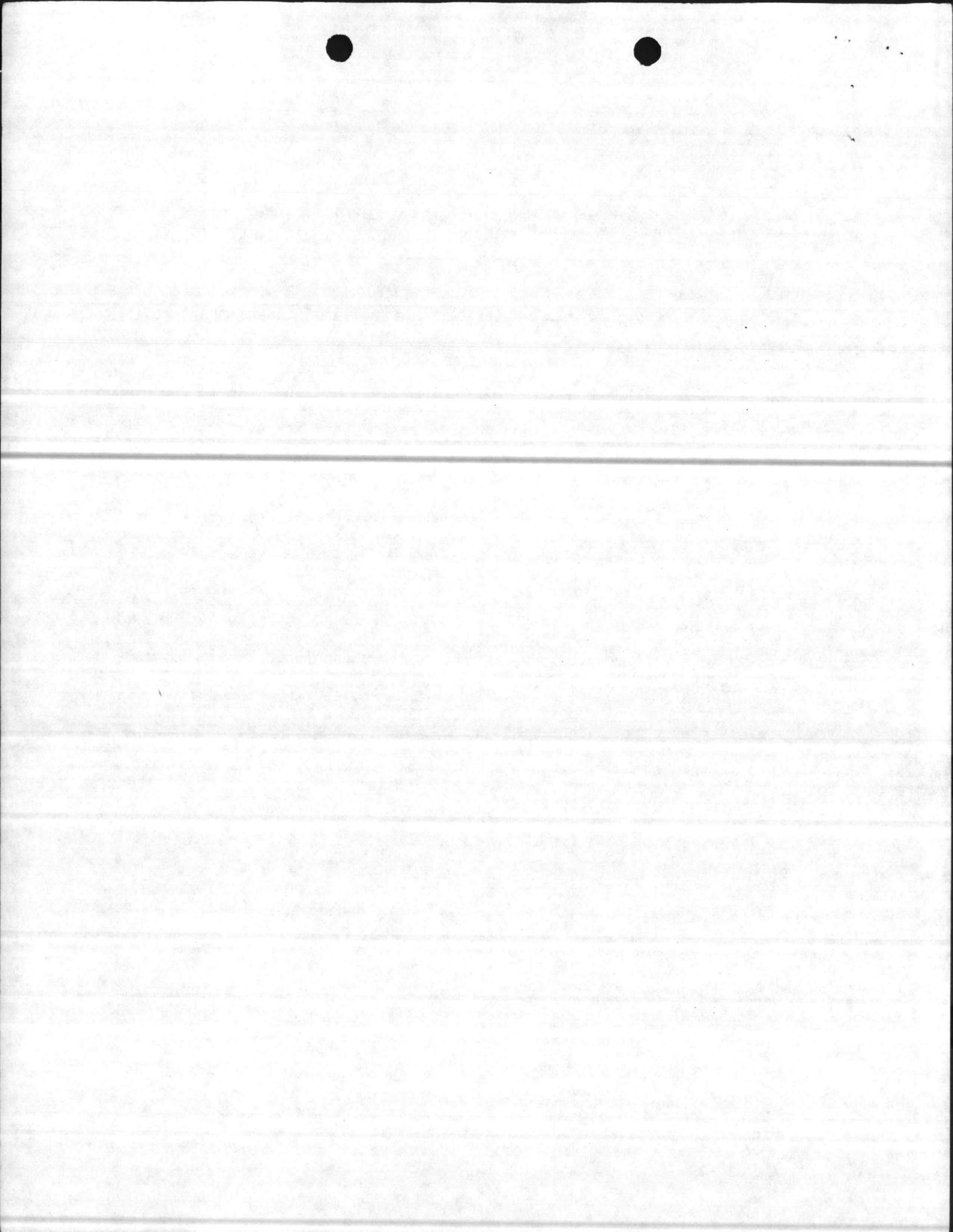


Study Title: Effects of Mechanized Training on Red-cockaded Woodpeckers

Goal: To assess the impact of mechanized training of marines at Camp Lejeune, North Carolina on Red-cockaded woodpeckers.

Justification:

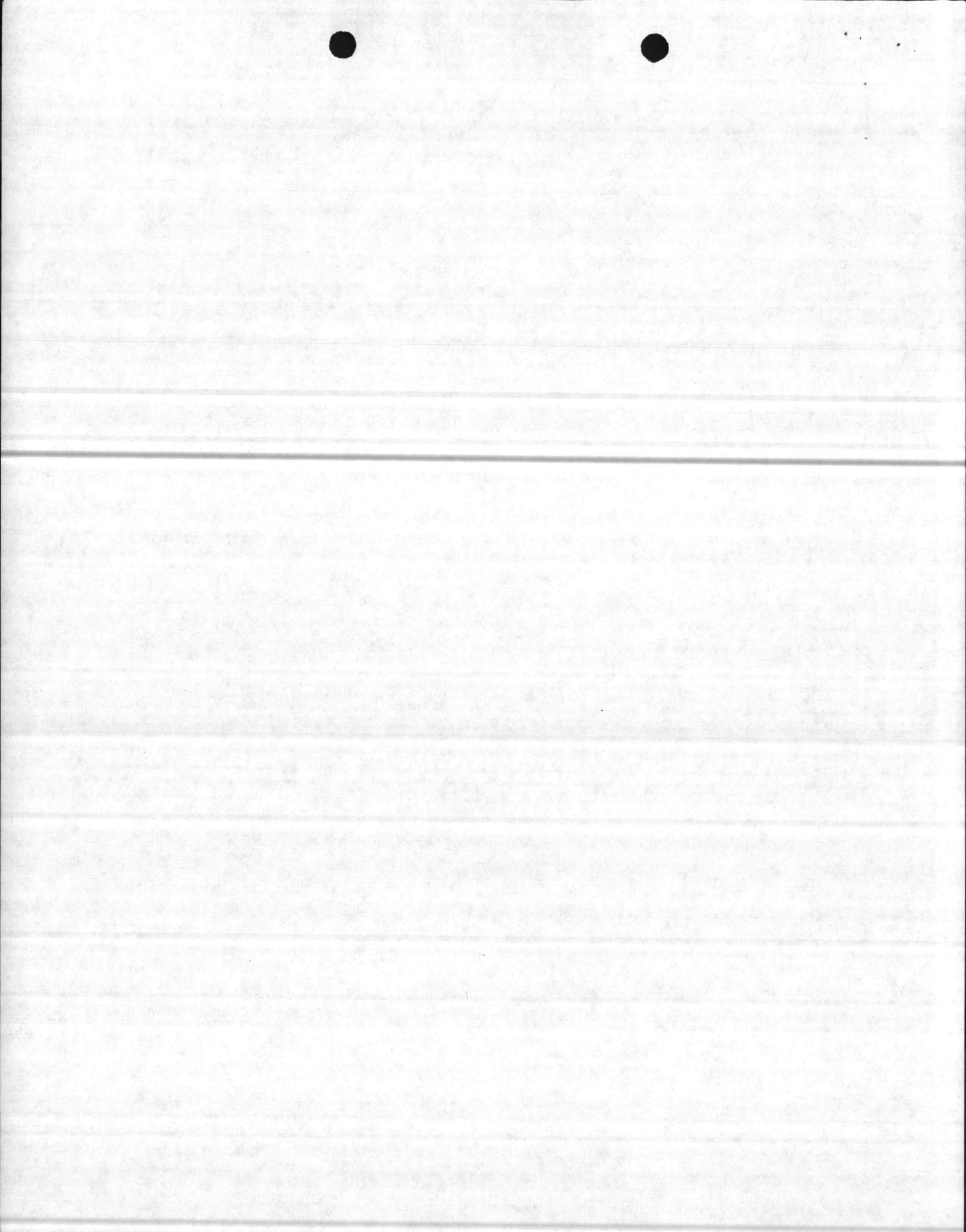
The Red-cockaded woodpecker has been listed as an endangered species since 1968 (USDI 1968) and is protected by the Endangered Species Act of 1973 (PL93-205). This precarious status is apparently related to the woodpecker's adaptation to living only in mature pine forests in the southeastern United States and to the fact that mature pine forests are much reduced from their former range (Vogl 1973). Vogl, (1973) reporting historical accounts of early travelers in the Southeast, concluded that most upland areas of the Southeast were occupied by pine savanna. This once widespread community was protected from hardwood invasion by frequent and widespread wildfires (Garren 1943, Ahlgren and Ahlgren 1969). Short rotation timber management on private and commercial timberlands and fire exclusion by man have dramatically reduced the extent of mature pine savanna in the southeast. Today, much of the remaining mature pine savanna woodpecker habitat persists on public lands where saw timber rotation schedules still predominate and where prescribed burning is an important management tool. National wildlife refuge lands, national forests and military reservations now support some of the best of this kind of habitat. Further, Section 7 of the Endangered Species Act of 1973, provides that all federal departments and agencies will use their authority to further the conservation of endangered species and will not engage in activities that will jeopardize the continued existence of such endangered or threatened



species. Marine Corps Base, Camp Lejeune, North Carolina is a military reservation where Red-cockaded woodpeckers have survived well, partly due to the use of prescribed fire and partly due to the long rotations practiced there. The primary function of the Base, however, is the training of marines, which sometimes results in potentially disturbing activity and noise levels in close proximity to woodpecker cavity and nest trees. If such activities do indeed disturb the birds by interfering with normal foraging, feeding or roosting behavior, which might in turn affect survival of adults as well as nesting success then such activities take place in violation of Section 7 of the Endangered Species Act. Presently, however, the impact of mechanized training on the birds is unknown. No studies have been done which document the effect of human activity or vehicular noise on Red-cockaded woodpeckers. Therefore, there is no basis on which to make a judgment as to whether or not Marine Corps' mechanized training violates the Endangered Species Act. Further, the knowledge of the impact of such activity has general application throughout the Southeast. Woodpecker habitat on private and commercial timber lands is expected to diminish rapidly in the future. As this occurs, only pine forests on public lands will be managed with the longer rotation required by Red-cockaded woodpeckers. Publicly owned and managed forest lands may save this species from extinction. Therefore, it is essential that we understand the impacts of human activity on the welfare of this species.

Objectives:

- (1) To estimate numbers of Red-cockaded woodpeckers on the mechanized infantry training area and a control area on a quarterly basis for 3 years.
- (2) To measure nesting effort and fledging success of Red-cockaded woodpeckers on both areas.
- (3) To characterize the understory and overstory vegetation (in colony



sites) in both areas, during the course of the study and inventory damaged trees/ha.

(4) To document troop usage of both areas and the incidence and intensity of both troop and mechanized vehicle use on an annual basis and immediately (2 weeks) preceding census activities.

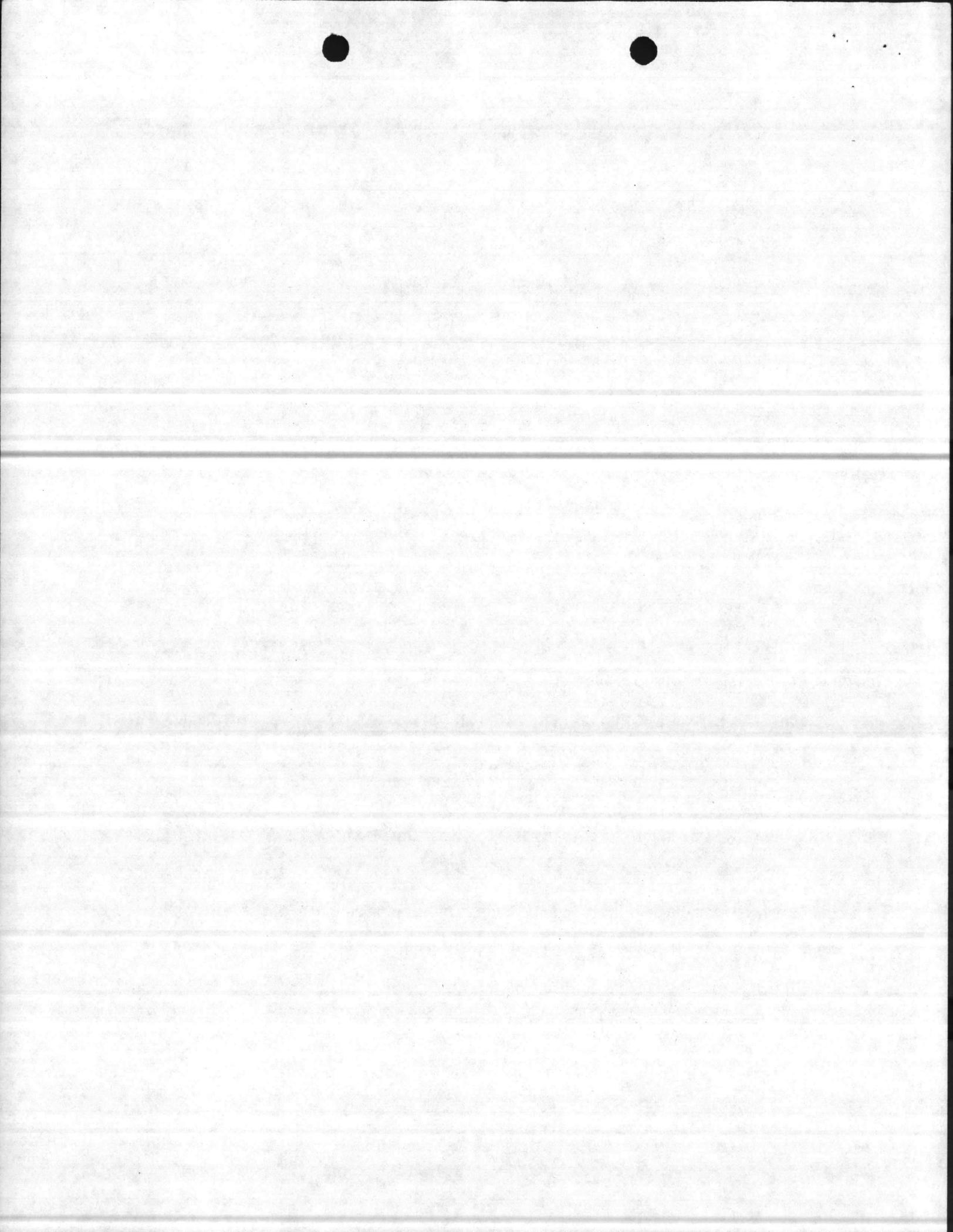
(5) To determine the response of Red-cockaded woodpeckers to troop and vehicular noise near the nests.

Job 1: Quarterly Population Estimate

Objective: To estimate population of Red-cockaded woodpeckers on January 1, April 1, July 1, and October 1 of each year.

Procedure: Each clan of woodpeckers will be inventoried on or about the quarterly anniversary by recording individual band combinations. This will, of course, require that each clan member be color banded and that each clan be observed for a sufficient time to record the band combinations with a spotting scope. Adult birds will be banded as soon as work begins and young will be banded as nestlings each year. Initially, 30 days in field need to be devoted to banding - that should take care of most adults. Several days each quarter will need to be devoted to banding of adults, also. In the first year of the study, it is estimated that approximately 50 adults will need to be banded. The observational activity may require 2 days per clan, though often one day is sufficient and sometimes more than one clan can be identified each field day. A conservative estimate of time for this job would be 4 work weeks per quarter or 16 weeks per year (80 work days) for 18 clans, 9 on the mechanized training area, 9 on the control area.

Job 2: Estimate Nesting Success



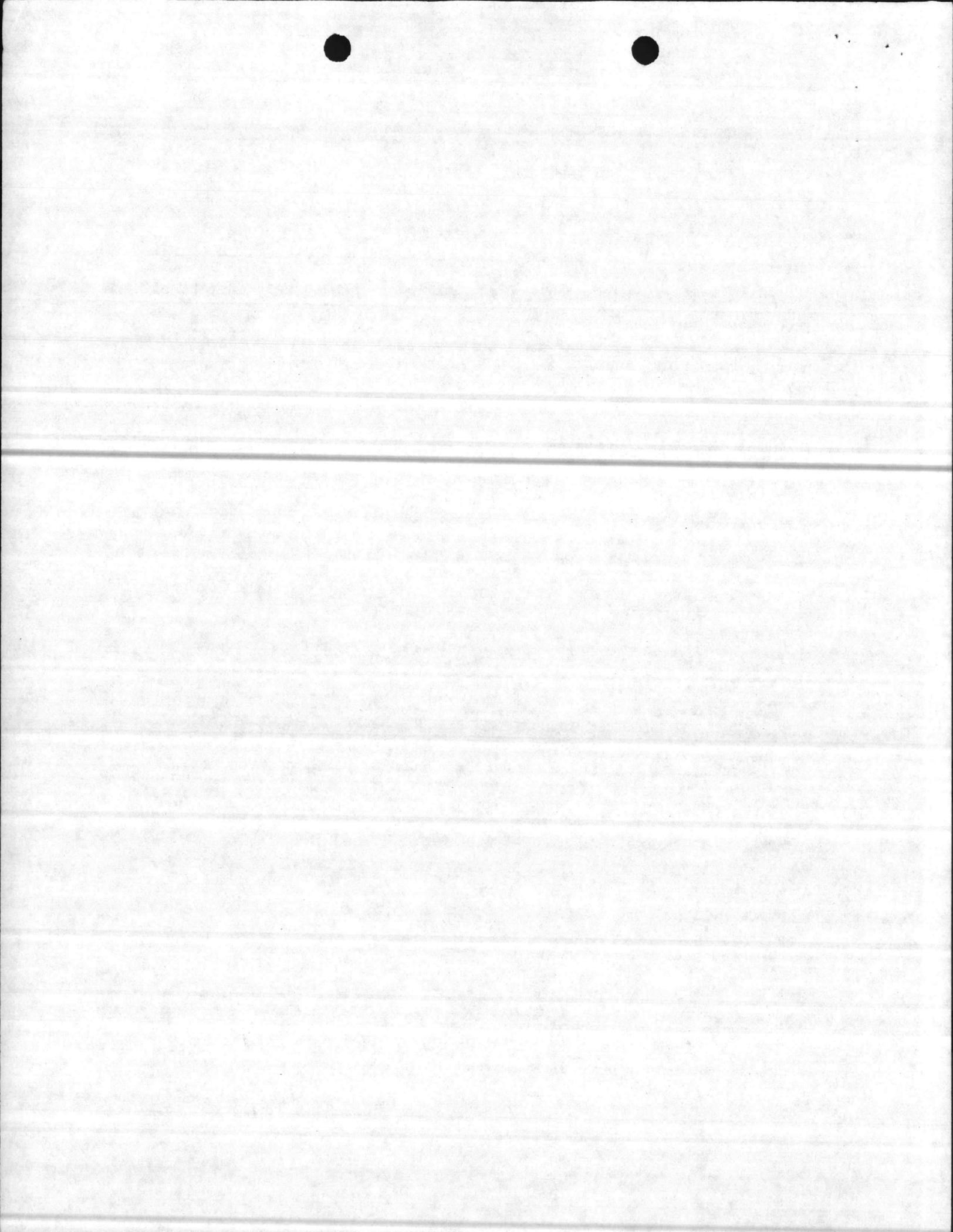
Objective: To measure nesting effort, success and recruitment of Red-cockaded woodpeckers on the mechanized infantry training area and the control area.

Procedure: Beginning in mid-April all known cavity trees will be visited weekly to determine which trees will be used as nest trees. After nest trees have been identified each nest tree will be visited once each week during the nesting season in order to determine clutch initiation and completion dates, clutch size, nesting and renesting success. Continued weekly visits will facilitate brood size counts, banding of the young birds (at 4-8 days of age) and determination of fledging success. This job will require that 18 nest trees be climbed each week during the breeding season (15 April - 15 August). This will require a minimum of 2 work-days per week for two people or 4 man-days/week for 14 weeks (56 man days).

Job 3: Characterization of Vegetation

Objective: To characterize understory and overstory vegetation on the mechanized infantry training area and the control area once each year of the study.

Procedure: A series of permanent quadrats will be randomly located in each colony site and buffer zone. At each sample location, meter-square quadrats will be used to document the ground cover vegetation and a .01 ha circular quadrat will be used to measure density, cover and species composition of the shrub and sampling layer. Overstory will also be characterized within these same .01 ha quadrats by recording species and basal area at each sample location. Within each colony site every cavity or start tree



will be counted and described. The vegetation sampling will require approximately 2 field days per colony each year for 2 people or 36 days (72 man-days). Cavity and start tree descriptions will require 4 days per year for 2 people.

Job 4: Data Analysis and Summary Reporting

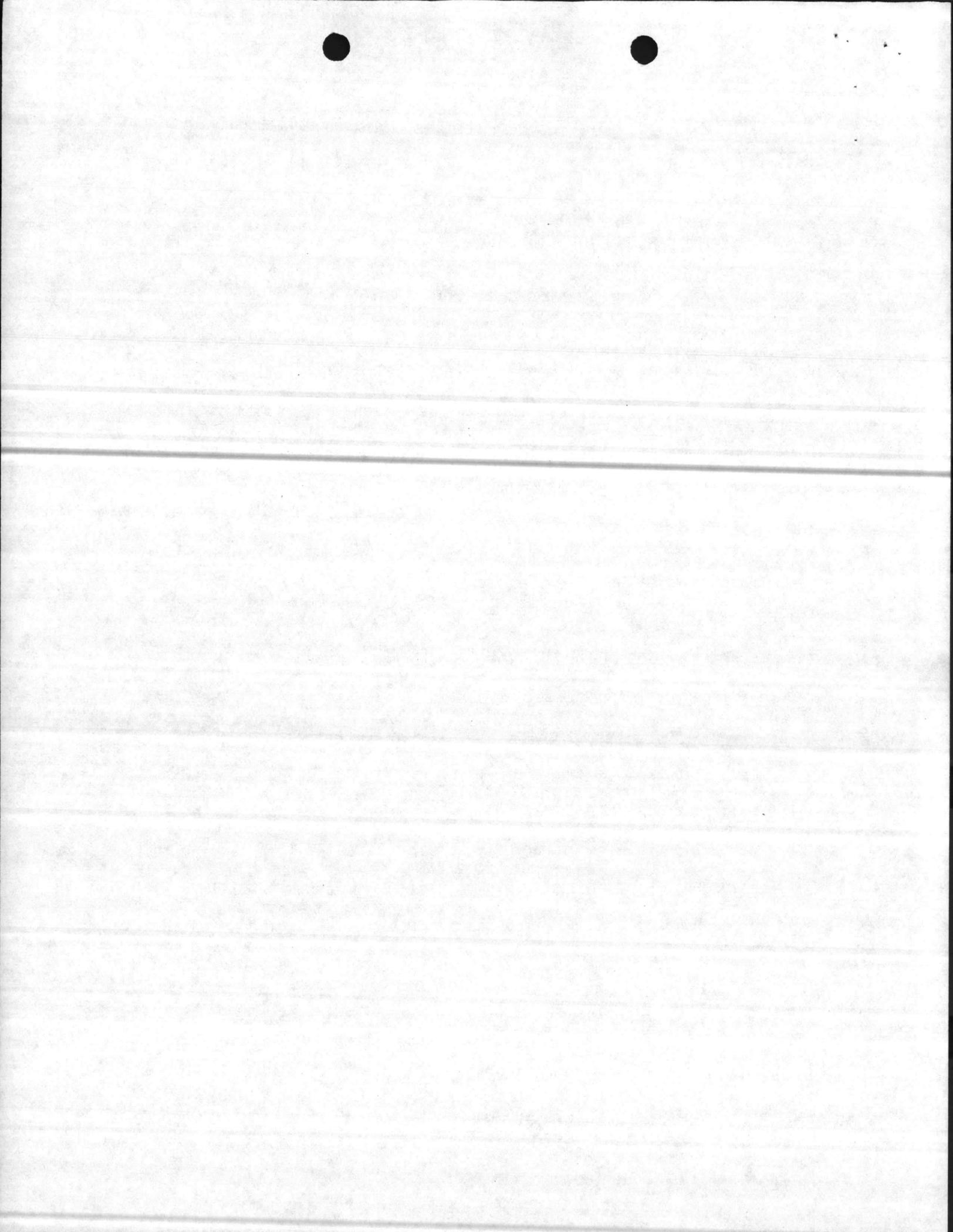
Objective: To summarize and analyze field data for each season of activity.

PROCEDURE: Field notes and data sheets will be summarized and all data keypunched on computer cards for data storage and analysis. A minimum of 2 days per month will be necessary to keep data analyses current and handle administrative affairs. An additional 2 days will be needed during preparation of the annual report.

Job 5: Troop Activity Noise and Red-cockaded Woodpecker Feeding Behavior

Objective: To determine affects of troop activity and vehicle noise on feeding of nestlings by Red-cockaded woodpecker adults.

Procedure: Tape recordings of mechanized infantry activities will be played at normal levels near nest trees where adult woodpeckers have been observed feeding young. To avoid any possibility of harm to the young woodpeckers, the test recording will only be played for a period of one hour during each test. Five test nests will be randomly selected from the 11 active colonies at Camp Lejeune not part of either study area. Each test nest will be exposed to one hour of recorded troop and vehicle noise, during which the number of feeding trips made by adult woodpeckers will be recorded. In addition, the number of feeding trips made by adults will be recorded for 1/2 hour preceding and 1/2 hour following the text exposure. Five nests will also be selected for similar observation period from the control area. No tape will be played although the number of feeding trips will be recorded

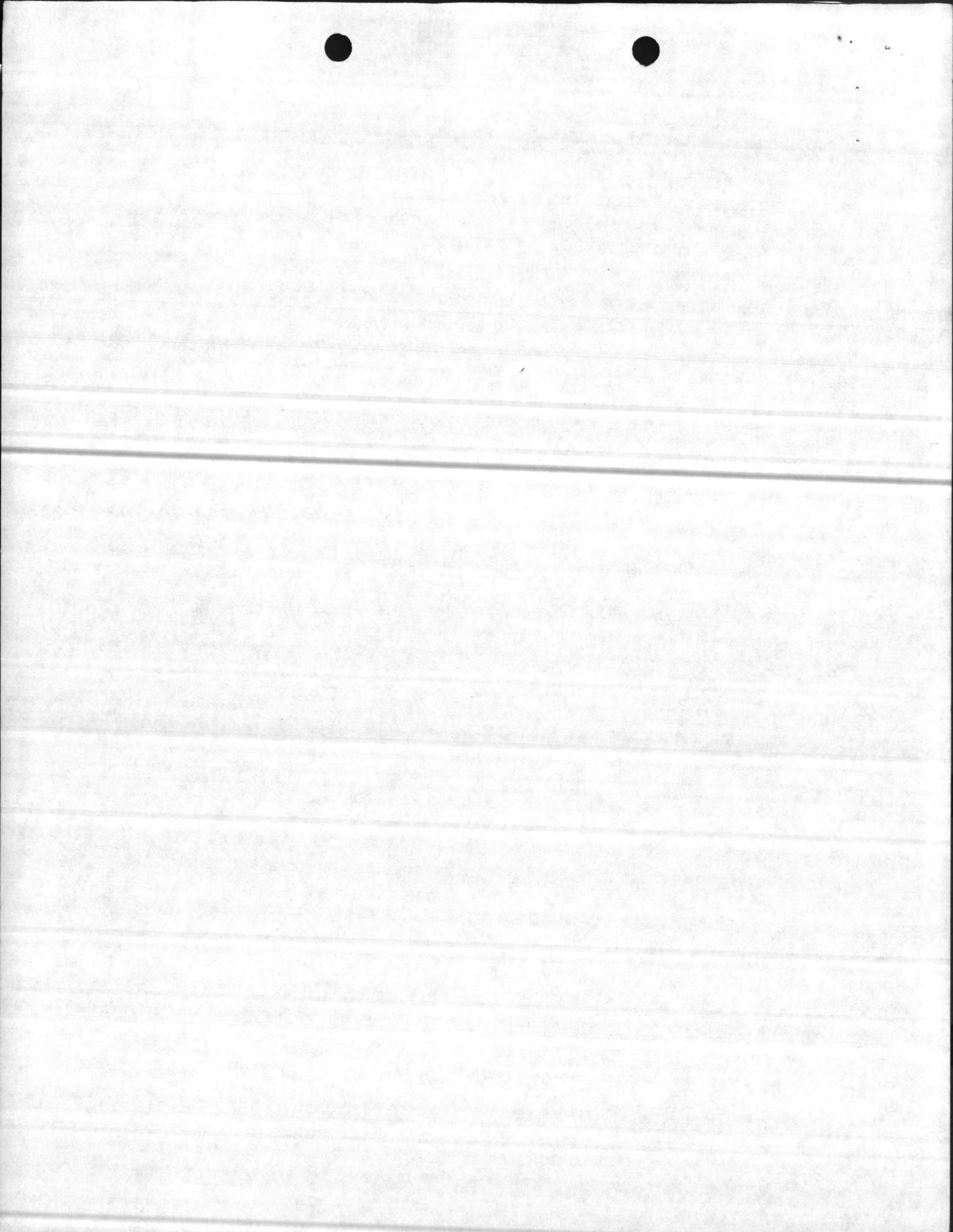


for a similar two hour period. To standardize this test as much as possible, the test of each nest will be made at the same chronological age of the nestlings rather than the same calendar date. Extreme weather conditions will be avoided and the same photoperiod hours of each day will be used. This design will yield a 2-stage test of the impact of noise on woodpecker feeding behavior. Ten half-day sample periods will be needed to complete this test.

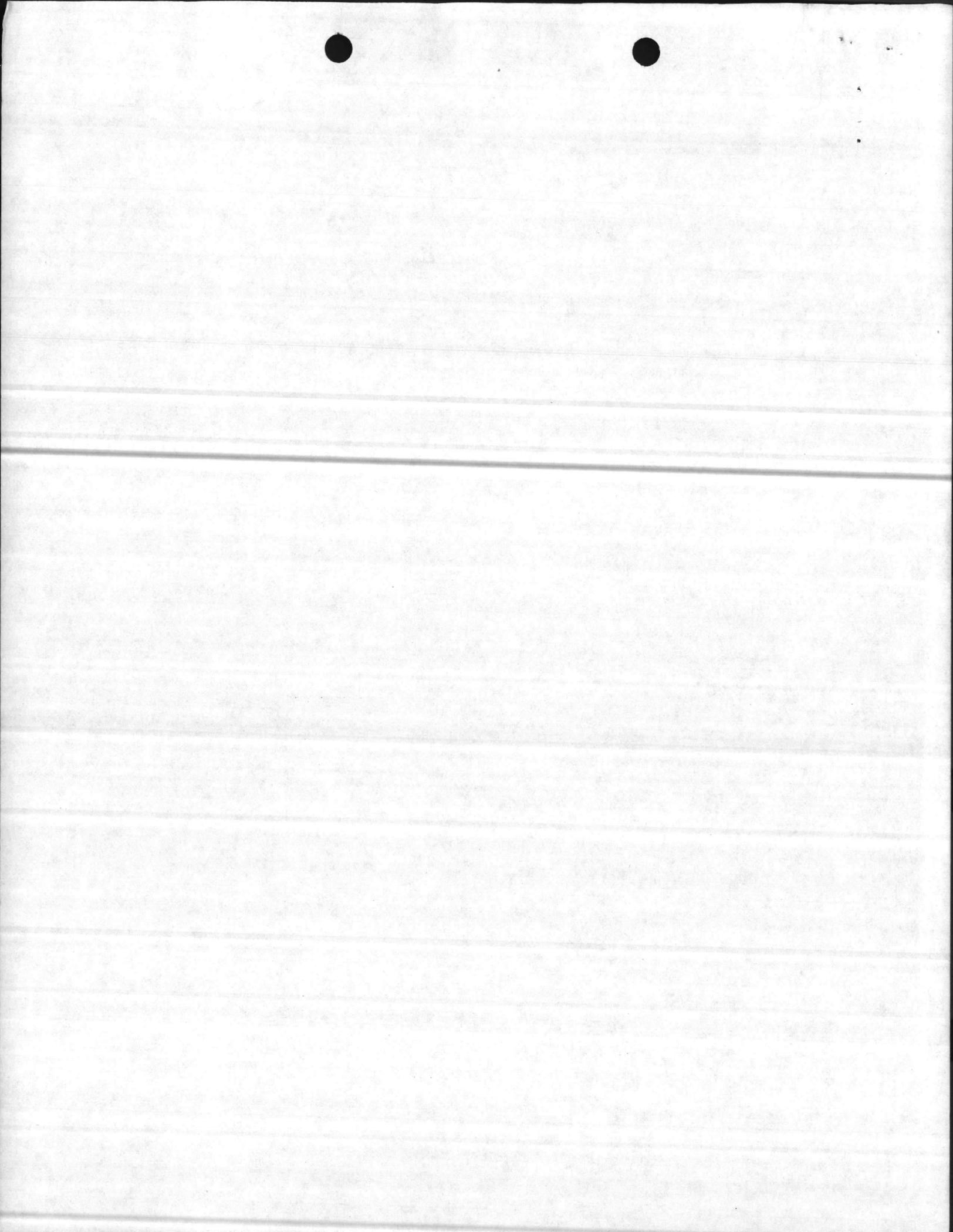
Job 6: Preparation of Final Report

Objective: To analyze, synthesize and interpret all results and prepare a final written report, with recommendations, based on the results of Jobs 1-5.

Procedure: Continual seasonal summaries of data will be made and data will be key punched for computer entry and analysis. When all field work has been completed, final data summaries and analyses will be completed and the final report will be prepared.



<u>Job Number</u>	<u>Job Title</u>	<u>Man Days/Yrs.</u>
1	Quarterly Population Estimate	80
2	Estimate Nesting, Fledging Success	84
3	Characterization of Vegetation	80
4	Data Analysis and Summaries	24
5	Effect of Noise on Woodpecker Behavior	14 (1st and 2nd yr. only)
6	Preparation of Final Report	60 (Last yr. only)



BUDGET

	<u>1st Year</u>	<u>2nd Year</u>	<u>3rd Year</u>
Personnel:			
Research Technician II	\$10,380.00	\$11,662.00	\$13,061.00
Temporary Labor (1)	3,460.00	3,460.00	3,460.00
Fringe Benefits (17% of Salaries)	<u>2,352.00</u>	<u>2,570.00</u>	<u>2,808.00</u>
Sub-Total	\$16,192.00	\$17,692.00	\$19,329.00
Travel (Current Services)	1,000.00	1,000.00	1,000.00
Fuel, Maintenance	1,500.00	1,500.00	1,500.00
Computer Time	100.00	300.00	500.00
Equipment			
Four wheel drive truck (1)	7,500.00		
Swedish Ladder sections (7)	770.00		
Spotting Scope, Stock mount	250.00		
10x50 Bushnell Sportview Binoculars (2)	160.00		
Miscellaneous equipment	<u>350.00</u>	<u>500.00</u>	<u>350.00</u>
Sub-Total	11,530.00	3,330.00	3,350.00
TOTAL	\$27,722.00	\$20,992.00	\$22,680.00

