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SOUTHERN BEAVER CONTROL

BY

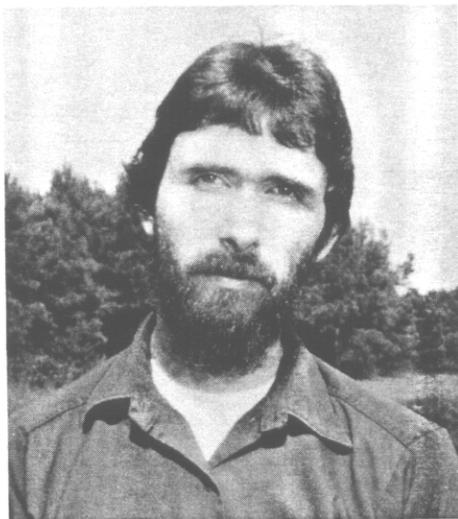
KEN FORBUS AND FRED ALLEN



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ACKNOWLEDGMENTS

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INTRODUCTION

Beaver have often been described as beneficial animals in that through impoundments of back water, they provide a habitat for game, furbearers, waterfowl, plus other birdlife and fish. At the same time, the beaver has established a reputation as a nuisance and pest because of their feeding activities which cause flooding and tremendous amounts of timber loss. A survey conducted by the Georgia Forestry Commission between 1967 and 1975 indicated that an estimated 45 million dollars worth of Georgia timber had been damaged as a result of beaver

activity.^{1/}

Three facts concerning beaver should be noted:

1. Various beaver control methods have been tried in the past and some to no avail.
2. Beaver are strict vegetarians. Their preferred tree species in the Southeast are sweetgum, willow, cottonwood, yellow poplar and maple. Also, pine may be heavily eaten.
3. The size of a beaver colony (family group) may vary from two to nine individuals.^{2/}

The primary objective of this study was to determine the effectiveness of trapping beaver for two consecutive weeks in two consecutive trapping seasons using the 330 Conibear. This study is a continuation and enlargement of research conducted in Alabama in 1976 by Edward P. Hill. He had found that most of the beaver in a small drainage could be removed within a two-week trapping period and the remainder removed the next year.^{4/}

STUDY AREA

Two study locations with drainages approximately two miles in length were selected.

The first site was in Treutlen County. It involved a drainage consisting of 73 acres of which approximately 60 were flooded. A timber cruise revealed that 1,100 of the estimated 1,400 cords were classified as dead, dying or heavily dam-

aged. An associated problem existed in the area because beaver had undermined a railroad embankment and caused a 120-foot section of railroad to collapse. Overall damage done by beaver in this 73-acre study area was approximately \$100,000.

The second area selected was the Baldwin State Forest in Baldwin County. Portions of the forest are set aside as a seed

orchard for the Georgia Forestry Commission reforestation department. The study area contains 124 acres, has a site index of 90 and is capable of growing two cords per acre per year. As a result of beaver impoundments, culverts and drains were closed creating problems in the area.



Forester examines active slide at a dam crossing.



This impoundment area is typical of sites heavily damaged by beaver.

PROCEDURES

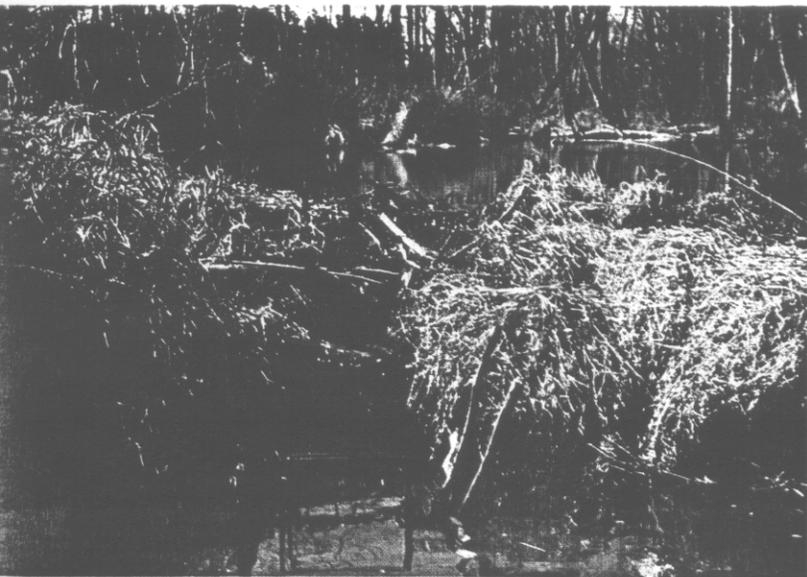
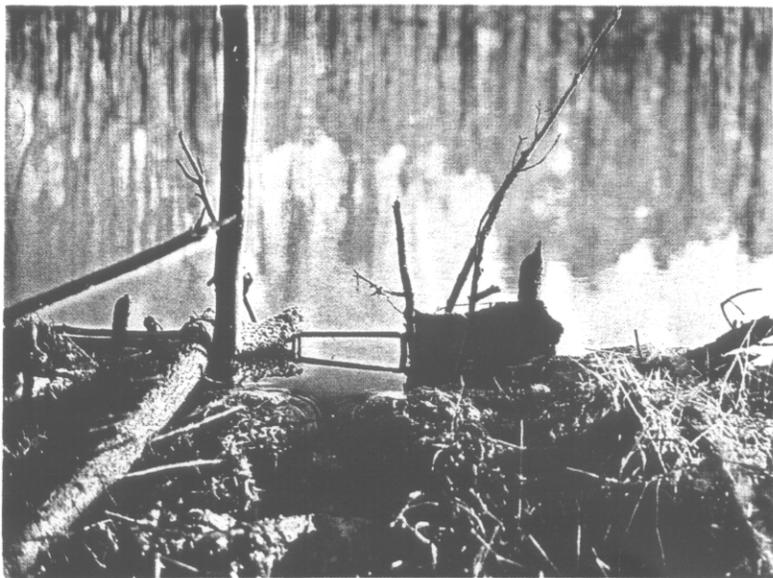
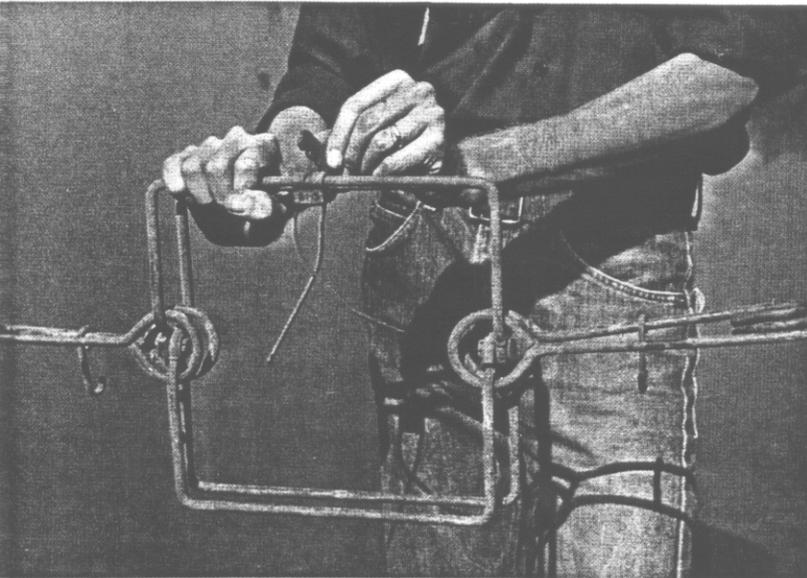
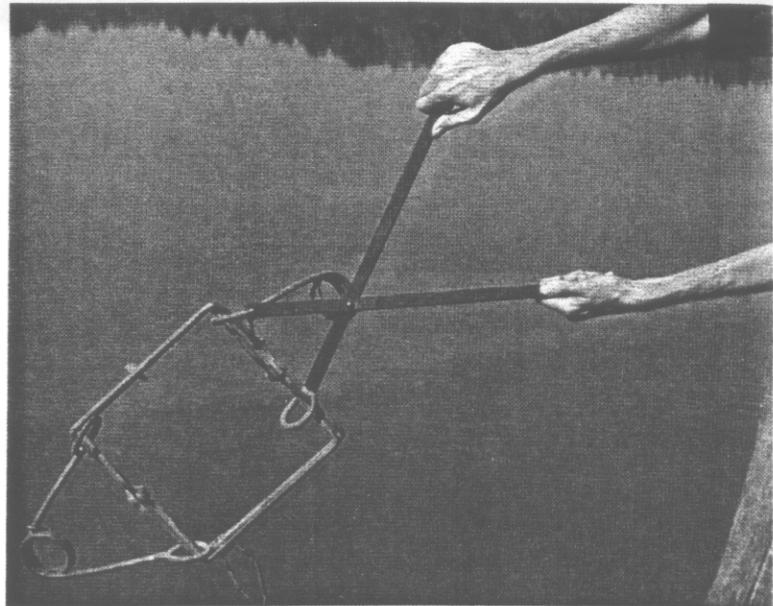
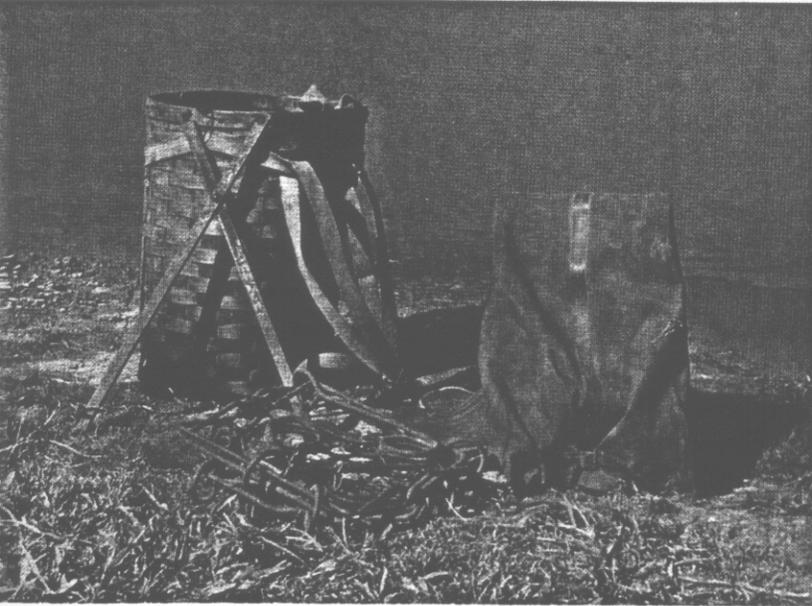
Opinions may vary among trappers regarding the type trap for control of southern beaver, but most of those who have tried the 330 Conibear agree that it is preferred for most situations.^{3/} Because of this consensus, an experienced, professional trapper was employed to set the 330 Conibears. No land sets were made in either area.

The two major types of water sets used were dam sets and channel sets. Dam

sets involved setting the trap in front of or immediately below the dam at an active crossing.^{2/} Channel sets involved setting traps in shallow runs between lodges, bank dens and feeding areas. A total of 26 traps were set at the Baldwin State Forest and 17 in Treutlen County. The number of traps and type setting were determined by the trapper.

Traps were checked daily during the study, and records were maintained on

catches as to trap location, sex, weight, date and type of set. Weights of beaver caught were estimated. Locations of dams, lodges, trap locations and bank dens were indicated on maps for future use. A jawbone of each trapped beaver was removed to determine age. Ages were determined by characteristics of basal openings in mandibular molars.^{5/}



Top left: Basket, tongs and other gear used in trapping beaver. At right, trapper uses tongs to open trap. Middle photo, left: Trapper sets trigger mechanism prior to placing trap in water. At right, a

dam set with trap on upper side of slide. Bottom, left: A dam set with trap located on lower side of slide. At right, a channel set trap is placed in midstream.

RESULTS

The Treutlen County area was first trapped for two weeks during January 1980. At this time, seven beaver were trapped in dam sets and two in channel sets. Prior to the study, two beaver had been shot by local residents who failed to note the sex and weight of the beaver. A total of 11 beaver (five females, four males, and two of unknown sex) were removed from the area. Table 1 shows the classes of beaver taken during the study.

At the beginning of the second year, the area was re-checked. No signs of recent activity could be found. Several traps were set, but they were unproductive. The area was believed to have been trapped out therefore the traps were removed, and the dams were dynamited. It should also be noted that due to dry weather in the summer of 1980, the study area had dried up.

In January of 1980, the Baldwin State Forest was trapped, and 12 beaver (eight females and four males) were caught. Channel sets produced seven catches, and dam sets produced five catches. Prior to the study, six beaver (sex and weight unknown) had also been trapped by Forestry Commission personnel. A total of 18 beaver were removed during the first season.

The second year, 1980-81, yielded eight beaver (six females and two males). Age and sex classes of the beaver taken during the two trapping periods are shown in Table 2. Channel sets resulted in six of these catches, and dam sets accounted for two. Following the completion of the second trapping season, the dams were destroyed by dynamiting them.

Table 1--Treutlen County Catch Record - 1980

Date Trapped	Trap No.	Sex	Age
1-15	2	F	3½-4
1-16	11	F	3½-4
1-18	10	M	2½-3
1-21	15	F	1½-2
1-24	9	M	4½ +
1-24	12	F	3½-4
1-24	14	M	2½-3
1-27	17	M	4½ +
1-27	4	F	3½-4

Table 2--Baldwin State Forest Catch Record 1980 (First Period)

Date Trapped	Trap No.	Sex	Age
1-31	5	F	4½ +
2-1	12	M	Kit
2-1	13	F	4½ +
2-4	20	F	Kit
2-6	20	M	4½ +
2-10	3	F	1½-2
2-10	5	F	1½-2
2-10	21	F	2½-3
2-11	8	F	2½-3
2-11	11	M	1½-2
2-11	20	F	2½-3
2-12	9	M	Kit

1980 (Second Period)

Date Trapped	Trap No.	Sex	Age
12-7	4	F	Kit
12-9	8	M	4½ +
12-10	8	F	1½-2
12-11	23	F	4½ +
12-11	5	F	4½ +
12-14	24	F	4½ +
12-14	8	F	3½ +
12-14	23	M	Kit

CONCLUSION

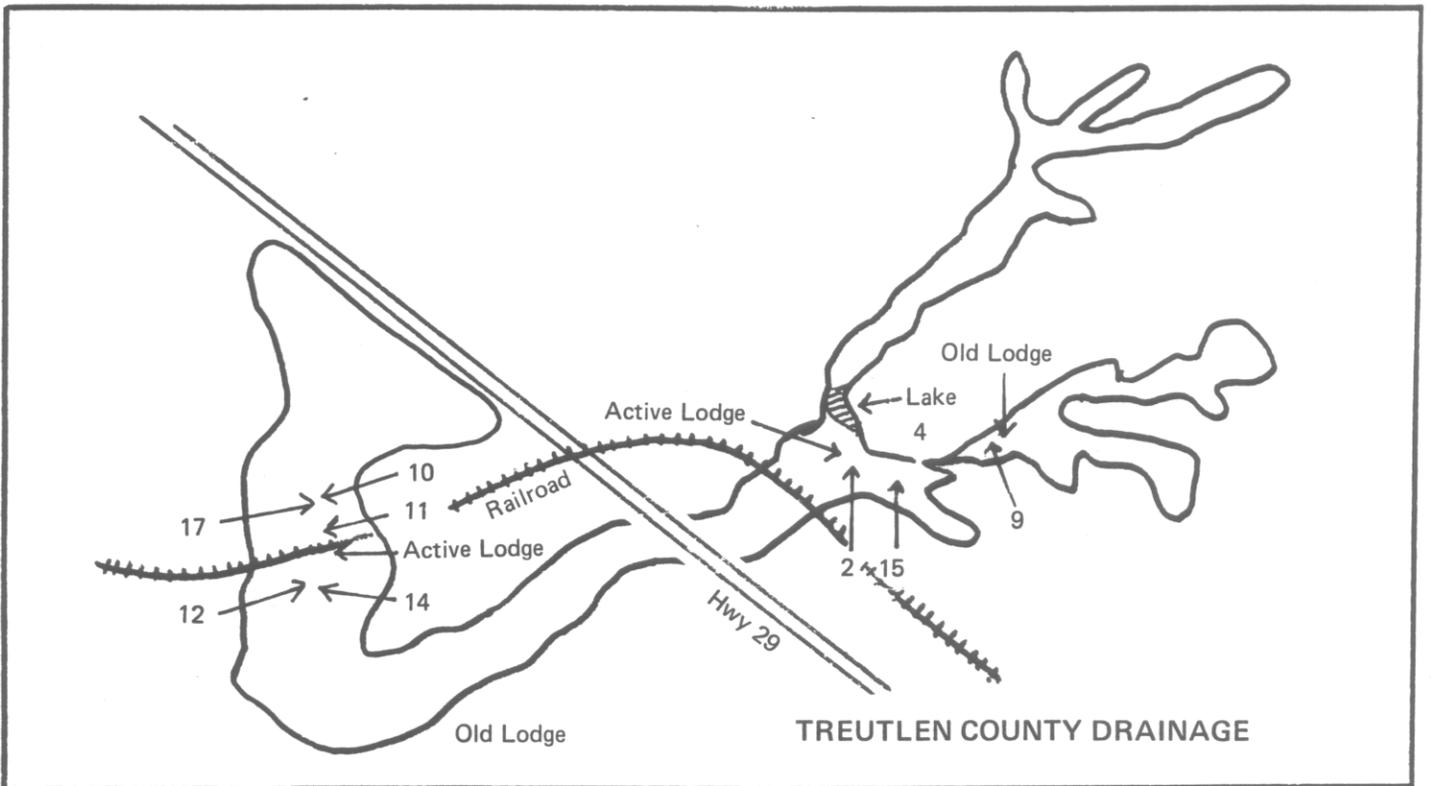
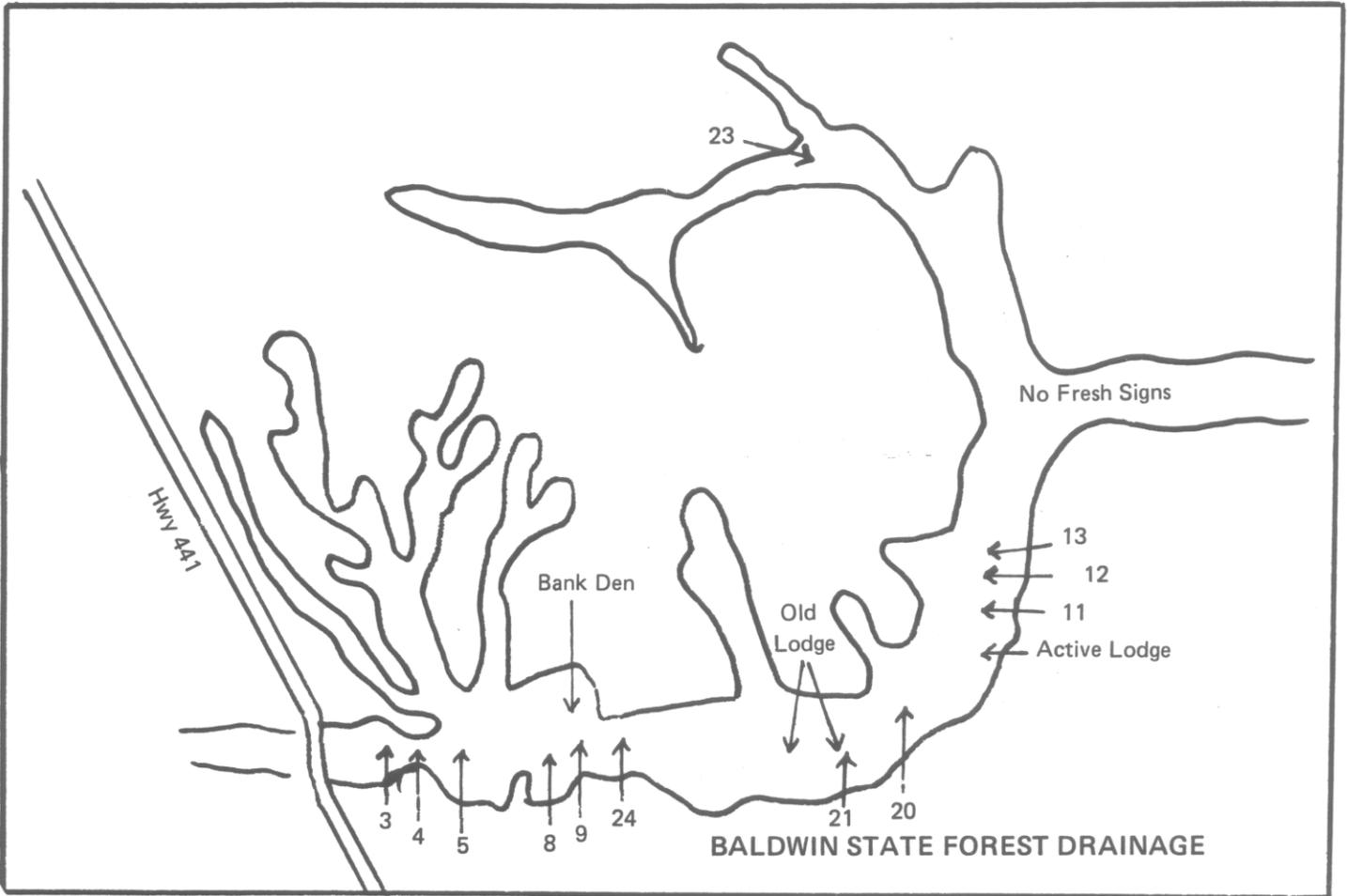
In the spring following the last trapping period, both areas were checked for signs of beaver activity.

The Treutlen County area, which was trapped only one season, showed no fresh sign of beaver activity. When the Baldwin State Forest was re-checked, it was found that one of the 26 dynamited dams had been rebuilt.

It can be concluded that intensive trapping using the 330 Conibear for two

weeks during two consecutive years can either eliminate or greatly reduce the beaver population on small drainages. This is not to say that in every case the problem of beaver damage on small watersheds is solved. Beaver egress and ingress to areas may occur and may have to be dealt with periodically as the need arises. However, effective control of nuisance colonies can be maintained using the technique described.

LOCATION OF SUCCESSFUL TRAP SETS
 LODGES AND DENS



TIPS ON CONTROLLING SOUTHERN BEAVER

1. Traps should be set in areas that have indications of fresh activity.
2. Traps should be set with the top of the trap two to three inches above the surface of the water with the trigger mechanism beneath the water.
3. Traps should be wired to a secure stake to prevent the loss of the trap to high water or loss of the beaver and the trap.
4. Arrange sticks, logs or other debris as may be necessary to effectively block the channel on either side of the trap and guide the beaver to the trap opening.
5. Manipulate the habitat by destroying dams, lodges or bank dens.
6. For information on season and requirements, contact Department of Natural Resources or Georgia Trappers Association.

LITERATURE CITED

1. Georgia Forestry Commission. 1975. Beaver Damage Survey, 23 p.
2. Hicks, Tom. 1977. Beaver and Their Control in Georgia. Department of Natural Resources, Tech. Bulletin WL 2.p.
3. Hill, Edward P. 1974. Trapping Beaver and Processing Their Fur. Alabama Cooperative Wildlife Research Unit No. 1, Auburn, Alabama. 10 p.
4. Hill, Edward P. 1976. Control Methods for Nuisance Beaver in the Southeastern United States. Proc. 7th Vert. Pest Conf. pp 85-89.
5. Van Mastroud, F.C. and Stephenson, A.B. 1964. Age Determination for Beavers by Tooth Development. T. Wildle Manage 28(2) 430-434.



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John W. Mixon, Chief of Forest Research

Cost	\$1908
Quantity	5,000