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BEAVER POPULATION STUDIES, NORTHERN MACKENZIE DISTRICT

Annual Progress Report 1962-63, Project Number M3-2-2

By V. D. Hawley

INTRODUCTION

Plans were submitted for a limited beaver population study to be conducted on the Mackenzie delta. Objectives were:

(a) To determine colony composition, colony densities, colony and individual range, reproductive success, population turnover etc. for the beaver in the northern Mackenzie District and fluctuations in these factors due to habitat, climate, harvest and other ecological variations, (b) To determine the current beaver population status and harvest intensity in the northern Mackenzie District and (c) To perfect aerial census and other investigative techniques.

The study was designed to obtain basic information on the northern Mackenzie beaver which is so necessary to our understanding and management of this resource. The objectives for the year 1962-63 ^{was} ~~was~~ to do limited live-trapping on the Canadian Wildlife Service experimental trapping area, RTA 91 (Fig. 1) for the ecological data and to determine the approximate sequence of beaver cache construction by making successive weekly aerial food cache counts on selected routes.

RESULTS

Live-trapping activities were not conducted during 1962 as the live traps arrived late in the season.

The weekly aerial food cache surveys were postponed due to

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a press of other work with higher priority and to a lack of suitable aircraft in the area. On September 25 and 27 flights were made over RTA 91 to locate beaver food caches. The airplane used was a Cessna 185 and was flown at a height of approximately 150 to 200 feet. All lake shores were searched and all streams flown. However the airplane was too fast for this work and much circling to regain position or refly areas missed was necessary. The plane could not be kept directly over the lake shore or stream through all its convolutions and it is likely that some caches were missed. In fact, beaver sign at locations widely separated from ^{observed} food caches almost proves that the count was not complete. ?

Nevertheless, twenty-eight food caches were located and charted (Fig. 1) on the area. Since the area is approximately three miles wide by five miles long, that figure represents a density of about one colony per square mile. If southern colony size figures were applicable, we could estimate a population of between 170 and 250 beavers on RTA 91. However, the average colony size for beavers in this area is not known and is one of the reasons for initiating this study.

Presently 11 Bailey beaver live-traps are available. Twelve New Mexico style beaver live-traps have been constructed except for the attachment of the door springs. Live-trapping operations will be initiated in 1963 as outlined in the project plans.

A miniaturized radio transmitter, being prepared for use on

muskrats, will be tested on live-caught beaver and used to obtain information on individual movements and range if it proves feasible.

The area will be surveyed again in the fall of 1963 and food caches charted for comparison with 1962 data. The sequence and timing of beaver food cache construction will be obtained by flying selected routes at weekly intervals beginning in early fall. An attempt will be made to determine the accuracy of ^{sample} strip counting in comparison to the total survey sampling method.

Submitted by V.D. Hawley

Inuvik, N.W.T.

26 June 1963.

BEAVER COLONIES, RTA 91, FALL 1962



