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McEwen, E.H.

Yukon caribou investigation. [Aklavik,
Canadian Wildlife Service, 1954]

13 *l.* maps.

1. Caribou - Yukon I. Title

This report on the Yukon caribou herd contains information on spring, summer and autumn movements.

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The route of the spring migration was similar to the one in 1953. According to Cst. Moore R.C.M. Bolice, Old Crow, about May 5th, 1954, the largest number of caribou crossed the Porcupine River near the Driftwood River. Moving north through the Blow River Pass, the animals reached the coastal plain. The caribou continued northwesterly, crossing the Firth and Malcolm Rivers, passing between the foothills and Komakok (base near the Malcolm River). The western limit of this movement was not determined. It was reported that a large number of caribou filed past the base during May and June, until approximately the first week in July.

On June 21, 1954, a flight was made with Mr. R.H. Smith, U.S. Fish and Wildlife, from Aklavik through the Blow River Pass to the Old Crow Flats, with four transects in the Flats before continuing down the Firth to the Malcolm Rivers and returning to Aklavik (Fig. 1). Weather conditions and visibility were excellent throughout the flight, lasting for four hours and 33 minutes (1012 to 1445 hrs).

A total of 488 caribou and one grey wolf were counted. Four caribou, two of which were seen on the hills on the west side of the upper part of the Blow River and two near the headwaters of that river. No caribou were found in the Old Crow Flats, or along the Firth to the Malcolm Rivers. Caribou trails, possibly made during the summer, or the autumn of 1953, were observed in the Old Crow Flats, particularly along a creek flowing westward ($68^{\circ}05'N$, $138^{\circ}05'W$) and in the northern part of the Old Crow Flats ($68^{\circ}15'N$, $139^{\circ}30'W$). The remainder of the caribou were counted between the Firth River and the west side of the Mackenzie Delta.

The coastal plain area was covered in places with snow and water. Most of the lakes were partly filled with ice. In the Firth River area, the ground was almost completely flooded with run-off water. It was difficult to spot caribou on the bare, flat ground. Flying at a 200-foot altitude, caribou would run from the aircraft and were easily seen. The animals ~~animal~~ appeared quite distinct from their surroundings. Even flying at this

low altitude, an accurate calf count could not be made. Previous results from other aerial surveys have shown that calf counts from an aircraft are incomplete and unreliable. Only 25 calves were counted in the total number of animals observed.

In the transect flown along the coastal plain, 170 caribou were counted by E. Sutton from the Babbage River to the Delta and 314 by the writer from the Malcolm River to the Delta. The width of the transect was half-a-mile on each side of the aircraft. From the Malcolm to the Babbage Rivers, 209 caribou were counted on a 108 square-mile strip, or 2 (1.9) caribou per square mile. From the Babbage River to the western side of the Delta, 275 caribou were counted on a 65 square-mile strip, or 4 (4.2) per square mile. Besides a difference in density, the sex composition varied. Animals west of the Babbage River consisted predominately of adult cows and calves, and young animals. On the east side of the river a greater number of adult bulls, young bulls and yearlings were found. Of 105 caribou, counted on one strip, east of the Babbage River, at least, 28 adult bulls and six young bulls, were found. No adult bulls and only a few young bulls were seen west of the Babbage River. The difference in sex composition of the groups might have resulted from a segregation of animals during the fawning season, and a later spring movement of the adult and young bulls.

On July 8, 1954, on a flight from Aklavik to Herschel Island, only four caribou were seen at Ptarmigan Point, opposite the settlement. No caribou were seen on August 2 on a flight from Aklavik to the Old Crow Flats (Fig. 2).

From April 17 to August 22, 1954, A. Hoydahl worked in the Blow River area from his camp ($68^{\circ}34'N$, $138^{\circ}5'W$), near Mount Fitton. Few caribou were observed from his camp during April, May and June. Groups numbering 100 and less, were seen travelling down the Blow River in a north and northwesterly direction. From August 12 to 22, walking from his camp to Shingle Point, he estimated about 1,000 to 1,500 caribou near his camp, and about 3,000 in scattered groups to within eight miles of Shingle Point. This year, he noted a marked increase in the number of wolves in the Blow River. They were seen and heard regularly from his camp. Two wolves and two grizzly bears were shot by him.

In 1954, the autumn distribution was different than that of 1953. On September 29, 1953, 8,494 caribou were seen from "Fish River" to a creek west of the Blow River. In the Old Crow area, on August 30, about 5,000 caribou were reported along the Old Crow Mountain. By September 27, large numbers of caribou occurred in the Old Crow Flats. From August until mid-September 1954, caribou occurred along the coastal plain, reported first near Shingle Point and later seen in the "Fish River" and "Cache Creek" area, south to "Canoe Lake". By September 15, no caribou had appeared on the Old Crow Mountain.

Three surveys and the report on one chartered flight, flown on August 27 and 28, September 10, 12 and 15, are shown on Figs. 3, 4, 5 and 6, respectively. On August 27 and 28, the observations were recorded by M. Zubko, Aklavik Flying Services, flying from Aklavik to Old Crow. No caribou were observed in the Rat River area, or along the Porcupine River to Old Crow. Returning to Aklavik on August 28, small groups of caribou, numbering 463 (34, 9, 13, 30, 50 estimated, 8, 10, 100 estimated, 40, 11, 10, 9, 9, 10, 30, 30, 50 estimated and 10) were seen along the main part of the west branch of the Blow River. The observations were made from latitude $68^{\circ}17'N$, longitude $137^{\circ}57'W$; northeast to latitude $68^{\circ}45'N$, longitude $137^{\circ}52'W$. In addition, 93 caribou (50 estimated, 20, 15 and 8) were seen southwest of the "Coalmine Lake" at latitude $68^{\circ}38'N$ and longitude $136^{\circ}27'W$.

On the survey of September 10, 493 caribou and one grey wolf were seen. From 1217 to 1227 hours, 181 caribou (11, 8, 14, 20, 42, 29, 9, 10, 10, 16, 6 and 16) were counted from latitude $68^{\circ}18'N$, longitude $135^{\circ}36'W$ to latitude $68^{\circ}22'N$, longitude $136^{\circ}15'W$. Since the caribou were widely scattered in small groups an estimate of their numbers, using aerial transects, was attempted. Two transects were flown from 1227 to 1229 hours and from 1230 to 1233 hours, about eight miles apart, in an east-west direction. No caribou were counted in the half-mile strips. Because of a strong west wind, varying in intensity from 30 to 50 mph, it was not possible to continue the transects. From 1233 to 1243 hours, 144 caribou (8, 16, 23, 1, 14, 38, 44) were counted along the "Fish River" north to within two miles of the Moose Channel. From 1246 to 1255 hours, 92 (24, 59, 5, 3) caribou were counted to the east branch of the Blow River. It had been planned to continue the survey along the coastal plain to the Firth River and to Old Crow, but the strong, gusty wind necessitated a cancellation of this

plan. Returning directly to Aklavik, 66 caribou (24, 4, 6, 6, 10, 10) were counted from 1259 to 1304 hours. Eighty-one (20, 20, 15, 26) caribou counted on the last part of the flight, were not included in the total count because, they could have been counted before.

A total 3,558 caribou were counted on the September 12th survey (Fig. 5), of which 496 were counted from aerial photographs, 1086 on the ground and the remainder from the aircraft. From 'Canoe Lake', along 'Cache Creek' to the Mission Camp, to a lake ($68^{\circ}50'N$, $137^{\circ}18'W$), west of the Blow River, 1,652 caribou were counted. At this lake, 108 caribou were counted in small groups (15, 42, 51). From the lake, following the west branch of the Blow River to the divide, 1,163 caribou were counted. In the flat area, south of the divide, to the headwaters of Johnson Creek, 635 caribou were counted in small groups. No caribou were observed in the Old Crow Flats, or along the Old Crow Mountains. On August 28, Zubko counted about 463 caribou along the Blow River. He said that the distribution of caribou had remained almost the same during the 15-day period. It appeared that the number of animals in the area had increased. The general direction of movement of the caribou was south up the Blow River towards the Driftwood River drainage.

On the last survey conducted on September 15, shown on Fig. 6, the areas north of Old Crow to the foothills, east across the headwaters of the Babbage and Blow Rivers and southeast to the Driftwood River, were covered. On this survey, flown from 1000 hours (Y.T.) to 1320 (P.T.), 2,541 caribou were counted and, at least, 2,500 caribou photographed. An unsuccessful attempt was made to count the caribou on the photographs. The animals were not distinguishable because the prints were of an inferior quality. A second print will be made, from which the total count and herd composition will be determined.

No caribou were observed north of Old Crow, across the Flats, to latitude $68^{\circ}20'N$. At 1032 hours (Y.T.), the first small group of caribou (estimated to be 100) were seen north of the Old Crow Flats (about $68^{\circ}27'N$, $140^{\circ}10'W$). From here to the headwaters of the Babbage River ($68^{\circ}37'N$, $139^{\circ}16'W$), 62 caribou (40, 15, 7) were counted. Fresh trails in a NE-SW direction through the low pass of the Babbage River indicated that caribou may travel through this pass on their autumn and perhaps spring movements. Crossing

southeast to the Blow River pass, 10 caribou were counted and about 100 photographed. The largest concentration of caribou, moving in the general direction of east and southeast, were observed south of the Blow River to the limit of trees on the Driftwood River ($67^{\circ}37'N$, $133^{\circ}10'W$). In this area, 2,310 (500E, 100, 11, 48, 969, 241, 30, 25, 386), besides an number of caribou photographed, were seen. Fresh caribou trails were seen along the foothills on the western side of Richardson Mountains. Thirty-eight caribou were counted along the foothills and 50 caribou near the headwaters of the Bell River at about a 2000-foot elevation.

This year, about 100, or 150, caribou were killed by hunters from Aklavik in the 'Cache Creek', 'Fish River', Blow River and Shingle Point areas. About September 15, hunters reported that caribou were moving south up the west branch of the Blow River. Between September 15 and 20, caribou in the 'Fish River', 'Cache Creek' areas, which had been moving south, started travelling north again, crossing towards the Blow River. On October 4, no caribou were seen by a local pilot in the area as far west as Ptarmigan Point (Fig. 7). Since this flight was made a few days after a heavy snowfall, no tracks were seen. By this date, the caribou must have moved inland. After mid-October, hunters from Aklavik failed to locate any caribou in the areas west of the settlement. Even the natives from Fort McPherson did not find caribou in the Rat River area. The exact location of the hunter's observations is not known. The Old Crow natives had killed two caribou up to September 15. A telegram received from the R.C.M. Police, at Old Crow, on October 31, stated that, "Large herd of caribou number unknown travelling south southeast from Old Crow along Peel Range". Although the exact location of the caribou is uncertain, they are probably moving south along the hills west of the Porcupine River.

At the time the surveys were conducted, a total count of the population could not be determined because of their wide range and their scattered distribution. It appears that the ideal time to census the population would be in mid-October. By October, most of the caribou have congregated inland in large groups. However, during freeze-up, weather and flying conditions are not favourable for aerial surveys after mid-September.

A total count of 9,092 caribou was made as follows: 493 on September 10, 3,558 on September 12, and 2,541 plus an estimated 2,500 on September 15.

The possibility of duplication was considered, and uncertain cases were discarded. The figure represents about one third of the total minimum number for this group of caribou. The coastal plain area, which was incompletely surveyed, contained part of the missing caribou. After the surveys had been completed, it was reported that about August 27, 1954, a fairly large number of caribou were distributed between the Firth and Blow Rivers, especially in the King Point area. Normally, large numbers of caribou have moved into the Old Crow area by August and September, instead of being along the coast. From the observations made on the surveys, a total census could not be made because of the scattered distribution of the caribou on a wide range. Most of the caribou were found in narrow river valleys in which transects could not be flown. This sampling technique could have been used on the wide plains on the north and south sides of the Richardson Mountains, if a random distribution of caribou had occurred.

Data on herd composition, collected on these surveys, will be included in a separate report, if an examination of the reprinted photographs is successful.


E.H. McEwen,
Mammalogist.

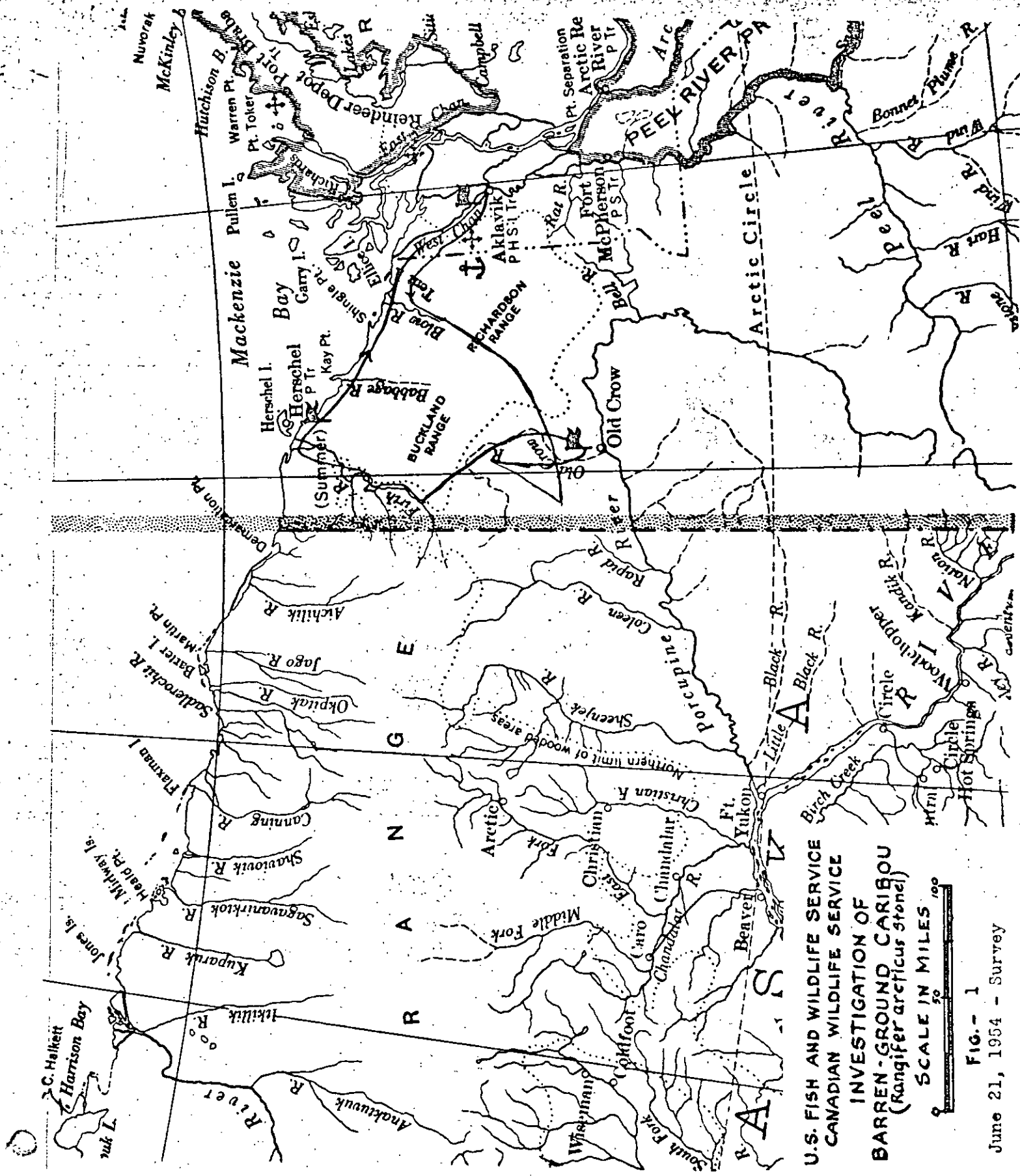
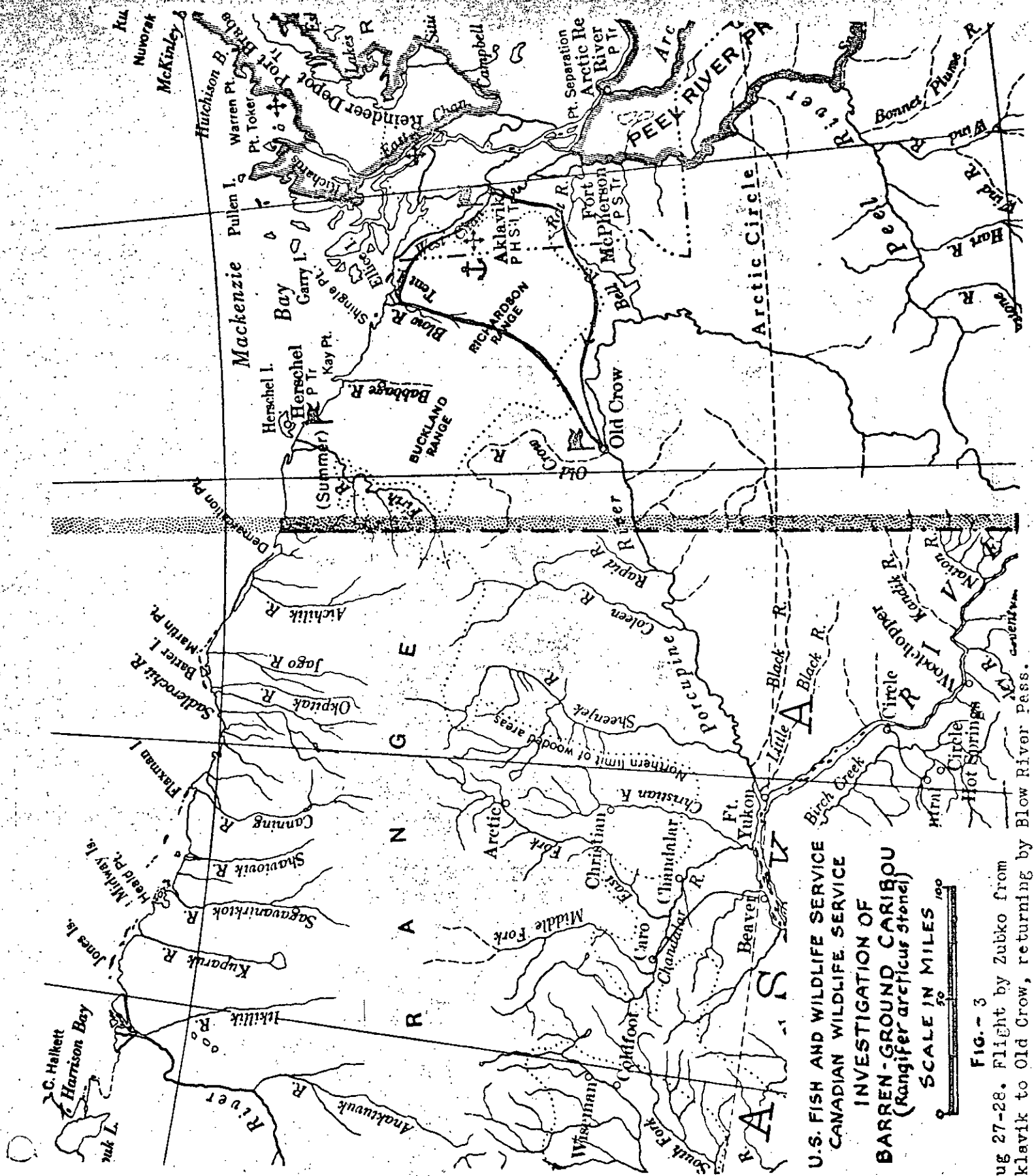


FIG. - 1
June 21, 1954 - Survey

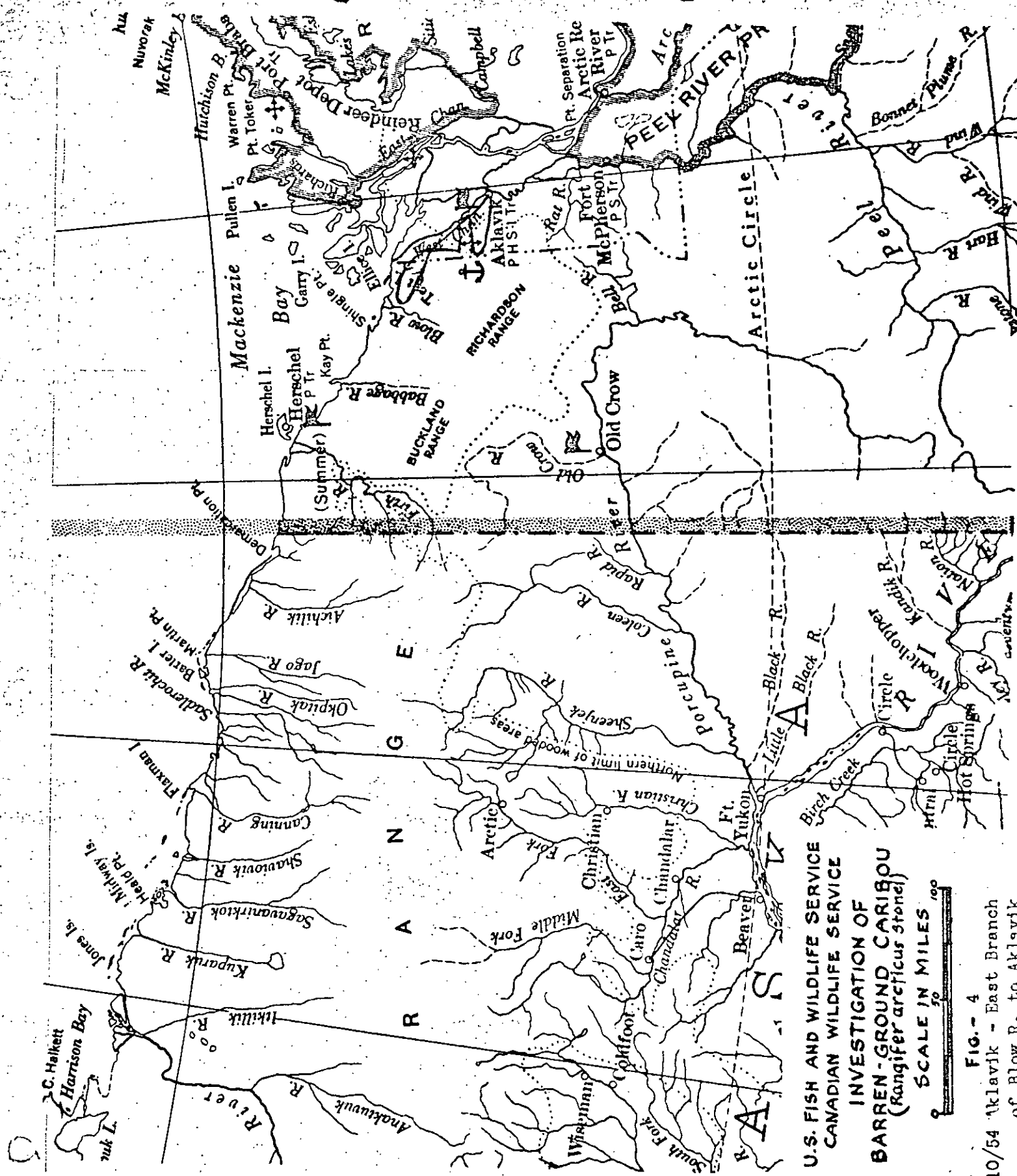


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BARREN-GROUND CARIBOU
(*Rangifer arcticus stonoi*)

SCALE IN MILES
0 50 100

FIG. - 3

Aug 27-28. Flight by Zubko from
Aklavik to Old Crow, returning by Blowing Rock pass.

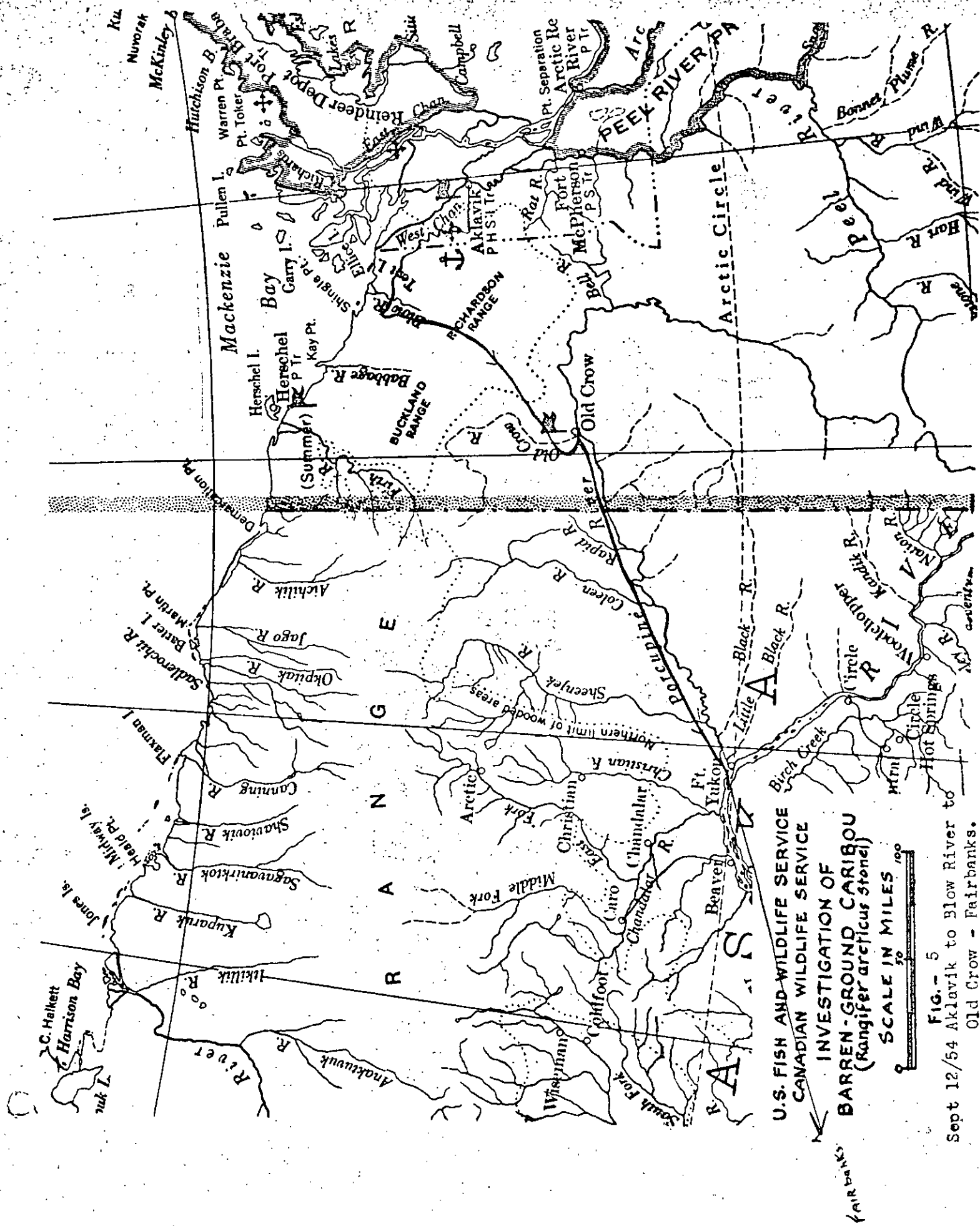


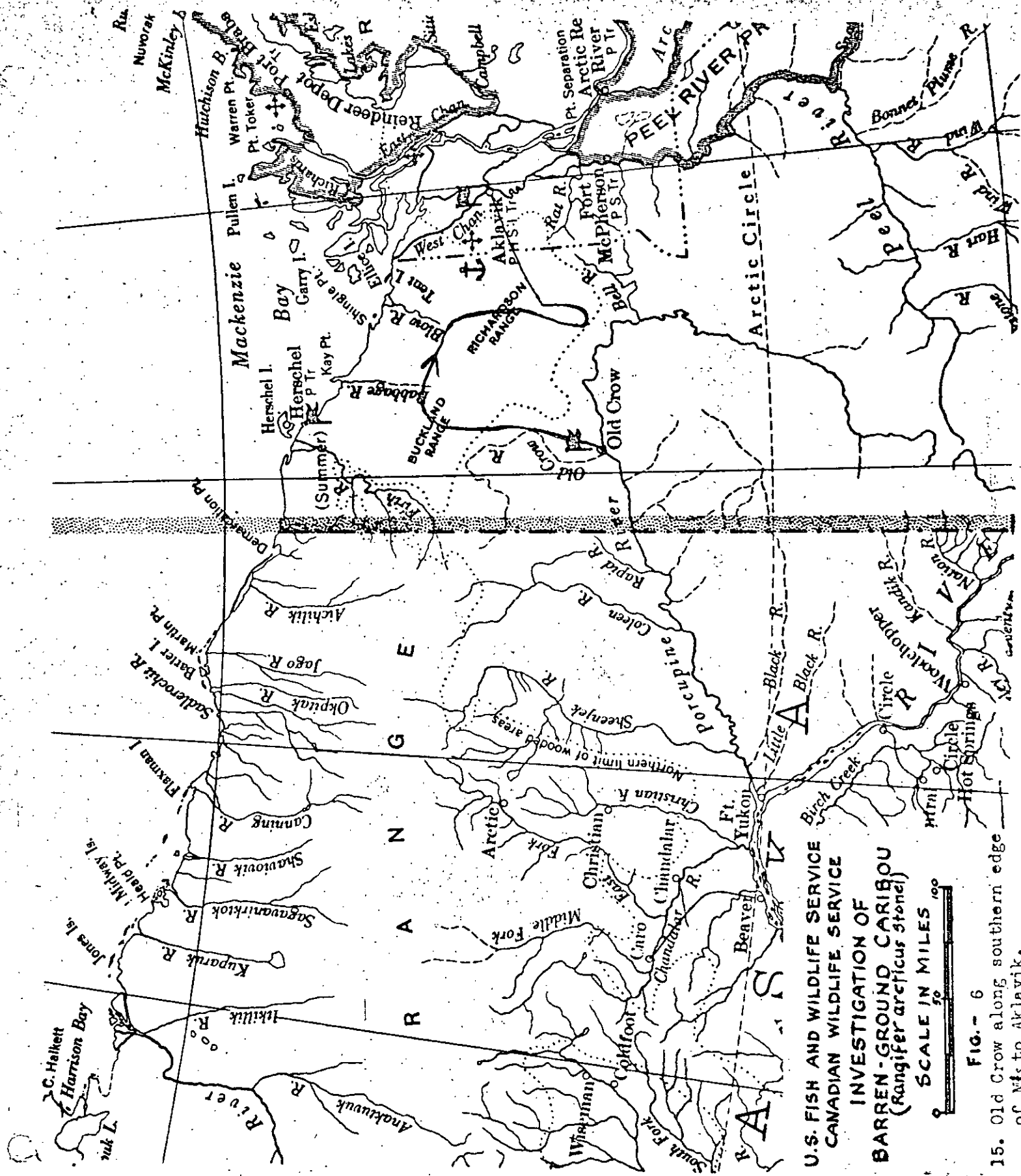
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(*Rangifer arcticus stensel*)

SCALE IN MILES
0 50 100

FIG. - 4

Sept 10/54 Aklavik - East Branch
of Blow R. to Aklavik



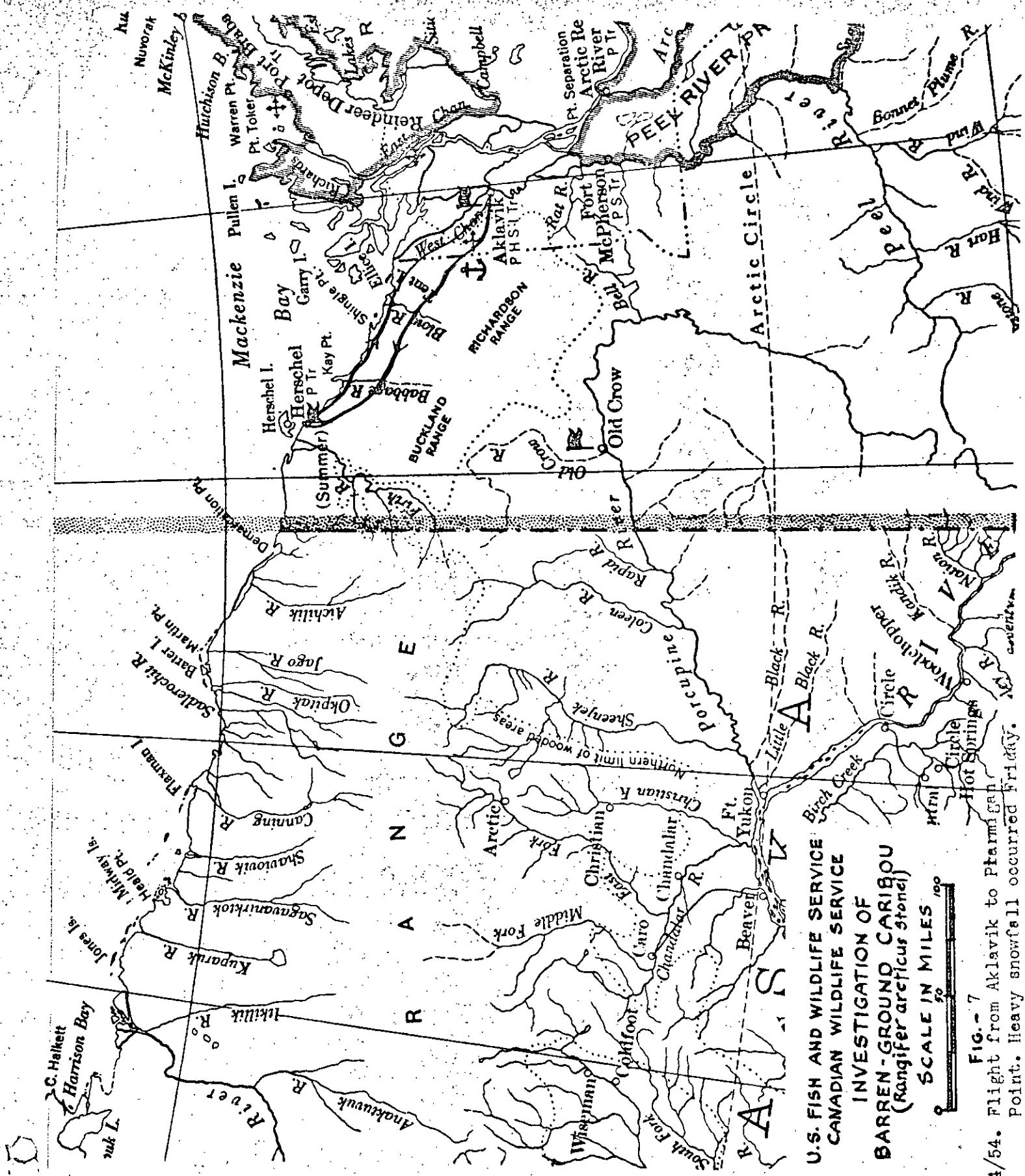


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(Rangifer arcticus stensel)

SCALE IN MILES
100
50

FIG. - 6

Sept 15. Old Crow along southern edge
of N.I. to Aklavik.



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BARREN-GROUND CARIBOU
(*Rangifer arcticus stonell*)

SCALE IN MILES
0 50 100

FIG. - 7

Oct 4/54. Flight from Aklayik to Ptarmigan Point. Heavy snowfall occurred Friday.

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Yukon caribou
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