BEAR TRACKS

No. 5 **Editors: Dean Cluff and Phil McLoughlin** Spring/Summer 1998

A Newsletter on Grizzly Bear Studies in the Central Arctic, NWT, Canada

LARGEST RANGES FOR GRIZZLY BEARS ARE IN THE NWT

Annual and seasonal ranges for barren-ground grizzly bears are the largest reported to date for grizzly bears. The average annual ranges for 19 males from 1995-97 was 6,685 km^2 which was significantly larger than the 2,074 km^2 for 35 females. Family status of females (with or without cubs) did not influence their annual range size.

Seasonal ranges for males varied from about 2100 km^2 in spring and fall to about 3600 km^2 in summer. Females seasonal ranges were one-third the size of males and were also greatest in the summer.

Seasonal rates of movement, calculated by measuring the straight-line distances between consecutive locations, were significantly higher for males than females. However, both males and females decreased their rate of movement from their highest in spring (males) or summer (females) to their lowest rates in the fall.

Large ranges put individual bears in potential contact with many different humans and camps that may be considerable distances apart. Therefore, people must realize that just one food-conditioned bear can cause problems for many camps.

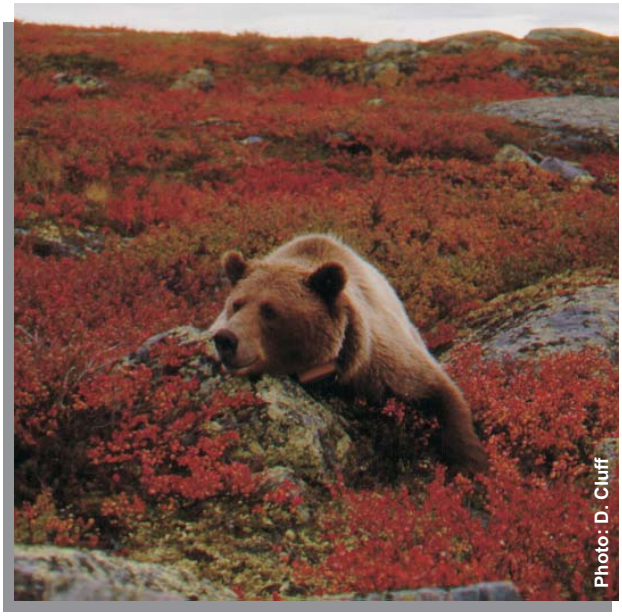


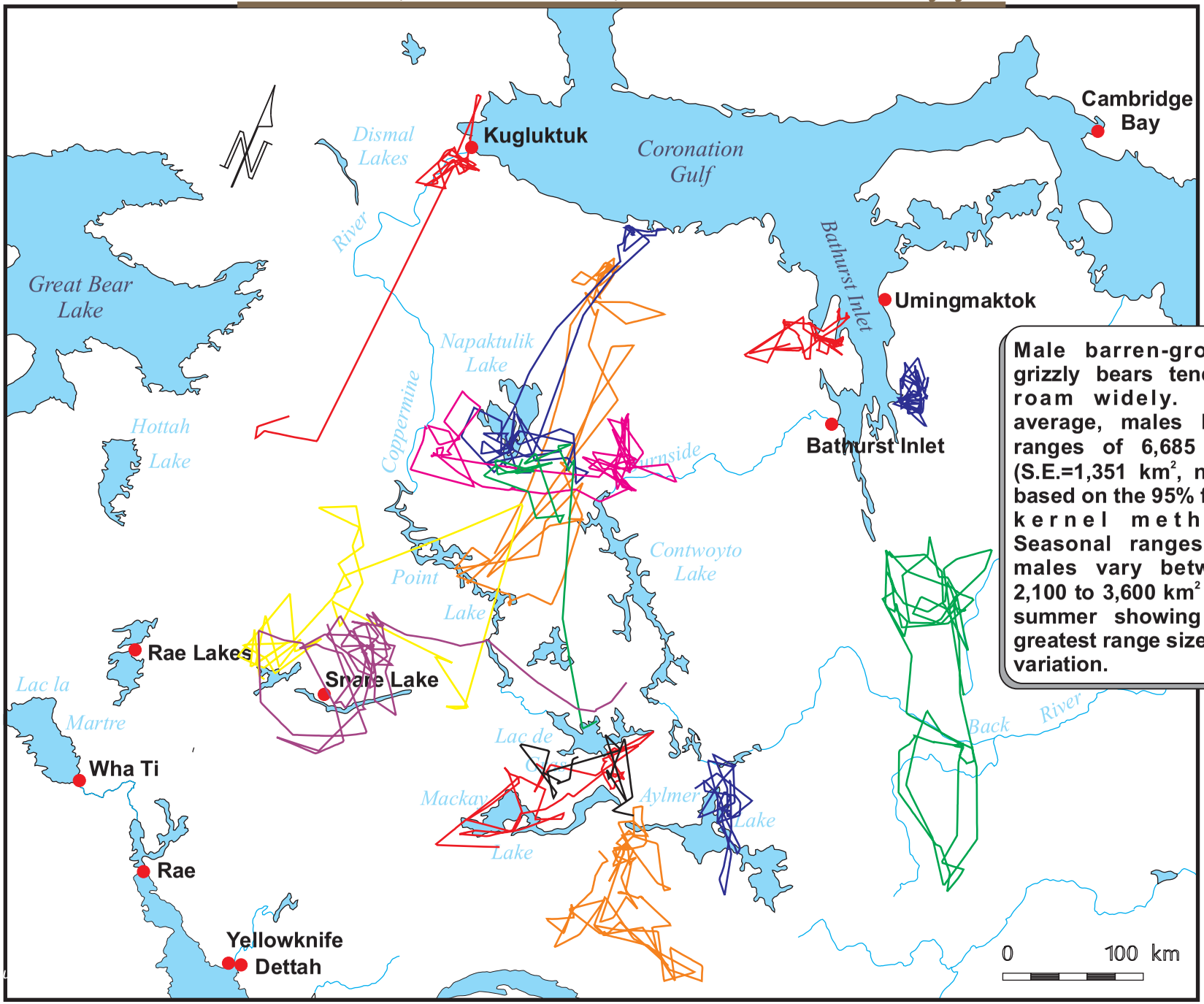
Photo: D. Cluff

TELEMETRY UPDATE

Capture effort for 1997 concentrated on two areas, north of Contwoyto Lake and east of the Tree River, and east of Bathurst Inlet where 20 new satellite collars were deployed. We also removed 25 satellite collars but fitted seven of these bears with break-away VHF radio-collars so that their den site could be found the following spring.

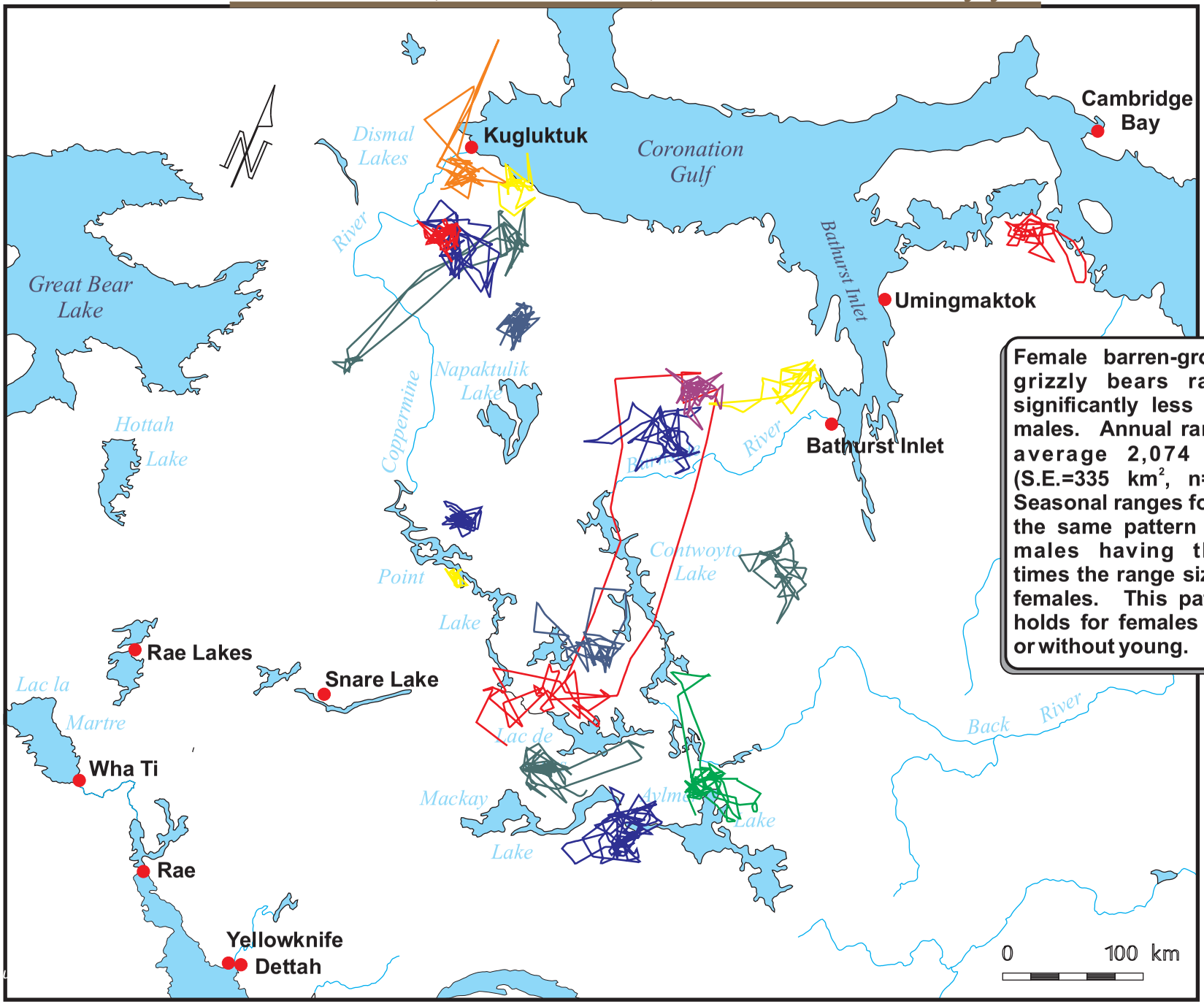
Currently, we have 20 grizzly bears with functioning satellite collars. Since May 1995, we have tracked 64 bears by satellite. We plan to deploy 17 new collars in May 1998 which will complete the satellite radio-collaring phase of the project.

MALE GRIZZLY BEAR MOVEMENTS 1997



Male barren-ground grizzly bears tend to roam widely. On average, males have ranges of 6,685 km^2 (S.E.=1,351 km^2, n=19) based on the 95% fixed kernel method. Seasonal ranges for males vary between 2,100 to 3,600 km^2 with summer showing the greatest range size and variation.

FEMALE GRIZZLY BEAR MOVEMENTS 1997



Female barren-ground grizzly bears range significantly less than males. Annual ranges average 2,074 km^2 (S.E.=335 km^2, n=35). Seasonal ranges follow the same pattern with males having three times the range size of females. This pattern holds for females with or without young.

HABITAT ANALYSIS UPDATE

Phil McLoughlin, with Axys Environmental Consulting Ltd. (Calgary) scholarship support, estimated seasonal habitat preference ratings for grizzly bears in the Lac de Gras region. The analysis incorporated a 14,000 km^2 LANDSAT TM satellite image obtained from Diavik Diamond Mines and Golder Associates.

The analysis found that these grizzly bears are showing specific habitat use in spring, summer, and fall. In spring, male bears favor esker habitats, likely because esker tops become snow free early in the season and provide easy access to the previous year's berry crop. Females are less selective at this time and may actually be avoiding males.

In summer, heath tundra appears important for both sexes while tall shrub is used in summer and fall. Tall shrubs likely provide overhead hiding cover, relief from heat during hot days, and shrub-specific food such as horsetail, willow buds, and some sedges.

Acknowledgments

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PROJECT SPONSORS (1998)

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THE NWT GRIZZLY BEAR PROJECT

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