

# WOLF NOTES



No. 3

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Winter 1998/99

*A Newsletter on Wolf Studies in the Central Arctic, NWT, Canada*

## Esker/Wolf Study prepares for Phase 2

Wolves were fitted with satellite radio-collars in June 1997 and 1998 to allow for their movements to be monitored while denning. This information was needed to assess the importance of eskers as denning habitat. The existing satellite collars on the wolves will be replaced next June with conventional VHF radio-collars. Unfortunately, funding realities prevent further deployment of satellite collars. However, the VHF collars will allow these wolves to be monitored at den sites for another 3 to 5 years and improve our estimates of den site fidelity, yearly pup counts, and pack size at dens.

The treeless tundra offers us an opportunity to take a 'snapshot' inventory of active wolf dens at a given time, that is, a map of virtually all active wolf dens in the region. This inventory will provide data for a possible density estimate of wolves on the Bathurst caribou range. Wolves with radio-collars will help identify known breeding pairs and solitary, non-breeding individuals.

## Wolf Workshop in Lutsel K'e

A workshop on wolf management issues was held in Lutsel K'e from October 22<sup>nd</sup> and 23<sup>rd</sup>, 1998. We presented new research data and discussed concerns resulting from last winter's Rennie Lake area wolf harvest.

At issue were the 633 wolves harvested by Saskatchewan hunters and the use of snowmobiles to harvest wolves. The community appreciated the opportunity to discuss research and wolf management issues and thought more discussion in the near future would be useful.



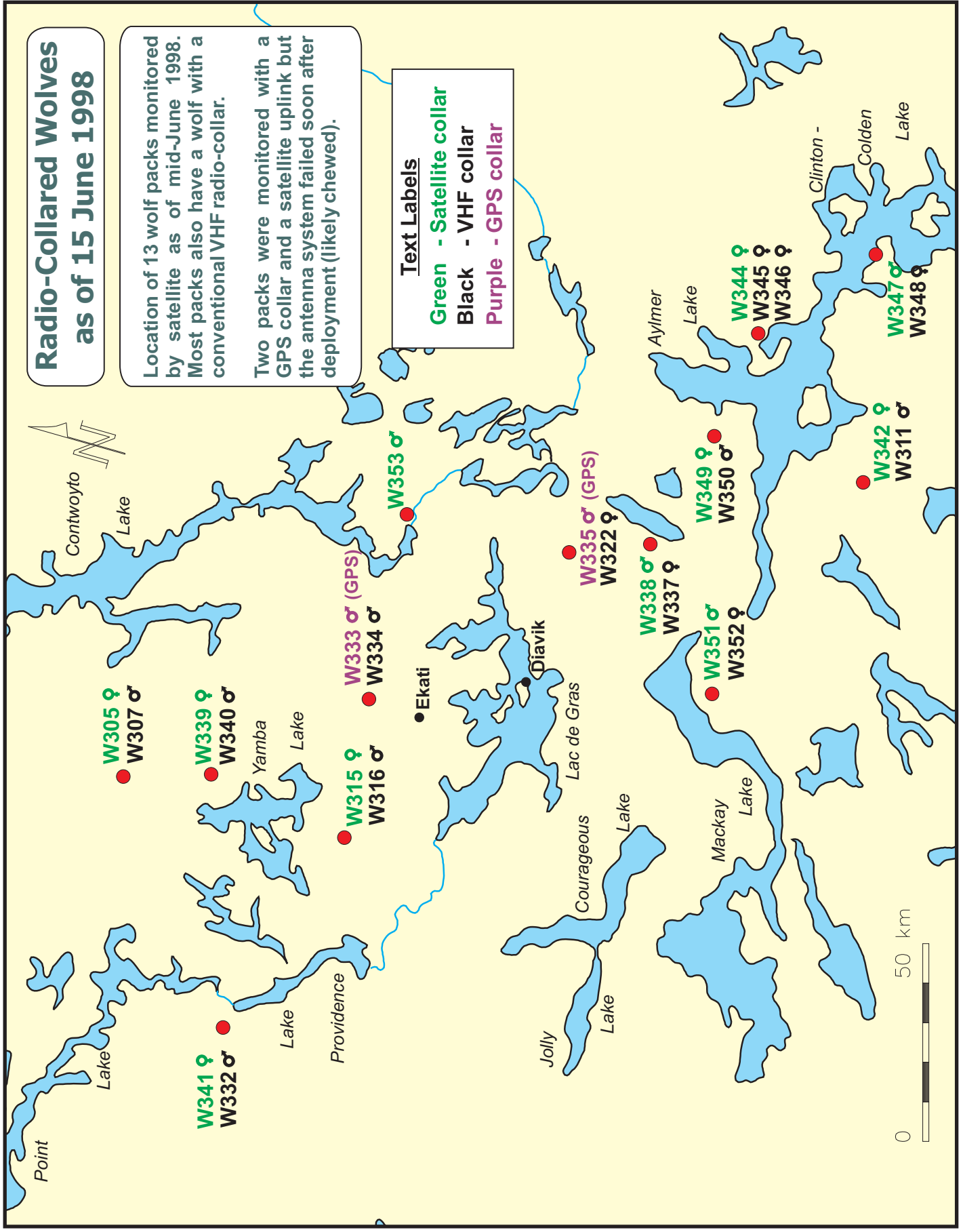
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# Radio-Collared Wolves as of 15 June 1998

Location of 13 wolf packs monitored by satellite as of mid-June 1998. Most packs also have a wolf with a conventional VHF radio-collar.

Two packs were monitored with a GPS collar and a satellite uplink but the antenna system failed soon after deployment (likely chewed).

**Text Labels**  
**Green** - Satellite collar  
**Black** - VHF collar  
**Purple** - GPS collar



# GPS Collar Testing

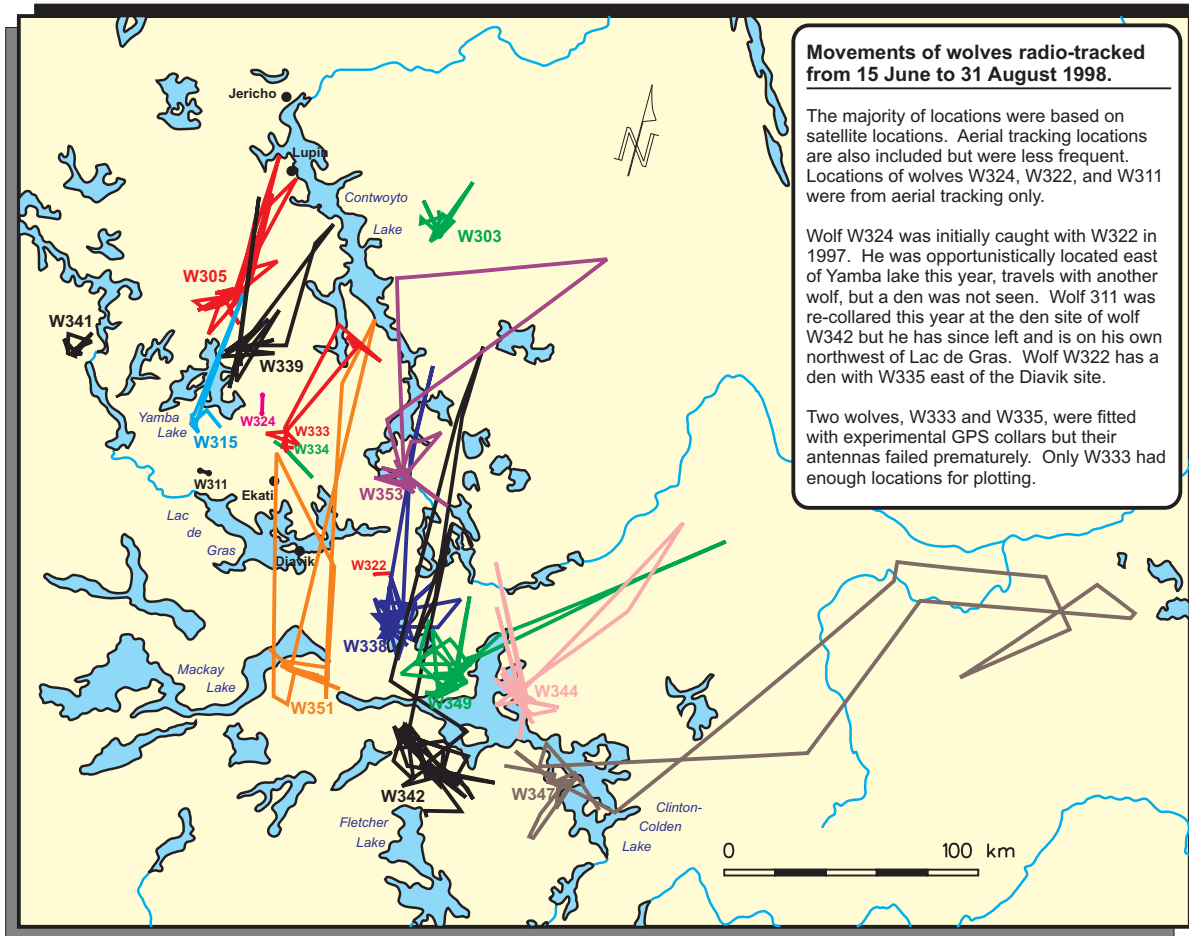
We teamed up with the Wolf Education & Research Center, the Center for Conservation Research & Technology, and Earthspan to field test new tracking technology that takes advantage of the Global Positioning System (GPS) to collect more precise locations.

The GPS receiver on the radio-collar acquires about 4 locations/day then transmits these stored locations to a satellite, which then re-transmits the locations to us. Unfortunately, the two prototype GPS radio-collars we deployed on wolves failed after 10 days. We suspect this was because the external whip antenna (see picture) for the satellite uplink was chewed by other wolves thereby preventing data transmission. Both wolves have since been sighted several times over the summer and appear to be in good shape.

We continue to work with the manufacturer to improve the collar. For instance, note how the white 'box' that houses the transmitter's electronics is spread out more over the collar to distribute its weight more evenly than in other designs.



## Summer Movements 1998



**Movements of wolves radio-tracked from 15 June to 31 August 1998.**

The majority of locations were based on satellite locations. Aerial tracking locations are also included but were less frequent. Locations of wolves W324, W322, and W311 were from aerial tracking only.

Wolf W324 was initially caught with W322 in 1997. He was opportunistically located east of Yamba lake this year, travels with another wolf, but a den was not seen. Wolf 311 was re-collared this year at the den site of wolf W342 but he has since left and is on his own northwest of Lac de Gras. Wolf W322 has a den with W335 east of the Diavik site.

Two wolves, W333 and W335, were fitted with experimental GPS collars but their antennas failed prematurely. Only W333 had enough locations for plotting.

## 1998 Pup Counts

Ground-based observations were not as frequent this year as in 1997 and consequently, we had to rely mostly on aerial radio-tracking flights. Unfortunately, not all pups may be seen at one time with this method. Nevertheless, this year we saw a wide range in the number of pups, from none to 8 pups for 12 active dens. We calculated an average of 3.1 pups/den based on these counts.

# Graduate Student Update

Lyle Walton has completed his field work and now begins his data analysis and writing for his M.Sc. thesis. Lyle is examining movements of wolves while denning, habitat associations, and evaluating the 2 types of satellite radio-collars we used.

Lyle Walton measures a wolf after radio-collaring.



Marco Musiani is the newest graduate student to come on board. Marco comes to us from Italy but his research involved wolves in Poland. Marco was awarded the prestigious Canadian Embassy Scholarship and is now enrolled at the University of Calgary's Faculty of Environmental Design. Marco's Ph.D. research will examine genetic relationships and dispersal of contiguous wolf packs and interpopulation gene flows.

## Acknowledgments

We thank the West Kitikmeot Slave Study Society and the GNWT (Resources, Wildlife, and Economic Development) for major funding. Helicopter Wildlife Management safely and effectively net-gunned wolves for capture and collaring. We are grateful to the following companies, agencies, and individuals represented by the logos below for providing further logistical support and assistance in 1998.



Resources, Wildlife, and Economic Development



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Center for Conservation Research & Technology

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