



## 20 Years of Monitoring Wolves



The Lost Creek wolf pack feeding on a caribou kill in March 2012.

Photo by Sandy Hamilton

For over 20 years, biologists at Yukon-Charley Rivers National Preserve (YUCH) have been monitoring wolves that live mostly within the Preserve boundary, but who routinely wander outside this imaginary line to pursue prey or other interests. Over the course of winter, the toughest time of year for survival, wolf numbers in Yukon-Charley Rivers dwindle before being replenished in the spring with a new crop of pups. Typically, wolf packs that range in the Preserve lose about 26% of their members over the winter to both death or dispersal.

### A Drop in Wolf Numbers

Last year, wolf numbers dropped by 64% from the fall of 2012 to spring 2013. It was the largest percent drop ever measured in 20 years, falling from 81 wolves to 29 in nine packs. The spring 2013 average pack size of 3.2 wolves was the second lowest ever recorded in 21 years. The 21-year average is 4.9 wolves per pack. Most of this drop in wolf numbers (44%) is due to the Alaska Department of Fish and Game's (ADF&G) wolf control program.

In March 2013, ADF&G's wolf control program reduced Yukon-Charley Rivers National Preserve's radio-collared packs by 36 wolves, including three collared wolves whose movements were being monitored by the National Park Service (Figure 1). All of these reductions occurred when the wolf packs were outside the Preserve boundary. In total, 118 wolves

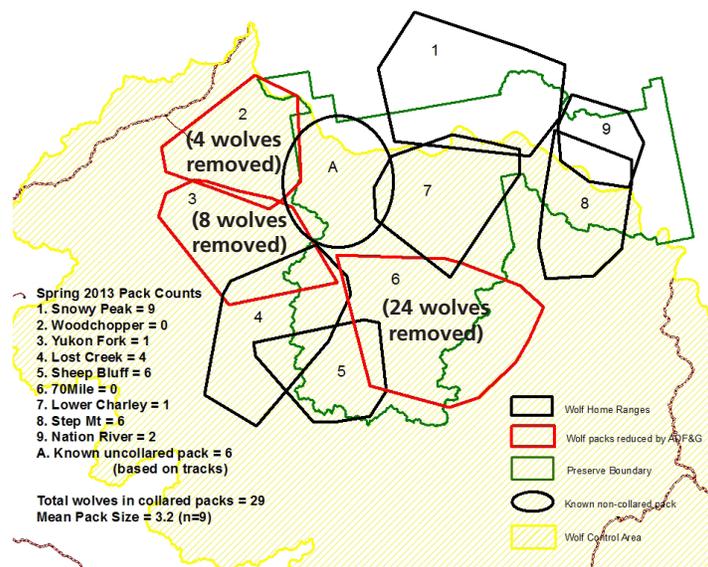


Figure 1. Reduction of wolf population by Alaska Department of Fish & Game's predator control program in March 2013. While several wolf packs being monitored by NPS in Yukon-Charley Rivers National Preserve were affected by control operations, no wolves were shot within the Preserve boundary.



## New Pups Can Aid Recovery

were eliminated from the greater Fortymile wolf population via aircraft assisted wolf control (40 by helicopter, 78 by airplane) last winter.

Conventional harvest of wolves in YUCH has averaged about 6.7 wolves over the past 27 years. Over the last 10 years, the average harvest was 6.3 wolves; over the last five years, the average take was 4.6 wolves.

Sixty-seven percent (six of nine) of radio-collared packs localized at a den in May 2013. This is only slightly below the 20-year average of 74%. Of the six packs that localized at a den, four have been confirmed to have pups, one is still unknown (Nation), and one (single Yukon Fork female) appears to have lost her pups. Continued fall/winter radio-tracking will be needed to confirm pup numbers, and total pack counts. These 4 litters of pups have added at least 19 wolves to YUCH's wolf population. Pack totals so far this fall show a fall estimate of 48 wolves, and a fall mean pack size of 6.86 wolves, which is below the 20-year average of 7.3 wolves/pack, and lower than recent years, but not unusually low. These numbers are very preliminary and will no doubt change, assuming more radio-tracking flights.

Twenty years of percent drops from Fall to Spring counts in the average number of wolves/pack from Yukon-Charley Rivers National Preserve.

Winter	Fall	Spring	% Drop
1993 - 1994	4.5	4	11%
1994 - 1995	7	5	29%
1995 - 1996	7.3	6	18%
1996 - 1997	10.3	7.7	25%
1997 - 1998	8	5.6	30%
1998 - 1999	6.7	5.7	15%
1999 - 2000	8.2	5.5	33%
2000 - 2001	7.9	5.3	33%
2001 - 2002	8.8	6.5	26%
2002 - 2003	8.6	7.1	17%
2003 - 2004	9.2	6.7	27%
2004 - 2005	8.7	5.5	37%
2005 - 2006	7.4	5.2	30%
2006 - 2007	4.9	2.4	51%
2007 - 2008	5.8	4	31%
2008 - 2009	7.4	2.9	61%
2009 - 2010	5.8	3.4	41%
2010 - 2011	7.4	5.8	22%
2011 - 2012	7.9	6	24%
2012 - 2013	9.0	3.2	64%
Range (Normal)	4.5 - 10.3	3.7 - 7.7	0.11 - 0.37%
Average (15 'normal' years)	7.7	5.7	26%

Orange rows are years that are likely or known to have been affected by ADF&G wolf control.

## Future Monitoring

Currently, we are following eight active collars in seven packs. We are likely to lose radio contact with three or four of those packs over the coming winter due to battery failure in

the radio collars. NPS hopes to resume wolf captures for this project once the necessary funding and permits can be acquired.

For more information on Yukon-Charley's wolf monitoring program, contact Wildlife Biologist John Burch at (907) 644-3574, or email him at john\_burch@nps.gov.

### Yukon-Charley Rivers National Preserve

