

The CANADIAN FIELD-NATURALIST

Published by THE OTTAWA FIELD-NATURALISTS' CLUB, Ottawa Canada



A black and white version of this photo appears on the cover of Volume 122, Number 4 (Oct–Dec 2008) of the Journal and is referred to in the text of Rockwell, Gormezano and Hedman 122:323-326.

Grizzly Bears, *Ursus arctos*, in Wapusk National Park, Northeastern Manitoba

ROBERT ROCKWELL^{1,3}, LINDA GORMEZANO¹, and DARYLL HEDMAN²

¹Division of Vertebrate Zoology, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024 USA

²Manitoba Conservation, Thompson, Manitoba R8N 1X4 Canada

³Corresponding author: Robert Rockwell e-mail: rfr@amnh.org

Rockwell, Robert, Linda Gormezano, and Daryll Hedman. 2008. Grizzly Bears, *Ursus arctos*, in Wapusk National Park, northeastern Manitoba. *Canadian Field-Naturalist* 122(4): 323-326.

We report on nine sightings of Grizzly Bears (*Ursus arctos*) in northeastern Manitoba in what is now Wapusk National Park. Although biological research in the region has been conducted regularly since 1965, all sightings have been made since 1996. The Grizzly Bears were seen either along rivers known to harbor fish or in an area known for berries.

Key Words: Grizzly Bear, *Ursus arctos*, Wapusk National Park, Manitoba, Canada.

Grizzly Bears (*Ursus arctos*) are reported to have been absent from Manitoba historically at least through 1989 (Banfield 1959, 1974; Harington et al. 1962; Banci 1991, McLellan And Bianci 1999). Some recent accounts and range maps have included Manitoba in the Grizzly Bear's regular range (e.g., Schwartz et al. 2003), while others indicate that the regular range ends north of the Manitoba border but list rare, extra-limital observations for at least two sites along the Hudson Bay coast of Manitoba (e.g., Ross 2002*). Increased encounters with Grizzly Bears in northern Manitoba could be the result of increased observational effort or the expansion of the species' range. The latter could indicate a geographic shift related to habitat changes or food availability in the core areas and/or the newly occupied territory or to growth or other changes in the demographic structure of the core population followed by dispersal into unoccupied habitat.

In this paper, we extend the work of Clark (2000) and update confirmed observations of Grizzly Bears in the coastal sections of the Hudson Bay Lowlands east and south of Churchill, Manitoba (in what is now Wapusk National Park). We confine our primary efforts to this region since research there has been ongoing since 1965 and at a consistent level since 1993. As such, any recent increase in the frequency of Grizzly Bear encounters is more likely to be related to increased presence of the animals than increased efforts to find them. Because this new National Park is in the process of developing its status and mission plans, we also speculate on how regular occupation of the park by Grizzly Bears could influence some of the other species that have historically occupied the area.

While there have been occasional reports of Grizzly Bears or their sign since the onset of research in this area (e.g. Figure 1), we have limited the observations for this paper to confirmed sightings, as suggested by Clark (2000). Confirmed sightings require that either



FIGURE 1. Claw marks assumed to be made by a Grizzly Bear were observed in the tundra along the north coast of Wapusk National Park on 29 May 2006. The penknife is 12 cm.

the large hump of muscle over the scapulae or the concave face typical of Grizzly Bears be clearly seen by individuals familiar with the species. Nine encounters are summarized in Table 1 and to our knowledge they are the only confirmed sightings for this region since research began in 1965. Seven of the nine have been made since 2003 and the locations of all nine are depicted in Figure 2. The photograph of the most recent observation appears on the cover of this issue of *The Canadian Field-Naturalist* and the animal clearly shows the diagnostic scapular hump and concave face of a Grizzly Bear.

Comparisons of photographs from the three 2008 observations (Table 1) suggest that the animal seen near Rupert Creek may not have been the same animal as the ones seen near Thompson Point since it ap-

TABLE 1. Confirmed sightings of Grizzly Bears in Wapusk National Park.

Encounter	Date	Location	Details	Authority ¹
1	15 June 1996	58.23333N 93.06667W; Approximately 7 km inland near Thompson Point	Seen from fixed-wing survey plane and photographs were taken. Hump and concave face were clearly seen and are obvious in photograph.	Dale Humburg ^a
2	5 June 1998	58.33333N 93.03333W; Coastal beach ridge near Thompson Point	Seen from helicopter. Hump and concave face were seen clearly.	Doug Clark ^b
3	Summer 2003	Near the coast at the Owl River	Seen from helicopter and photographs were taken. Hump and concave face clearly visible.	Robert Rockwell ^c
4	Summer 2004	Near the coast at the Broad River	Seen from helicopter and photographs were taken. Hump and concave face are clearly visible.	Bob Reside ^d
5	6 July 2004	58.13515N 92.86322; Broad River cabin	Seen 3 metres from cabin door. Concave face clearly seen.	Melissa Gibbons ^e
6	Summer 2005	Near the coast at Rupert Creek	Seen from helicopter. Hump and concave face were clearly seen.	Bob Reside ^d
7	22 July 2008	57.56758N 92.55860W; Near coast north of Rupert Creek	Seen from fixed-wing aircraft and photographs were taken. Hump and concave face were clearly seen.	Shaun Bobier ^f
8	1 August 2008	58.28953N 93.00608; Near coast south of Thompson Point.	Seen from helicopter and photographs were taken. Hump and concave face were clearly seen.	Daryll Hedman ^g
9	9 August 2008	58.36613N 93.08047W; 2 km inland and 9 km north- west of Thompson Point	Seen from helicopter and photographs were taken. Hump and concave face clearly seen.	Robert Rockwell ^c and Linda Gormezano ^c

¹ Individuals who saw the animal or examined the pictures and confirmed it was a Grizzly Bear. ^aDucks Unlimited, Memphis, Tennessee; ^bUniversity of Alberta, Edmonton, Alberta; ^cAmerican Museum of Natural History, New York, New York; ^dRiding Mountain National Park, Wasagaming, Manitoba; ^eWapusk National Park, Churchill, Manitoba; ^fManitoba Conservation, Churchill, Manitoba; ^gManitoba Conservation, Thompson Manitoba

pears to be substantially larger. In contrast, the individuals in the latter two sightings (that were made less than a week and less than 10 km apart) could not be distinguished. We suggest at least two different Grizzly Bears may have been present in Wapusk National Park in 2008.

Given their enormous home ranges (11 400 km², Gau et al. 2004) and flexible habitat requirements (Schwartz et al. 2003), it is not surprising that Grizzly Bears have extended into areas such as Wapusk National Park that are only a few hundred kilometres south of their regular range. Three confirmed observations of Grizzly Bears since 1990 north of Churchill, Manitoba, further support that interpretation. The dates and locations of those encounters are: 27 July 1990 at 59.56667°N, 94.86667°W (in Clark 2000); 13 September 2005 at 59.89944°N, 97.03889°W and 28 June 2007 at 59.39383°N, 94.77224°W (both D. Hedman, unpublished data).

Wapusk National Park contains ample supplies of animal and plant resources known to be used by Grizzly Bears (Barry 1967; Gau et al. 2002; Ross 2002*; Schwartz et al. 2003). Of particular note are the more than 50 000 pairs of nesting Lesser Snow Geese (*Chen caerulescens caerulescens*), a potential food source already being exploited by Polar Bears (Rockwell and

Gormezano 2009). Nesting Snow Geese are found within the Grizzly Bear's range in Nunavut but are absent between there and Wapusk National Park. The park also contains substantial populations of Canada Geese (*Branta canadensis*) and both Caribou (*Rangifer tarandus*) and Moose (*Alces alces*). The park is rich in various arctic berries, especially cloudberries (*Rubus chamaemorus*) and blueberries (*Vaccinium uliginosum*) (R. L. Jefferies, personal communication). The streams associated with five of the nine sightings (Figure 2) contain fish (R. F. Rockwell, unpublished data), and the Thompson Point area, where the other four sightings occurred, was traditionally used by local Cree First Nation communities for berry harvests (Flora Beardy, personal communication). The inland portions of the park include extensive peat plateaus and outcroppings used for winter denning by Polar Bears (*Ursus maritimus*) (e.g., Clark et al. 1997). These could certainly provide Grizzly Bears with winter haven.

The presence of Grizzly Bears raises interesting potential issues for other species in Wapusk National Park. Grizzly Bears are known to be exceptionally efficient predators of both Caribou and Moose (Ross 2002*) and would place new predation pressure on those species. Such predation would provide competition for both Wolves (*Canis lupus*) and Polar Bears,

although Grizzly Bears are known to provide scavenging opportunities for other such species (Ross 2002*). Female Polar Bears and their new cubs become active in the early spring in the interior portions of the parks and if Grizzly Bears were also to den there, encounters between the two species would be likely but the outcomes uncertain. There are reports and speculation that Grizzly Bears kill and consume female Polar Bears and their cubs but also that Polar Bears may prey on denning Grizzly Bears (Taylor 1995; Doupe et al. 2007). Although such events might be rare, informed management plans for interior portions of Wapusk National Park should consider them. Finally, there are several reports of natural hybridization between Grizzly and Polar bears, the most recent being the well-publicized hybrid harvested in 2006 near Sachs Harbor on Banks Island (Taylor 1995; Schliebe et al. 2006). Such hybridization could potentially complicate issues related to genetic integrity and identification of the two species and their hybrids.

The observations presented here are consistent with the range map presented in Schwartz et al. (2003) that includes northeastern Manitoba in the range of Grizzly Bears. It is not yet clear whether the individuals encountered are transients, perhaps making use of higher levels of seasonally available food, or are more permanent residents. Continued and especially consistent monitoring will help resolve the Grizzly Bear's status and establish whether their abundance is increasing in northeastern Manitoba.

Acknowledgements

This work was supported in part by the Hudson Bay Project and was performed with the cooperation of Wapusk National Park. We appreciate being able to use the Grizzly Bear sighting locations of Shaun Bobier, Doug Clark, Dale Humburg, Melissa Gibbons and Bob Reside. Flora Beardy (York Factory First Nation) provided information on berry picking during a Traditional Knowledge interview with R. F. Rockwell. R. L. Jefferies (University of Toronto) kindly shared his extensive knowledge of the flora of Wapusk National Park. This paper benefited from comments by Ken Abraham, Bob Jefferies, Sheldon Kowalchuk and Marty Obbard.

Documents Cited (marked * in text)

- Banci, V.** 1991. COSEWIC status report on the grizzly bear *Ursus arctos* in Canada in 1990. Committee on the Status of Endangered Wildlife in Canada, Ottawa. 171 pages.
- Ross, P. I.** 2002. Update COSEWIC status report on the grizzly bear *Ursus arctos* in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa. 91 pages.
- Schliebe, S., T. Evans, K. Johnson, M. Roy, S. Miller, C. Hamilton, R. Meehan, and S. Jahrsdoerfer.** 2006. Range-wide status review of the polar bear *Ursus maritimus*. USFWS, Anchorage. Available from: http://alaska.fws.gov/fisheries/mmm/polarbear/pdf/Polar_Bear_Status_Assessment.pdf.

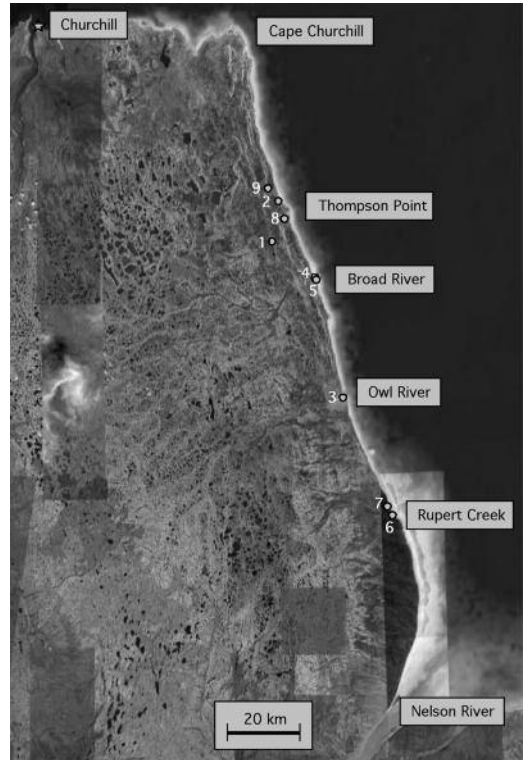


FIGURE 2. Locations of the nine confirmed Grizzly Bear sightings in Wapusk National Park. See Table 1 for numbers.

Literature Cited

- Banfield, A. W. F.** 1959. The distribution of the barren-ground grizzly bear in northern Canada. Contributions to Zoology. National Museum of Canada Bulletin 166: 47-59.
- Banfield, A. W. F.** 1974. The Mammals of Canada. University of Toronto Press, Toronto. 438 pages.
- Barry, T. W.** 1967. The geese of the Anderson River delta, Northwest Territories. Unpublished Ph.D. thesis. University of Alberta, Edmonton. 212 pages.
- Clark, D. A.** 2000. Recent reports of grizzly bears, *Ursus arctos*, in northern Manitoba. Canadian Field-Naturalist 114: 692-696.
- Clark, D. A., I. Stirling, and W. Calvert.** 1997. Distribution, characteristics and use of dens and related excavations by polar bears in the western Hudson Bay Lowlands. Arctic 50: 158-166.
- Doupe, J. P., J. H. England, M. Furze, and D. Paetkau.** 2007. Most northerly observation of a grizzly bear (*Ursus arctos*) in Canada: photographic and DNA evidence from Melville Island, Northwest Territories. Arctic 60: 271-276.
- Gau, R. J., R. Case, D. F. Pender, and P. D. McLoughlin.** 2002. Feeding patterns of barren-ground grizzly bears in the central Canadian arctic. Arctic 55: 339-344.
- Gau, R. J., P. D. McLoughlin, R. Case, H. D. Cluff, R. Mulders, and F. Messier.** 2004. Movements of subadult male grizzly bears, *Ursus arctos*, in the central Canadian arctic. Canadian Field-Naturalist 118: 239-242.

- Harrington, C. R., A. H. MacPherson, and J. P. Kelsall.** 1962. The barren ground grizzly bear in northern Canada. *Arctic* 15: 294-298.
- McLellan, B., and V. Bianci.** 1999. Status and management of the brown bear in Canada. Pages 46-50 in *Bears: Status Survey and Conservation Action Plan*. Edited by C. Servheen, S. Herrero and B. Peyton. IUCN/SSC Bear and Polar Bear Specialist Groups. IUCN, Gland, Switzerland.
- Rockwell, R. F., and L. J. Gormezano.** 2009. The early bear gets the goose: climate change, polar bears and lesser snow geese in Western Hudson Bay. *Polar Biology* 32: 539-547.
- Schwartz, C. C., S. D. Miller, and M. A. Haroldson.** 2003. Grizzly Bear *Ursus arctos*. Pages 556-586 in *Wild Mammals of North America*. Edited by G. A. Feldhamer, B. C. Thompson and J. A. Chapman. Johns Hopkins University Press, Baltimore.
- Taylor, M.** 1995. Grizzly bear sightings in Viscount Melville Sound. Pages 191-192 in *Polar Bears*. Edited by Ø. Wiig, E. Born and E. W. Garner. Proceedings of the Eleventh Working Meeting of the IUCN/SSC Polar Bear Specialist Group. IUCN, Gland, Switzerland.

Received 5 October 2008

Accepted 19 May 2009