Abstract

Movements of boreal caribou in the James Bay lowlands

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Little is known about the movements and home range of boreal woodland caribou (*Rangifer tarandus*) in the James Bay lowlands. As part of ongoing studies to measure the potential effects of the De Beers Victor Project on the local and regional environment, a study of woodland caribou was initiated. This study involves the use of GPS collars with Argos satellite system uplink to monitor movements of caribou. Additional aerial surveys of a study area (22 000 km^2) in the early and late winter are used to provide an overall indication of the usage of the area around Victor by caribou and other wildlife. Animals were collared in December 2004 at varying distances from the Victor site (max. 60 km). Preliminary data for 2005 has been analysed. During 2005, some animals moved large distances >480 km from Victor, while others were relatively sedentary. One animal (from the total of ten) was harvested by a hunter in March. The only obvious trend in movement patterns occurred in the middle of November when all the collared animals began to move north-west. The daily distances moved in November were much greater (10-20 km/d) than earlier in the year (0.5-10 km/d) and by mid December they were all north and west of their locations when first collared, in some cases more than 480 km to the northwest of their initial capture sites. The minimum annual distances covered for the nine remaining animals ranged between 900 and 1500 km. The home ranges of the caribou ranged from 8000 km^2 to 56 380 km^2 with a mean home range of 23 434 km^2, which is much greater than boreal woodland caribou in other parts of Ontario.

Key words: Home range, Victor Project, woodland caribou.