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Characterization of woodland caribou (*Rangifer tarandus caribou*) calving habitat in the boreal plains and boreal shield ecozones of Manitoba and Saskatchewan

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As recovery plans are being developed or implemented for boreal caribou, it is becoming important to further examine the spatial and temporal characteristics of areas used at calving and to identify site and landscape attributes that may be selected by the animals. In order to do this, we analyzed the movement and habitat use pattern of 31 animals in the boreal plains and boreal shield ecozones. GPS telemetry data were obtained from 12 female boreal caribou from the Kississing-Naosap herd in Manitoba between 2002 and 2005, and 19 females from the Smoothstone-Wapawekka herd in Saskatchewan between 2005 and 2007. Based on movement rates, LOESS curves were used to identify eight distinct seasons for both herds. Reduced movement rates, involving a rate of 50 m/h or less for a minimum of a week, were used to identify 20 calving sites in the Smoothstone-Wapawekka herd, 13 calving sites in the Kississing-Naosap herd, and their associated pre- and post-calving areas. Vegetation characteristics at the site and landscape scales were examined using Forest Resource Inventory, roads, trails, fire and cutblocks data. Paired-logistic regression was used to assess calving habitat selection at the site scale and generalized estimating equations were used for the landscape scale analysis. Selection was seen to occur at the landscape scale for calving areas in both herds however, no identifiable trends were seen to occur at the site scale based on vegetation characteristics. The predictive maps of calving and potential calving habitat generated for both herds are providing key management information for the protection of boreal caribou during the calving season.