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PERFORMANCE OF A PROTOTYPE SATELLITE TRACKING SYSTEM FOR CARIBOU. L. F. Pank,
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The study confirmed the utility of a satellite tracking system to monitor caribou location, activity, mortality, and environmental temperature. Performance of the system (prototype 2.1 kg transmitter package, TIROS-N polar orbiting satellites and French ARGOS signal processing) was evaluated during bench, enclosure, and field trials. Mean locational error ranged from 0.5 to 2.5 km. Temperature tolerance of the transmitters spanned from -20° to 80°F. The motion sensor accumulated relative measures of activity over 0.5 and 6.0 hour periods. During the field trials, the system fixed the location of an adult cow in the Porcupine Caribou Herd 114 times during a 2.5 month period. The system successfully tracked this cow during the fall migration as she moved over 1,000 km. Transmitter size, weight, oscillator stability, temperature tolerance, sensitivity of the activity sensor, and life were identified for improvement in the production units.

ABSTRACTS OF PAPERS AND POSTERS

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