

Alaskan caribou and ptarmigan migrations recorded

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In the February issue of *BioScience*, biologists describe the first-of-its-kind recording of caribou and ptarmigan migrations made with 14 automated cameras positioned in the northern foothills of the Brooks Range, Alaska. By analyzing some 40,000 images of the tundra landscape, Ken D. Tape of the University of Alaska and David D. Gustine of the US Geological Survey documented the northern spring migrations of both species. They estimated the number of individuals traveling, and made telling observations that shed light on caribou and ptarmigan behavior, without interfering with the animals by capturing and tagging them.

Tape and Gustine used cameras mounted on stakes, far enough away from a highway and from the Trans-Alaska Pipeline to reduce disturbance. Pairs of cameras, spread out over 65 miles, photographed upland sites and locations near rivers, which have different sorts of vegetation, every 15 minutes. Caribou were the easier subjects, and the researchers could estimate that they moved about 6 miles per day toward their calving sites later in the migration. They appeared to slow down to forage in areas of open ground and avoided river ice and open water. Ptarmigan, because they can fly quickly, were harder to count, and were seldom seen when snow covered all the vegetation. But they seemed to move at a similar speed to the [caribou](#), on average. Other species, including bear, a wolf, ground squirrels, foxes, hawks, falcons, and owls, were seen occasionally, as well as a rare human.

Tape and Gustine maintain that automated cameras are a promising way

for researchers to study other terrestrial migrations efficiently. The technology might thus make clearer the factors affecting migration of a wide range of species.

More information: The article by Tape and other peer-reviewed articles in the February 2014 issue of BioScience are now published as Advance Access at bioscience.oxfordjournals.org/content/early/recent .

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