Swift Fox Census Survey in Northeast Montana

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Swift foxes (*Vulpes velox*) were surveyed across an area of 11,420 km2 on the prairies of northeast Montana from October 2022 – March 2023. The purpose of this survey was to determine changes in relative distribution, estimate population within the census area, and compare those results to previous census findings. Live trapping and remote camera methods were used to collect data in the field. Surveys were conducted in 74 townships across the census area. Township occupancy analyses were used for camera data and live trap data were analyzed using mark-recapture estimation. Live traps detected swift foxes at 36 of 45 townships, which resulted in 146 captures of 91 unique individuals. Camera traps detected swift foxes in 16 out of 29 townships, which resulted in 47 visits. Incidental canid observations during the survey period yielded 35 coyotes, 30 red foxes, and 109 swift foxes. It was not possible to identify individuals from camera traps or incidental observations, so some visits could be the same individual. Preliminary results for relative distribution show a slight western expansion within the census area. Comparing live trap results to previous census surveys we see a significantly higher catch per unit effort in 2022 than in 2014, 2005, and 2000. Theseresults indicate a potential increase in the northeast Montana population of swift fox. Recent swift fox reintroductions bordering the census area could be a source of inflation in the population estimate. A comprehensive population survey will be conducted in Canada and Montana in upcoming years.