

# TRACKING THE MOVEMENTS OF SNOWY OWLS AT THEIR SOUTHERN RANGE LIMIT

How are Snowy Owls moving around in the winter? What drives their movements?

To answer these questions, we analyzed fine-scale telemetry data (GPS/GSM) from 50 Snowy Owls tagged in eastern and central North America from 2013–2019. We compared flight patterns during the winter season to landscape features, with owls grouped by sex and age. We classified owl movement into 2 categories: **resident** (staying in one area) and **nomadic** (traveling across a wide area).

Solar-powered GPS/GSM transmitters



In the agricultural areas of the Prairies, where rodents are likely abundant, owls were more often resident (i.e. small winter areas).



In the Great Lakes regions, many owls were again resident, but others were nomadic. Resident owls were typically in agricultural areas and nomadic owls in cities and near lakes, where resources are fragmented and variable.



On the Atlantic coast, the habitat is further fragmented by the ocean and human development. Many owls were nomadic, traveling along coastlines likely following the movements of their prey (i.e. seabirds and waterfowl).



We found that Snowy Owls are incredibly variable in their movements, from resident to nomadic. Our data suggest movement patterns are driven by the distribution and availability of prey, rather than age or sex.

Designed by Impact Media Lab

McCabe, RA, JF Therrien, K Wiebe, G Gauthier, D Brinker, S Weidensaul, and KH Elliott. 2021. Landscape cover type, not social dominance, is associated with the winter movement patterns of snowy owls in temperate areas. *Ornithology* 138: 1–12.

