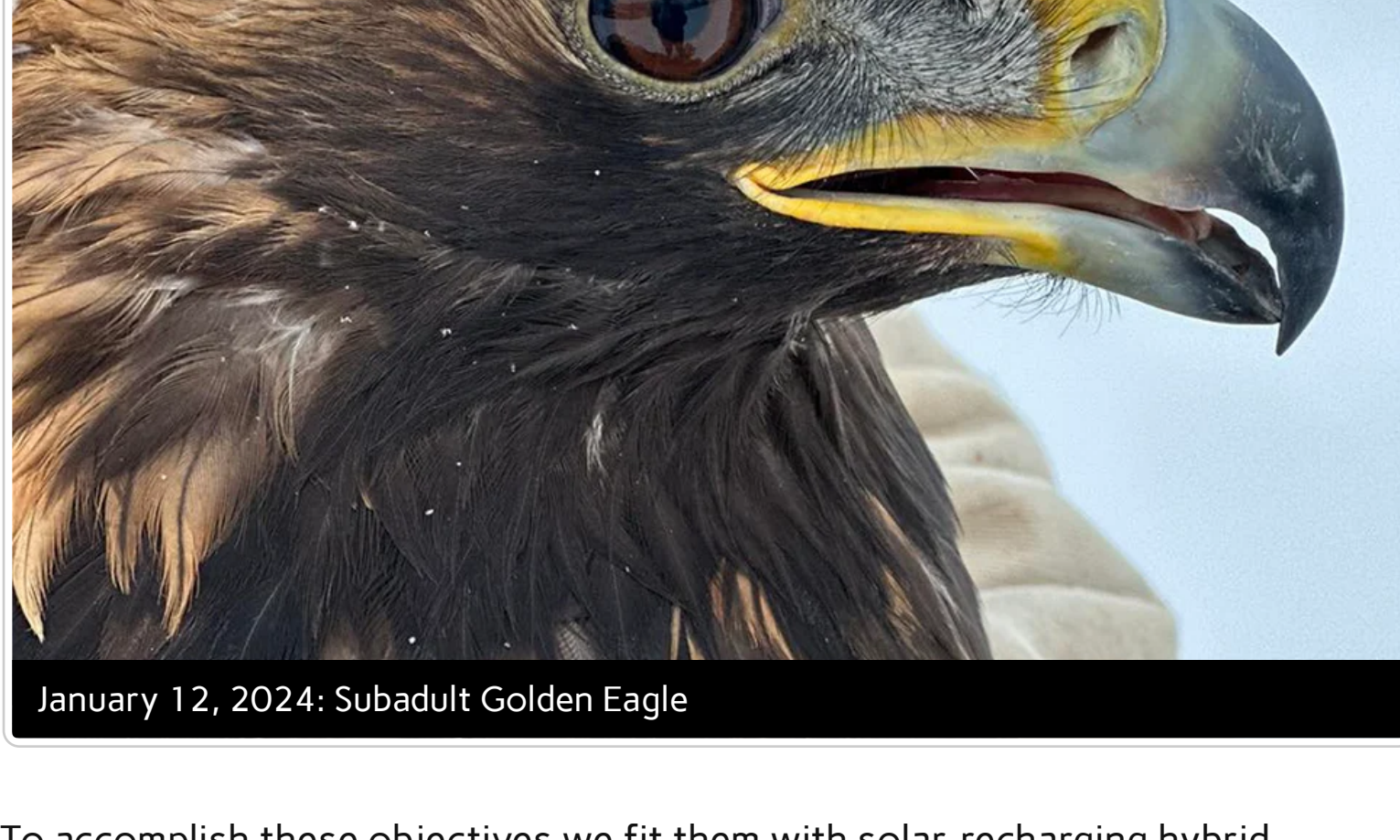


A summary of the first two field seasons tracking Golden Eagles from the Driftless Region

January 23, 2024 RaptorResource

– By Brett Mandernack

The eastern race of Golden Eagles that are known to winter in or pass through the Driftless Region have only recently been recognized. Our primary research objectives are to learn the travel behavior of these eagles, delineate their fall and spring migration routes and their fidelity to those routes, identify their summer and winter ranges and fidelity to those, and examine mobility on those ranges. Mobility on summer ranges may help discern the breeding status of adults. We captured Golden Eagles from the northern and southern portions of the Driftless Region.



January 12, 2024: Subadult Golden Eagle

To accomplish these objectives we fit them with solar-recharging hybrid satellite/cell tower transmitters, or CTTs, made by Cellular Tracking Technologies to obtain location data and, in ideal conditions, determine flight behavior depicting ringing flight (riding thermals and spiraling up), stooping (diving) behavior, and other flight details.

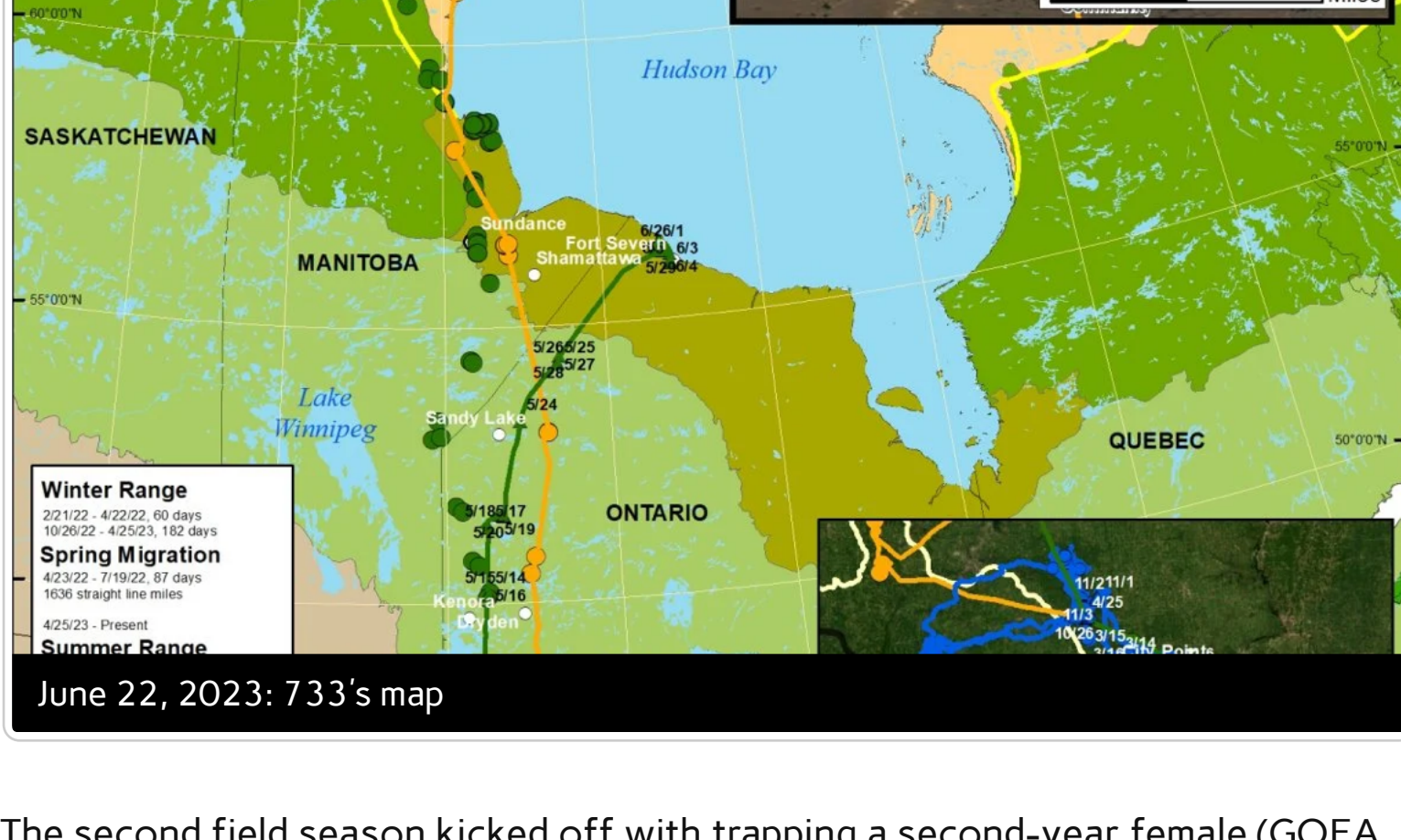


A two-year-old eagle having its transmitter fitted. Even subadults have the characteristic golden nape.

Field season one began January 2022. We captured an adult female (GOEA 731) on 1-15-2022 and a second-year female (GOEA 733) on 2-21-22, in west-central Wisconsin, near Alma, toward the northern portion of the Driftless Region. The adult female began spring migration on 3-27-22 and arrived on her summer range (s.r.) in northern Nunavut on 6-4-22, traveling 1,580 straight-line miles. We suspect that GOEA 731 died on the s.r. on 9-23, as no movement was detected after that date.

GOEA 733 was more mobile on her winter range (w.r.) than GOEA 731, drifting to the Neilsville, WI, area, then to Ladysmith and Amery, WI, prior to initiating spring migration on 4-23-22. By 7-19-22 she had reached her s.r. in Nunavut, traveling 1,636 straight-line miles and only 157 miles from GOEA 731's s.r. She began fall migration on 9-8 and ended it on 10-25 near Neilsville, WI, part of the previous year's w.r.

GOEA 733 continued to intermittently send data throughout the winter of 2022-23 and unlike the previous winter, she spent some time south of Reedstown, WI, near Spring Green and around City Point before initiating spring migration on 4-25, which was two days later than the previous year. Migration lasted 36 days covering 789 straight line miles and ended in northern Ontario along Hudson Bay. She stayed near the bay all summer and began fall migration on 10-1. She reached the northern shore of Lake Superior on 11-18 and traversed it southwest rounding Superior at Duluth, MN. GOEA 733 reached her previous year's w.r. near Neilsville on 11-28.



June 22, 2023: 733's map

The second field season kicked off with trapping a second-year female (GOEA 832) on 1-27-23. However, this transmitter began losing battery charge almost immediately, despite being a high profile unit with a feather-deflecting pad under it to minimize the possibility of feathers blocking sun from the solar panels that recharge the unit. She hung around the capture site area near Alma, WI, and traveled up to Elmwood, WI, area by mid-February. The transmitter continued to lose charge and the last transmission was just 3.5 weeks following deployment, on 2-21-23.



January 12, 2024: Subadult Golden Eagle

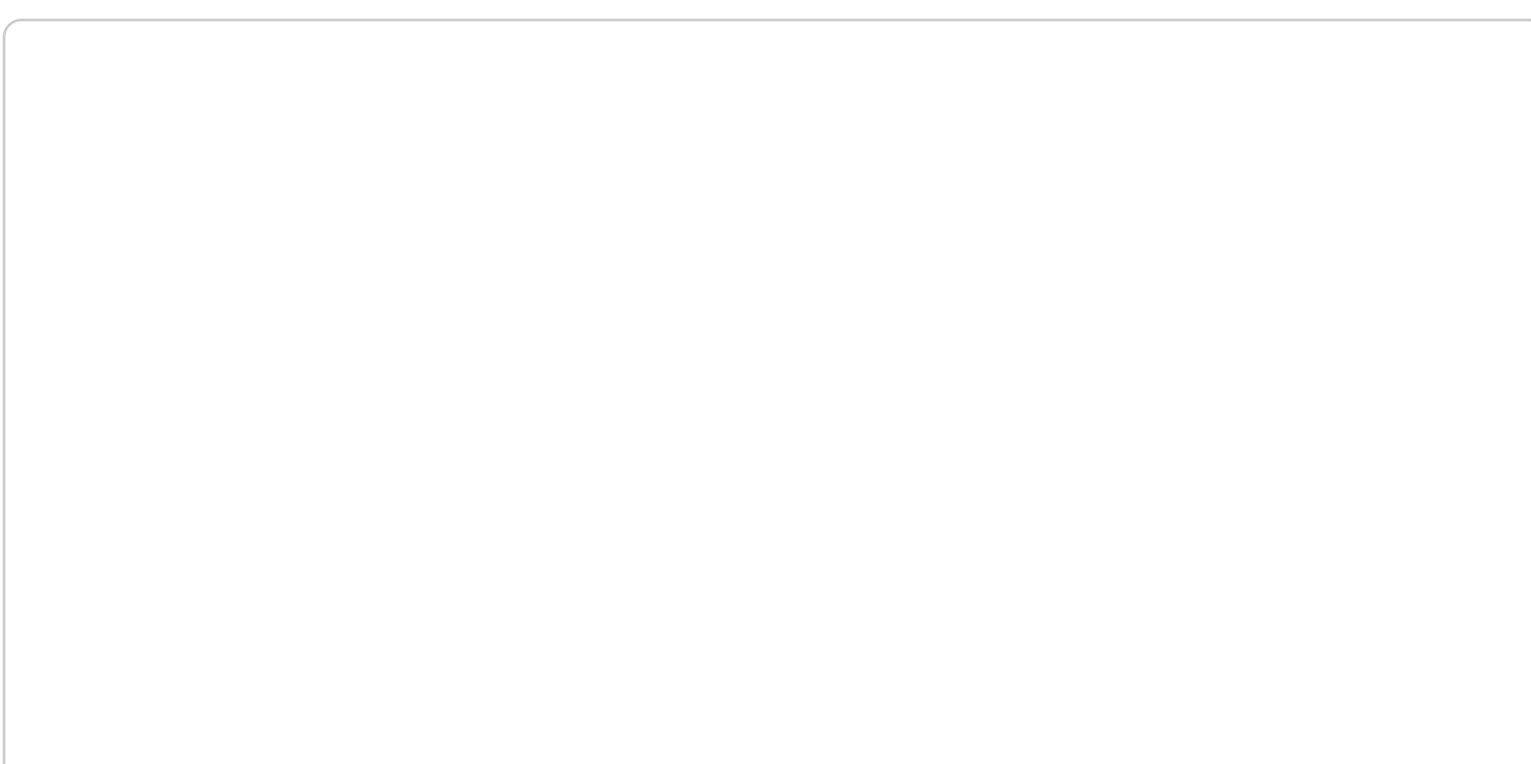
Two GOEA's were captured on 2-1-23, a second-year male near Alma, GOEA 834, the other, a second-year female, GOEA 732, near Bagley, WI. GOEA 834 showed strong fidelity to his w.r. and remained there until spring migration commenced on 4-14-23. He headed fairly directly to northern Manitoba (MB) then began a less direct route up through Nunavut (NU) ending migration on 6-4-23, 1,606 straight-line miles from his capture site, and not far from where 731 and 733 summered the year before. However, he continued to wander extensively in eastern NU, east into the Melville Peninsula area then headed southwest. Fall migration commenced on 10-1-23. Transmitter voltage began dropping and there have been data gaps as a result, but there was sufficient data to determine his path back to his previous w.r., reaching it by 11-24-23. CTT voltage remained critically low but intermittent data showed he remained on that w.r. through mid-December.



Golden Eagle 834.

GOEA 732 had a CTT with voltage issues that began shortly after deployment. Following release she headed up the Mississippi River to near Richland Wisconsin, then north-northeast up the Kickapoo River to near Richland Center. On 2-4 she veered east-southeast and headed toward Spring Green, WI, north of the Wisconsin River. She remained in that area until 3-20 when she headed north-northeast 92 miles, possibly initiating spring migration. She continued north to Manitowish through 3-24, but that was the last data location we received, again due to diminished voltage.

GOEA 833, a second-year male, was captured in the Bagley, WI, area and fitted with its CTT on 3-14-23. Its CTT has erratic voltage issues, as well. Voltage dropped shortly after deployment and the unit did not transmit from 3-21 until 4-14, when the unit suddenly, though briefly, revived. During that time, he ranged from western Grant Co., WI into eastern Iowa along the Turkey and Volga Rivers. Spring migration began on 4-25-23 and despite data gaps due to low CTT voltage, we tracked him up to the Melville Peninsula in northern NU. We concluded that migration ended on 6-17 though he was quite mobile in that massive peninsula into late July when he settled into an area for the remainder of summer. He began heading south from his summer "sweet spot" in north central NU around the second week of September. Data gaps were frequent and lengthy by then and we had no data on him from 9-18-23 until a 12-13 cell tower check-in. He had already moved to southeast Minnesota by then, just north of the MN/IA border. We hope to get a massive cell tower download of his past locations if the CTT voltage can increase to the level it takes to transmit that data.



Golden Eagle at Winged Freedom Raptor Hospital in Spooner, WI

We thought we had wrapped up the Golden Eagle field season after the GOEA 833 deployment, but Jeff Worrell got a call from a raptor rehabilitator in Spooner, WI, regarding an adult male Golden Eagle that glanced off a passing vehicle in northwest Wisconsin and was recovering well in the rehab center. We decided to deploy our final CTT on GOEA 835 on 4-5-23. Two days later he began, or continued, his migration north. Data were frequent enough to determine his path, which was a direct route to NU. He settled in an area in the southern part of the Melville Peninsula by 5-24-23 and while his s.r. was quite small, data revealed he did not focus on a specific location, but was rather mobile within that range. This suggests he was not focusing on a nest site this year. Unfortunately, his CTT stopped transmitting by 6-27-23 due to low voltage.

We prepared for the upcoming field season months in advance of eagle capture and deployment of transmitters. This winter we will primarily be using satellite-only transmitters by Geo-Trak that have proven reliable and long-term during many years of Bald Eagle research by Eagle Valley and Raptor Resource Project. We look forward to answering many more questions about the travels of the eastern race of Golden Eagles and sharing them with you.

To follow the travels of any of the eagles we've tracked, visit <https://www.raptorresource.org/learning-tools/eagle-map/>.

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