

A New Kind of 'Tweet': I Just Got a Text from a Red-Tailed Hawk!

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Each year over 66 million people pass through Chicago's O'Hare International Airport on their way to business meetings, conferences, vacations, and other important events. As they gaze out the window of the terminal or an aircraft at the large expanses of pavement and grass, likely they do not notice the presence of red-tailed hawks and other wildlife that also find the airfield at one of the busiest airports in the world to be a good place to spend time. While passengers enjoy a burger, sandwich, or salad from the food court, European starlings are foraging within grassy areas looking for insects and red-tailed hawks search



Photo by Brian Washburn

for voles and other prey items. However, problems arise when birds and aircraft collide, an event that occurs most commonly on and within 5 miles of airports.

Red-Tailed Hawk

Fortunately, going about their important work relatively unnoticed are wildlife professionals from the U.S. Department of Agriculture's Wildlife Services (USDA WS) program. These airport biologists use a variety of tools and techniques to make the airfield unattractive to wildlife and scare or remove those problematic birds that remain and pose a hazard to safe aircraft operations. When it comes to reducing the risk to aircraft posed by raptors such as red-tailed hawks, the live-capture and relocation of these birds away from the airport is a common practice. However, little is known about where and when these relocated birds spend their time.

The National Wildlife Research Center (the research arm of USDA WS) provides research and information in support of the USDA WS operations program and the airport community. As a Research Wildlife Biologist, I am leading several research efforts aimed at gaining a better understanding of how to effectively reduce the risk of raptor-aircraft collisions. At Chicago's O'Hare International Airport, my USDA WS colleagues and I are using

colored wing-tags and traditional leg bands to determine how many relocated red-tailed hawks actually return to the airport. We are starting to gain an understanding of how age class, time of year, and other factors might influence whether or not a bird returns to the airport following a relocation 'road trip'.

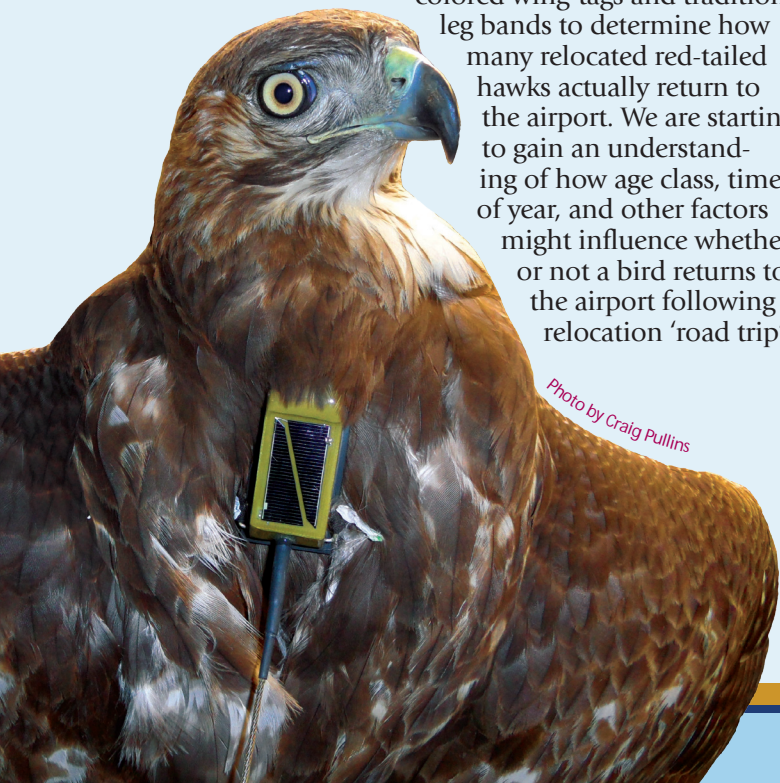
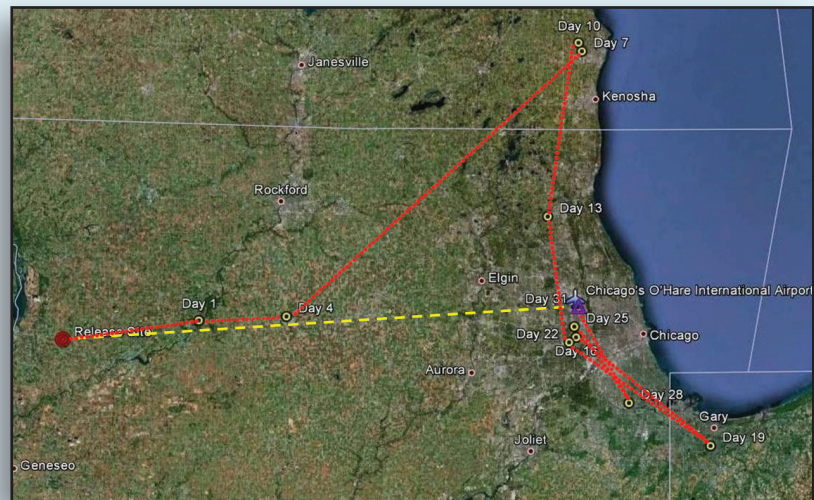


Photo by Craig Pullins

Although the information we are obtaining from the tagging efforts is very valuable, the need for more finite details regarding post-relocation movements of raptors is clear.

In February of this year, an exciting opportunity presented itself to allow this process to begin while simultaneously learning about a new technology in satellite telemetry. Working with Paul and the Microwave Telemetry staff, we agreed to deploy an experimental 25-gram GPS-capable solar-powered transmitter on a red-tailed hawk. However, this unit is somewhat unique in that it uses the Groupe Spécial Mobile (or Global System for Mobile communication; GSM) system standard and the same cell phone towers we rely on for our daily human communications to transfer the data from the unit to the end user rather than through the satellite network (granted, this is a huge oversimplification to an amazingly complex process).



Locations (shown at 3-day intervals) of a red-tailed hawk (GSM14) following her relocation from Chicago's O'Hare International Airport. Although she took one month and a relatively indirect path, GSM14 traveled back to the airport from which she was live-trapped and relocated.

On an early March morning, a second-year female red-tailed hawk found a gerbil safely tucked away in a bal chatri trap too much to resist as breakfast; thus we had a volunteer. Hereafter known as GSM14, she was fitted with the GSM/GPS telemetry unit using a backpack harness, provided with vehicle transportation, and released at a presumably safe site about 125 miles west of the airport.

GSM14 left the release site within hours and by the next day had flown 25 miles to the east. One week later she was located in southeastern Wisconsin. Next, she traveled south through the northern reaches of Chicago to an area southeast of O'Hare airport. After two forays into northeastern Indiana, GSM14 headed north toward the airport where she was captured. Most importantly, exactly one month after her relocation the unit recorded her presence back on the O'Hare airfield. Since that time she has taken up residence in a wooded area to the east of the airport and has wandered onto the airfield itself on numerous occasions.

GSM14 and other red-tailed hawks present on or near Chicago's O'Hare International Airport that are currently wearing satellite transmitters (as part of a related research study) are providing valuable information about the movements of these birds and the potential risks of hawk-aircraft collisions at O'Hare and other airports. Further, the introduction of the GSM/GPS telemetry units provides exciting opportunities for future research to increase our understanding of wildlife ecology and movements.