

'411' Impresses Trackers With Her Native Skills

By Allen J. Barth

Bald eagles (*Haliaeetus leucocephalus*) in Grand Teton National Park (GTNP) are the subject of intense research by the tri-state Greater Yellowstone Ecosystem Bald Eagle Research Project in Montana, Wyoming and Idaho. In Wyoming the project is funded by NPS, USFS and the Wyoming Game and Fish Department. Dr. Al Harmata, of Montana State University, is directing the study, during which most of the nestling eagles since 1979 have been banded each year. In 1985 and 1986, a few of the eagles were equipped with transmitters to better monitor their movements, and one eagle was followed as it migrated from Wyoming, through five other states, to a wintering area in northern California.

On June 16, 1986, the Schwabacher nest was visited and two eaglets were discovered. Both were banded, various measurements taken and blood drawn for analysis. The larger, believed to be a female, was equipped with a solar-powered, backpack transmitter. Her activity was monitored several times a week as she moved about the nest, not yet mature enough to fly. She was named "411," referring to her transmitter frequency.

411 fledged on August 14 but the signal was not received until September 4, when she was located in Granite Canyon (at the south end of GTNP), 14 miles from her nest site. She left the canyon the next day and was located on August 17 6 miles east of Alpine, Wyoming where she was followed along the Snake River to Palisades Reservoir, about 30 miles from her nest.

She stayed at the reservoir, interacting with other young eagles there, until October 1. At 12:15 p.m. she "rang-up," gliding in a tight circle, letting the uplifting power of a thermal carry her. After reaching a height of more than 400 feet she began to glide southwest – the beginning of her fall migration. She headed southwest the first two days, slowly moving over ridges and valleys, gliding 2-5 miles, losing height and ringing-up to gain altitude once more. Covering 60 miles the first day and 90 the second, she had passed through parts of Idaho and Utah. The fledgling was tracked using a Park Service 4-wheel drive Chevy Luv equipped with a 2-element directional antenna. The antenna had a range of approximately 20 miles while the eagle moved over the ridges. Roads along her path enabled relatively close monitoring as she traveled, averaging 16 miles per hour.

411 moved west the next two days, across the north end of Utah into Nevada, averaging 125 miles per day. The signal was lost near Contact, Nev., but was relocated by aircraft near Winnemucca. At an altitude of 14,000 feet in a plane the range of the antenna could be increased to more than 50 miles while 411 perched, and about 100 miles while she soared over the ridges. She had changed her flight technique from flying high in thermals to staying low along the sides of ridges where updrafts allowed her to soar. She rarely needed to flap her wings.

The following two days she headed northwest from the Winnemucca area, across the Black Rock Desert, through the extreme northeast end of California and on to southern Oregon. There she discovered the Thompson Valley Reservoir, with a large population of American coot, intermixed with many duck species, providing an abundant food supply. She stayed at the

reservoir for two weeks.

The first couple of days seemed to be difficult. At Palisades Reservoir she utilized the abundant source of dead fish; but at Thompson Valley Reservoir she was faced with live avian prey. At first she scavenged off remains that the adult eagles left behind. She fiercely defended carcasses against persistent ravens, going so far as to chase a raven down for taking a small piece of meat. After three days of scavenging, she successfully caught a coot. She seemed to watch the adults as they hunted, observing the easy meals they gained. She soon caught a coot a day, occasionally taking a duck – usually green-winged teal.

411 frequently soared around the area, venturing only 5-7 miles before returning to the reservoir. On October 18 – the opening of Oregon's waterfowl season – she departed the reservoir for a longer period, not returning until the following morning. The adult bald eagles had also departed the area and were seen less frequently after hunting began.

When she returned to the reservoir a close sighting revealed that the transmitter was too tight, due to her unexpected great increase in body size. She continued to fly with no difficulty however. The straps seemed to be giving her some discomfort so capture plans were made.

Six #2 double long spring leg-hold traps heavily padded with foam rubber and tape were used to capture her. The solar transmitter was removed and replaced with a tail-mount transmitter. Immediately after being placed on the ground she gained flight and flew about a half mile, landing in a snag. She was in excellent physical condition, very fat and full of energy. At 1:40 p.m. she rang-up and headed south, flying 12 miles in under an hour, the farthest she had traveled since her arrival 2 weeks earlier. It was likely the hand-

ling had affected her.

The following morning 411 turned southwest. The signal was lost that afternoon and searches the rest of the day and into the following morning turned up no signal. A plane was chartered out of Klamath Falls to conduct an aerial search. She was located on Gerber Reservoir, only 40 miles south of her location the previous morning. She stayed on the reservoir for two days before traveling on. Her flights were very irregular with frequent direction changes. After three days of traveling in a generally southerly direction, averaging only 30-40 miles per day, she arrived at Reservoir F near Canby, California. Like Thompson Valley Reservoir, Reservoir F was teeming with coot and waterfowl.

Arrangements were made with the U.S. Forest Service Wildlife Biologist, George Studinski, to continue monitoring 411. It was believed she would stay until early winter, then move near Tule Lake National Wildlife Refuge, 50 miles northwest of Reservoir F. The refuge winters a great number of bald eagles.

Previous sightings and recoveries of banded bald eagles led researchers to speculate that young eagles traveled along major waterways during their migrations. 411 seemed to key in on other signals that directed her flight. She covered many miles, in a relatively direct line of travel, by use of air currents which minimized her energy use. She was even able to locate herself in an area known to winter many eagles, without having made the trip before and by doing so alone. As research continues on bald eagles much can be learned to assure their survival and success.

Barth has a BS degree from the University Wisconsin – Stevens Point in Wildlife Management. He is currently working with the Wyoming GYE Bald Eagle Working Team.



Fat and sassy after a couple of months on her own, this bald eagle fledgling (christened "411" for her radio transmitter frequency) readies herself for take-off after having her solar-powered backpack transmitter replaced by more comfortable tail-mount equipment.