## Raptor Rapture: banding in the Goshutes

by Cathy Rickabaugh Phoenix, Arizona

On a rocky mountain crest located between the northern forests of western North America and the distant southern deserts, a small group of dedicated people await an autumn miracle.

At the end of August, a sprinkling of hawks appear out of the north. By mid-September hawks, falcons, and eagles soar in great numbers, headed for points south. Most of them will fly deep into Mexico to spend the winter.

Along the way, the Goshute volunteers gather to learn from them.

For centuries, birds have been considered the bearers of prophetic news, good and bad. Our modern society scoffs at such superstition, yet birds indeed are forecasters. Through birds we can discover environmental trends by assessing their numbers in the wild.

The Goshute Mountains tower over the surrounding sagebrush basins, overlooking the Great Salt Lake Desert. Situated in east central Nevada, these high, conifer-capped ridges attract the migrants and direct them southward. The formidable expanse of the encompassing salt flats and deserts create an effective barrier to these travelers, many of which are primarily forest dwellers.

This concentration of raptors, or birds of prey, has only been recently documented. Raptor biologist Steve Hoffman discovered this migration corridor in 1979. It has since proven to be a major flyway, perhaps the largest between the Pacific Coast and the Mississippi River.

This factor makes the Goshute Research Project of primary importance to conservationists. I spent two weeks in September 1987, finding out why counting as well as capturing, banding, and releasing these wild raptors is playing such a critical role in conservation. The station is remote. At the end of a winding jeep road, a steep foot trail ascends 1,600 feet in less than two miles. The dry ridge is sparsely covered with bristlecone and limber pine. Everything must be carried in. Fortunately, food and water are airlifted to the summit through the generosity of the Bureau of Land Management, Elko District. From the highest point on the ridge, the observer enjoys a breathtaking 360 degree view. It is the panorama of a fragile world.

The camp on the summit bustles with activity in the early morning. Along with breakfast and a lunch box, each volunteer receives his daily task — trapping blind, processing tent, or observer's scribe. Before the morning flight of raptors begins, people disperse to their assigned places and the camp becomes deserted until evening.

Professional observers man the highest point, sweeping the airy expanse with binoculars to spot, identify and count the passing migrants. Alternately scorched by the sun and buffeted by winds, the count must be taken while the daylight lasts. Down in the trapping blinds, volunteers crouch, peering through a slit into the bright sky, alert to lure a passing raptor into the nets. Hot and stuffy on sunny days or cold and drafty on bitter days, the interior of the blind affords concealment with few comforts.

The Goshute volunteers, however, did not congregate in this distant wilderness to enjoy a life of leisure. The discomforts are mitigated by the importance, the fun, and the camaraderie that the project characterizes.

The purpose of the study is to determine the status of western raptor populations and, in turn, environmental health. Why raptors?

Raptors are marvelous indicators.

They are sensitive to changes, numerous, and highly mobile. Residing at the top of the food chain, raptors are sterling barometers of widespread problems lower on that chain. A fluctuation in raptor abundance may be traced to a disturbance of habitat and/or prey animals at a lower level. In other words, if the prey animals are in trouble, so are the predators. All life is connected.

Raptor studies on the Goshute ridge are divided into two parts, counting and banding. Trained observers spend the long days counting migrants. Imagine identifying a hawk as it soars past, a speck in the blue sky three miles out and a thousand feet overhead! Multiply that speck by 50 or 60 (on some days) per hour, at different heights, close in or up to four miles out, all moving rapidly south with no time for second looks, and you have some idea of the difficulty involved. The count and identification must be accurate to maintain the integrity of the study.

My respect for the abilities of the observers stems from personal experience. For two days I served as scribe for these hawkwatchers, dutifully noting down species, distance, wind direction and any other information imparted to me from the men behind the binoculars. In addition, I would attempt to help spot passing raptors, but left the identifying to the experts. My forte, I was informed, was spotting ravens and bumblebees.

Below the observer's lookout, the other half of the study ensues. The three trapping stations are manned by volunteers, many of them first timers such as myself. Under the tutelage of a licensed bird bander, we neophytes quickly learned the rudiments of trapping and processing wild raptors. In contrast, the observers have spent years learning, on their own initiative, their special trade.

The trapping station consists of two areas, the trapping blind and the processing tent.

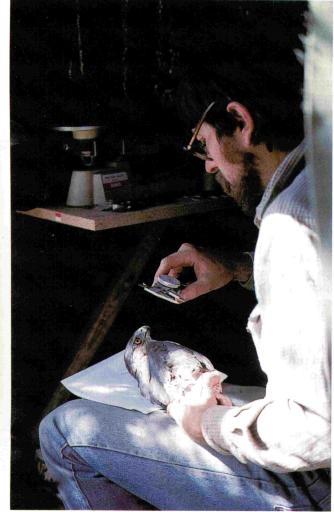
The trapping blind, camouflaged with greenery, looks out on a system of mist nets and spring loaded bow nets. Raptors are lured down by the use of live pigeons and sparrows. These lure birds are secured in leather harnesses and attached to a moveable line which can be manipulated by a person in the blind. Movement is essential to catch the attention of a distant hawk. Once attracted, the hawk must be "played into" a mist net or bow net. It is an acquired skill,



Robert Mesta (U.S.F. & W. Service) sets a bow net for trapping larger bawks and eagles.

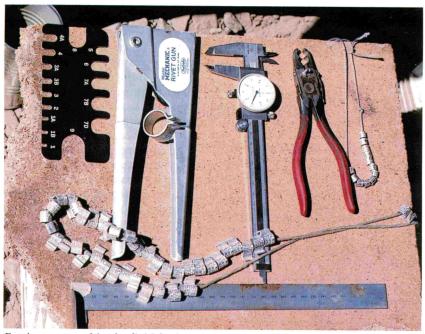


Photos by Cathy Rickabaugh



Raptor biologist Steve Hoffman (founder of W.F.R.C.) takes measurements while processing a Cooper's bawk.

After banding and recording data, this female Cooper's bawk was released.



Equipment used in the field for banding and measuring: L to R, size gauge for bands, pop rivet gun with eagle band, calipers, banding pliers, kestrel bands, chord of Cooper's bawk bands and wing ruler at bottom.

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as exciting and complicated as playing in a sport fish.

Smaller raptors such as kestrels, sharp-shinned hawks and Cooper's hawks are often caught in the mist nets. Larger birds such as red tailed hawks and golden eagles must be lured into the center of a bow net where the mechanism is triggered by a trapper in the blind.

After a bird is netted, the action begins. Time is of the essence, not only to clear the field for another capture, but to prevent the snared bird from becoming more entangled or escaping. Removing a bird from the hair-thin mist net takes patience, finesse, and practice! Clutching talons can take a toll on hands, so they must be controlled first. Most birds of prey rarely bite, but the kestrel doesn't realize this. While the handler holds the sharp little talons in one hand and disentangles the delicate feathers with the other hand, this smallest of falcons repeatedly savages the handler's flesh. They go for the cuticle on purpose, I'm convinced!

Once free of the net, the feathered courser is gently tucked into a long, ventilated cylinder. This keeps the bird calm while waiting to be processed. The bird is now ready to make its contribution to science.

A short distance from the trapping blind, workers quietly process the bird. After being weighed, a numbered U.S. Fish and Wildlife Service bird band is placed on one leg. This is a vital part of processing, for it is the only way to obtain a return on the bird. Band returns are few compared to the number of birds banded, but they tell a tale of the birds' travels and travails.

Next, a series of precise measurements are taken, such as the lengths of the rear talon, leg, folded wing, upper beak, etc. Each measurement is used to determine the unique characteristics of a given population. Information gathered in the Goshutes will eventually find its way into many diverse studies which will expand the scope of the initial project. Some measurements, for example, are used as sexing criteria for western birds.

In the final step of processing, the photographically inclined bring out their cameras. Aside from the artistic standpoint of having a close-up picture of a magnificent creature, photographs of unusual specimens will be added to the study.

The well documented raptor is now ready for release. The entire process

takes from 10 to 20 minutes and every effort is made to keep the bird from becoming stressed.

Now, with a hoist into the air and a farewell, the hawk is free. Off it goes in a flurry. Often, the bird will climb steeply, then pause and, giving a resounding shake, rouse all its feathers, seemingly to throw off any vestige of human proximity.

As it wings southward, the banded raptor has not only made an initial donation to science, but carries the hope of future knowledge. The bird band is imprinted with an individual number and an address. If it is caught, killed, or found dead, the finder can send the number to the address on the band along with where it was found. This information is collated with other band returns and a picture of the raptors' movements begins to form.

The project documents what we have known all along — political boundaries do not exist in the natural world. A creature that is legally protected in one country may be considered fair game in another land. Even though many band returns arise from the death of a raptor, the information gained concerning their movements is invaluable in developing conservation programs that cross human boundaries and cultures.

When raptor numbers plummet drastically, it is time to look for reasons. Birds are subject to all manner of natural controls — disease, accident, predation, natural disaster. More often of late, however, they are impacted severely by habitat destruction caused by human action. This is an area of major concern. This is where the Goshute Project can aid us in our quest for a healthier world.

The Goshute studies are conducted by the Western Foundation for Raptor Conservation, Inc., a non-profit, tax-exempt organization founded to conserve birds of prey and their habitats in the west through research and educational programs. Through its newsletter and Adopt-A-Hawk programs, WFRC will continue its studies and disseminate information to all concerned.

Only by being aware of a problem are we able to work toward a solution.

To learn more about WFRC's programs and how you can help, please write: Western Foundation for Raptor Conservation, Inc., P.O. Box 304, Albuquerque, NM 87103, or phone (505) 291-9224. ●