
BIRDS
of
Prey
AND IDAHO POWER'S
EFFORTS TO PROTECT THEM

GOLDEN EAGLE

(Aquila chrysaetos)

Size: *30 to 42 inches long (76 to 107 cm)*
Wingspan: *74 to 90 inches (187 to 228 cm)*
Weight: *7 to 13 pounds (3178 to 5902 g)*
Number of eggs: *1 to 3 (dull white with brown blotches)*
Eggs laid: *early February to mid-March*
Incubation and fledging: *15 to 16 weeks*

February 3, 1986

Dear Friends:

Around the world the Peregrine Fund interacts with many companies. Only a few have demonstrated a serious commitment to our wildlife resources and have realized nature's great contribution to the quality of life we all enjoy. Idaho Power is such a company. At every level, from chairman to line crews and secretaries, there is a commitment and concern. Idaho Power has been a pioneer in the prevention of eagle electrocution and development of nest platforms for birds of prey on transmission structures, and they have initiated and supported research to ensure their hydroelectric projects do not negatively impact birds of prey. As a pioneer, and because of their effort to enhance public awareness, what they started has had a far greater impact than simply on the area and people they serve. They have expanded man's horizons by finding a solution where none existed. The impact is international and will extend beyond our generation. We are proud to call them friend.

Sincerely yours,

Bill Burnham

William Burnham, Ph. D.
Director
World Center for Birds of Prey

Between the tiny southern Idaho towns of Roseworth and Three Creek, Idaho Power's 69,000-volt Jarbidge line crosses some of the most desolate, sagebrush-strewn, lava-encrusted real estate you can find. It's the kind of place where antelope roam and lizards and jack rabbits play. And little else. In short, it's perfect eagle country.

The golden eagles who live in this high desert like the power line. Its poles provide the elevated perches the birds prefer for hunting and roosting where none existed before. Some of the birds even use them for nesting. For a long time, it seemed we had achieved the perfect nature-human symbiotic relationship. Then, in June 1984, we discovered it wasn't so perfect after all. Some of the eagles using the line were getting electrocuted.

It was back in the early '70s that Idaho Power first realized it had a problem with eagle electrocutions. More and more of the birds were being found under the company's power lines, victims not only of the electricity but of gunshots, poison and starvation. There was nothing, of course, we could do about the last three things, but we thought we might be able to prevent the electrocutions. The problem was we weren't sure how.

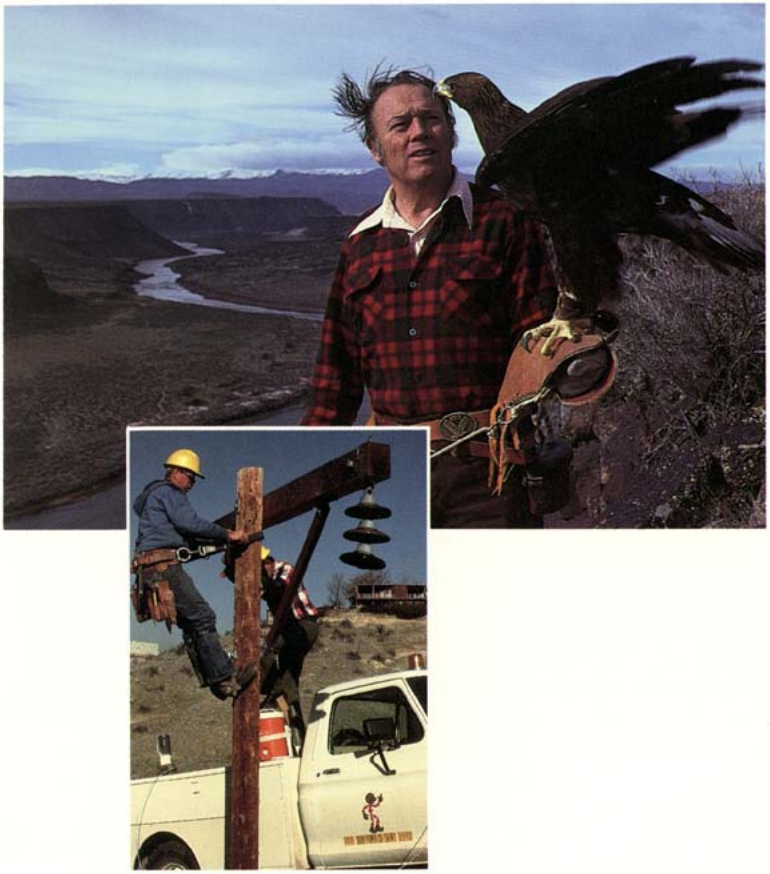
BALD EAGLE
(Haliaeetus leucocephalus)

Size: *30 to 42 inches long (76 to 106 cm)*
Wingspan: *78 to 96 inches (198 to 243 cm)*
Weight: *9 to 14 pounds (4086 to 6356 g)*
Number of eggs: *1 to 3 (white)*
Eggs laid: *mid February to April 1*
Incubation and fledging: *15 to 16 weeks*

So in March 1972, the company enlisted the aid of raptor expert Morlan Nelson. Nelson is recognized as one of the world's foremost authorities on eagles, hawks and other birds of prey. Among his credits: Walt Disney Productions has used him as a trainer, consultant and photographer for their acclaimed Truelife Adventure series; he has helped universities conduct environmental studies and has traveled the world as a consultant on falcons and falconry.

Nelson teamed with Idaho Power engineers and biologists to study the problem of eagles and power lines. The first thing they looked at was the power poles themselves. What was it that made them so dangerous to birds of prey?

To find out, Idaho Power line crews built mock-ups of various types of poles in Nelson's backyard in the foothills near Boise so he could study the birds and their behavior around the poles.

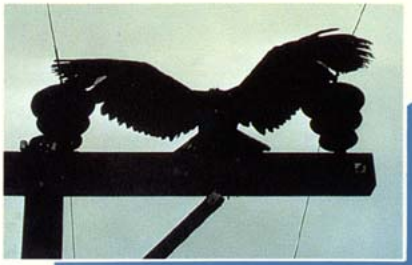


After months of research with a trained eagle, several things became clear. For example, most of an eagle's problems with power lines could be traced to its wings. Their 6½ to 7½ foot spans allowed the bird to touch two conductors or one conductor and a ground wire at the same time. This was especially true of young birds, those two months to a year old, who hadn't yet learned to fly with the greatest of ease and were still a little clumsy.

Also, it appeared that most of the electrocutions occurred on one type of structure: a single pole with a crossarm at the top carrying low voltage lines. Those equipped with extra hardware like transformers or switches seemed especially dangerous.

When first presented with Nelson's findings, company officials were worried they might have to replace hundreds of miles of line since the killer-pole was one of the most common types we used.

But Nelson had a better idea. He came up with perches and modifications that would keep eagles away from the danger without having to replace a single pole. (See box.) He also helped company engineers design new eagle-proof poles that could be used when new lines were built or old poles replaced.



The poles that were killing eagles on the Jarbidge line weren't the same perpetrators Nelson had found 12 years before. In fact, their design was considered a special case. The crossarm was lower (one of Nelson's suggestions), but each pole also was equipped with a long metal bayonet or lightning rod attached to a groundwire. A bird could easily brush it with a wing or tail and be electrocuted. This soon became the prime suspect in the Jarbidge deaths.

The company breathed a sigh of relief that it wouldn't have to replace hundreds of miles of line, but would it have to build perches or obstructions on each and every pole?

No. Further study revealed most of the electrocutions could be prevented by modifying a relatively small number of poles. In fact, in an average year only 1 in 10,000 of the company's poles can be expected to be involved in an electrocution.

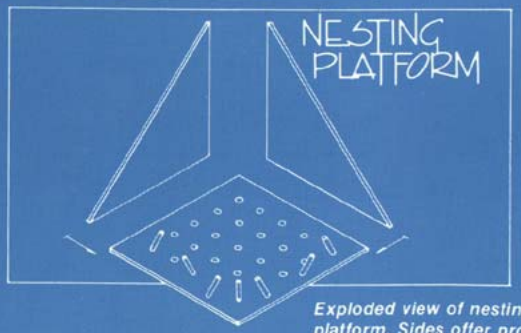
The solution to the Jarbidge problem seemed to be cutting a 6-inch gap in the groundwire, which would protect the eagles while still providing lightning strikes a path to the earth. This modification was performed in the fall of 1984 and so far seems to have eliminated eagle electrocutions on the line.

For rent: Power pole w/view.

An eagle is kind of like a 500 pound gorilla. It'll build its nest anywhere it wants to, including on the company's 100-plus-foot transmission towers. These towers can actually be better nesting sites than the cliffs in which many eagles normally set up housekeeping. Air can circulate more freely, and in some cases, young eagles have a better chance of surviving the summer heat than they might in the ovenlike environment of a south-facing cliff.

Unfortunately, an eagle's nest-building can be a real nuisance to utility lineman and customer alike.

Enter once again Morlan Nelson. He helped Idaho Power design nesting platforms that would protect both the birds and the lines. Simple structures built of plywood, they've been installed throughout the company's service area and have helped expand the eagles' habitat by providing them "homes" in areas otherwise devoid of nesting sites.



Exploded view of nesting platform. Sides offer protection from wind and sun.

The Peregrine Fund.

Idaho Power's involvement with birds of prey goes far beyond nesting platforms and protecting them from electrocution. In 1983, the company was instrumental in bringing The Peregrine Fund's World Center for Birds of Prey to Boise.

Founded in 1970 at Cornell University by Dr. Tom Cade, the Peregrine Fund is dedicated to the study, protection and breeding of not only the peregrine falcon but all birds of prey threatened with extinction including the elf owl, the aplomado falcon and red-breasted falcon.

The Fund has also helped re-establish several species in areas where they had previously disappeared. Take for example, the groups' namesake. In 1973, pollution of the environment by DDT and other pesticides had reduced the peregrines' population to only 50 breeding pairs. The species was given up for dead.

Peregrines would not breed in captivity, the thinking went, and would certainly die off in the wild. But the thinkers were wrong. The Peregrine Fund merged the skills of falconers and poultry farmers with the science of artificial insemination and has now bred and released more than 1,000 peregrines into the wild.

When the Peregrine Fund first arrived in Boise, Idaho Power tried to help out any way it could, donating time, money, material, equipment and moral support. Today, the Fund occupies 518 acres of desert south of the city and attracts visitors from around the world.

It's an exciting achievement, and Idaho Power's proud to have played a part, however small, in the Fund's success.

PEREGRINE FALCON
(Falco peregrinus)

Size: *15 to 20 inches long (38 to 50 cm)*
Wingspan: *35 to 40 inches (88 to 101 cm)*
Weight: *1¼ to 2¼ pounds (567 to 1021 g)*
Number of eggs: *2 to 4 (white with reddish brown)*
Eggs laid: *approximately April*
Incubation and fledging: *8 to 9 weeks*

OSPREY
(Pandion haliaetus)

Size: *21 to 24 inches long (53 to 50 cm)*
Wingspan: *54 to 72 inches (137 to 182 cm)*
Weight: *3 to 3½ pounds (1362 to 1589 g)*
Number of eggs: *3 to 4 (cream with red-brown blotches)*
Eggs laid: *May*
Incubation and fledging: *12 to 13 weeks*

The Osprey

In 1970, the osprey was sliding towards extinction, a victim of the insecticide DDT. Ingested with the bird's food, the chemical would cause the osprey to lay eggs with paper-thin shells. Too often, these delicate eggs became coffins, cracking prematurely and killing the embryos inside.

Then a 1972 amendment to a federal law banned the use of DDT, and slowly but surely, the osprey made a comeback. Today, it's once again a common sight around rivers, lakes and marshes.

The osprey's nest is huge and usually is built out of sticks and branches at the top of a large, dead tree. But power poles also are popular nesting sites. At Idaho Power, we wish they weren't. The nest's great size can cause all sorts of havoc with powerlines including fires and outages.

However, balancing the home-building habits of the osprey with the needs of our customers is fairly simple. Under agreement with the U.S. Fish and Wildlife Service, we just move the osprey's nest. Either to a man-made stand built nearby or to a new location on the same pole or tower.

It's a move that keeps our linemen and customers happy, and most of the time, our fine, feathered friends never know the difference.

Learning to live together.

Idaho Power's birds of prey program is just one of the company's efforts to mitigate its use of the environment with the creatures who live in it. Our four fish hatcheries have helped re-establish the steelhead and salmon runs in the Salmon River and its tributaries, and our wildlife feeding programs have helped some of Idaho's deer and elk herds make it through some very tough winters.

Idaho Power carries on its raptor research efforts to this day, gathering data, experimenting with new designs for transmission and distribution facilities and tackling problems (like the Jarbidge line) as they arise. All to make sure people's need for electricity is in harmony with the survival of nature's birds of prey.

BIRDS of Prey

Credits:

Cover, Dave Boehlke

Inside Front Cover, Dave Ellis

Pages 1, 2 and 8, Dave Boehlke

Pages 3, 4 and 5, Morlan Nelson

Page 6, illustration courtesy of U.S. Fish and Wildlife Service

Inside Front Cover, Page 7, illustration courtesy of Alberta Fish and Wildlife Division

Page 9, Idaho Power.

Idaho Power

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