

# Osprey

(*Pandion haliaetus*)



The Osprey is the only member of the avian Family Pandionidae. Uniquely adapted to catch and feed almost exclusively on fish, it is one of Utah's most specialized summer residents. Many also pass through Utah during their spring and fall migrations. Since the mid-1990s, increasing numbers of Osprey have begun to nest within the state, inhabiting areas near lakes, rivers and streams. In a state as dry as Utah, their distribution is closely tied to natural and man-made water sources.

## Habitat

During spring and fall migrations, Osprey may be sighted along many major waterways in the state, though occasionally they are spotted in habitats miles from water of any kind such as the Orem Overlook and at Snowbird. Sightings are more common in areas near the Great Salt Lake and along the Green and Colorado rivers. They are also seen along the Wasatch Mountains from Zion National Park to the Idaho border and in the Uinta Mountains.

Construction of reservoirs in Utah has expanded suitable Osprey habitat for both feeding and nesting. Flaming

Gorge Reservoir currently hosts Utah's largest concentration of nesting Osprey. Its deep but clear water allows them to see and catch their prey. And the rocky pinnacles lining the shore provide excellent nesting sites.

While Flaming Gorge Reservoir and Fish Lake represent historical Osprey nesting strongholds, breeding pairs of Osprey can now be found at a number of lakes and reservoirs across the state, including Utah Lake, Panguitch Lake, Pineview Reservoir, Deer Creek Reservoir, Rockport Reservoir, Jordanelle Reservoir, Strawberry Reservoir, Echo Reservoir, Minersville Reservoir, Starvation Reservoir and Willard Bay.

## Range

Osprey may be found on almost every continent. Breeding populations can be found in Europe, Asia, North and Central America, Australia and on many of the Pacific, Atlantic, Mediterranean and Caribbean islands. Utah's Osprey migrate south to winter in Mexico, Central America and South America. Other wintering populations occur in the southern areas of Africa and South America.

## Description

Osprey are large raptors (birds of prey) with distinct dark markings. Adults measure 21 to 24 inches long with a wing span from 4 1/2 to 6 feet. They weigh 3 to 4 pounds. Males have an almost pure white chest and belly, while females have mottled dark brown markings across the chest that form a "necklace." Both sexes have a white head with a unique wide brown mask crossing the eye.

In flight, Osprey are most easily distinguished by their sharply angled wings, which are more narrow than those of other large raptors such as hawks and eagles. Viewed from below, Osprey have dark markings at the "wrist" where the wings bend, dark wing tips, and dark bands on the tail.

Juveniles have markings similar to adults but the feathers on the back, wings and tail are edged with a pale buff color, resulting in a scaled appearance, and their chests are slightly mottled.

## Prey and Hunting Behavior

Osprey will feed on any medium-sized fish swimming at or just below the water surface. They often hunt from a perch in order to conserve energy, but are also effective aerial hunters. In flight, Osprey may either dive directly on their prey or hover in one spot before diving.

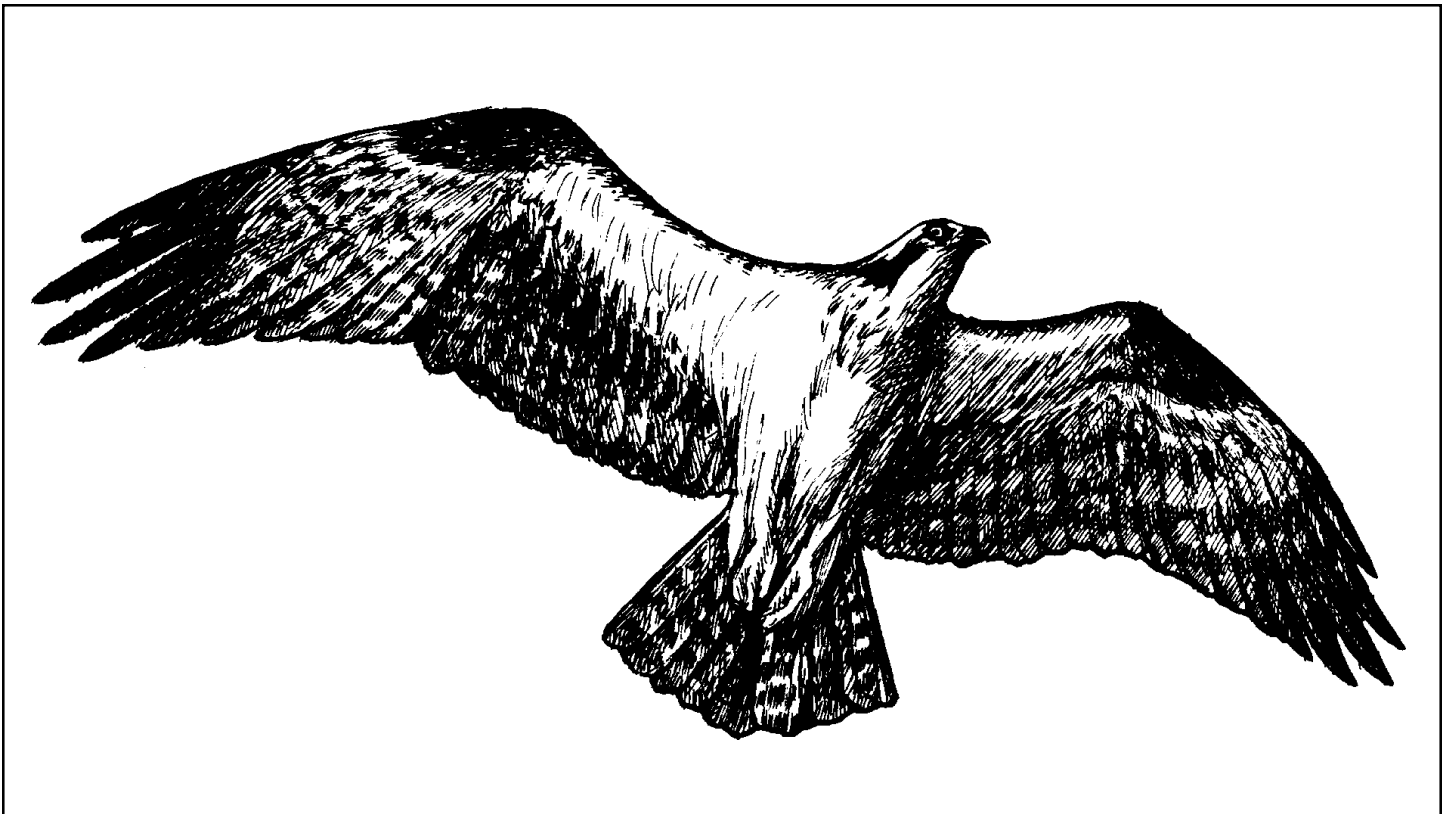
Osprey catch fish by plunging feet first into the water with their wings extended high above their head. Their long, heavy, strong legs and large feet allow them to reach well under the surface of the water. When either foot touches a fish, the Osprey's fast reflexes snap the foot closed, grasping the fish before it has time to escape.

To help them grip onto a fish, Osprey also have ridges of short, sharp spines (spicules) on the bottom of their feet. In addition they can rotate their toes, which gives them extra strength, dexterity and stability when catching and holding onto a struggling fish.

After a successful dive, Osprey may pause briefly on the water before take off. Once in the air, they shake off the water left on their feathers and then position the fish so its head faces forward. This reduces wind resistance and allows them to better control their catch.

## Reproduction

In late March and early April, the Osprey that nest in Utah return from their southern wintering ranges. The older males return first, followed a few days later by the females and younger males. Usually birds that have nested successfully before, return to the same nest. If one partner does not return, the other partner will seek to mate with another bird. Younger birds select new sites for their nests.



Courtship displays are common for all breeding pairs. Nest site selection and construction are a significant part of courtship. The male selects the nest site and begins constructing the nest, usually before the females arrive. Criteria for good nest sites include security from predators, protection from high winds and proximity to good fishing areas.

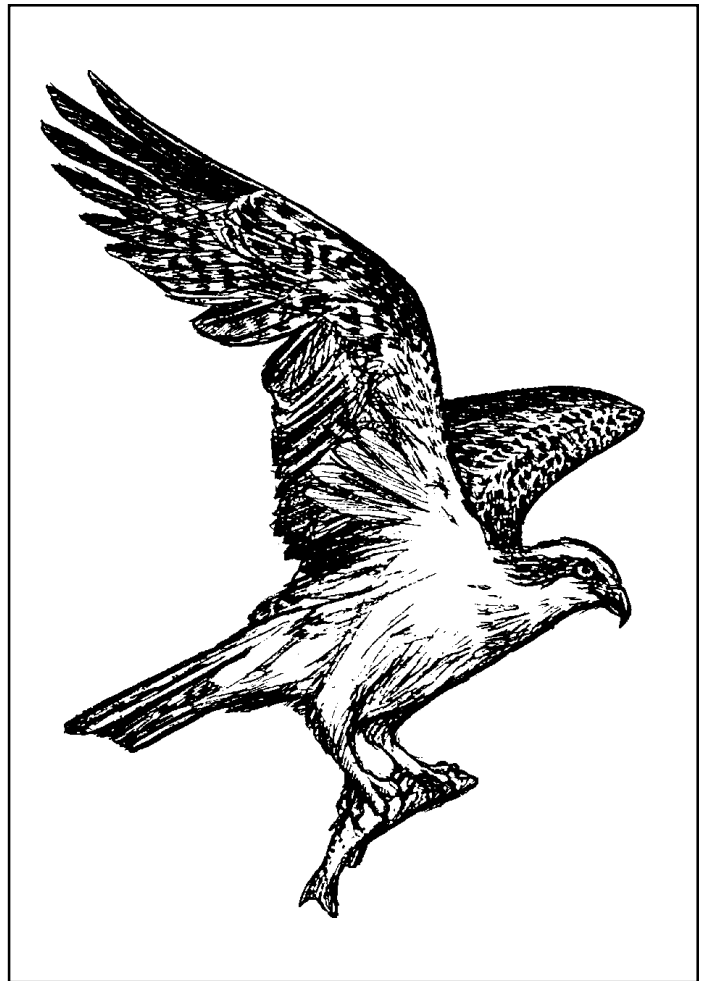
Osprey courtship displays involve dramatic flying patterns. Sometimes diving and hovering or swooping up and diving sharply down, the male will call to the female while in flight. Then the male carries a fish or nesting materials to present to the female. When a female accepts the male as a mate, she helps to finish building the nest he has selected. The male supplies most of the nesting materials and begins to supply fish for her. By the time the female is ready to lay eggs in late April or early May, she relies almost exclusively on the male for food.

Osprey prefer to build their nests in trees, but readily accept man-made structures such as platforms built to increase available nesting sites. Artificial nest structures installed by Division of Wildlife Resources biologists at selected locations have helped to maintain and increase Utah's Osprey population. Osprey often build their nests on power poles, cell phone towers or telephone pole crossarms as well. At some such sites, they run the risk of death by electrocution. To reduce this problem, biologists either build a nest platform above the pole top, or create a nest tower in proximity to the "selected" power or telephone pole, thus making the original chosen site less desirable. At Flaming Gorge Reservoir, Osprey choose to nest atop rocky pinnacles.

Nests can be quite large and are composed of larger diameter limbs and branches. Sometimes they even include such oddities as fishing rods or surveyor stakes. Just before the female lays her eggs, she constructs a nest bowl and lines it with downy feathers, moss, shredded bark and other soft materials. She usually lays between one and three eggs, although occasionally a female will lay four. The eggs are laid one at a time and usually one to three days apart. Both parents incubate the eggs, but the female remains on the eggs for longer periods of time while the male continues to supply food for both of them.

## Young Osprey

The chicks hatch five to six weeks after the eggs are laid. They hatch one to three days apart, so the first chicks to hatch are developing one to three days ahead of the second and third chicks to hatch. The young are born helpless and totally dependent on the adults. They have a fine covering of off-white down that is replaced by a



heavier, coarse grey-colored down within a couple of weeks. By the time the chicks are a month old they are almost as large as their parents.

Young Osprey are entirely dependent on the adults for food and shelter. The adult males generally feed themselves before delivering fish to the females and offspring. This assures that the males will be in good physical condition to continue hunting and supplying food for the females and chicks. When fishing is poor and there is not enough food for all the chicks to survive, the chicks compete for what fish is brought to the nest. The larger chicks may push the younger, smaller chicks aside.

Approximately nine weeks after hatching, the young Osprey are ready to "fledge" (fly from the nest). During the next month, the young practice flying and learn how to fish. The males continue to deliver food to the nest or directly to the young. By the first of September, most of the females have left the area and have begun to migrate south. The males and older juveniles follow within a couple of weeks, and by October only the youngest birds and birds that have migrated from the north are still found here. Osprey are very rarely seen in Utah during the winter.

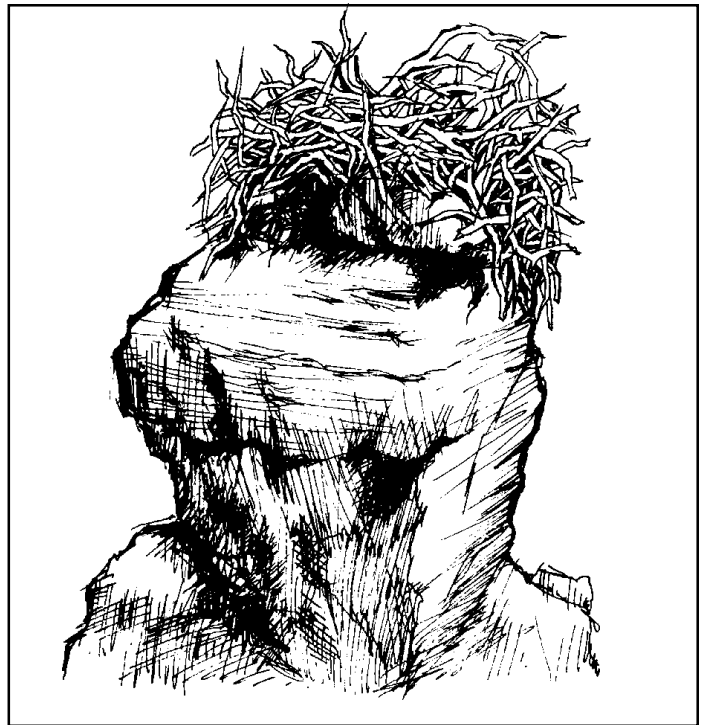
## Management

*Osprey are protected by Utah state law and the federal Migratory Bird Treaty Act. It is illegal to kill Osprey, disturb nesting Osprey, destroy nests, collect or have in your possession eggs, feathers, or nests of Osprey.*

The Osprey population in Utah continues to increase. When the first population surveys were conducted in the mid-1970s, biologists found only four active nests with a total of six young. More recently, the Flaming Gorge and Green River areas alone host over twenty nesting pairs of Osprey annually that produce from twenty to forty young. Substantial increases have also been noted at other sites across the state.

The Utah Division of Wildlife Resources began banding Osprey chicks in 1976, and by 1992, over 146 birds had been banded. Bands have been returned from Colorado, Wyoming, Colombia, Chili, Ecuador, El Salvador, Bolivia, Peru, and Honduras.

Nesting success depends on several factors. One factor that may cause nests to fail is human disturbance in the nesting areas. Although Osprey may be tolerant of some human activities, they are adversely impacted when people hike or climb too close to their nests. They are also disturbed by boats or jet skis moving directly toward or stopping directly under their nests. Other factors that may limit nesting success include an increase in predators (especially Great Horned-owls, ravens, Golden Eagles and falcons), a decline in the available fish populations and poaching.



Biologists from the Utah Division of Wildlife Resources will continue monitoring the state's Osprey population to gather additional life history information.

## What You Can Do

- Always view nests from a distance of at least 800 to 1,000 yards so as not to disturb nesting birds. If the adult birds leave the nest, the chicks, are very susceptible to predation, dehydration (from the heat of the sun), or to cold (from the effects of stormy weather).
- If you observe Osprey nesting in other parts of Utah, report your finding to the nearest Wildlife Resources office.
- Contribute to wildlife through the Wildlife Tax Check-off on the Utah State Income Tax form or by making a contribution to the Watchable Wildlife Program, Utah Division of Wildlife Resources, 1594 West North Temple, Suite 2110, Salt Lake City, UT 84116.

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*Wildlife Notebook Series No. 7 written by Ron Stewart, UDWR Regional Conservation Outreach Manager, Vernal; edited by Jim Parrish, UDWR Avian Program Coordinator; illustrated by Jill Rensel. (IMAGES MAY NOT BE REPRODUCED)*



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