# Osprey
*Pandion haliaetus*

October 2018

## Field Notes

Osprey (*Pandion haliaetus*) in North Cascades National Park. NPS photo

### General Description

Once alarmingly rare in the 1950–1970s era of DDT use, ospreys are on the rebound. These large, long-winged raptors are commonly seen nowadays flapping, circling, or hovering over water in search of their main meal: fish. Ospreys weigh (2.5–4.5 lbs; 1–2 kg) and have longer wingspans (150–180 cm; 5–6 ft) than other hawks, though not as long as eagles.

Sometimes mistaken for a seagull or bald eagle, the osprey is largely white underneath except for black patches on its wrists, a black eye line, and dark-striped flight feathers. A brownish "necklace" is sometimes visible. Its back is dark brown. In flight, a distinct bend at the wrist forms an "M" shape against the sky.

Ospreys are in the order, Accipitriformes, with hawks, eagles, and vultures, but occur in their own family, Pandionidae. "*Haliaetus*" comes from the Greek "halos," meaning "sea," and "aetos" for "eagle."

### Habitat, Distribution, and Migration

Like the peregrine falcon, ospreys occur globally. They are found at lakes, rivers, and estuaries around the world wherever shallow water brings fish within striking distance.

In North America, northern populations of ospreys migrate to Mexico and farther south in the winter. Adults migrate singly, apart from their mates, and then reunite on spring breeding grounds. The Pacific Northwest has both migratory and wintering populations of osprey. Migratory ospreys in Oregon head south in late August/mid-September and return in March–April to breed. Migratory juveniles stay south for their first 18 months of life before returning north to breed at age 3.

### Behavior and Feeding

Ospreys are uniquely adapted to catching live fish, which comprise 99% of their diet. Diving for a fish, the osprey plunges feet first into the water—up to a meter deep. Sharp spines (spicules) on its feet and an outer toe that can angle backwards (unlike other hawks) help it grasp the fish. Underwater, specialized nasal valves close, as does its third eyelid, the semitransparent nictitating membrane. Uniquely powerful wing beats lift it out of the water with its wet load. A coat of dense oil on its feathers repels water while immersed. Ospreys carry fish headfirst—streamlined—to the nest.

Andy Morffew

The osprey's loud, shrill whistles and chirps serve a variety of purposes, including courtship, alarm, and female breeding solicitation. Listen for this telltale sign of breeding ospreys during the summer.

### Breeding

Ospreys generally nest within 1–2 km of water, though it can be farther. They build their large, bulky stick nests on treetops, promontories, rocky cliffs, or increasingly, on artificial structures. Remarkably tolerant to human activity, ospreys readily use artificial nest platforms, as well as cell, radio, and utility line towers for nesting—a key factor in their recovery.

Male ospreys bring nest materials (sticks for the structure, and grass, moss, algae and similar type material for cushioning and insulating eggs) for the female (mostly) to arrange. The female lays 1 to 4 creamy pinkish white eggs with heavy red-brown spotting, which hatch asynchronously after 38 days. Nestlings fledge 7 to 9 weeks later.

NPS/Cal Singletary

### Conservation

Before its ban in 1972, DDT and its derivative, DDE, caused osprey, peregrine falcon, bald eagle, and other bird populations to crash from eggshell thinning and other effects. Ospreys have since steadily recovered. Today they are valuable indicators of ecosystem health for many reasons: they are top predators in aquatic food webs, nesting pairs are easy to find and tolerant of short-term human disturbance, and they have known sensitivity to several contaminants.

### Where to See

Ospreys breed in Lassen Volcanic NP, Redwood NSP, Whiskeytown NRA, and may be seen migrating through the remaining Klamath Network parks.

### More Information

https://www.audubon.org/field-guide/bird/osprey

https://sandpointmagazine.com/story/ospreys-birds-of-myth-and-fortune/

Video of osprey catching fish: https://www.youtube.com/watch?v=nA3LtXnNIto