

Osprey



Pandion haliaetus



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Physical Description:

The osprey is the only species in its family, Pandionidae, and belongs to the order, Accipitriformes, which includes most of the diurnal birds of prey such as eagles, hawks, and kites. Formerly, the osprey was classified in the same family as hawks. Ospreys are large birds (reaching lengths up to 22.8 inches or 58 centimeters) with wingspans between 59.1-70.9 inches (150-180 centimeters). They weigh between 49.4 to 70.5 ounces (1400-2000 grams). Their bodies are slender, with long, narrow wings and long legs. The breast and belly of this raptor are mostly white, with some dark streaks. The white extends out the wings, but the primaries, secondaries, and tail feathers are mottled black-and-white. While there is much variation, the female tends to have a streakier breast than the male. The back is mostly black or dark brown. The head is distinctive with a white crest, a face bisected by a dark eye-stripe, and yellow eyes. Ospreys fly with a marked kink in their wings, making an M-shape when seen from below. The osprey's talons are uniquely adapted for catching and carrying fish (see fun facts below).

Natural History:

Although found worldwide, the taxonomy of ospreys is controversial. The most widely accepted classification is that there is only one species (with four subspecies) but recent studies indicate that there may be at least two species of osprey - the Western osprey (*P. haliaetus*) with three subspecies occurring in Europe, Asia and the Americas and the Eastern osprey (*P. cristatus*) occurring between Sulawesi (in Indonesia), Australia and New Caledonia. It has also been debated whether all subspecies should be elevated to separate species. Ospreys live near rivers, estuaries, salt marshes, lakes, reservoirs, and other large bodies of water. They are rare along rivers in the shrub-steppe zone, as they prefer water surrounded by forested habitat. They can be found near fresh or salt water, as long as the water can sustain medium-sized fish. Ospreys gravitate toward shallow fishing grounds, frequenting deep water only where fish school near the surface. Ospreys hover over the water, plunging feet first when they spot prey. Primarily solitary birds, they usually roost alone or in small winter flocks of six to ten. They can be either permanent residents or long-distance migrants. The osprey suffered great declines in the past century as a result of DDT and other eggshell-thinning pesticides. Since the ban of DDT in 1972,

the osprey has made, and continues to make, a strong comeback in much of North America. Artificial nest platforms have significantly increased nesting in many areas. Overall, their populations have grown by 2.5% per year from 1966 to 2015, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 500,000 with 21% spending some part of the year in the U.S., 28% in Canada, and 3% in Mexico. The species rates a 7 out of 20 on the Continental Concern Score. The Breeding Bird Survey has also reported a significant increase in the osprey population in Washington.

Reproduction:

Ospreys nest in a wide variety of locations, including Alaska to New England, Montana to Mexico, and Carolina to California. They generally return to Washington in late March or early April to breed; most of the population leaves in August or September. The greatest abundance of nesting ospreys in Washington is on the Pend Oreille River and the Everett waterfront. Whatever the location, nesting habitat must include an adequate supply of accessible fish within a maximum of about 12 miles of the nest. They also require nest sites in open surroundings for easy approach, with a wide, sturdy base and safety from ground predators. Nests are usually built on snags, treetops, or crotches between large branches and trunks; on cliffs or human-built platforms. Osprey nests are built of sticks and lined with bark, sod, grasses, vines, algae, or flotsam and jetsam. Usually the male finds the site before the female arrives. Ospreys form pair bonds through aerial flight displays and courtship and often mate for life. Males perform an aerial "sky-dance," sometimes called "fish-flight." With dangling legs, often clasping a fish or nesting material in his talons, the male alternates periods of hovering with slow, shallow swoops as high as 600 feet or more above the nest site. Sustaining this display for 10 minutes or more, he utters repeated screaming calls while gradually descending in an undulating fashion to the nest. The male usually fetches most of the nesting material-sometimes breaking dead sticks off nearby trees as he flies past-and the female arranges it. Nests on artificial platforms, especially in a pair's first season, are relatively small, less than 2.5 feet in diameter and 3 to 6 inches deep. After generations of adding to the nest year after year, ospreys can end up with nests 10 to 13 feet deep and 3 to 6 feet in diameter!

Life Cycle:

The female typically lays three eggs, although clutch sizes between two and four eggs are normal. They have one brood a year. Both members of the pair incubate the eggs for 38 to 43 days. After the young hatch, the female stays with them, and the male brings food. At hatching, the young are capable of limited motion, covered in down, and eyes are open. Once the young can be left alone, both parents provide food. The young do not fledge until they are 44-59 days old, and even after fledging, they will stay close to the nest for a further two months. They then will remain at their wintering grounds for two to three years (if migratory) until they return north to make their first attempt at breeding. Ospreys can live to be 25 years old although most live between 15 to 20 years.

Range:

Ospreys can be found on every continent except Antarctica. Most ospreys that breed in North America migrate to Central and South America for the winter, with migration routes following

broad swaths of the eastern, interior, and western U.S. A few ospreys overwinter in the southernmost United States, including parts of Florida and California.

Diet:

The osprey is the only raptor on the continent that eats almost exclusively live fish. In North America, more than 80 species of live fresh and saltwater fish account for 99 percent of the osprey's diet. Captured fish usually measure about 6 to 13 inches in length and weigh one-third to two-thirds of a pound. On very rare occasions, ospreys have been observed feeding on fish carcasses or on birds, snakes, voles, squirrels, muskrats, and salamanders.

Threats:

Osprey numbers crashed in the early 1950s to 1970s (in some areas, 90% of breeding pairs disappeared) when pesticides poisoned the birds and thinned their eggshells. While ospreys have made a significant recovery since the 1972 U.S. DDT ban, ospreys are still listed as endangered or threatened in some states - especially inland, where pesticides decimated or extirpated many populations. As natural nest sites have succumbed to tree removal and shoreline development, specially constructed nest platforms and other structures such as channel markers and utility poles have become vital to the osprey's recovery. Unfortunately, a growing cause of death for ospreys is entanglement at the nest: the adults incorporate baling twine and other discarded lines into their nests; these can end up wrapped around a chick's feet and injure it or keep it from leaving the nest. Additionally, range expansion into formerly occupied areas has been slow due to their strong philopatry to nesting areas.

Fun Facts:

- An osprey's outer toe is reversible, which means they can carry prey with either three toes forward and one back or with two toes in front and two toes behind. This arrangement is seen in owls but not in any other diurnal raptors.
- While flying away with the freshly-caught prey, an osprey will manipulate the fish so that it is parallel to its body (head first), and thus aerodynamic.
- Ospreys have the nicknames "sea hawk," "river hawk," and "fish hawk" because of all the fish they eat.
- The name "Osprey" made its first appearance around 1460, via the medieval Latin phrase for "bird of prey" (*avis prede*). Some wordsmiths trace the name even further back, from Latin "ossifragus," meaning "bone-breaker."
- The osprey is the only hawk species in North America that eats almost exclusively live fish.
- They can dive as deep as three feet into water for fish.
- In 2008, an osprey being tracked by researchers flew an amazing 2,700 miles in just 13 days, traveling from Massachusetts to French Guiana, South America! During their long lifetimes, they can travel over 160,000 miles!
- Ospreys are excellent anglers. Over several studies, ospreys caught fish on at least 1 in every 4 dives, with success rates sometimes as high as 70 percent.

Sources:

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