



U.S. Fish &amp; Wildlife Service

## Chesapeake Bay Field Office

Northeast Region



Friday,  
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## Osprey (*Pandion haliaetus*)

### Life History

The osprey, or fish hawk, feeds exclusively on live fish. Its toes and talons (claws) are long and sharp for holding onto slippery fish. Ospreys are mostly brown on their backs, white below, and have long narrow wings in the shape of a stretched out "M." They have distinctive dark brown patches at the bend of each wing and dark brown stripes through the eyes. Ospreys are fairly large birds, with a body length of about 21-24 inches and a wing span from 4 1/2 to 5 1/2 feet. Females are larger than males, as is true of most birds of prey. Their habitats include shallow water estuaries, lakes, and rivers.

### Foraging

During spring and summer, ospreys find an abundance of medium-sized fish on the Chesapeake to feed their young. Males typically forage far and wide for food, whereas females stay on the nest, or nearby. Ospreys hunt by soaring over water, periodically hovering on beating wings to scan for surface schooling or spawning fish. On breezy days, they let the wind keep them aloft as they search for fish. Cloudy conditions with rippled water lessen the osprey's fishing success, which can jeopardize hungry nestlings.

Upon sight of its prey, the osprey makes a spectacular dive. Folding its wings tightly, it descends swiftly and plunges feet first into the water, often submerging completely. Another technique is a shallow scoop for fish at the surface of the water and the osprey hardly gets wet. Clasping the twisting fish, the osprey takes flight and labors to climb ever higher. Successful early season hunts often end with a beautiful courtship

Some migratory birds in the Chesapeake Bay area:

[Canada Goose](#)

[Canvasback](#)

[Great Blue Heron](#)

[Osprey](#)

[USFWS Office of Migratory Bird Management](#)

Ospreys occur in nearly every corner of the globe, but nowhere as abundantly as the Chesapeake Bay area. The Chesapeake nesting population is the largest known concentration in the world, numbering nearly 2,000 pairs! Some even refer to the Chesapeake as the "osprey garden." Ospreys migrate to the Chesapeake every spring, usually around the beginning of March.

The familiar swooping of ospreys plunging for fish and their distinctive "kyew kyew kyew" call is enjoyed by many boaters and

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flight, an undulating display of the male's flight power to its mate.

#### **Nesting**

Ospreys three years or older usually mate for life, and return to the same nest site year after year. Spring courtship marks the beginning of a five month period when the pair works together to raise their young.

A clutch of three or four eggs are laid by the third week of April. The bulk of the nest and its depressed center helps conserve heat. The eggs, usually mottled cinnamon brown, are about the size of jumbo chicken eggs, and must be incubated for nearly 5 weeks.

The eggs finally yield their treasures, nearly 2-ounce helpless chicks that can barely beg for food. Amazingly, with a plentiful supply of fish, these balls of fluff will become soaring acrobats in just eight weeks. However, if food is scarce, the chick that hatches from the first laid egg stands the best chance of survival since it can outcompete its smaller siblings and may even push them out of the nest.

Osprey abundance in the Bay region is partially determined by favorable nesting sites. Offshore structures offer protection from terrestrial predators (such as raccoons) and human activity, permit rapid detection and escape from danger, and place the birds near their food supply. Ospreys may choose sites over the water such as duck blinds, navigation markers, or manmade nesting platforms or high trees and utility poles on land.

Fortunately, ospreys, if not harassed, are reasonably tolerant of human beings. When these raptors are respected as interesting, though noisy neighbors, they will nest close to people, and can be enjoyed at many sites around the Bay. An Eastern Shore river such as the Tred Avon has constant summer boating traffic, but also supports over 30 nests which fledge large numbers of young. Ospreys are also nesting successfully on heavily used western shore rivers like the South, Severn, Magothy, and Back. In recent years, there has even been a nest on the Potomac within the limits of Washington, D.C.

fishermen.

Fortunately, ospreys are doing very well on Chesapeake Bay and are common sights on navigational buoys and markers. Yet, there was a time not long ago when their survival on the Chesapeake was threatened.

## Migration

Ospreys return to the Chesapeake every spring, usually around the beginning of March. By late July, most young Chesapeake ospreys are on the wing. The young and adults begin their southern migration by the end of August to wintering grounds in the Caribbean, Central America and South America. Throughout September ospreys and many other birds of prey from the northeastern U.S. funnel through coastal Virginia just north of the Bay Bridge Tunnel near the Eastern Shore of Virginia National Wildlife Refuge. More than 100 osprey sail over the mouth of the Chesapeake during many of these "flight days" along with numerous other raptors ranging in size from bald eagles to kestrels.

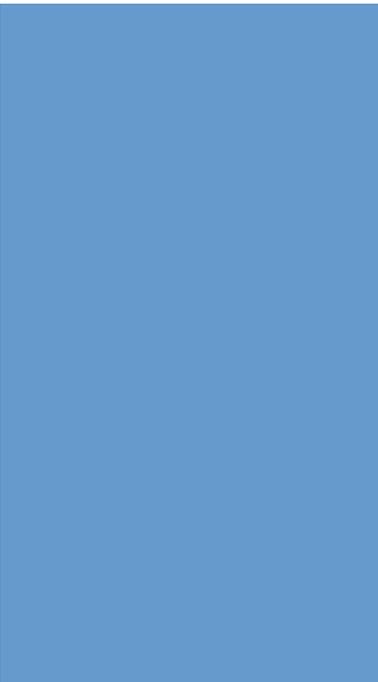
## Threats to Survival

Although ospreys are now a common sight on Chesapeake Bay, two to three decades ago they faced possible extinction along much of the Atlantic coast. For years, they were unable to produce enough young to maintain the population. Production was down because of egg failures caused by extremely thin and easily broken eggshells.

Years of research led to the discovery that their eggshell thinning was caused by the pesticide DDT, which had been in heavy use since World War II for spraying mosquitoes and crop pests. DDT was banned from use in the U.S. in the early 1970s and the osprey and some other affected birds of prey have made remarkable recoveries.

The help of people in constructing thousands of artificial nest platforms has also benefitted the osprey. However, intensive human development along shorelines still can harm the aquatic environment which ospreys depend upon. Formerly, active nests were routinely removed from buoys and channel markers, reducing the number of young produced. Now, this can be done only with a permit and if safety is affected.

Some areas of the Bay are low in fish abundance and cannot support highly productive osprey colonies. In these areas, perhaps one young will survive for every nest whereas other areas with more fish can produce two or three fledglings per nest. The osprey's high visibility and position at the top of the aquatic food chain make it a valuable



indicator species for detecting future habitat destruction, dwindling fish populations, and contamination of the environment.

### **The Future**

The story of the osprey on Chesapeake Bay is one of beauty and promise. The beauty is in their spectacular flights and vociferous calls heard throughout the spring and summer. The promise arises from the resurgence of osprey abundance following the ban on harmful pesticides. And the promise can extend to the entire Bay and its living resources if people take strong measures to restore the Chesapeake's aquatic habitats. With our perseverance and determination, the osprey will remain a beautiful symbol of the Chesapeake and an environmental indicator for the future.

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