



A Quarterly Publication from the Division of Fish and Wildlife, RI Department of Environmental Management

Ospreys Back and Nesting in High Gear by Lori Gibson

The return of the Osprey is a fabulous sight to witness, after their population crash from the pesticide DDT. Rhode Islanders have always championed the underdog and Ospreys are ideal candidates. Our nesting population plummeted from a high of 140 in 1949 to just two nests with zero young in 1967. All along the Northeast coast, similar crashes were occurring due to the cumulative effects of DDT. Of the 800 nesting pairs from Boston to New York, only 90 nests remained after the crash. In 1978, when I started to survey Ospreys, there were only 13 pairs statewide. The Division of Fish and Wildlife is now monitoring the status of over 113 nests with the assistance of a dedicated cadre of volunteers and have presented the findings in the *Osprey Newsletter* for the last 30 years.

DDT is a persistent pesticide, passing from runoff up the food chain from insects to fish, while being concentrated in

fatty cells. DDT did not actually kill Ospreys outright. The pesticide inhibits the absorption of calcium necessary for eggshell production. As a result, the eggshells were too thin to survive the 28-day incubation and would often break under the weight of the female.

By 1972, federal regulations restricted the use of DDT and the Osprey population began an immediate and steady increase. The sensitivity to environmental conditions makes the Osprey a remarkable and reliable indicator of the quality of the environment, a compelling reason for monitoring the population so closely.

We also recognize that DDT is not the only threat to Ospreys. Plastics in the environment are also a constant hazard. Osprey are attracted to a variety of plastic material and consistently use it for nest building. Entanglements have occurred and successful capture and liberation of birds without permanent damage

Continued on page 6

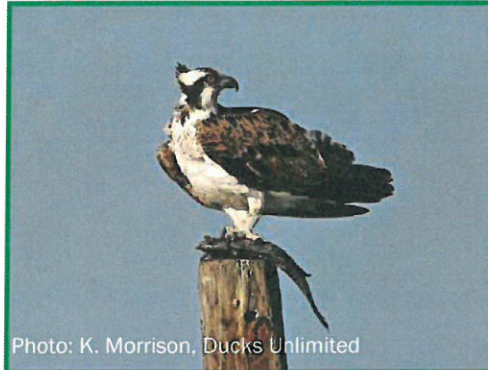


Photo: K. Morrison, Ducks Unlimited

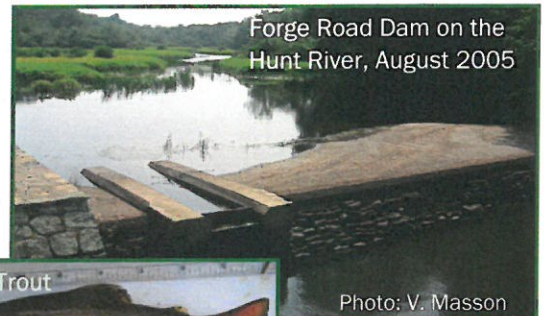
Inside this issue:

Wild Places	3
Intro to Marine Fisheries	4
Species Spotlight: Horseshoe Crab	5
Kids Raise Living Fossils	7
Kids Corner	7
Calendar of Events	8

Fish Need Water Too! by Veronica Masson

Summer is here and water levels in streams, lakes, ponds and reservoirs are starting to drop. For some this means drought restrictions may not be far behind. We seem to have plenty of water in Rhode Island; we are after all the Ocean State. But unfortunately, water levels in the state fluctuate due to rainfall amounts and water use throughout the year. Regardless of the situation, every summer the peak in demand for water coincides with the lowest levels of water in streams and in the ground. When everyone's lawn is turning brown in the summer and lawn watering is high there is the least amount of water available.

While you may not be affected, many in Rhode Island are required to comply with water restrictions such as odd/even watering days, but the ones who are most affected are



Forge Road Dam on the Hunt River, August 2005



Brook Trout

Photo: V. Masson

the creatures that live in the water. Survival of fish and other living things in streams depend upon clean flowing water. The health of Narragansett Bay also depends upon a supply of clean freshwater.

The Division of Fish and Wildlife is concerned with how unnatural fluctuations in

Continued on page 2

THE DIVISION OF FISH AND WILDLIFE MISSION STATEMENT:

Our mission is to ensure that the Freshwater, Marine and Wildlife resources of the State of Rhode Island will be conserved and managed for equitable and sustainable use.

Ospreys Back and Nesting in High Gear

by Lori Gibson

continued from page 1

is difficult, at best. Ospreys have also been electrocuted as they often nest on utility poles. Most of the deaths occur when nesting material or a wet fish come in contact with structures to complete the circuit. In other instances, nesting material has interfered with the proper operation of transformers, resulting in fires and subsequent power outages.



Ospreys Photo: Charles Allin

Ospreys have mass appeal for their bold fishing style and highly visible nesting behavior. Few can argue that they are not in awe of the sight of an Osprey plummeting feet first into the water and emerging with a fish clutched in its talons, struggling to regain flight.

The Osprey, *Pandion haliaetus*, meaning "sea eagle" is otherwise known as the "fish hawk" and is the only member of its genus, although there are several subspecies. Ospreys are found on every continent except Antarctica. Our nesting Ospreys migrate to South America, particularly Columbia, and the Caribbean. Ospreys arrive from their wintering grounds in mid to late March, with males preceding females. Birds reuse former nests and young return to within 18 kilometers of their natal sites.

Ospreys breed at three to four years of age and sub-adult or non-mature birds build "house keeping" nests. Ospreys usually lay three eggs, which hatch in sequential order. The female remains on the nest with the young while the male provides all the fish. Poor weather can greatly impact the fishing success of the male and the survival of downy young. Annual mortality of fledglings is high, over 50 percent, which declines to 10 percent in adulthood. Ospreys live for eight to 14 years. Migration to the wintering grounds occurs from August through September and sometimes later. The fledglings are the last to migrate and do not return to their breeding grounds the first year, returning instead as two year olds.

Ospreys are impressive birds with a wingspan of up to 68 inches. When seen from above, the Osprey is a rich brown color with a white head and is often mistaken for an eagle. The underside of the Osprey is a cream color with a band of darker feathers across the breast. Females have more markings than males and are generally larger. Juveniles have buff tipped

feathers and a distinctive red eye, instead of the golden eyes of the adults. Adult Ospreys weigh approximately three and a half pounds.

During the early years of our Osprey monitoring, birds commonly nested in the tops of dead trees within marshes. This provided safety from climbing predators like raccoons and a high vantage point to defend against avian predators,



Plastics used as nesting material, Warren, RI

Photo: Lori Gibson

such as great horned owls. However, almost all current nests are situated on utility or mobile phone towers, light structures and even water towers. These sites offer the height advantage that Osprey

so desire but can invite conflicts with utility owners. Solutions are best dealt with prior to egg laying as nesting birds are protected by federal and state law.

Ospreys have been very creative over the years in their nesting site selection. One pair tried to nest on the radar housing of a sailboat moored in South Kingstown and others nested on active cranes in Cranston and Charlestown.

Volunteers are always needed in order to fully monitor Rhode Island's Osprey population. Willing participants must have a spotting scope and provide timely reports on nesting activity, number of young, number fledged, as well as disturbance and weather related mortality events. Volunteers are also asked to provide detailed records of their time in order to qualify for "in-kind" match.

As federal funding is utilized for this project through the generous assistance of the Federal Aid to Wildlife Restoration Act, we can apply volunteer time as state match. This greatly enhances the project, in addition to gathering the necessary data. For nests in your area that might need monitoring please call 789-0281 for more information or email me at:

Lori.Gibson@dem.ri.gov.

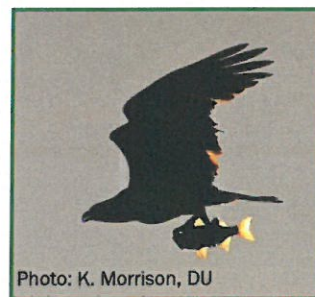


Photo: K. Morrison, DU



Nest atop derrick at active granite quarry, Westerly, RI

Photo: Lori Gibson

For more information.....

Ospreys: A Natural and Unnatural History by Alan Poole

For an up close view visit the Conanicut Island Raptor Project Marsh Meadow's webcam at: www.conanicutraptors.com

For information about Dr. Rob Bierregaard's satellite telemetry work, visit: www.bioweb.uncc.edu/bierregaard/ospreys.htm