ABOUT THE COVER: OSPREY

Now that the Osprey *(Pandion haliaetus)*, or "fish hawk," has recovered from the population crash associated with the DDT era, it has once again become a familiar sight in our coastal estuaries, where it can be seen hovering or plunging into the water. Ospreys are large raptors, intermediate in size between hawks and eagles, and are easily identified by their largely white underparts and head, with a black band across the face. In flight, black patches show at the "wrist" of the wing, the point at which the wings characteristically flex backwards, giving the bird a distinctive silhouette. Sexes are similar in plumage, although the female is larger, and frequently has a more pronounced breast band. Young birds have a dorsally spotted plumage. The Osprey is worldwide in its distribution, with four subspecies currently recognized, two of which are found in the New World. The species breeds across northern Eurasia, in Australia, in North and Central America, and in the Caribbean. They winter in South America, Africa, India, and Southeast Asia. In North America Ospreys nest from Alaska across Canada south to the southern shores of Hudson Bay, the Great Lakes, southern Labrador and Newfoundland, and south along the east and Gulf coasts to Louisiana. They also breed in scattered locations in the west, and along the Pacific coast as far south as northern California. In Massachusetts, breeding is concentrated in the Westport River estuary complex, on Martha's Vineyard, and along the south shore north to Weymouth.

The taxonomy of Ospreys has been the subject of controversy. Generally, Ospreys have been considered sufficiently distinct to be placed in their own family, the *Pandionidae*, but recent DNA-DNA hybridization work has led Sibley and Monroe to include them as a subfamily, the *Pandioninae*, in the family *Accipitridae* along with the hawks, Old World vultures, and eagles.

In Massachusetts, Ospreys begin to arrive in late March or early April, and by May most are nesting. They begin to migrate south in August, with a peak of migration in late September or early October. Daily high counts for spring migrants may reach 50 at favored locations, such as Mount Tom and Mount Wachusett, and in fall as many as 350 have been recorded. There are a few scattered early winter records.

Ospreys are monogamous, mate for life, and breed first at the age of three to five years. They have been know to live in the wild to an age of 15-20 years. Ospreys often breed in loose colonies with up to several hundred nests or as solitary pairs, along rivers and estuaries, ponds and lakes, wherever there is sufficient access to a supply of fish. They prefer nesting on islands and over water, presumably as protection from ground predators. Their calls have been variously described as musical whistling cackles, screams, shrill whistles usually with a rising inflection, and *Kyew, kyew, kyew*, or *Whew, whew, whew*, and assorted alarm, guard, and food-begging calls of *Cheep*, or *ick-ick-ick*.

and assorted alarm, guard, and food-begging calls of *Cheep*, or *ick-ick-ick*. Courtship flights include pursuit and various aerial gymnastics, and males courtship feed from the initiation of pair formation through egg-laying. In the northeast they are generally nesting by the end of May. They have a single brood, but may renest if the first attempt fails. They will build nests on a wide variety of substrates, including dead or live trees, rocks, telephone poles, aquatic duck blinds and channel markers, power line stanchions, and on the ground on mammalian predator-free islands. Pairs reuse nests year after year, refurbishing them and adding to them until they reach gigantic proportions. Nests over five feet deep are not uncommon, and one nest had a platform of sticks nearly twelve feet across. Generally, the males provide the nesting material, and the female does the construction. Nesting materials include seaweed, sheep and cattle bones, and human refuse such as fishing nets, broken boat tillers, and rope. Sometimes other avian species, such as House Sparrows, grackles, and wrens, will build their nests within the Osprey nest structure.

Usually three brown mottled white or pinkish eggs are laid, and both birds incubate, although the female does the majority, while the male hunts and brings back fish. Hatching occurs in about six weeks, and during the roughly eight weeks to fledging, the female does most of the brooding and may shade the chicks with her wings on hot days. The young are cryptically colored and "freeze" in the nest when adults give alarm calls. The chicks are fed by regurgitation for about ten days, and thereafter fresh fish. They continue to be fed by the parent birds after fledging.

Ospreys eat almost exclusively fish, although they may also prey on rodents, birds, or crustaceans opportunistically, or at times when fish are scarce, waters are turbid, or when in unfamiliar areas during migration. They actively pursue prey, diving feet-first into the water, usually from heights of 30-100 feet. They have long talons, spines on their toes and foot pads, and the outer toe is flexible so that they can grip with two toes forward and two back—presumably adaptations for catching fish. They have long, unfeathered tarsi and generally oily feathers—adaptations for their water immersion feeding tactics. They have an unusually long intestine which may be adapted to digesting fish scales and bones. In flight Ospreys always carry fish head-first into the wind, which improves aerodynamics.

This dynamic species, with its highly visible nest, has long been the focus of conservation controversies. In Massachusetts the population of Ospreys was probably reduced by fifty percent from 1880 to 1930 due to hunting and habitat alteration, even though it was locally protected on its breeding grounds. From the 1950s through the early 1970s the population crashed, at times decreasing by thirty percent per year. The crash was due largely to poor reproductive success linked to egg-shell thinning caused by DDT and its metabolite DDE in conjunction with other organochlorine pesticides. Ospreys are "top carnivores"

in their ecosystem and hence have suffered greatly from the increased concentration levels of pesticides at each level up the food chain. A dramatic recovery followed the banning of organochlorines in the early 1970s, with the population increasing in our area ten percent per year initially, and up to twenty percent during the mid-1980s. This recovery was enhanced by the instillation of artificial nesting platforms, particularly in the Westport and Martha's Vineyard areas. In parts of the Northeast the Osprey has now recovered to pre-DDT era levels and beyond. The Osprey adjusts well to the presence of man, and can become quite tame, as evidenced by nests on channel markers despite heavy boat traffic, and in one case in the parking lot of an amusement park!

W.E. Davis, Jr.

MEET OUR COVER ARTIST

Barry Van Dusen continues to contribute cover art to *Bird Observer*. Barry was the artist for *A Birder's Guide to Eastern Massachusetts*, a joint publication of the American Birding Association and Bird Observer of Eastern Massachusetts, Inc. Barry also illustrated *Birds of Massachusetts*. He can be reached at 13 Radford Road, Princeton, Massachusetts 01541.

M. Steele

AT A GLANCE *August 1994* _____ *Wayne R. Petersen*

August's mystery photo is unambiguously one of those sneaky, streaky, brown jobs—that is, a sparrow. Sparrows are always tough; sometimes because they are wary and hard to observe and sometimes because different species closely resemble one another. Because the sparrow in the photo is an adult at a nest, there is no need to worry about whether it is in juvenal plumage—a plumage that can confound even experts under certain circumstances.

Two of the most useful features that should be considered when identifying sparrows are the breast pattern and the head and facial pattern. Because the bird is an adult, the presence of obvious breast and flank strikes is noteworthy. If the age was unknown, then this feature would be less useful because many juvenile sparrows have streaked underparts. In addition to the streaked underparts, the presence of a broad, pale eyebrow stripe, a thin whitish eye ring, and the apparent absence of a prominent central breast spot are features to particularly notice.

Of the numerous sparrow species occurring in Massachusetts, the best candidates for consideration are Vesper, Savannah, Henslow's Sharp-tailed, Fox,