

they are not capable of flight until the ninth or tenth week. It is also known that the young of Horned Owls may leave the nest as early as the end of the fourth week. They are adept climbers, using their developing talons to good advantage; one observer has commented that a hand-reared young captive readily used its beak as well in climbing. Apparently a sloping branch or a downed limb is all that is needed for an ambulatory owlet to begin its journey to a new treetop. Hunger calls reveal its location to the parent birds who continue to provide food until the fall of the year.

The young owls seldom move more than twenty miles from their place of hatching. They do, however, leave the territory of the parent birds, moving out in all directions.

Young Great Horned Owls at nest, photo by Herman Weissberg, Manchester

Massachusetts Breeding Bird Atlas Project - 1974-1978

The 1974 Season

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The 1974 breeding season marked the first year of the Massachusetts Breeding Bird Atlas Project. This project is designed to map the breeding distribution of Massachusetts' birds during the five-year period from 1974 through 1978. It is jointly sponsored by the Massachusetts Division of Fisheries and Game and by the Massachusetts Audubon Society. Using a grid based on U.S. Geological Survey maps ("topo" maps), we hope to place a worker in each of the 989 blocks in the state to record which species breed there.

During 1974 we were able to obtain some coverage in 437 blocks, or just under half of the total. In some of these blocks only a few breeding species were reported, but many blocks had 40-50 confirmed. The total number of different kinds of breeding birds in each block will vary, of course, with available habitat, but an average suburban or rural block will probably contain around 60-70 breeding species. Each block, 1/6 of a "topo" map, contains about 10 square miles, measuring just over three miles on each side. While this may seem like a large territory to cover, once a species is known to breed in the block no further information on it is needed for the entire five-year period. In practical terms, this means that the conspicuous birds in each block can rapidly be confirmed as breeders; remaining breeding seasons can thus be used to search out the more elusive and rarer species.

As a result of interest in the Atlas project, two new species were added to the state's list of breeding birds: the Glossy Ibis, found nesting on Clark's Island in Plymouth-Duxbury Bay, and the Cattle Egret, found in a mixed heron colony on House Island off Manchester. The only Little Blue Heron recorded as nesting in Massachusetts was also found on Clark's Island, as was one of the two confirmed Great Egrets (the other was in Westport).

A total of 166 species was confirmed for the state, despite the fact that no confirmations were reported for Yellow-crowned Night Heron, American Wigeon, Turkey Vulture, Grey-cheeked Thrush, Hooded Warbler, and several other birds known to have bred here in the past. These five species (and others) were missed undoubtedly because of inadequate coverage; we should be able to add them in future breeding seasons.

With coverage at less than the half-way mark, it is difficult to make detailed statements about the breeding distribution of most of the state's birds. However, some trends can already be discerned.

The Starling topped the list as the bird confirmed in the greatest number of blocks: it was reported a confirmed breeder in 262 blocks. The next four species which, with the Starling, made up the top five, are American Robin, House Sparrow, Common Grackle, and Barn Swallow, reported from 260, 208, 206, and 186 blocks respectively. The first four doubtless breed throughout the state except in those blocks which are treeless and contain no man-made structures (such as parts of the Cape and the Islands). These results agree in general with those of the Fish and Wildlife Service Breeding Bird Survey conducted each June in Massachusetts. The ubiquity of the Barn Swallow is a bit of a surprise, but that species is easily confirmed because of its conspicuous colonial nesting behavior and its affinity for barns and garages. As it feeds solely on insects, it will probably prove to be absent from highly urbanized areas, where insects are scarce.

Four newcomers to the state showed interesting distribution patterns, reflecting the factors which have affected their colonization of Massachusetts. Even with imperfect coverage, the Cardinal and Mockingbird can be seen to be distributed more or less throughout the state, while the House Finch and Tufted Titmouse are much more restricted. House Finch confirmations are confined to Massachusetts east of Worcester County and to the southern Connecticut Valley. They have also been reported breeding in one block on Nantucket and have colonized much of the Cape. By contrast, the Tufted Titmouse, also largely confined to eastern Massachusetts and the southern Connecticut Valley, has not been confirmed anywhere on eastern Cape Cod or the Islands. This bird's diurnal migration habits and its reluctance to fly over even small bodies of water have apparently prevented its spread to the outer Cape and the Islands.

Raptor confirmations were somewhat limited because of the late start of many workers during the 1974 breeding season. Earlier field work during 1975 and subsequent seasons should result in a more accurate picture of breeding distribution. Red-tail and Broad-wing breeding reports were scattered throughout the state, except that no Broad-wing nestings were reported from the Cape or the Islands. These two buteos, along with the American Kestrel and Screech Owl, were confirmed in more blocks than any other raptors. Twelve nesting Goshawks were found in the state, an indication that these forest dwellers are again becoming established, as Massachusetts' farmland reverts to woods. Unfortunately, only one or two Cooper's and Sharpshins were confirmed. It remains to be seen whether this reflects the drastic population decline known to have occurred elsewhere for these accipiters or lack of coverage by Atlas workers.

It is obvious from the foregoing discussion that breeding bird distributions in Massachusetts are not static and are influenced by a host of factors. Habitats are changing as a result of natural processes and human manipulation. Widespread feeding during the hard winter months may have allowed some new colonists to survive, while competition from exotic birds, deteriorating habitat, and pesticide use has drastically reduced or eliminated some old-time residents. Certain species, like the Grasshopper Sparrow and the Short-billed Marsh Wren, have virtually disappeared as breeders, for reasons that are poorly understood.

The Atlas project will be the first detailed map of the breeding distribution of birds available for any state. It will provide us with an accurate picture of Massachusetts' avian breeding distribution during the mid-70s and will be available for use by scientists, preparers of environmental impact statements, and researchers interested in the factors influencing range changes and breeding habits of specific species. It will be replicable at any date in the future when we may wish to look at the distribution changes which shall have occurred.

We need additional workers now. It's not too early to become familiar with the block you'll be working, come spring. You may even be able to confirm a few birds now by finding last summer's nests. If you know the common breeding birds in your area by sight and sound and are willing to commit a few hours each week during the breeding season to the Project, contact Deborah V. Howard, Massachusetts Audubon Society, Lincoln, Ma. 01773.