

MANOMET BIRD OBSERVATORY ENTERS ITS THIRD DECADE: AN UPDATE ON RESEARCH ACTIVITIES

by R. Tod Highsmith

For twenty years, Manomet Bird Observatory (MBO) has occupied eighteen acres of catbrier thickets, open fields, cranberry bogs, and mixed woodlands on the shores of Cape Cod Bay just south of Plymouth. And for twenty years, a crew of devoted bird banders has patrolled a maze of paths along which fifty mist nets are strung, carefully sampling the waves of avian migrants that pass by each spring and fall. This consistency of effort has paid off well: over a quarter million birds of more than 250 species have been banded and released at MBO since its founding in 1969.

But banding birds is only a process and not an end in itself. Although many members of the New England birding community think of MBO primarily as a coastal banding station, our real mission is the research into bird biology and conservation that techniques like banding make possible. Nor is our mission only local in scope. Two current programs representative of MBO's international research agenda will be described briefly in this article.

As many birders are now aware, the notion that our locally breeding birds fly south each fall for "vacations" on their tropical "wintering" grounds is a misleading one. Not only is the act of migration a dangerous undertaking, but many species actually spend a greater part of their year in the tropics than they do on New England breeding territories. In the mid-1980s, MBO began intensive studies of the nonbreeding-season ecology of birds in the Central American nation of Belize. Although only about the size of New Hampshire, Belize has one of the largest remaining continuous tracts of tropical forest in the western hemisphere and hosts a wide variety of habitats that are rapidly disappearing in other tropical countries.

In the rugged Maya Mountains in the country's southwestern corner, our studies have shown that North American migrants account for more than forty percent of the birds found in human-altered habitats during the winter months, and nearly twenty percent of birds in mature forests. Just as in New England, Gray Catbird, Common Yellowthroat, and Indigo Bunting are characteristic of second growth, but a more enticing group of migrants is found in the undisturbed rain forests: Wood Thrush, Northern and Louisiana waterthrushes, Yellow-bellied Flycatcher, and Kentucky, Magnolia, and Worm-eating warblers.

By banding and recapturing birds over the course of several weeks, MBO scientists have found that many males and females maintain winter territories or home ranges and defend them against other individuals. What is more, birds may return to the same territory following their next southward migration, as

evidenced by individuals who are caught at the same mist net locations in succeeding years. This fidelity of some birds to specific areas underlines the threat posed by destruction of habitats. What does a bird do if the rain forest where it overwintered last year is a pasture this year?

In order to help preserve wintering habitats for migrants and year-round habitats for the many resident species, MBO has been working closely with the Belizean government to explore the possibilities for establishing a nature reserve along the Bladen Branch of the Monkey River. MBO's plan, which detailed the economic benefits of tourism over logging in this nearly pristine area, was well received. The Belizean government recently announced that 84,000 acres of tropical forest will be set aside as the Bladen Nature Reserve. The design and boundaries of the reserve are based largely on recommendations in MBO's report. Our efforts are now focused on the Rio Bravo Conservation Area, a large tract of varied habitats under acquisition by the Programme for Belize, a consortium of local and United States conservation groups. In addition to developing a catalog of the plant and animal life, MBO scientists will be evaluating the prospects for low-impact, sustained-yield forestry practices in appropriate areas, thus offering an alternative to the destructive practice of clear-cutting.

One of MBO's coastal research programs has been tracking the environmental health of another group of long-distance migrants. Since 1974 the International Shorebird Survey, launched in cooperation with the Canadian Wildlife Service, has been censusing shorebirds and collecting information on the resting and refueling stops they use in migration. Over six hundred volunteer observers, including a dedicated contingent of New England birders, have helped to assemble the largest data base on shorebird populations in the world.

In 1980 MBO chose a single species, the Red Knot, for more detailed study because of its vulnerable migration strategy and small population size. Using rocket nets to capture large numbers of roosting birds at a time, MBO scientists banded and color-marked birds (dyeing their white breast feathers a brilliant orange) to facilitate their observations. Knots were followed wherever they went: to spring stopovers in Delaware Bay, where they stuffed themselves on freshly-spawned horseshoe crab eggs, and to wintering areas as near as Florida and as far as the coast of Argentina.

The information gathered through these efforts is now being put to work for conservation purposes. Together with the National Audubon Society, MBO initiated the Western Hemisphere Shorebird Reserve Network (WHSRN) in 1987. With cooperation from governments and environmental groups in twelve countries, WHSRN works to identify and encourage the preservation of critical shorebird wintering and stopover sites. More than ten sites in the United States, Canada, and South America have so far been recognized for the enormous

concentrations of shorebirds they support, and hundreds of other sites are being evaluated. At some of these sites, ninety percent of the population of a single species will congregate simultaneously.

MBO's special role in WHSRN has been to offer training workshops for Latin American researchers in the techniques required for shorebird study: use of mist nets, rocket nets, and pull traps; and assessment of the physiological condition of birds in the hand. Together with workshops on conservation policy for individuals in management positions, this training helps to support and build research expertise in Latin American nations. As of the spring of 1990, WHSRN's research and administrative offices are also headquartered at MBO.

MBO's ability to continue these innovative research and education programs requires support from many sources, including New England birders. Individuals are welcome to become members of MBO. You are invited to attend our on-site banding demonstrations in the spring and fall and frequent lectures and slide shows by staff scientists at locations throughout New England. For more information, please call the MBO offices at 508-224-6521.

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