

## MANOMET BIRD OBSERVATORY

Brian A. Harrington, Manomet Bird Observatory

The Manomet Bird Observatory was founded in 1969 as the outgrowth of an "Operation Recovery" migratory banding station that had been operated at the site during fall migration for three years. It is currently one of three observatories and bird-banding stations in North America organized after the productive European scheme; it is also one of two North American observatories with a full-time director and staff, and the only such facility on the Atlantic coast. MBO is located on Cape Cod Bay, six miles east-southeast of Plymouth, Massachusetts, in the Manomet section, on a typical coastal morainal upland. Habitats on the 18-acre property include a quarter-mile of rocky and sandy beach, cranberry bog, secondary growth thickets, catbriar thickets, fields and a currently uncultivated orchard.

The principal activities of the Observatory derive from the intent of the trust agreement under which it was established, specifically that it would encourage "research and education in the fields of ornithology, biology, ecology, geology, conservation and natural history...., including (but not limited to) sponsoring or contributing to joint programs with non-profit research and educational organizations to promote the study of natural history; establishing a field station to make year-round study and census of breeding and migratory land and sea birds through a banding program and observation."

MBO headquarters, located on a 60-foot bluff overlooking Cape Cod Bay, houses research and administrative offices, laboratories, and living quarters for a limited number of staff, interns, and visiting researchers, as well as an ornithologically-oriented library containing major journals and a growing text and reference collection.

An executive director and a staff of scientific professionals, currently numbering four, form the basis of the operational staff. Policy decisions and over-all responsibility lie with a board of eleven trustees, including a managing trustee, who serves as chairman of a management committee, and an advisory committee consisting of scientists and educators. Crucial to successful operation of MBO are a number of unpaid volunteer staff workers, interns, and a supporting membership of approximately 1,200.

Research activities are varied, but those currently in progress evolve mostly from a basic program of bird-banding. Operating from dawn to dusk, nearly year-round, the banding program processes about 20,000 birds each year. The principal laboratory is equipped and staffed for quick and efficient processing of large numbers of birds with minimum confusion for banders. High intensity lights, holding cages, close-up camera equipment, triple-beam balance scales, optical aids, and various banding and ectoparasite collection equipment are readily available and heavily used by as many as 10 banders and recorders at one time.

Data taken from each bird include: wing length, ectoparasite examination, skull ossification, fat condition, weight, and, where possible, age and sex. Unusual features are also noted, and for many birds, molt cards are completed. For each bird most data are recorded in computer-compatible format and soon entered onto computer cards for later storage on tape.

Data from these banding programs are currently being used for studies of shorebird migration, migrant shorebird feeding and behavioral ecology, breeding population studies of certain passerines, winter population studies of sparrows, avian nuclide concentrations through whole-body counting at a nuclear generating plant and control site, Mourning Dove populations and movements, molt studies, populations and movements of House Finches in Massachusetts, and comparative studies of coastal and inland fall migration of passerine birds in Massachusetts. Other current research projects, not directly related to banding, are a Seawatch Program started in 1968 to document movements and populations of southbound sea ducks, a study of northbound American Brant migration, and census studies of landbirds at MBO. For use of data not currently examined, MBO welcomes proposals from qualified researchers.

The education program of MBO places particular emphasis on reaching young people, with the belief that an early introduction to the natural world will lead to increasing concern about its health and preservation. This program is staffed entirely by volunteers who are trained in bird identification, record keeping, avian biology, and field ecology. The teachers hold trail walks and demonstrations of research techniques for several thousand children, as well as teachers and college biology students who visit on arranged

schedules. In addition, the "Birds-Go-To-School Program" takes MBO's philosophies and demonstrations to additional thousands of school children in their classrooms, so that live exhibits may be seen and touched and where spontaneous enthusiasm can lead to questions about research, biology, and our environment.

For a limited number of serious older students, MBO also offers internships that provide an opportunity to live and work at the Observatory for weeks or months, to talk and work with the professional staff, and to carry on independent or supervised studies of their own.

In short, MBO is a center for research and education in environmental biology that not only seeks new information, but also advocates the urgent need for biological awareness, while educating laymen as to some of the techniques used in biological research. To do this, Manomet Bird Observatory is dependent on a core of devoted volunteer and professional staff, as well as contributions and supporting memberships.

#### BIRDING ON PLYMOUTH BEACH

Bruce A. Sorrie, Manomet Bird Observatory

When one thinks of birding on Plymouth Beach, one should recall the tern colony and the opportunity to observe at close quarters four species of nesting terns (Common, Arctic, Roseate, and Least). In fact, this may be the only easily accessible colony in the United States where one can watch the breeding activities of these four species.

The Least terns segregate themselves and nest on the stony ground beside the road, midway out on the three-mile peninsula. The larger terns choose the open dunes near the tip of the beach - the Commons throughout, the Roseates in the thicker patches of dune grass, the Arctic terns on the bare pebbly sand along the edge of the colony. Due to the excessively fragile nature of these dunes, it is essential that no one walk or drive on them. Low tides usually find the birds preening on the exposed sand flats on the bay side, providing excellent opportunities for the photographer.

A word on logistics: the best way to get to the beach is to drive south on Route 3 and take the exit marked "Plymouth Plantation Highway - Manomet." Continue east about a mile and take a left turn onto Route 3A. Proceed north about a mile to Bert's Restaurant, immediately north of which is the beach parking lot and road. When school is out, only vehicles with "Town of Plymouth Facilities" stickers may use the beach road and lot, so be prepared to park elsewhere. Since four-wheel-drive vehicles are necessary anyway, I suggest walking, which is the best way to see birds along the beach. High tides are best for viewing shorebirds, low tides for wintering waterfowl.

For much the same reason as the nesting terns, scores of other species are attracted to the beach. Black Terns (early June), Royal Terns (June-July), Black Skimmers (early to mid-June), and Laughing Gulls (May-June) are rare but regular visitors. At high tide, hundreds of shorebirds search the beach tideflats for invertebrates, and at low tide turn to the mussel beds. Common species from May to early June are: Semipalmated and Black-bellied Plover, Piping Plover (breeds on stony areas), Ruddy Turnstone, Spotted Sandpiper (1 or 2 pair breed in the dunes), Greater Yellowlegs, Knot, White-rumped, Least, and Semipalmated Sandpipers, Dunlin, Sanderling, Short-billed Dowitcher, and an occasional Willet. From late July through September these species return in even greater numbers, usually along with Western Sandpipers, Whimbrel, Hudsonian Godwit, and Golden Plover. Though most birds congregate near the tip of the peninsula, be sure to check both sides of the beach on the way out!

Other summer residents of the beach and marshes include Snowy Egret, Black-crowned Night Heron, Kestrel, Clapper Rail (probably breeds), Tree Swallow, Horned Lark, and Sharp-tailed Sparrow.

A storm in May might produce Northern and Red Phalaropes as well as Gannet, while one in June sometimes brings Wilson's Petrel, Gannet, and Parasitic Jaeger. Fall storms have produced Sooty and Greater Shearwaters (rare), Gannet and the Phalaropes.

Good birding doesn't stop with cold weather and falling leaves, for abundant migrating and wintering waterfowl find food in the protective harbor. Nearly every eastern spe-