

Banders are continually accumulating in their records data of various kinds, the value of which, in part, only time will reveal; but, on the other hand, many discoveries will be found immediately available for publication in our Bulletin if the records made at each station be carefully tabulated and studied. Banders doing this will be surprised to discover the amount of information of interest and scientific value that is often hidden in their notes and banding records. In this line of work lies the lasting enjoyment in operating a banding station. Moreover, the more thought and time that are devoted to banding work, the greater will be the scientific output: the more one puts in, the more one can take out. No banders should take the view that they do not possess sufficient training in scientific methods to make contributions along many lines, nor should they go on banding day after day without making a careful study of their records occasionally in order to find out their meaning.
Cohasset, Mass

SIX DAYS IN A MASSACHUSETTS TERN COLONY

BY CHARLES B. FLOYD

ONE of the flourishing colonies of Terns on the Massachusetts coast, probably the third largest, is located on "Tern Island" close to the mainland in Chatham harbor. The island has an area of ten acres, about one half being salt marsh which is covered by the sea at high tide, and the remainder sand with a slightly undulating surface, sparsely covered with a strong growth of salt grass and other plants. This vegetation is of great protective value to the Terns, for the growing young find partial shelter under it from the sun and rain, both of which often destroy them in great numbers.

In 1925, from July 4th to the 10th, I spent a large part of each day on the island. Previous to this I had visited the island about June 20, 1925, at which time the young Terns, recently hatched, were found dead by hundreds, practically all perishing in the downy stage. Investigation revealed that the cause of their death was the excessively hot weather of early June, at a time when the salt grass was not sufficiently high to offer them protection from the direct rays of the sun. Cases are on record of the hot sun destroying young chickens when imperfectly fledged while exposed to similar conditions, and this appears to have been the case with the Terns.

Game Warden Patterson, who assisted me in my banding work, counted 3,300 eggs about the middle of June, and found so many more that he abandoned the attempt to make an exact count. These eggs were laid after the decimation of the first broods.

The Common Tern (*Sterna hirundo*) is the more abundant of the two species and it outnumbers the Roseate Tern (*Sterna dougalli*) about one hundred to one. As far as I was able to observe, the two species nest in perfect harmony, and the fledglings, after they are able to run about, mingle freely, although the majority of the nests of the Roseates are placed well apart from those of the other species.

The young of the two species are readily distinguished, the Roseates having black bills and tarsi, while the Common Terns have salmon-colored or yellow tarsi and red grading to black bills. In the matter of plumage, even at this stage the two species are also distinguishable.

As regards habits, the two species are quite in contrast. When alarmed, the fledgling Roseates burrow deep in the sand or under thick tufts of grass or other plants, and remain quiet, whereas the young of the Common Tern run ahead as one approaches, fluttering their small wings and squawking until overtaken, when they flutter about or lie motionless, flat on the sand.

The nests are placed on the ground, some being nothing more than a depression in the sand, while others are well formed and lined with grass. The eggs of the two species are much alike in size, shape, and markings.

Warden Patterson reports the average date of arrival of both species as May 8th, the first eggs being laid on May 12th, and the first young appearing on June 5th.

Often the adult Terns came to the surface after a plunge, carrying a small fish by the head. The birds rose in the air and dropped their prey, only to seize it again by the tail in mid-air in order that the young might swallow it with ease. In one instance, I witnessed an old bird fly in to feed its young, but before the fish which it carried was deposited in the open mouth, the bird became frightened and dropped the fish on the sand. The parent Tern seized it again, now covered with sand, and flew to the ocean where it alighted and dipped the fish into the water, thus removing the sand, after which it returned and fed its young. Such behaviour as this is not far removed from the domain of human mental processes.

Two hundred and fifty adult Terns were found lying on the

ground, their heads neatly severed as though cut with a knife, and both head and body untouched. There were no marks of animals or birds of prey on them, nor had any attempt been made to eat any portion of the bodies. We have been unable to determine what agency could have killed these wonderful flyers, in little groups, day after day, over a period of two weeks, and leave no trace behind.

The result of our labors was the banding of 2,500 Common Terns, 217 Roseates, and nine Piping Plovers.

Auburndale, Mass., September 10, 1925.

TREE TRAPS

BY RICHARD B. HARDING

Much interest has been shown regarding various forms of tree traps suitable for birds such as Downies, Hairies, Chickadees, etc., so that your editor has asked for descriptive matter covering trapping devices for these birds.

The accompanying sketches (Plate II) show cross sections or perspective views, without detail, of four different traps. If the reader has an aptitude for tools, these traps can be made at home; otherwise it is recommended that they be purchased from Mr. A. W. Higgins, Rock, Mass., who is familiar with and has made all of these traps.

No. 1 is the Lyons automatic tree trap. *A* is a wire guard, some six inches wide, which is fastened to the trunk of the tree at an angle so the birds climbing up the tree are diverted by the guard towards its highest point, where the entrance to the trap begins (*B*). *C* is the trap chamber proper. The captured birds climb to the top of this chamber, where they see a mirror at *D* and attempt to escape in that direction. As soon as they come in contact with this mirror, having no purchase, they fall down into the sub-chamber (*E*) and are finally removed in a gathering cage (*F*). For its use this trap depends upon the operator finding some tree or group of trees that are frequented by such birds as the Black and White Warbler and Brown Creeper. Where such a tree is found this trap has been very successful.

No. 2 is a vertical pull trap which has been most successful in the hands of the writer over a period of three years. It consists of a letter-basket covered with fine-mesh wire, mounted on a vertical board which is fastened to the tree. *A*