In 1902, due to the late arrival of the aluminum bands, only 23 birds were banded. On June 21, of these, three were found dead, one on the ground and two in the nests. Only a single return resulted from this banding effort, a specimen shot Sept. 24, 1902, at Abington, Maryland.

In 1903 both of the colonies changed location, one selecting an adjacent hillside where 89 nests were counted. This time this colony was in mixed forest and all but seven of the nests were in pines, the rest in oaks. In this colony we banded 78 young. Two of these banded birds were almost full grown and were found dead under the trees of the colony. Four additional banded birds were reported as follows: The first was captured July 19, in a street in Leesburg, Va. The second was caught July 20 in a fish trap in the Potomac below Washington. The third was shot July 18 at Pennsville, N. J. Band No. 38 was taken from a bird shot at Dividing Creek, Cumberland County, N. J., in the first week of April 1904.

In 1910 Mr. E. J. Cort reported a large colony near Marshall Hall, Md. We therefore paid a visit to this rookery and placed 367 rings on young birds.

The returns from this effort were as follows:

July 21, 1910, Darby Creek, Delaware Co., Pa.
Aug. 2, 1910, Reading, Pa.
Aug. 5, 1910, Marshall Hall, Md.
Aug. 12, 1910, Foglers Goldfish Pond, near Thurmont, Md.
Aug. 20, 1910, 1546 H Street, N.E., Washington, D. C.
August-end of 1910, Virginia Beach, Va.
Sept. 17, 1910, Rouge River P. O., 18 miles east of Toronto, Canada.
Sept. 28, 1910, Silom Dam, near Chambersburg, Pa.
Oct. 20, 1910, Asbury District, Sommerset Co., Md.
Dec. 7, 1910, St. Simons Island, Ga.
April (latter part) 1911, Banagüises, northeast Matanzas Province, Cuba.
June 29, 1912, Laurel, Md.

Since these efforts of mine, bird-banding has become a vocation (U. S. Fish & Wildlife Service) and an avocation of hundreds of private individuals scattered through our land and licensed banders are furnished with bands by our Government.

U. S. National Museum, Washington, D. C.

ON THE RETURN OF SUMMER-RESIDENT BIRDS

BY J. T. NICHOLS

Correlated with unfavorable barometric pattern and winds to bring them to my territory (Long Island, and Central Park, New York City), north-bound migrant birds were abnormally scarce there in the Spring of 1951. As I no longer believe that migrating, individual birds follow the same course in successive years to and from their nesting station, and merely transient individuals might have been involved, this was not surprising. Later it appeared that whereas some summer residents were normally plentiful in Long Island localities with which I was familiar, others were markedly scarce.

Each summer I trap and band a few birds at the same station at Mastic, Long Island, and expect to take two or three returns from previous years. The summer of 1951 was as usual, except that there were no returns. Had abnormal spring weather shifted the nesting range of individual birds? I have supposed that when an individual migrant bird's nesting territory is once established, deviation from it in later years is slight, with negligible exceptions, and believe that view is generally held. On the other hand, I had at least one bit of evidence that weather may affect the nesting range of a species. A pair of Brown Creepers, certainly no more than casual nesters on Long Island, nested there at Smithtown in 1947 after an unusually late Spring, when the species had been plentiful (Nichols, D. G., 1948, *The Auk*, Vol. 65, p. 612).

Bird migration is infinitely complicated, consisting as it does of the behavior of individual birds under varying conditions. Such being the case it is remarkable how closely its pattern follows certain rules. But, in the nature of the case, these rules cannot be laws. There is doubtless some deviation from them. When one is fitting them together rationally, in the light of new facts as they come along, to gain a hypothetical picture of the whole, the deviation is important.

Many individual adult summer resident birds return year after year to nest at the same spot. Relatively very few young return to the spot where they were hatched. However, it has been proved more recently that young do return to nest in succeeding years in the general vicinity of it. It is also true that young of colonial nesters like the Bank Swallow not infrequently return to the same colony, and there are records of young Piping Plover, the nesting territory of which is confined to a narrow strip of sand, returning to their birth-place. When independent of their parents, young usually drift away. My present hypothesis is that a principal factor in non-return of young to a banding station, usually situated in a wide or unlimited potential two-dimensional breeding area for the species, and their return to the general area, is because their place memory takes time to develop, and they do return to the place to which they have drifted prior to migration.

The place memory factor suggested itself when I was banding a considerable number of House Sparrows in Garden City. At the appropriate season young-of-the-year outnumbered adults at my feeding station, and repeated in the trap much more frequently than they. However, except when still dependent on their parents, and in marked contrast to the adults, they drifted away almost immediately, and permanently, to be replaced by as many independent, unbanded young of the same age. I could be sure of this as I banded young on the left, versus adults on the right leg On the other hand, a Song Sparrow (No. 46-8207) which "suggested a bird-of-the-year from an early brood" when banded at Mastic August 11, 1946, was retaken at the banding station there in 1947, 1949 and 1950.

To help evaluate the 1951 evidence, I have taken five species commonly banded at Mastic, of each of which I have had "returns" there in previous years—namely, Song Sparrow, Catbird, Brown Thrasher,

Red-eyed Towhee and Chipping Sparrow. The Song Sparrow was about normally numerous both at Mastic and Garden City; Catbird plentiful at Mastic, though in less numbers than in 1950, abnormally scarce at Garden City; Thrasher abnormally scarce both at Mastic and Garden City; Towhee normally numerous at Mastic, scarce at Garden City; Chipping Sparrow, about as numerous as in recent years, less numerous than earlier, at Mastic, absent in Garden City, where scarce in recent years.

Trapping records of a given year are only significant by comparison with other years. The number of adults trapped in preceding years from which there might be returns, as well as the proportion of returns in adults trapped in a given year, have a bearing on the problem. As young birds very rarely return to such a station, in an unlimited two-dimensional nesting area, they may be counted out.

The period for which I have compiled the data is from spring through August. There is much less chance of a summer resident return in September, and an increasing chance of drifting or migrating individuals. In July and August I am frequently uncertain whether a bird handled is adult or a bird-of-the-year, but have rated as adults those I did not have some reason to suppose were young. This would tend to make the figure for adults banded in a given year too high. According to the hypothesis that birds-of-the-year return to the place to which they have drifted prior to migration, it would affect the proportion of returns less than otherwise.

MASTIC, 1949

Song Sparrow.—Adults trapped, 2; banded, 1; returns, 1 (50%). Young banded, 1.
Catbird.—Adults trapped, 2; banded, 2; returns, none. Young banded, none.
Thrasher.—Adults trapped, 6; banded, 5; returns, 1 (17%). Young banded, 2.
Towhee.—Adults trapped, none. Young banded, 5.
Chipping Sparrow.—Adults trapped, none. Young banded, none.
5 species.—Adults trapped, 10; banded, 8; returns, 2 (20%). Young banded, 8.

1950

Song Sparrow.—Adults trapped, 4; banded, 2; returns, 2 (50%). Young banded 8.
Catbird.—Adults trapped, 13; banded, 12; returns, 1 (8%). Young banded, 1.
Thrasher.—Adults trapped, none. Young banded, 1.
Towhee.—Adults trapped, 2; banded, 2; returns, none. Young banded, 1.
Chipping Sparrow.—Adults trapped, 2; banded, 2; returns, none. Young banded, none.
5 species.—Adults trapped, 21; banded, 18; returns, 3 (14%). Young banded, 11.

1949-50

Song Sparrow.—Adults trapped, 6; returns, 3 (50%). Young banded, 9.
Catbird.—Adults trapped, 15; returns, 1 (7%). Young banded, 1.
Thrasher.—Adults trapped, 6; returns, 1 (17%). Young banded, 3.
Towhee.—Adults trapped, 2; returns, none. Young banded, 6.
Chipping Sparrow.—Adults trapped, 2; returns, none. Young banded, none.
5 species.—Adults trapped, 31; returns, 5 (16%). Young banded, 19.

1951

Song Sparrow.—Adults trapped, 5; returns, none (less than 17%). Young banded, 2.
Catbird.—Adults trapped, 2; returns, none (less than 30%). Young banded, 2.
Thrasher.—Adults trapped, 2; returns, none (less than 50%). Young banded, 1.
Towhee.—Adults trapped, 1; returns, none. Young banded, none.
Chipping Sparrow.—Adults trapped, 2; returns, none. Young banded, none.
5 species.—Adults trapped, 12; returns, none (less than 8%). Young banded, 5.

The "less than" percentages suppose (which is highly improbable) that another bird trapped in each case would have been a return. They point out a correlation between percentage of returns and number of birds trapped, on the basis of which one may discount the significance of absence of returns in other species than the Song Sparrow, but they emphasize such significance as they may have in the Song Sparrow and the totals. The probable reason for a lower percentage in 1950 than in 1949 is that some of the Catbirds rated as adults were birds-of-the-year, or drifting birds. I know of no tangible age-criterion in the Catbird, like the eye-color of the Thrasher. The lack of returns in 1951 may not be referred to the small number of birds trapped, as the highest percentage was in 1949 with a smaller number.

I have of course no statistical evidence on the problem, or claim that what there is has proved anything. But significant evidence is obtainable by the sampling method, when properly applied. In view of 1951, my hypothesis that it is the rule for adult migrant birds to return consistently to the same locality to nest is not weakened, but modified (in lieu of further evidence) by the belief that abnormal spring migration weather may sometimes prevent at least some of them from doing so.

The American Museum of Natural History, Central Park West at 79th St., New York 24, N. Y.

BIRD PHOTOGRAPHY FOR BIRD-BANDERS

By RICHARD B. FISCHER

At a regional meeting of the Eastern Bird-Banding Association some years ago Mr. Jesse Miller showed a series of miniature color slides of birds that his high school bird study group had banded. The birds had been held in the hand before an inexpensive 35-mm. camera while their pictures were taken. That simple technique for quickly recording in color what would require pages of description deeply impressed the audience, and in adapting it to my own needs certain refinements were made which may interest and assist other banders.

Aside from the undeniable and legitimate pleasure of having a portrait of some particular species, there are other reasons for wanting a photograph of a living bird. In studying the plumage development of young birds, progression of the moult, or assumption of breeding or winter plumage, color pictures are well-nigh indispensable. To record some abnormality of plumage or structure a photograph, again, is worth pages of written material.

THE FOCAL FRAME

Before discussing the ordinary equipment involved, which may vary with different photographers, we must consider a prime requisite —the focal frame. In place of a description of the device, your attention is called to Figure 1, showing it in use with a Kodak Bantam. Complete information on its use and construction plus valuable suggestions on close-up photography—which is what you will be doing—can be found in the splendid pamphlet "Portra Lenses and a Technique for Extreme Close-ups," available without charge from the