

Fourth in Fuertes print series

Notes on the Plumage of North American Sparrows by Frank M. Chapman [Edited]

Song Sparrow, *Melospiza melodia*. The fusing of the spots on the central breast-feathers to make a larger spot or blotch and the pronounced maxillary stripes are the chief distinguishing marks of the Eastern Song Sparrow (*M. m. melodia*), (Fig. 2), as well as of practically all the races of Song Sparrow; add to these certain characteristics of voice and manner, and a disposition which usually permits examination at close range, and we have a bird which is generally identified without difficulty.

The sexes are alike, and in view of the exceptional variations shown by this species west of the Rockies, the color of the eastern bird is notably uniform. It is a fact that the country east of the Rockies is in itself comparatively uniform, but nevertheless there are in its areas inhabited by Song Sparrows the climate of which differs more widely than that of regions in the West, each of which has a different race of Song Sparrow.

The Song Sparrow is the most plastic of North American birds, or, in other words, it is so readily affected in size and color by the climatic conditions under which it lives that, given some slight change in the climate of a region, we expect to find it reflected in the Song Sparrow of that region. Broadly speaking, the general colors of Song Sparrows are related to the rainfall, while their size is related to latitude. Thus, the Song Sparrows of arid regions are pale, while the Song Sparrows of humid regions are dark. Compare, for example, the figure of the Desert Song Sparrow, *M. m. fallax*, (Fig. 3), with that of the Sooty Song Sparrow, *M. m. rufina*, (Fig. 4). The former inhabits the Colorado desert where the annual rainfall averages about six inches; the latter lives on the northwest Pacific coast where the annual rainfall averages over ninety inches.

Again, observe that the Mexican Song Sparrow, *M. m. mexicana*, at the southern extremity of the range of the species is the smallest race, measuring some six inches in length, and that there is a gradual increase in size northward until the maximum is reached at the northern extremity of the range of

the species, where the Aleutian Song Sparrow, *M. m. sanaka*, (Fig. 1), attains a length of nearly nine inches.

If we compared only the palest Song Sparrow with the darkest, we might well believe, so unlike are they, that each form represents a distinct species; but when we include in our comparison representatives of all the twenty-three races [A.O.U. Check-list, 1957, lists 31.—Ed.] of Song Sparrows we find complete intergradation in color and in size. Nowhere can one draw the line. As the climatic conditions under which the birds live change, the birds keep pace. Cause and effect go hand in hand. Here we have a species in flower, as it were, a single Song Sparrow stalk with its twenty-three blossoms, any one of which might make an independent growth as a species if it were separated from the parent stem. Doubtless some day the separation will come, when we shall have several species of Song Sparrow, each with its group of races, but at present we have only one species, divided into some twenty-three [31] subspecies or species in process of formation.

A variety of reasons may be advanced to account for the pronounced geographical variations shown by the Song Sparrow. Its wide range indicates physical adaptability and ready adjustments to differences in food and habitat. Its variations in size, while they conform to the general law of increase in size northward, are exceptionally marked, and are not equaled by those of any other North American bird, — a further indication of an inherent plasticity.

The species is comparatively non-migratory. Several races, notably in California, are permanently resident, and a number of contiguous and restricted areas may there be found each to have its own form of Song Sparrow. [Samuel's Song Sparrow, *M. m. samuelis*, (Fig. 5), is found only in salt marshes bordering San Francisco and San Pablo bays.] Such strictly non-migratory species are continuously subjected to the influences of their environment, which are heightened by permanent isolation

The painting by Louis Agassiz Fuertes accompanying these notes appeared as the frontispiece of *Bird-Lore*, Vol. XII, No. 2, March-April, 1910. The painting itself, from which our reproduction was photographed, now has various registration and crop marks, and pencilled notations, probably by Chapman, not reproduced in the *Bird-Lore* version.

