

RECENT SONG SPARROW WEIGHINGS

By CHARLES L. WHITTLE

From time to time beginning in 1926, I have published records of the average weight of several Song Sparrows (*Melospiza m. melodia*). The weight of the first Song Sparrow weighed, one banded in Cohasset, Massachusetts, in the spring of 1926, was 26 grams, whereas the average weight of seven birds taken in March of that year was 24.28 grams (see *Bulletin* for 1926, p. 34). Later, in the *Bulletin* for 1927, p. 71, I gave the average weight of 29 Song Sparrows as 22.52 grams. These birds were practically all adults, and the average weight is probably fairly accurate, but it doubtless represents migrants, whose nesting-places are unknown as well as locally nesting Cohasset birds, the average weight of which may or may not be the same as the average weight of Song Sparrows nesting say in Labrador or in Florida.

In *The Auk* for October, 1926, Vol. XLIII, p. 498, attention was called to the fact that on April 7, 1926, four migrating Song Sparrows visited my traps in Cohasset, Massachusetts, weighing 2.90 grams more than ten other migrating Song Sparrows which were banded there during late March and early April of the same year. The four heaviest birds were manifestly longer than those banded just previously. In a footnote on the same page of *The Auk*, the question was raised whether or not these heavy birds represented an undescribed race of *Melospiza* nesting far to the north of the United States. The fact that four such heavy migrating birds appeared together was stressed as hardly accidental, and the opinion was expressed that they probably constituted a group.

In *The Auk*, Vol. XLV, 1928, pp. 335 and 336, Meyers gives an account of two Song Sparrows trapped together by him on February 18, 1926. These birds accidentally escaped from the gathering-cage and were killed by flying against a window. They were immediately weighed, one a ♀, weighing 26.0 grams, and the other, a ♂, weighing 26.5 grams. The length of the ♂ was 6.8 inches, and that of the ♀ 6.7 inches, or, as he states, about a half-inch longer than the average Eastern Song Sparrow. Meyers subsequently weighed thirty-nine other Song Sparrows having an average weight of 22.5 grams. He dissected both heavy birds to determine if they were excessively fat, if there was an early enlargement of the sex organs, or if their crops were surcharged with food, and found that

none of these possible causes was accountable for the extra weight.

As in my case, and independently of me, these heavy birds led him to the hypothesis that a larger, heavier race of *Melospiza* exists far to the north of the United States.

It is interesting to compare, as published, his average weights of the Eastern Song Sparrow, and that of his two large and heavy birds, with my published figures, as follows:—

Mayer	—average weight of	2 Song Sparrows	—26.25 grams
Whittle	—average weight of	4 Song Sparrows	—26.00 grams
Meyer	—average weight of	39 Song Sparrows	—22.50 grams
Whittle	—average weight of	29 Song Sparrows	—22.52 grams

In the hypothesis that somewhere north of the United States boundary there is a larger race of Song Sparrows than occurs in the eastern part of the United States, no improbability is implied, since just this phenomenon is well known to occur in the Pacific coast regions of Canada and Alaska.

It seems to me that a refinement of the method now used in measuring birds by securing these measurements from museum skins which are subject in certain respects, notably length, to variations due to stretching by the collector, or to shrinkage due to drying, is to procure them from live birds, an opportunity now made possible as a part of the bander's work. Such procedure will permit determining the measurements of locally nesting and locally hatched birds throughout Canada and the United States. Opportunity will thus be had to learn how much of the variation (estimated by J. A. Allen to be 20 per cent) noted in many species by the present methods of securing these data, is local or regional. The bander has opportunity in many cases to measure known adults at the close of the post-nuptial molt when the primaries and rectrices are unabraded. The bander may also take the measurements of many juvenile birds between the period they come to the traps and their departure in case of migratory species. Such young birds may often be remeasured another year as adults, both with abraded plumage and in unabraded post-nuptial plumage.

Hand in hand with this work, the bander should, I believe, investigate the weights of birds after they leave the nest, studying their weights in connection with their measurements. It probably will be found in most instances that the greater their average measurements, the greater their average weight will be. Meyer's two unusually heavy Song Sparrows, as I have said, were also unusually long. No one knows the weight of the Aleutian Song Sparrow (*Melospiza m. sanaka*), but it is doubtless much greater than its Mexican cousins. It may be that

average weights will commonly parallel average size as now determined, in which case weight-determinations will be of considerable importance, especially so as they may be so quickly and accurately obtained.

I published a note in the *Bulletin* of October, 1927, p. 75, reporting the average weight of eight nesting Song Sparrows, birds trapped in Cohasset and in Peterboro, New Hampshire. Reported by localities, two Cohasset birds, trapped in July, averaged 21 grams; the six Peterboro Song Sparrows averaged slightly more than this. Owing to the small number of birds weighed, these averages have little value, although they are of considerable interest.

A more dependable series of weighings has been made at my Peterboro banding station during August and early September of this year. Young native Song Sparrows have been fairly plentiful, and twenty-three have been weighed, several on two occasions two or three weeks apart, one on three occasions. Other birds-of-the-year were weighed, but they were too wet to allow accurate weighing. These twenty-three birds had an average weight of 21.37 grams. No birds were weighed in the early morning hours when their crops were likely to be empty, and none was weighed late in the afternoon when a full crop was probable.

The average weight of these twenty-three Song Sparrows, all hatched on the premises, and weighed at this season, ought to be fairly representative of Peterboro birds-of-the-year. It would be interesting to have a similar series of say Virginia and Cape Breton birds weighed for comparison.

Peterboro, New Hampshire, September 20, 1929.