

1934

A. V. Fuller

2. Vesper Sparrow - *Poocetes gramineus gramineus*

The nest was found July 7th, just after the fifth and last chick was hatched, so that weights and measurements were made from the day of hatching.

Nest, Location and Structure: The nest was located 60' south of the road on the top of the hill back of camp, and about 20' from a chipping sparrow's nest. It was in a slight depression at the base of a sumac seedling and a small bush honeysuckle, the leaves of the two bushes almost covering the nest. The bulk was of grasses and some very fine rootlets. There was practically no lining, just a few circles of fine grasses. Depth 2", diameter inside 3", diameter outside $3\frac{1}{2}$ ".

Reactions toward Observer: At all times the male was far the more nervous of the two. The nearby chippy generally warned of my approach but if the male was absent the female generally paid no attention to me. The first day I used a white netting thrown over an amelanchier about 5' from the nest, but this was not as satisfactory as just wearing dark clothing and sitting under the amelanchier. The third day I erected a blind. The female usually brooded facing east, having a view of the blind and the road. She paid no attention to the blind, however, except when the male persistently talked about me from one of his five favorite vantage points. His favorite guard posts circled the nest at a range of about 20' and varied in height from a stick about one-half foot high, to a stump, a bush, and finally a tree. Towards the end of the week the female adopted the habit of leaving the nest by hopping right up to the door of the blind which was at a distance of two feet.

Care of the Young: Both parents brought food, the female on an average of every fifteen minutes, the male, on an average of once an hour. This would have undoubtedly improved if he could have overcome his fear. Several times he carried food in the vicinity of the nest for an hour at a time trying to screw up his nerve to the point of approaching the nest. Several times he gave up and ate the food himself. When he did visit the nest his stay was very brief, and his approach was soundless save for the fluttering of his wings. The female had a special food call, a soft cooing note, which the young soon learned to recognize. Both parents approached and left the nest by a regular route.

The food was mainly caterpillars of various species and mayflies. It was macerated between the mandibles and shared among at least three young at a visit. There was no system of rotation for during one observation one chick didn't succeed in obtaining food once in an hour and twenty minutes. At one time a cricket dropped into the nest but evidently this isn't the proper food for young vespers for the female carried it off and dropped it.

The female brooded the young several times an hour, staying on the nest about ten minutes each time. This usually followed a feeding. Forbush says the male also helps in the

brooding, but he was altogether too skittish.

Nest sanitation was cared for by the parents eating the fecal sacs.

Development of the Young: On the first day in the evening there was natal down on the head, wings, and two spots below the shoulders. There appeared to be a berry in the stomach. Growth in weight was very regular, being about 2 g. a day. Growth in length was much more irregular, the greatest jump being the 6th day when the length increased 8 mm. On the 7th day there was no increase in length. However, undoubtedly there were many personal errors in the process of measurement.

On the second day the feather tracts showed on the chin, neck, and sides of chest and belly. The third day the feather tracts on the back were evident, and the eyes were beginning to open. The primaries began to appear on the second day and made their greatest growth between the fifth and sixth days. The tail feathers appeared the fifth day and on this day also the feathers were very distinct on all the tracts.

On the evening of the eighth day the young and adults had disappeared. The nest was in perfect condition. I judged that they had been destroyed, for although I returned to the nest on several consecutive days I found no trace of them. They seemed to me to be too helpless to have left the nest normally. There had been little nest activity of stretching, etc. and they seemed to have very little grasping power. After studying the goldfinch their increased activity in comparison to the helplessness of the vespers seemed to confirm my suspicion that the nest was not empty as a natural event.

However, much later I happened to read in Forbush that vesper sparrows often leave the nest at eight days and if unmolested, fly at 12 days. So probably the nest leaving as I observed it was normal, and the apparent immaturity typical of a ground-nesting bird which can finish its development on the ground with great safety away from the nest. It is also quite likely that the parents had actually removed them from the vicinity because of my attentions.

Age	1 st Day (12 hrs)	2 nd Day	3 rd Day	4 th	5 th	6 th
Date	7/3/34	7/4/34	7/5/34	7/6/36	7/7/34	7/8/34
Wgt.	4.31 g.	7.22	8.92	11.23	13.84	16.17
Length	45 mm.	48. mm	55.5 mm.	58. mm.	60.2 mm.	68. mm.
Bill	4.5	5.	—	5.9	6.	7.1
Bill-Eye	6.75	8.9	9.1	9.5	10.	11.
Bill-Gape	8.	9.	10. ✓	11.8	12.	12.7
Bill-Nost.	2.5	3.	3.5	4.	4.5	5.
Eye Diam	2.9	3.	3.5	3.5	4.	4.5
Extent.	42.	42.	50.	65.	70.	77.
Wing Rgt.	9	10.9	14.5	15.	18.	18.4
Primary		trace	1.	3.9	8.	11.1
Tarsus	9.75	12.5	15.	17.	18.	20.
Tarsus-toe	16.	21.	25.5	29.2	34.	35.
1. Toe + Nail	4.	5.9	6.9	8.	10.	10.1
2. "	4	6.	7.5	8.	9.	9.
3. "	6.	8.5	9.95	10.2	12.	13.1
4. "	4.	6.	7.5	8.	9.	9.
Bas. Wing	1.	2.	5.3	7.	9.9	12.1
Tail					1.	2.
Food.	1 berry.	Stomach full.				
Eyes.	closed.	closed.	beg. to open	open		
Feathers.	Notal down head, wings 2 spots between shoulders None on lower surf. down 6.5mm on head down spot on each thigh.	Feather tracts appearing chin, neck, sides of chest + belly.	Feather tracts on back extending to tail. Marked growth on chest and legs.	Head tracts very distinct Primaries + Secondaries developing rapidly.	Pin feathers distinct down back and all other feather tracts.	General gray tone to feather tracts.

Vesper Sparrow
Wgt. + Growth.

Much personal error in taking measurements

x. See Graph

excreta weighed