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# OBSERVATIONS ON THE GONADS OF THE ENGLISH SPARROW FROM MAY TO NOVEMBER

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Observations were made on the gonadal activity of the English sparrow for one year, November, 1932, to November, 1933. The progressive part of the cycle is from November to May, Allender, 1934*. The gonadal activity is at its height during May and June, as determined by the size of the testes and the comparative number of spermatozoa present in the tubules. Regression sets in about the first of July and is completed by the first of September. The gonads are then in a state of quiescence until December.

Birds collected in May and June showed only slight physiological or cytological differences in testis development. The testis length averaged nine mm. or about the size of a large garden pea. The spermatozoa were in large bundles, the heads directed toward the walls of the tubules and the long tail filaments extended toward the center. The spermatogonia, primary and secondary spermatocytes lined the walls. The tubules were distended until they were only one cell thick and the cells much elongated. There was no interstitial tissue present.

The size of the testes was much reduced directly after the first of July. The testes of a specimen taken by the author July 7, 1933, was 6 mm. in the longest diameter, nevertheless there were slight cytological changes. Specimens taken later in the month showed greater alterations. The number of sperm was greatly reduced, the tubule walls were less distended, and the tunica was thicker (cells were more oval). During the next month the spermatozoa all disappeared, the tubules were decreased in size, and the cells became more rounded. The interstitial tissue began to appear in spaces between the tubules, and increased as regression proceeded. The testis size steadily decreased to a minimum of 2 to 3 mm. in September

* Allender, Christia, 1934. Observations on the gonadel activity of the English sparrow from November to May. Pro. Okla. Acad. Sc. No. 14.

and remained thus through October and November. Cross sections of those taken in these months were strikingly different from those taken in sexual activity. The tubules were few and far apart, and very small. They had only a few large nuclei which were thought to be the nuclei of spermatogonia. The spaces between the tubules were filled by interstitial tissue. All of the cells which made up the testes at this stage were oval and had a relaxed appearance as compared to the progressive phase.

It was found that regression begins about the first of July and is completed by September. The testes remain in a state of quiescence through November. Very pronounced physiological and cytological changes occur as the sexual activity declines. The mature germ cells disappear, the tubules decrease in size, the cells become rounded, interstitial tissue appears and fills the large spaces between the tubules. The testis size decreases to two millimeters.

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