II. SPERMATOGENESIS AND SEASONAL CHANGES IN THE TESTES OF ACRIS GRYLLUS

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(Abstract)

The spermatogenetic cycle was studied from testes of frogs each month (except January) from September to May.

The testes of **Acris gryllus** are divided into lobules separated from each other by connective tissue in which are scattered interstitial cells. Certain interstitial cells migrate into the lobules and become cells or Sertoli.

Large cells, primary spermatogonia, with polymorphic nuclei are located around the periphery of the lobules. Normal prophase, metaphase, and telophase spermatogonial stages were observed. The somatic number of chromosomes as observed in the spermatogonial divisions is twenty-two.

Following the last spermatogonial telophase, the chromatin immediately passes into the first spermatocyte leptotene stage followed by typical amphitene, pachytene, and diplotene phases. Ring-shaped tetrads are formed. The first spermatocyte division is the reductional division.

The maximum number of degenerating cells appear in November. This is a normal degeneration of the first spermatocyte leptotenes.

There is no resting period between the two maturation divisions. Secondary spermatocytes resemble the first spermatocytes, except that they are smaller in size, have reduced numbers of chromosomes, and have smaller chromosome sizes.

Maximum activity of:
Primary spermatogonia is in February;
First spermatocytes is in October;
Secondary spermatocytes is in February.

Minimum activity of:
Primary spermatogonia is in December;
First spermatocytes is in November;
Secondary spermatocytes is in November.

Two cases of hermaphroditism are reported.