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SPERMIOTELEOSIS OF BRUCHUS QUADRIAMACULATUS FABR.

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(Abstract)

As a basis for genetical experimentation, a further study was made of the little known spermatogenesis of *Bruchus quadrimaculatus*. Particular attention was given to the cytoplasmic structures in sperm formation

(spermiogenesis), various fixatives and stains, including vital and smear techniques. having substantiated observations of previous investigators upon chromosome numbers and upon chromatin behavior in pre-spermatid stages.

Mitochondria appear in all stages following spermatogenia, exhibiting characteristic appearances during mitoses and in the spermatids. The new "central substance" in the halves of the "nebenkern" becomes localized along the edges of the outgrowing "ribbons" as the source of the marginal filament. The undulating membrane apparently is formed by the fusion of these "ribbons."

Golgi bodies are first observed in the secondary spermatocyte. They behave characteristically during spermioteleosis, producing the acrosome and leaving a residuum, the Golgi remnant, to be sloughed off with the cytoplasm from the tail.

Chromatoid bodies occur in some spermatids and not in others. They migrate backward along the axial filament to be rejected with the Golgi remnant.

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