

The tsetse-fly female matures a single oocyte at a time. It ovulates this into the uterus, where it hatches, develops into a fully-grown larva, and is later larviposited by the mother. It is only then that the next mature oocyte is ovulated, and the whole sequence is repeated. Thus, in this insect, it is possible to differentiate clearly four processes of egg production: (1) oogenesis, (2) oocyte growth and vitellogenesis, (3) ovulation, and (4) oviposition (in this case, larviposition). Mating is necessary to initiate the process of ovulation, but it is not necessary for the earlier processes. In virgin females, oogenesis, oocyte growth and vitellogenesis takes place normally; but the sequentially matured oocytes are lysed within the egg chambers without being ovulated.