

FIGURE 12. Male reproductive system.

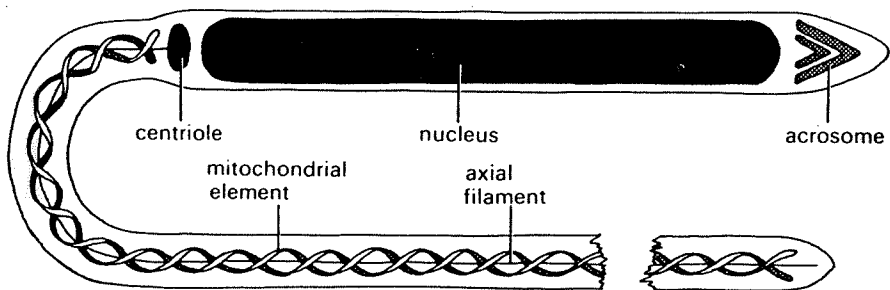


Fig. 182. Diagram showing the possible structure of an insect spermatozoon (after Davey, 1965a).

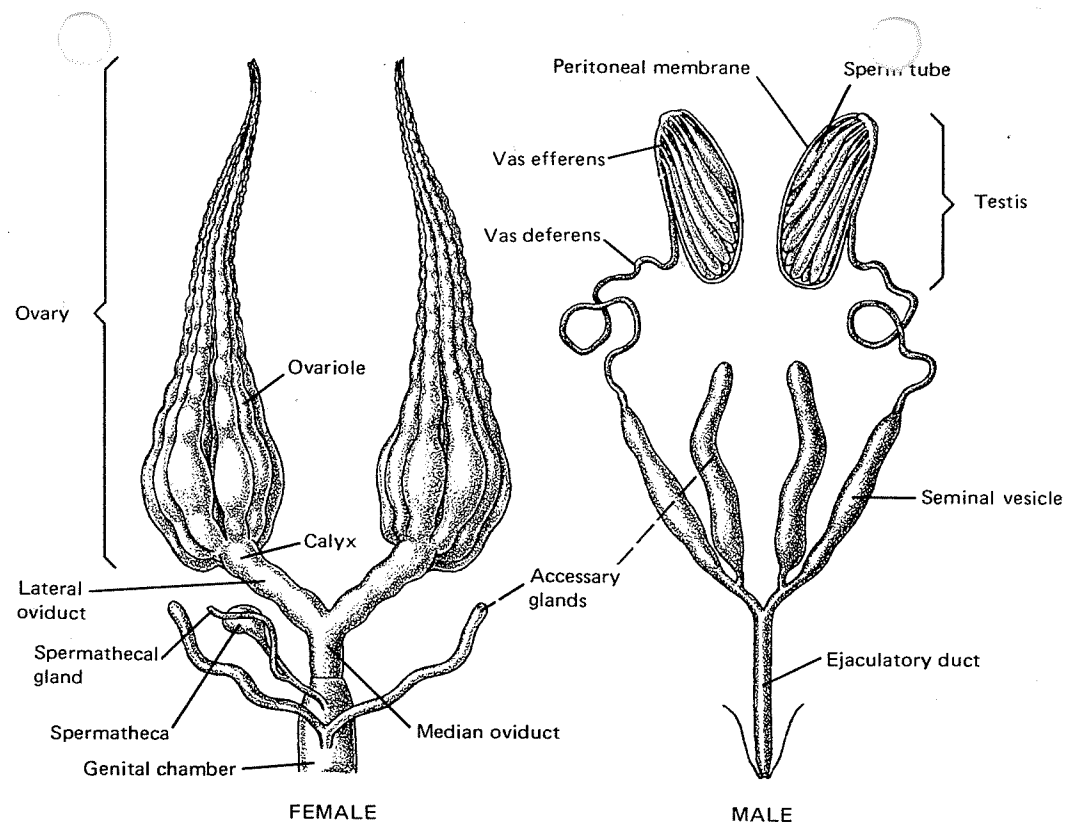


Figure 74. Diagrammatic representations of the female and male reproductive systems. Much variation from these hypothetical models occur. (Redrawn with slight modifications from Snodgrass, 1935)

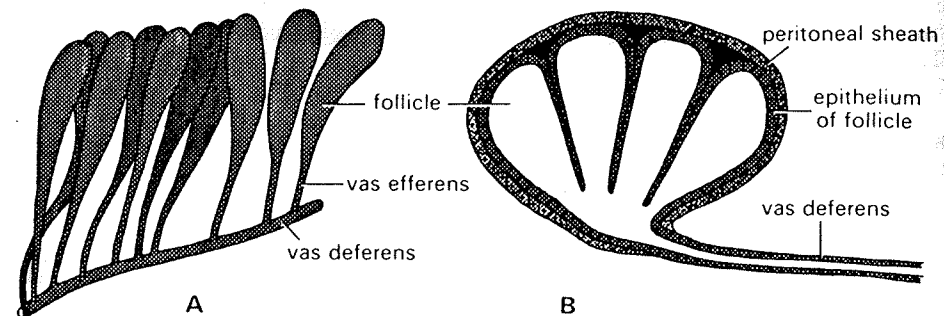


Fig. 179. A. A series of testis follicles opening independently into the vas deferens as in Orthoptera. B. Section through a testis in which the follicles are incompletely separated from each other and have a common opening to the vas deferens, as in Lepidoptera (from Snodgrass, 1935).

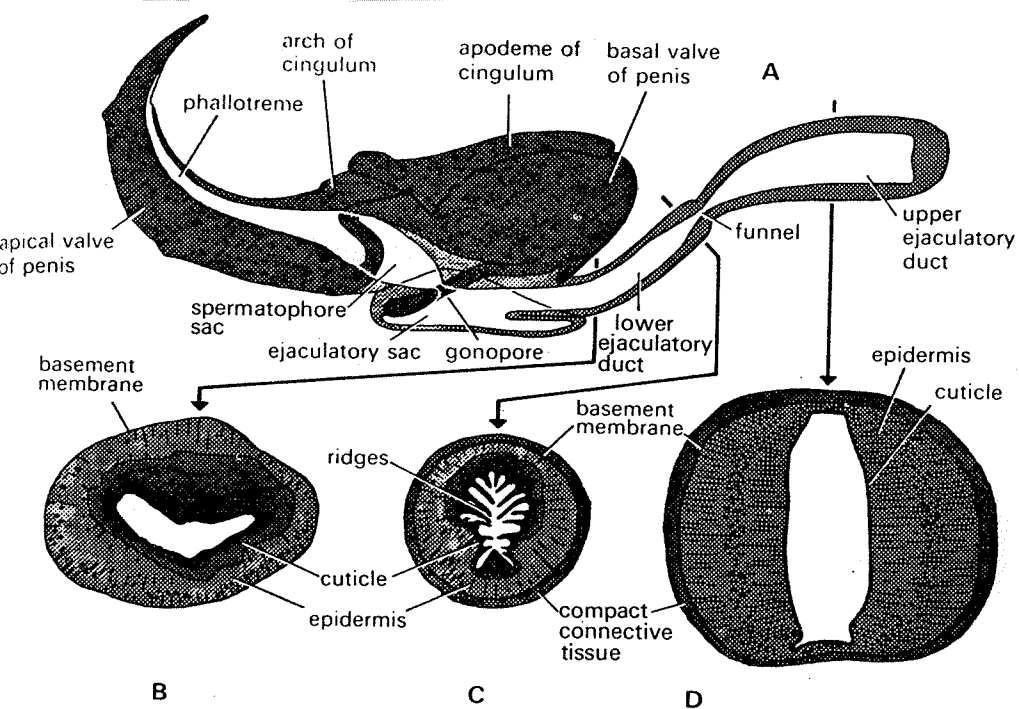
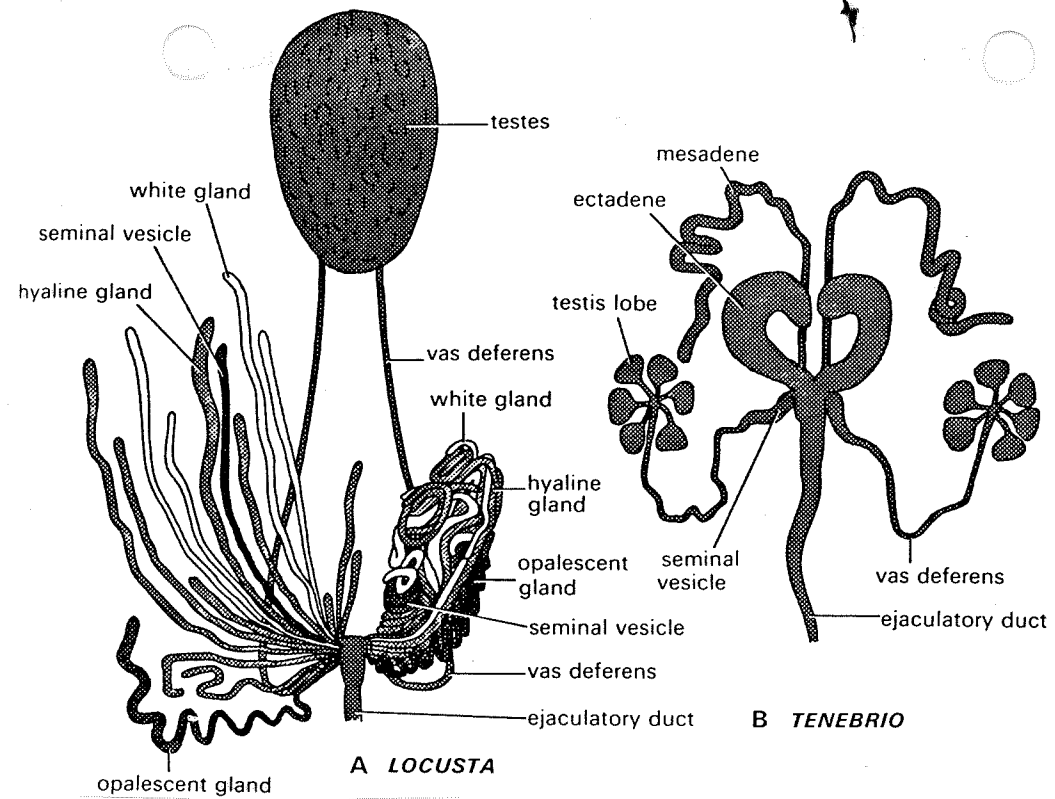


Fig. 180. Male copulatory organ and ejaculatory duct of *Locusta*. A. Lateral view with musculature removed. B. Transverse section of lower ejaculatory duct. C. Transverse section of funnel. D. Transverse section of upper ejaculatory duct (after Gregory, 1965).

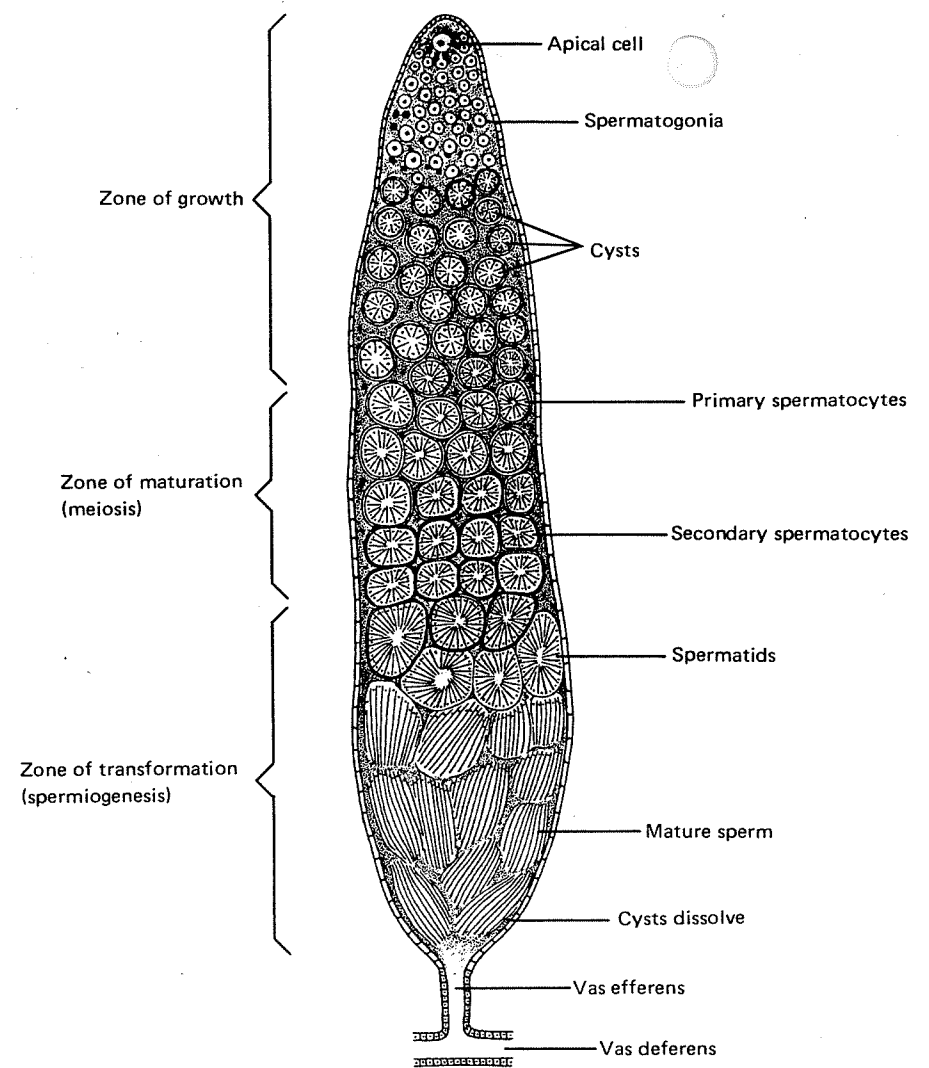


Figure 73. Diagram of sperm tube or follicle indicating sperm development. (Redrawn with slight modifications from Snodgrass, 1935)

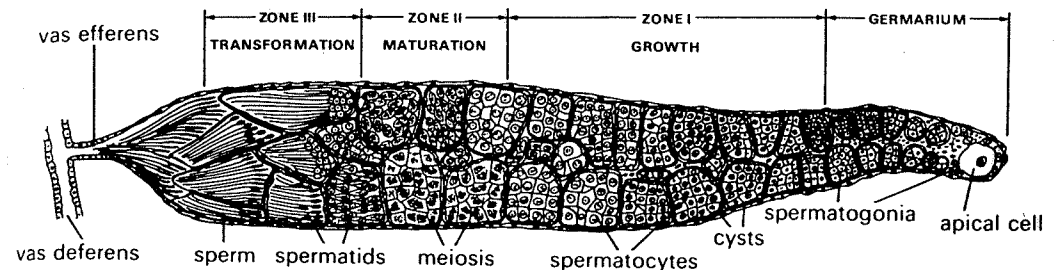


Fig. 181. Diagram of a testis follicle showing the stages of development of the sperm (from Wigglesworth, 1965).

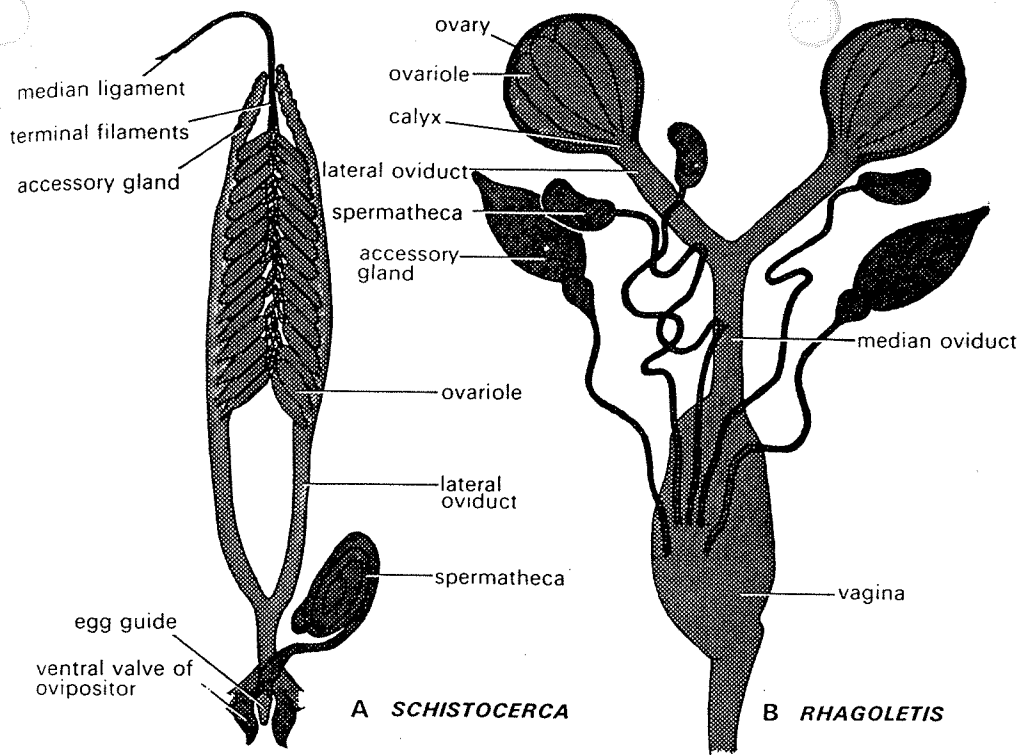
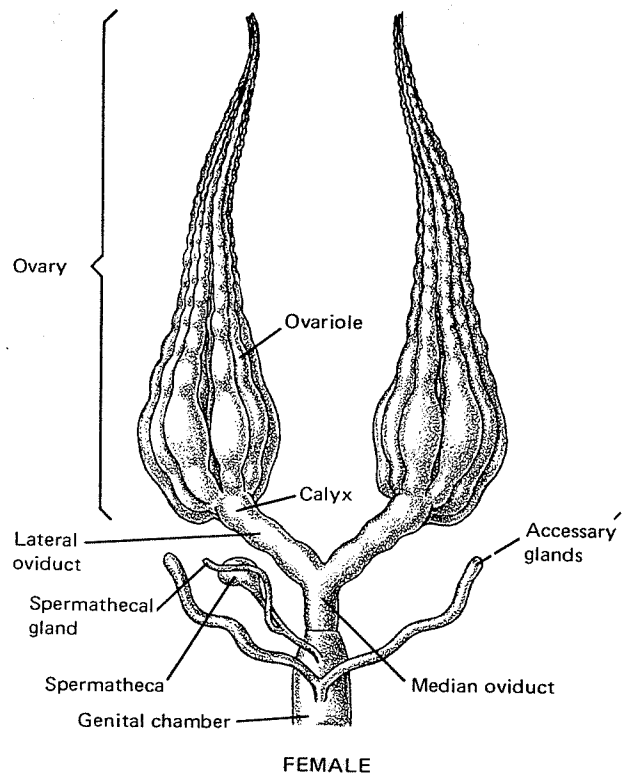


Fig. 185. Female reproductive systems of (A) *Schistocerca* and (B) *Rhagoletis* (Diptera) (after D. S. Anderson, 1966; Snodgrass, 1935).

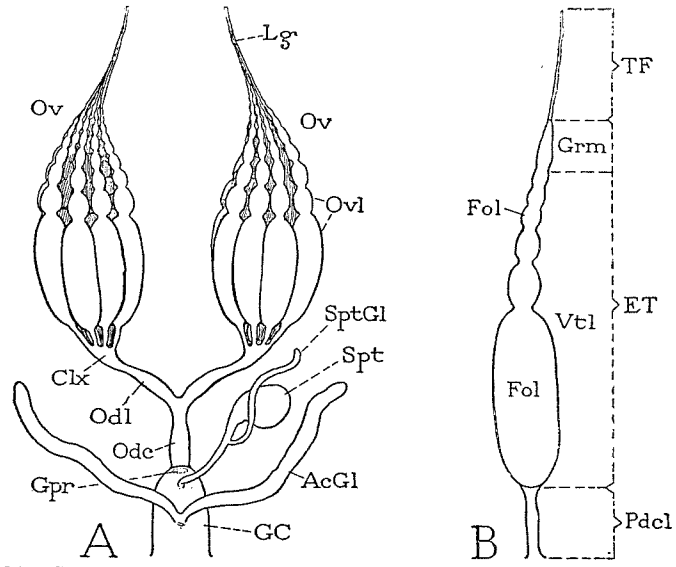


Fig. 284.—Structure of the female reproductive organs. A, diagram of the ovaries, oviducts, and associated structures. B, diagram of an ovariole. *AcGl*, accessory gland; *Clx*, calyx; *ET*, egg tube; *Fol*, follicle, or egg chamber; *GC*, genital chamber (vagina); *Gpr*, gonopore; *Grm*, germarium; *Lg*, ovarian ligament; *Odc*, oviductus communis; *Odl*, oviductus lateralis; *Ov*, ovary; *Ovl*, ovariole; *Pdcl*, ovariole pedicel; *Spt*, spermatheca; *SptGl*, spermathecal gland; *TF*, terminal filament; *Vtl*, vitellarium.

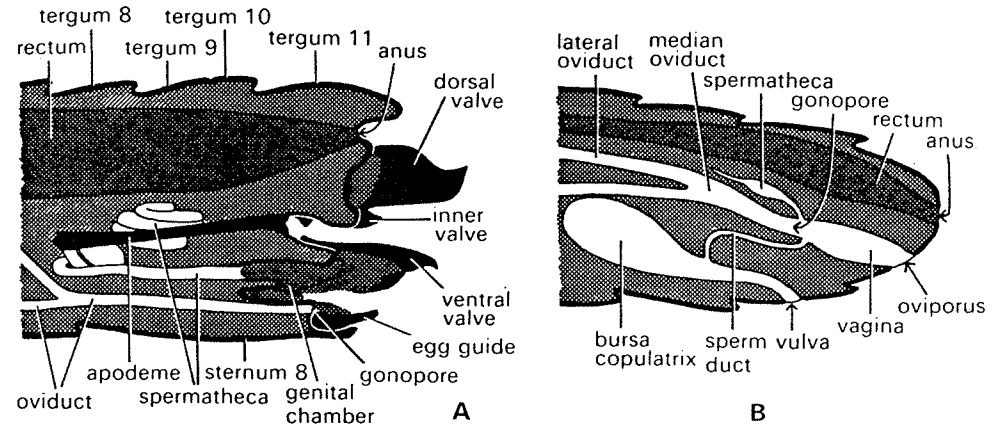


Fig. 186. Diagrammatic sagittal sections of the end of the abdomen of (A) *Locusta* and (B) a ditrysian lepidopteran (from Uvarov, 1966; Imms, 1957).

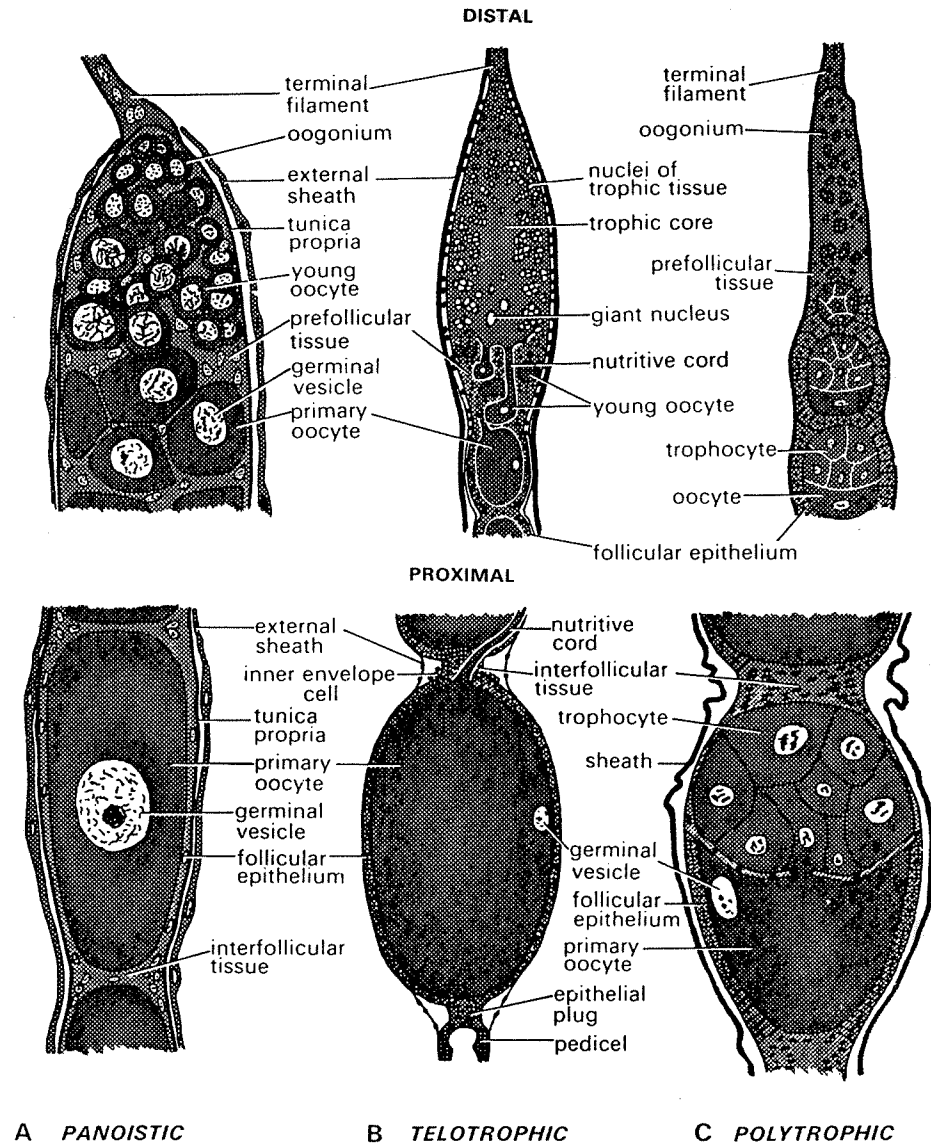


Fig. 188. Diagrams illustrating the structure of the distal region of the ovariole, including the germarium (above) and a proximal part with well-developed oocyte (below) in (A) panoistic, (B) telotrophic and (C) polytrophic ovarioles (from Bonhag, 1958; Davey, 1965a).

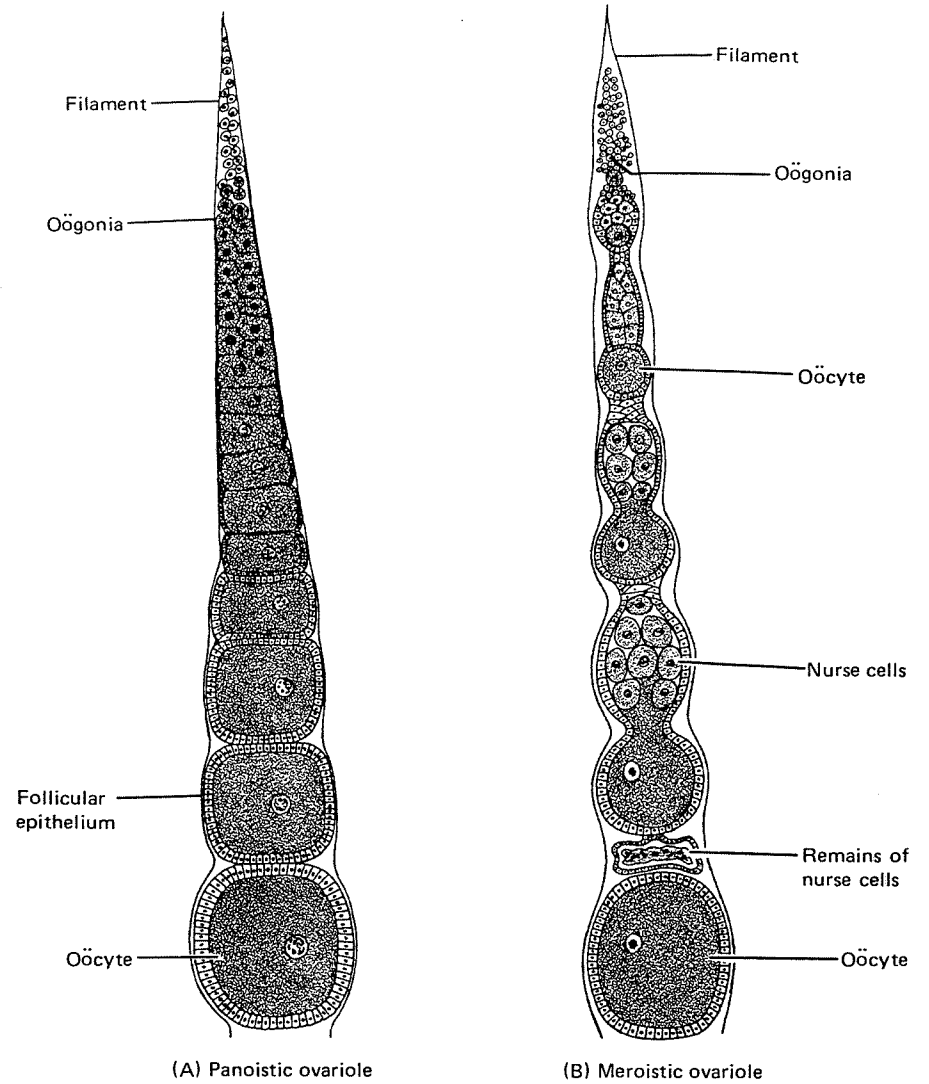


Figure 75. Two types of ovarioles. (A) panoistic from Orthoptera; (B) meroistic from Hymenoptera. (Redrawn with slight modifications from Imms, Richards, & Davies, 1957)

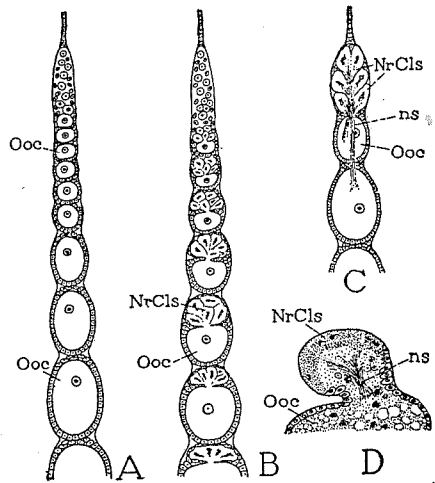


FIG. 286.—Three principal types of egg tubes, diagrammatic. A, panoistic type. B, polytrophic type. C, acrotrophic type. D, upper end of an acrotrophic ovariole of *Pseudococcus*. (From Shinji, 1919.)

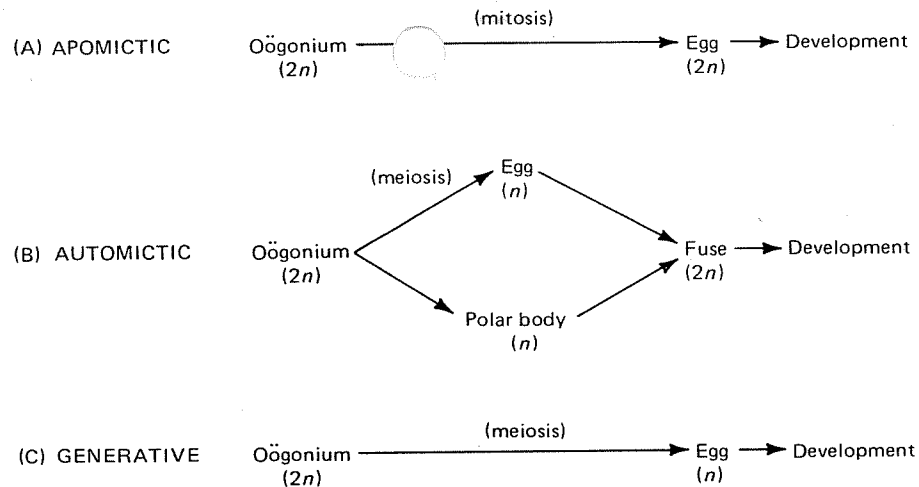


Figure 78. Types of parthenogenesis. Type A has the greatest genetic stability. Type C determines sex as the opposite is diploid from normal fertilization.

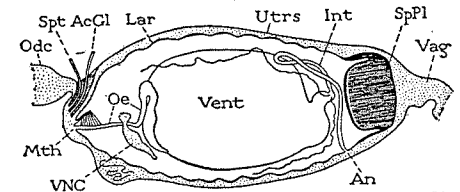


FIG. 291.—Larva of *Glossina palpalis* in uterus of the fly. (From Keilin, 1916, after Roubaud, figure reversed and relettered.) AcGl, accessory gland; An, anus; Int, intestine; Lar, larva; Mth, mouth; Odc, oviductus communis; Oe, oesophagus; SpPl, spiracular plate of larva; Spt, spermatheca; Utrs, uterus; Vag, vagina; Vent, ventriculus; VNC, ventral nerve cord.

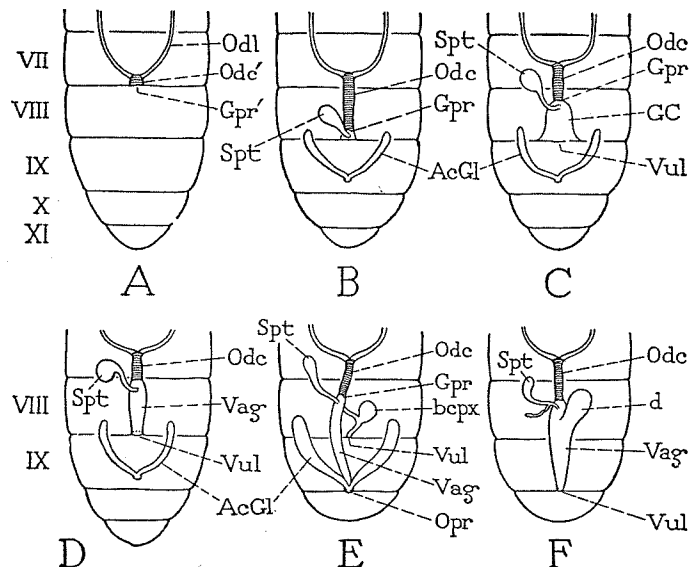


FIG. 289.—Diagrams illustrating the evolution of the median exit apparatus of the female reproductive system. A, primitive median gonopore (*Gpr'*) behind seventh abdominal segment. B, oviduct extended through eighth segment, definitive gonopore (*Gpr*) at end of this segment. C, genital chamber (*GC*) invaginated behind eighth segment. D, genital chamber converted into a vagina (*Vag*). E, vagina extended through ninth segment, but copulatory opening (*Vul*) retained on eighth. F, vagina extended through ninth segment, anterior opening lost, posterior opening becomes the vulva (*Vul*). AcGl, accessory gland; *bcpz*, bursa copulatrix; *d*, vaginal pouch; *GC*, genital chamber; *Gpr*, definitive gonopore; *Gpr'*, primitive median gonopore; *Odc*, oviductus communis; *Odc'*, primitive median oviduct; *Odl*, oviductus lateralis; *Opr*, oviporus; *Spt*, spermatheca; *Vag*, vagina (genital chamber); *Vul*, copulatory opening, or vulva.

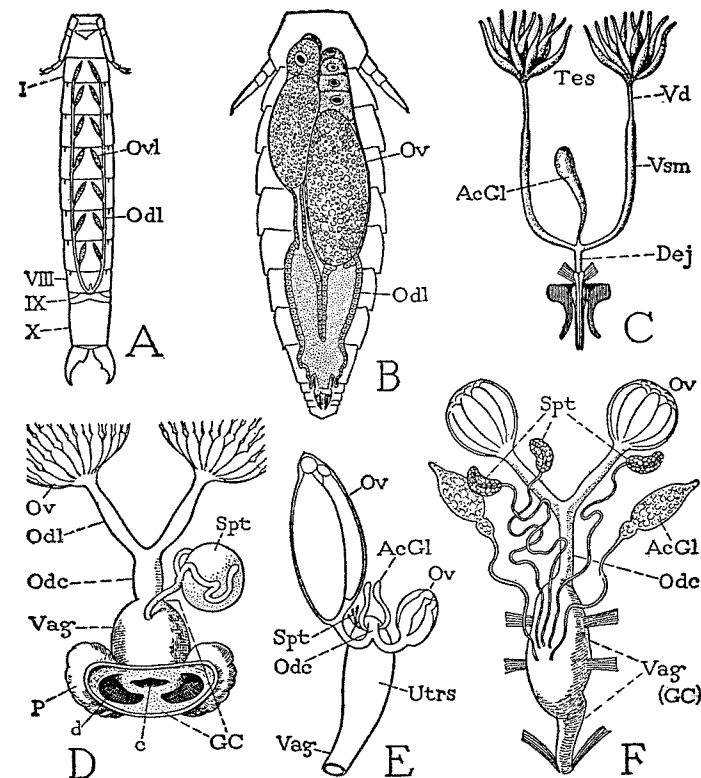


FIG. 290.—Examples of unusual types of reproductive organs. A, *Heterojapyx gullardi*, female. (From Tillyard, 1930.) B, *Acerentulus confinis*, female. (From Berlese, 1910.) C, stonefly, *Leuctra prima*, male. (From Mertens, 1923.) D, honey bee, queen, diagrammatic. E, *Mesembrina meridiana*, female. (From Keilin, 1916, after Chodkowsky.) F, *Rhagoletis pomonella*, female.