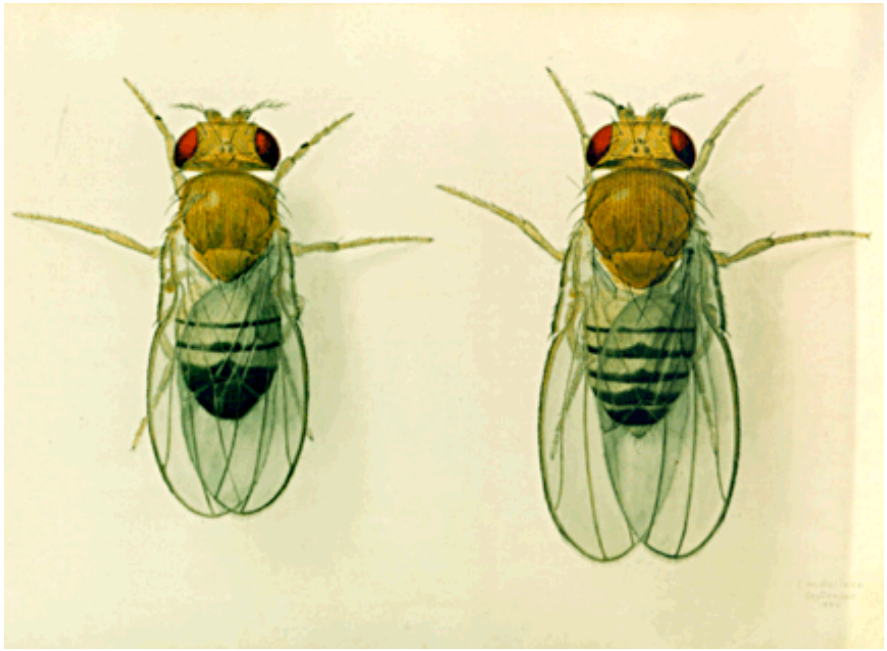
# Embryonic development of *Drosophila melanogaster*

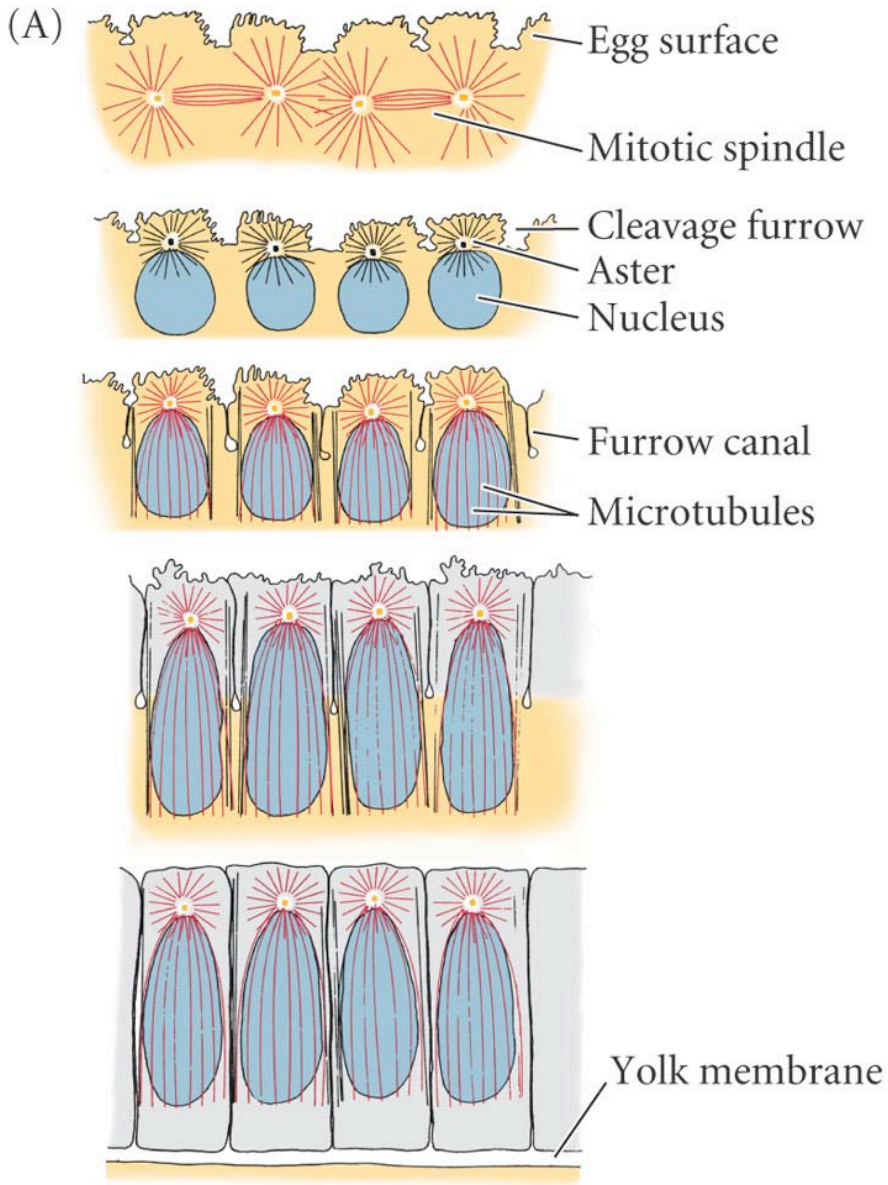


**Christiane Nüsslein-Vollhard, Eric Wieschaus, Edward B. Lewis, 1995:**
**Nobel prize for medicine**

→ **genetic analysis of embryogenesis in the fruitfly reveals conserved mechanisms that govern development of most animals including humans**

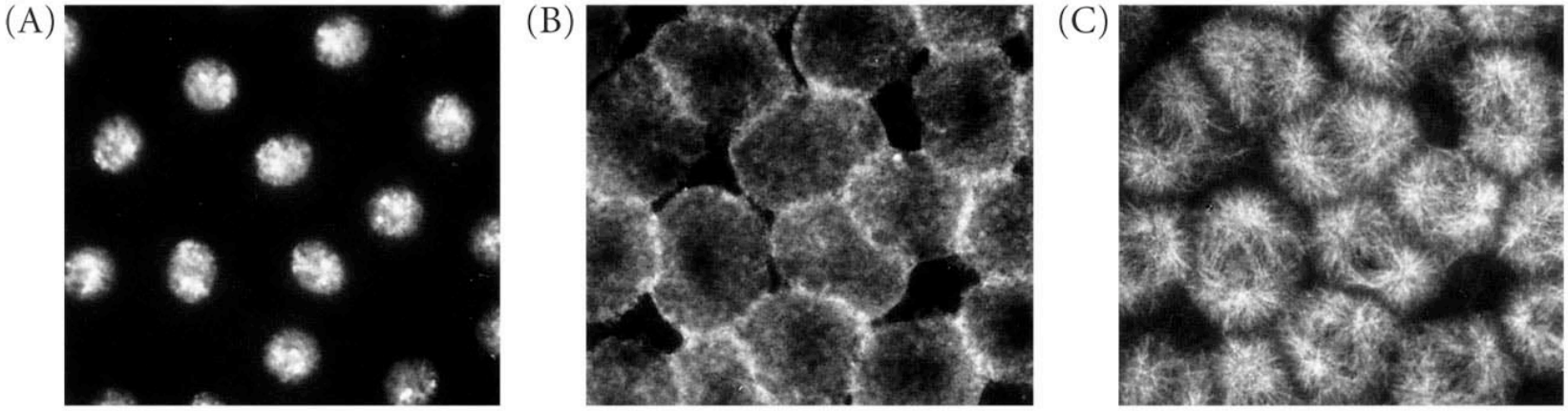
# *Superficial Cleavage in a* Drosophila *Embryo*

# *Formation of the Cellular Blastoderm in* Drosophila



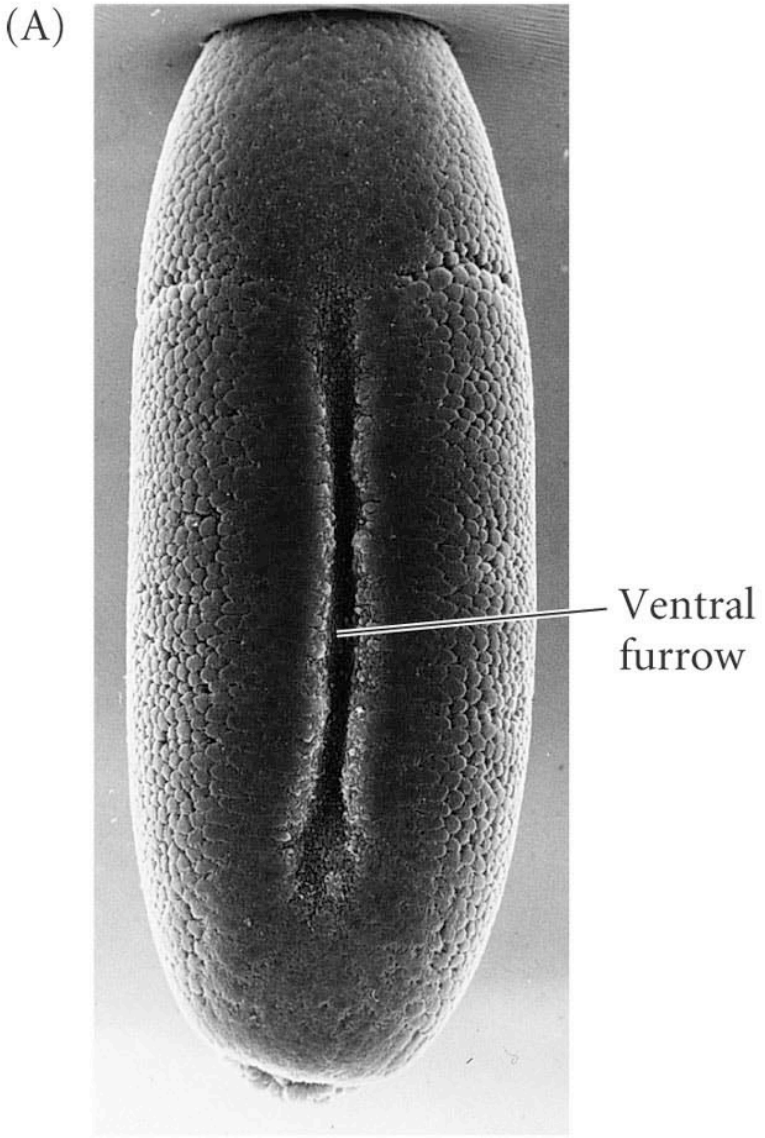
## *Localization of the Cytoskeleton around Nuclei in the Syncytial Blastoderm of* Drosophila

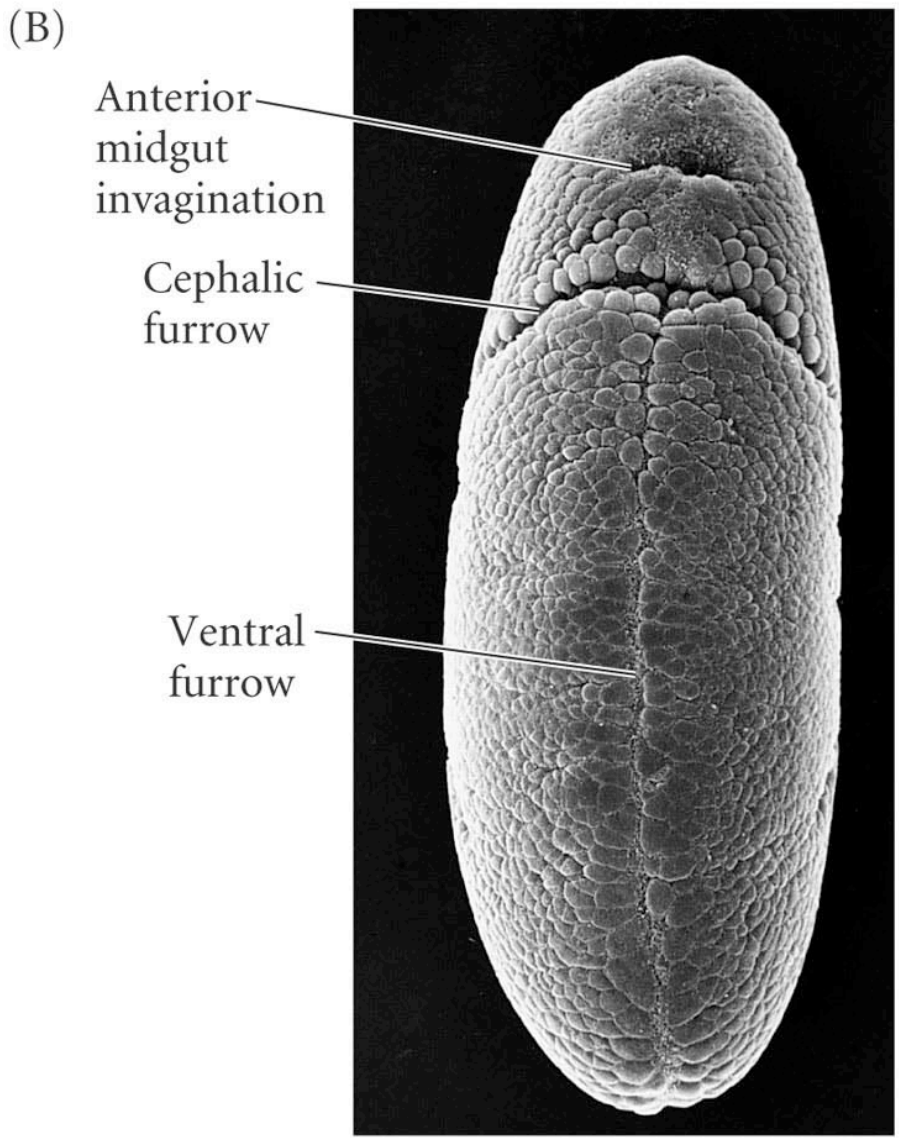
**nuclei of the syncytial blastoderm and surrounding cytoplasm form energids:**



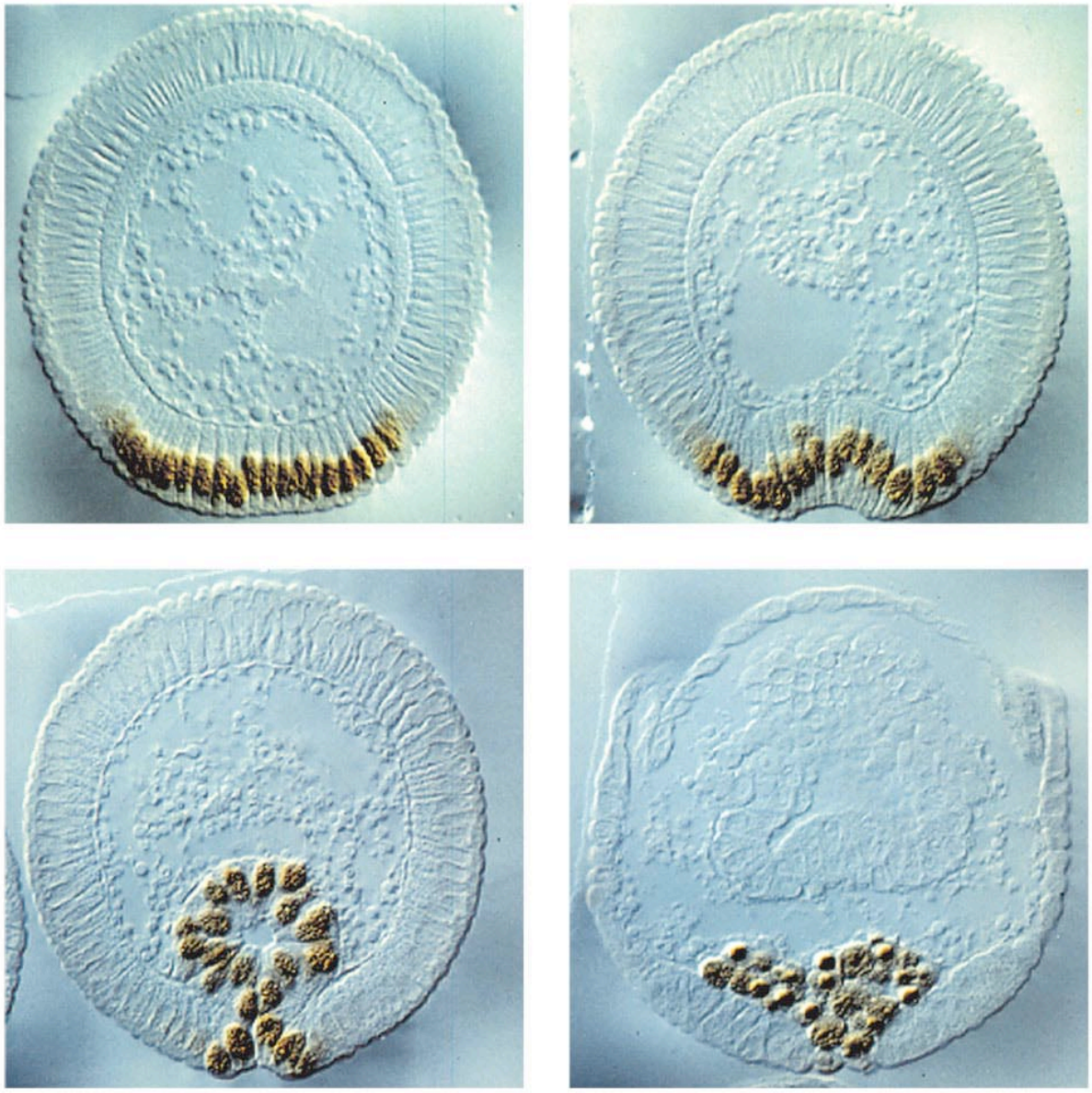

**nuclei** **actin** **microtubules**

# *Gastrulation in* Drosophila

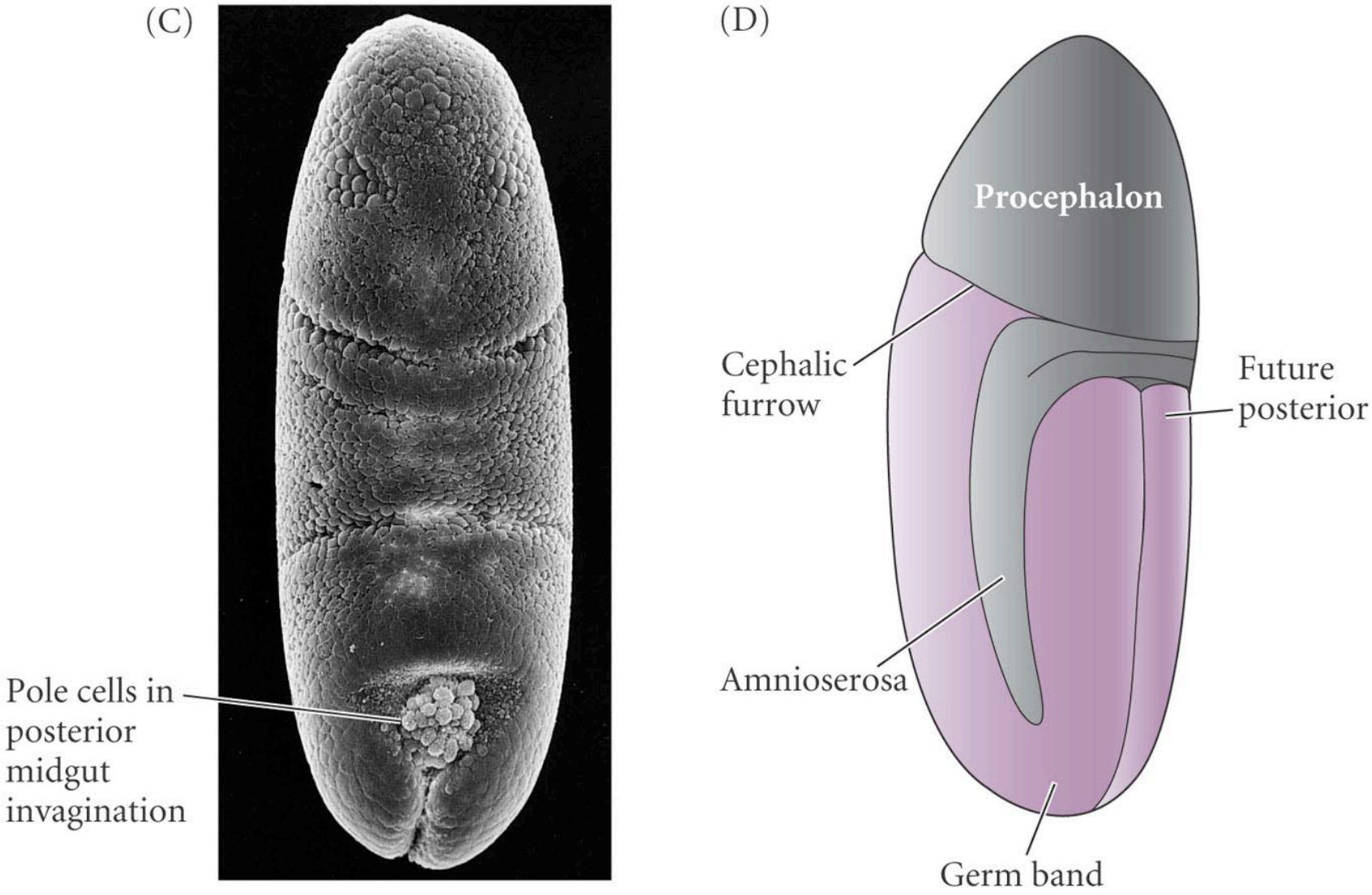


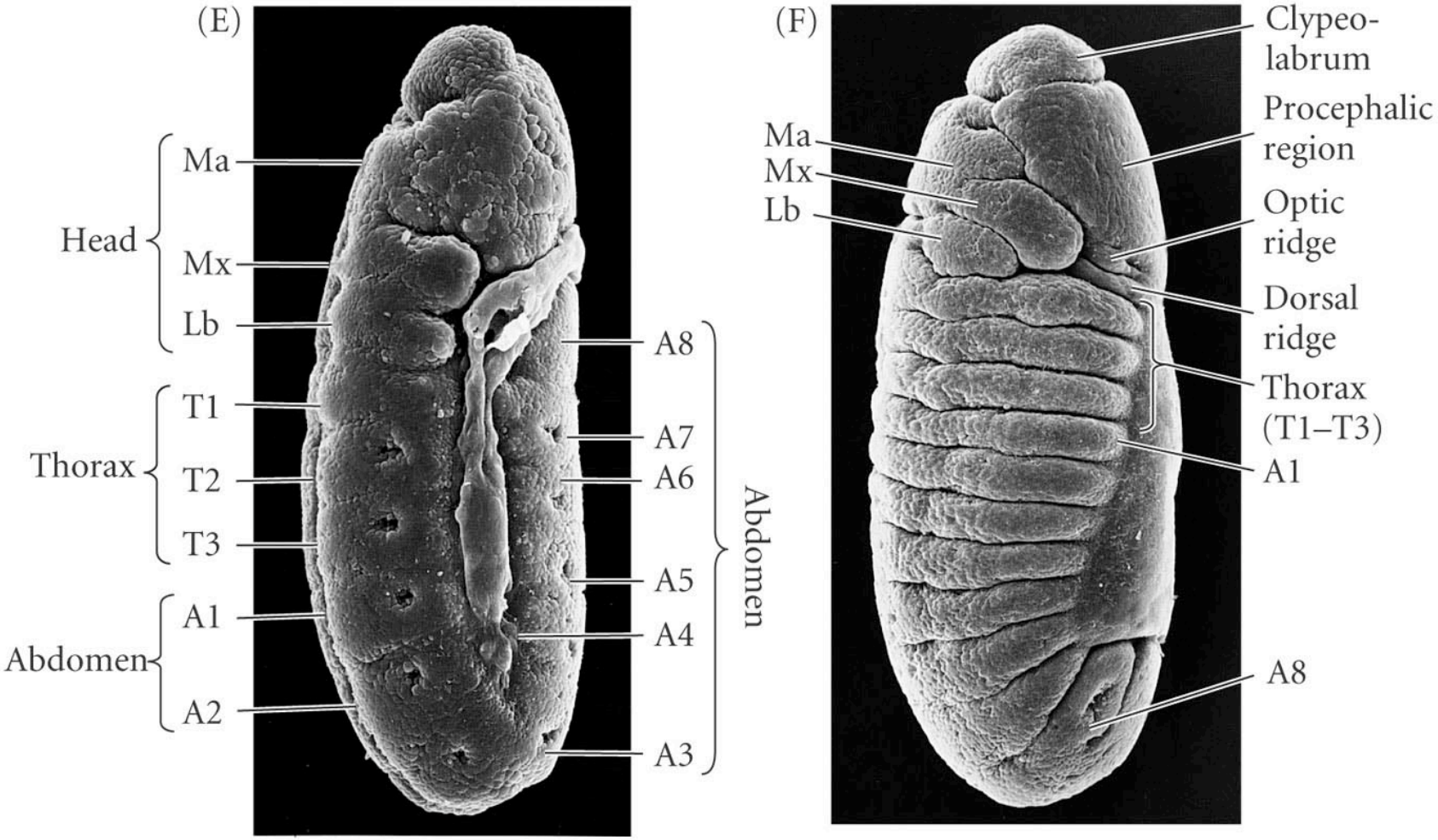
# *Gastrulation in* Drosophila



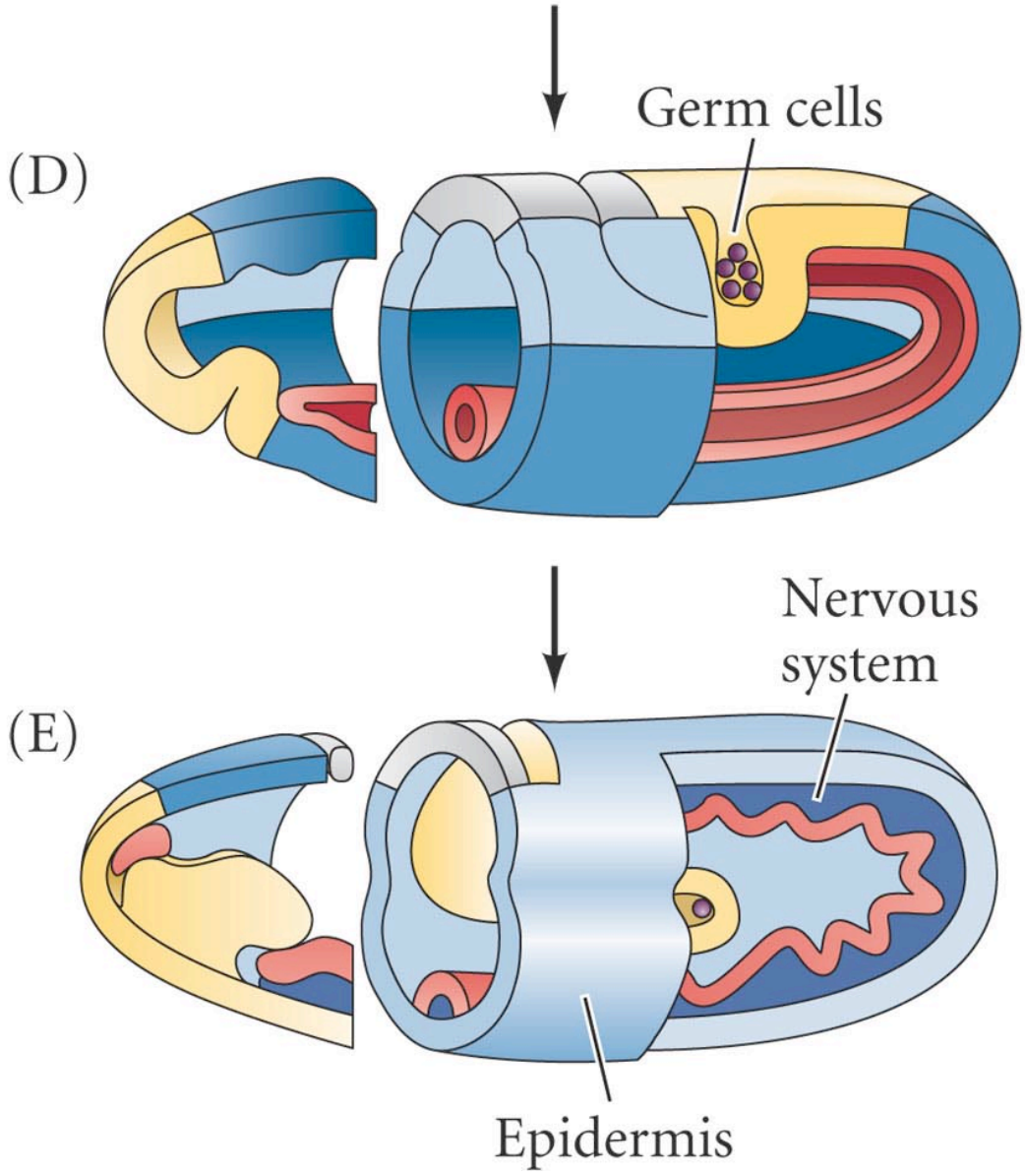
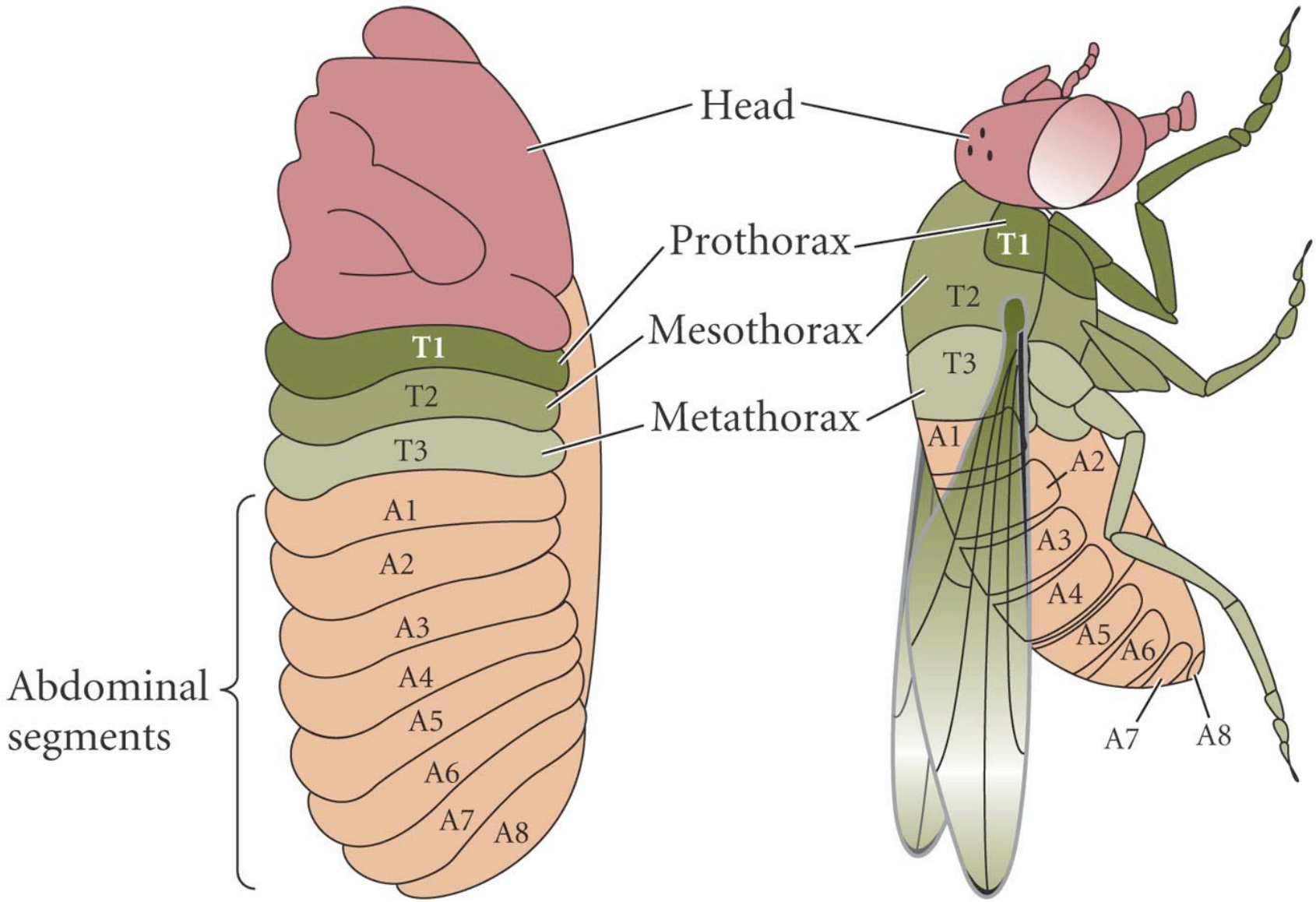
# *Gastrulation in* Drosophila



# *Gastrulation in* Drosophila



## *Schematic Representation of Gastrulation in* Drosophila



## *Comparison of Larval and Adult Segmentation in* **Drosophila**