IV. Platyhelminthes Chapters 13, 14 & 19 (BLY 459 2005)

A. Characteristics of the phylum
   1. Bilaterally symmetrical
   2. Flattened dorsoventrally
   3. Without true body segmentation
   4. Most with an incomplete digestive tract
      a. With a mouth and a PHARYNX
      b. Without an anus
   5. Acoelomate (Lack a cavity around body organs)
   6. Without the following systems
      a. Skeletal
      b. Circulatory
      c. Respiratory
   7. Reproduction
      a. Most are MONOECIOUS (= hermaphroditic)
      b. A few are DIOECIOUS (= sexes separate)

B. Class Turbellaria (pp 199-208)
   1. Characteristics
      a. Epidermis with cilia
      b. Direct development
   2. Examples
      a. *Dugesia* (= *Planaria*) is free-living
      b. *Bdelloura*
         (1). Ectocommensal
         (2). Book gills of horseshoe crabs

Slides (2): Turbellaria, *Bdelloura*, Commensal on Bookgills of Horseshoe Crabs

C. Class Monogenea (Chapter 19)
   1. Monogenetic flukes
   2. Characteristics
      a. Epidermis without cilia
      b. Feed on host blood
      c. Hermaphroditic, but do not fertilize their own eggs
   3. Location
      a. Ectoparasitic on gills, scales of fish
      b. Many have invaded host body cavities with
         openings to outside of frogs, salamanders and turtles
         (1) Mouth
         (2) Gills
         (3) Urinary bladder
   4. Taxonomy based upon attachment organs
      a. OPISTHAPTOR
         (1). Large attachment organ containing suckers
         (2). Posterior location
      b. PROHAPTOR: anterior attachment organ
Slide: Monogenea. *Gyrodactylus*

5. Gyrodactylid viviparity can cause economic problems in enclosed habitats such as fish hatcheries and aquaria
   a. Offspring developing in uterus of parent has in its uterus another developing embryo which, in turn, may carry another embryo.
   b. Parasites are adult at birth & are released directly into infection site
   c. Potential for exponential population growth
   d. Immune system of some host species can eliminate gyrodactylids

Slide: Monogenea, *Rajonchocotyle*

Slide: Monogenea, *Rajonchocotyle*

D. Class Trematoda

1. Subclass Aspidobothrea (Chapter 14)
   a. Have a huge attachment organ
   b. *Cotylaspis*
      (1). Turtles
      (2). Freshwater mollusks

Slides (2): Apsidobothrea, *Cotylaspis*

Slide: Apsidobothrea, *Aspidogaster* in cross-section

2. Subclass Digenea

E. Class Cestoidea (= Tapeworms)