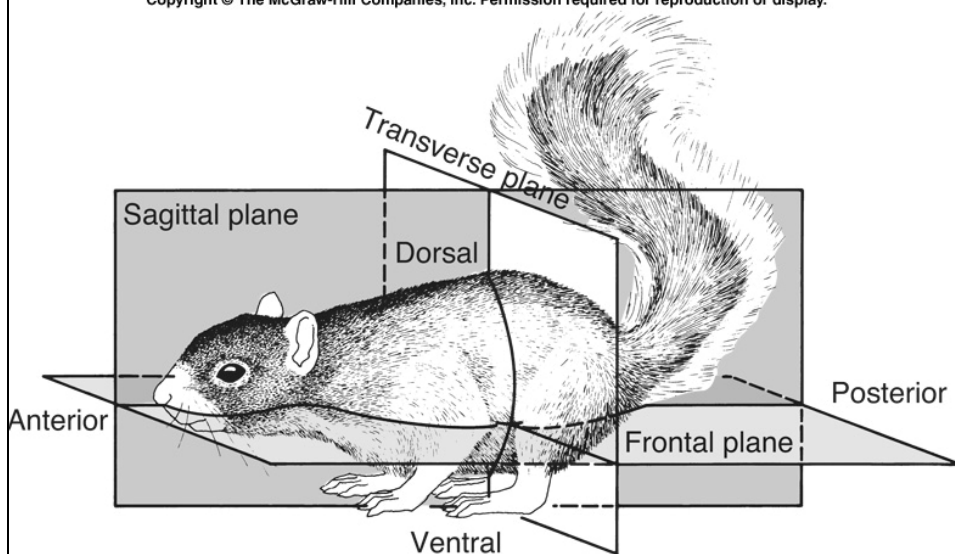


Chapter 9

Architectural Pattern of an Animal

Figure 09.02

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Unicellular

Multicellular

Symmetry equal or same size & shape of parts on opposite sides

- 1) spherical mirrored halves when plane cuts through center
common in unicellular
suited for floating & rolling

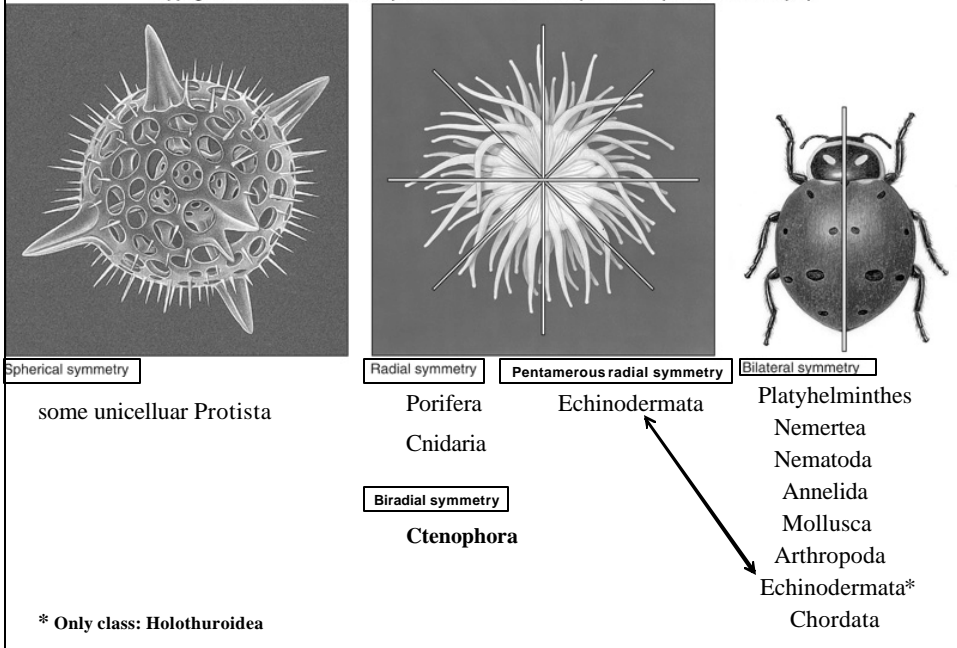
- 2) radial mirrored halves when > two planes cuts through longitudinal axis
tubular, vase, bowl shaped
sessile
floating
feeble swimmers

- 3) biradial mirrored halves when two planes cuts through longitudinal axis
pair of appendages restricts the two planes e.g. Ctenophora

- 4) bilateral mirrored halves when plane cuts through sagittally
anterior-posterior axis → **cephalization** → **forward direction**
dorsal-ventral axis **sensory structures**
left-right halves

Figure 09.01

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Germ layers

ectoderm, endoderm & mesoderm

Body Cavities

acoelom no coelom

pseudocoelom → cavity but not completely surrounded by mesoderm

coelom “true” internal fluid-filled body cavity

space to accommodate specialized organs e.g. excretory, reproductive

hydrostatic pressure for locomotion & burrowing

surrounds & protects gut

Segmentation serial repetition of similar body segments

Annelida

Arthropoda

Chordata

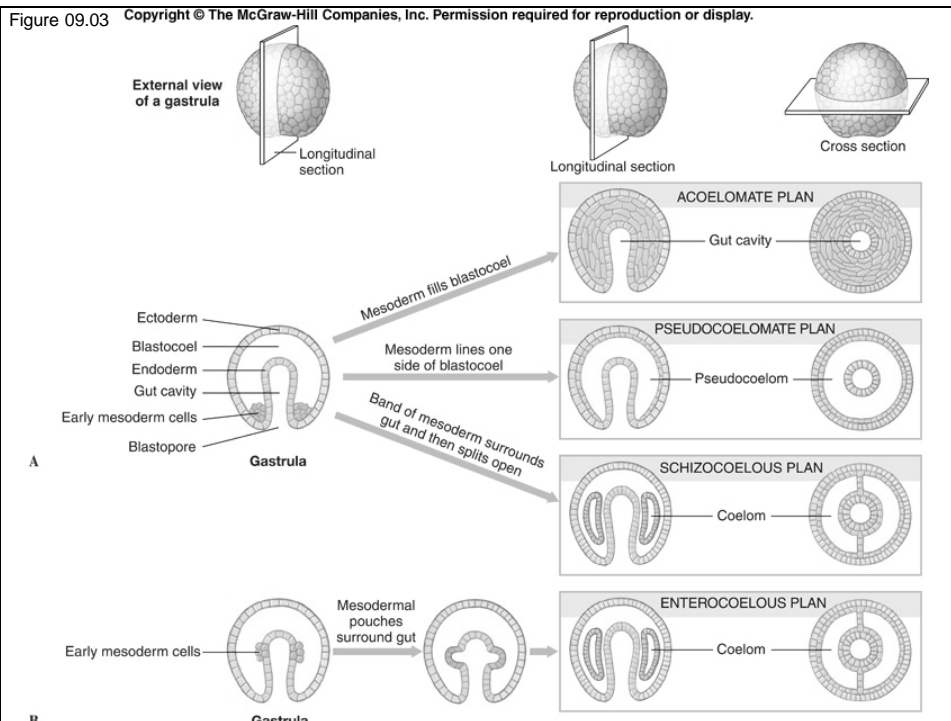


Figure 09.03a

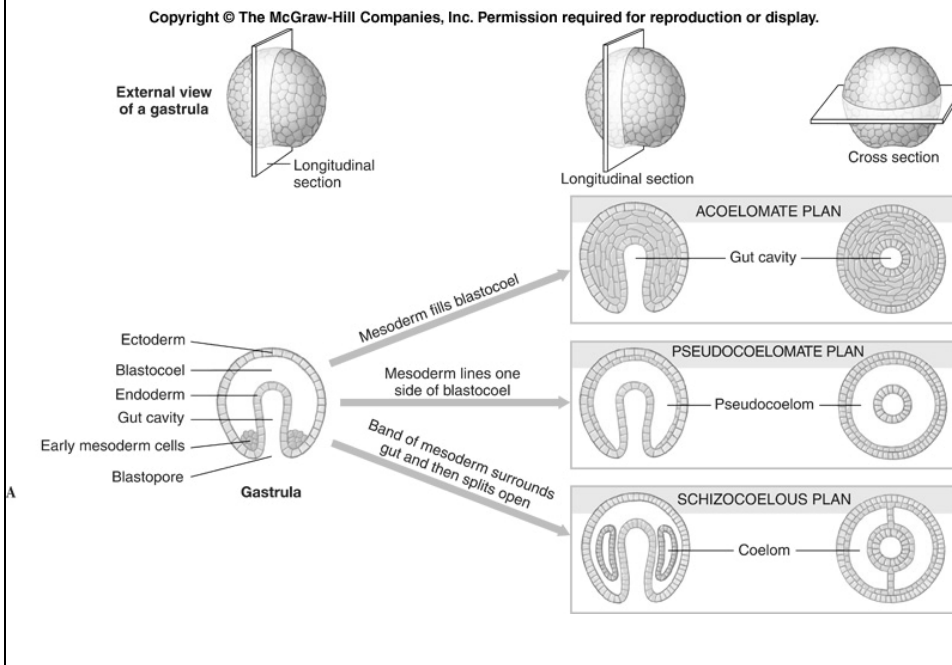


Figure 09.03b

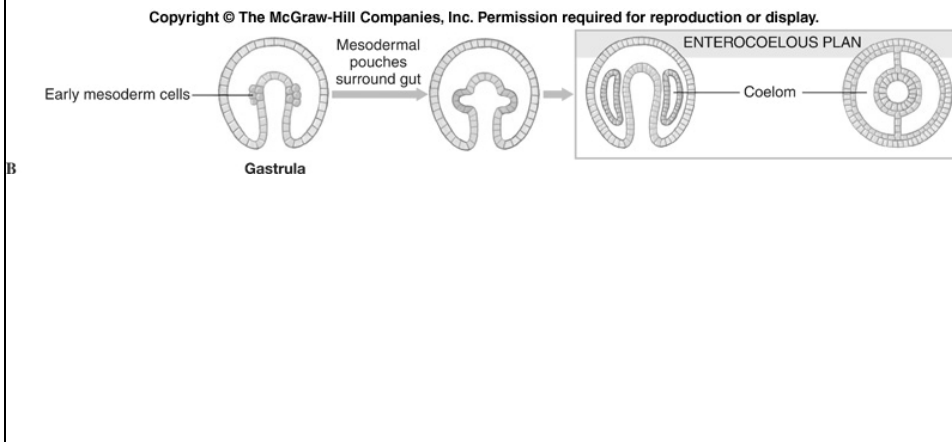
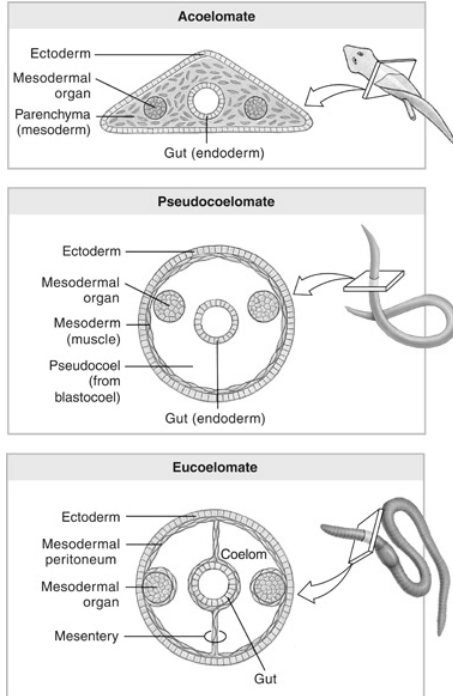


Figure 09.04

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Phylum
 Platyhelminthes
 Nematoda
 Annelida

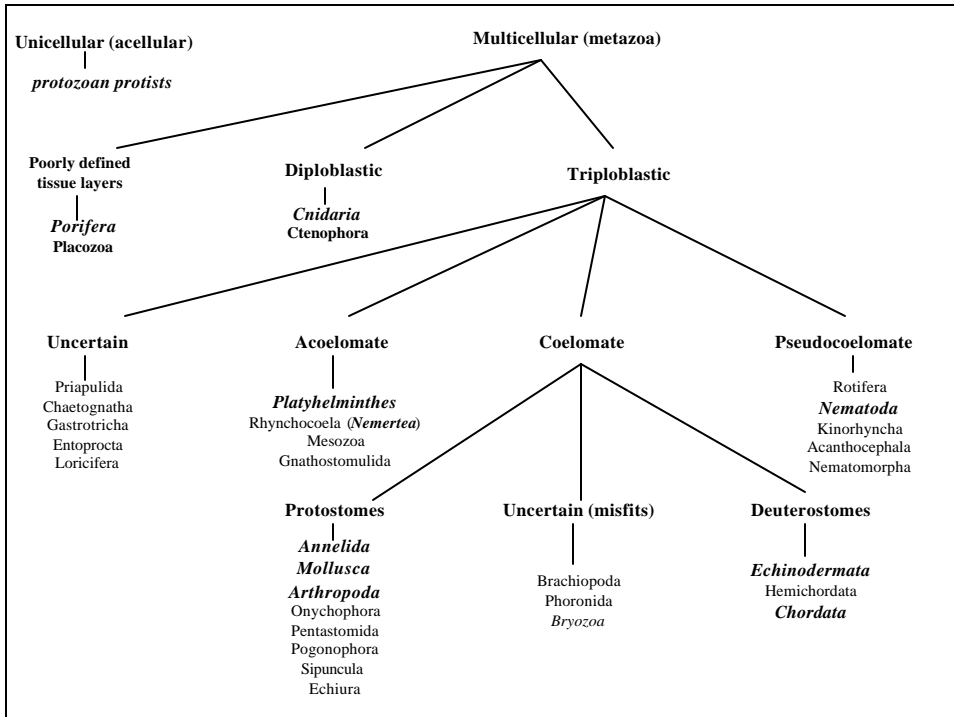


Figure 09.05

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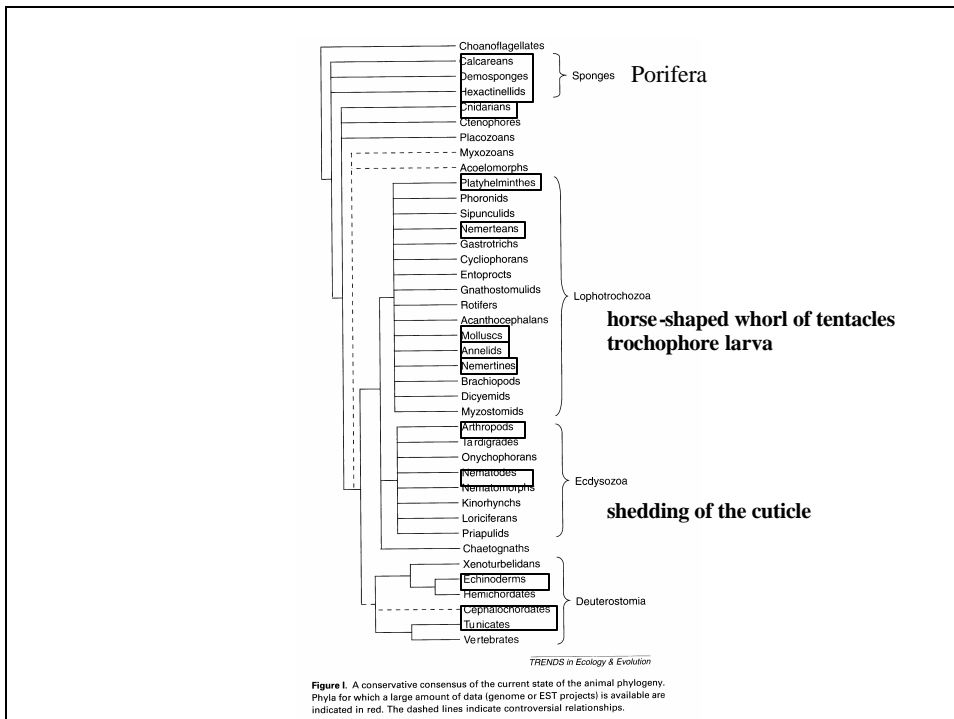
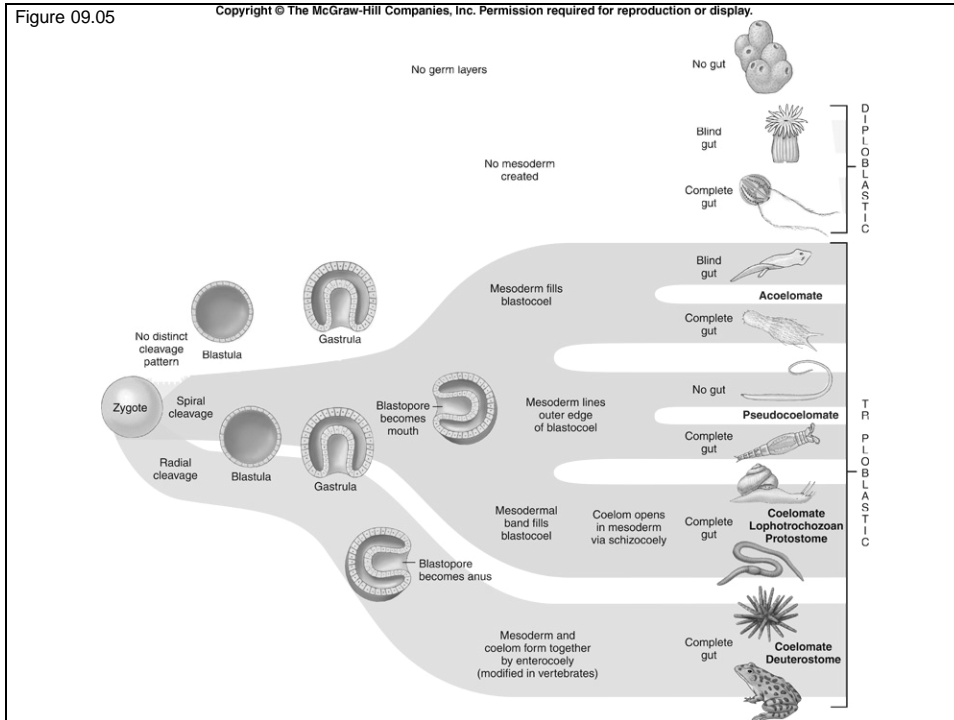


Figure 1. A conservative consensus of the current state of the animal phylogeny. Phyla for which a large amount of data (genome or EST projects) is available are indicated in red. The dashed lines indicate controversial relationships.

Figure 09.06

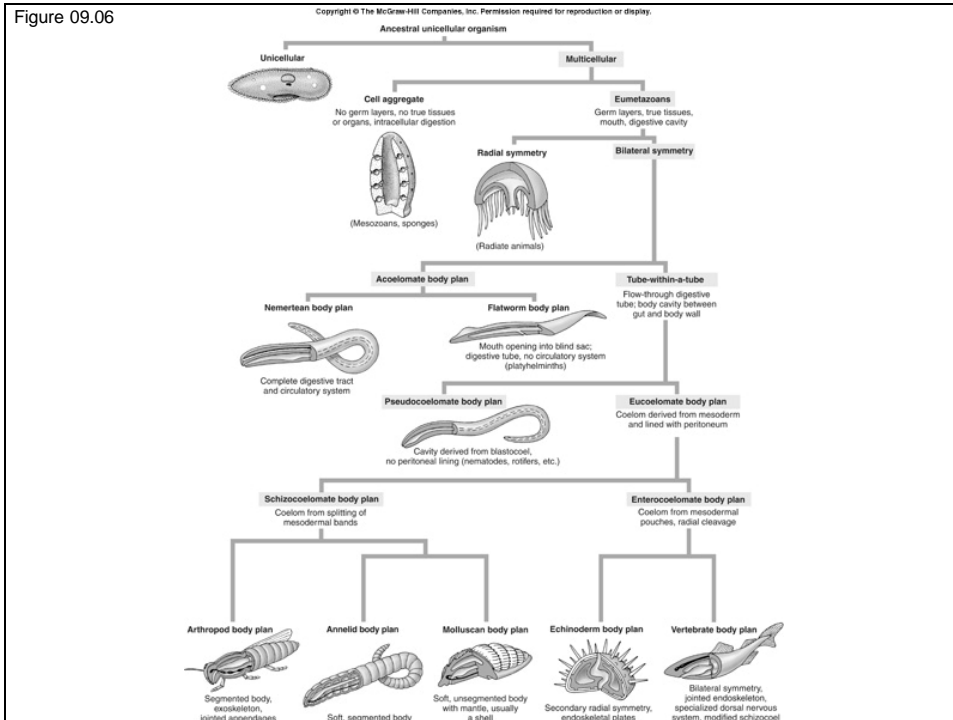
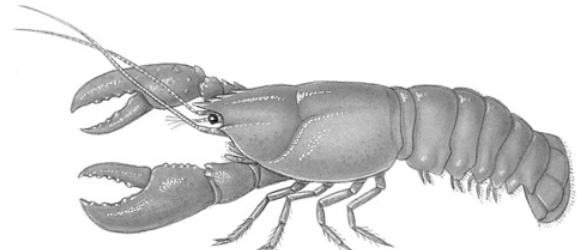


Figure 09.07

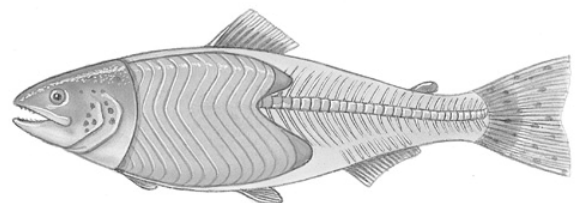
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Annelida



Arthropoda



Chordata

Figure 09.co

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Phylum: Ctenophora (Comb jellyfish)

