

Ankara University, Faculty of Agriculture , Department of Fisheries and
Aquaculture, Programme of Fisheries and Aquaculture

AQS421: Aquatic Invertebrates

Reference: Brusca, R. C., & Brusca, G. J. **Invertebrates**. 2003.
Sunderland, MA: Sinauer Associates, 2.

AQS421: Aquatic Invertebrates

Week 1:

- Introduction

Week 2:

- Classification, Systematics and Phylogeny

Week 3:

- Animal Architecture and the Bauplan Concept

Week 4:

- Animal Development, Life Histories, and Origins

Week 5:

- The Protists

Week 6:

- Phylum Porifera: The Sponges
- Phylum Cnidaria

Week 7:

- Phylum Ctenophora: The Comb Jellies
- Phylum: Platyhelminthes

Week 8:

- Phylum Nemertea: The Ribbon Worms
- Blastocoelomates and Other Phyla

Week 9:

- Phylum Annelida: The Segmented Worms
- Sipuncula and Echiura

Week 10:

- The Emergence of the Arthropods: Onychophorans, Tardigrades, Trilobites, and the Arthropod Bauplan

Week 11:

- Phylum Arthropoda: The Crustacea

Week 12:

- Phylum Mollusca

Week 13:

- Lophophorates
- Phylum Echinodermata

Week 14:

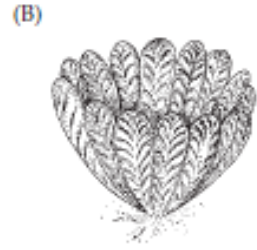
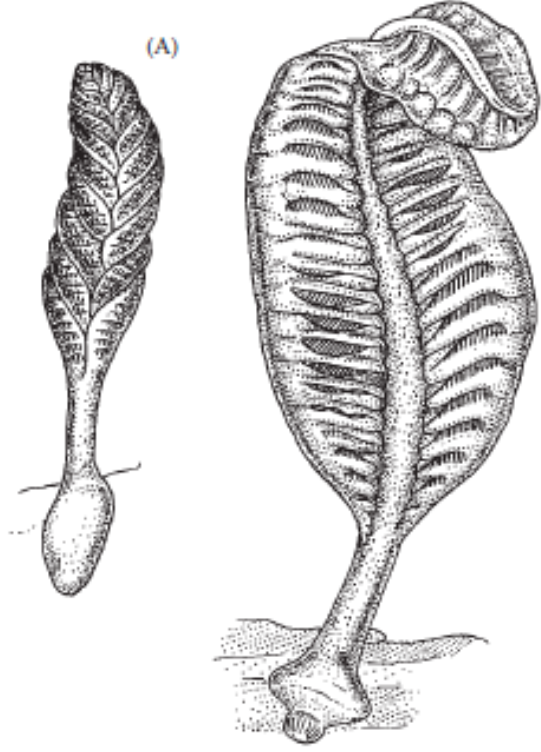
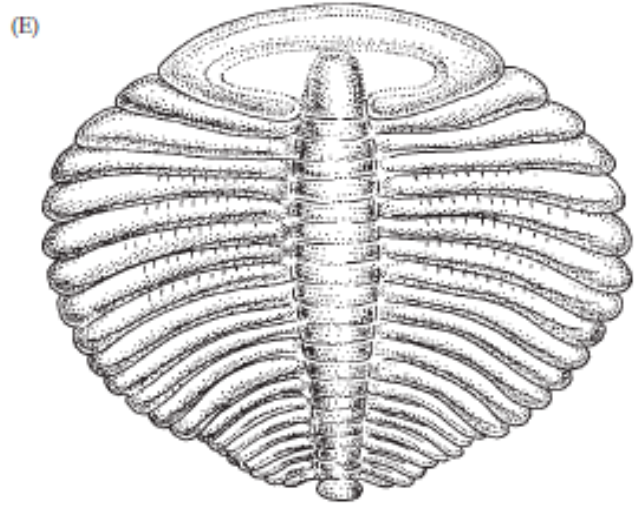
- Other Deuterostomes
- Perspectives on Invertebrate Phylogeny

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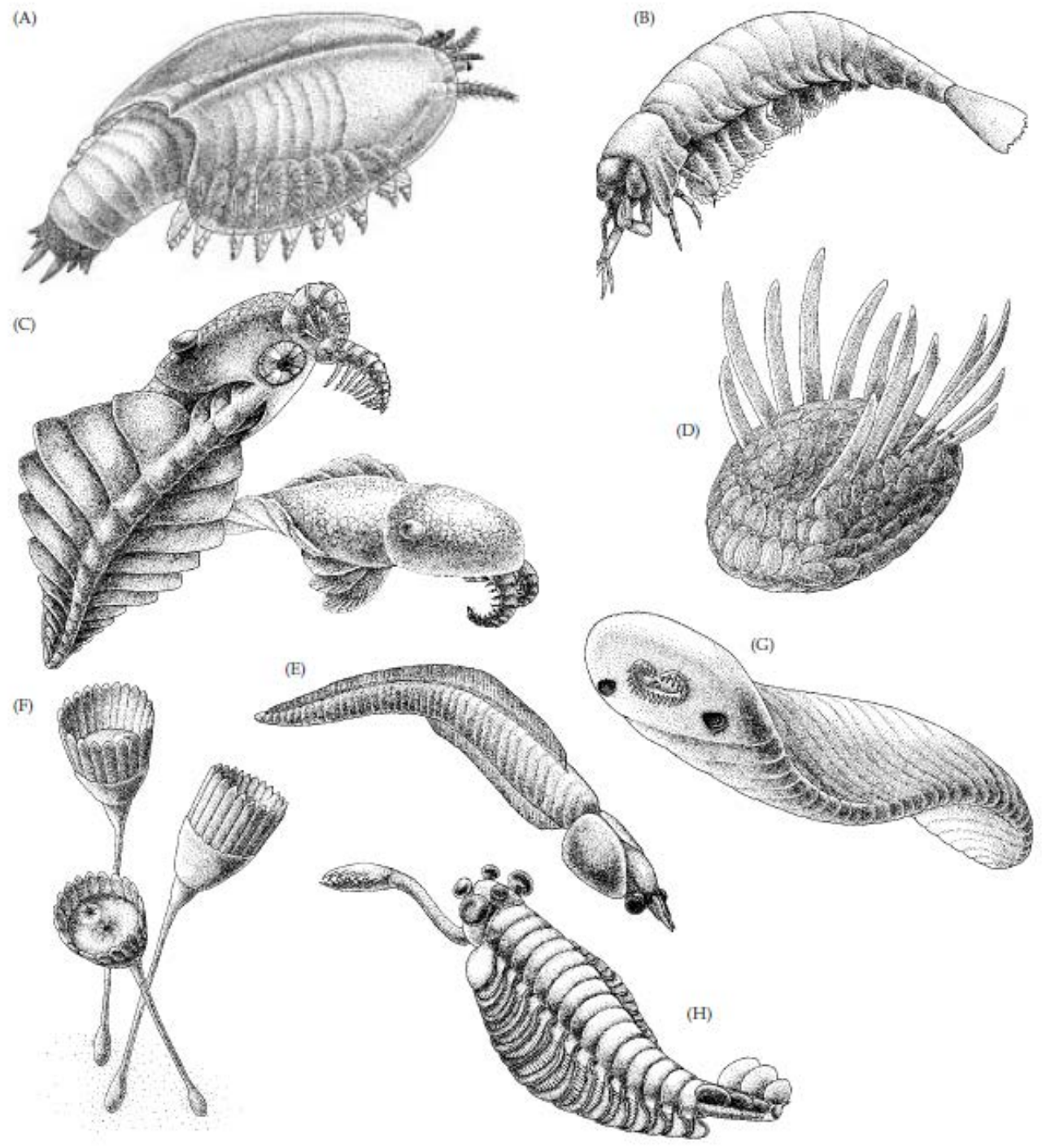
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1. Week: Introduction

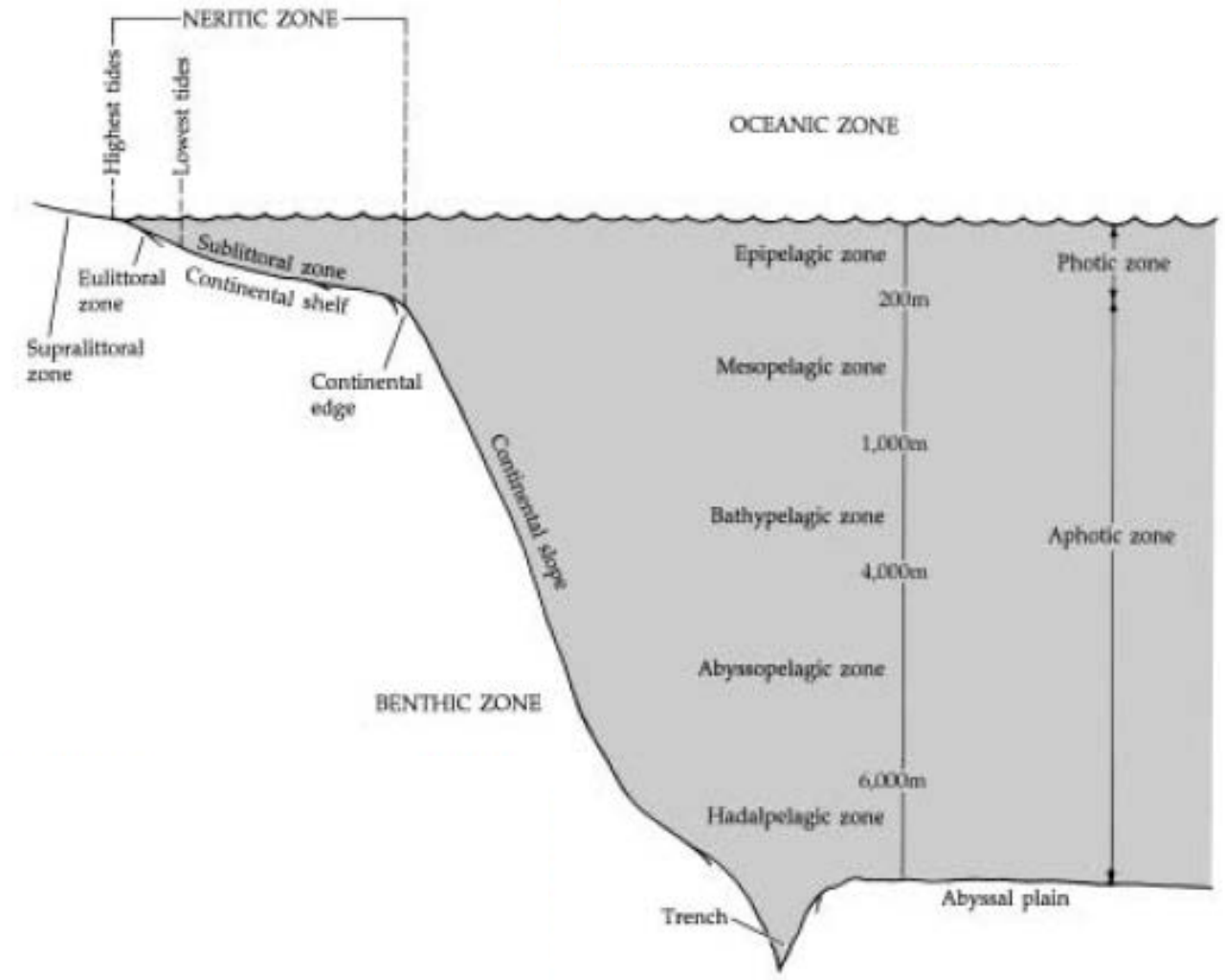
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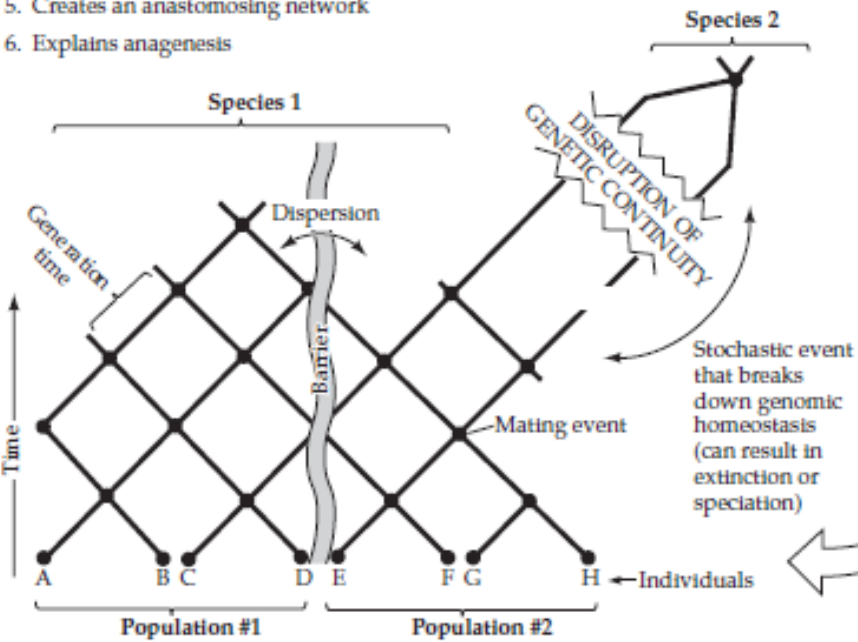


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Microevolution (Within species evolution)

1. Individuals and populations linked by gene flow (e.g., reproductive ties, dispersion)
2. Process produces pattern of reticulation
3. Acts on individuals (e.g. natural selection)
4. Works to maintain genomic continuity (i.e. evolutionary homeostasis)
5. Creates an anastomosing network
6. Explains anagenesis



Macroevolution (Species/clade evolution)

1. Species linked by speciation events
2. Process produces pattern of bifurcation ("dendrogram")
3. Acts on species
4. Disrupts genomic continuity
5. Creates hierarchical, diverging network
6. Explains cladogenesis (origin of clades: species and species groups)

