PODCAST OUTLINE: ANNELID STRUCTURE

1. Introductory comments
   A. Included groups
   B. Species diversity
   C. How similar to the mollusks

2. External features
   A. General shape
   B. Metameres and septa
      1. Defined
      2. Systems in each metamere
      3. Organismal systems
   C. Body regions

3. Body wall
   A. Epidermis with cuticle
   B. Muscles
4. Coelom

5. Digestive system
   A. Mouth and anus
   B. Pharynx and esophagus
   C. Crop and gizzard
   D. Intestine
      1. External morphology
      2. Cross-section features

6. Circulatory system
   A. General structure
   B. Dorsal and ventral blood vessels
   C. Hearts
   D. Capillaries
      1. Intestinal
      2. Body wall
      3. Nephridial
7. Nervous system
   A. Ventral nerve cord
   B. Lateral nerves
   C. Brain

8. Nephridial system
   A. Structure of nephridium
   B. Function of nephridium
   C. Nephridiopores

9. Reproduction
   A. Asexual
   B. Sexual
      1. Sperm and egg production
      2. Copulation
      3. Zygote development
Questions

Explain how the Annelid’s external structures compare to those of a planarian and to a roundworm.

In annelids, how do the body wall, coelom, and intestine relate to each other spatially?

What is the significance of having radial and longitudinal muscles in the annelid?

What is meant when somebody says that annelids have a hydrostatic skeleton?

Describe the linear sequence and explain the functions of the various organs in the annelid digestive system.

Compare the circulatory system of an annelid to that of a clam.

Describe three routes that blood takes from the ventral blood vessel to the dorsal blood vessel of an annelid. How does each route contribute to the physiological well-being of an annelid?

Describe the main components of the nervous system of an annelid. How does it compare to that of a jellyfish? To that of a planarian?

How do nephridia function to cleanse the coelomic fluid of an annelid?

How do annelids reproduce? What is the adaptive significance of their hermaphroditic reproductive behavior?