

Introduction to the Arthropods

I. Introduction

- a. Number of species
- b. Habitats
- c. Examples

II. Features that unify them as a group

- a. Segmentation and tagmosis
- b. Cephalization
- c. Jointed appendages - articulation
- d. Exoskeleton
 - 1. Composition
 - 2. Functions
 - 3. Molting
 - 4. Instars

II. Features that unify them as a group (cont.)

e. Digestive system

1. Parts

2. Variability

f. Eyes

1. Compound vs simple.

g. Nervous system

1. Components

h. Circulatory

1. General nature

2. Path of blood

3. Significance relating to size

i. Organs for gas exchange

j. Wings

k. Organs for nitrogen removal

III. Four subphyla

- a. Chelicerates
- b. Crustaceans
- c. Hexapods (Insects)
- d. Myriopods

IV. Ecology

- a. Habitats
- b. Feeding types
- c. Pollinators

V. Importance to humans

- a. Beneficial
- b. Detrimental

VI. Evolutionary considerations

Questions pertaining to the Introduction to Arthropods podcast

1. What are the four subphyla of Arthropods?
2. What is tagmosis, and why is it so significant to the Arthropods?
3. What is meant when somebody says that Arthropod appendages are articulated?
4. Describe the arthropod exoskeleton in terms of structure and function?
5. How does growth differ between an arthropod and a mammal (that has an internal skeleton)?
6. Discuss the nature and significance of the open circulatory system in arthropods.
7. How does the arthropod nervous system compare to those of a cnidarian, a flatworm, and an annelid?
8. What is the significant change in arthropod phylogeny over the past several decades?
9. How are arthropods important in most food webs?