

Categories Of Biological Classification (p. 300 – 304)

I. Taxonomy

1. Define the term taxonomy.

Taxonomy – science of naming + classifying organisms

2. Circle the letter of each sentence that is true about early efforts at naming organisms.

- a. Names were usually in English.
- ☒ b. Names often described detailed physical characteristics of a species.
- ☒ c. Names could be very long. (Polynomials → 12 or more Latin words)
- ☒ d. It was difficult to standardize the names.

3. Who developed the modern classification system of organisms?

Carlous Linnaeus

Swedish Botanist
(18th Century)

4. Define the term binomial nomenclature.

Binomial Nomenclature – two-word naming system of organisms
(developed by Linnaeus)

5. Circle the letter of each sentence that is true about binomial nomenclature.

- a. The system is no longer used today.
- ☒ b. Each species is assigned a two-part scientific name.
- ☒ c. The scientific name is always written in italics.
- d. The second part of the scientific name is capitalized.

6. Define the term genus.

Genus – taxonomic category containing similar species

7. Identify the genus and species names of a grizzly bear, *Ursus arctos*.

Genus = Ursus Species = arctos

8. Identify the genus and species names of a red maple, *Acer rubrum*.

Genus = Acer Species = rubrum

9. Write your name as a scientific name using binomial nomenclature. (Be creative!)

Reuterius craigera

Common
Names

- Vary among languages
- Different species share common names

European
vs.
American
Robin

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II. Classifying Organisms**1. Define the term domain.**

Domain – taxonomic grouping of similar kingdoms

2. List the three domains and identify the types of organisms assigned to each domain.

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1. Archaea : Bacteria (Methanogens, Halophiles)
2. Eubacteria : Bacteria (Streptococcus, Escherichia)
3. Eukarya : Protists, Fungi, Plantae, Animalia

3. List the remaining seven taxonomic levels (from general to specific).

<u>Kingdoms</u>	- contains phyla
<u>Phylum</u>	- contains classes
<u>Class</u>	- contains orders
<u>Order</u>	- contains families
<u>Family</u>	- contains genera
<u>Genus</u>	- contains species
<u>Species</u>	- individual species

4. Taxonomically, classify a mountain lion. (We will do this in class.)

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<u>Animalia</u>	- Kings
<u>Chordata</u>	- Play
<u>Mammalia</u>	- Chess
<u>Carnivora</u>	- On
<u>Felidae</u>	- Fine
<u>Felis</u>	- Green
<u>Felis concolor</u>	- Satin