

Topic #13

**Biotic Component of Forests:
Classification and Summary of Single Cell Life Forms**

(Campbell and Reece: 491-497, 334-337, 534-547, 549-569)

I. Objectives

- A. Introduce concepts for classifying living organisms into related groups.
- B. Review basic characteristics of single cell life forms and viruses.

II. Introduction.

- A. Food web is made of many different types of organisms.

- B. Living organisms classified into related groups.
- C. Based on "evolutionary relationships".

III. Taxonomic classification based on evolution.

- A. Domain
- B. Kingdom
- C. Division or Phylum.
- D. Class
- E. Order
- F. Family
- G. Genus
- H. Species

I. Latin name

1. Genus species
2. Always underline or italicize.

IV. Six "Kingdoms" of living organisms

- A. Archaeobacteria.
- B. Eubacteria.
- C. Protista.
- D. Plantae.
- E. Fungi.
- F. Animalia.

V. Viruses.

A. Structure.

B. Energy utilization.

C. Reproduction (Figs. 37.5-37.6).

D. Are viruses living?

VI. Archaeobacteria.

A. Structure and reproduction:

B. Energy utilization.

1. Anaerobic.

2. Salt environments

3. High temperatures.

C. Ancient relics?

VII. Eubacteria.

A. Structure:

B. Most diverse, longest evolving, life form.

C. Reproduction:

D. Energy utilization.

1. Aerobic and anaerobic.

2. Many energy sources.

3. Food web role.

VIII. Protista.

A. Structure: Grouping of convenience.

1. Eucaryotic.

2. Unicellular or little distinction between tissues.

B. Energy utilization.

1. Photosynthetic - have chlorophyll.

a) Diatoms:

b) Green, red, brown algae.

2. Lack chlorophyll.

IX. Key Terms.

taxonomic classification

Domain

Kingdom

Genus

Species

Latin name

prokaryote

eukaryote

obligate parasite

vector

Archaeobacteria

Eubacteria

binary fission

obligate anaerobe

facultative anaerobe

toxins

diatoms

red and green algae

protozoa