

## Topic 1: Introduction to Riparian Ecosystems

### I. Two-Minute History

Many words in English (about 60%) come from Latin, the language of the ancient Romans (ca. 1000 BCE-500 CE). Because the Roman empire extended from the Middle East to Spain and from Great Britain to Africa, Latin endured as a common second language for one thousand years after the Roman empire collapsed. Educated medieval Europeans always knew at least two languages: their first native language (French, Spanish, Italian, German, etc), and Latin. This was because Latin was the language of learning - all medieval scholarly books were written in Latin, and university courses were taught exclusively in Latin. You will discover that much of the vocabulary of biology comes from Latin, because Latin was of course the language of science for so many centuries.

### II. Learning Latin Roots

#### *riparian*

English definition: located or living on a riverbank or shore

Latin root: *ripa* = riverbank, seashore

Related Latin words: *riparenses* (soldiers stationed near a river), *riparius* (near a river), *ripula* (little river)

#### *estuary*

English definition: water passage where the tide meets the river current

Latin root: *aestuarium* = the part of the sea coast that overflows during high tide and is muddy during low tide

Related Latin words: *aestuo* (boil, rage up violently), *aestabundus* (foaming, fermenting), *aestuusus* (agitated)

#### *habitat*

English definition: place/environment where a plant or animal lives or grows

Latin root: *habito* = to live somewhere, to inhabit

Related Latin words: *habitatio* (a place to live), *habitor* (an inhabitant), *habitus* (a habit)

#### *sedimentation*

English definition: the process of depositing or settling

Latin root: *sedimen* = settlements, deposits

Related Latin words: *sedimentum* (a settling, sinking)

### III. Affix of the Day

An affix is a little word or piece of a word that attaches to a longer word in order to change its meaning. For example, if you attach the affix *pre-* to the word "adolescent", you get "preadolescent", meaning a person who is about to go through puberty. Affixes are usually attached to the front of words (prefixes) or the end of words (suffixes).

co-

Latin root: *cum* = with, together

English words using *co-*: *cooperation* (to work together), *coauthors* (two people writing together), *coeducation* (when men and women are educated in the same school)

#### IV. Etymology Exercises

1. Fill in the blanks using words related to *habito* from the list below.

habitually  
uninhabitable  
inhabitant  
cohabit  
microhabitat

- a. The octopus and the crab \_\_\_\_\_ a little cavern in the coral reef.
- b. I am an \_\_\_\_\_ of the San Francisco Bay Area.
- c. Mr. Predictable \_\_\_\_\_ picked up the newspaper at 8:00 am every day.
- d. The plant's leaf provided a \_\_\_\_\_ for the aphids.
- e. Venus is completely \_\_\_\_\_ for humans, with extreme temperatures, storms, and no water.

2. Which of the following words uses the *co-* prefix?

coproduced  
coal  
couch  
cocaine  
coevolves  
cochair  
coexist  
coast  
cope  
coffee