

Life Science 7

Chapter 20-3

Freshwater Ecosystems

p 540-543

Objectives

- List the characteristics of rivers and streams.
- Describe the littoral zone of a pond.
- Distinguish between two types of wetlands.

Freshwater Habitat

- Streams- if fast moving, organisms have adaptations to
“ _____ ”
 - if slow moving, similar to lakes
 - may form _____ at the mouth
 - _____: area where the river moves back and forth

Draw a sketch of the Red River below. Include meanders!

Freshwater Habitat

- Ponds- typically have _____, insect larvae, tadpoles, etc

Freshwater Habitat

- Lakes- three zones
 - _____ - lake shore, plus areas of submerged vegetation
 - most of primary production takes place here
 - many organisms live here
 - _____: deeper zone
 - little primary production, mainly just large fish that live here
 - _____ - deepest zone
 - not enough light for photosynthesis
 - food is available as it falls from above
 - bacteria are able to feed on the dead matter, but in doing so, they use up the _____ in the water, thus, this area is _____
 - **thermal stratification-** _____

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- _____ water on the top, _____ water along the bottom, separated by _____
 - as fall and spring occur, the layers disappear (all water is cold) (called _____)

Lake Images

Succession in Aquatic Ecosystems

- _____ **lake**- a relatively young lake
 - low in nutrients, but rich in oxygen
 - large diversity of species, but few plants (not enough minerals for them)
 - low biomass
- _____ **lake**- older lakes
 - as time passes, lake acquires nutrients from runoff
 - allows growth of plants, algae
 - species diversity drops, but _____
 - if too many nutrients enter the lake, eventually the dead decaying matter can use up the oxygen in the lake, resulting in massive fish kills
 - if result of pollution, called **cultural eutrophication**
 - eventually lake may completely fill, which then becomes a _____, and then a _____

Secchi Disk Images

Wetlands

- **wetland**: _____
 - _____: wetland that has grasses, rushes, reeds as dominant vegetation
 - similar to sloughs or ponds here in MN
 - _____: wetland where trees and vines are the dominant vegetation
 - willows, bald cypresses, oaks elms, vines, poison ivy