

HABITAT ZONATION IN LAKES

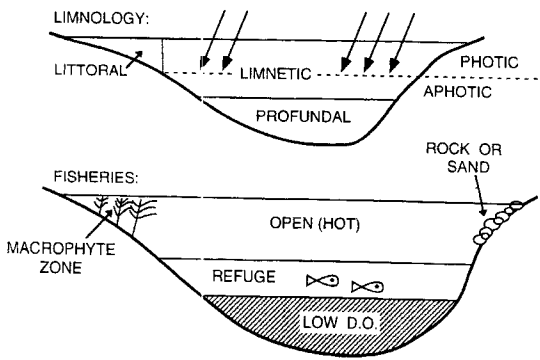


Figure 6.8. Hypothetical habitat zonation in lakes, emphasizing limnological terminology (top) and fisheries zones (bottom)

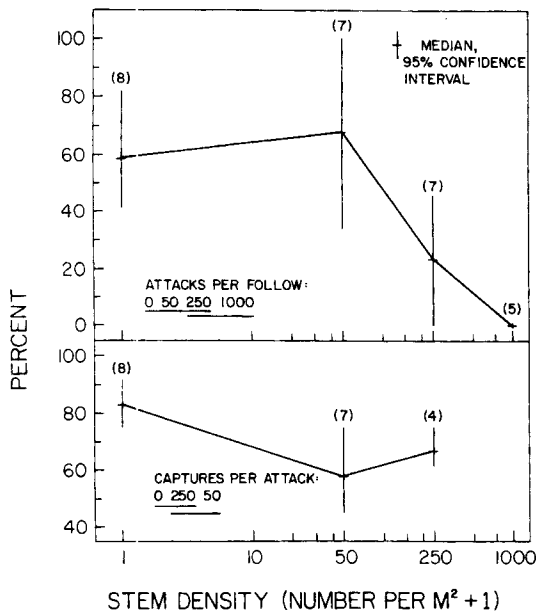
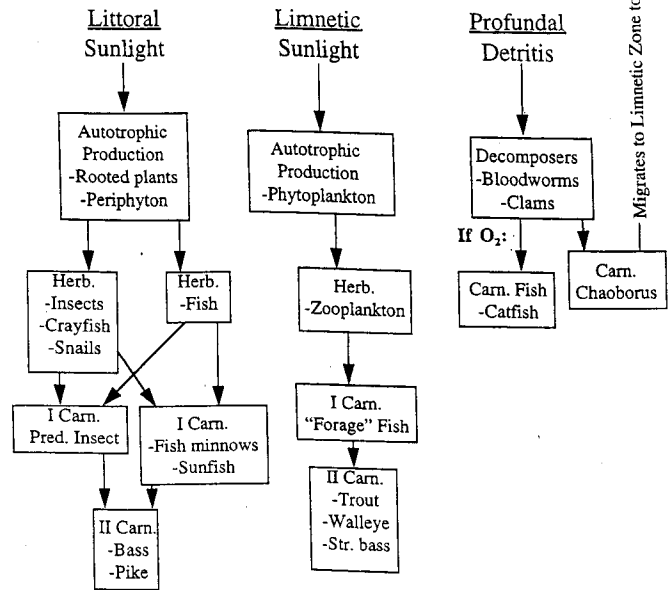


FIGURE 2.—Percent of attacks on bluegills per follow and percent of captures per attack in an experiment with largemouth bass under conditions of increasing stem density. Number of experiments per treatment is indicated in parentheses. Medians not significantly different (Kruskal-Wallis test, $P > 0.05$) from each other are underlined. No attacks were observed at high stem density.

TABLE 4.—Results of principal components analysis of habitat variables from the eight Byllesby Reservoir sites showing the relative amount of variation between sites explained by the first principal components (PC1-PC3); no other component had an eigenvalue greater than 1.0. Reservoir habitat variable loadings on the first three principal components, based on data from eight river sites, are also shown.

Statistic or variable	PC1	PC2	PC3
Summary statistics			
Eigenvalue	2.519	1.972	1.507
Variance explained			
Proportion (%)	31.5	24.7	18.8
Cumulative (%)	31.5	56.1	75.0
Eigenvectors			
River habitat variable			
Water depth	0.03	0.65	0.27
Substrate ^a	-0.37	0.15	-0.37
Bedrock ledges	-0.52	0.25	0.16
Undercut banks	0.40	0.21	0.31
Boulders	0.02	0.42	-0.62
Woody debris	0.47	0.44	-0.10
Bank vegetation	0.35	-0.22	0.09
Aquatic macrophytes	-0.31	0.19	0.51

^a Substrate scale ascribes low values for small particles and increasingly higher values for larger particles.

Hierarchy of Lake Zones for Fish

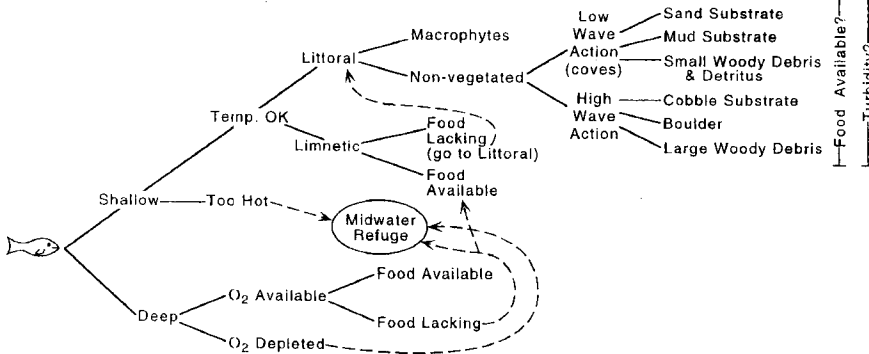


Figure 6.9. Hierarchical schematic of decision making in habitat selection by an individual fish among typical lake zones.

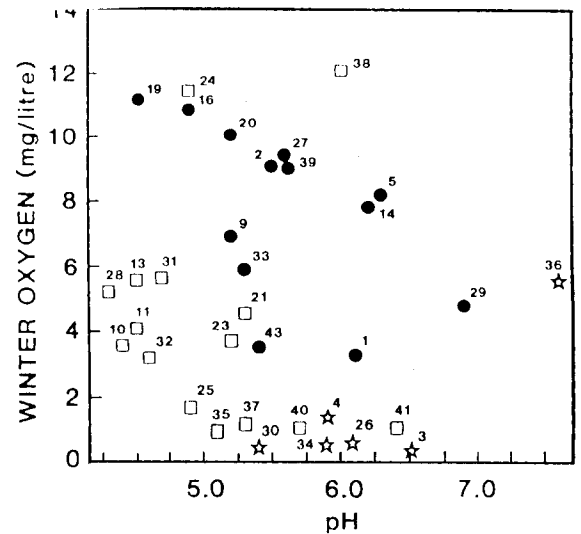


Figure 10.3. Winter oxygen concentration and pH for 34 lakes in Wisconsin. Assemblages dominated by centrarchids (solid circles), *Umbra-Perca* (open squares), or cyprinids (stars). [From Rahel (1984).]