

Macroinvertebrates can be used as indicators

- "sensitive" MI's have a very limited range of water quality conditions that they can tolerate
  - DO
  - temperature
  - chemical pollutants

"richness" → we'll look at:  
↓  
# of taxa

- # of individuals of different "taxa" (groups)
- # of individuals in some groups as compared to others

→ "population"

taxa richness: total # of groups we saw (19)  
 mayfly richness: " " " mayfly groups we saw  
 stonefly richness: " " " stonefly groups we saw  
 caddisfly richness: " " " caddisfly groups we saw  
 → **HIGHLY** sensitive to "poor" W.Q. -  
 the more we see, the "better" the WQ

% chironomidae:  $\frac{\# \text{ of midges}}{\text{total \# of organisms}} \times 100$   
 (MIDGES)

→ **HIGHLY TOLERANT**  
 % dominance:  $\frac{\text{add the \# of the } \underline{3} \text{ most abundant groups}}{\text{total \# of organisms}} \times 100$   
 → **Diversity** — dominance is low, diversity is high