

INTERTIDAL FISHES LAB

You gained first-hand knowledge of how to sample intertidal fishes to obtain estimates of species diversity, species composition, density, and the size distribution of fishes at a site in La Jolla. Often there are differences in the density and assemblage structure of organisms with tidal height; i.e., intertidal zonation. Now we need to make some sense of the data, which is posted in the Bulletin Board section of the course website.

Answer the following questions (10 pts. total), and be sure to show your work as appropriate:

(1) What is the overall species diversity at the intertidal site, using the Shannon-Weiner Index?

(2) What is the species diversity among the three intertidal zones (high, mid, and low)? Does diversity appear to differ among zones?

(3) What is the density of fishes in each of the three intertidal zones (high, mid, and low)? Do the densities appear to differ among zones?

(4) Graph the size-frequency distribution of the woolly sculpin in each of the intertidal zones. Does it appear that the distributions differ among zones? (you may graph in Excel and attach).

(5) What conclusions can you draw about any differences among the intertidal zones, or if there appear to be no differences, can you speculate why this may be the case at this site?