http://www.dkimages.com/discover/previews/957/45007491.JPG

Exercise 10. Factorial ANOVAs

Note:
E-mail a single Word document with your results. All analytical work needs to be done in R (unless otherwise noted). Scripts and output from R should be included in the Word document for full credit.

Please summarize your results in standard ANOVA table format. Failure to do so will result in an automatic loss of one point per ANOVA analysis.

1. Minchinton & Ross (1999) examined the distribution of oysters and their suitability as habitat for limpets in a temperate mangrove forest. They used two factors: **sites** (2 sites about 600 m apart) and **zones** (4 levels: seaward zone without mangroves, seaward zones with mangroves, middle zone, and landward zone). In each of the 8 combinations of site and zone, they sampled limpet abundance on oyster shells on the forest floor.

   Using the Minchinton & Ross (1999) data, perform a two-way factorial ANOVA. First, assume that both factors are fixed (3 points). Second, assume that both factors are random (3 points). Finally, assume that site is a random factor and that zone is a fixed factor (3 points). Provide standard ANOVA tables for these 3 different models. Briefly discuss which of the three models you believe to be the most appropriate based on the sampling design (1 point).

Due November 11, 2009