IB / NRES 509 – Statistical Modeling

Preliminary Analysis

DUE Wednesday April 11th, 2 pm
Via Electronic Drop Box

20 points

1-3 pages, double spaced

Synopsis: **1-3 pages double space text plus R/BUGS code and data plus a minimum of 5 results figures or tables with legends.** Text should briefly summarize the results of the analysis and any modifications of the model description (i.e. what you actually ended up doing).

At this point the analysis of your model should be mostly complete. The objective of this assignment is to generate a complete analysis, including model results and code. You should have everything ready BEFORE you arrive at lab on the 11th because that lab will focus on peer review.

**Code:** You should turn in the R and/or BUGS code that you used to analyze the model. Code should be well documented so that someone else (e.g. Mike) can figure out what you did and repeat the analysis and recreate your figures based just on the script. Data should be included either as a text file, RData object, or embedded in you BUGS object, and should have sufficient meta-data so that someone else can understand it (variable names, units, range of allowable values, etc.). Code should be readable by the statistical software you used (i.e. we need to be able to open it up in R or BUGS rather than cut-and-paste).

**Results:** The text to turn in does not need to be long and should read like a **Results** section to a scholarly journal. Remember that Results sections present the results but generally do not focus on interpretation (that will go in the Discussion). As such, this section can be fairly brief (1-3 pages double spaced). **Reminder: Format for final project is based on Ecology Letters guidelines.**

**Figures and Tables:** For this assignment you should turn in at least 5 figures and tables that summarize or support your Results. Figures and tables should include legends that are sufficiently detailed to allow the figures to STAND ALONE. These figures and tables should focus on RESULTS—they shouldn't just be plots of the raw data without model fits, nor is there any need to “pad” the document with superfluous diagnostic plots. That said, the Results text and figures should provide enough information that an external reviewer would feel confident that the modeling was done correctly (e.g. convergence was achieved, sufficient samples were taken after burn-in and thinning, etc.)

**Peer Review:** The lab on April 11th will focus on peer review. Each person will be paired with someone else and will have to explain their model and results. You may want to bring in your project proposals and model descriptions to facilitate this. The reviewer should let the presenter know if there are things they don't understand (anything unclear in the results, figures, or code), offer suggestions about how the analysis could be improved, and let them know if they spot any errors or bugs. This review should first be provided verbally so that the presenter can start to make changes as needed. It is also due in written form the following week as the Lab 12 lab report.

*Note: to give you extra time for your preliminary analysis, Lab 11 will be due 4/13.*