Bi 213 (Lab)   **Ecology: Quadrat Analysis**   **2010**

Part I. Data Analysis (<u>may be completed as a group</u>): For individual species/overall for canopy and understory

Follow Procedure steps 1-7 (as appropriate) on page 709 of your lab manual. However, you should realize that you <u>MUST</u> use MS Excel to emulate the data tables AND build calculations into your Excel spreadsheets. For ALL data collected by the entire class, do the following:

- ✓ Calculate dominance and relative dominance for <u>**tree**</u> species

- ✓ Calculate density and relative density for both <u>**shrub**</u> and <u>**tree**</u> species

- ✓ Calculate frequency and relative frequency for both <u>**shrub**</u> and <u>**tree**</u> species

- ✓ Calculate importance value for <u>**tree**</u> species

- ✓ Present results in graphical form (<u>**11 graphs total**</u>) – consult *Exercise 1.4, Lab Study A. Tables and B. Graphs* for guidance (note the differences between line and bar graphs)

Part II. Write-up: For ALL data (<u>must be submitted individually</u>)

- ✓ Write a qualitative description of the area that was sampled. Note any changes in the various biotic components calculated above across ALL quadrats analyzed.

- ✓ Answer the following questions based on your analyses above.

    - ❖ Which tree species was/were most dominant?

    - ❖ Which species were most frequent?

    - ❖ Compare plant density and frequency of tree and shrub species.

    - ❖ Keeping in mind both your own group's data and all class data, what were the possible sources of error regarding the:

        - ▪ plants you counted/measured?

        - ▪ plots/quadrats you surveyed?

All lab reports are due at the BEGINNING of lab during the week of May 31st