Write your name on the back of this exam. Do not write your name on the front.

Biology 316- General Entomology
Exam III
Fall 2004

Spelling and grammar count. This exam is worth 100 points. Complete sentences are required; please do not list things.

PLEASE DO NOT ATTEMPT TO WRITE AN ENTIRE THESIS. A complete answer should not require more than one page.

Please answer the following question:
Consider the plots below of data from three different locations in northern California. Each shows the percent use of different species of plant for oviposition by *Euphydra editha* (Nymphalidae). Carefully outline three different ecological reasons that may explain this variation in host use. For each ecological reason, state how this could have been an evolutionary force resulting in this extreme variation in host plant use. (11 points each)
Answer TWO of the following three questions. Only answer two. If you answer more than two, I will grade only the first two.

1) Carefully compare and contrast herbivory and predation/parasitoidism with regard to morphology, host specificity, and behavior. Be sure you discuss both herbivory and predation/parasitoidism in each part of your answer. (11 points each) "Compare and contrast" means "how are they similar and how are they different."
2a) Define EIL. (3 points)

2b) Carefully describe three factors that may influence the EIL of a particular pest. How does each factor influence the EIL? (10 points each)
3) Choose three medically important orders. For each order, choose a disease with which members of each order are involved. For each disease describe its prevalence, the insect involvement, the disease-causing agent, and the region of the world where it occurs. (11 points each)