Integrative Biology 200A

"PRINCIPLES OF PHYLOGENETICS"

Spring 2000

Quiz 1

You may use any books, notes, or references, but you must work independently of other people.

To keep the amount of writing under control, please confine the answers to the space provided (but write clearly and large enough to see!); outlines are fine.

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1. (10 points) Would you use partial warps as phylogenetic characters? Why or why not?
2. (10 points) How might you use the NCBI's (National Center for Biotechnology Information) web site to determine if a DNA sample you sequenced was contaminated?
3. (10 points) The rise of phenetics was partially a response to the subjective nature of evolutionary systematics as well as a starting point for cladistics. List 3 features of phenetics that are also shared with cladistic analysis.
4. (20 points) What are the general steps (and criteria used) in character analysis? Give: a) A list with a one sentence explanation of each; b) An indication of any particular problems faced by morphological and DNA-sequence data for each.

