

36-149 Writing Assignment #7 Due Tue 17 Oct 2006

This week, you will write a five “mini”-essays based on your book and the Prum and Brush article. You can keep each of these pieces short, typically one paragraph, but make it as long as it needs to be to make your point coherently. For the alternative enrichment writing assignment, see below.

1. Describe *in your own words* what an adaptation is and why they such a big role in our study of evolutionary processes.

2. Describe the main theme of your book.

3. How do adaptations relate to the main theme of your book and what role do they play in the story your book is telling? Give examples to support your points.

4. Briefly describe Prum and Brush’s model of feather evolution. How does it differ from previous models in logic, approach, and evidentiary basis?

5. Prum and Brush’s model points to several logical flaws in previous models. For example, we saw in class that classifying feathers of some modern bird lineages as possible primitive forms was phylogenetically misguided. Another example is how proponents of a specific functional theory of feather evolution presuppose an ancestral function and thus constrain without evidence the process by which feathers evolved. Another example is the tendency to package disparate processes – the evolution of birds, of flight, and of feathers – into one argument, which tends to exclude plausible possibilities from discussion. Describe the basic evolutionary arguments at work in your book. How susceptible are these arguments to the general points that Prum and Brush raise?

Enrichment Assignment: Read the posted Prum and Brush paper and write an essay that addresses (at least) one of the following questions.

A. Prum and Brush state (elsewhere): “Over the past 20 years, it has been recognized that historical analysis in evolutionary biology requires an independent documentation of the *pattern* of evolutionary events before testing alternative functional hypotheses about the evolutionary *process* that explain those events Functional theories of the origin of feathers have failed because they attempt to do exactly

the opposite: they use presumed knowledge of adaptive evolutionary process to reconstruct historical pattern.”

What do they mean by this? Discuss.

B. One contribution of the Prum and Brush model is to propose a series of transitional forms in the evolution of feathers without depending on a particular functional explanation. Nonetheless, the model does make specific predictions about the feather morphology during its evolution that are relevant to feathers' functional properties. Describe how the Prum and Brush model elucidates functional theories feathers?

Remember to look at the comments from your earlier assignments while writing this piece. As you write and revise your piece, ask yourself whether you are meeting the basic criteria:

G Grammar and Sentence Structure

Do my sentences and paragraphs conform to the principles we discussed in class?

O Organization and Coherence

Have I organized my piece to convey my point clearly and presented a coherent and logical flow?

S Soundness

Are my facts, information, and arguments accurate and sound?

F Fulfilling the assignment's requirements

Have I done everything that I was asked to do in the assignment?

A Appropriateness for the audience

Would a classmate be able to understand this piece and get my main point?

V Voice, Style, and Creativity.

Can I recognize this piece of writing as being in my own voice and style or is it merely a recitation of facts?

Also remember to give specific citations for specific pieces of information. Numbered endnotes are one good way to do this. Contact me if you have any questions or concerns.