

Ornithology Week 4 Practice Problems: Feathers

- 1) Which of the following taxa produce beta-keratin?
 - a) Reptiles (excluding birds)
 - b) Reptiles (including birds)
 - c) Reptiles and amphibians (excluding birds)
 - d) None of the above
- 2) Retrises have asymmetrical vanes to generate Bernoulli lift. (**T, F, or It Depends**)
- 3) How are remiges numbered?
 - a) primaries are counted from inside to outside, secondaries are counted from outside in
 - b) primaries are counted from outside in, secondaries are counted from outside in
 - c) each remige is labeled counting inward from the outermost feather
 - d) primaries are counted from outside in, secondaries are counted from inside out
 - e) none of the above
- 4) Provide a hypothesis for why plumage elaboration (e.g., the evolution of sexual ornaments) more commonly occurs in the retrises than remiges.
- 5) During feather development, the follice invaginates to form a placode. (**T, F, or It Depends**)
- 6) Which of the following plumage colors are produced by **pigments**? Circle all that apply.
 - a) yellow in parrots
 - b) olive-green in warblers
 - c) brown in great-horned owls
 - d) orange in warblers
 - e) black in hummingbirds
- 7) Migratory species commonly have one complete and one partial molt per year (**T, F, or It Depends**)