

HONR 259C: “Fearfully Great Lizards”: Topics in Dinosaur Research
Spring Semester 2007

Critical Review IV: Dinosaur Growth and Behavior
DUE: Thursday April 19

Overview

Sometimes people tend to think of dinosaurs—or other animals, for that matter—as if they were only adults. Yet all animals start off as babies, and most end life while they are still young. So it is important to consider the lives of young dinosaurs when trying to understand their biology.

There are several issues that intrigue us about the growth of dinosaurs. For example, how long did it take for them to achieve adulthood? How long did the last after reaching adulthood? What changes in physical characteristics (other than size) and in behavior might have happened as they grew up?

Paleontologists have recently developed a number of approaches to study the **ontogeny** (growth) of dinosaurs and other fossil animals. We will examine some of those studies here.

Specific Questions to Address

What aspect of dinosaur ontogeny and behavior is being examined? In what group or groups of dinosaurs was it studied?

Was the ontogeny studied in the changes recorded in a single individual? By examining a population of individuals? By a combination of the two?

What techniques were used to determine the changes or rate of growth in the fossils examined?

To what degree were the changes in growth and behavior compared to living animals (for whom these can be directly observed)?

Did the observations suggest something about the physiology of the dinosaur(s) studied? If so, what did it suggest?

Did the observations suggest something about the intraspecific behavior of the dinosaur(s) studied? The interspecific behavior? If so, what did it suggest?

In your analysis and observations, do the conclusions of the authors seem justified? Are there other reasonable hypotheses that you think might be better supported by the evidence? If so, what are they and how would the evidence better support them?