

**The Rise and Fall of the Dinosaurs**  
**Steve Brusatte**  
**Chapter 2 - Dinosaurs Rise Up**

**Problem 1.** Describe Pangea. Page 49.

**Problem 2.** What is that concept called for the ocean? Page 49.

**Problem 3.** Describe the climate during the Triassic Period. Page 50.

**Problem 4.** What caused violent air currents to stream across the equator? What were the secondary effects of those violent air currents? Page 51.

**Problem 5.** Who were the leading actors in the story of Triassic Pangea? Where did they prowl? Page 56.

**Problem 6.** Is the scientific saying, absence of evidence is not always evidence of absence, true? Page 59.

**Problem 7.** What are the two breakthroughs allowing the dinosaurs to prosper? Page 61-62.

**Problem 8.** What is hyperseasonality? What are its effects? What causes it? Page 71.

**Problem 9.** In evolutionary biology speak, what is convergence? Page 72.

**Problem 10.** Early in the Triassic the archosaurs split into what two major clans? Page 73.

**Problem 11.** Describe the *Machaerops*. Page 73.

**Problem 12.** What is the *Effigia okeefeae*? Page 74 - 76.

**Problem 13.** What is morphological disparity? Page 78.

**Problem 14.** What is a distance matrix and how is it used? Page 79.

**Problem 15.** What did the breakthroughs in morphological disparity and the distance matrix show about the dinosaurs and pseudosuchians during the Triassic period? Page 79 - 80.