

XIV. Phanerozoic - Late Paleozoic (chapter 15)

**A. Intro. - Late Paleozoic = Mississippian + Pennsylvanian
(= Carboniferous) + Permian**

B. Paleogeography & plate tectonics (pp. 359, 371-375, 381-382)

1. Locations & movements of continents

- a. Laurussia & Gondwana converge & collide**
- b. Siberia**

2. Pangaea forms!

- a. Northern Pangaea**

- b. Southern Pangaea**

- c. Tethys Seaway**

- d. Some islands**

3. Lots of mountain building

- a. Antler Orogeny**

- b. Allegheny Orogeny (N.Am. + Africa)**

c. Ouachita Orogeny

d. Hercynian Orogeny

e. Mauritanian Orogeny

f. Uralian Orogeny

g. Sonoma Orogeny

C. Sea level & climate (pp. 359, 368-369, 371-375)

1. ~High sea levels in Mississippian

2. Major regression at M-P boundary

3. Fluctuating sea levels in Pennsylvanian

4. Permian - sea levels lower

5. ~Warm in Mississippian

6. M-Pm (~345-280 Ma) - many short ice ages in Gondwana & Siberia

7. Pennsylvanian - atmospheric hyperoxia & low CO₂

8. Permian - most rainfall in mt. areas; arid deserts in many places; also humid tropical forests & semi-arid savannahs; glaciation in Gondwana

D. Some Carboniferous & Permian rocks (pp. 357, 359, 379-386)

1. Miss. - lots of fossiliferous limestones & some deltaic deposits

2. Major unconformity at M-P boundary

3. Lots of Pennsylvanian coal in eastern North America

4. Pennsylvanian fossiliferous limestones in western North Am.

5. Cyclothems common in Pennsylvanian

a. Definition

b. Cycle is nonmarine-marine-nonmarine, etc.

c. An ideal cyclothem:

d. Cause of cyclothem?

**6. Permian - terrestrial redbeds, evaporites, coals, limestones,
glacial deposits**