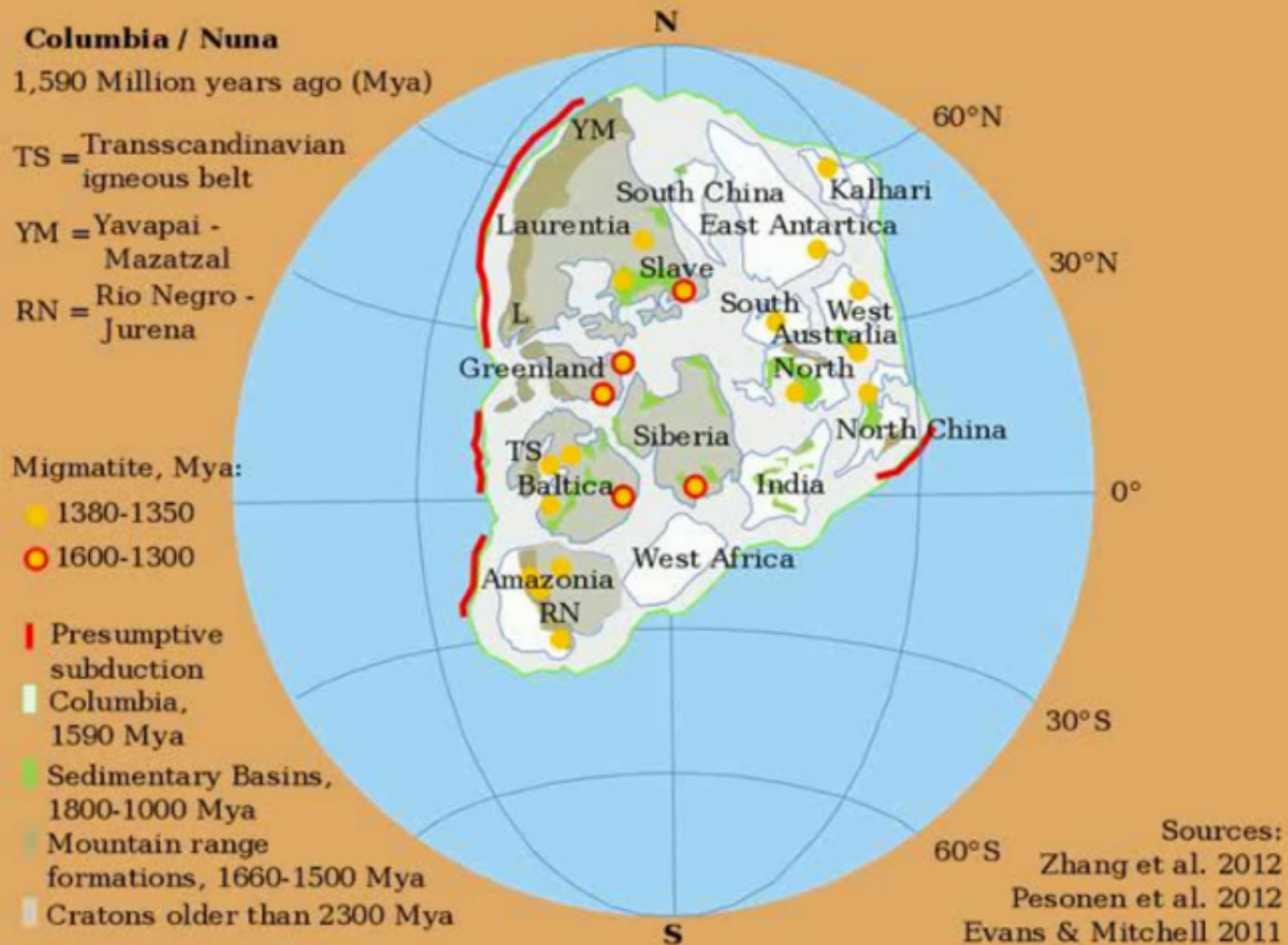
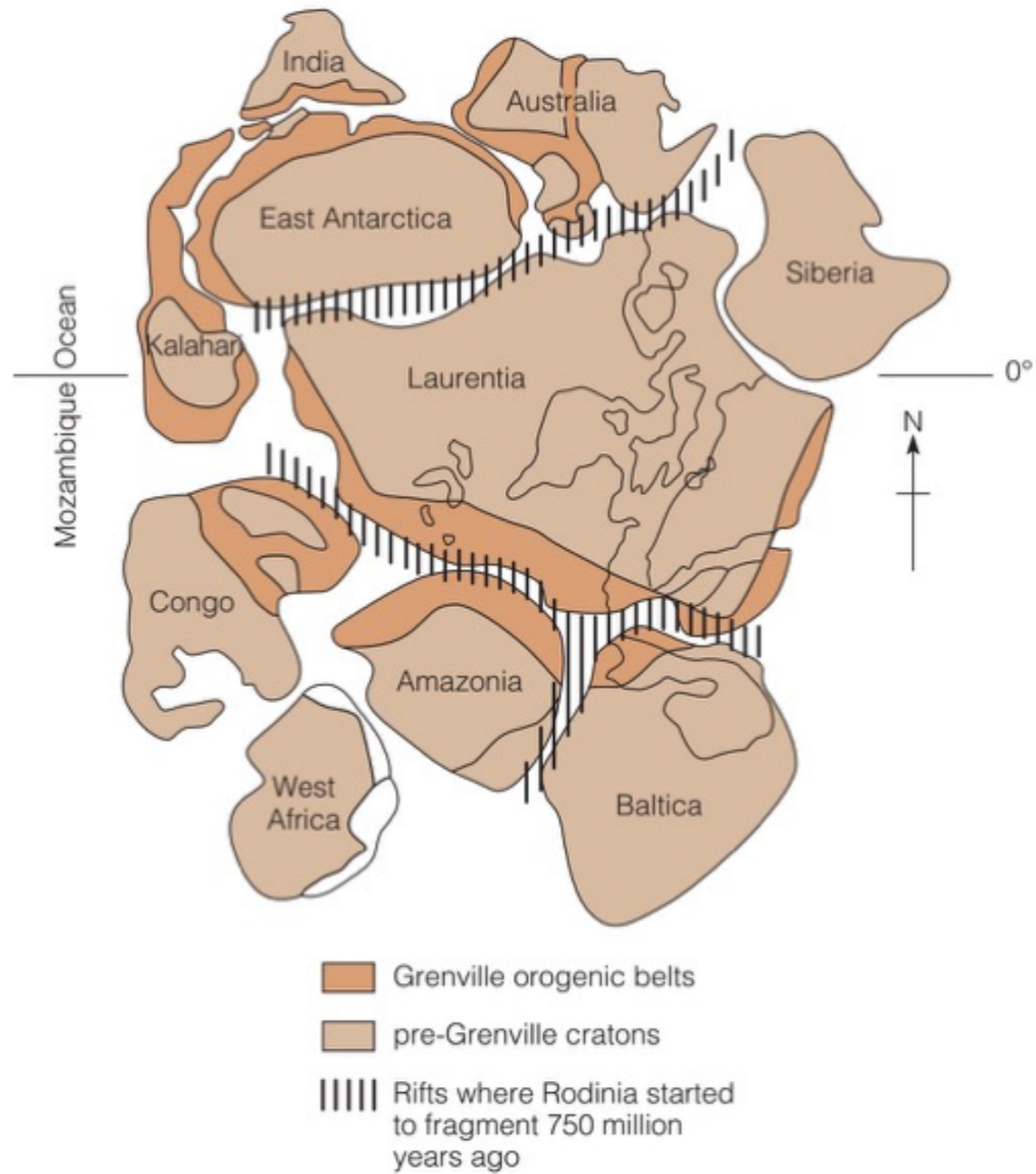


## Columbia Supercontinent (1.5 Ga.)

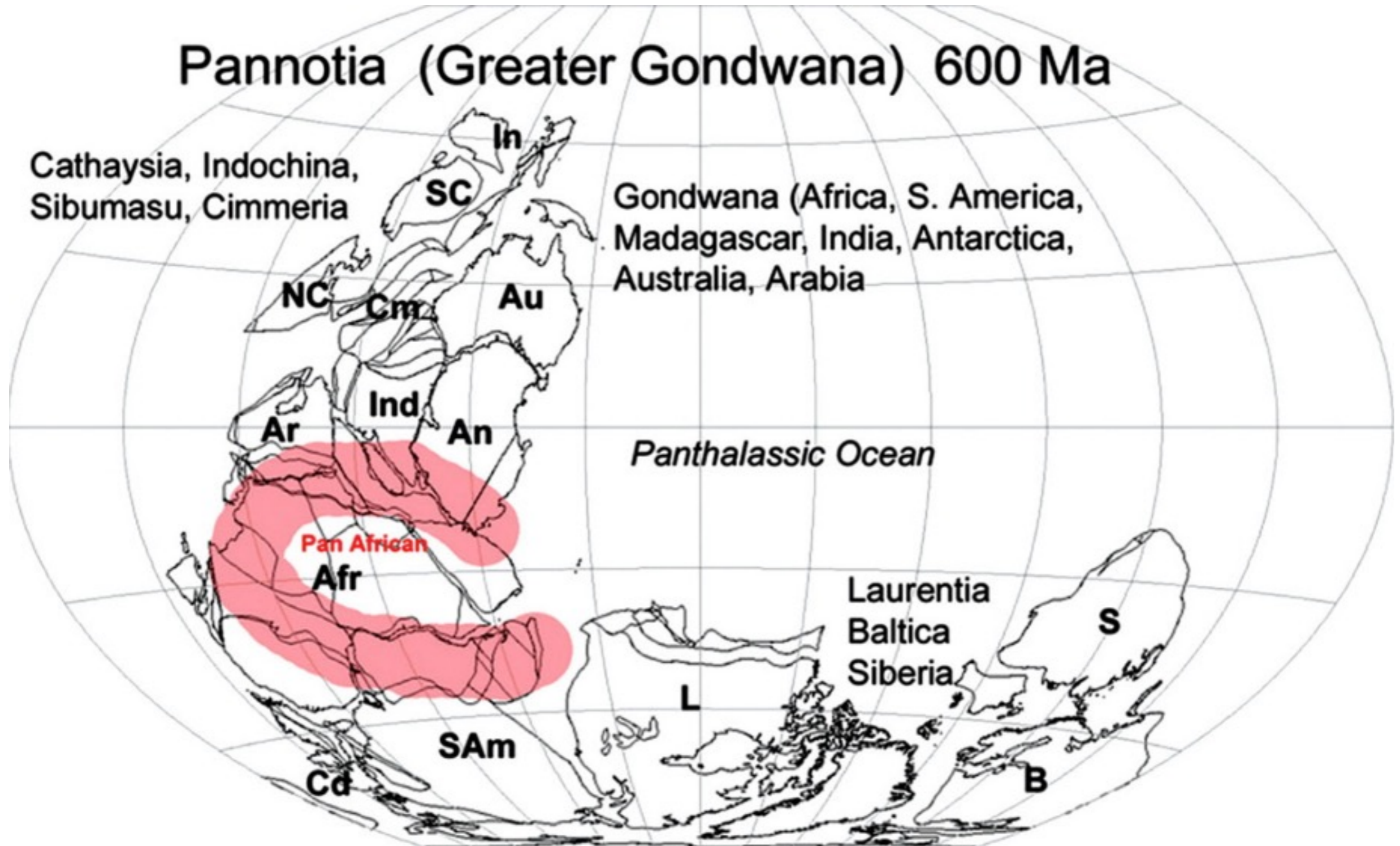
# Columbia (supercontinent)



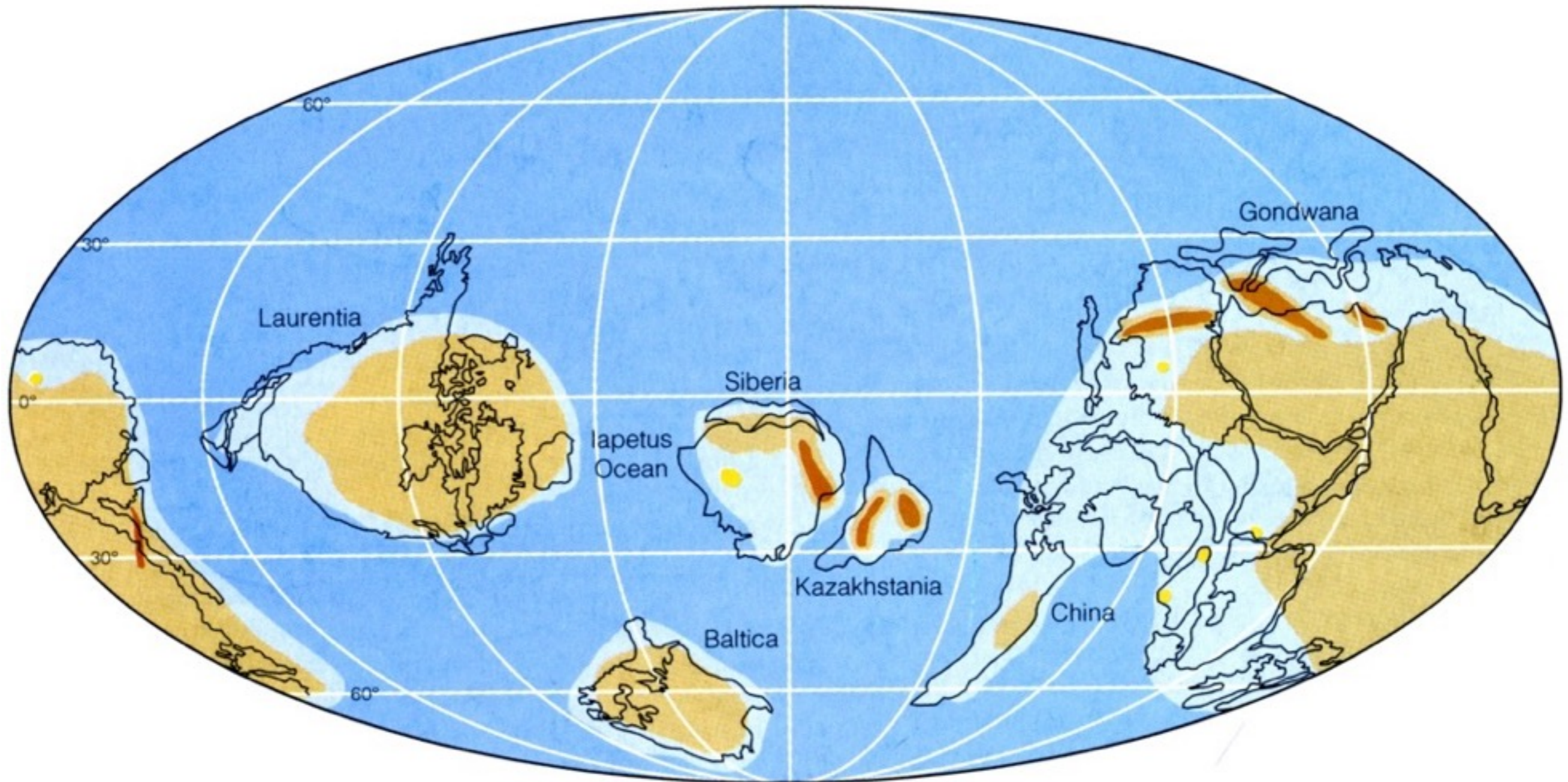
# Rodinia Supercontinent (750 Ma.)



# Pannotia Supercontinent (600 Ma)



# Late Cambrian Paleogeography



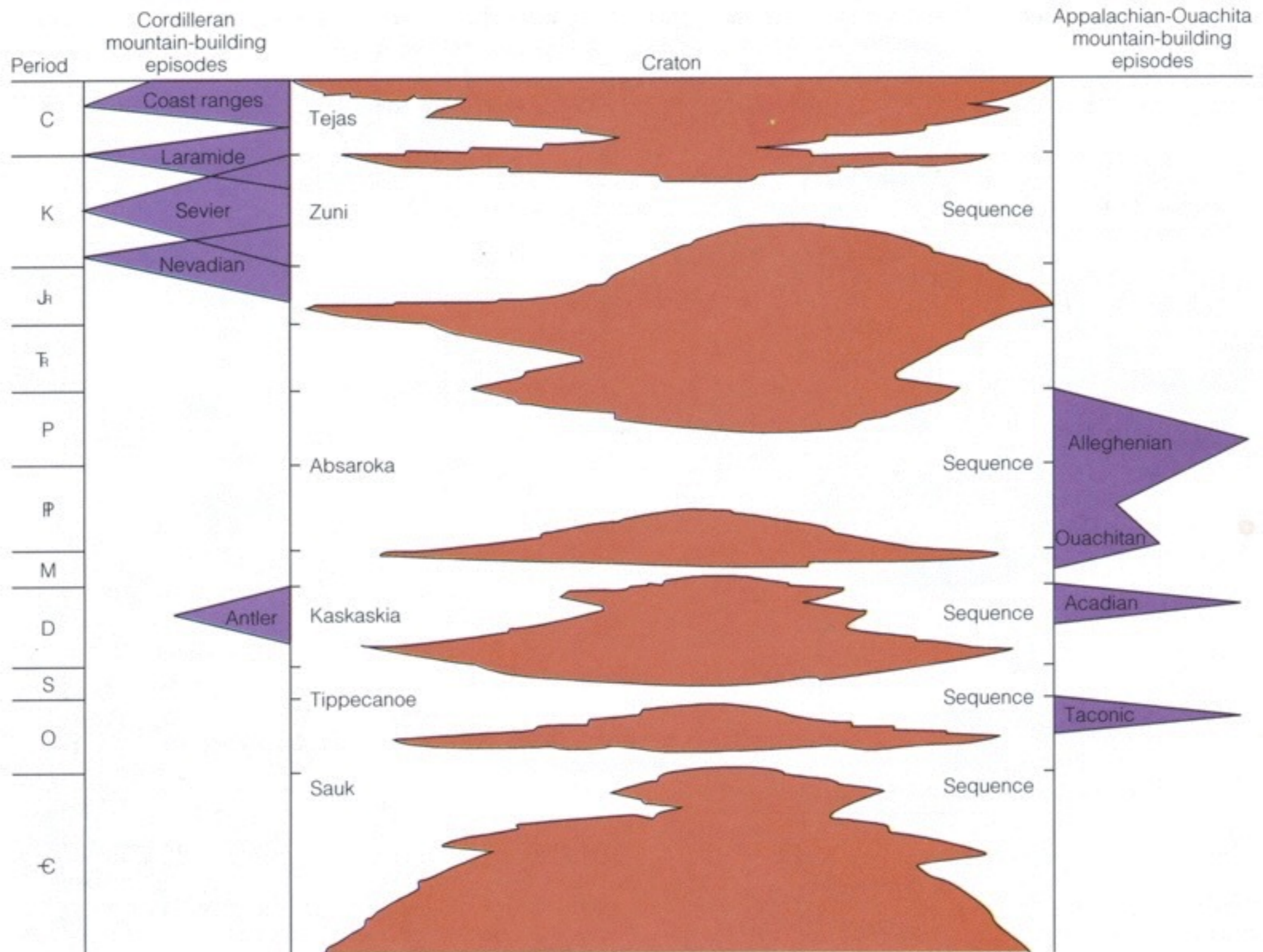
(a) Late Cambrian Period (523-505 M.Y.A.)



# Geologic Structures in Cambrian Laurentia



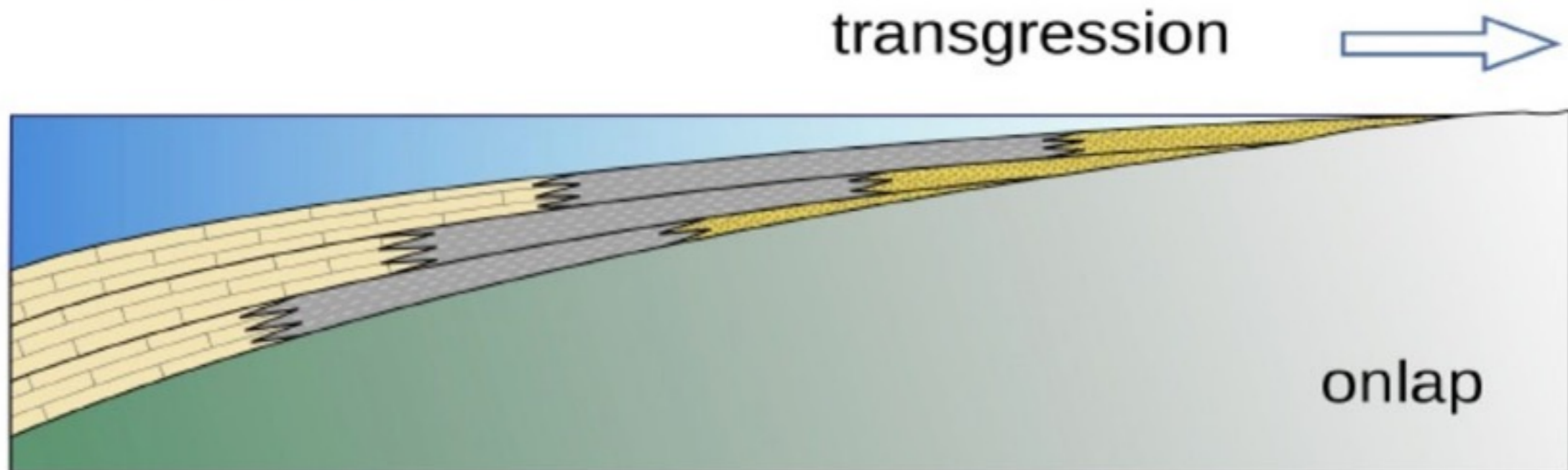
# The Sloss Seas



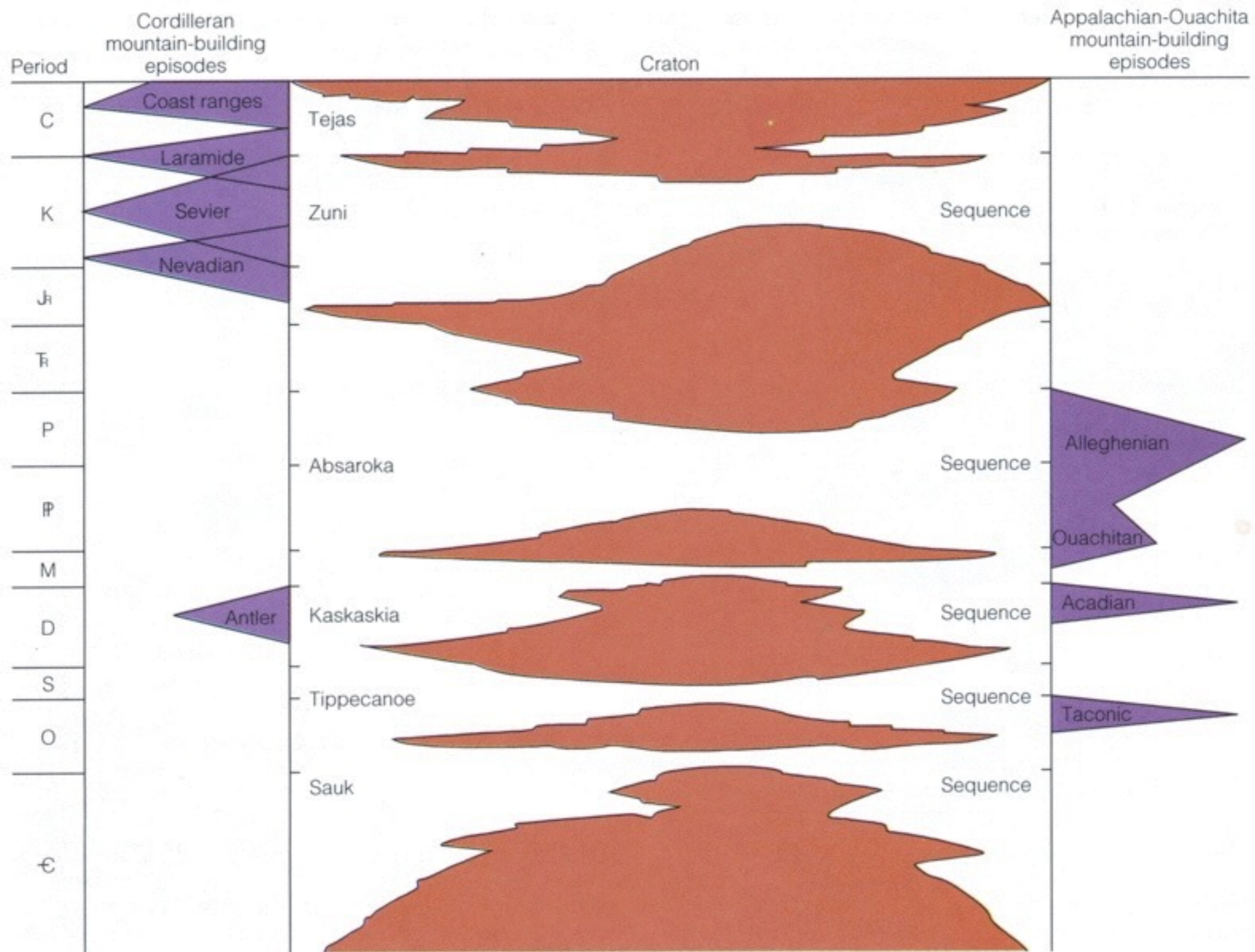
# Marine Transgression

## Walther's Law

- ❖ Facies show a **transgressive** pattern when the sediment supply is overpowered by a relative rise in sea level, or when the land subsides tectonically. Both cause the shoreline to move landward



# The Sloss Seas

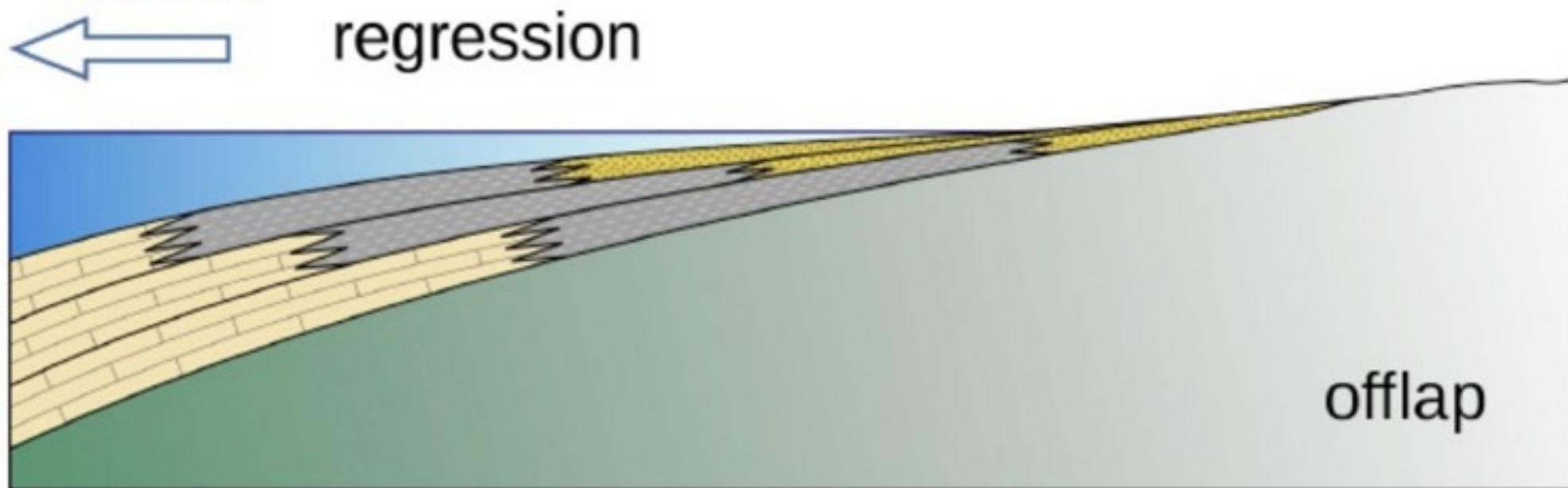




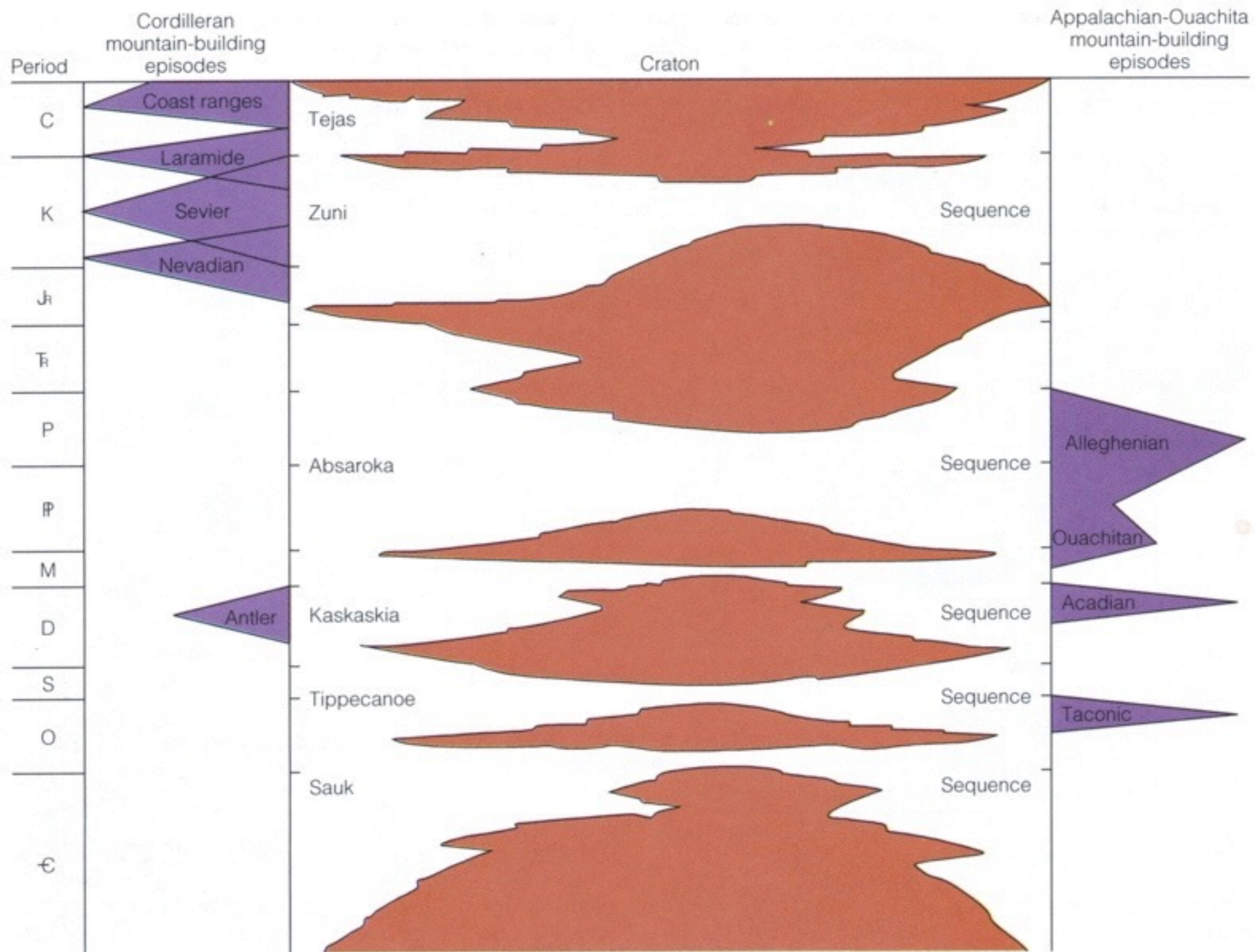
# Marine Regression

## Walther's Law

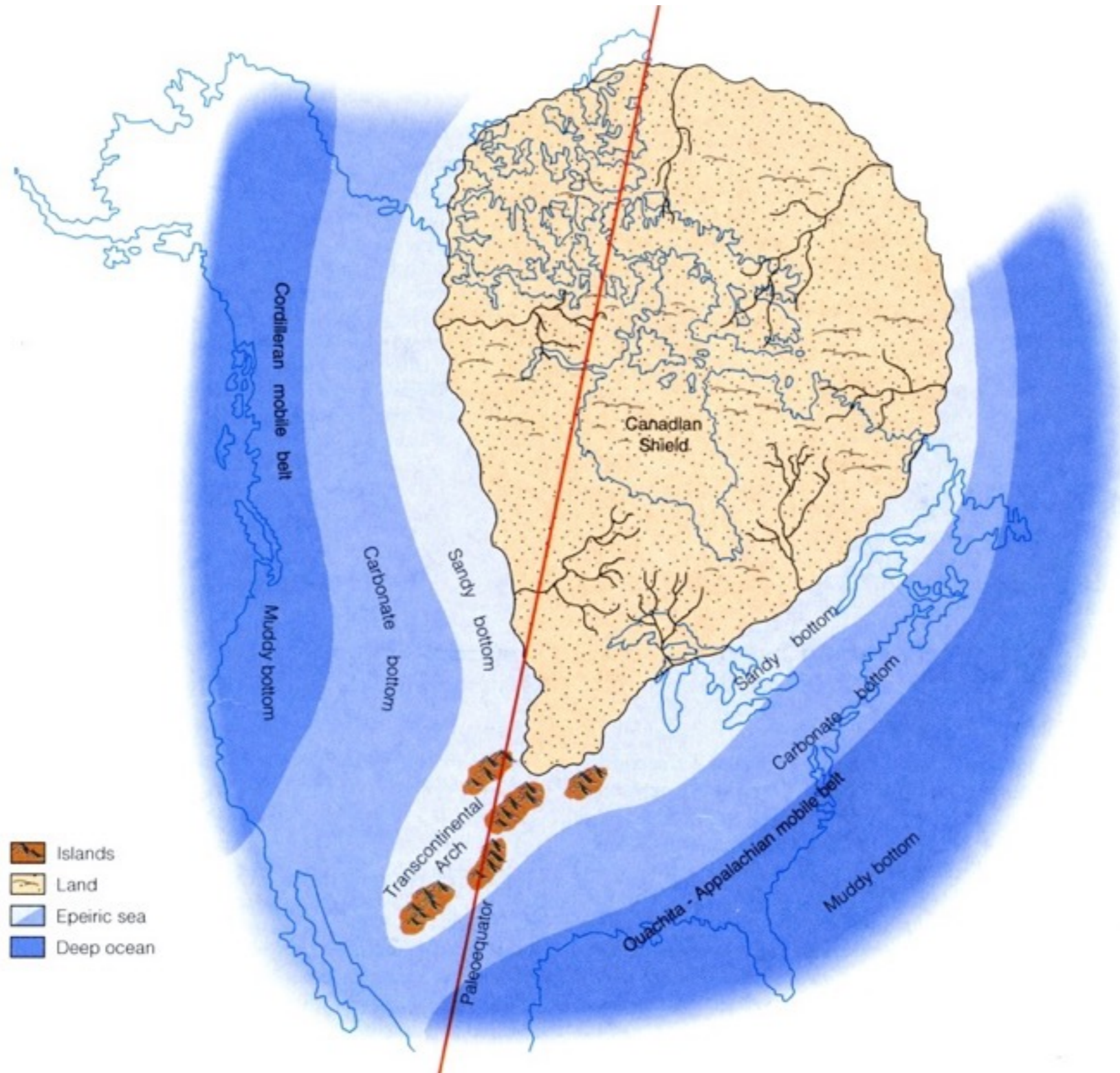
- ❖ Facies show a **regression** pattern when the shoreline moves seaward due to an excess sediment supply from land, when the land is tectonically uplifted and the sea level retreats, or when there is a relative lowering of sea level.



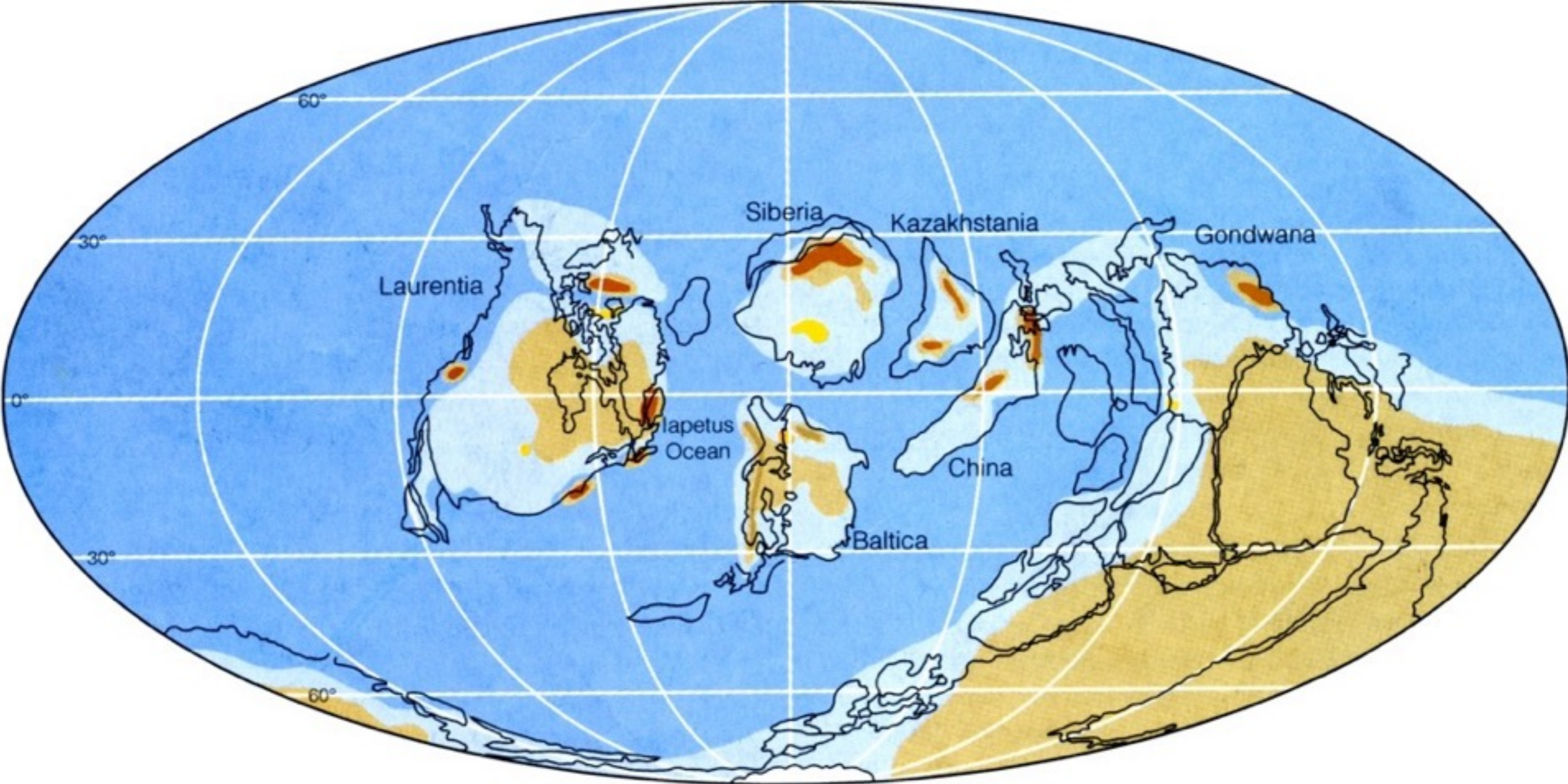
# The Sloss Seas



# Laurentia in the Cambrian Period



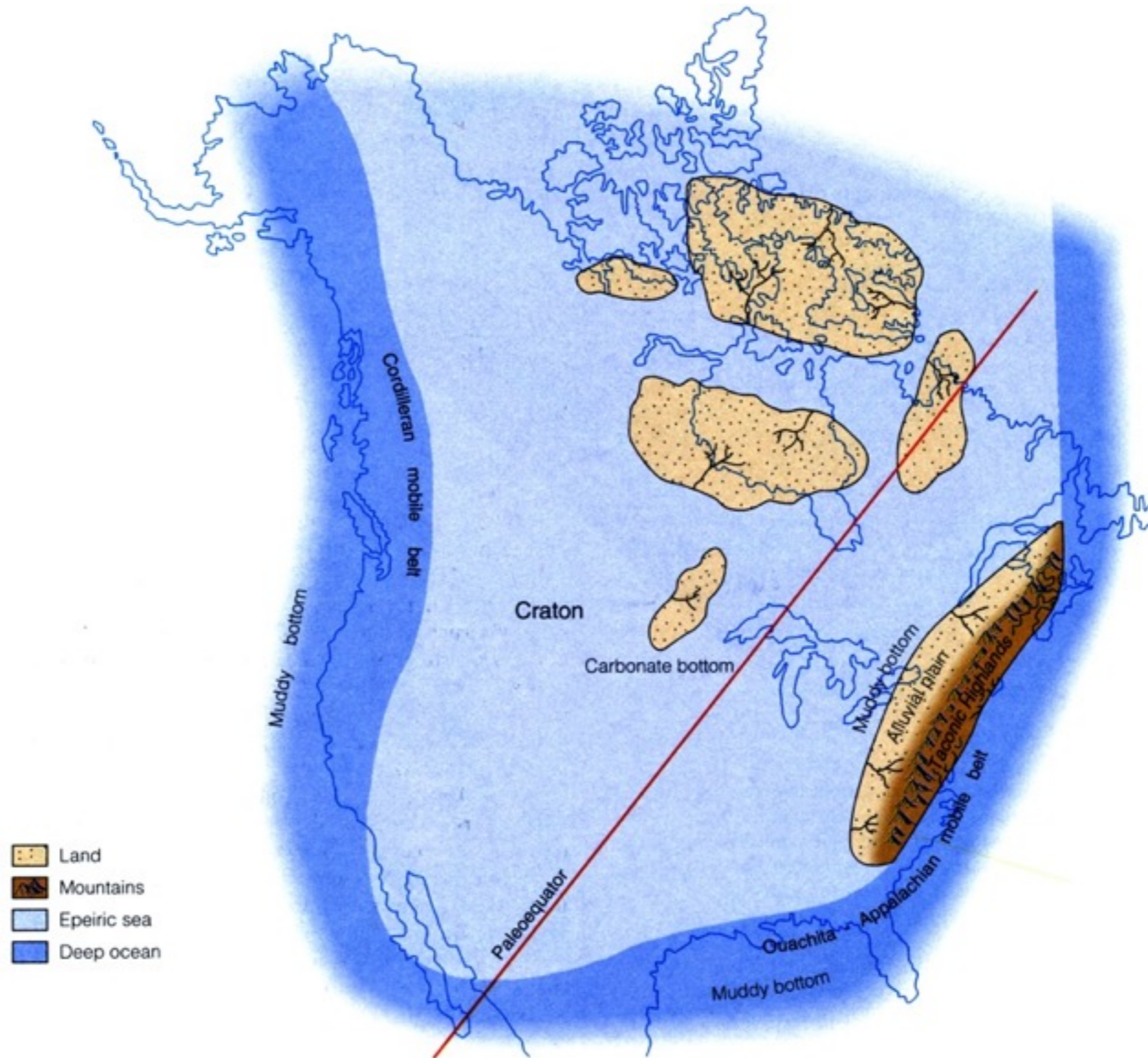
# Ordovician Paleogeography



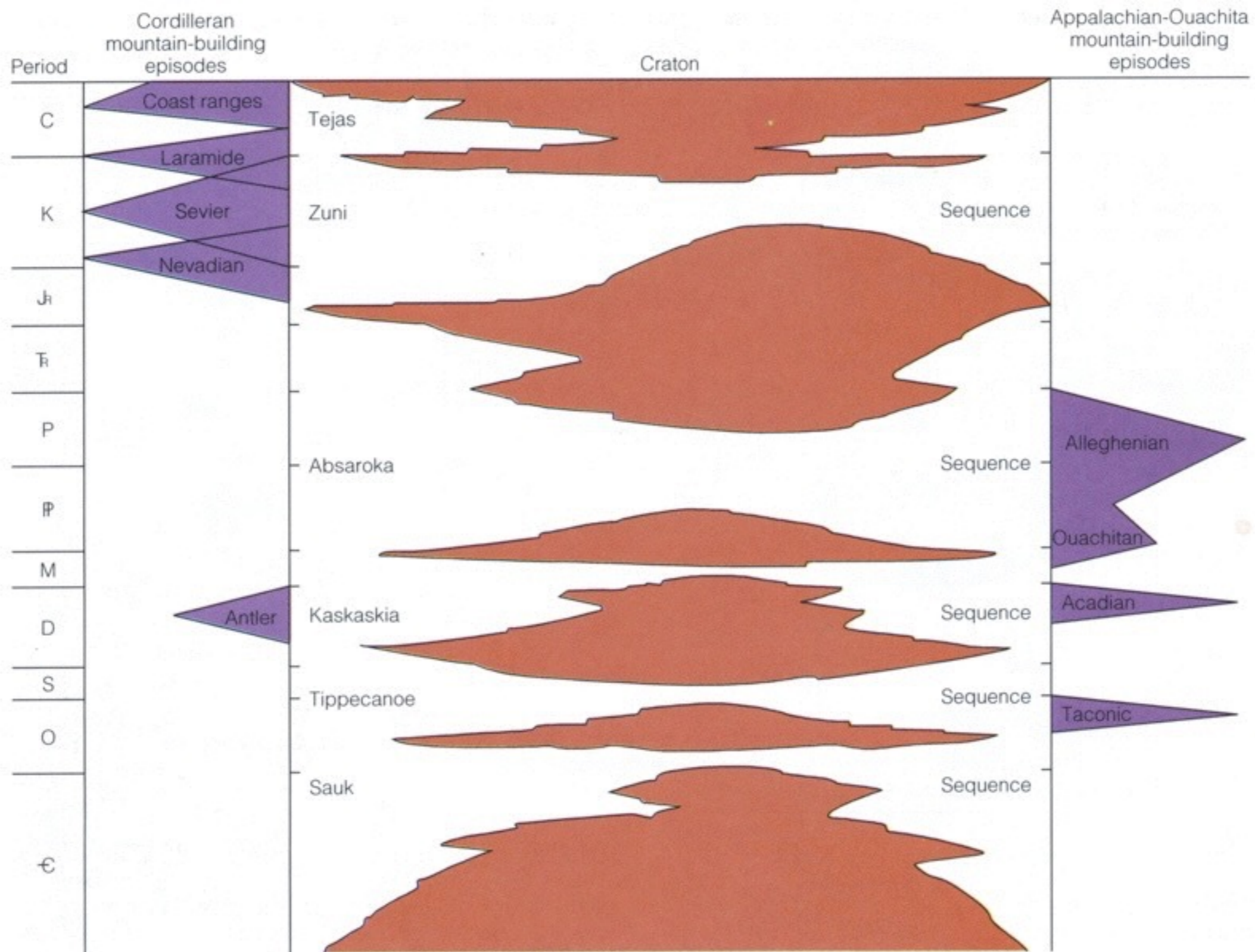
(b) Late Ordovician Period (448-438 M.Y.A.)

- Evaporites
- Lowlands
- Mountains
- Shallow sea
- Deep ocean
- Glaciation

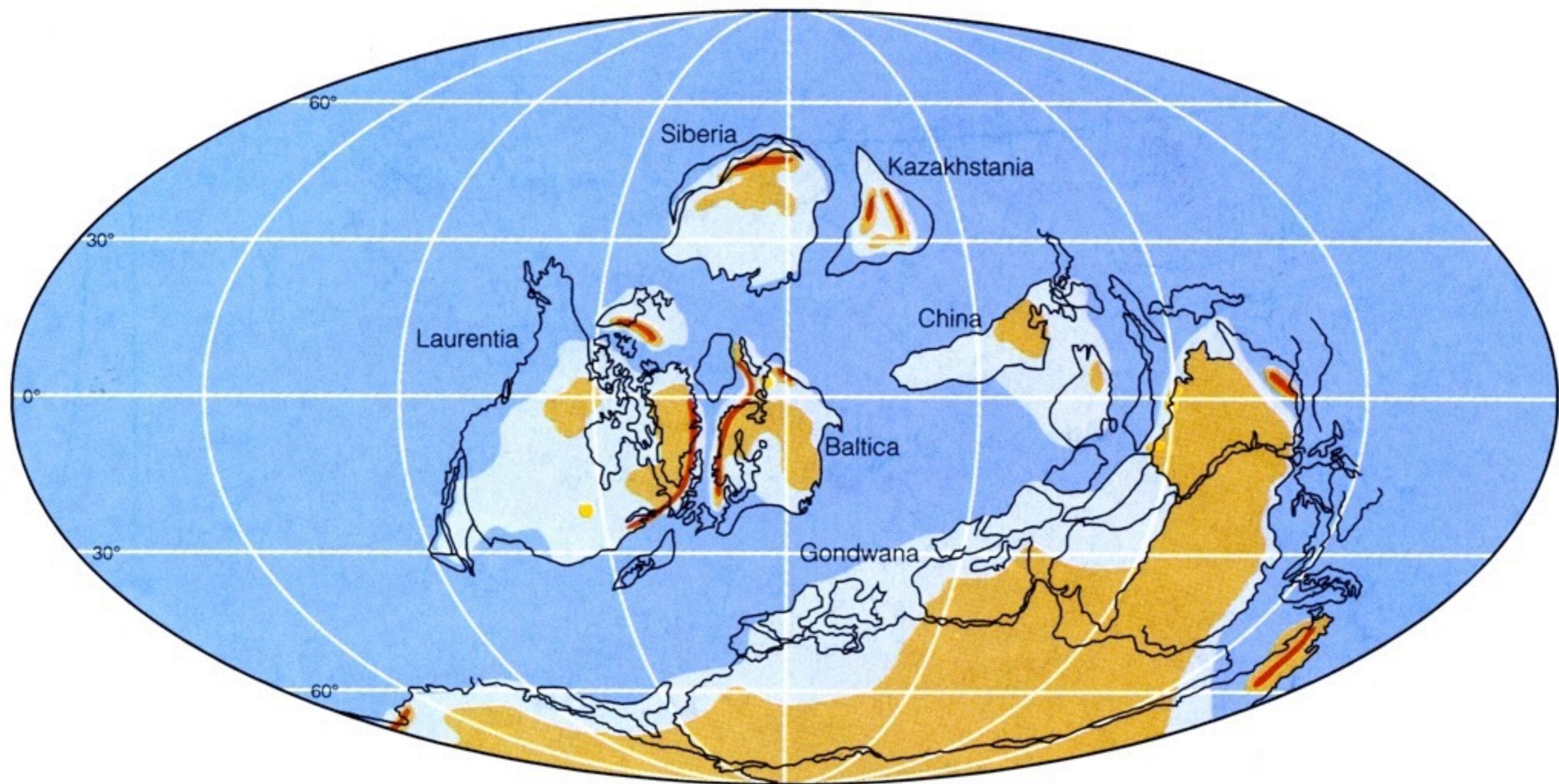
# Laurentian in the Ordovician Period



# The Sloss Seas



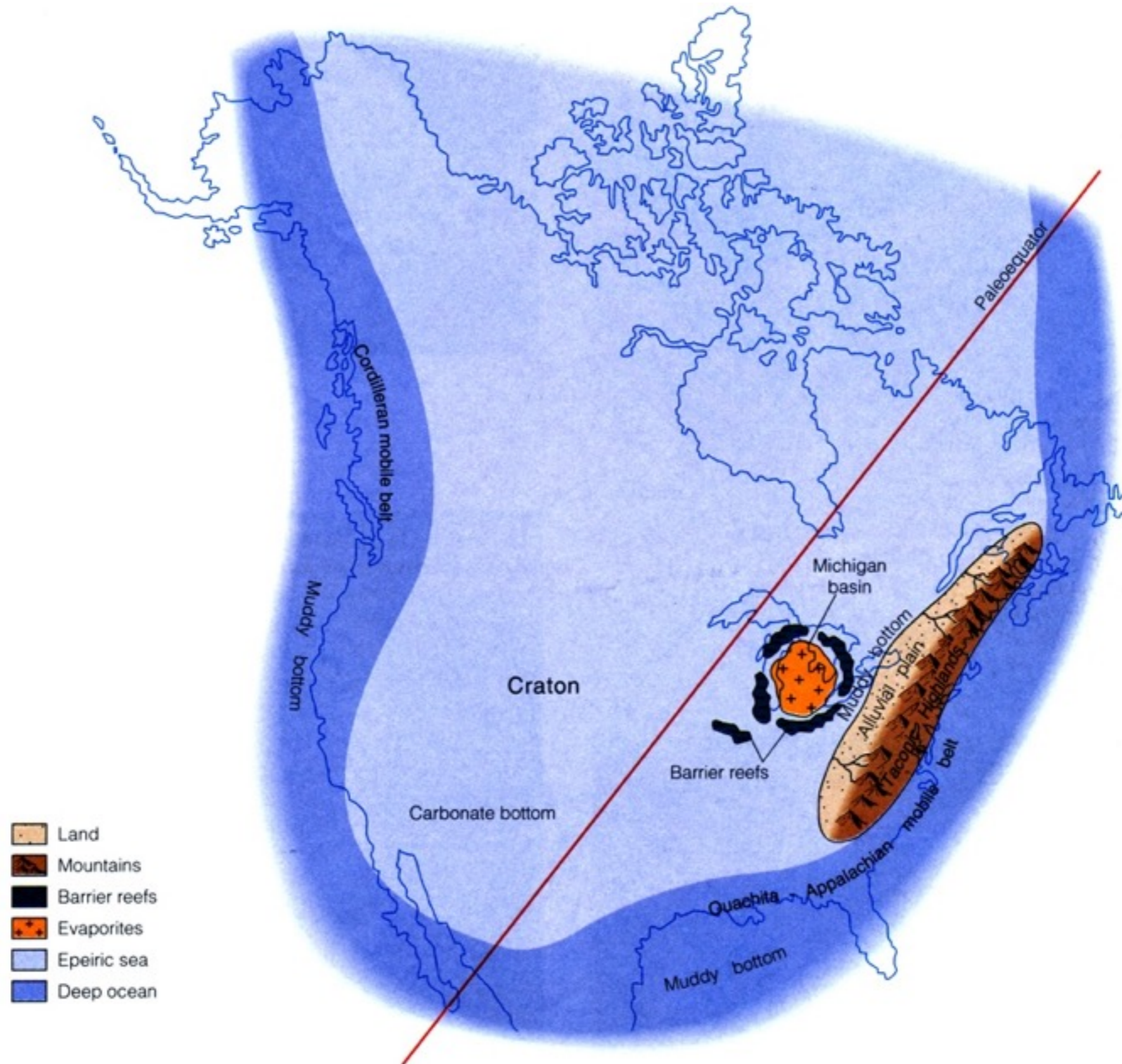
# Silurian Paleogeography



(c) Late Silurian Period (421-414 M.Y.A.)

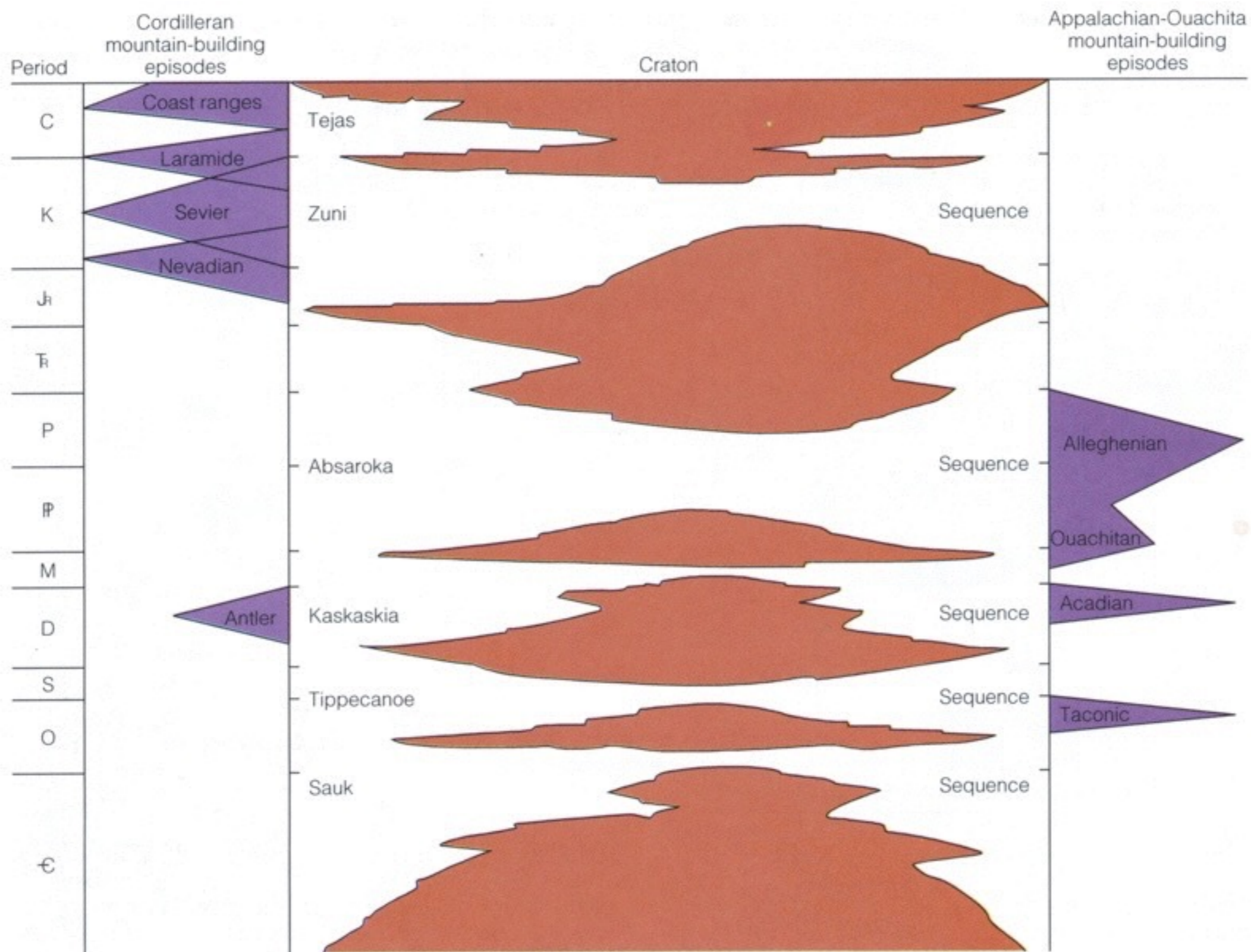


# Laurentia in the Silurian Period

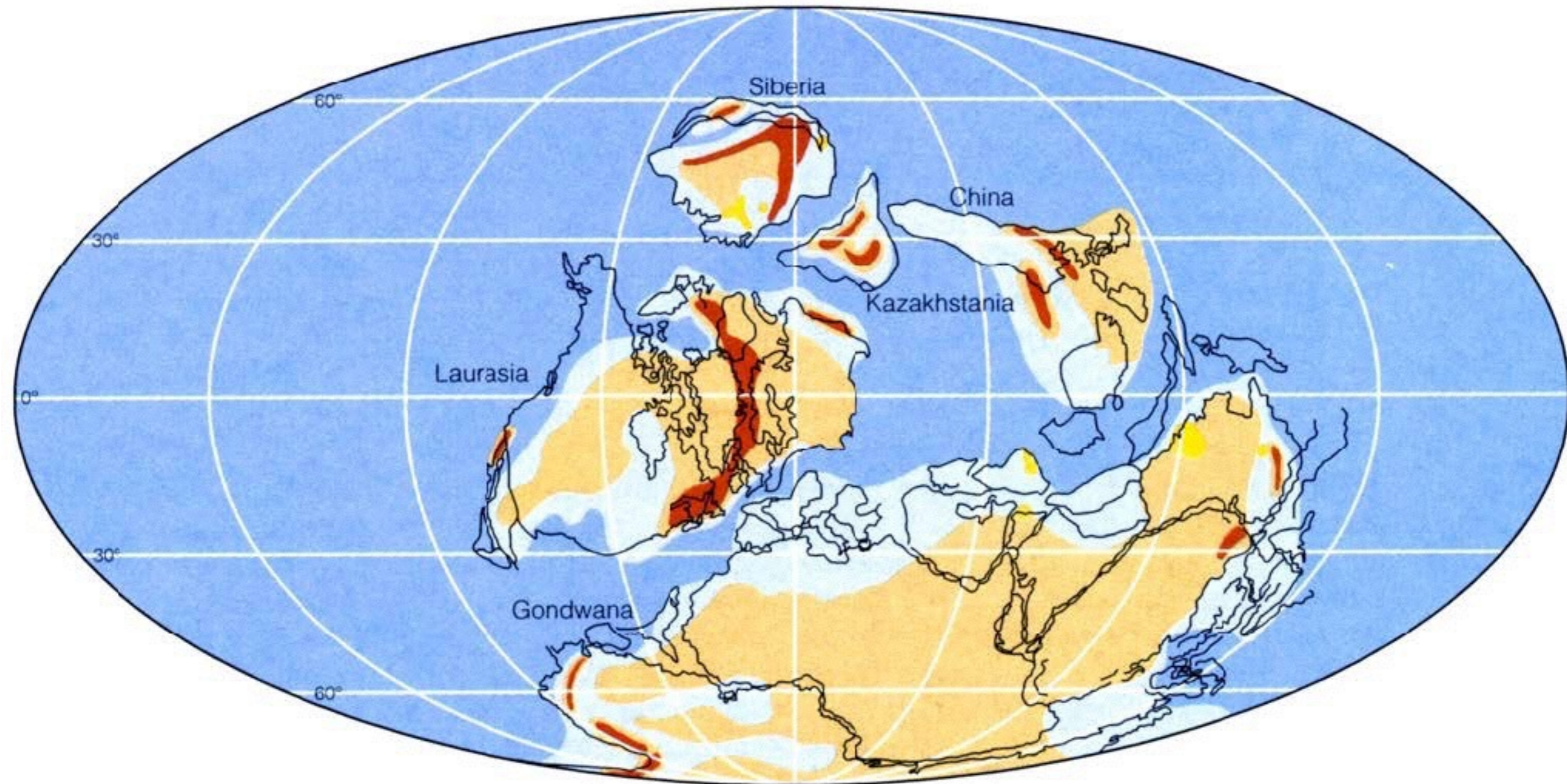




# The Sloss Seas



# Devonian Paleogeography



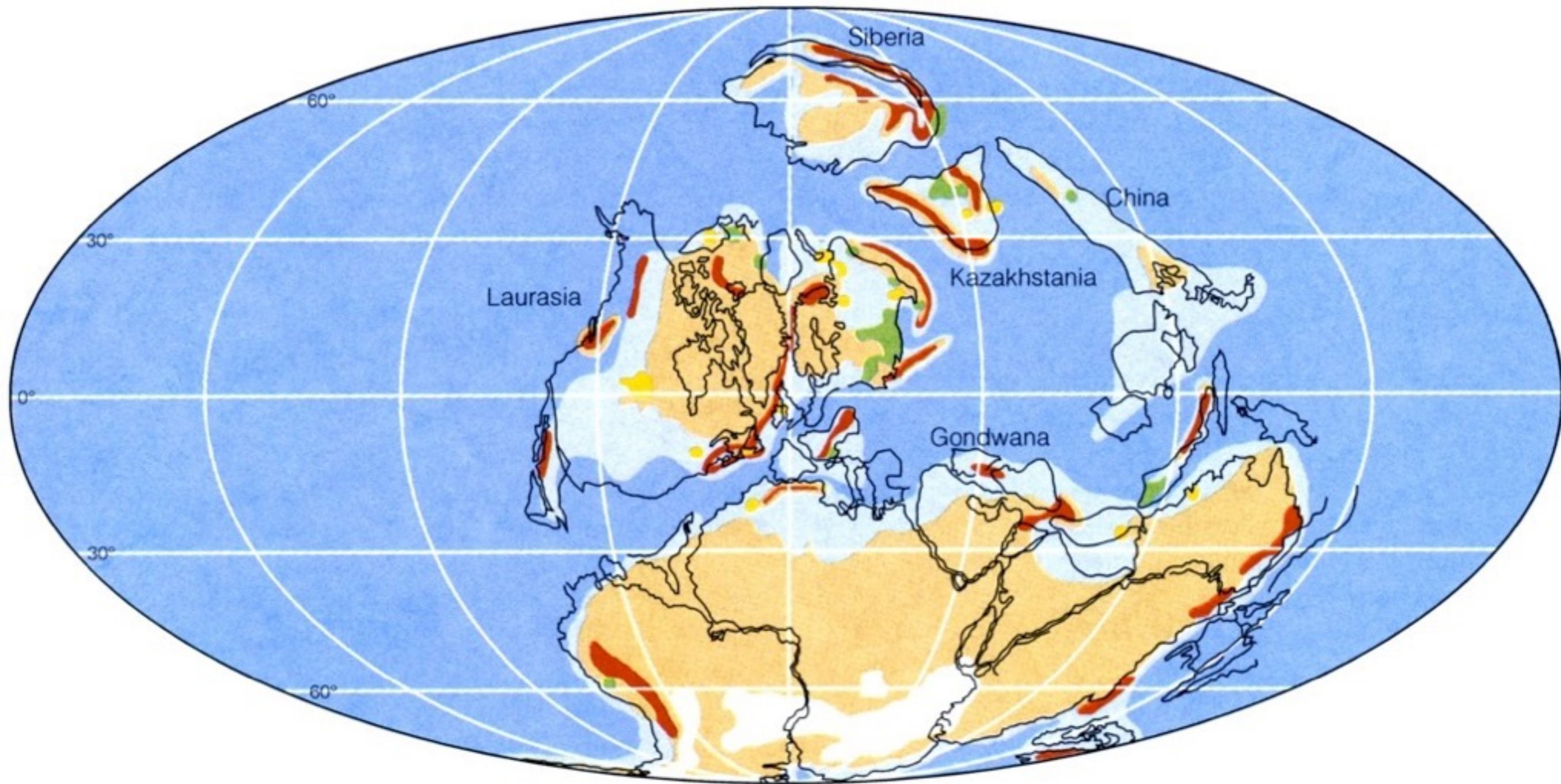
(a) Middle Devonian Period (380-374 M.Y.A.)

Evaporites    Lowlands    Mountains    Shallow sea    Deep ocean

# Laurasia in the Devonian Period



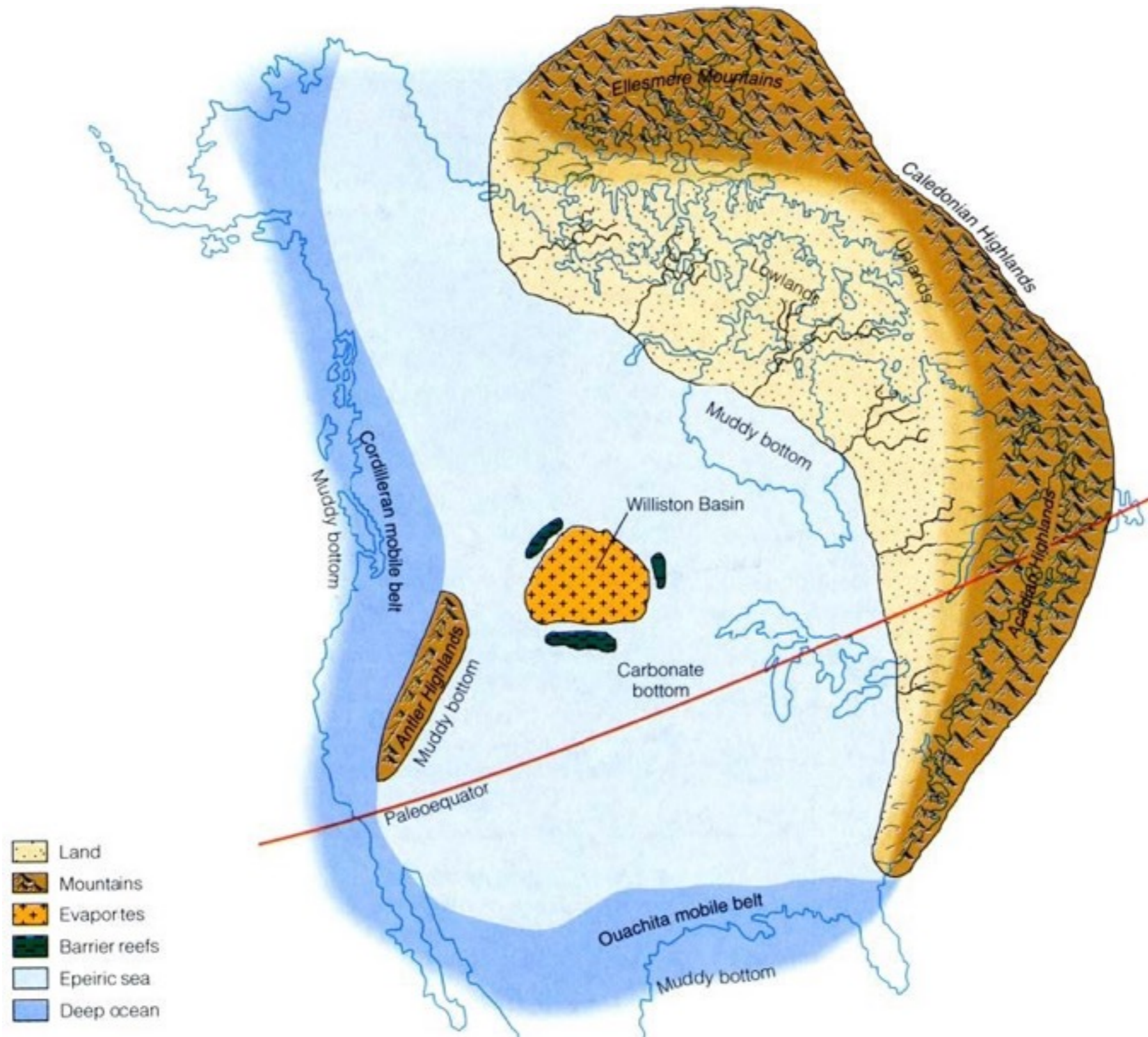
# Mississippian Paleogeography



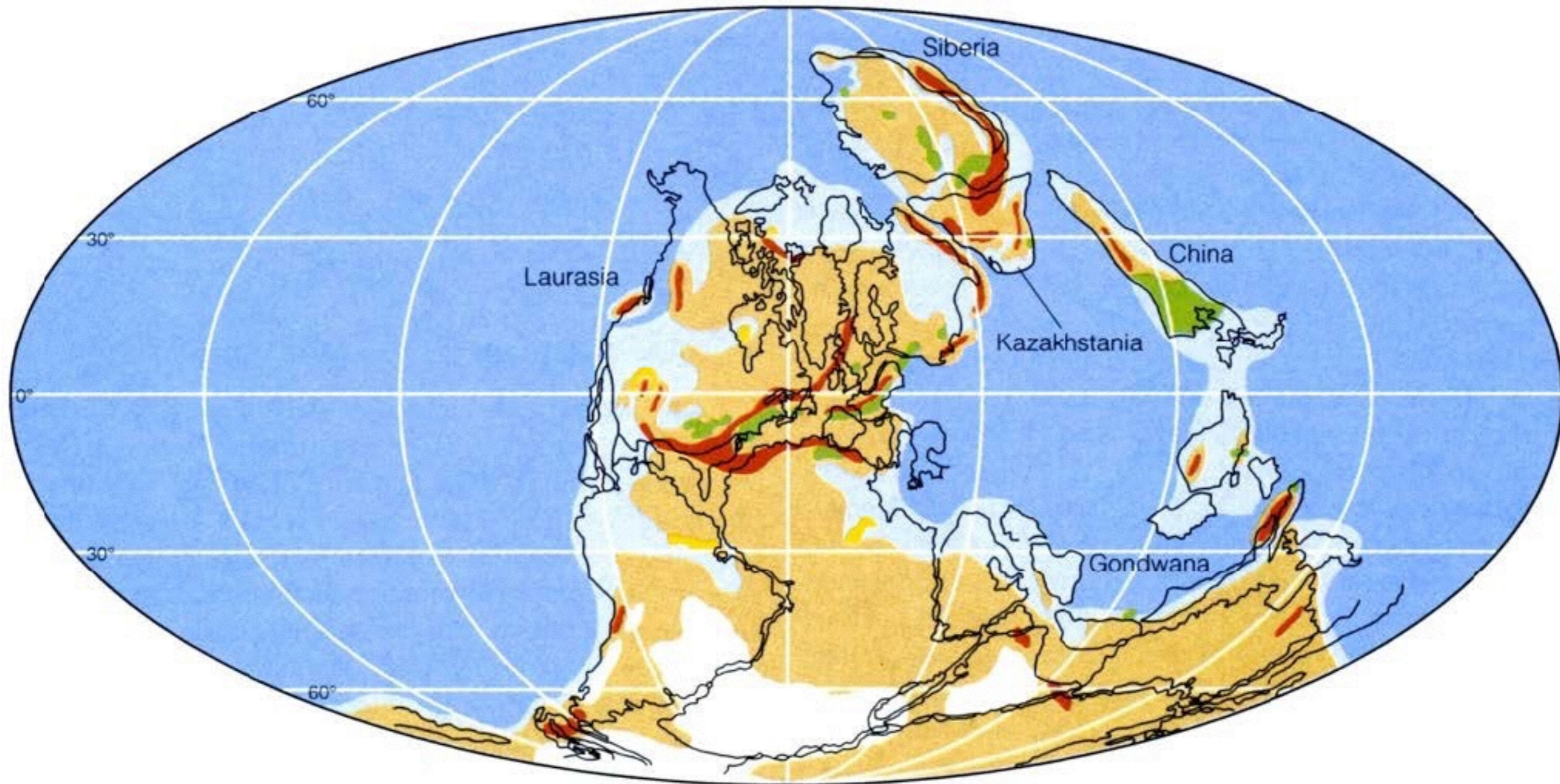
(b) Early Carboniferous Period (352-333 M.Y.A.)



# Laurasia in the Mississippian Period



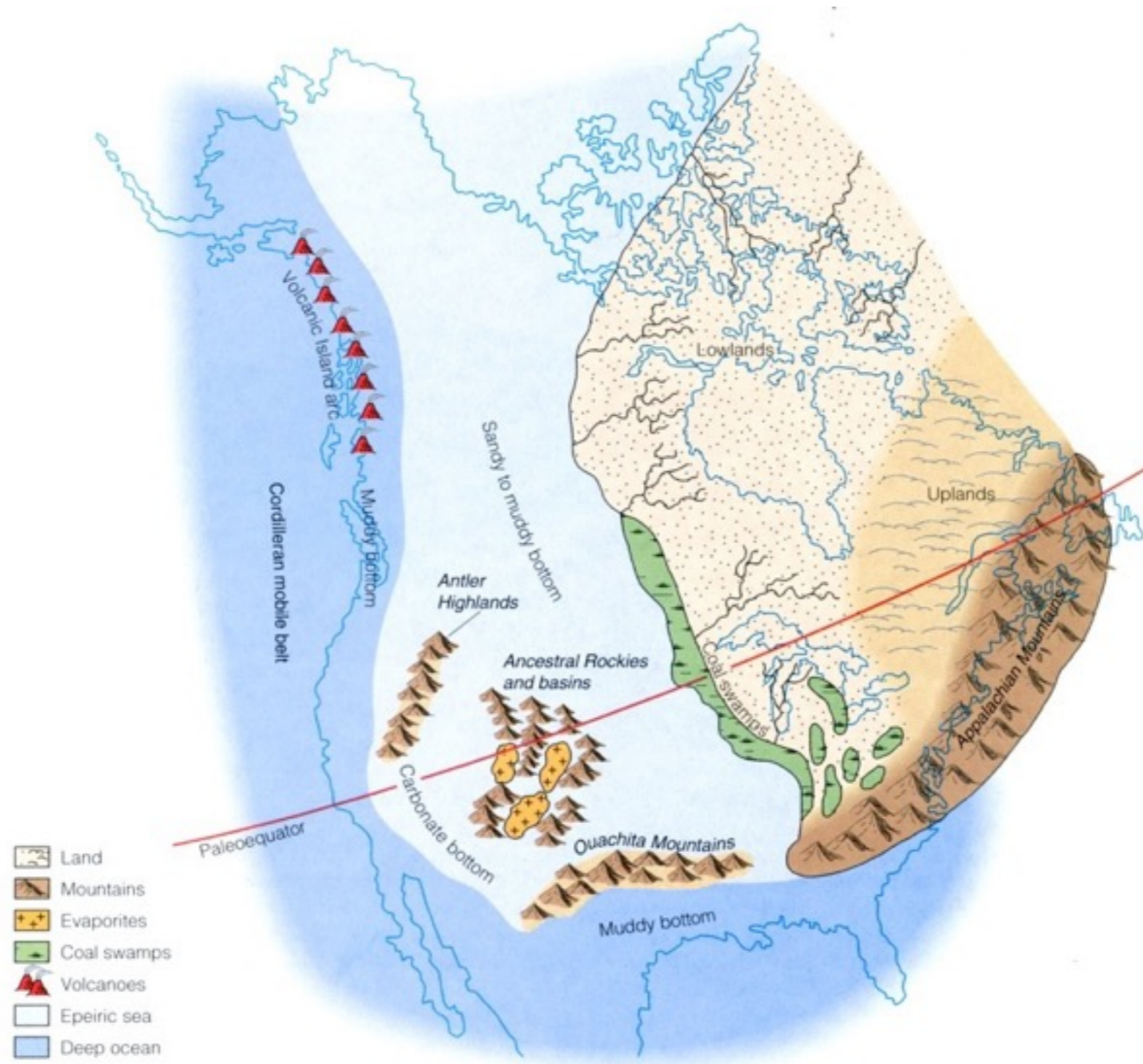
# Pennsylvanian Paleogeography



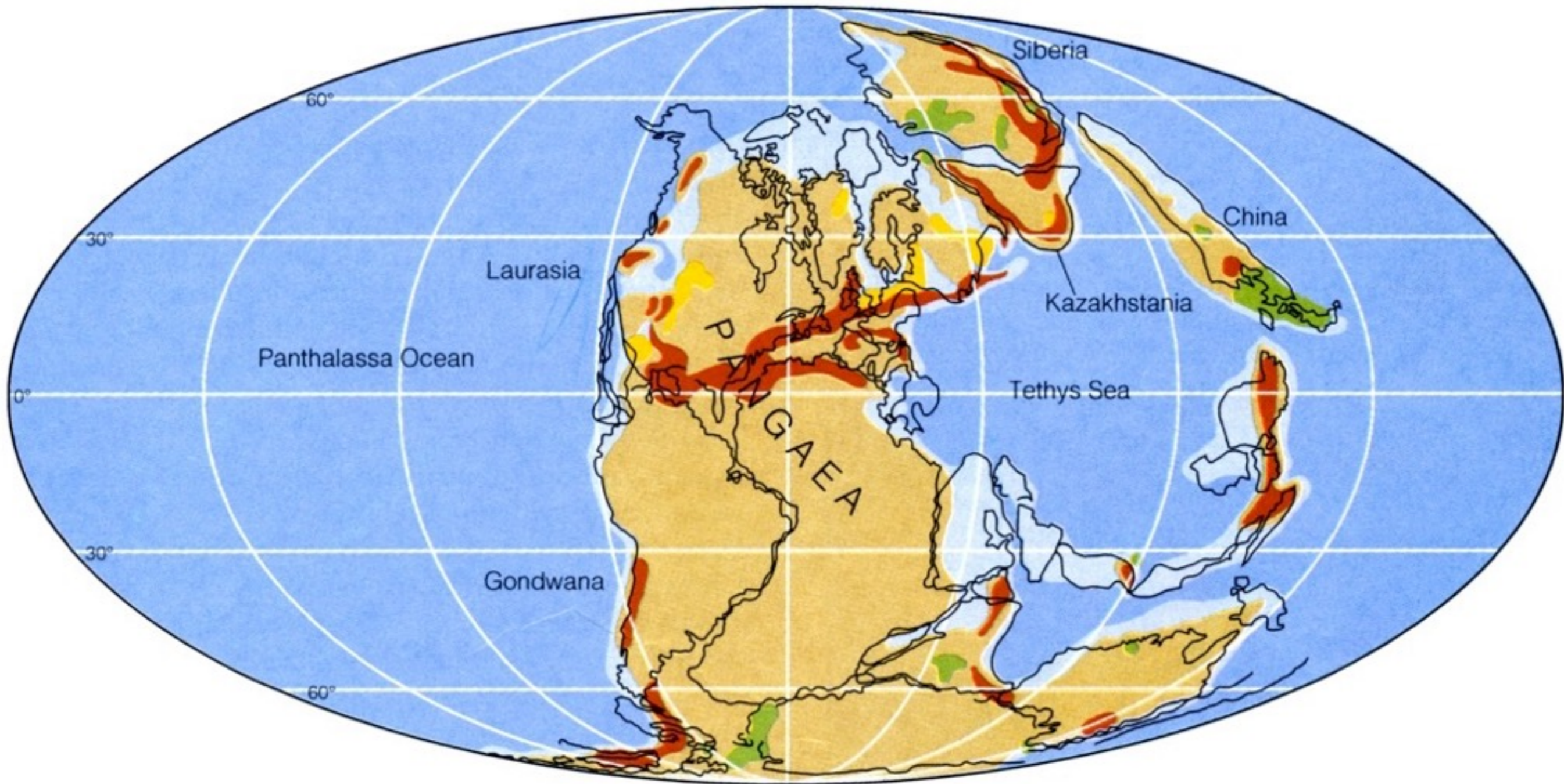
(a) Late Carboniferous Period (315-296 M.Y.A.)

Evaporites   Coals   Lowlands   Mountains   Glaciation   Shallow sea   Deep sea

# Laurasia in the Pennsylvanian Period



# Permian Paleogeography with Pangea



(b) Late Permian Period (258-253 M.Y.A.)





# Laurasia in the Permian Period

