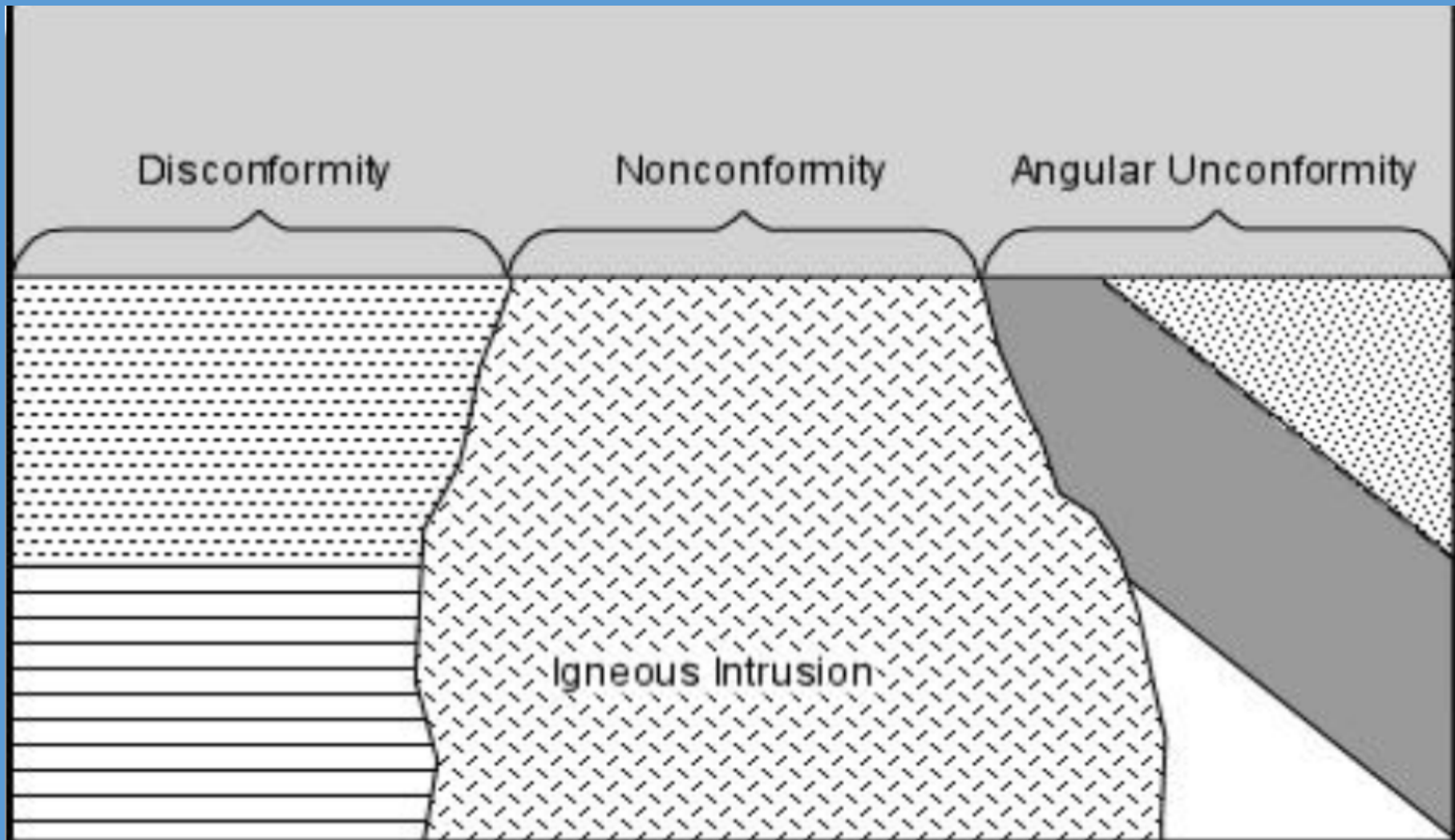


# **Structural Geology Part II**

## **Fractures ( Faults and Joints)**

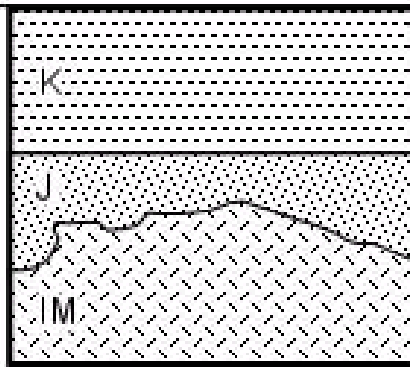
## Nonconformity

Nonconformity is used for unconformities at which strata were deposited on a basement of older crystalline rocks. The crystalline rocks may be either plutonic or metamorphic.

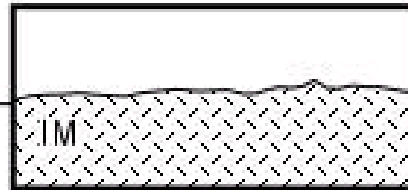


## Development of a Nonconformity

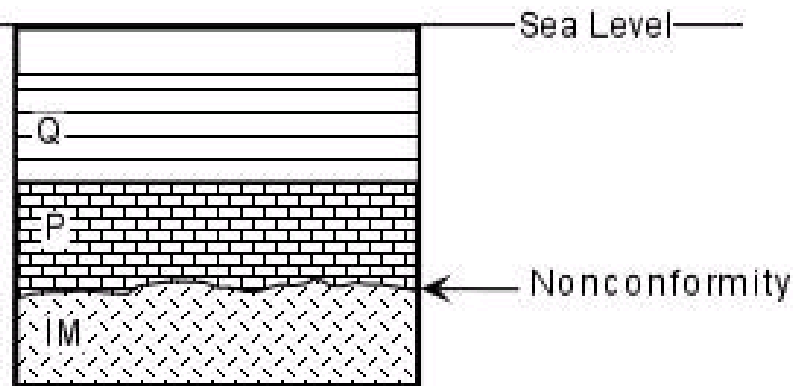
Deposition of rocks J & K. Intrusion or Metamorphism of Rock IM



Uplift, & erosion of rocks J, K, & IM

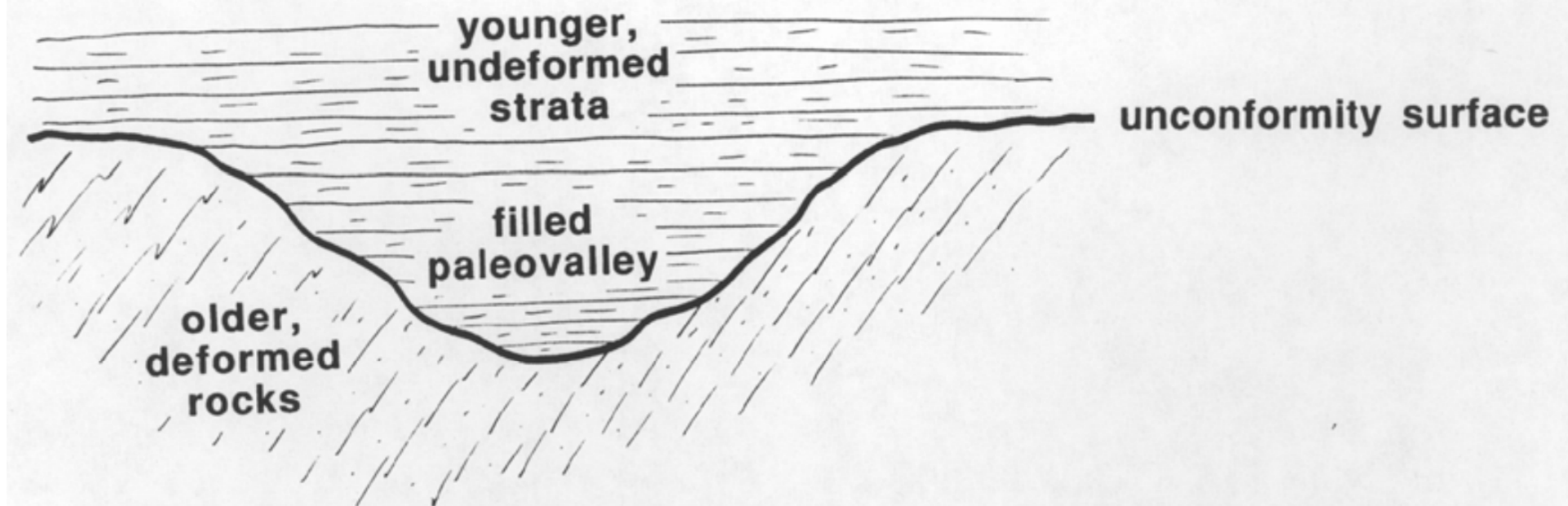


Subsidence & Deposition of rocks P & Q



## Buttress Unconformity

A buttress unconformity occurs where beds of the younger sequence were deposited in a region of significant pre-depositional topography. Imagine a shallow sea in which there are islands composed of older bedrock. When sedimentation occurs in this sea, the new horizontal layers of strata terminate at the margins of the island. Eventually, as the sea rises, the islands are buried by sediment. But along the margins of the island, the sedimentary layers appear to be truncated by the unconformity. Rocks below the unconformity may or may not parallel the unconformity, depending on the pre-unconformity structure.



## **Blended unconformity**

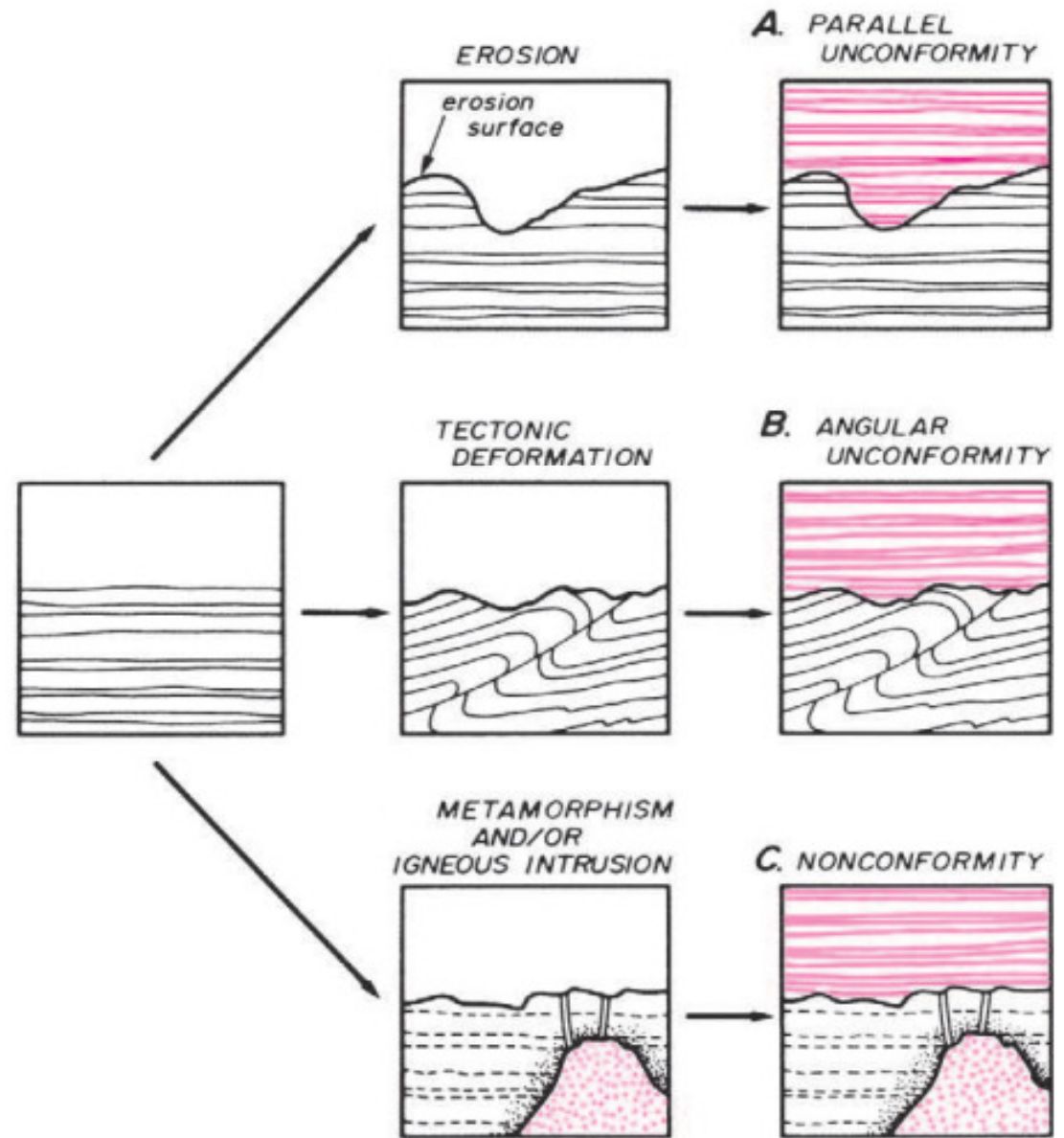
A blended unconformity is a type of disconformity or nonconformity with no distinct separation plane or contact, sometimes consisting of soils, paleosols, or beds of pebbles derived from the underlying rock.

Formation of unconformities.

*Deposition of older rocks*

*Interval of non-deposition*

*Deposition of younger beds*



# Grand Canyon as best Example of Unconformity Types

