

Geography 12: Maps and Spatial Reasoning

Lecture 15: Topographic Features on Maps

Professor Keith Clarke



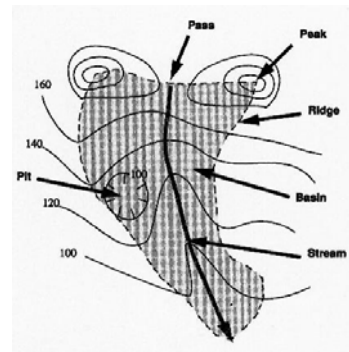
Contours

- Review: CI, index, rule-of-V's, concave, more=steeper
- Can get absolute information: elevations, gradients, etc.
- Pattern of contours requires interpretation
- Knowledge of landforms helps interpretation
- Compressed class in physical geography and geomorphology
- Geomorphology has a sub-field of geomorphometry
- Often goal is to interpret *process* from *form*

A tension

- Erosion: breaking down and removal of surface materials
 - Processes can be fast or slow
- Deposition: erosional material is moved from one location to another and redeposited
- Forces are chemical, mechanical, gravity, water, wind, etc.
- Each creates distinctive **landforms**

Terrain skeleton



Some key terms

- Peak
- Pit
- Ridge
- Spur
- Scarp/Scree
- Drainage (Channel)
- Inflection point
- Saddle (Pass)
- Basin/Watershed

Peak (and false summit)

Landscape: Mountain, Glacial erosional (Glacial Peak, Washington)

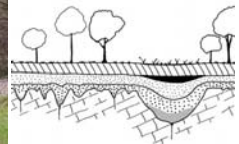


Yosemite Valley

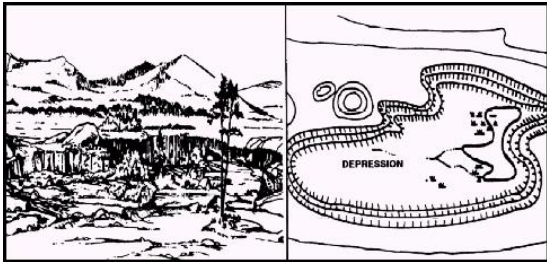


Pit: Dolina

Landscape: Karst (Chemical erosion)
(Skocjanske Jame, Slovenia)



Depression/Sink-hole



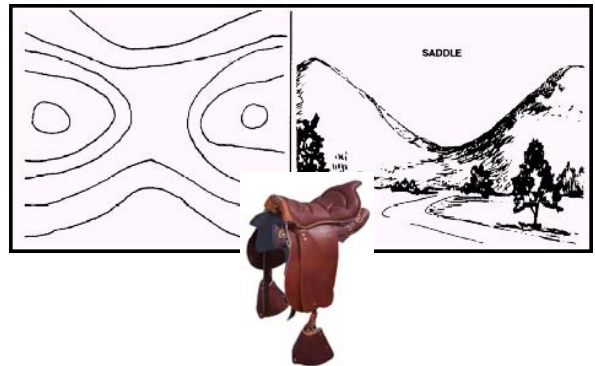
Limestone sink-hole (FL)



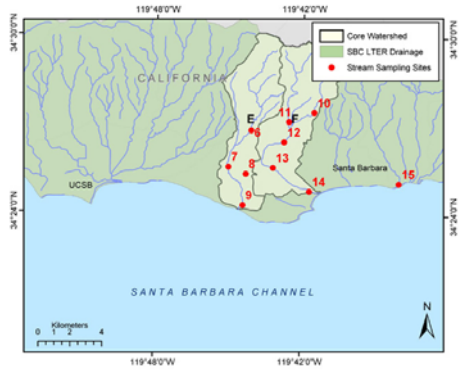
Saddle Point
California Coastal Savanna
(Figueroa Mountain Road)



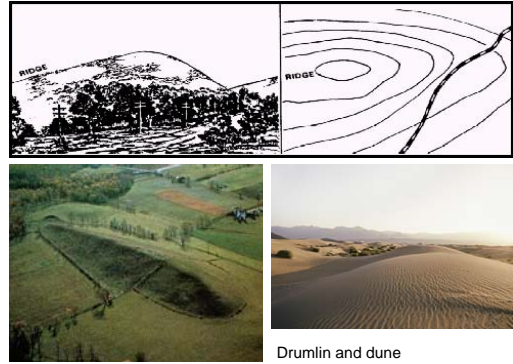
Saddle point



Watershed



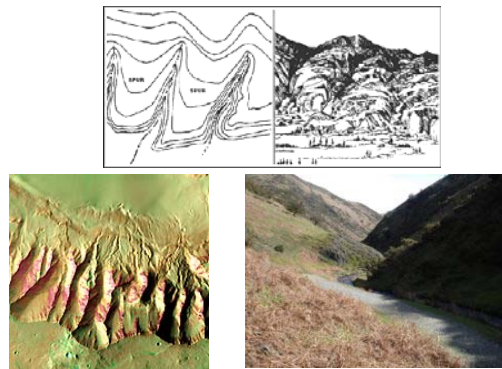
Hill and ridge



Ridge and ridgeline



Spur



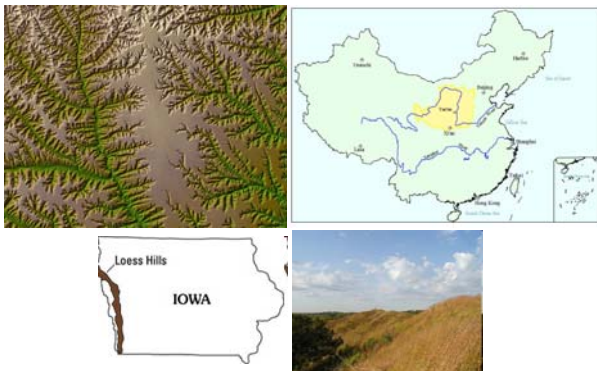
Wadi Hatan, Western Desert, Egypt
Landscape: Aeolian



Wind-formed landscapes: Erosion



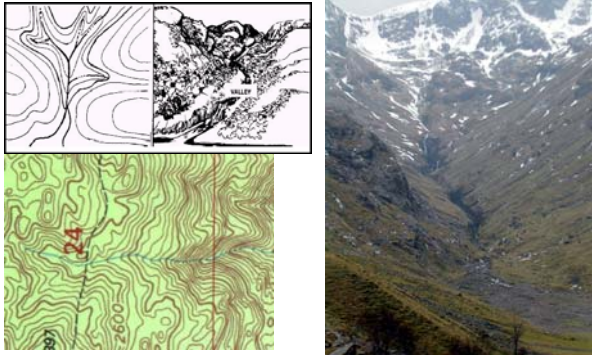
Deposition: Loess Plateau-China & Iowa



Drainage/Stream Channel
landscape: Prairie (Clay Co. MN)



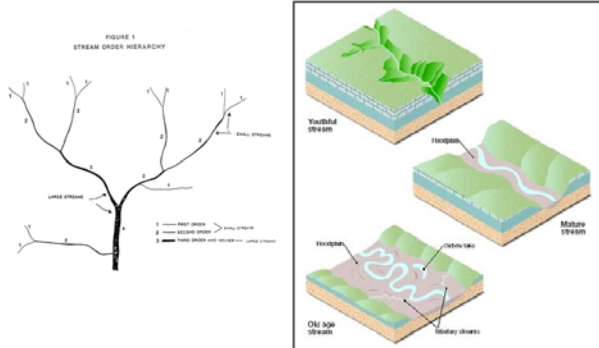
Stream features



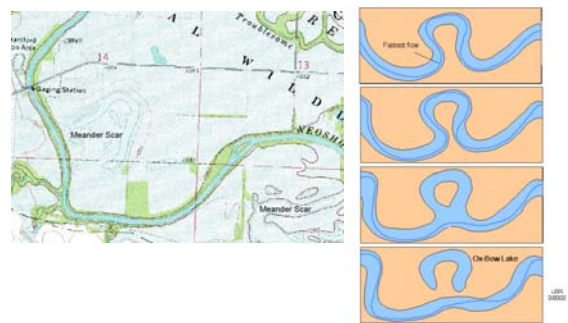
Draw/Gully/Spring



Stream order and landscape



River features: Meanders



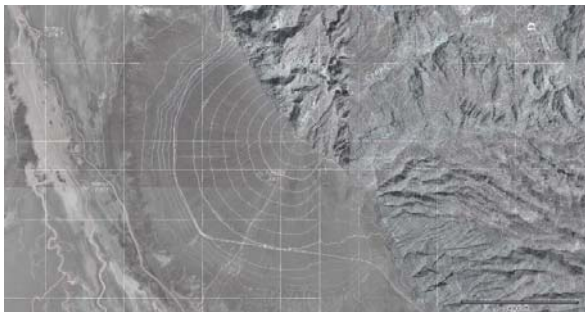
Levees



Levees (Mississippi)



Alluvial Fan (Death Valley)



Alluvial fan (Topo map) Cedar Creek (Ennis, MT)



What and where?



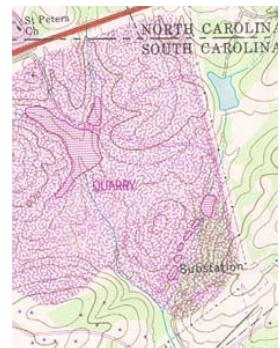
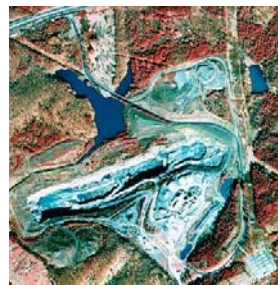
What and where?



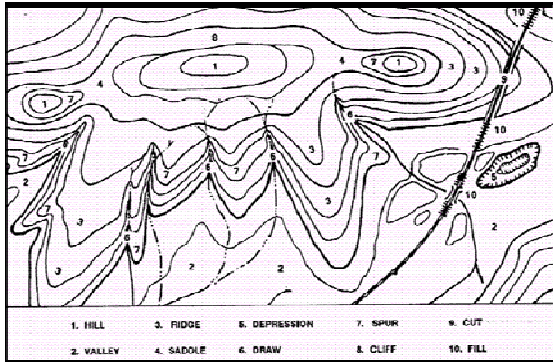
What landscape and where?



What?



All together now!



Summary

- Contours and other relief methods can show terrain structure
- Structure can be interpreted to see what natural and human features are present
- Skeleton features of the landscape
- Different landscapes have different features
- Many clues for interpreting where and what