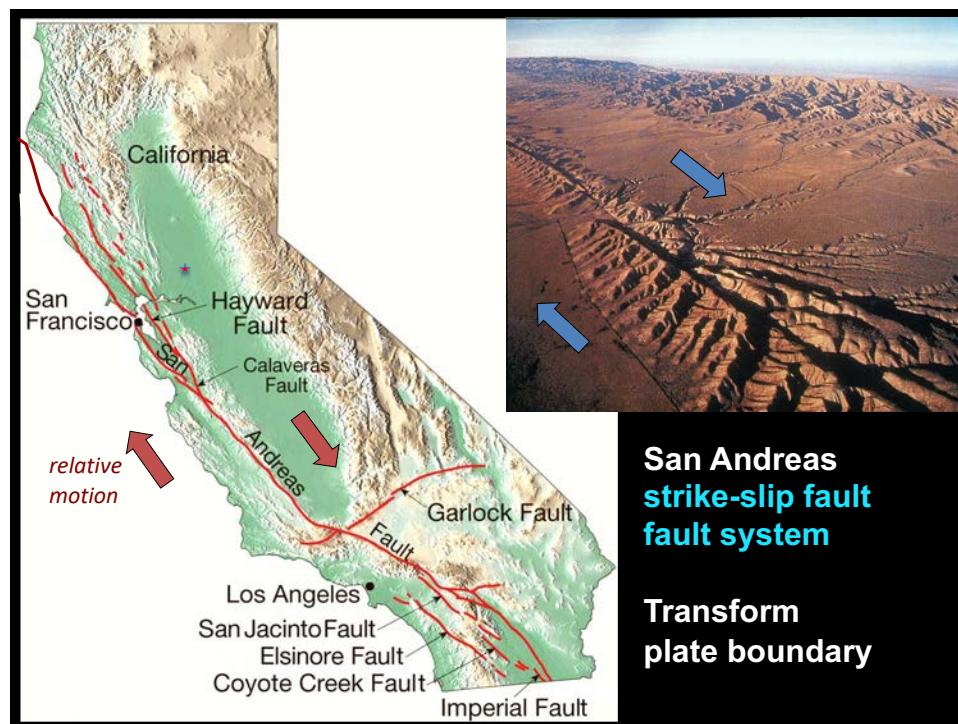
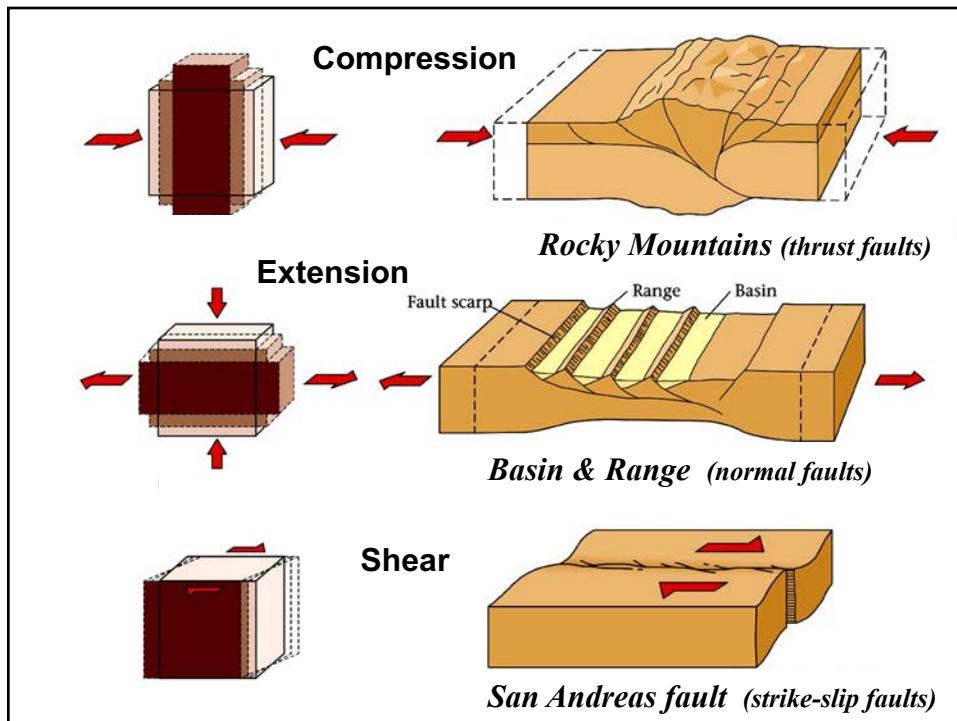


1



2



3

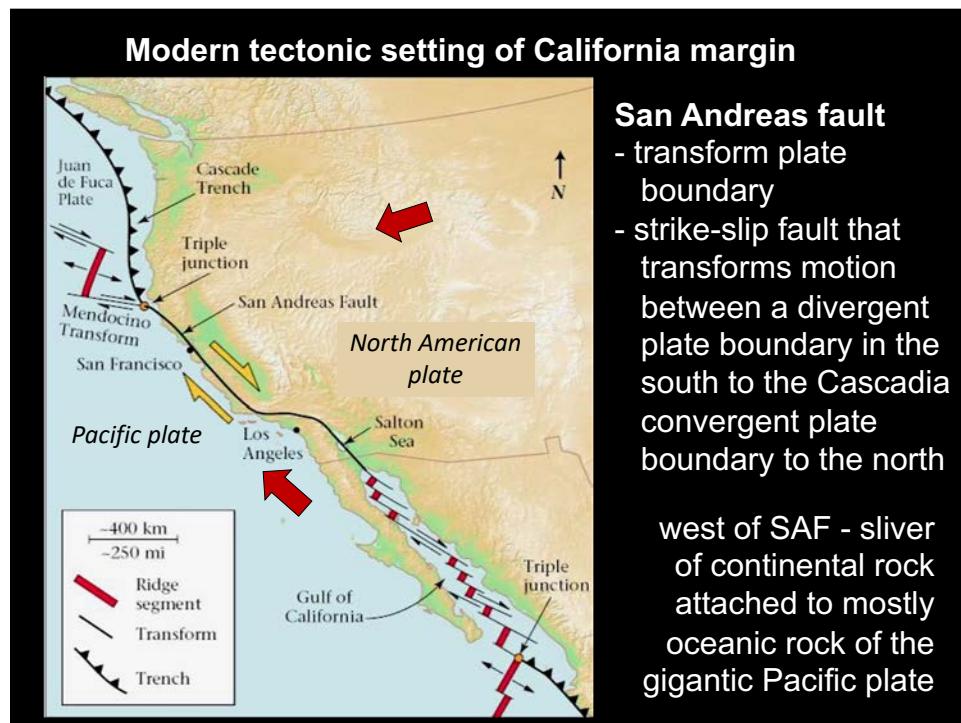


Tectonic **shear** stress generates **strike-slip faults** that

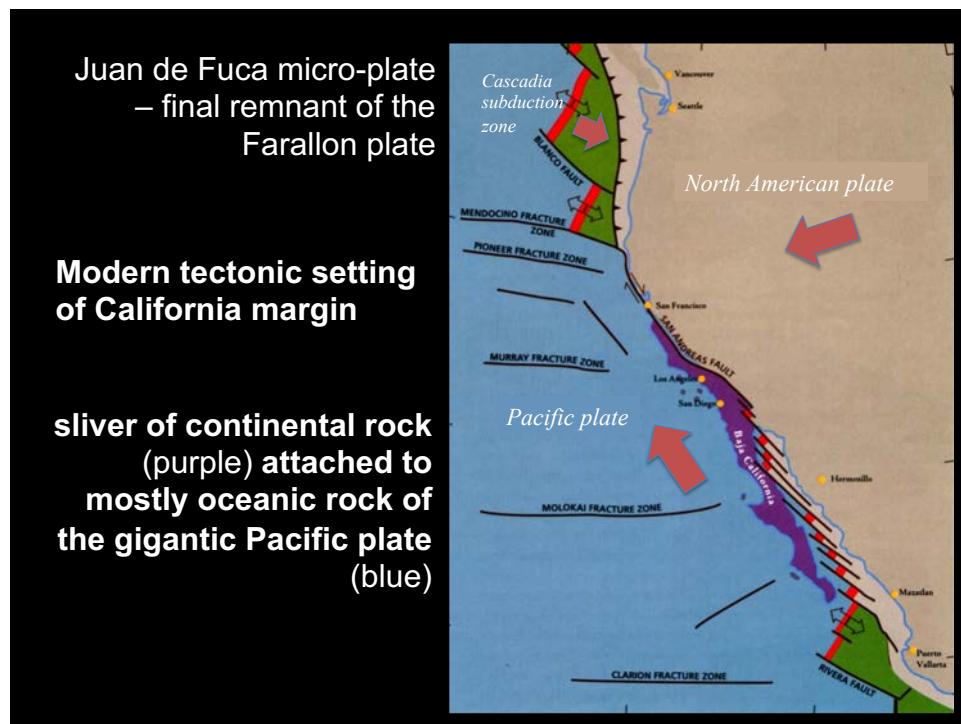
episodically rupture, causing earthquakes

- fault remains “locked” while tectonic stress accumulates through time
- abrupt release of the pent-up stress is the earthquake

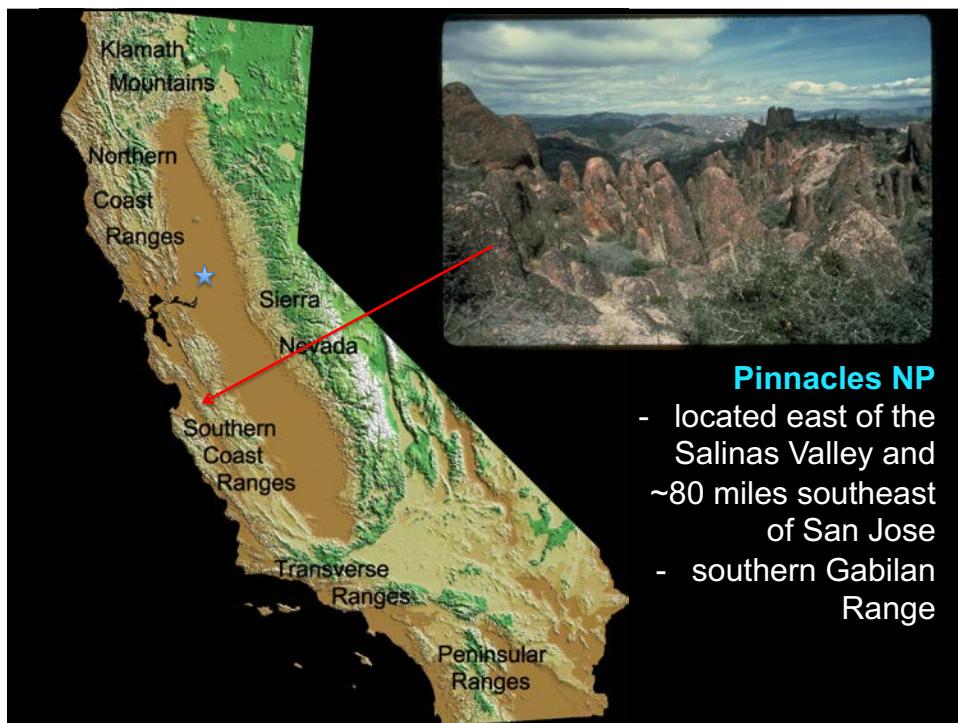
4



5



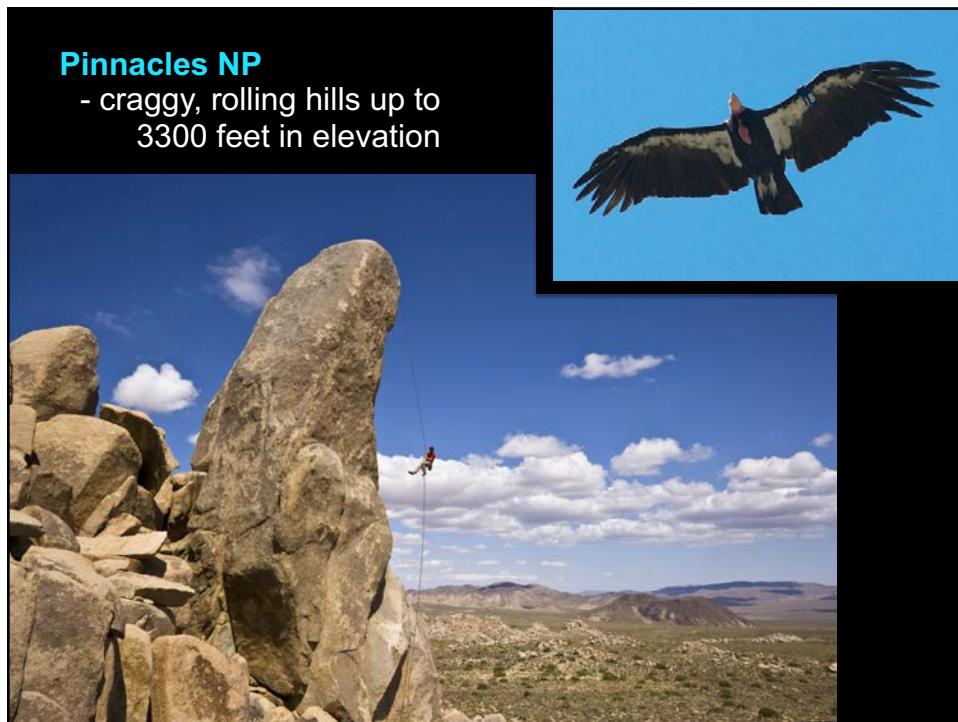
6



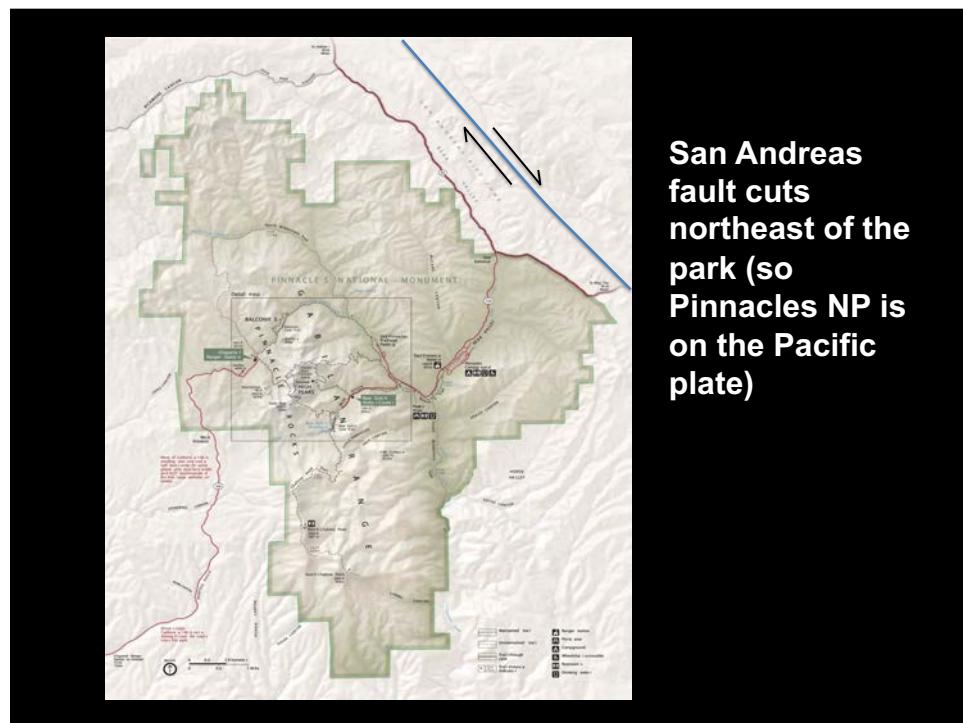
Pinnacles NP

- located east of the Salinas Valley and ~80 miles southeast of San Jose
- southern Gabilan Range

7

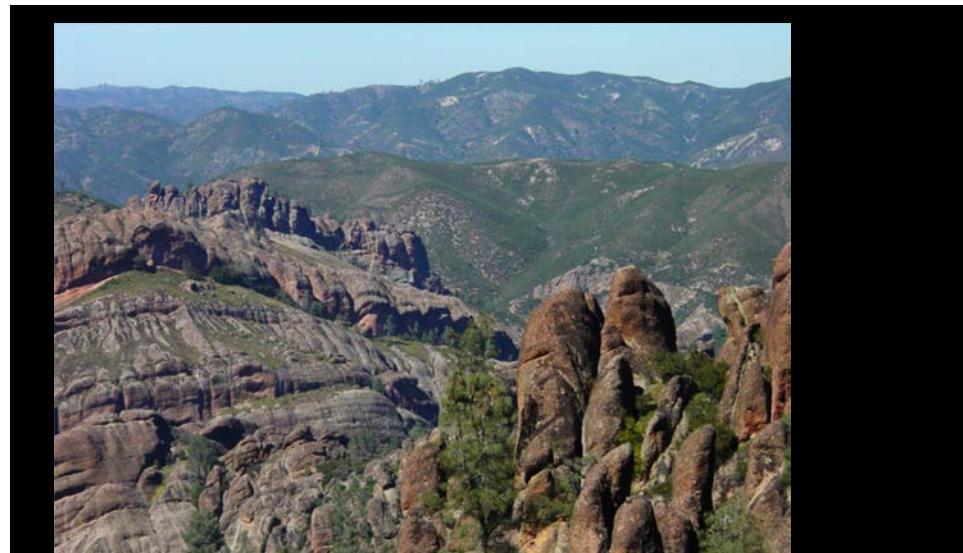


8



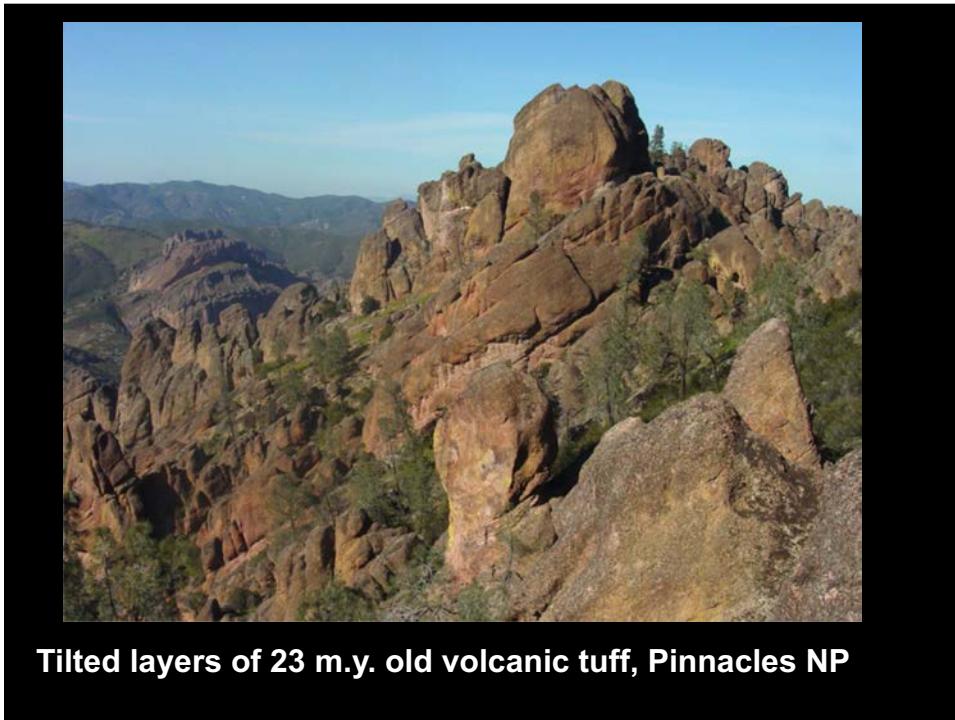
San Andreas fault cuts northeast of the park (so Pinnacles NP is on the Pacific plate)

9

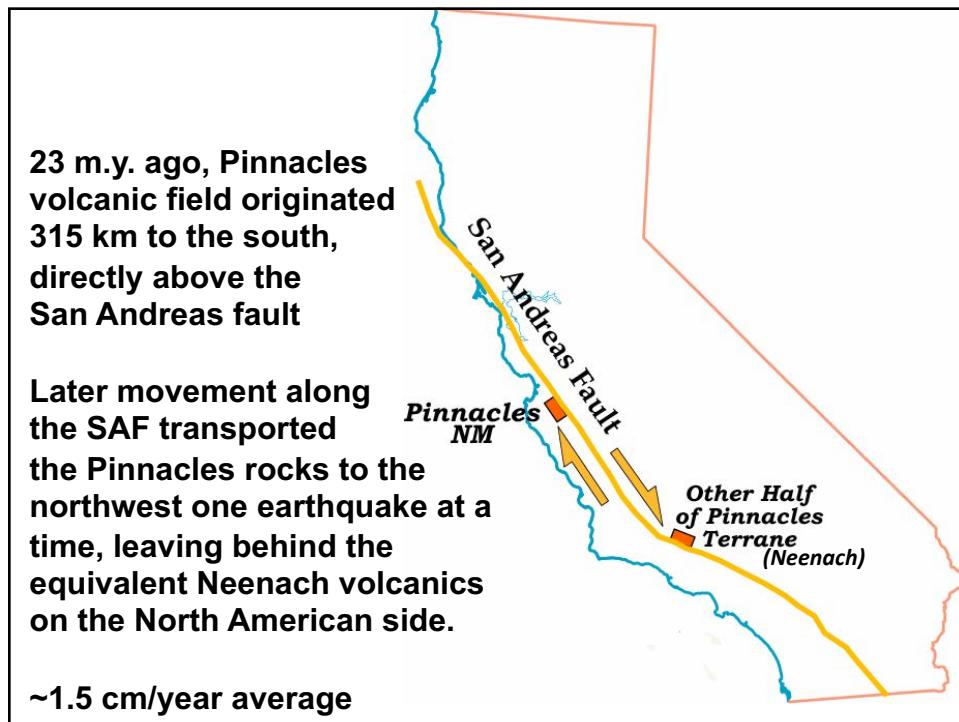


Balconies Cliffs (from High Peaks Trail), showing multiple layers of **pyroclastic volcanic tuff**, now tilted by motion along the SAF

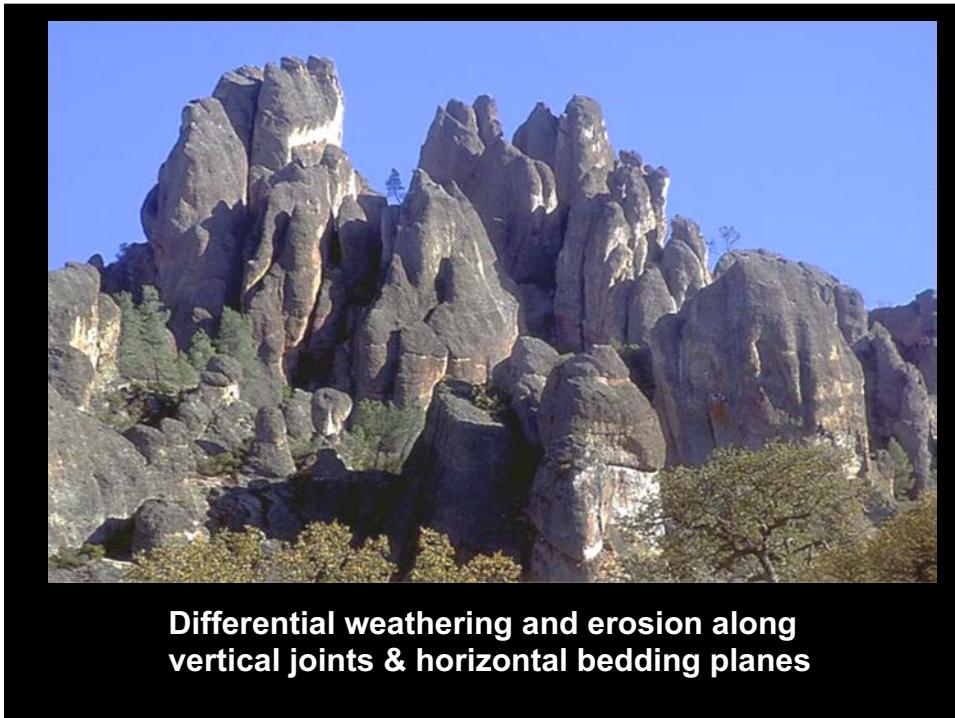
10



11

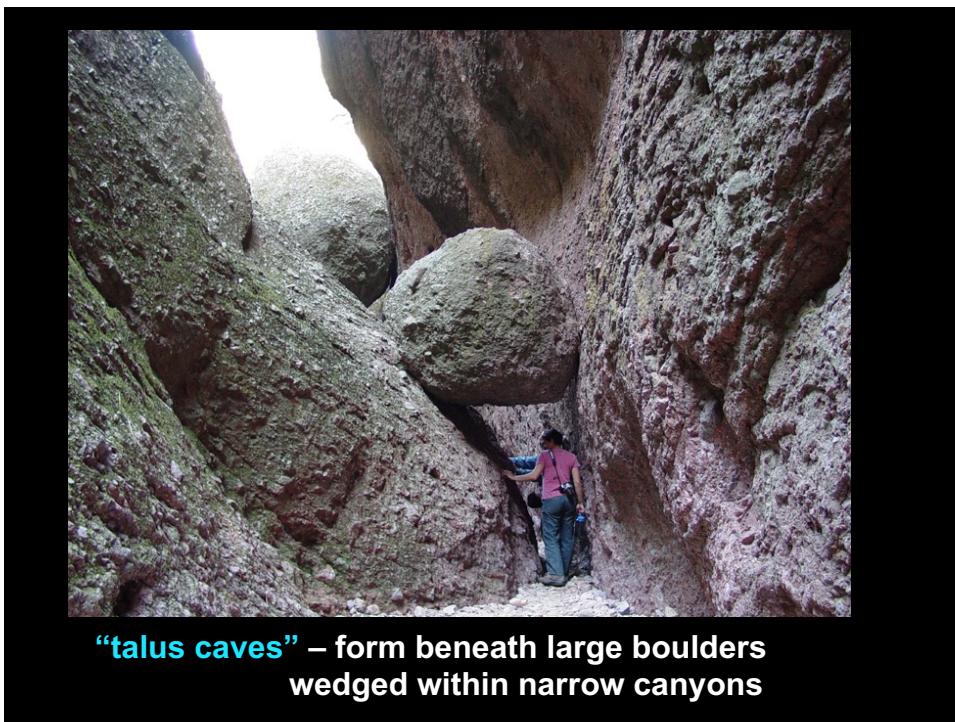


12



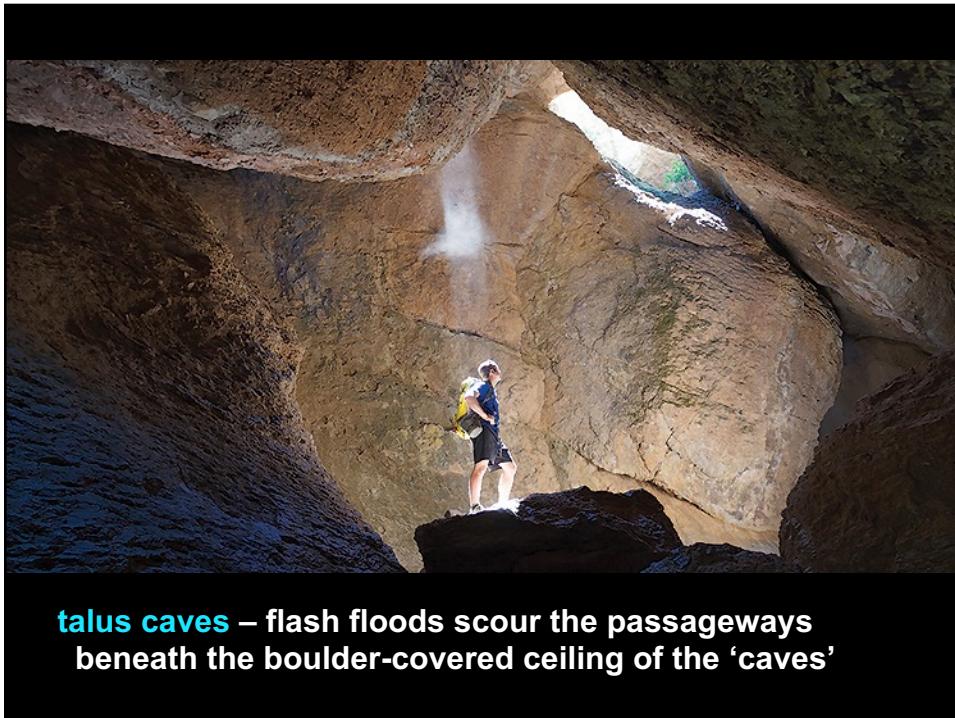
Differential weathering and erosion along vertical joints & horizontal bedding planes

13



“talus caves” – form beneath large boulders wedged within narrow canyons

14



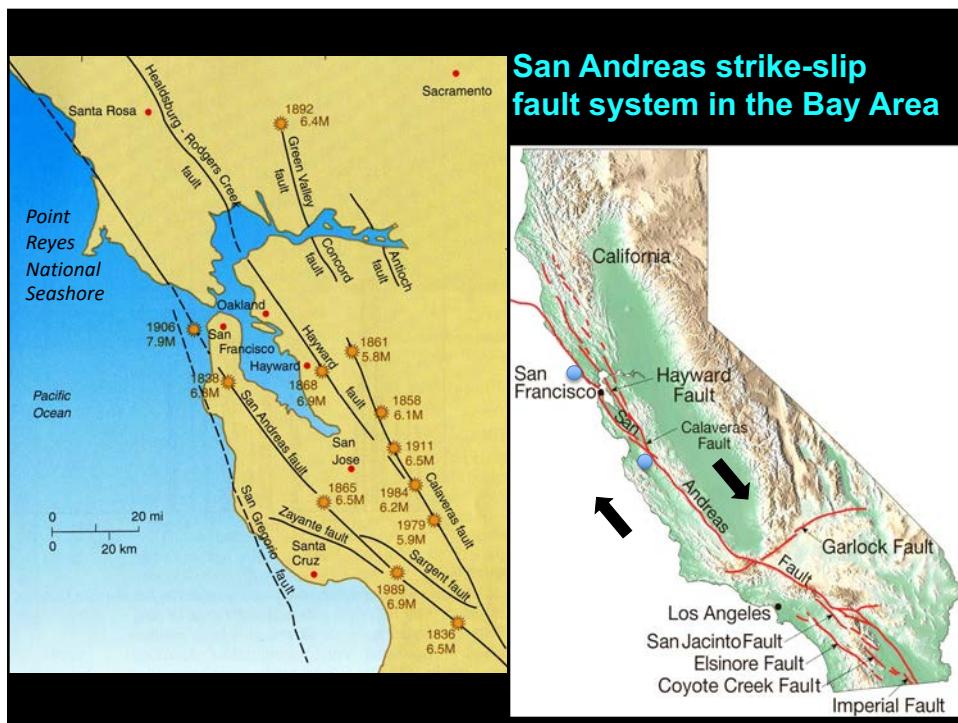
**talus caves – flash floods scour the passageways
beneath the boulder-covered ceiling of the ‘caves’**

15

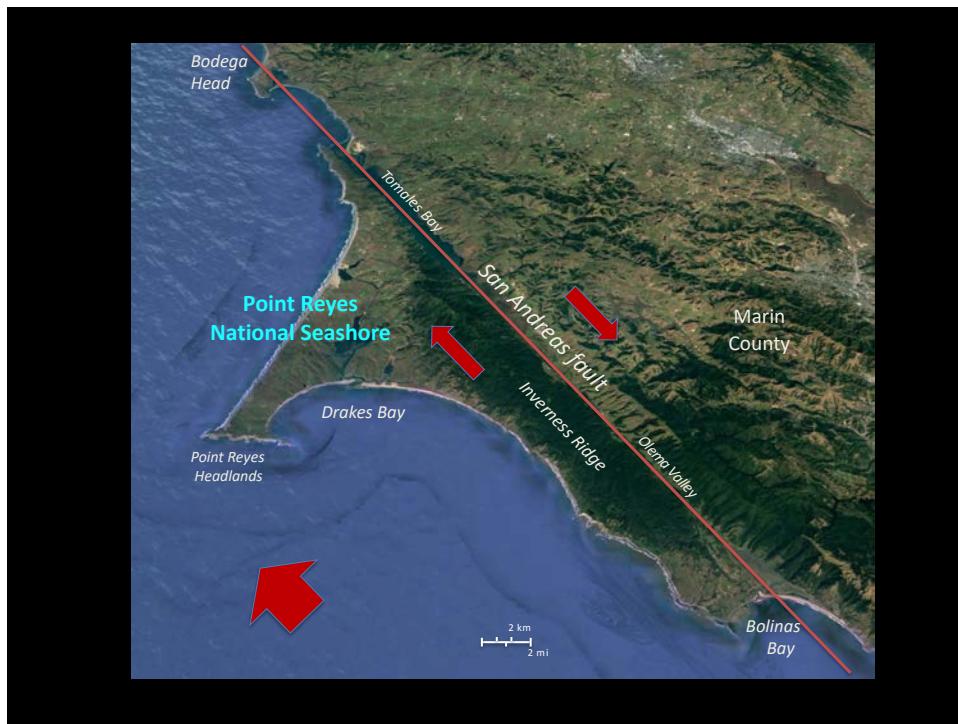


High Peaks Trail, Pinnacles NP

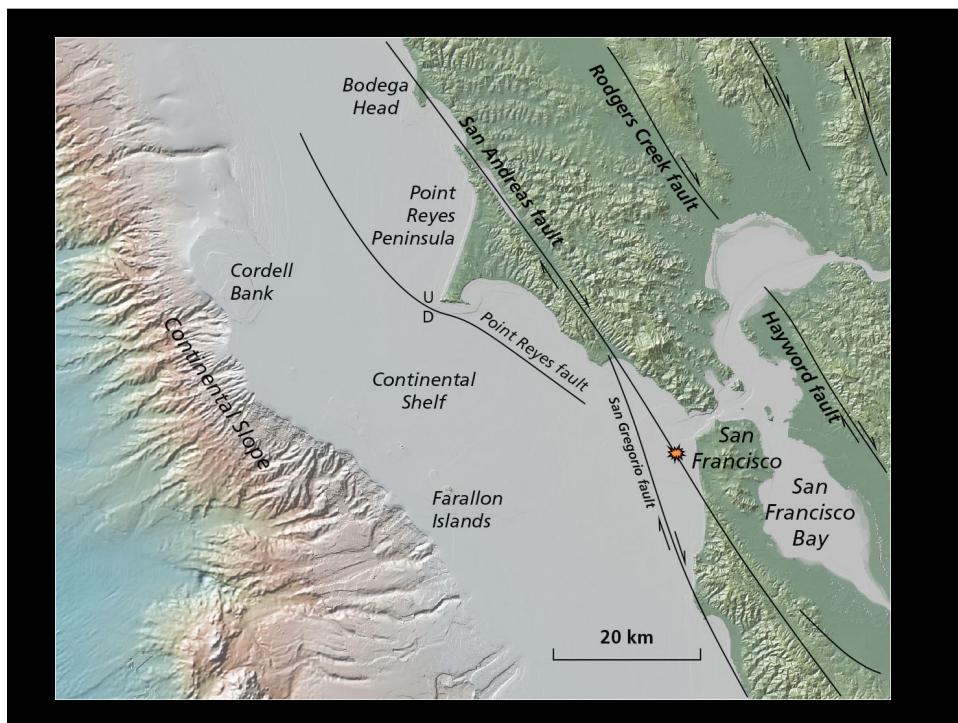
16



17



18



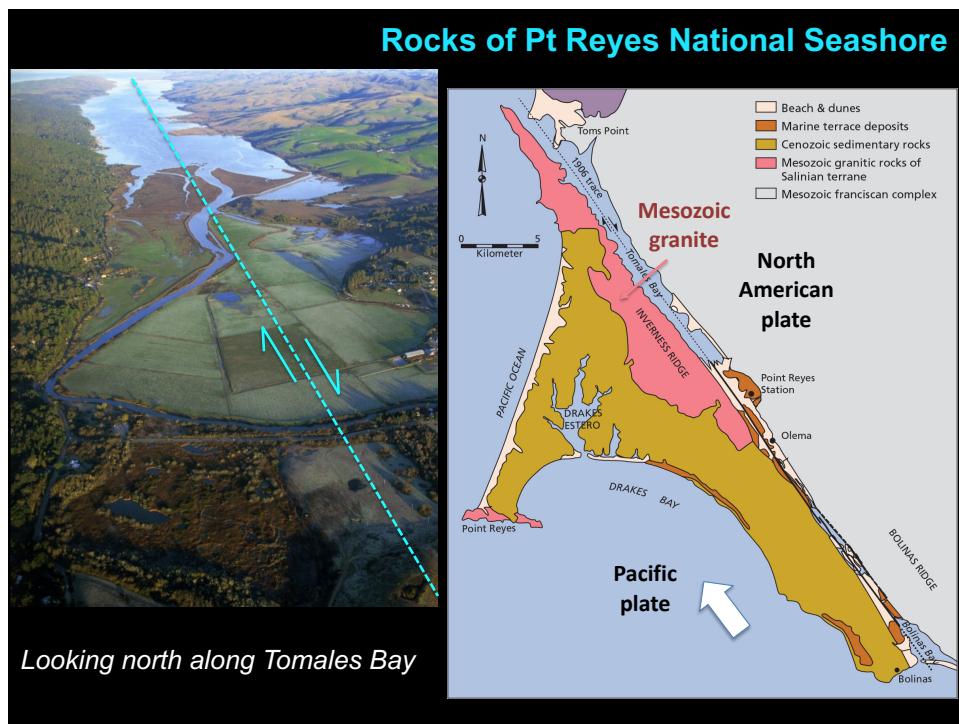
19



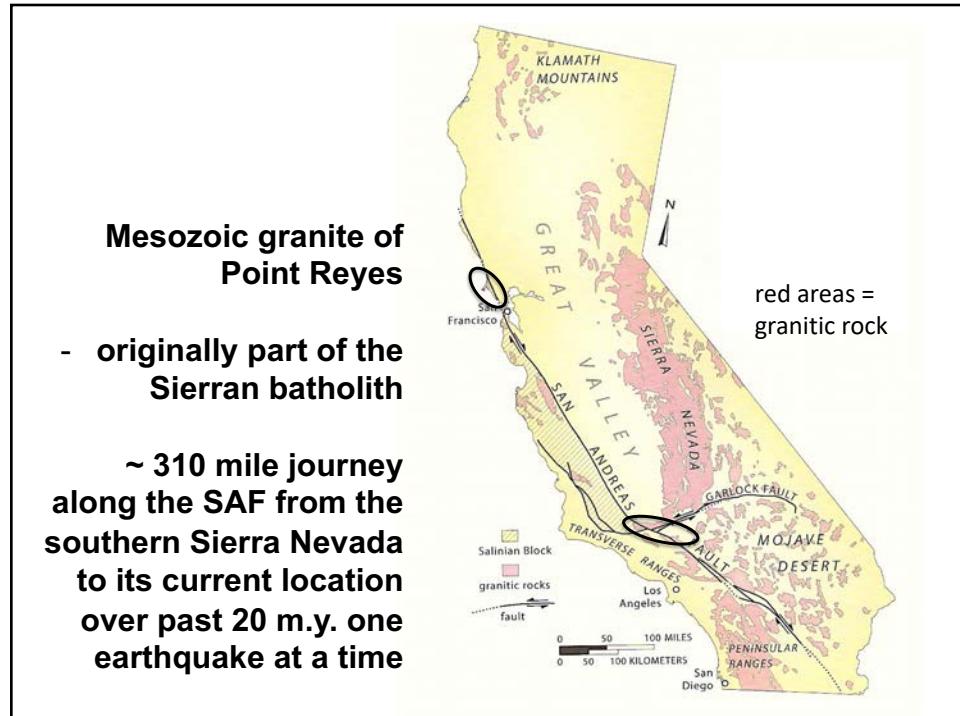
20



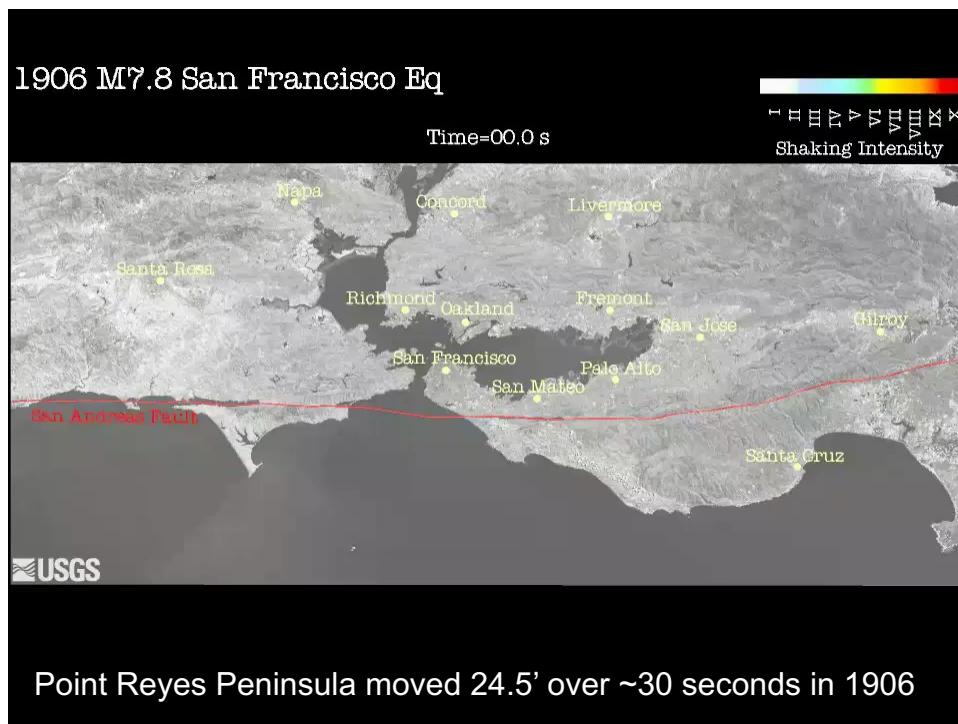
21



22



23



24

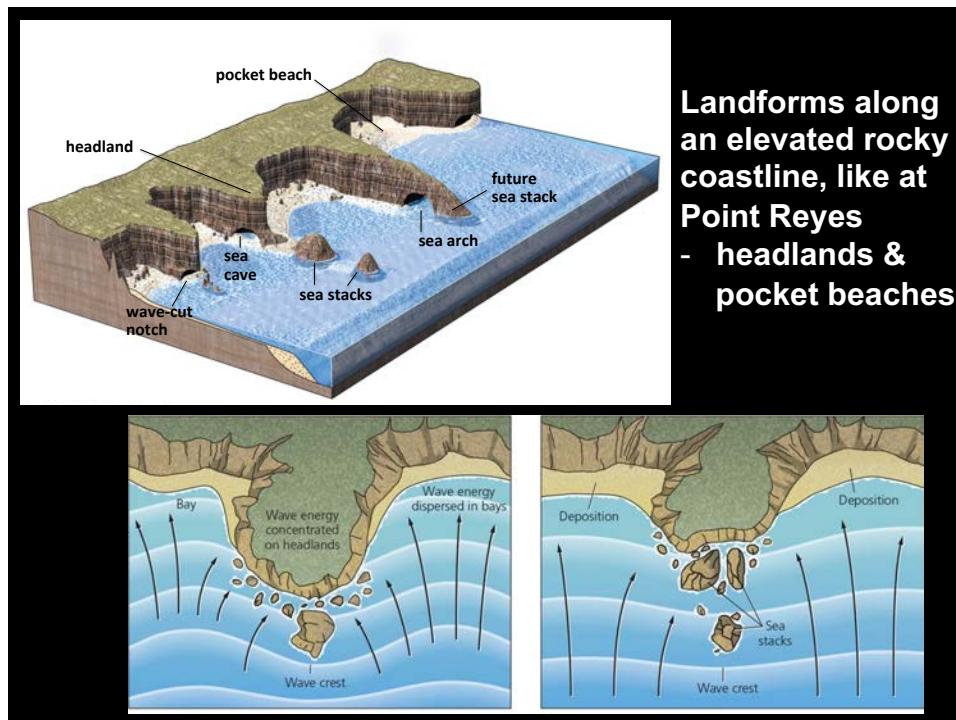
Coastal Landforms & Shoreline Processes



Point Reyes sea cliffs & sea stacks

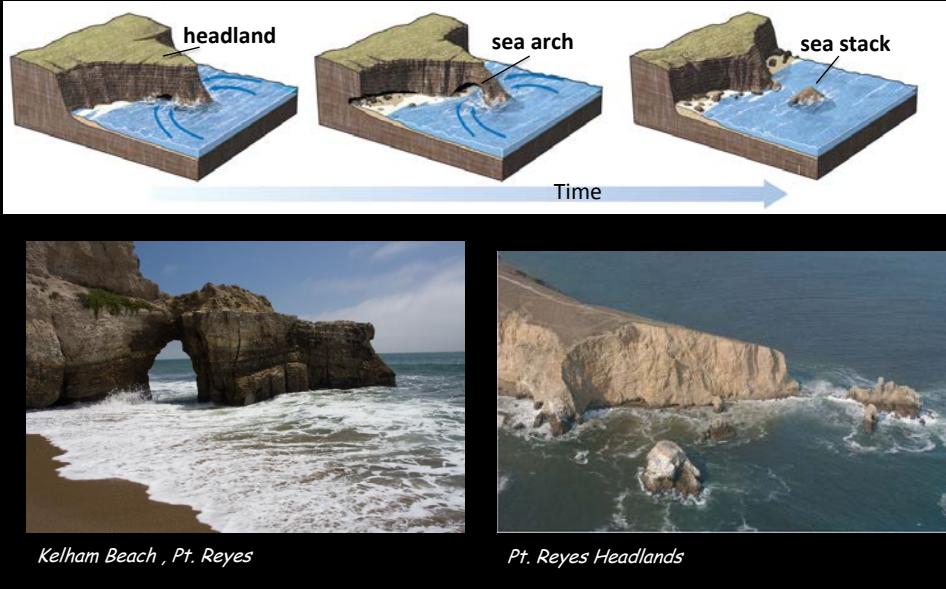
- rocky headlands and pocket beaches
- balance between rates of uplift vs coastal erosion
- landslides occur from undercutting by wave attack
- landslide debris becomes the sand of the beach

25

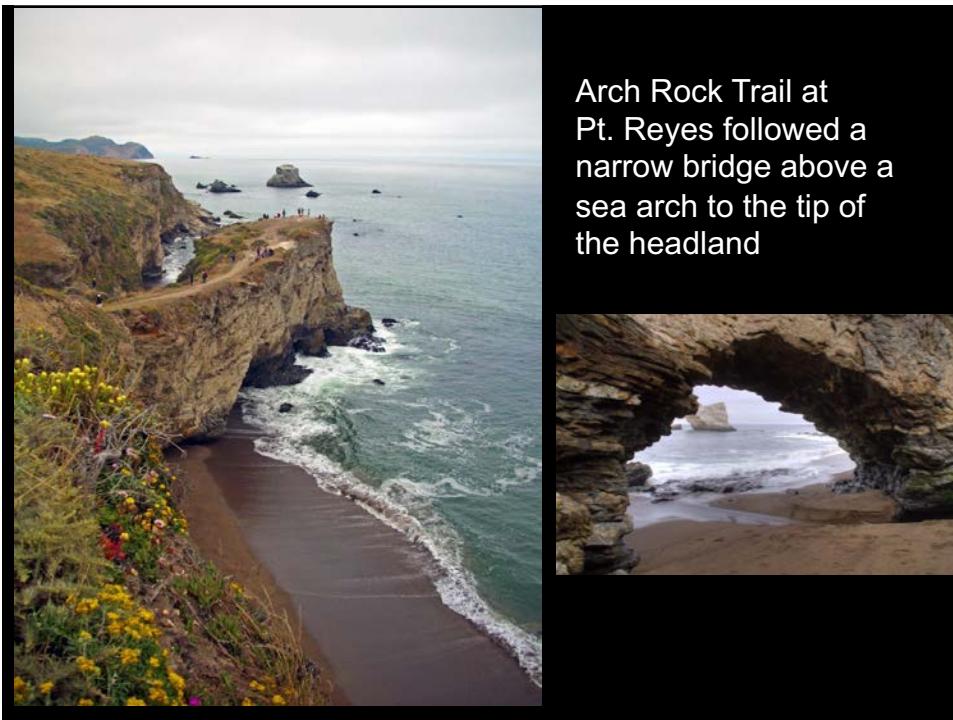


26

Formation of sea arches and sea stacks by wave erosion of a rocky headland



27



28



March 2015
natural bridge collapsed,
killing one

29

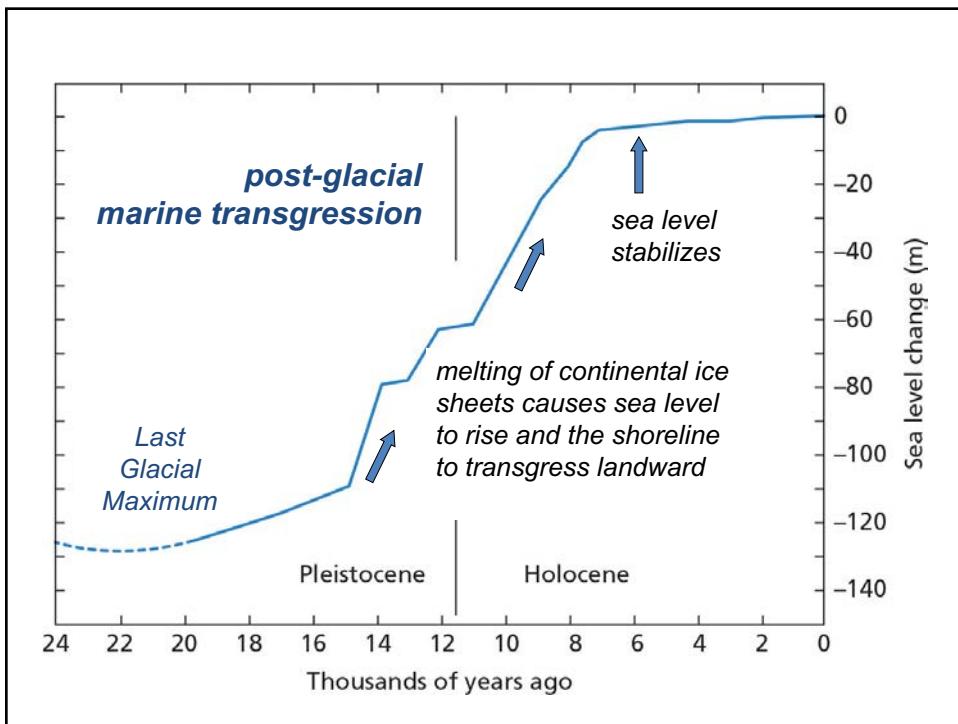


sea stacks mark the former position of the sea cliff

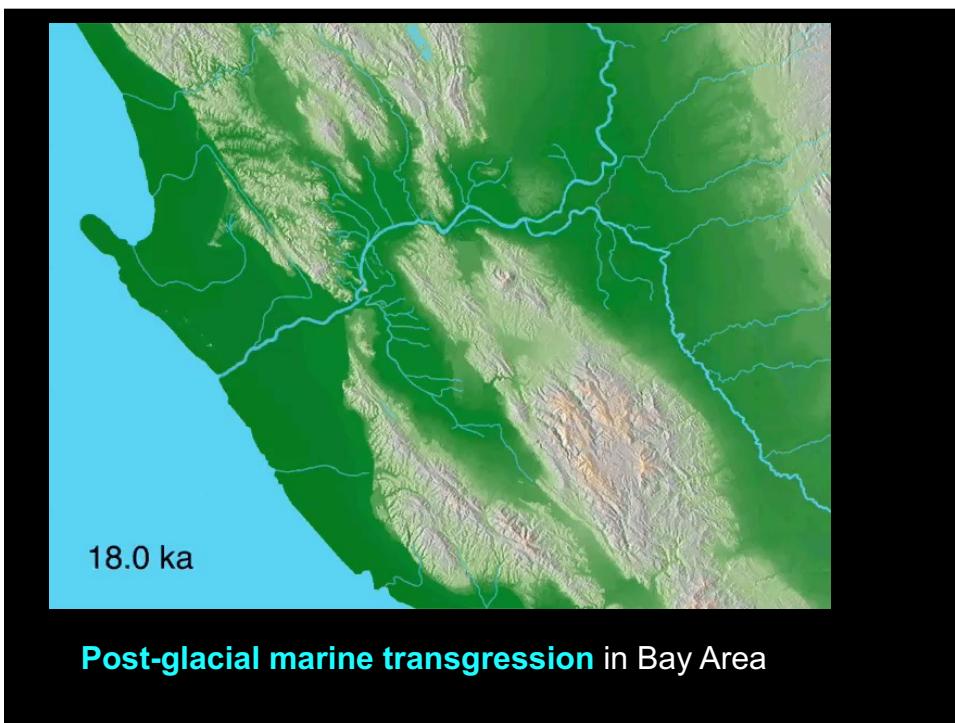
30



31



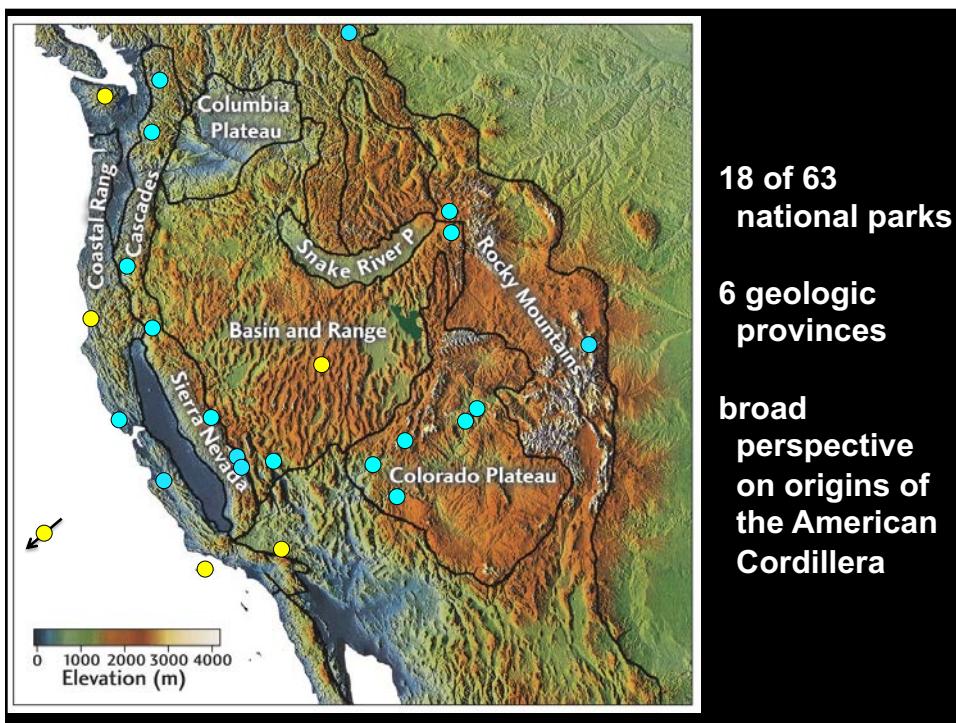
32



33



34



35