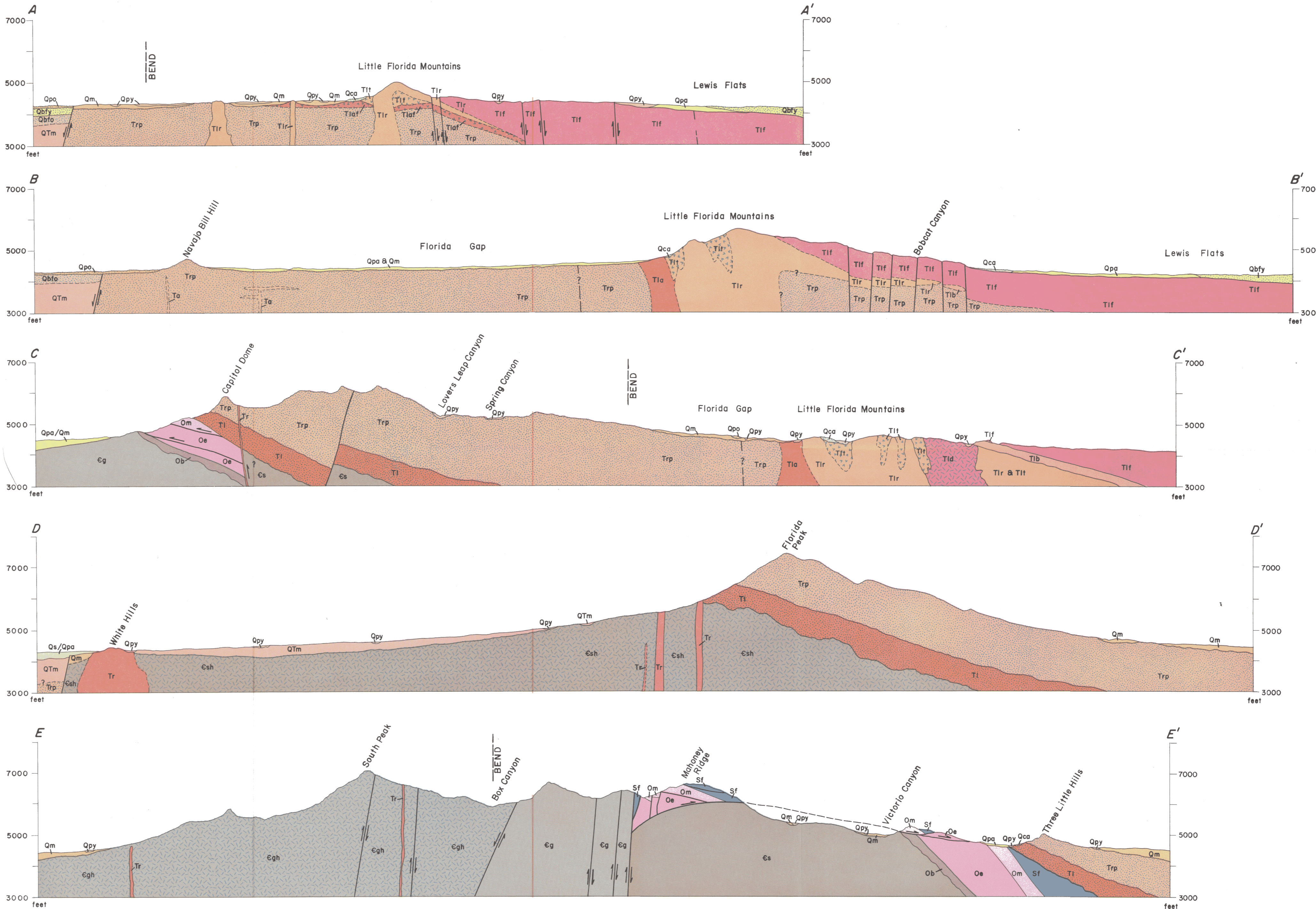


DESCRIPTION OF UNITS

- Qs** Windblown sand—Unconsolidated dunes up to 10 ft (3 m) high; mostly underlain by caliche horizon; forms cover over map unit shown by symbol under the line (for example, Qs/Qpa)
- Qbfo** Older basin-floor sediments—Predominantly nongravely to slightly gravely alluvium in the Mimbres Basin unaffected by arroyo incision; contain moderate amounts of pedogenic carbonate
- Qbty** Younger basin-floor sediments—Predominantly nongravely to slightly gravely alluvium in the Mimbres Basin unaffected by arroyo incision; contain very little pedogenic carbonate
- Qca** Undifferentiated colluvium—alluvium—Thin talus-slope veneers and colluvial and alluvial fills on arroyo-valley side-slopes; found in mountain canyons and on piedmont slopes
- Qpa** Undifferentiated piedmont-slope alluvium—Complexly intermixed, older piedmont-slope alluvium and younger piedmont-slope alluvium (Qpa and Qpy)
- Qpo** Older piedmont-slope alluvium—Unconsolidated fan deposits, piedmont-valley fills, and erosion-surface veneers, associated with surfaces graded to closed basins; uppermost beds typically cemented with pedogenic carbonate
- Qpy** Younger piedmont-slope arroyo alluvium—Fills (silty to gravelly) of shallow drainage-cuts cut below older fan and erosion surfaces graded to closed basins
- Qm** Mimbres formation—Fan gravel and interbedded, sandy lenses representing piedmont-slope facies; includes thin erosion-surface veneers near mountain fronts, upper layers contain carbonate accumulations (caliche) up to several feet thick; up to 100 ft (30 m) thick
- QTm** Mimbres formation, lower part—Similar to Qm but found on higher terraces and alluvial-fan remnants; igneous-rock clasts are much more intensely weathered; up to 100 ft (30 m) thick on bajada and probably several thousand feet thick in basin
- Tm** Monzonite of Florida Mountains—Intensely altered and deeply weathered, finely crystalline dikes and small, irregular intrusions exposed only in arroyos and on a few bare slopes and ridges
- Tld** Dacite of Little Florida Mountains—Grayish-red to dusky-red intrusive, microcrystalline to hypohyaline, nonporphyritic
- Tlf** Fanglomerate of Little Florida Mountains—Dark reddish-brown, rhyolite-boulder breccias, sandy and muddy conglomerates, and conglomeratic sandstones; lower, coarser beds are well indurated; upper, finer beds are moderately indurated; fault zones cutting these strata contain manganese, barite, and fluorite veins; estimated thickness approximately 2,000 ft (606 m)
- Tlb** Basaltic-andesite flow(s)—Dark reddish-brown to black, vesicular and amygdaloidal flows, hydrothermally altered; plagioclase luffs in an interstitial matrix; only exposed at southeast end of Little Florida Mountains; up to 100 ft (30 m) thick
- Tlr** Rhyolite of Little Florida Mountains—Irregular, domal to dike-like intrusions and short flows of pole-red to dark grayish-red, flow-banded rhyolite, much of unit has a distinctive auto-breccia texture; phenocrysts are very rare; unit forms bold cliffs along western side of the range
- Tlt** Rhyolite tuff of Little Florida Mountains—Pale-greenish to orange-gray lithic tuff and minor, interbedded, volcaniclastic mudstone and sandstone, poorly indurated and poorly exposed in small slope gullies; black perlitic obsidian occurring as outer zones of rhyolite intrusions is included in this unit because of similar slope-forming character; unit includes much hydrothermally altered rock in southern end of the Little Florida Mountains
- Tr** Rhyolite dikes in Florida Mountains—Very light gray dikes ranging from 1 to 18 ft (0.3–5.5 m) in thickness and small stocks; holocrystalline, nonporphyritic; fractures commonly stained with manganese oxides
- Tlaf** Ash-flow tuff—Grayish-pink, vitric-crystal to crystal-vitric ash-flow tuff; contains 7–30% phenocrysts of plagioclase, sanidine, quartz, biotite, and sparse hornblende and sphene; abundant, white, flattened pumice fragments in outcrop west of The Little Gap; small rock fragments common in outcrop 1 mi (1.6 km) north of Rock Hound State Park; up to 300 ft (91 m) thick
- Tla** Andesite of Little Florida Mountains—Undifferentiated flows and intrusions of medium-gray to brownish-gray andesite to dacite; finely crystalline, nonporphyritic, hyalopilitic, piloxitic texture; provisionally correlated with Rubio Peak Formation in the southern part of Cooke's Range
- Ta** Hornblende andesite and basaltic andesite—Intensely altered and deeply weathered dikes and small irregular intrusions; basaltic andesite is dark gray to black, dense, aphanitic rock exposed only in arroyos and on a few bare slopes and ridges throughout the Florida Mountains
- Trp** Rubio Peak Formation—Grayish-purple and reddish-brown breccias of polyolithic volcanic clasts grading upward into greenish-gray breccias and conglomeratic sandstones; basal beds contain abundant granite and limestone clasts; upper beds are sand-sized volcanic granites with abundant epidote concretions; entire section is strongly propylitized everywhere; up to 1,650 ft (500 m) exposed in mountains, probably several thousand feet thick in basins
- Ti** Lobo Formation—Interbedded reddish-brown shale, chert-limestone conglomerate, calcareous gray siltstone, sandstone, and pebble-to-cobble conglomerate; this unit is Darton's (1916) Lobo Formation; up to 600 ft (182 m) thick
- Ph** Hueco Formation—Thin- to medium-bedded, medium- to dark-gray fossiliferous limestone, slightly dolomitic near base; lenses of yellow to red sandstone interbedded near top; approximately 430 ft (130 m) thick
- Mr** Rancharia Formation—Thin- to medium-bedded, dark-gray to black, fine-crystalline, fossiliferous limestone; contains up to 50% chert near top; 220 ft (67 m) thick
- Dp** Parcho Shale—Dark-gray to olive-gray fissile shale, with 1-ft- (30-cm-) thick black fossiliferous limestone bed 10 ft (3 m) above base; 250 ft (76 m) thick
- Sf** Fusselman Dolomite—Thin- to massive-bedded, alternating light- and dark-gray units (6), medium- to coarse-crystalline dolomite; several corall-rich zones; sparse chert in basal and uppermost beds; 1,480 ft (448 m) thick
- Om** Montoya Formation—Basal, coarse sandy dolomite (Cable Canyon) overlain by dark-brown, coarse-crystalline dolomite (Upham), thin-bedded, medium-gray limestone and cherty limestone (Alaman), and medium-bedded limestone and dolomite, fossiliferous lower part; chert near top (Cuter); up to 395 ft (120 m) thick
- Oe** El Paso Formation—Basal unit (Hit Canyon Member) of dark-gray, medium-crystalline dolomite overlain by medium-gray, medium-bedded limestone, dark-gray, thin-bedded limestone (Jose Member), a thick middle unit (McKelligan Member) of thin- to medium-bedded, light- to medium-gray limestone and cherty limestone, and an upper unit (Padre Member) of thin- to medium-bedded, medium- to dark-gray limestone with abundant chert; limestone units are fossiliferous; 1,260 ft (382 m) thick
- Ob** Bliss Sandstone—Thin- to medium-bedded arkasic to feldspathic sandstone, grades up to calcareous sandstone and silty limestone and dolomite; up to 185 ft (57 m) thick
- Ed** Diamictite—Cobble-to-boulder conglomerate with dark-red and green shale matrix; only exposure is 0.5 mi (0.8 km) north of Capitol Dome; up to 40 ft (12 m) thick
- Eg** Granite—Fine- to coarse-crystalline, red to gray, alkali-feldspar granite; contains approximately 65% perthite and microcline, 28% quartz, 5% hastingsite, and 2% magnetite, zircon, sphene, and apatite; predominant bedrock type south of south Florida Mountains fault and west of Capitol Dome
- Egh** Granite with abundant xenoliths—Fine- to coarse-crystalline alkali-feldspar granite (like Eg) containing up to 50% hornblende and pyroxene hornfels xenoliths; predominant bedrock type is in lower slopes and ridges south of south Florida Mountains fault
- Es** Syenite and quartz syenite—Predominantly coarse crystalline with many applitic zones; unweathered rock is bluish gray but prevailing outcrops are a yellowish-brown; composition ranges from alkali-feldspar syenite with only a trace of quartz to quartz alkali-feldspar syenite, hastingsite (typically altered) is a common mafic mineral, predominant plutonic rock north of south Florida Mountains fault
- Esh** Syenite with abundant xenoliths—Coarse-crystalline syenite (like Es) containing abundant masses and xenoliths of hornblende and pyroxene hornfels (Egh)
- pEm** Hornblende gneiss and gneissic granite—Medium- to coarse-crystalline dark-gray gneiss intruded by gneissic granite; only exposed north of Capitol Dome



Geologic cross sections of Florida Mountains

by Russell E. Clemons, 1993