

CANYON COUNTRY 11/10/11

1. Welcome/introductions. // On this trek through Canyon Country, you will see some highlights of 10 National Parks and 6 National Monuments. Since you cant hike with your dog in NPs and in most NMs, and because mountain bikes are not often allowed we spend most of our time in the out of the way places and you will see about 40 of these tonight. You will also see 2 different dogs with us, and many different friends. This was not 1 trip. Its roughly 10 trips over 4 years and about 100 nights out. But tonight we are on 1 “long strange trip”.
2. The Colorado Plateau extends across a broad region roughly bounded by the Colorado River and its tributaries. It’s often referred to as the “Four Corners”. I have expanded it a bit tonight to include 2 NPs in SE California and some sites in southern Arizona. Even in 100 days we could see but a fraction of the amazing places found in this region. Unfortunately 2 of the 4 Corners are missing, as tonight’s trek has no visits to the states of Colorado or New Mexico. We may not even cover your favorite haunt. // Show the loop of travel.
3. But, lets get started. Many of these places are not for the “heights challenged”.
4. Often there is no shade for miles.
5. It can be Banshee windy.
6. There is little water. // If you find a pothole (tank) its likely that native people and wildlife have been using it for centuries. Take a swim. Let the air out, because CC is like nowhere else on earth.

7. The roads in CC can be very rough. And be sure to watch the weather. This main road through the Escalante is impassable after a rainstorm. If you are even 1 mile in, you will stay in until it dries out.
8. It's nice to have a 4 wheeler. // Some Canyon Country vistas are expansive.
9. Others are claustrophobic.
10. You never know what you will find in Canyon Country.
11. Could be a dinosaur.
12. Could be Santa.
13. Could be a hallucinogenic hoodoo.
14. Or it could be evening light illuminating cactus spines like sparkling fireflies.
15. This image is not real. It's a composite image taken by a friend, over many hours. When you see "photos" which are just TOO good, they probably are digital creations. This is the only one you will see tonight. Some new cameras will take these composite images and blend them by a technique called High Dynamic Range. I have an article on this if you are interested.
16. Deleted photo.
17. Deleted photo
18. If you start your trip to Canyon Country with Death Valley, as we do tonight, be sure to first visit Mono Lake in eastern CA. The Tufa formations are calcium carbonate deposited near underwater springs. When the lake level dropped because LA was using all the flow of the feeder streams, the formations were exposed.

19. You have arrived in Canyon Country when you enter Death Valley NP in SE CA.  
The unhappy miners of 1849 who strayed into this 120-mile long basin named it.  
By the 1880's, wagon teams hauled powdered borax from its mines.
20. Sunrise creates an eerie blue tint to the salt beds in Bad Water Basin. These salt crystals form ridges as water evaporates up through the salt crust.
21. Be Prepared when you visit, as DV is the hottest (134), driest (less than 2 inches rain), and lowest spot (our camper is 282' below sea level) on the Continent. Yes, DV is even lower than the bottom of Grand Canyon --because the Colorado River is still flowing downhill to the sea. // How did it get to be below sea level? When the earth's crust pulled apart when the Sea of Cortez was formed, the surface of DV dropped down. This is the opposite from most of the Colorado Plateau, which was uplifted then eroded.
22. Despite its name DV supports 51 species of mammals, 300 birds and 1000 species of plants. This mammal needed a rest stop.
23. There are wonderful canyon hikes in DV. The walls of this canyon are polished granite.
24. DV's 3.4 million acres make it the largest NP south of Alaska and it takes a lot of time to see. When you go, Furnace Creek is a great camping spot but there are no showers or hookups.
25. The colors of this artist's palette come from the high mineral content of the sediments.
26. Amazing Gold Canyon certainly lives up to its name. //

27. Continue traveling east across the Great Basin, and you could end up camping in Las Vegas, NV. We did because my wife flew home from here and a buddy flew in. I got to stay.
28. If you do go to Vegas, Red Canyon is just 15 miles south west of the Strip. It is an excellent hiking and biking area.
29. Leaving Vegas, and heading NE, you first come to Valley of Fire, Nevada's oldest and largest state park. One of the signature sites is the beehives.
30. It is also known for its kaleidoscope of colors.
31. There are over 100 petroglyph sites (images carved into rather than painted on the stone) in the park. But, these animals are ready for their trek to Zion in SW UT
32. In The Grand Canyon you get dizzy trying to peer over the side. In Zion you get dizzy looking up. //Zion is a perfect combination of a faulted uplift paired with water erosion. The ying and yang of Canyon Country. // It was named by Mormon pioneers for the Temples of God and the Celestial City.
33. The hike into Angles Rest is definitely not for the "heights challenged". It started sleeting and I abandoned my hike because the 3000' sheer walls drop dramatically to the canyon floor. // You can see by Zion's sharp lines that this canyon is geologically young.
34. We left Zion in an April snowstorm. Most transportation in the park now is by shuttle. Easy. Warning: if you are going through the Mt Carmel tunnel on HW9 (to or from Bryce) you need an escort (\$10) if you are 11' high, and you cant go through at all if you are 13' or higher.

35. The dunes in Coral Pink Sands State Park near Kanab, UT, were sand dunes once before. 175 million years before. They were compressed into sandstone, then whipped back into sand by voracious winds, and later formed into dunes again. .
36. The sand is clear quartz. The color is a trace stain of iron oxide.// Be aware it's an ATV site, which is hard to believe. Go during the week and never in Spring Break, which in Utah is Easter week. We will now journey 50 miles NE to Bryce Canyon in south central UT.
37. When you first enter Bryce Canyon you really cant believe it. // The area was once an ancient river of sediment that was softer than the sides of the bank. The soft sediment eroded by wind and rain faster than the bank and in a lengthwise manner, thus creating the famous formations. Bryce was not carved by a river flow.
38. The marshmallow top of the fairyland pinnacles is really limestone on top of softer rock below, but who cares? You are at the top step of the Grand Staircase.
39. Paiute Indian legend has it that these Hoodoos once were creatures that turned themselves into people. But they were greedy and took more than they needed. So Coyote turned them into pillars of stone. They huddle together here with their faces painted just as they were when they were human.
40. You are looking south so the sun IS setting on your right. From the North campground you can do both sunrise and sunset points as hikes rather than driving.
41. Sunrise is sooo worth it. But it was less than 20 degrees. That is why the erosion is so fast in Bryce. It freezes and thaws 200 times a year. The rocks are losing 1"

- every 50 years. That's the Indy 500 in the geological race. In fact, The Poodle and the Three Wise Men, formations I saw as a child, are no longer there.
42. You are at 8,000' in Bryce and the air is very thin. We spent our down time in the camper and we didn't ventilate it, due to the cold. One morning I was cooking a 3-burner breakfast and our Co2 monitor went off. It probably saved our lives. If you don't have one...get one. We now move east along the UT/AZ border and enter the Escalante Staircase NM.
  43. We will head north on Cottonwood Rd, The N/S route through the Escalante. // The scenic Cockscomb is series of upturned sedimentary layers, bent, broken and tilted in a dramatic fold. If you drive this road going north it's easy to miss this full-length view. But about 10 miles in, at the top of a pass with a huge grey scree pile on the left, get out and clamber up the pile. This is what you see as a reward.
  44. Hackberry Canyon is easily accessed off Cottonwood Rd.
  45. Pack your sandals to hike canyons with water.
  46. The entrance to Cottonwood Canyon is cool and inviting. We turn east on HW 12 and reenter the NM on its North side.
  47. Winding through the North Escalante is a series of maze canyons called the Dry Fork Slots. The access is off Hole in The Rock Road.
  48. Not all canyons start at ground level.
  49. Peek a Boo Gulch is a series of plunge pools and fluted ledges artistically sculpted by spinning floodwaters.
  50. My buddy and I were talking about the Edward Abbey story from his book Desert Solitude (read this before you go) where he goes into a slick rock canyon

- by himself, slides into a seemingly docile bowl and finds that he cannot get out. It is a frightening experience.
51. It is still hard for me to believe this, but we found a very scared German hiker, stuck in a bowl in Peek a Boo. We helped him up over the lip, and he was gone in a flash. NEVER go in alone and always take a rope. This stuff is called “slick rock” for a reason.
  52. Entrance to Spooky Canyon is, well, Spooky. This area is a Labyrinth of slots, where you cant see out. My buddy and I foolishly separated. Very easy to get confused and I added 6 miles to my walk back to the rig.
  53. There are ghosts in Spooky
  54. Spooky is the narrowest of the slot canyons.
  55. I am stuck. It should be called “Slither” Canyon.
  56. Mystical artistry. // We will go east on a fabulous scenic drive on HW 12.
  57. Calf Creek Canyon has a massive cascade of Desert Varnish. But you have to hike a few miles to see the real waterfall.
  58. Lower Calf Creek Falls drops off a sheer cliff of Navajo Sandstone 125’ and creates a mist filled desert oasis. This is a must do hike if you are here in summer! Great camp ground at the trailhead. This is a most popular hike. HW 12 from the town of Escalante, NE to Torrey is a treat, and takes us to Capitol Reef.
  59. The name for Capitol Reef NP came from a “reef” being an impassable barrier and “Capitol” for the majestic white domes a la the US Capitol Building.
  60. The “Reef” is the 100-mile long Waterpocket Fold. It is the best-exposed and largest monocline in North America.

61. But I prefer to think that the park was given this name because the “reef” is the lower red layers of rock and the white layers are giant waves rolling across the desert.
62. CR also has some 4wd roads that take you deep into the park from which you can start your hike if you prefer solitude. The nearest traffic light is over 90 miles away.
63. Camping in these places gives us the opportunity see things during the “magic hour”. In the morning we drive 120 miles a little north and mostly east to the Moab area in central eastern UT.
64. The arches in Arches NP started out as thin walled fins. Fins are geology’s layers of fine pastry crust. They become arches through the freeze/thaw of water, and blasting winds poking holes in the fin, which grow larger over time.
65. The hike into Delicate Arch is only 2 miles and not to be missed. A more Iconic spot is hard to imagine. It is Utah’s License plate. It is unique in that it has no flanking fins to protect and support it. The arch clings precariously to the sloping lip of a slick rock amphitheater. But, lets not get too attached to its image. In the last 30 years, 5 arches in the park have collapsed. Ultimately, gravity and erosion will prevail. A little to the SW is Canyon lands.
66. Canyon Lands NP is really 3 distinct triangle shaped “parks”, split up by the Colorado and Green rivers. Island in the Sky, is where we spent most of our time mt. biking.
67. Eons ago, salt and other deposits from evaporating seas were covered by subsequent layers of earth. Ages later these deposits were uplifted and formed

- these red and white-banded pinnacles of the Needles District. // They are backstopped by the La Salle Mountains, which are an intrusion into Canyon Country, because they are great blisters of magma that squeezed between sedimentary layers and shot up over 10,000’.
68. CL is also known for its Pictographs (painted on as compared to chiseled in) that are often hidden in remote canyons where you need a 4wd to access. Mt bikes just cant cut through the sand washes.
  69. We got our family portrait painted here. If you prefer to “base camp” from a motel, Moab is the place.
  70. Biking the White Rim Road gives you access to some of CLs best scenery.
  71. The boys were thrilled with their antics on top of Mesa Arch. // There are over 2,000 stone arches in the Moab area.
  72. What’s a trip to Canyon Country if you don’t bike the famous Slick Rock Trail. But you can’t easily bike the 100 miles south where we are headed next.
  73. Imagine the next 3 slides of the Goosenecks of the San Juan River being one panorama view. Sorry, I don’t use computers to make my photos.
  74. The top layer is grey limestone and below it is black shale. The river is about 1,000’ below.
  75. The river travels 5 miles of distance here, but only meanders one mile down stream. There is a great rough camping area on the rim of this canyon.
  76. This is an example of “Camping Rough” near Valley of the Gods in the very SE corner of UT.
  77. In the Valley of the Gods a high clearance vehicle is a good idea.

78. This area is a great example of “differential erosion”, where hard sandstone eroded slower than the shale around it, leaving these buttes. Its time to go a little north again.
79. Sometimes the views in the Natural Bridges NM, in SE UT, are dizzying.
80. Make sure you check out local conditions, because the White Canyon is very steep and the drainage basin begins a long way from the park. Tell the “Getting stranded in Arches” story.
81. This tank has a very similar “crack of a top entrance” as the swimming hole portrayed in the movie “127 Hours” where they slid down the sides and fell into the water. That is a must see movie for canyon crazies.
82. Reflections on all that stands around us.
83. Natural bridge/scale-- find Carolyn. Natural Bridges are carved by water flow, and the rush of the river after a summer monsoon still sculpts the supports for these bridges. Geological change is constant, but almost imperceptible given our time here, compared to theirs.
84. Deleted photo
85. Natural Bridges is in a remote area. The campground is very small and booked early in the day. Be prepared to dry camp. The next day we go 50 miles south and visit a park located in 2 states and 2 nations.
86. Magic Hour in Monument Valley is very special. You are on the Reservation so please respect their privacy. It’s a land of immense scale – these spires and buttes, over 800’ high, dominate the skyline for miles around. // This was a huge wind blown dune field that formed into stone.

87. You should recognize Monument Valley because more westerns were filmed here than anywhere else in the world.
88. Sunrise at a Traditional Navajo Hogan. Your “park pass” won’t get you into the Tribal Parks. Separate fees.
89. The South Mittens is the only hike in Monument Valley you can take without a guide. You can drive the rough 15-mile dirt road loop but no dogs are allowed even in the car.
90. If you want to camp when you go there --this is the spot. In front of the new hotel. It is an amazing place for both sunrise and sunset.
91. The 300,000 Navajos are a quiet people whose main income is livestock. They are one of the few tribes, which have NO casinos so they are very poor in material ways. Their culture is not one based on acquisition.
92. Canyon De Chelly NM is in NE Arizona, about 50 miles south of Monument Valley.
93. At 900’ Spider Woman is the highest free standing Pinnacle in the US. Legend says that Spider Woman taught the Dine’ to weave. From there, the story gets creepy... she comes down from the top at night and devours unruly children. It’s their bones that create the white top. Yuck.
94. There are traditional Navajo ranches which still work the canyon.// Most hogans are hexagons with the door facing east to welcome the day. If a death occurs inside a Hogan it is sealed and abandoned. Even if they have a modern house many Dine’ have a Hogan nearby that is used for religious/ceremonial purposes.

95. The cliffs rise 600' above White House Ruin. // The desert varnish is a mixture of manganese and iron oxides.
96. There is only 1 hike in CDC where you are free to go on your own. CDC operates under a unique political situation as both a National Monument and Tribal lands. You can take guided hikes and jeep tours. You can also have a guide drive your 4wd on tour. Much cheaper.
97. This building used to be 3 stories and the lower buildings were connected to the portion above. It's about 1000 yrs. old. Its Puebla and not Navajo which may account for its unique design.
98. The structure was named White House because the walls used to be covered in white plaster.
99. In many places in the 16 million acre Navajo Nation in NE AZ, you will need to have a native guide.
100. But you get to see interesting things like dinosaur footprints and hear about local culture.
101. The Hubbell Trading Post near Ganado, on HW 264, was established in 1878 when the Navajos were allowed to return to their native lands. The family operated it until 1965 when the N Park Service made it a Historic Landmark. But you can still buy things there. During this leg of our journey, we listened to a Tony Hillerman book on CD, which took place in the very spots we were seeing.
102. Here is an example of traditional weaving, as taught by Spider Woman, for sale in the Trading Post. This is the best place to buy the real deal in baskets and weavings.

103. Across the NE AZ desert, you can see the mudstone mesas of The Painted Desert NP. Interstate 40 bisects the park.
104. The purple, blue and maroon top layers are from a broad ancient flood plain. // This place is so unusual that even our dysfunctional national Congress has approved doubling the size of the park. NPs are nominated by the President and approved by Congress. NMs are established by Executive Order of the President.
105. The best easy hikes are in the Blue Mesa. Spring can be Very windy.
106. Here we look out over a river of petrified conifer wood. Before TR made this place a National Monument, a giant stone crusher was on a train headed west, to pulverize these 230 million year old fossils, into industrial abrasives.
107. Thankfully, today we know it as the Rainbow Forest. // There are no branches on these trees so we know they were transported great distances to be buried here and resurrected millions of years later.
108. The trees are now silica from volcanic ash that seeped into the wood and fossilized. Please don't take any. There is a store in Holbrook where you can buy pieces the size of a sliver to a log. I bought a basketball-sized gem for our Zen garden.
109. The Wigwam Motel in Holbrook, built on Route 66 in 1938, is on the National Register of Historic Places. This is a fun place to base and see NE Arizona.
110. Standin on The Corner in Winslow Arizona... We head west again now.
111. This is a very rare photo of a young Hopi girl in traditional hair dress.

112. The ONLY time you can photograph Hopi Indians is when they are in State or Federal Parks, AND participating in a cultural pageant. Even then they are extremely shy. // We are just outside the Hopi Reservation at Homolovi State Park.
113. Kachinas are part of the Hopi religious beliefs. A great novel on this subject is Hillerman's, Sacred Clowns. I highly recommend that you read a couple Hillerman books before you go to NE Arizona. You will appreciate the area and people so much more if you have a basic understanding of their geography and culture. As I said earlier, we made tonight's trek in 10 different trips. So "Beam me up Scotty", as we hyper jump 150 miles north to the central AZ/UT border and Lake Powell.
114. Lone Rock stands in Lake Powell off HW 89. // The lake is 185 miles long.
115. This place is THE Party Beach of America in the summer. Know when to go. If you want a motel base of operations for this area, Page AZ is the place.
116. The entrance to Antelope Canyon in the Navajo Nation, just east of Page, looks so peaceful. But in 1997 a 50' wall of water surged through the canyon from a thunderstorm 5 miles away. 11 people died inside.
117. This canyon is a VERY special place. But it is in serious need of a management plan. The Navajos require you go in with their guides, which is fine, but they don't manage the competition or crowds well. Avoid spring breaks and weekends AT ALL COST.

118. I will share some photography tips I got from a Pro (our son), for when you attempt to photograph a place as special as AC. First, pick your spot and wait for the right light. Time of day is everything. Noon April 22 to Sept 20 is best for photographers. Others can avoid all the tripods and camera bags, and go an hour either side of noon and its fine and the season is longer.
119. Second, explore different angles.
120. Before you embark into these special places make sure you REALLY know how to use shutter speeds, aperture and ISO to take photos without flash. And be able to do it in the dark-- so have mastery of the camera body before you go.
121. Remember, No photograph can capture the essence of these incredible places, any more than we can photograph the wind. But the 4<sup>th</sup> rule is “never stop trying”.
122. Set your white balance to “cloudy” for the extra boost to reds and yellows.  
// No matter how hard we try, we can only capture mere pieces of the whole, but these pieces stir our hearts and excite our imaginations, and forever remind us of the wonders of CC.
123. Horseshoe Bend just outside Page, AZ, on public land, is an easy hike and best done 2 hours before sunset. Take a pic nick and everyone carry a Really good flashlight for the walk out. If you want to raft the Colorado for a day in a guided boat, or even on your own for a couple days, you can float 15 miles of calm water from the dam down to Lee’s Ferry. You float by this location.

124. Camping in the Grand Staircase, beneath its stair step terraces, gives us great access to day hikes between Page, AZ and Kanab, UT.
125. The Toadstools just north of HW 89 represent the artistry of erosion with a whimsical flair.
126. These goblins were created by weather attacking the angular edges of the rocks, creating the smooth round heads and sides.
127. I really loved this area of bizarre little goblins. And I am not talking about our dog. The hike in is very easy.
128. You are now at the entrance to Wire Pass. // The Paria River formed this intricate network of canyons in the South Escalante.
129. Slots are not always an easy hike.
130. Rim Rocks, however, is an easy hike just off HW 89 near Kanab.
131. Grit bearing winds and freeze/thaw chiseled these rocks into fanciful formations.
132. The gate to the dark and foreboding Buckskin Gulch can cause you some trepidation as you pause before you enter.
133. BG is the world's longest slot canyon. It is no more than 50' wide through a 12-mile course. You can hike this canyon for 40 miles.
134. Many Western movies were filmed at the Old Paria town site because of the colorfully layered rock and its remote feel. Yet, it's close to town. Kanab UT. is a great place to motel base operations in the South Escalante.
135. Biking Old Paria Rd gives us an In Your Face look at the layer cake geology. // There is no off road biking in Escalante NM.

136. House Rock Valley Road, just a mile south of the UT /AZ border leads to Coyote Buttes and offers breathtaking views of the mesas of the Vermillion Cliffs, north in Utah.
137. Entry into Coyote Buttes or “The Wave “ is by 20 lucky permit holders daily. Half the permits are issued on line and half the day prior at the Ranger Station Lottery. For 2 years I tried and failed to get a permit on line. So we tried the lottery for 4 days. 2 with Carolyn and 2 with my buddy Isaac after Carolyn flew home. He won. We will go back and wait as long as it takes to get a permit for her. It’s that amazing.
138. Long long ago a vast dune field covered this area. It was eventually buried, saturated by groundwater, and compressed.
139. As the future layers of the earth compressed the dunes, the minerals concentrated in the sand flowed together then cemented into the cross beds of The Wave. This is a layer cake all right, but one that was pinched and plopped down by a sloppy baker.
140. 10 million years ago the uplift in the Colorado Plateau created this 3 dimensional puzzle of sensuously sculpted sandstone. // We will go back to the border and drive a few miles west on HW 89.
141. The Wahweap Hoodoos were formed by guess what?? --water and wind erosion.
142. These Hoodoos have a “hairdoos”. They are opposite of most we see, as the white layer is beneath the dark one.
143. It looked like Isaac was eating lunch in a pile of left over cake frosting.

144. By now we are in “Hoodoo Central”. The dark Dakota sandstone was the beach of an incoming sea. The pedestal is white slurry sandstone 60 million years older than the top. Geologists refer to this phenomenon as an “Unconformity”  
What happened to those 60 million years?? I guess Time just passes by so quickly when you are having fun...
145. Now the bad news. It’s at least a 10-mile hike through a sand arroyo with no shade to reach these magnificent pearly white columns. The wind can be fiendish --on a good day. Don’t even think about going in here if its threatening rain. There is a fantastic ranger station near Big Water on HW 89 that has exact weather conditions daily. Go there. That is where you will go every morning, anyway, to play the Wave Lottery. But, we already won the Lottery so we will drive south to the Grand Canyon.
146. You can take the bus along the South Rim of the Grand Canyon to watch the sunset at Hermits Rest or any of a dozen other stops along its route. Come back after dark. My favorite is take the bus out and hike back to catch the sunset to twilight experience. TR called the GC “The ONE great sight every American should see.” Tonight you will get to view the canyon from a perspective very few people ever see.
147. Its interesting that in spite of its utter magnificence, TR could not get Congress to approve of making it a NP. So he used a little known phrase in the Antiquities Act and named it a National Monument by Executive Order, due to its “great scientific value”. Until then, the Act had only been used to protect archeological sites like Mesa Verde and Casa Grande.

148. The Glen Canyon Dam was built in 1963. It is 638' high, which may not be high enough. In 1968 huge winter snowpack and unusually early and heavy spring rains across the Plateau, caused a dangerously quick melt. Water came to the top of the dam. Plywood frames were hastily constructed on top of the dam, and held back the floodwater. The Dam could have been breached, and if so it would have collapsed.
149. We are preparing to launch our raft trip through the Canyon at Lee's Ferry. The Navajo Bridge in Page is the last car crossing of the Canyon until the Hoover Dam, 350 miles downstream. The River flows from east to west.
150. Sometimes the river is sublime, but you can never relax on the oars. You can see that in each bend of the river there are 2 eddies. And there are LOTS of bends in this river. It is Very difficult to row out of them due to the volume of the river. So, you must row to stay in "the bubble line" to avoid the eddies.
151. Sometimes the river is exhilarating. // Major Wesley Powell led the first expedition through the uncharted waters of the Colorado River, from its headwaters to the Sea of Cortez, in 1869. Their tales are truly amazing. To think, not one man drowned, and only the one armed Powell (lost it in the Civil War battle of Shiloh) wore a life vest, made of horsehair. I wonder what the flotation rating was. NP rules now require life vests at ALL times you are on the water.
152. Red Wall Cavern is a famous landmark early in the trip.
153. The ruins of Nankoweap Granary are 1000 yrs. old, but artifacts found nearby date back 10,000 yrs.
154. Most of the time the river allowed for an incredibly peaceful experience.

155. But not when you are in Upset Rapids.
156. Sometimes its payback when you are in front. And remember, this water comes from the bottom of the lake, at 48 degrees year round.
157. The Rapids on the Colorado have their own rating system. Infamous Blossom Bar in the Rogue is a Class 4. The rapids of the Colorado go to Class 9.
158. We averaged about 5 hours a day in the boats and we took a few days off as well. Evenings were incredibly relaxing....
159. Unless you were on cooking duty. Powell's biggest problem on his expedition was not the rapids. It was lack of food. We didn't have that problem. We ate fresh veggies, fruit and meat every day. We bought our raft/food package from Pro River Outfitters in Flagstaff. They provided huge coolers, frozen in layers, and which hung in net baskets in the river and were always covered from the sun. We still had ice at the end of our trip.
160. Being a "self guided" trip, we cooked and cleaned in teams. And you carry EVERYTHING out.
161. I wore a helmet in the big rapids, not from fear of rocks, but rather to protect me from errant oars. Especially if I was rowing.
162. Mid rapid recovery
163. And a helping hand. But you can see how easily one could get wacked by an oar.
164. It was April, but some days were really hot. Near 100
165. Some were really cold. Mid 40s.

166. A Spiny Lizard was our evening camp guest. April was too early for snakes, thank goodness.
167. This rock is called Schist, which is mica and other minerals uplifted from the core of the earth, superheated and crystalized. It is 2 Billion years old. The Schist is exposed because the canyon here is over a mile deep. If you stacked all the Egyptian and Mayan pyramids on top of each other, you would be about a half of the way up the canyon walls.
168. The gigantic Grand Canyon is nearly hidden if you stand 100 yards back from the rim. The GC's sudden depth and complexity make it seem to be an illusion.
169. One of my favorite days of the trip I spent hiking alone on the Tepeats/Thunder River plateau. Mark dropped me off then picked me up miles down river so I could enjoy this magnificent hike.
170. You can get lulled to sleep as a passenger.
171. But not for long.
172. I was often amazed at the Other Worldly Canyons within The Canyon. You can see the scale of this place by finding my buddies.
173. Deer Creek washes away any concerns for the day.
174. Deer Creek Falls deserves all the photos it gets.
175. Some of our camps were sandy. // This is the spot where the High Dynamic Range image was assembled. Because the dam changed the ecology of the canyon, the beaches were disappearing. Now the NPS engages a controlled flood every couple years to recreate the natural cycle and recharge the beaches.

176. Grand Canyon is 1.2 million acres, and most of us see it as “Awesome” in scale. But, when you live in its depths you can also appreciate the small stuff.
177. Lava Rapid. Class 9. What more need be said?
178. The Cheese Grader can slice and dice your boat, and serve it up like a pizza.
179. Wow! Just when you think you can breathe, you hit Lower Lava.
180. How did he stay in and keep the raft upright? // There is a combined 27’ drop in the Lava Rapids.
181. This group didn’t make it. 7 upsets. Huge effort to rectify an upturned raft. And you do it in 50-degree water!
182. This is a good example of how camp worked. When you weren’t on chores, it was cocktail hour. // Here is one thing I never considered. The river level changes due to power demand water release from the dam. It is like a “tide”. The gates open on a somewhat regular schedule, but the time the tide arrives changes the further downriver you are. The rafts are very heavy when beached and one mid night they had to be moved out, as the dam tide (as in Glen Creek Dam) was receding.
183. Sleeping out was a great joy. Never seen a darker sky, albeit just a sliver of one. One of the audience tonight is going on this trip. Tip: take a small tarp to keep the sand out of your gear to put under your cot when you sleep out.
184. The rapids are created by debris flows from these lovely side canyons.
185. Elf’s Chasm. // In the worlds geology the GC is Unique in the true definition of that word, Unique.

186. The BEST book on the history of the canyon and the experience of rafting it is by Gighlieri. I highly recommend it even if you never leave the rim.
187. Not a bad view, but watch out for that first step.// Until 1988 aircraft regularly buzzed through the Canyon. Not today. But helicopters do come rescue those in need and we carried a satellite radio to call out, if necessary.
188. Canyoneering can be a challenge if you want to stay high and dry. There are only 2 hikes into the canyon from the rim to the water, and no trail along its bank. In fact, Spanish explorers didn't believe the Indians when they were told that there is a river in the canyon floor, because they couldn't see it from the rim.
189. The eerie blue color of Havasu Canyon comes from dissolved manganese in the water.
190. Evenings are a wonderland on the bottom rung of the Grand Staircase. // The river has sudden depth changes and can go from inches to 90' deep willy-nilly and it flows about 4mph average.
191. Sunset. So peaceful. If you are bothered by the presence of the Glen Canyon Dam, relax. It is but a temporary feature in geologic time. One day it will be gone. The Canyon will survive.
192. And "peaceful" is also a temporary feature on the Colorado. The River drops 1700' in 225 miles. That is 25 times the drop of the Mississippi River over the same distance.
193. There is a "Great Unconformity" in the strata of the Canyon that represents a Billion year gap in the geologic history. Unconformities are missing chapters in the geologic record that occur when erosion removes layers of

material before new layers are deposited on top. Earlier we saw the 60 million year Unconformity in Wahweap Hoodoos. This one is one Billion years! // In geologic time, the Age of Man is represented by the sugar sprinkles on the top layer of the cake.

194. Pumpkin Springs is a Travertine Bowl, the only one of its kind in the Canyon.
195. Most rafters in the Canyon experience the trip on motorized “thrill me feed me“ 5-day trips. // From 1869 until 1949 only 100 people had traveled the length of the Grand Canyon. But after the war, inflatable craft became available and the river rats were in heaven. Today, 25,000 people are passengers on the river, annually. That seems like a lot, but its nothing compared to the 5 Million tourists who look over the rim each year.
196. But less than 2,000 people get to do it on their own like we did. The permit for a self-guided trip is by Lottery, so expect about a 10-year wait. Among adventurers there has developed an “I take you, you take me” system to increase their odds. My raft partner has done the canyon 8 times now. I felt like an interloper with a private guide. It was my first time down the Canyon, and I had only rowed a raft one day prior to leaving Lees Ferry. I normally kayak Oregon rivers in an Orange Torpedo.
197. All too soon we arrived at Diamond peak and the Havasupai Reservation take out near Peach Springs on Route 66. 225 miles. 21 days. I could have gone back to Lees Ferry and started it again that day. I loved it. Lets have Scotty beam us up again and set us down in Grand Canyon Village.

198. Sunrise from the Rim is a “subtle spectacle”. Pay a few extra bucks and stay inside the park at the lodges so you will be close to the rim or you are likely to miss it. // This top white layer is about 300’ thick and made of fossilized corals and other marine life, called Kaibab Limestone. You can also see the snow.
199. As you head east on HW 64 stop and view the Canyon of the Little Colorado. It’s a Navajo Tribal Park with a small fee, but it’s worth it. Notice the difference from GC—this one is colorless, grim and foreboding.
200. Navajo crafts such as turquoise and silver are beautiful and surprisingly inexpensive. Buy some. Remember, they have no casinos to support them.
201. Walnut Canyon NM, just east of Flagstaff, AZ, was the home of the Sinagua Indians.
202. The unique thing about these structures is the wood used in construction. It makes sense, because this location provided timber, where most cliff dwellings were built in areas of little or no forest.
203. These dwellings are about 800 years old. The river through the canyon created an island upon which the Ancients built their homes. As if they weren’t remote enough already??
204. The mining camp of Jerome AZ was one of the last really Wild West towns. Prostitution was legal here until 1940.
205. The sunsets of Sedona, AZ, are world famous for a reason.
206. Sedona is the easiest place to access the red rock landscape. Dozens of buttes are visible from town and hiking trails start right in the middle of housing areas. If Moab is a Red Bull guzzling, slick rock shock, bandana biking dude;

- then Sedona is a new age spa wacky, crystal sporting, vortex hunter. Enjoy the weird while you are there.
207. Red Rock country is really just “rust”. The colors come from iron oxides combined with oxygen. Rust.
208. Most of Canyon Country gets less than 8 inches of rain a year. Yet there are trees. The Junipers you see in CC are often a mass of tangled deadwood woven around fresh green growth. In drought years, Junipers can limit their growth to only a few branches and sacrifice others that die off in this unique natural pattern. Look carefully at them on your next trek and follow the vein of life of nature’s perfect bonsai.
209. The Jeep is heading south into a new landscape. The Best CC rig. Easy to tow. High clearance. Floats well over deep sand.
210. Photo deleted
211. It floats so well that we end up 300 miles to the SE before we even know it. By now Carolyn really needs a potty stop. What is THIS place?
212. Chiricahua NM, in the SE corner of Arizona, gets its name from the Apache’s word for “Land of Standing Rocks”.
213. There is a shuttle with stops at the best hiking spots. //A subsequent President can rescind an Executive Order establishing a NM and the park can lose its protection. This happened once in the Chiricahuas, by President Wilson, but President Coolidge restored its protective status and we are very glad he did.

214. The predominant feature in the Chiricahua NM consists of spires, like Bryce, but here they are made of lava. This is the only place in the world where you can see lava pinnacles with Fedoras on their head.
215. This is the land of Cochise and his grandson Geronimo. Great battles were fought on these plains.
216. After the natives lost the Apache Wars, the survivors were relocated to Florida. Most of them quickly died of disease and famine, and there are only a couple hundred Apaches left.
217. Saguaro NP, 100 miles NW of Chiricahua, captures the symbol of the American SW. The Saguaro is the largest North American Cactus. You probably know that they don't sprout arms until they are 50 yrs. old.
218. There are 2 sections to the park. Tucson is a good base from which to see this park.
219. On the east is High desert, which is largely inaccessible without a jeep.
220. The west section is the lower Sonoran Desert. // The roots of the Saguaro are wide ranging and a plant can absorb up to 200 gallons from 1 rainstorm -- enough to last a year.
221. San Javier Mission near Tucson is known as "The White Dove of the Desert".
222. It was built in 1783 and is the oldest European structure in AZ. Lets turn north now on I-10.
223. Casa Grande, the Great House, was the nation's first Archeological Reserve, protected in 1892.

224. The Hohokam people abandoned this village in about 1450. Casa Grande was covered in 1903 to prevent erosion by rain.
225. As a freestanding 3-story structure, it must have made quite an impression on the numerous indigenous traders who traveled along this major trade route.
226. Petroglyphs of the Hohokam Indians abound in White Tank Regional Park, near Phoenix.
227. A White Tank is a limestone pothole.
228. Quartz Mt is unique, and is a very difficult hike.
229. I only included these photos, because, "This aint Kansas, Dorothy". That is quartz not snow.
230. Flat Iron Mt. visually lives up to its name. Look for my hiking buddies on top.
231. The view from the top could almost make you lose your lunch. You could hit the town of Apache Junction.
232. The Superstition Mts, SE of Phoenix, were a hotbed of gold mining.
233. This area is Very hard hiking.
234. Tanks are the life centers of Canyon Country.
235. This hike is in Pago Park near Downtown Phoenix, is very close to the Zoo and the Botanical Gardens (which is not to be missed).
236. On the way west to Yuma you will find hidden Palm Canyon.
237. Know when to go. The palms are only visible in the sunlight a few minutes a day. Had I not asked the ranger (many miles away and several days

earlier) we would never have seen the trees due to the shadows of the knife narrow steep sided canyon.

238. These few trees are the only native palms in the entire State of AZ.
239. We continue west on our trek, into SE California and Joshua Tree NP. This park preserves the unique high Mojave Desert ecosystem of the giant branching Yucca. These trees are over 200 yrs. old.
240. The campground could not be in a better location. But if you are in Palm Springs, you can do this park as a day trip.
241. This park has the most amazing Cholla garden.
242. Joshua Tree NP is also known for its massive granite monoliths and rock piles. They draw boulder climbers from all over the world.
243. And now we must “Wave” a fond Goodbye, because it’s The End of our trek through Canyon Country.