Arizona Landscapes Assignment
Discovering a Special Place
Example 1: Brown’s Mountain

Name of place: Brown’s Mountain
My name: Ron Dorn

1. Location and directions from ASU Tempe Campus

Brown’s Mountain is located in north Scottsdale, just north of Dynamite Road (Figure 1). On a weekend, it will take you about 45 minutes to reach the Brown’s Ranch Trailhead (Figure 2). If you are starting from the Tempe Campus, you would first go east on the 202 and then north on the 101. The exit is where the 101 begins to turn west, and you continue north on Pima Rd. Keep going north until you reach Dynamite and then turn east (right). The road goes up in elevation as you drive east, and close to the high point, you turn left (north) at the light at Alma School Rd. Drive slow through the housing subdivision, and Alma School dead ends at the Trail head.

Figure 1. Google Earth view of the trailhead area (made from http://maps.google.com) looking north. The screenshot was annotated using the free online photo editing program http://pixlr.com/editor/. After turning east (right) on Dynamite, you travel about 3 miles to Alma School.

Figure 2. Brown’s Ranch Trailhead. This facility has flush toilets, water, and a nice display about the history of the area. This trailhead is part of the Scottsdale McDowell Sonoran Preserve. Source of photograph from this story.
2. Reason why this place is special

I think that Brown’s Mountain (Figure 3) is a special spot to visit for several reasons. First, it looks interesting. It has a neat combination of colors – dark on top, with a white stripe and then covered with flora that includes giant saguaro cacti. I like the flat top at the summit, which is pretty unusual for the Phoenix area.

Figure 3. Photograph of Brown’s Mountain looking north. The dark rock on top is a remnant of a basalt lava flow. Then, directly underneath the basalt is a pyroclastic flow deposit called welded tuff – erupted from the Superstition Mountains supervolcano perhaps 20 million years ago. This ancient supervolcano deposit makes up the white cliff face. Saguaro cacti dominate the vegetation on the flanks of the mountain. Photo source: Ron Dorn.

Another reason why I think Brown’s Mountain is special is that the area is about 10°F cooler than Tempe. If the high temperature in Tempe is 100°F, you can start your hike at a cool 90°F. As the sun gets lower, the temperatures cool off much faster than in the urban core.

Most important to me, the benefit of hiking a mountain is a great view at the top (Figure 4 and Figure 5). The trail goes right up to the summit (Figure 6). Figure 4 shows the view of Cholla Mountain and Granite Mountain looking to the northeast. Figure 5 shows the view towards Pinnacle Peak. There are also great views of the Tom’s Thumb part of the McDowell Mountains.
Figure 4. View from the top of Brown’s Mountain looking northeast. Photo source: Ron Dorn.

Figure 5. View from the top of Brown’s Mountain looking southwest towards Pinnacle Peak. The co-developer of this class, Scott Kelley, joined me at the summit. Photo source: Ron Dorn.
Figure 6. The trail to the top of Brown’s Mountain is just 1.5 miles from trail head to the top – indicated by the red dots. Source of map: Scottsdale McDowell Sonoran Preserve. The map was annotated with red dots using the free online photo editing program http://pixlr.com/editor/.
3. Two Selected Elements of Physical and Human Geography

The two elements of geography highlighted here are Landforms and Biogeography. Although Brown’s Ranch has an interesting Historical Geography component, I was struck more with the landforms and saguaro.

**Instructional Note:** I do not expect your reasons to be as technical or filled with physical geography detail!! This is not a geomorphology class. It is a class intended to encourage you to get out and explore. However, I would like to explain here that Brown’s Mountain was turned upside down. What I mean is that this high spot was once the low spot in the area, a former stream valley. The technical term for this is relief inversion.

The main rock type in the area is granite. Granite exists as the lowest rock type at Brown’s Mountain, and it makes up the other mountains in the area. However, at this spot, some sandy sediment accumulated in a river valley on top of the granite. Then, about 20 million years ago, the Superstition Mountains supervolcano erupted and spread a thick deposit of ash that accumulated on top of the sands. Then, sometime in the range of 15 million years ago, basalt lava flowed down the river valley and covered the ash. Then, the area eroded for 15 million years. Since the basalt flow is much more resistant to rock decay and erosion than any of the other rock types, it helped preserve the ash, sand and granite underneath. This whole process is called **relief inversion**, where the low spot became a topographic high because of the greater strength of the rock type – similar to this diagram.

The second physical geography component highlighted are the saguaro cacti. The scientific name for saguaro is *Carnegiea gigantea*. Some of the largest saguaro I have ever seen grow in the Brown’s Ranch area. Those that are around Brown’s Mountain
look pretty typical. However, if you hike over to Granite Mountain, those along the southeast flank are incredible in their size. I think that this area is more sheltered from the wind (Figure 7).

Figure 7. Saguaro grow exceptionally large on the southeast side of Granite Mountain. Several trails weave in and around areas with shelter from the wind. Photo by Ron Dorn.

4. Additional information of interest

Before this land was purchased by the Scottsdale McDowell Sonoran Preserve, it was used by a variety of outdoor enthusiasts, including motorcyclists who made many of the trails and mountain bikers. Figure 8 is a map of those trails with the names of the local mountains. Note that the mountain to the west of Brown’s Ranch had been called Slant Mountain by everybody. Then, the name was changed – at least on all of the trail maps. Of course, it would take an act of the Arizona State Board on Geographic and Historic Names to give a name to this mountain, because the mountain is unnamed on the official U.S. Geological Survey topographic maps.
Figure 8. Mountain biking map of the area around Brown’s Mountain, which was once called Slant Mountain. Source of the map from this website.

5. Sources used to write this assignment

Instructional Note: your sources can be hyperlinks embedded in the text – as seen above. Or, they can be compiled in his bibliography. You can use any consistent format for the bibliography.

The following used in writing this report were accessed August 1, 2014:


Arizona State Board on Geographic and Historic Names http://www.azlibrary.gov/about/boards-and-commissions/asbghn

Brown’s Ranch Trail … Discover a ‘Place Like No Other’ by Amanda Niemerg http://www.anthemnews.com/browns-ranch-trail-discover-a-place-like-no-other/

Google Maps http://maps.google.com

Photo Editing Software http://pixlr.com/editor/


Scottsdale’s McDowell Sonoran Preserve http://www.scottsdaleaz.gov/preserve