

# WATERFALL TRAIL – A SELF GUIDED HIKE (2 miles)

## STOP 1: (Evelyn Oitesdorf Bench) – CACTUS

### To ponder:

Take a look at the cacti you see here.

What are their similarities and differences?

If you were going to name a cactus – which of the two would you name a “Teddy Bear?”

### Consider:

What makes a Cactus a Cactus?

Spines – no leaves

Designed to conserve water (they are able to expand like an accordion to hold more water in wetter times and use it in drier times).

Some grow as high as 40 feet. Some are as small as 2 inches.

The number of arms has NOTHING to do with the ability to determine the age of a cactus.

You cannot directly consume the “water” from any cactus.

(Only John Wayne (and cartoon characters) can do that)

Here are a few cactus types you will see on the north side of the trail.

Teddy Bear Cholla



Staghorn Cholla



Christmas Cholla



Saguaro Cactus



Here are some cactus types you’ll see on the south side of the trail

Compass Barrel



Hedgehog cactus



## STOP 2: Fauna Sign - Animals

### To ponder

What kind of animals would you have expected to live in this area?  
The sign pretty much gives it away.  
Stop and read a little about the inhabitants of the area.

### Consider:

Most of the animals that inhabit the Park are crepuscular or nocturnal. Crepuscular means that they are active at sunrise and sunset only. Nocturnal means that they are active mostly at night. This doesn't mean that you won't see any during the day, but they are generally very wary of humans and will remain hidden as much as possible.

## STOP 3: Larry Bench – Plant adaptation

### To Ponder:

Take a look at this plant – it is called a Triangle Leaf Bursage. Consider the special things that help plants survive the Arizona Heat.

### Consider:

The Triangle Leaf Bursage is very common to the Arizona Desert. During the dry seasons the stems of the Bursage are so dry that they can be used for kindling wood, yet they remain alive. They have very small leaves (to minimize their exposure to the sun) which are coated to keep water in the leaves.

Dropping their leaves during the hot season reduces the surface area of the plant and therefore reduces evapo-transpiration.



## STOP 4: Early Inhabitants Sign – Living here

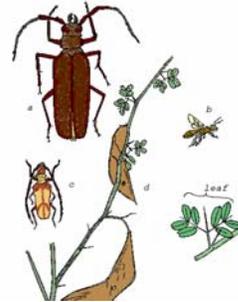
### To Ponder and Consider:

Take the time to read the sign and think about those who lived here before. They lived off the desert that you see around you. It was pretty much as you see it today.

## STOP 5: Three Benches Together on the East Side of the Trail – More plant adaptation

### To Ponder:

Look at the Creosote Bush (left), The Ironwood Tree (center) and The Palo Verde Trees (right) (ignore the bugs). They have adapted over millions of years in order to survive the desert climate.



### Consider:

Creosote bushes exude oil onto their leaves to coat them during rainstorms. This forces the water to drop off the leaves and be absorbed through the roots, which is much more efficient. These oily or waxy leaves also resist water loss. Take a few leaves in your hand. Cup your hand around them and blow onto them. Now smell. You get the smell of the desert during rain storms. Creosote bushes form cloned colonies which are very long-lived. There is a ring of creosote bushes in the Mojave Desert that is believed to be over twelve thousand years old.

Notice how tiny the leaves of the Palo Verde are. Again, to minimize their exposure to the sun. They also drop their leaves when it is extremely hot. They are still able to carry out photosynthesis using the chlorophyll in their bark. That is why their bark is green and hence the name Palo Verde – Green Pole or Green Stick.

The Ironwood, named for its hard, heavy and dense wood, also has small leaves that it will partially shed in times of extreme heat. However, since the leaves are denser on the Ironwood, the outer leaves are able to better shade the inner leaves.

## STOP 6: Petroglyph Plaza – The petroglyphs

### To Ponder:

What are all these signs and symbols attempting to say?

### Consider:

These signs were made in the rock by chipping away the desert varnish (the dark brown or black coating on the rocks). Symbols were left by the Archaic Ones in about 5000 BC. These are more circular type symbols. The more graphic symbols (more pictures) were left by the Hohokam who were here from around 100 BC to 1200 AD.

## STOP 7: Hohokam Sign – Those who have vanished

### To Ponder and Consider:

Read about the people who lived longest in the valley. They were remarkable agriculturalists and artists. No one knows why they fled the valley but they were gone by 1400 AD.

## STOP 8: Bench on the east side of the trail – Desert Mistletoe

### To Ponder:

Look for an Ironwood tree with a large clump of material in its branches. The clump looks like a large hive or nest but it is Desert Mistletoe, a parasitic shrub. How did this get up in that tree?

### Consider:

This parasite, which can grow up to one meter in length, is spread by birds who feed on its berries. This is not the Eastern Kissing Mistletoe, which has white berries, but an orange berried pendulous shrub that grows on leguminous trees such as the Ironwood, Mesquite, Palo Verde and Acacia.



## STOP 9: Petroglyph Sign – Signs and symbols

### To Ponder:

What do all these signs mean?

### Consider:

Ancient inhabitants pecked hundred of figures and symbols on to the rock faces of the White Tank Mountains. Some may go back as far as 10,000 years. They have

withstood sun, rain and vandals for all those years. Vandalism, however, has taken its toll. If you see anyone vandalizing the rocks, notify Park authorities immediately. It is a crime.

A rock drawing was a serious undertaking to its creator. While no one can say precisely what most of the symbols mean, we know that they had an important function in the lives of the people. They were not stone-age graffiti. They record ideas, observations and events in the lives of the people.



### STOP 10: Geology Sign – Rocks and more rocks

#### **To Ponder:**

The Rocks of the White Tanks are the oldest rocks in the valley. They date back to pre Cambrian time, over 1700 million years.

#### **Consider:**

Notice how the rocks in the higher cliffs are very angular while the wash rocks are smooth. This is evidence that these rocks have been exposed to the elements for millions and millions of years. Granite, which makes up the majority of all the exposed rock in the Park, is extremely hard, so a lot of exposure had to happen to weather these rocks this extensively.

### STOP 11: Hays Bench – The Valley of the Sun

#### **To ponder:**

Look at the view of the valley. You are generally looking east. On a clear day you can see the Four Peaks Wilderness area, The McDowells, Usery Park, Camelback Mountain, the Bradshaws, the Squaw Peak Wilderness, Black and Indian Mesas and Continental Mountain.

#### **Consider:**

Take a group picture.

Listen to the Canyon Wren.

Appreciate the vistas, in spite of the pollution that sometimes hangs in the Valley.

## Stop 12: The Waterfall – Where's the water?

### **To Ponder:**

Where does this water, when there is actually some there, come from?

### **Consider:**

Again, look at how smooth the rocks are. The waterfall is slowly receding further back into the rock. Think of the time it has taken to do this.

The waterfall you see is actually fed by two more waterfalls above. These are strictly off limits, as the signs say. The pools in the above falls are twice the size of the one you are standing at so it takes a lot of rain over a long period of time to fill these pools in order for the water to flow over the edge. That's why the waterfall rarely runs.

## The walk back

Enjoy the trip back. Observe, listen to and smell the desert around you.

Come to the Visitor Center to see live snakes and other desert dwellers

Hike one of our many trails. We have the most beautiful trails in the area. Many of them are for serious hikers and require proper planning and excellent equipment. They may be long but they are worth the trip. Allow yourself adequate time as you must be off the trails by sunset. Keep an eye on the weather.

You can picnic at one of our more than 200 picnic sites. Some are covered but each has a table and a charcoal grill which can be used if there are no fire bans in place.

You may either keep this self guided tour booklet or recycle it. Do not throw or leave it on the trail. We encourage you to bring it back to the Visitor Center. Thank You!

