

## WIND EROSION AND DEPOSITION

What is wind?

The perceptible natural movement of the Air especially in the form of current Air blowing from a particular direction

- The words derived from “Aeolus” the Greek which mean God of wind
- Wind is moving air and is caused by differences in air pressure within our atmosphere air under high pressure moves toward areas of low pressure. The greater difference in pressure the faster the air flow

## WHAT IS EROSION?

The process in which sediment is picked up and moved from one place to another place.

- what are the forces which cause erosion?
  - The force of gravity, running water, glaciers, waves and wind
  - Wind is actually the weakest of erosion. water ice and waves are much stronger agent but wind can be powerful shaping force if there are no plants to hold the soil in place.

# PROCESS OF EROSION

1. Deflation
2. Abrasion

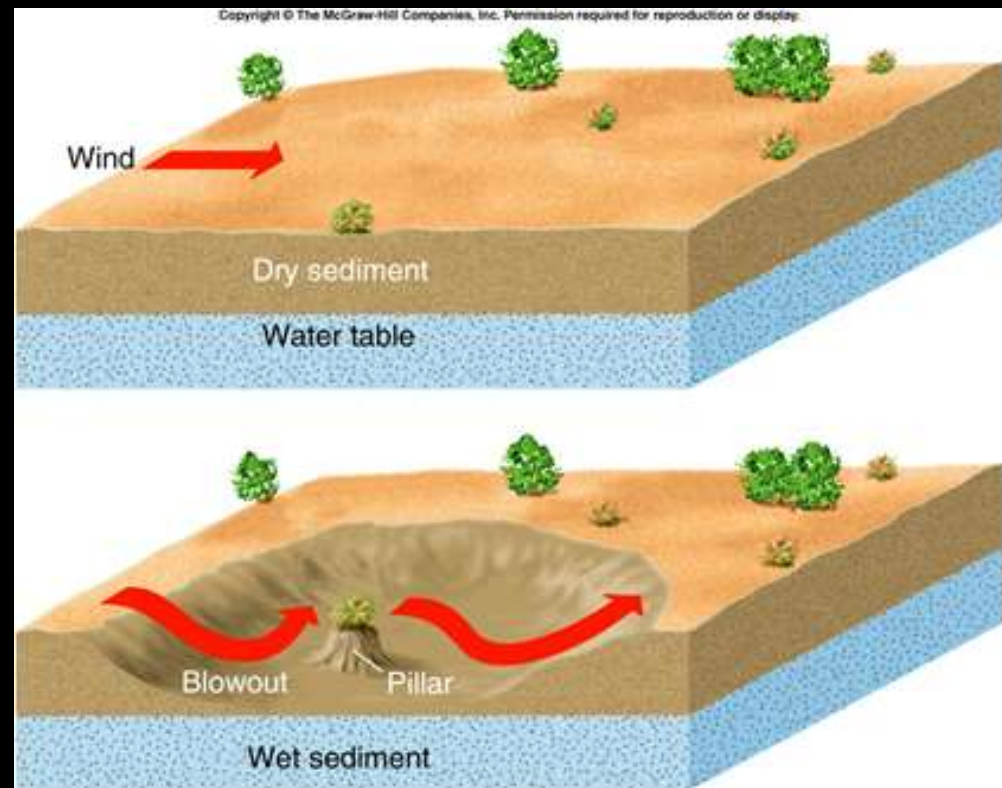
1. Deflation. Wind removes the top layer of sediment and leaves behind the larger, heavier pieces of rock.
2. Abrasion is the mechanical scraping of a rock surface by friction between rocks and moving particles during transport by wind and other erosional agents.

# Transportation

1. **Saltation** is the movement of sand or other sediment by short jump and bounce
2. **Attrition** is the process of reducing something's strength or effectiveness through sustained attack or pressure.
3. **Suspension** wind smaller particle moving by suspension
4. **Surface Creeps**

# EROSIONAL LANDFORM BY WIND

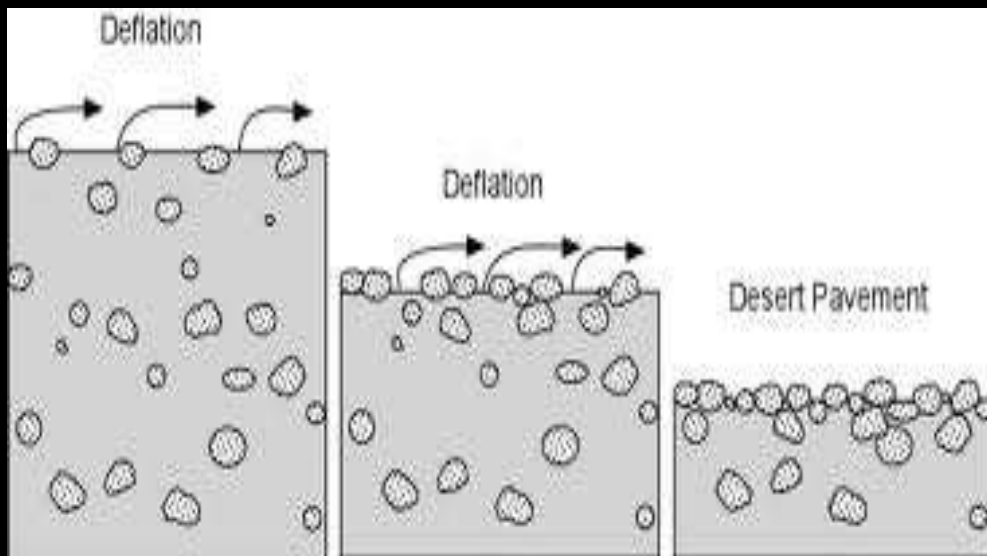
1. **Deflation hollow** which is wind create depression on the surface of earth and hollow it is also called blow out. A surface depression or hollow commonly found in arid and semi arid region caused by wind



# Desert pavement.

Deflation is removal of fine particles by wind. The resulting hole is a blowout. If coarser material is left behind, it can form (desert) pavement. Deflation can remove a significant amount of sand and silt

A **desert pavement**, also called **reg** (in the western Sahara), **serir** (eastern Sahara), **gibber** (in Australia), or **saï** (central Asia)





# Desert varnishing.

Jun 22, 2013 - A strange red, brown and black coating covers many desert rocks and is known as *desert varnish*

Shining of any surface due to colliding of pebbles and erosion of less material



The source of desert varnish has intrigued scientists since the mid nineteenth century.

# Ventifact or Driekants

Polish of surface any pebbles with two or more side as called ventifact or driekants

Ventifacts,  
Antarctica





# Yardang.

Yardangs are formed by wind erosion, typically of an originally flat surface formed from areas of harder and softer material. The soft material is eroded and removed by the wind, and the harder material remains. The resulting pattern of yardangs is a sequence of vertical faros.



# Zeugen.

It is a sequence of horizontal faros.

**ZEUGENS** are also formed by wind abrasion where a surface layer of hard rock is underlain by a layer of soft rock into a ridge and furrow landscape. The ridges are called zeugens which may be as high as 100 feet. Ultimately they are undercut and gradually worn away. Zeugen resistance rock forms block like ridges called zeugen.



# Mesas and butte.

A mesa is considered both a geography and geology term. The mesa is an isolated, high plateau with a flat top and steep sides. It is commonly found in dry regions of the western and southwestern United States.

the Spanish word, mesa, meaning table.

A butte is also considered to be both a geographical and geological term. This formation looks like a mountain or a hill that is flat topped and isolated from the surrounding area



# Mushroom and pedestal rock.

A mushroom rock, also called rock pedestal or a pedestal rock, is a naturally occurring rock whose shape, as its name implies, strikingly resembles a mushroom.





# Earth pillar and isloberg.



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# Monolith and Honey comb.

This word comes from the Greek, and it literally means “single stone”

The term “monolith” is used in a number of ways. Basically, a monolith is a really big stone, and there are both natural monoliths, like Uluru in Australia, and artificial monoliths, such as the standing stones at Stonehenge.

Which is small hole in the rock it is called honey comb.



## DEPOSITIONAL FEATURE BY WIND

Two category.

1. Small scale
2. Large scale

I. sand drift or sand sheet.

Sand sheets are flat, gently undulating plots of sand surfaced by grains that may be too large for saltation. They form approximately 40 percent of Aeolian depositional surfaces. Sand sheets exist where grain size is too large, or wind velocities too low, for dunes to form.



# Sand ripple.

one of a series of small ridges produced by wind

# Sand fall.

formation of sand shadow were wind sweep sand over a driftion such deposit  
is known as sand fall



# Large scale.

1. Dunes
2. Active Dunes
3. Passive Dunes

## On The Basis of Shape

1. Crescent
2. Longitudinal
3. Star Shaped
4. Parabolic
5. Transvers Sand Dunes
6. Whale Back
7. Undulation