9.3: Eolian Processes - Weathering by Wind

Eolian processes are erosion, transport and deposition by wind. We will briefly discuss each. First, however, let's make an important clarification about the ability of wind to move material: the smaller material is (and the lighter weight it is) the easier it is for the wind to move. Small particles (sand, dust, soil) are moved by the wind very easily. Large particles (pebbles, cobbles, rocks) are not moved by the wind easily.

**Eolian Erosion**: Summarize how *desert pavement* is formed:

Desert pavement is formed by deflation, or the movement by the wind of all the small particles, leaving only the larger pebbles and gravel.

**Eolian landforms: Sand Dunes** Large areas of our earth are covered with sand. The Grand Erg Oriental in the central Sahara Desert in Africa covers an area the size of Nebraska and is estimated to be 4000 feet deep. Sand dunes are always in motion. They migrate in the predominant wind direction, usually forming long ridges. The windward slope is shallow, and sand grains are driven up slope, until they tumble down the steep leeward slope.