

WIND EROSION IN EGYPT'S OWEINAT MOUNTAIN  
AND IMPLICATIONS TO EOLIAN EROSION ON MARS

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The formation of pits in solid rock was studied along the northern slopes of the Oweinat Mountain at the southwestern corner of Egypt. Emphasis was placed on the wind-facing northern slopes. Near the base of these slopes *tafoni* abound, where honey-combing of the sandstone rock occurs by moisture.

At higher levels of the slopes another type of pits form by wind erosion. Smallest are the vortex pits that form on the surface of hard quartzitic rock. Deeper and larger pits appear to form by plucking of individual grains from the sandstone. These become the host for wind-carried sand grains which move about the pits as the wind gusts. Such erosive action increases the size of the pits. These are very similar to the pits in rocks of the Viking 2 landing site. They were observed not only in sandstone and quartzite, but also in dense and fine grained basalt, trachyte, granite, and hematite exposures.

At the highest levels of the wind-facing scarps, the pits form in rows. As the number and size of the pits increases, grooves are formed. Parallel rows of grooves produce a distinctly fluted surface.