

July 17

? WHY THE WEATHER ?

Dr. Charles F. Brooks,
of Clark University,
describes:

MIRAGE

"It is a very common thing in flat desert regions, and in other places during the warmer hours of the day, to see images of distant objects below the real objects themselves, as though these objects were being reflected from a horizontal mirror - hence the name inferior mirage given to this phenomenon," says Dr. W. J. Humphreys. "It closely resembles, even to the quivering of the images, the reflection, by a quiet body of water, of objects on the distant shore - the 'water' of course is the image of the distant low sky - and therefore frequently leads to the false assumption that a lake or bay is close by.

"All these things are caused by the strong heating of layers of air - on a clear, hot, afternoon, with no wind, the ground becomes very strongly heated, and this in turn heats the air which is close to the ground; under certain conditions, the heating may be so intense, and cause the layers of air to arrange themselves in such a way, that the rays of light coming from distant objects are bent aside from their paths, and this causes the peculiar appearances."

This bending of the light rays occurs because the different layers of air have different optical densities. Similarly, but in a greater degree, water and air are of different optical densities so that light is bent in passing from one to the other. If a stick is thrust obliquely into water, the portion under water appears displaced, making the stick look as if it were broken at the surface. So, too, undisturbed layers of air sometimes act like a lens and displace or distort distant objects.

(Tomorrow: Looming)

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