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? WHY THE WEATHER ?

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AIR-POCKETS IN SAND

By Charles Fitzhugh Talman,
Authority on Meteorology.

An English zoologist, Prof. J.H. Orton, reports an unfamiliar phenomenon in the last number of Nature (London). While crossing the sands of Morecambe Bay, England, from the village of Flookborough last summer his attention was attracted by a succession of curious sounds around him, resembling profound sighs or the strong flat expirations made through pursed lips by a sleeping person. He learned from a companion that the sounds were due to the escape of air from small pockets below the surface of the wet sand, and could be produced by perforating with one's finger the drying and slightly elevated areas of sand overlying these pockets. The vibration produced in the ground by a pedestrian or a passing cart appeared to increase the air pressure sufficiently to blow off the sandy caps of the pockets.

"These air-pockets," he writes, "have been observed near high-water mark when crossing the sands soon after the recession of the tide. The following explanation is suggested for their formation. At this level the sand dries and drains to a great extent in summer, and especially during the neap tide period. When the spring tide floods set in, water flows very rapidly over the area of dry sand, imprisoning air below the wetted surface. During high and the following ebb tide water gradually percolates below the surface into the underlying sand where it collects and forms a pocket, which may be 'blown' by a gradual accumulation of the encircling water pressure or by a sudden increase due to vibration of the ground."

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