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? WHY THE WEATHER ? Mailed September 17, 1932

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DUST WHIRLS

Many years ago the U.S. Bureau of Soils published a copious and instructive bulletin by Dr. E. E. Free, "The Movement of Soil Material by the Wind," in which the author gives the following account of dust whirls:

"Among the most striking of arid region phenomena are the dust whirlwinds or columns of whirling dust-filled air, a few inches to several feet in diameter and from a few feet to hundreds of feet in height. They may be seen nearly every hot day, sometimes running rapidly over the surface; sometimes remaining nearly if not quite stationary, but never losing their rapid rotation. They usually last only a few minutes, but occasionally persist much longer. One observed by Pictet lasted for over five hours. They are largest and last longest on the flat, bare plains of the desert, and are usually seen in a calm or when only a light breeze is blowing, although their occurrence in windy weather is not unknown.

"These whirls have been noticed by many travelers in desert and steppe regions, and have been carefully observed by Baddeley in India and by Pictet in Egypt. They are frequent in China and on the pampas of South America, and occasionally occur during the dry season even in the humid regions. One of the most interesting phenomena in connection with dust whirls is the occurrence of systems of several whirls, each revolving rapidly about its own center and also moving about a common center in a more or less perfect circle a few rods in diameter.

"Minute dust whirls have been artificially produced by heating an iron plate on which fine silica had been sprinkled." The experiments last mentioned were made and described more than 30 years ago by Prof. R.W. Wood.

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