

charge wood is blown to pieces and wires are converted into vapor. Besides such laboratory experiments a field party has been studying natural lightning as it runs wild in the mountains of Colorado. It is found that lightning has a voltage of about a hundred million, which is a million times more than the ordinary household lighting circuit. The most striking characteristic of lightning is its proverbial quickness. A current of eighty thousand amperes may pass from the cloud to the ground in a few millionths of a second. On its way through the air it performs all sorts of pranks, knocking off electrons from atoms as a wind blows off hats in a street. The atoms thus deprived of their natural companions hook up with any other atoms that are handy. So it happens after a thunderstorm that some oxygen atoms instead of pairing off in their usual way get connected in a triple group called by the chemist "ozone" and by the ignorant "a sulphurous smell." Sometimes the oxygen connects with nitrogen and then the soil is enriched with nitric acid as good as any Haber could make, though not so cheap. We may even assume that the nitrogen atoms that get hit the hardest may be smashed quite to pieces and that other elements, helium or hydrogen, may be formed from the fragments. . . .—Dr. E. E. Slosson, *Science Service*, on the Centenary of the Franklin Institute, Philadelphia, Sept. 17-19, 1924.

Among the papers presented at the thirty-eighth meeting of the Iowa Academy of Science were the following:

"Is Iowa getting wetter or drier?" Charles D. Reed. "Orientation of buildings on the basis of sunlight," Wm. Kunerth.—*Science*, Oct. 10, 1924, p. 342.

The tropical storm that swept the Atlantic states Sept. 29 to Oct. 1, seems to have been responsible for the appearance in Washington, D. C., of 8 species of shore birds very rarely seen there. Most usually migrate farther east, and one species down the Mississippi Valley, en route to South America.—Abstr. from *Science Service*.

#### The Highest Recorded Shade Temperature

For seven years Prof. Filippo Eredia has taken observations at Azizia, in the semi-desert plain of Jefara, between the coast of Tripolitania and the interior plateau. On September 13, 1922, under conditions of cloudless sky and southwest wind, he obtained an absolute maximum of 136.4° F. This is the highest authentic temperature ever recorded on the globe, exceeding by 2.3° F. the previous record of 134.1° F. in Death Valley on July 10, 1913.

The remarkable circumstance is that the season should have been equinoctial. The mean temperature of September in that region for seven years surpasses June. "This anomaly is probably a local accentuation of the Mediterranean characteristic of excessive summer heat lingering to a later date than in high latitudes, where the greater difference in length of days between solstice and equinox permits a rapid decline in temperature when August is over." This condition is a prominent illustration of the fact that seasonal extremes of temperature, even in continental regions, tend to lag well behind the corresponding extremes in the intensity and duration of sunlight. It shows also that cooler and drier climates near the confines of the tropics are hotter in summer months than are equatorial climates.—*Nature*, (London), Aug. 26, 1924, pp. 294-295.

An article dealing with the same subject in the *Quarterly Journal of the Royal Meteorological Society* for October, 1924, p. 324, quotes for comparison other exceptional temperature readings in the region.