

amount of material which would be accelerated at the rate of one foot per second per second by the gravity pull of the earth on a one-pound body at 45° north latitude and at the level of the sea.

The word weight according to scientific usage means the force with which the earth pulls on a body, and it can be expressed most intelligibly in dynes or poundals.

Many teachers of engineering conform to the popular usage in that they employ the word weight to designate the absolutely definite and invariant result which is obtained by weighing a body on a balance scale, and to get what they call the "mass" of the body they divide this so-called weight by the acceleration of gravity which is a variable! They do not remember, as Professor Hoskins does, that they should use the value of the acceleration of gravity at a certain place which has been agreed upon, and this is equivalent to saying that they do not understand what they are doing when they divide by "*g*." We wish indeed that the thing were as simple as Professor Hoskins thinks<sup>6</sup> it is, namely, a mere matter of dividing by 32.1740; and of course it is just that simple—to the man who understands it.

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#### PRE-WISCONSIN GLACIAL DRIFT IN THE BOSTON BASIN

TO THE EDITOR OF SCIENCE: During the past few weeks exposures have been made in connection with extensive excavation work in the city of Boston where one, and possibly two, pre-Wisconsin drift sheets have been uncovered.

The evidence consists of a zone of extremely weathered material beneath the Wisconsin drift, an erosion unconformity, different types of deposits, a slight trace of an interglacial soil, some interglacial subsoils, and an apparent difference in direction of the source of included debris. It was possible to determine with some accuracy the zone of post-Wisconsin oxidation, and the final shaping of the

<sup>6</sup>See footnote on page 685, SCIENCE, May 7, 1915.

ridge in which this evidence was found appears to be due to the re-advance of an ice sheet which slightly contorted the uppermost waterlain materials. The axis of this ridge is accordant with the direction of the striæ of the last glacial advance in the region.

A paper is now in preparation covering in more detail this important clue to older Pleistocene deposits in eastern Massachusetts.

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#### A SERIOUS NEW WHEAT RUST IN THIS COUNTRY

ON May 21 of this year, a party representing the office of cereal investigations of the U. S. Bureau of Plant Industry discovered the yellow leaf rust (*Puccinia glumarum* Eriks. and Henn.) of wheat on several varieties of wheat in a field in the vicinity of the Indian school at Sacaton, Ariz. The presence of the rust was first called to the attention of the party by Dr. F. Kølpin Ravn, of Copenhagen, Denmark, temporarily employed by the U. S. Department of Agriculture in consultation with officials of the department on cereal diseases. At about the same time, A. G. Johnson found the rust also on *Hordeum murinum* in southern California. The rust was not afterwards found on wheat anywhere in California, but later, during June, was found in considerable abundance at various places in Oregon and Washington, and to some extent in Idaho, and a very few specimens at Bozeman, Mont., and Logan, Utah. Up to July 1 it has not been seen anywhere east of the Rocky Mountains. In Oregon and Washington the rust was also found on barley, and at Pullman, Wash., it was found by the writer on a species of wild grass as yet unidentified.

In various minor ways Dr. Ravn has been of great help to the cereal pathologists, but the discovery of the presence of this rust is a particularly interesting example of the benefit resulting from a cooperation of foreign botanists occasionally in the investigation of problems in this country with which such men are already acquainted in their own country. This rust being common in Europe and usually the