

We have to define efficiency by "work out divided by work in." The teacher has also replaced the dictionary.

Our school work in what is called, from custom, reading seems to consist in reciting some "pieces," very ultra-modern, calling for some acting and a little thought. Later the pupils are required to learn what some critic has said about the great works, with perhaps extracts from the professor's doctorate thesis. It is then certain that the pupil will not read any of the books which he has heard called classics.

A teacher found that his pupils could not get what was in the book. They said: "Why do the books not present the matter as you do?" He wrote the book; he reported that the reviewers said that it was about as dry a book as they had ever seen.

JOHN N. JAMES

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THE COTTON WORM MOTH

I WAS interested in Professor Fernald's note on the cotton worm moth in your issue of November 27. Professor Fernald reports that few of these moths were taken in Massachusetts in 1912. Now in 1912 we had a great flight of them here, the only invasion on a large scale that I have heard of in this locality. They were here by the tens of thousands, literally covering the ground for a space of 100 square feet or so under some of the street lights.

The moths arrived on the night of October 10; the night watchman in the village told me they came in all at once at about 3 A.M. and flew for a time in such swarms round the electric lights "that you couldn't see the lights for the moths." They were reported in large numbers in at least one other village near here; and my father who was then living in London, Ontario, wrote me that there had been an invasion there which arrived two or three days earlier than ours here, but which must have been on the same large scale as to numbers.

It would be interesting to know whether

these were parts of the same front, or separate swarms moving independently.

In 1913 I saw none here, but during the past autumn there were a few specimens, though I have no record of the date of their appearance.

A. P. SAUNDERS

CLINTON, N. Y.

METEOROLOGICAL OBSERVATIONS IN GERMANY

A LETTER dated Berlin, November 30, 1914, from Professor Dr. Gustav Hellmann, director of the Royal Prussian Meteorological Institute in Berlin, advises us that the usual regular observations are being maintained without interruption throughout the German Empire. So far as the internal weather forecasts for Germany are dependent upon cable reports from foreign countries they are made with difficulty; all such reports are at present interrupted, even those from Iceland, since the latter come over a Danish cable that lands at Aberdeen where they are suppressed and are not permitted to reach even Copenhagen. The regular, though belated arrival of the *Meteorologische Zeitschrift*, together with other scientific publications show that the German scientific world is far from suspending its existence during its present struggle.

C. ABBE, JR.

SCIENTIFIC BOOKS

An Account of the Mammals and Birds of the Lower Colorado Valley, with Especial Reference to the Distributional Problems Presented. By JOSEPH GRINNELL. University of California Publications in Zoology, Vol. 12, No. 4, pp. 51-294, Pls. 3-13, 9 text figures, March 20, 1914.

The report before us gives the results of an expedition undertaken in the spring of 1910 by the California Museum of Vertebrate Zoology. Since the founding of this museum by Miss Annie M. Alexander, in 1908, Grinnell and his staff have spent much of their time in the field, accumulating extensive series of specimens, representing the fauna of California and adjacent states, and