lbs. to the ton. Most large corporations do likewise. Personally we are entirely willing to pay for a hundredweight of coal and receive 112 pounds, that is, eight stones (a stone as we all *readily* remember being 14 pounds). But we only get an uncertain number of stones in each ton; and the ton remains 2,000 pounds. We are thankful that there is not a Troy ton, or we might get that (1,500 lbs.).

Mr. Russell argues that the old English weights and measures are uniform and consistent. He therefore proposes a new ounce to weigh 436.947 grains. We now have two ounces, one of 437.5 grains and another of 480. Who then could tell how many grains there were in a pound, a hundredweight or a ton? Why not let the grain depart in peace? No one now uses it, whereas the grain is in general use among scientific men and is entirely satisfactory.

ALEXANDER MCADIE

AN ILLUMINATING METHOD OF HANDLING DATA

THERE has come to my observation a notable method of treating data, one worthy the attention of the curious in such matters, and casting light upon certain other things of interest. A circular letter entitled "Biologists under cross-examination on the inheritance of acquired characters," to which is attached the name of Casper L. Redfield, has recently been distributed. Appended to it are what purport to be "parts of letters received" from certain biologists in answer to inquiries from various persons concerning the inheritance of the effects of the organism's responses to its environment (as distinguished from the direct action of the environment). With regard to these letters it is stated that "in the cases in which the question was directly answered, that answer was usually confined to one or two sentences in a letter filled with irrelevant matter," and as to the replies quoted it is said that "the replies given are simply those parts of the letters received which answer the questions asked—irrelevant matter being omitted." Among these replies the following (in answer to an inquiry from a Mr. Herdman) is given as my contribution:

> *Dear Mr. Herdman:* I have little or nothing that will help you. Redfield's work has been criticised as unsound. Otherwise, nothing has been published.
>
> H. S. JENNINGS.

The pertinent points regarding this are as follows:

(1) My letters to Mr. Herdman contain no such passage or passages. Not one of the sentences quoted is found in my letters to Mr. Herdman or to any one else.

(2) Except for the trend of the comment on Mr. Redfield's work the passage does not give even remotely the sense of what I wrote. In addition to Mr. Redfield's writings I referred the inquirer to Kammerer's extensive work, which is almost entirely on the heritability of the organism's responses to the environment; to Semon's book, "Das Problem der Vererbung Erworbener Eigenschaften," which contains accounts of many investigations along this line; to the recent work of Griffith and Detlefsen on the inheritance of the reactions produced in rats by whirling, and to other works. I did not say, "I have little or nothing that will help you," for I hoped that these references would help him. And I obviously did not say that other than Redfield's work "nothing has been published," since I gave references to other things that had been published. I am driven to conclude that these two sentences are metamorphoses of the following. After the somewhat extended letter, with references to the literature, above mentioned, a brief second letter to Mr. Herdman (in answer to an inquiry as to the nature of the criticisms on Redfield) said: "I felt that I had little or nothing to add that would help you, so that I have not hurried about replying." (Note the words "to add," the omission of which from the ostensible quotation completely changes the sense). After referring him to Pearl's review of Redfield, my summary of the situation concluded by saying that "a great many persons have worked along lines similar to this, but in most cases the results have been negative, so that nothing has been published on the work or the work has attracted no attention, since there were no definite results." Nothing else in my letters bears the least resemblance in either words or meaning to the first and third sentences in what purport to be "parts of the letters received" from me.

The student of scientific method will find it an enlightening exercise to analyze in detail the methods employed in the author's treatment of the raw data given above, in order to get out of them his finished product; to formulate the general principles under which these operations are carried out; and to meditate upon the wonderful potentialities opened up by the application of these methods and principles to the data of genetics. Upon the reader that will carry out this analysis a great light will dawn as to how it happens that the author claims that the matters discussed in his published works demonstrate the inheritance of acquired characters; and as to the weight to be given to those claims.

H. S. JENNINGS

JOHNS HOPKINS UNIVERSITY

SOME IMMIGRANT CLOVERS

IN April, 1923, my attention was called by Professor Paul Tabor, of the Georgia Agricultural College, Athens, Georgia, to a clover said to be growing in

northeastern Georgia and to be new to that section. It had been first observed by Mr. D. J. Pitts, of Bowman, Georgia, and material was later sent me by Mr. Pitts, who also wrote as follows:

I first noticed this clover some five or six years ago in my crimson clover and thought nothing of it at that time, but it stayed on this piece of land without any help, and volunteered each year until it covered a place ten by twenty feet; so I stripped a few seed last spring and sowed them in a field on a strip ten by seventy-five feet; it, also, grew well.

This clover proved to be *Trifolium striatum* L., a species widely distributed in Europe. It seems to be quite at home in northern Georgia since the plants sent by Mr. Pitts were all more than 4 dm in height, one plant with thirty stems from the crown growing to a height of more than 6 dm. Seed ripens about the last of April or early May. This species may become of economic importance.[1]

The species listed below were all sent in by Professor Paul Tabor, of Athens, and Mr. W. J. Davis, of Tifton, Georgia, who with Mr. H. C. Appleton, of Athens, Georgia, collected the plants at Snow Hill, Alabama. Concerning these species nothing is known as regards the length of time they have been in this country nor how widely spread they may be. Professor Paul Tabor wrote under date of May 23, 1923, as follows:

All of these clovers were picked up (on May 13) during an hour's stroll up the railroad from Snow Hill, Alabama. The railroad track has ballast of lime rock. All of these clovers were found growing within a few inches of this ballast but had apparently not scattered to the sides of the embankment or the cuts.

The writer hopes to be able to study these clovers next spring, but meanwhile it seems best to place on record the fact that these European clovers, mostly Mediterranean, have been found growing wild in the United States. Dr. Chas. Mohr in "Plant Life of Alabama," 1901, p. 562, says regarding *T. resupinatum*, "Adventive with ballast. Mobile, June, 1887; not observed of late years." A complete set of specimens has been deposited with the United States National Herbarium and, so far as material was available, with the Gray Herbarium and the Herbarium of the New York Botanical Garden.

Species of *Trifolium* collected at Snow Hill, Alabama, May 13, 1923:

T. glomeratum L.	*T. resupinatum* L.
T. lappaceum L.	*T. scabrum* L.
T. nigrescens Viv.	*T. suffocatum* L.
T. tomentosum L.	

A. J. PIETERS
In Charge of Clover Investigations, U. S. Dept. Agriculture

[1] Since writing the above Doctor B. L. Robinson has kindly furnished the following record of specimens of *T. striatum* in the Gray Herbarium and in that of the New England Botanical Club.

"Ballast, Camden, N. J., I. C. Martindale, 1880."

"In old field, Eastham, Mass., June 22, 1914, F. S. Collins, No. 2309."

"Forming prostrate rosettes, dry sandy field and borders of woods, Harwich, Barnstable Co., Mass., June 25, 1918, M. L. Fernald, No. 16,960."

"The Collins specimen is in the herbarium of the New England Botanical Club; the others in the Gray Herbarium."

QUOTATIONS

THE ENDOWMENT OF RESEARCH

THE new policy of the Royal Society may fairly be called the endowment of maturity; there is no reason to quarrel with it on that account. The society exists, as William, Viscount Brouncker, its first president, said in accepting the charter granted by Charles II, "for improving natural knowledge," and no body more competent to decide how funds can best be applied to this end could be found than the council of the Royal Society, upon which experts in all departments of science sit.

The policy was stated and explained by the president in the anniversary address. The society has been able for a good many years past to make certain annual payments from sums which it receives, chiefly from the Donation Fund and the Government grant. These have been used mainly to assist workers of promise in the early period of their career by providing the cost of apparatus and material, through research studentships, and by the Sorby Fellowship. In recent years the society has come into the enjoyment of certain bequests and gifts—the Foulerton gift and bequest, yielding £5,050 a year, the Messel Fund, yielding £1,575, and the Yarrow Fund, £5,450. Still more recently the death of Dr. Ludwig Mond's widow has liberated his bequest, which, it is anticipated, will yield an annual income of about £2,500. These new sources of income have placed upon the society the responsibility of determining the best way of expending them. The policy it has now adopted is interesting from several points of view. It has decided that the income may best be spent in creating greater opportunities for experienced investigators of already proved first-rate capacity in research. Such men as a rule have hitherto occupied positions in universities or other institutions which require from them manifold duties. In almost all such institutions they must give up much of their time to teaching, and there are many other calls upon them of an administrative kind, and such calls are likely to increase