from malnutrition, due to their living on poorly constituted diets, and also to greater efficiency in the use of feeding-stuffs in animal production.

Our solution of the problem of successfully feeding diets of purified foodstuffs together with the two unidentified food essentials, fat-soluble A and water-soluble B, greatly simplified the study of the problem of isolating the latter substances. Indeed without it the study of this problem can scarcely succeed. My associates and I have further simplified the problem of their isolation by the demonstration that similar "protecting" substances do not exist for the diseases scurvy and pellagra. It had become a widely accepted belief that there existed not less than four such unknown dietary essentials, one for the prevention of beri-beri, another each for scurvy, pellagra and for rickets. This belief rested on the "vitamine" hypothesis of Funk. I need not here dwell upon the important studies of Eijkmann, Fraser and Stanton, Stepp, Holst, Funk, Williams, Osborne and Mendel, and of Goldberger, a critical study of whose papers greatly aided us in the planning of our experimental diets and in the interpretation of our results.

During my stay at the University of Wisconsin nobody had anything to do with independent work with my rat colony, except in a small way an independent study was carried on by Mr. V. E. Nelson during the months just preceding July, 1917. I reiterate my statement in my reply to Professor Hart in Science for March 8, that the work which they charged I had made dishonest use of, which was participated in by Mr. Steenbock, was planned entirely by me, and was carried out by him as directed, in the capacity of an assistant. He was not consulted about the interpretation of the data in the paper by McCollum and Simmonds (*Jour. Biol. Chem.*, January, 1917), because his personal attitude towards me before I left Wisconsin made impossible a joint preparation of the paper, and he was therefore given credit for the preparation of the materials employed in the experiments instead of being made joint author, as I should have been glad to have made him under other circumstances.

When one leaves an institution after having made observations of a fundamental character, and having for several years made use of these in the development of new and important lines of research, his colleagues who remain behind have, of course, a right to continue investigation in this field, just as any one located elsewhere has the right to take advantage of the observations of others, and attempt to further the acquisition of knowledge. There is no property right in research or its results so long as it is incomplete and not protected by patent. Some proceed on this theory, attempting the while to perfect details, and to add some element of originality, and to give their work the mark of independent thought. Others prefer to spend their time in making experiments of an exploratory character, at the risk of doing much unprofitable work in order to make some observation which will open up a new field of investigation which they may follow with profit. A few prefer to attempt to bring into disrepute some investigator who has opened up a new field of research when he has reached a point where much further work remains to be done, which is obvious to every one who studies his published results, in the hope that they may thereby so discredit him that his work will be interfered with, with a view to making possible the reaping of a harvest of opportunity which his absence from the field would make possible. Many believing that the author of the first important observation has the right to be allowed to develop the new field without annoyance, refuse, from a sense of self-respect, to pounce upon, and, in haste, complete what another is doing, when a study of fundamental nature makes possible a new type of investigation. Judgment as to which course one should pursue will, of course, be determined by the standards of the individual.

E. V. McCollum

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THE WORLD'S CALENDAR

To the Editor of Science: A communication by W. J. Spillman in Science of May 17 discloses the fact that a bill was introduced in the Congress on April 16 with the object of

reforming the world's calendar, by Honorable J. M. C. Smith, of Michigan.

It is gratifying to learn that the movement for Calendar Reform is thus taking on definite shape; and also that, from the writer's viewpoint, the bill referred to embodies the feature of dividing the year into thirteen lunar months, thus assigning to the moon her rightful place in determining her share of time division in the calendar.

It would appear to be sufficiently obvious without special mention, that it must be futile for any individual government to undertake a reform of the world's calendar without the cooperation of the other principal civilized nations; and that any legislation that may now be projected along that line should be with the object of securing such cooperation.

It may be suggested also that the movement might better be deferred until the present world agitation shall have subsided.

T. G. DABNEY

CELLULOID FOR COVER GLASSES

TO THE EDITOR OF SCIENCE: War conditions are causing many substitutes to be used, and even I was forced to one by the scarcity of cover glasses for microscopic work. I found that sheet celluloid can very well be used in place of the glass, the fiber thereof being practically negligible for beginning work. I take sheet celluloid, cut strips about the width of the slide, iron these strips flat (place the heated iron over each part but do not rub, for rubbing the iron causes other streaks), and then cut the strip into small squares. In addition to being unbreakable and so quite durable and inexpensive, they can not scratch the lens by the pupil running the objective into the coverslip, as beginners are prone to do with all cautions about such dangers forewarning them. Other science teachers may find this expedient worth trying. F. A. VARRELMAN

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AN ABSOLUTE SCALE FOR RECORDING TEMPERATURE

TO THE EDITOR OF SCIENCE: I think the suggestion of Dr. Marvin in a recent number of SCIENCE (15 March, 1918) with reference to the adoption of an approximation to the absolute scale of recording temperatures is a good one. Two suggestions occur to my mind in trying to devise an appropriate name for this scale. As it is a combination of the Absolute and the Centigrade the word "Abcent" composed of the first syllable of each word seems to give a fitting term. An alternative would be to call it the "Thomson" scale, a name which would signify that it closely resembles the Kelvin or absolute scale but is not quite the same. As is well known, Lord Kelvin's earlier name was Sir William Thomson. J. ADAMS

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SCIENTIFIC BOOKS

Calculus. By HERMAN W. MARCH, Ph.D., Assistant Professor of Mathematics, University of Wisconsin, and HENRY C. WOLFF, Ph.D., Assistant Professor of Mathematics, University of Wisconsin. McGraw-Hill Book Company, New York, 1917. Pp. xvi + 360.

Differential and Integral Calculus. By CLYDE E. LOVE, Ph.D., Assistant Professor of Mathematics, University of Michigan. The Macmillan Company, New York, 1916. Pp. xviii + 343.

Plane Trigonometry with Tables. By EUGENE HENRY BARKER, Head of the Department of Mathematics, Polytechnic High School, Los Angeles, California. P. Blakiston's Son and Co., Philadelphia, 1917. Pp. 172.

College Algebra. By ERNEST BROWN SKINNER, Assistant Professor of Mathematics, University of Wisconsin. The Macmillan Company, New York, 1917. Pp. vi + 263.

Projective Geometry. By L. WAYLAND DOWLING, Ph.D., Associate Professor of Mathematics, University of Wisconsin. McGraw-Hill Book Company, New York, 1917. Pp. xiii + 215.

Elliptic Integrals. By HARRIS HANCOCK, Professor of Mathematics in the University of Cincinnati. John Wiley and Sons, New York, 1917. Pp. 104.

Of the making of many text-books of mathematics for colleges and secondary schools there