is due to buried meteoritic material. Not that meteorites large enough to produce this anomaly never fall upon the earth, but rather that giant meteorites are largely back-fired from their craters. Moulton[2] has calculated that a swiftly moving meteorite may produce a pressure of fifteen million atmospheres at the time of its impact. No one knows how earth rocks would be affected by fifteen million atmospheres of pressure, for this is far beyond our experiments and in fact beyond our comprehension. However, it seems quite certain that rocks of all kinds would be greatly compressed by this amount of pressure. If this be true a terrific explosive rebound must follow the impact, lifting strata far above their original level. This uplift of the deeper strata might well produce a gravitational anomaly. Rebounds of elastic solids is not a matter of speculation. It seems to be characteristic of all great impacts that are not able to break through the material that receives the impact.

Can any one suggest how structural bilateral symmetry with overtilted beds on one side of the structure can be produced by volcanic explosions that come solely from within the earth? It is this kind of symmetry that is found in Meteor Crater, Sierra Madera, Flynn Creek structure and a number of the cryptovolcanic structures. Oblique meteorite impacts offer a satisfactory explanation of this symmetry.

J. D. BOON[3]

SOUTHERN METHODIST UNIVERSITY,
DALLAS, TEXAS

VITAMIN C (ASCORBIC ACID) CONTENT OF THE BUFFALO-BERRY

THE buffalo-berry, *Lepargyrea argentea* (Nutt.) Greene, a native fruit of North Dakota, has been found to contain an abundance of vitamin C, as determined by the method of Bessey and King,[1] as adapted for the Evelyn photoelectric colorimeter by Bessey[2] and Morell.[3] The ripe fruit, on a fresh basis, apparently contains well over 150 mgs of vitamin C per 100 grams. One sample of fruit, picked on October 15, 1942, contained 184 mgs of vitamin C per 100 grams.

This fruit is usually consumed in the form of a jam or a jelly. Although destruction of vitamin C occurs, samples of buffalo-berry jam contained 80 to 90 mgs of vitamin C per 100 gms.

DARLINE KNOWLES
IMMANUEL WILK

NORTH DAKOTA AGRICULTURAL
EXPERIMENT STATION

SCIENTIFIC BOOKS

VITAMINS

Chemistry and Physiology of the Vitamins. By H. R. ROSENBERG. xix + 674 pages. New York: Interscience Publishers, Inc. 1942. $12.00.

THIS is an encyclopedic monograph treating practically all the substances commonly called vitamins; and, in general, each of them on the same comprehensive plan—nomenclature, chronology, occurrence, isolation, properties, specificity, synthesis, industrial methods of preparation, determination, "standards" (units of quantitative expression), metabolism and requirements in nutrition. Different aspects are, however, obviously treated with very different degrees of fullness; and, in the opinion of this reviewer, of critical acumen as well. In his preface the author introduces himself as having "been connected, at some time or other, with the development of many of the vitamins known to-day"; and this phrase well foreshadows the strength and weakness of the author's handling of the broad and many-sided subject he has undertaken. The book gives a relatively complete account of the "development" of each vitamin from a biochemical discovery into a commodity to be patented, if possible, and manufactured for commerce; while the treatment of the significance of the vitamins in nature, and in the scientific undertaking "to render more intelligible the world in which we live," is disappointingly sketchy; and the generalizations as to vitamin values of foods are unwarrantably dogmatic in form and, at least in this reviewer's opinion, excessively pessimistic in substance.

The volume contains the materials for a useful reference handbook on the industrial chemistry of the vitamins. It seems unfortunate that in so many of the chapters this useful material is intermingled with compilations of material from the physiological or nutritional literature of the vitamins which latter can hardly be said to be handled with a firm grasp nor with freedom from errors and inconsistencies, *e.g.*, on pages 34; 57 and 60 *vs.* 75; 100; 123; 180; 190; 198; 199; 338. Whether all these will be obvious to the reader will naturally depend largely upon the knowledge of vitamins which he already

[2] F. R. Moulton, "Astronomy," 1931, p. 305.

[3] In the absence of the junior author, C. C. Albritton, Jr., the senior author should be held responsible for this reply.

[1] O. A. Bessey and C. G. King, *Jour. Biol. Chem.*, 103: 687, 1933.

[2] O. A. Bessey, *Jour. Biol. Chem.*, 126: 773, 1938.

[3] S. A. Morell, *Indust. and Eng. Chem., Anal. Ed.*, 13: 793, 1941.