

vision of economic zoology. Professor A. G. Ruggles was, at the same time, appointed station entomologist, which position carries with it the office of state entomologist. At the December meeting of the board Professor F. L. Washburn, who has held the position of state entomologist in Minnesota for nearly sixteen years, asked and obtained permission to be relieved of that position and its attendant police duties, and the action of the board on the eighteenth was necessary to fill the vacancy thus caused.

MR. D. C. DUNCAN, assistant professor of physics at Purdue University, has resigned his position to accept appointment in a similar capacity at the Pennsylvania State College.

E. G. WOODWARD, formerly head of the dairy department at the University of Nevada, has been made head of the dairy division, State College of Washington.

I. D. CHARLTON, professor of agricultural engineering at the State College of Washington, has resigned to accept a similar position at the University of Minnesota.

DR. WILSON GEE, professor of biology in Emory University, has resigned to become assistant director of agricultural extension work in South Carolina. His successor is Dr. R. C. Rhodes, formerly assistant professor of biology in the University of Mississippi.

PROFESSOR F. DE QUERVAIN has been appointed to the chair of surgery in the University of Berne in succession to the late Professor Kocher.

DISCUSSION AND CORRESPONDENCE

VITAMINES AND NUTRITION

IN this national food crisis when people are scrutinizing the make-up of their diet for patriotic, economic and physiologic reasons the proper selection of food materials looms up as a problem of no mean proportions. Especially is this true with those who, having attempted to keep abreast of the most recent developments in nutrition, have had their faith in former practises shaken by a smattering of knowledge of the importance of vitamins in the dietary. Truly, from the standpoint of

the investigator, an appreciation of the rôle of vitamins has made and will make much progress in nutrition possible and in every way more complete, but from the standpoint of the people as a whole it is questionable if the possibility of a lack of vitamins in the diet is of more serious import than that of the lack of suitable proteins or mineral constituents.

Vitamins as a class are now acceptably divided into a fat soluble and a water soluble type. Both are absolutely essential in a complete diet and both vary considerably in their occurrence. Individually many foods are deficient in one or both of them, but safety has undoubtedly been assured to the consumer by his desire for variety. It is scarcely to be doubted that in the American diet there is probably no danger of a lack of sufficiency of the water soluble vitamin, but with the fat soluble type the case is not so clear. Up to the present, studies on its occurrence are limited to a few seeds and leaves, and fats of plant and animal origin. While butter fat is richer in this dietary essential than butter substitutes, it is still too early to predict if in the aggregate this special property of butter fat warrants its taking a superior place in the mixed diet. The fat soluble vitamin has recently been found in this laboratory to occur in liberal amounts in edible roots as compared with our cereal grains, but it has also been found to be quite easily destroyed—apparently by oxidation. The chemical stability of the dietary essential and its occurrence in various foods is now being studied in this laboratory to determine if there is any probability of a varied diet of raw and prepared foods being deficient in this constituent.

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A FLOOD IN THE VALLEY OF THE ORISKANY CREEK, NEW YORK

ON Monday, June 11, 1917, there occurred in central New York a flood which was remarkable in respect to the damage done in a very limited area, and the control of the waters by physiographic conditions.

Oriskany Creek rises in the southern part of Oneida county, flows south for three and one half miles, following the normal direction of the Chenango River drainage across the Madison county line, and one and one quarter miles west of the village of Solsville is diverted abruptly to the northeast, eventually emptying into the Mohawk River.

For the distance of a mile west, south and east of Solsville the main valley is a nearly level plain consisting of two glacial terraces, through which Oriskany Creek flows for nearly two miles in a narrow valley about fifty feet below the terrace level.

From Solsville to Oriskany Falls—nearly four miles—the stream is constricted within a valley only a few hundred yards wide for the greater part of the way, choked with kames which expand to the east and north into one of the larger kame areas of central New York. The stream is utilized extensively for water power, one pond being situated at Solsville and two others within a distance of a mile and a half to the east. The track of the Utica division of the New York, Ontario and Western Railroad follows the stream bed in this part of its course.

Due to severe and continued rain on the night of June 10, the three ponds mentioned broke their dams almost simultaneously about four o'clock the following morning. A wave of huge proportions rolled down the narrow valley destroying buildings and ruining crops in its path.

The village of Oriskany Falls is situated in the valley between a steep rock hill on the north and a large kame on the south. Fortunately the inhabitants were warned of the impending disaster by telephone. However, two persons were drowned. Leaving the village street the flood followed the sharp turn of the creek to the southeast, the waters in part flowing along the railroad track between a row of buildings and the kame, and washing away the railroad embankment near "the falls." At this point the railroad track was suspended in mid air for at least 100 feet to the bridge. The area devastated was estimated as one eighth of a mile wide in the village.

Three and one half miles north of Oriskany Falls, near the village of Deansboro, the same stream also washed out a railroad embankment for many feet.

The writer was staying in a neighboring town at the time and was an early witness of the scenes above noted.

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SCIENTIFIC BOOKS

Laws of Physical Science. By EDWIN F. NORTHROP, Ph.D. J. B. Lippincott Co. 210 pp.

The author of this volume has proposed to collect in compendious form the principal facts and relations that have been established in the study of physical science. The book does not pretend to be a text-book or to go into the discussion of the principles stated, but the attempt has been made to present all the more important laws and principles of physics in such form that they may be easily referred to by a student or worker in the subject, and to give in each instance references to sources where a fuller discussion may be found.

The plan has left the author great freedom of choice and he has browsed about, gathering here and there not only the more formal laws and wider generalizations, but facts, relations, and even definitions from all domains of physics including physical chemistry. No attempt is made to connect them into a systematic body or treatise beyond the arrangement of the various topics under the main divisions of the subject in something like logical grouping.

The large number of laws and relations given—there are about five hundred separate topics—makes it necessary for each statement to be brief and clear-cut, leaving the detailed explanation to be looked up by the student in the text-book or treatise to which reference is made. The demands of condensation have been met for the most part very successfully in statements which though compact are clear and correct. In a few instances, however, the