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. Northrup, 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

statements should be revised as in case of the gas constant on p. 79, where the reader would be puzzled if he did not understand that a gram-molecule of gas is the amount dealt with. Also we find quantity of heat defined as "the total kinetic energy of the molecule or ultimate particles of a body," without explaining that this excludes what is ordinarily called latent heat. In describing the Nicols' prism the spar is said to be cut along a "parallel plane" without indicating to what the plane is parallel. In the statement about vector potential the phrase "all lines of magnetic induction" is used where the meaning is, the total flux, or total number of lines of induction. Also the interior of a hollow enclosure at uniform temperature is spoken of as at "black body temperature" instead of as giving off the radiation characteristic of a black body at that temperature.

It is perhaps unfortunate that the author has chosen Rankine as his source for various thermodynamic statements, for with all his undoubted genius Rankine is not an easy guide to follow, and the two statements of the second law of thermodynamics which are quoted from him are practically useless unless interpreted by the fuller discussion in the original to which reference is given. We should have expected a more modern statement of so important a matter as the second law, to supplement the statement by Clausius which is given.

But it is easy to be too critical; the author has successfully carried out his proposal and has done an important service in bringing together in this convenient form so large a collection of the laws and principles of physical science, clearly and accurately stated, and in the care with which the specific references under each topic have been selected, making it easy for the student to turn to sources where the subject is more fully developed.

The volume is well gotten up, with flexible covers in handy form for reference, and has a full index. A few misprints are noted, as in formulas on pages 37 and 42, where the figure 1 is used instead of the letter l, also in the general equation for the flow of heat the coefficient of conductivity K is omitted, and in the formula for the frequency of vibration of a stretched cord the factor $2l$ does not appear.

A. L. KIMBALL

THE PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES

THE ninth number of Volume 3 of the *Proceedings of the National Academy of Sciences* contains the following articles:

Heliotropic Animals as Photometers on the Basis of the Validity of the Bunsen-Roscoe Law for Heliotropic Reactions: Jacques Leob and John H. Northrop, Rockefeller Institute for Medical Research, New York City. New quantitative experiments proving that the "instinctive" motions of animals to light are phenomena of automatic orientation and a function of the light intensity, the function being the Bunsen-Roscoe Law of photochemical action.

The Appearance of Reverse Mutations in the Bar-Eyed Race of Drosophila under Experimental Control: H. G. May, Department of Zoology, University of Illinois. Such a phenomenon is not difficult of explanation on the theory that it is produced by a chemical change in the constitution of some substance.

The Part Played by Alcyonaria in the Formation of Some Pacific Coral Reefs: Lewis R. Cary, Department of Biology, Princeton University. On certain of the Pacific reefs the alcyonaria are important coral-forming agents; their relative importance can be determined only after borings have been made through some reefs to determine the history of the reefs.

Observations upon the Alkalinity of the Surface Water of the Tropical Pacific: Alfred Goldsborough Mayer, Department of Marine Biology, Carnegie Institution of Washington.

The Effect of Temperature on Linkage in the Second Chromosome of Drosophila: Harold H. Plough, Zoological Laboratory, Columbia University. Both high and low temperatures produce an increase in the percentage of crossing over. The crossing over appears to take place in the stage when the chromo-