which he worked. They show, too, the skilfully exercised powers of observation of Nature which always lay behind his work, and were unimpaired with the passing of years. Sir James Frazer's eloquent appreciation of Baldwin Spencer's work, which places it in true perspective as a unique record of which time will enhance the value, Dr. Marett's sympathetic memoir, and Miss Jean Hamilton's account of the last few days before his death and her perilous journey in conveying his body to its last resting-place, make this a volume which all admirers of Spencer's work will treasure.

Nucleic Acids. By P. A. Levene and Lawrence W. Bass. (American Chemical Society Monograph Series, No. 56.) Pp. 337. (New York: The Chemical Catalog Co., Inc., 1931.) 4.50 dollars.

SPECIALIST knowledge grows apace, though sometimes after great difficulty, along the paths of error and controversy, by the combined labours of many workers. This is particularly true of the chemistry of the nucleic acids, about which there are already two monographs by English and German authors, now supplemented by one from an American writer whose own researches in the field have been of prime importance. The plan adopted by Drs. Levene and Bass is to deal first with the components of the nucleic acids, then with the nucleosides and nucleotides, and finally with the nucleic acids and the enzymes which decompose them. In part the subject is treated in historical sequence: there are ample references and two indexes.

The nucleic acids are established in structure as phosphoric esters of glucosides, the organic radical being a pyrimidine or purine derivative. By their very structure such complex compounds are liable to reversible intramolecular rearrangements which it is fair to assume will alter both their chemical and biological function.

Chemists are beginning to gain an idea of the importance of phosphorus compounds in the living cell, especially as factors in facilitating molecular rearrangements and transformations as witnessed by their function in fermentation and in muscular changes. It is probable that we are on the eve of striking advances in our interpretation of intracellular reactions, and it is essential that the whole existing knowledge of the subject should be adequately presented in monograph form, as is done here.

Plane Trigonometry. By B. B. Bagi. Pp. vii + 248. (Dharwar: The Author, Reddy Housing Society, 1931.) n.p.

THIS volume has been written essentially to suit conditions in Indian colleges. The author claims that his treatment has greater vigour and comprehensiveness than is to be found in many of the existing textbooks written for use in English schools. It is a little difficult to see precisely wherein the real divergence lies, for the book begins, as usual, with the measurement of angles, the use of signs in geometry and orthogonal projection. It then covers the customary groundwork up to the properties of triangles and quadrilaterals. There are also short chapters on finite series and products, elimination and limits. It seems strange to divorce elimination from equations, yet the latter comes roughly in the middle of the book, whilst the former is relegated to Chap. xx.—the last but one!

The relations between the sides and angles of a triangle are established by a uniform method founded upon projection, whilst in solving triangles the older method of using tabular logarithms is used to avoid the negative characteristic. Seven-figure tables with the necessary work in proportional parts are employed, and on p. 126 a reproduction of a page from Chambers's "Tables" is given.

There are many examples taken from recent examination papers fully worked out to illustrate the text, and each chapter ends with a good selection for the student to solve.

Il passato e il presente delle principali teorie geometriche; storia e bibliografia. Per Prof. Gino Loria. Quarta edizione totalmente rifatta. Pp. xxiii + 467. (Padova: Casa Editrice Dott. Antonio Milani, 1931.) 60 lire.

THE first edition of Prof. Loria's treatise on the history and bibliography of geometry was an expansion of a course of lectures delivered at Genoa in 1886. After an introductory chapter on geometry up to 1850, there followed eleven more dealing respectively with higher plane curves, surfaces, space curves, differential geometry, analysis situs, line geometry, correspondences and transformations, enumerative geometry, non-Euclidean geometry, hyperspace, and miscellaneous topics. This was translated into German and Polish. The second edition added references up to 1896. The fourth edition is doubled in size, the extra matter forming a second part, on a similar plan to the first, but dealing with contributions since 1896. It is remarkable that so much good work has been done in this period, which includes the War years. The book will be a most valuable aid to geometrical research. H. T. H. P.

Storia delle matematiche. Per Prof. Gino Loria. Vol. 2: *I secoli XVI e XVII.* Pp. 595. (Torino: Società Tipografico-Editrice Nazionale, 1931.) 25 lire.

THIS admirable work continues the history of mathematics into the sixteenth and seventeenth centuries. This period, which includes such great names as Tartaglia, Napier, Descartes, Galileo, Fermat, Leibniz, and Newton, to cite only a few, presents to the historian a difficult task of discrimination. Prof. Loria has approached the subject on the lines laid down by Montucla: "L'histoire d'une science n'est pas celle de tous les auteurs qui en ont écrit, mais seulement de ceux qui ont contribué par leur travaux à en reculer les bornes". Nevertheless, he has chosen the matter with such care that very little which is of historical importance seems to have escaped the net. Each chapter is accompanied by a very full bibliography which permits a more detailed study of any particular point on which further information may be required.