content, and the results of his theoretical analysis of the causes and engineering control of slides in clays.

Collin's methods and conclusions opened a new era in civil engineering. He recognized the significance of geologic relationships in engineering practice and differentiated clearly between cohesive and cohesionless soils. He concluded that the slip surface is the result, not the cause, of failure, as had been previously proposed by his contemporaries. The fundamental cause of failure of clay slopes was determined to be inadequate shear strength. He showed that such features as the type of clay and the conditions of service to which the slope is exposed may determine the stability. He described and examined theoretically various procedures for the prevention and repair of slides on slopes and embankments.

The book includes 21 plates which are photographic reproductions of Collin's drawings of the profiles of slides described in the text, his geometrical methods of analysis, and methods of preventing and repairing slides. The value of the plates is restricted by the fact that most of the symbols to which Collin refers in the text are illegible.

RICHARD C. MIELENZ
Master Builders Research Laboratories, Cleveland, Ohio

Our Atmosphere. Theo Loebsack. Translated from the German by E. L. Rewald and D. Rewald. Pantheon, New York, 1959. 256 pp. Illus. $5.

The rediscovery of the romance of the atmosphere has brought forth an outpouring of popular books in all languages. Not since the heyday of the free balloon has the public imagination been so caught by the phenomena of the earth's air mantle. With space travel only a step away, many of the physical and chemical problems of the atmosphere, which seemed utterly academic only a decade back, are now practical questions. And the ever-changeable weather, with its influence on human activities, has been with man since the dawn of his existence and will remain a governing environmental factor for a long time to come.

As a guide into this realm, the biologist and science writer Theo Loebsack gives us a well-rounded picture. His exposition grips the reader's imagination as he takes us through the world between the earth's surface and space. The origin of the atmosphere, its composition, the sound phenomena, and the optical properties, from blue sky to rainbows and mirages, are well sketched. Polar lights and the endless procession of clouds are adequately described. The nature of winds and weather phenomena, including the drama of hurricanes, tornadoes, and jet streams, comprises a substantial part of the book. Professional meteorologists will appreciate the author's plea for tolerance of their efforts at forecasting. Loebsack also tries valiantly to dispel many myths about cycles, as well as myths that originated in the "hundred-year calendar"—a European forerunner of some of our weather almanacs.

A slight difficulty for the American reader is introduced by the translators' use of British terminology throughout. More serious, however, are the large number of small inaccuracies and loose statements. Here is a random sample of these. One reads that colors of the sky can be caused by comparatively low humidity. The physical laws of the atmosphere are credited to Leverrier. There is a badly scrambled diagram of tornado occurrences and the basic flow patterns that lead to tornadoes. The conflagration of Hamburg, one is told, added water vapor to the air to cause rainfall. The buran is made into an African snowstorm. The word *tension* is misused, in one place to designate potential and in another to indicate tonus. The role of blizzards in destroying crops of coffee, corn, and bananas in the Gulf of Mexico area is considerably overstated. It should have been easy to avoid these slight errors by proper review, and one is surprised to find credit given in the preface to certain experts for such an effort.

It is a pity to have to note these lapses in an otherwise well-written book, which has some very unusual and appealing features. Among these are the interesting discussions on the possible role of an earlier stage of the atmosphere in the generation of life, and the chapter on the relation of the air environment to breathing. The appraisal of radioactive fallout and radiation damage by a neutral observer is sobering.

The book is well illustrated and contains some excellent color reproductions, but the proofreading was carelessly done. On the whole, the merits of the book far outweigh the faults; these could be easily eliminated in another printing.

H. E. LANDSBERG
Office of Climatology, U.S. Weather Bureau

Traité de Biochimie Générale. vol. 1, parts 1 and 2, *Composition Chimique des Organismes*. P. Boulanger and J. Polonovski. Masson, Paris, 1959. 1476 pp. Illus. Cloth, F. 24,500; paper, F. 22,000.

This large handbook of biochemistry will be published in three volumes. Volume 1 deals with the chemical composition of organisms; volume 2, with the enzymes; and volume 3, with the metabolic processes and their coordination. The first of these volumes has been published, in two parts. The editors emphasize in their foreword that the work is written to acquaint students with the present state of biochemistry and to supply them with references to sources where they will find directions for experimental work. Two of the principal initiators of this work, M. Polonovski and M. Javillier, died before publication of the first volume. The present editors are M. Florkin, P. Boulanger, M. Lemoigne, J. Roche, and R. Wurmser.

In the first chapter of part 1, M. Javillier and D. Bertrand discuss the discovery of different elements in organisms and their concentration in organs and tissues. The same authors treat the inorganic compounds of biological importance in a second short chapter. The bulk of the two volumes is formed by chapter 3, which deals with the organic body constituents. In a last short chapter F. Tayeau discusses complexes which are formed by the permanent or temporary combination of two or more of the simpler materials. Lipoproteins, glycoproteins (mucoproteins), glycolipids, and complexes formed by antigen plus antibody, by apoenzyme plus coenzyme, or by enzyme plus substrate are briefly treated in this chapter, which, as the author points out, forms a link between classical biochemistry and biophysics.

Chapter 3, which comprises 1254 out of a total of 1397 pages of text, consists of a short introduction, written by Roche, and six other sections. In the first of these Lespagnol discusses the reactions, derivatives, and syntheses of carbohydrates. The very logical classification and nomenclature seem to be typical of French biochemistry; the designation *heterosides* is used for complexes formed by the conjugation of sugars with aglycons. In the next section Naudet and J. Polonovski report on fatty acids, glycerides, phospholipids, and "cerides," while sterols are treated by Bar. The term *cerides* is used for waxes, glycerol ethers, and similar derivatives. A subsequent short section is devoted to the discussion