Medical Library Association, with the following results:

Great Britain: Seven replies, one copy at the National Institute for Medical Research.

Canada: Eleven replies, one copy at the University of Ottawa, another at the University of Western Ontario.

United States: Eighty-five replies, copies being located in the following institutions: University of Oregon, Harvard, Army Medical Library, Boston Medical Library, Columbia (two copies, medical and psychology libraries), New York Academy of Medicine, University of Pittsburgh, Johns Hopkins, University of Louisville, Northwestern, University of Pennsylvania, St. Louis University, and the Wistar Institute.

This survey indicates that only about 15% of medical libraries are fortunate enough to possess a copy of Marinesco's valuable book.

The copy in the University of Western Ontario library was a gift from the private library of the late A. B. Macallum, Sr. The gift of any copies now in private hands to a university not listed above would be a contribution to neuroanatomical research.

MURRAY L. BARR

Department of Anatomy
University of Western Ontario

Account Balanced

THE Committee Supporting the Bush Report was organized under the chairmanship of the late Isaiah Bowman, to work for the passage of suitable legislation on a National Science Foundation. During its operations the committee solicited and received voluntary contributions from many hundreds of persons in all fields of science. A small sum remained unexpended, and the Executive Committee voted to contribute it to the National Science Foundation through the director, Dr. Waterman. The Foundation has accepted the contribution and given permission for publication of the covering correspondence.

HOMER W. SMITH

March 26, 1951

Dr. Alan T. Waterman
National Science Foundation
Washington, D. C.

DEAR DR. WATERMAN:

On behalf of the Committee Supporting the Bush Report, of which the late Isaiah Bowman was chairman, we want to extend to you and the newly created National Science Foundation our heartiest congratulations.

A balance of $512.36 remains unexpended from a sum that was raised by subscription from scientists and friends of science throughout the country for the purpose of expediting the passage of satisfactory National Science Foundation legislation.

We would be happy to have the National Science Foundation accept this unexpended balance, to be spent by the Foundation without restrictions.

Yours sincerely,
BORIS A. BAKHMETEFF
CARYL P. HASKINS
HOMER W. SMITH
BETHUEL M. WEBSTER

April 16, 1951

Dr. Homer W. Smith
New York University College of Medicine
New York, N. Y.

DEAR DR. SMITH:

I wish to acknowledge receipt of your letter of March 26, 1951, transmitting the unexpended balance, $512.36, of a sum raised by subscriptions from scientists and friends of science for the purpose of expediting the passage of satisfactory National Science Foundation legislation.

On behalf of the National Science Foundation, I am very pleased to accept this first contribution to the Foundation, to be spent without restrictions. The members of the National Science Board join with me in expressing our sincere appreciation and ask that you convey this message to the members of the Committee Supporting the Bush Report.

May I add my personal thanks for your message of congratulations.

Yours sincerely,
ALAN T. WATERMAN, *Director*

Meteorological Data in Ecology

THE interesting comments of Werner A. Baum (*Science*, **113**, 333 [1951]) concerning the ecological use of meteorological temperatures serve to emphasize the need for a clearer understanding of the significance of meteorological data in ecology. The utility of such data is well established in microclimatic studies, but the relationship of microclimatic to microenvironmental research does not seem to have been sufficiently emphasized. The former is only an integral part of the latter. Thus ecology must deal with edaphic, aquatic, geographic, and physiographic aspects, in addition to the climatic or weather data of meteorology. To get basic material for ecology, the objective should be to follow the incoming radiation, its absorption and dissipation, and the effect it produces in all its ramifications. Thus ecology requires much more information than that provided by meteorology or microclimatology. It involves a much broader field.

The following steps suggest some of the items that should be quantitatively measured in providing ecological data in studying the microenvironment: (1) Incoming solar radiation, its intensity and duration; (2) reflection of sunshine from various surfaces upon which it impinges; (3) absorption of sunshine into soil, water, plants, and animals in the form of heat and light or other radiation; (4) reradiation as loss of heat and light; (5) temperatures at various places in air, water, soil, plants, or burrows of animals—specifically, at the ground surface at successive intervals downward in the soil and upward in the air and at various places in the bodies of plants, in water, in the burrows of animals, and elsewhere; (6) movement of air (wind), velocity, duration, and direction at different points—e.g., next to the ground, among the vegetation, and above the vegetation; (7) precipitation, liquid or solid, and its ramifications; (8) relative humidity at various places—near the ground, among

the vegetation, and above the vegetation; (9) soil moisture at various depths underground; (10) evaporation from different kinds of surfaces; (11) barometric pressures.

Since such complete data are not usually available, it becomes necessary to use all the meteorological information possible and to supplement it by special records for ecological purposes. It would be a great saving in time and energy if these data could be automatically recorded on multiple-recording drums so that the values of each factor could be readily observed in simultaneous relation to others. In addition to its labor-saving value, it should also lead to clearer recognition of correlations and divergencies among the various factors that might help explain the dynamics of ecology.

ANGUS M. WOODBURY

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University of Utah

Book Reviews

Theory of Electrons. L. Rosenfeld. Amsterdam: North-Holland Pub.; New York: Interscience, 1951. 119 pp. $2.25.

This book is a revised and extended version of what must have been a most stimulating seminar for advanced graduate students of physics. It presents the foundations of the classical atomistic theory of the electric, magnetic, and optical properties of matter in a clear, careful way, in a brief 119 pages, by assuming that the reader has a considerable background in physics and mathematics, including analytical mechanics, statistical mechanics, and Maxwell's theory of the electromagnetic field. A summary of tensor notation is provided in an appendix.

The first chapter gives a brief historical review of the discoveries that led to the modern picture of the electrical constitution of atoms. The second is devoted to an unusually careful derivation of Maxwell's equations in matter by averaging over the charge and current distributions of the constituent atoms, electric quadrupole terms being retained. The third chapter deals with the dynamical properties of systems of charge, including Larmor's theorem and the gyromagnetic effects. The fourth chapter, on the magnetic properties of matter, is necessarily rather sketchy (even though the limitation to classical ideas is somewhat relaxed), but it forms a clear and attractive introduction to the field.

The last two chapters take up half of the book and form its most characteristic and valuable part. A brief discussion of the polarization of an atomic system by a constant field leads into a presentation of the elementary theory of dispersion. The remaining pages are devoted to clarification and refinement of the concepts thus introduced. Radiation damping is discussed, and its effect on the extinction coefficient of light scattered by a gas. This same contribution to the extinction coefficient is then derived from a quite different point of view, that of light scattering by a medium in which there are fluctuations in density. Ornstein and Zernike's theory of critical opalescence is presented. Finally, the book culminates in a rigorous theory of dispersion that takes account of both radiation damping and density fluctuations, and ties together the preceding material in a beautiful way.

This book is to be recommended, on both scientific and aesthetic grounds, to advanced students of physics and to those who teach them.

HUBERT M. JAMES

Department of Physics
Purdue University

Amino Acids and Proteins: Theory, Methods, Application. David M. Greenberg, Ed. Springfield, Ill.: Thomas, 1951. 950 pp. $15.00.

The editor of this monograph has had the assistance of 17 contributors who have prepared 11 of the 13 chapters. In a beautifully printed and well-illustrated, although uncomfortably heavy, volume the amino acids and proteins are described and discussed from many points of view. The first 4 chapters deal with the properties of amino acids, the analytical methods used for their determination, their preparation by synthetic methods, and their isolation from proteins. The chapters following are devoted to the classification, purification, and isolation of proteins, to determination of their molecular size, to their amphoteric properties, and to criteria for judgments regarding the purity of individual preparations. The final chapters discuss the chemical reactions of proteins, their nutritive properties, antibodies, the biochemical significance of proteins, and the metabolism of proteins and amino acids.

Emphasis is placed throughout on methods, but the contributors have interpreted their assignment in widely different ways. For example, the chapter on the synthesis of amino acids gives, by means of chemical equations, the reactions that have been used to prepare these substances, together with brief statements on the procedures and references to their origin. However, the reader can rarely tell whether the reaction described has mere historical interest today, or whether it is the procedure he would be well advised to employ if he were assigned the problem of preparing a small sample or a large stock of the substance. To assist him in his choice, there is little in-