

SCIENCE

VOL. LXIX

MAY 24, 1929

No. 1795

INTERNATIONAL CHEMISTRY¹

CONTENTS

<i>International Chemistry</i> : PROFESSOR AUSTIN M. PATTERSON	531
<i>The Formal Opening of Darwin's House at Down</i> : DR. HENRY FAIRFIELD OSBORN	536
<i>Scientific Events</i> :	
<i>Research Reserves in the National Forests; Expedition for the Study of Gorillas; The Aeronautic Meeting at St. Louis; The Twenty-fifth Anniversary of the Carnegie Institution of Washington; The Non-resident Lectureship in Chemistry of Cornell University</i>	538
<i>Scientific Notes and News</i>	541
<i>University and Educational Notes</i>	544
<i>Discussion</i> :	
<i>The Fall Zone Peneplane</i> : DR. HENRY S. SHARP. <i>Mortensen's Cidaroides</i> : DR. ROBERT TRACY JACKSON. <i>Cosmos Unlimited</i> : PROFESSOR J. G. PORTER. <i>Chemical Training</i> : PROFESSOR MARION TALBOT.....	544
<i>Special Correspondence</i> :	
<i>Opportunities for Research Offered at the Biological Laboratories of the Bureau of Fisheries</i> : HENRY O'MALLEY	547
<i>Scientific Books</i> :	
<i>Freeman on Hydraulic Laboratory Practice</i> : DR. HERBERT N. EATON	549
<i>Scientific Apparatus and Laboratory Methods</i> :	
<i>An Improved Thermopile Vessel for the Electrometric Determination of the Volume Flow of Blood; An Enclosed Drop Method of Recording Volume Flow of Fluids by Oil Displacement</i> : PROFESSOR ROBERT GESELL	550
<i>Special Articles</i> :	
<i>Loveland Loess—Pre-Illinoian, Pre-Iowan in Age</i> : DR. FRANK LEVERETT. <i>On the Rotatory Power of Serum</i> : DR. P. LECOMTE DU NOÛY. <i>Inheritance in Lettuce</i> : DR. CHARLES E. DURST	551
<i>The National Academy of Sciences</i>	554
<i>Science News</i>	x

SCIENCE: A Weekly Journal devoted to the Advancement of Science, edited by J. McKeen Cattell and published every Friday by

THE SCIENCE PRESS

New York City: Grand Central Terminal.
Lancaster, Pa. Garrison, N. Y.
Annual Subscription, \$6.00. Single Copies, 15 Cts.

SCIENCE is the official organ of the American Association for the Advancement of Science. Information regarding membership in the Association may be secured from the office of the permanent secretary, in the Smithsonian Institution Building, Washington, D. C.

SCIENTISTS have always been internationally minded. Roger Bacon spent many years in Paris. Copernicus, a native of Poland, lived in several Italian cities. Robert Boyle's winter in Florence appears to have given him his initial interest in science. In the last century, as the result of Liebig's initiative, students from all countries migrated to the chemical laboratories of Germany. In times of peace, at least, seekers for truth have paid little heed to political boundaries but have gone to sit at the feet of the masters, wherever they might happen to be. Moreover, in earlier times the savants of different countries were eager to meet and to hear from one another's lips the descriptions of new discoveries. The Royal Society of London, which was founded in 1660 at the suggestion of a German residing in that city, from the beginning adopted a policy of hospitality to all nations. One of its first fellows was a foreigner, another was the first secretary, and the foreign correspondence of the society led to its well-known journal, the *Philosophical Transactions*.

Time has brought changes. None but the students in backward nations need travel abroad to receive good scientific instruction. A multitude of books and periodicals bring us far more information than any one person has time to read. Strong national organizations have sprung up for science in general, for individual sciences, for specialties in each science. Of these, chemistry has its full share. To-day we are seeking in international intercourse not so much news and instruction, although that still has its place, as some effective means of coordination. It is as if we had built separately, with constant interchange of plans, important scattered units, which still need to be tied together into a common structure.

Briefly, what can international organizations hope to accomplish? It seems to me that their possibilities for good lie chiefly in two directions: first, carrying out projects which smaller organizations can not undertake successfully; and second, promoting a great number of personal contacts between individuals of different countries.

Permit me to sketch for you the main developments in international chemistry in the last forty years. In 1889 an International Congress of Chemistry was held at Paris in connection with the exposition of that

¹ Presented before the Cincinnati Section of the American Chemical Society on March 13, 1929.

School of Medicine Western Reserve University

Cleveland, Ohio

NEW LABORATORIES AND
HOSPITALS

RESTRICTED CLASSES

THOROUGH INSTRUCTION

LARGE CLINICAL FACILITIES

HIGH STANDARD OF SCHOLAR-
SHIP

Admission confined to students having aca-
demic degrees and to Seniors in Absentia.

For information address:

THE REGISTRAR

2109 Adelbert Rd.

CLEVELAND

JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE

The School of Medicine is an Integral Part of the University and is in the Closest Affiliation with the Johns Hopkins Hospital.

ADMISSION

Candidates for admission must be graduates of approved colleges or scientific schools with two years' instruction, including laboratory work, in chemistry, and one year each in physics and biology, together with evidence of a reading knowledge of French and German.

Each class is limited to a maximum of 75 students, men and women being admitted on the same terms. Applications may be sent any time during the academic year but not later than June 15th.

If vacancies occur, students from other institutions desiring advanced standing may be admitted to the second or third year provided they fulfill the requirements and present exceptional qualifications.

INSTRUCTION

The academic year begins the Tuesday nearest October 1, and closes the second Tuesday in June. The course of instruction occupies four years and especial emphasis is laid upon practical work in the laboratories, in the wards of the Hospital and in the dispensary.

TUITION

The charge for tuition for 1929-30 will be \$600 per annum, payable in two installments. There are no extra fees except for certain expensive supplies, and laboratory breakage.

Inquiries should be addressed to the Executive Secretary of the School of Medicine, Johns Hopkins University, Washington and Monument Sts., Baltimore, Md.

Graduates in Medicine who satisfy the requirements of the heads of the departments in which they desire to work are accepted as students for a period not less than three quarters. Tuition charge is \$50 a quarter.

BOSTON UNIVERSITY SCHOOL OF MEDICINE

ORGANIZED IN 1873

ANNOUNCEMENT

may be obtained by application to

THE REGISTRAR

80 East Concord Street,

Boston,

Massachusetts



COLOR PLATES

A GFA Color Plates, the modern miracle of photographic science, are increasingly being adopted by laboratory workers and scientists who require authentic photographs in natural color for permanent record or lantern-slide projection.

Natural color photography has a direct application to your work.

*Write for free Agfa Color Plate
handbook*

AGFA ANSCO CORPORATION
BINGHAMTON, N. Y.

Published on May 21st.

OUTLINES OF GENERAL ZOOLOGY

Revised Edition

by **H. H. NEWMAN**

In this revision of his well-known textbook the author has made no changes in general method. He has maintained the judicious blending of the principles method and the type method of presentation which has proved so successful in the original edition. Several other important changes have been made, however. The text matter has been brought thoroughly up to date, and sufficient new material has been added to render the book thoroughly adequate for the needs of a two-semester course. Several new types have been introduced; namely, the sponges, the clam, the parasitic round worms of man, and the grasshopper. Extensive additions have been made to the chapters on the earthworm and frog. The book has been enriched with about thirty new cuts.

The chapters on the MORPHOLOGY AND PHYSIOLOGY OF THE CELL have been completely rewritten, and the chapter on the ANIMAL KINGDOM has been enlarged. A more definite physiological emphasis is apparent than in the original edition.

A very important feature of the revision is the complete reorganization of Part IV, formerly entitled GENERAL PRINCIPLES OF ZOOLOGY. This section of the book has now been rearranged and extensively rewritten under the general title of DYNAMIC ASPECTS OF ZOOLOGY. Certain chapters which did not fit into the new scheme were omitted and three new Chapters which deal with the biological mechanisms and sense organs have been added to this section.

Crown, 8vo, Cloth, 541 pages

By the same author:

LABORATORY GUIDE AND REVIEW MANUAL

This new manual has been prepared in response to a persistent demand on the part of teachers who have been using the GENERAL ZOOLOGY. It is relatively small in size and deals only with types discussed in the text. A feature of the book is a series of review questions at the end of each laboratory exercise which cover all the more important points in both text and manual and serve to focus the knowledge of the student.

Crown, 8vo, Cloth, 87 pages

60
Fifth Ave.

THE MACMILLAN COMPANY

New
York

Recent McGraw-Hill Biological Books

Wardle—Problems of Applied Entomology

By ROBERT A. WARDLE, *Professor of Zoology*, University of Manitoba, formerly Associate Professor of Entomology, University of Minnesota and Lecturer in Economic Zoology, University of Manchester.

587 pages, 6 x 9, 31 illustrations. \$6.00

Graham—Principles of Forest Entomology

By SAMUEL A. GRAHAM, *Associate Professor of Forest Entomology*, University of Michigan; Agent, U. S. Dept. of Agriculture, Bureau of Entomology. *McGraw-Hill Publications in the Zoological Sciences.*

339 pages, 6 x 9, 149 illustrations. \$3.50

Weldon—Economic Biology

A Text for Students of Agriculture and General Biology

By GEORGE P. WELDON, *Instructor in Biology, Entomology and Pomology*, Chaffey Union High School and Junior College, Ontario, Calif. *McGraw-Hill Vocational Texts.*

457 pages, 5½ x 8, 191 illustrations. \$2.50

Fred and Waksman—Laboratory Manual of General Microbiology —with Special Reference to the Microorganisms of the Soil

By EDWIN B. FRED, *Professor of Agricultural Bacteriology*, University of Wisconsin, and SELMAN A. WAKSMAN, *Associate Professor of Soil Microbiology*, Rutgers University.

145 pages, 5½ x 8, illustrated. \$2.00

Metcalf and Flint—Destructive and Useful Insects—Their Habits and Control

By C. L. METCALF, *Professor of Entomology*, University of Illinois, and W. P. FLINT, *Chief Entomologist*, Illinois State Natural History Survey. *McGraw-Hill Publications in the Zoological Sciences.*

918 pages, 6 x 9, 561 illustrations. \$7.50

Send for these new books on approval

McGRAW-HILL BOOK COMPANY, Inc.

Penn Terminal Building

370 Seventh Avenue

New York