SCIENTIFIC BOOKS

THE ORGANIC CHEMISTRY OF NITROGEN

The Organic Chemistry of Nitrogen. By NEVIL VINCENT SIDGWICK, F.R.S. New edition. Revised and rewritten by T. W. J. Taylor and Wilson Baker. The Clarendon Press, Oxford, 1937; pp. xix + 590; 6½ × 10 in.; price, $8.50 bound.

THE new edition of this valuable treatise appears very appropriately in our own country only a few months prior to the arrival of its distinguished author, who is to deliver the Maiben lecture before the American Association for the Advancement of Science at its Denver meeting on June 23.

Since the appearance of the first edition, in 1910, the work has been recognized as an authoritative review and critical discussion of that great division of organic chemistry with which it deals. As explained at that time, the purpose of the book is primarily educational, and it is not intended in any sense as a work of reference. Hence it does not attempt to cover the whole vast domain of nitrogenous organic chemistry, but rather to select those portions which seem most important, either because of their theoretical interest or for other reasons, and to discuss these in considerable detail.

Professor Sidgwick realized many years ago that the enormous expansion of our knowledge in this field made a revision of his book highly desirable, and in 1922 began the undertaking, with the intention of enlisting the collaboration of some of his Oxford colleagues and thus making it a cooperative effort. By the close of 1933, he had completed the first draft of four of the eighteen chapters. It then became evident that the increasing duties and responsibilities of all kinds devolving upon him as the result of his selection for so many positions of honor and distinction would postpone indefinitely the completion of a task which was daily growing more difficult.

In 1934, therefore, the completion of the revision was entrusted to the capable hands of Drs. Taylor and Baker, both fellows of Oxford University, the one of Brasenose and the other of Queen's College, and the book under review is the result. In its compilation, the authors have had the benefit of the material accumulated by those other colleagues who, from time to time, had aided Professor Sidgwick.

The major grouping of the subject-matter into the four divisions—I. Compounds with no nitrogen directly attached to carbon; II. Bodies containing one nitrogen atom attached to carbon; III. Compounds containing an open chain of two or more nitrogen atoms, and IV. Ring compounds—has been abandoned, although, in the main, the chapter headings, sequence and subject-matter remain much the same. The text as a whole has been not only thoroughly revised but also largely rewritten. The book opens with an introduction by Professor Sidgwick on "The Nitrogen Atom," and "Resonance."

As compared with the first edition, the following changes will be noted: (1) the amino acids have been assigned a separate chapter; (2) the aliphatic diazo compounds and derivatives of hydrazoic acid have been removed from Division IV and now constitute Chapter XI, immediately preceding the hydrazine derivatives; semicarbazide and related compounds, formerly given in Division III, now appear with the other carbonic acid derivatives in Chapter IX; the uric acid derivatives and the pyridine alkaloids have been omitted. On the other hand, the discussion of quinoline derivatives has been considerably extended, and now includes such important topics as the cyanine dyes, reactive methyl groups, acridine and phenanthridine. In the chapter (VIII) on nitro compounds, Mr. D. L. Hammick contributed the section on the molecular complexes of aromatic nitro compounds, and Professor Sidgwick that on chelate *o*-nitrophenol derivatives.

To the literature of its field, it is an outstanding and valuable contribution, and one which should be in the library of every one interested in organic chemistry.

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LIFE HISTORIES

Criteria for the Life History, with Analyses of Six Notable Documents. By JOHN DOLLARD. Yale University Press. v and 288 pp. 1935.

IT is difficult accurately to review a book which is obscurely written. John Dollard has a large vocabulary which he uses with prolixity but without precision. For example, he quotes Adler as saying that the mother helps the child and usually pampers her, and he comments thereon (pp. 49, 51, 67) in a manner which indicates that he does not know what "pampers" means and thus misses the significance of the quotation. Again, he has a fondness for the plural noun "surrogates," but I am unable to substitute any definition of the term I have thus far found in the dictionaries for the word where he uses it. The proper use of shall and will, of should and would, is of course difficult even for a discriminating writer; yet without being too much of a purist one may feel that the readers at the Yale University Press might have clarified some of the author's sentences by querying his usage

of these common words. "The 'group' into which the child comes is not the group in general; the child is not born into the church or the army; rather he is born into a very definite specification of the larger group, namely, the family." Here the meaning is clear, despite the shock of the somewhat strange word specification; and one is perhaps impeded rather than helped in his comprehensions of the sentence if he should be unfortunate enough to think of the rites of infant baptism and of circumcision, or of the insistence of some large religious group that the child *is* born into the church.

John Dollard has an exuberance of metaphor. Sometimes he calls it metaphor, more often he does not. "To use a football metaphor we begin in Adler's psychology at about the thirty yard line, rather than at the goal line, so far as the biological contribution to the development of the individual is concerned." This does not seem clear; when did the football game begin at the goal line? Does it not begin at the forty-yard line? Would we turn from sports to biochemistry, kinematics and psychology we can ponder this: "It shows . . . the culture as coagulated around a center of feeling . . . the life history shows a center of feeling and positive motivation moving through a culture, over time. The culture offers to this moving center of feeling its preferred barriers and permitted exits, much as in the psychologist's maze." It is difficult to believe that for any reader this maze of metaphor in any way clarifies the author's meaning. He is surely trying very hard to say something, but what, or shall I say, which?

"*Criterion II. The organic motors of action ascribed must be socially relevant.* This criterion sounds rather difficult to understand, but this is not the case; it is really very simple. It means merely that in order to have a theory of motivation we must make some statements about the body and what it can and will do; the organic properties which we assume as the basis of the life in the individual in the group must be of such a kind that they will submit to social elaboration. The organic activities of the body must come to meet the social influences that we have described."

This, dear reader, appears to be the definition of one of the seven fundamental criteria which a life history must satisfy. The first sentence after the italics should be unnecessary if true; but let us be charitable and thank the author for encouraging us poor boneheads along. What, then, do you make of the next two sentences? Unhappily, I make little of them or of the following three pages of exposition of this "really very simple" matter, and I regret to say that after examining the application of the criterion to the six life histories analyzed by Dollard I am still at a loss to know what he means, if anything. In the first case history (p. 45) he writes: "Adler rejects inherited or inheritable traits as a necessary concept and sees the new born infant as completely and plastically accessible to social influence. In this he would seem to be quite in accord with the best results of the comparative study of culture." This is a strictly anti-hereditarian point of view. Yet somehow the whole aim of Criterion II seems to be to lay stress on the organic; it is at any rate the only criterion of the seven which deals with the body and what it can and will do. Of course if one distinguishes temperament and personality, including in the former everything that can be inherited and in the latter only that which is not inherited but is taken on by exposure to the culture, then, irrespective of the best results of the comparative study of culture, one rejects *by definition* the concept of inheritance in the study of personality—and if so, why not say so clearly, even bluntly.

This is indeed what Thomas and Znaniecki, as quoted by Dollard, seem to do: "We may call temperament the fundamental original group of attitudes of the individual as existing independently of any social influences; we may call character the set of organized and fixed groups of attitudes developed by social influences operating upon a temperamental basis . . . the development of temperamental attitudes into character-attitudes can assume many different directions, so that, if proper influences were exercised from the beginning, a wide range of characters, theoretically any possible character, might be evolved out of any temperament." This is tolerably definite. The biologist would probably object to so extreme a statement as "theoretically any possible character," but that might depend on how restrictive is the qualification "the set of organized and fixed groups of" applied to attitudes in the definition of character. At any rate, Dollard, writing after Thomas and Znaniecki, should be equally or more precise than they, whether he follows or modifies their definitions.

What Dollard is trying to do is to unite the notions of psychologist, anthropologist and sociologist in such manner that he may reach a specification of characteristics of the life history which shall be necessary and sufficient to make it define the growth of a person in a cultural milieu so that the life of the individual up to any particular point may be viewed as a connected whole, shall make theoretical sense as a unit and shall afford the basis for prediction of behavior immediately beyond that point. This is an ambitious project. To accomplish even initial stages in the development of such a difficult undertaking it is important to be discriminating in thought, straightforward in exposition, clear in phraseology. That is why I have laid

so much emphasis on his failure in these respects. He has shown that his criteria are not satisfied for the life histories he has examined, and presumably he has chosen for examination the best available. He may thus have made a real contribution to the improvement of future life histories, even though the work as a whole, especially in its all too frequent "asides" and in its exuberance of mixed metaphor, can hardly fail to impress any mature student as adolescent.

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SOCIETIES AND MEETINGS

THE ILLINOIS STATE ACADEMY OF SCIENCE

THE thirtieth annual meeting of the Illinois State Academy of Science was held at Rockford College, Rockford, Illinois, on May 7 and 8. The attendance at the meetings, including the sessions of the Junior Academy, which held meetings of its own at the Rockford Senior High School, was well over 1,000.

For the program at the general session on Friday morning, after an address of welcome by Dr. Gordon Chalmers, president of Rockford College, Professor C. L. Furrow, Knox College, Galesburg, president of the academy, gave an illustrated lecture on "The Evolution of Sex in the Mollusca." This was followed by an address by Mr. Don L. Carroll, of the State Geological Survey, Urbana, on "Some Observations on the 1937 Flood in Southern Illinois." This address was illustrated by lantern slides of aerial photographs and maps of the area. The final address of the Friday morning session was a lecture, illustrated by colored moving pictures, on "Science and the Garden" by Mr. John H. Hanley, University of Illinois, Urbana. The Friday morning session of the Junior Academy was given over to the display and judging of the projects which were presented for competition in the annual exhibition of projects. For the general session on Friday evening Professor H. A. Vagtborg, of the Armour Institute of Chicago, addressed the Junior Academy members and guests on the topic "The Story of Sanitation." Professor George W. Stewart, head of the department of physics of the University of Iowa, addressed the Senior Academy on the subject, "Changes in Concepts of States of Matter."

On Friday afternoon 145 papers were presented before nine sectional meetings. The activities of the academy for the Saturday sessions consisted of six field trips. These were especially well attended. The geological trip, under the direction of Dr. M. M. Leighton, chief of the State Geological Survey, Urbana, and of Dr. George E. Ekblaw, also of the State Geological Survey, visited points of geological interest in the vicinity of Rockford. An industrial trip, under the sponsorship of the Rockford Chamber of Commerce, visited some of the many interesting industrial plants at Rockford. A trip to the Rockford Sewage Disposal Plant was conducted under the leadership of Mr. T. G. Lindquist, superintendent of the Sanitary District of Rockford. An anthropological trip, with Dr. J. B. Ruyle, of Champaign, as leader, visited the Logan Museum of Beloit, Wisconsin, and studied the various kinds of Indian mounds in the vicinity. A trip under the leadership of Mrs. J. H. Mansfield, president of the Rockford Garden Club, visited some of the many fine residential gardens of Rockford, the public parks and the nine forest preserves of Winnebago County. The botanical trip, under the direction of Dr. H. W. Pepoon, Chicago, and Dr. George D. Fuller, of the University of Chicago, visited and studied the interesting flora of Apple River Canyon State Park.

The officers elected for the year 1937–38 are:

President, Harold R. Wanless, geology, University of Illinois; *First Vice-President,* George D. Fuller, botany, University of Chicago; *Second Vice-President* and *Chairman of Committee on Local Arrangements,* Otis B. Young, physics, Southern Illinois State Normal University; *Secretary,* Wilbur M. Luce, zoology, University of Illinois; *Treasurer,* Paul D. Voth, botany, University of Chicago; *Editor,* Dorothy E. Rose, geology, Illinois State Geological Survey.

The annual meeting for next year will be held at the Southern Illinois State Normal University, Carbondale, Illinois, on May 6 and 7, 1938.

WILBUR M. LUCE,
Secretary

THE NEW HAMPSHIRE ACADEMY OF SCIENCE

THE nineteenth annual meeting of the New Hampshire Academy of Science was held on May 28 and 29 at Colby Junior College, New London. The Friday evening session was devoted to the reading of papers by members, the principal one of which was "Physiography of the Mt. Washington Region," by Mr. Richard P. Goldthwait, of Harvard University, who has been working on the problem with the aid of a grant from the academy and from the American Association for the Advancement of Science.

Papers by members were read at the Saturday morning session. Professor Charles F. Brooks, director of the Blue Hill Observatory, Harvard, and of the Mt. Washington Observatory, reported on the work done at the Mt. Washington Observatory during the