

In the region in which the writer has studied these plants, *Dryopteris* is represented by six specific units which seem to hybridize more or less readily, representing a total of fifteen possible combinations of two species. Of these fifteen, two are already described. Of the remaining, probably eleven have been found, and descriptions for most of these are in preparation, some by Miss Slosson, some by Dr. Philip Dowell and some by Mr. Benedict.

Both papers were discussed at length.

C. STUART GAGER,  
*Secretary*

THE AMERICAN CHEMICAL SOCIETY  
NEW YORK SECTION

THE sixth regular meeting of the session of 1907-8 was held at the Chemists' Club, 108 West 55th Street, on March 6.

The annual election of officers, to assume their duties at the close of the June meeting following, was held with the following result:

*Chairman*—Leo H. Baekeland.

*Vice-chairman*—F. J. Pond.

*Secretary and Treasurer*—C. M. Joyce.

*Executive Committee*—H. C. Sherman, Geo. C. Stone, Morris Loeb, Arthur B. Lamb.

The following papers were read:

"The Electrolytic Determination of Bismuth,"  
by F. J. Metzger and H. T. Beans.

"Some Principles in Laboratory Construction,"  
by Chas. Baskerville.

"A Method of Analyzing Shellac," by P. C. McIlhiney.

"Studies in Nitration, IV.: Melting-point Curves of Binary Mixtures of Ortho-, Meta- and Paranitranilines: A New Method for the Determination of Such Mixtures," by J. Bishop Tingle and H. F. Rolker.

C. M. JOYCE,  
*Secretary*

DISCUSSION AND CORRESPONDENCE

COOPERATION IN SCIENTIFIC BIBLIOGRAPHY

THE recent report of Dr. H. H. Field, founder of the Concilium Bibliographicum of Zurich, Switzerland, contains a discussion of the relations which this central international agency for recording and making accessible information regarding publications in certain

sciences bears to publishers and editors in these fields, which is of wide interest to all who wish to forward the success of this most valuable aid to science.

This bibliographical institute was founded officially by the International Congresses of Zoology and Physiology and for a decade has been subsidized by the Swiss Confederation, the city and canton of Zurich, the Swiss Bureau of Education, the French Zoological Society and learned societies in other countries. It is the work of the Concilium to examine the scientific periodical literature of the world, and also that which appears in reports, memoirs, bulletins of irregular and discontinuous publication, as well as the formal volumes of the regular book trade, and prepare accurate bibliographical lists of the same. The Concilium issues at present a series of bibliographical cards in zoology and another in physiology. The cards in zoology cover also the fields of general biology, microscopy, paleontology and anatomy. To these sciences which lie on the dividing line between medicine and the natural sciences it is intended to add progressively new branches. Movements have been started looking toward the extension of this work into other fields of science and the Concilium has come to be considered as the natural center about which all work of this nature tends to group itself. Alliances are even now being sought by the leading bibliographies in botany, anthropology, geology and mineralogy. Further extensions into the field of medicine are also sought, while negotiations regarding forestry and electro-chemistry are pending. Dr. Field very justly calls attention to the fact that the usefulness of the Concilium in making known new publications is not limited to printed matter appearing under its immediate editorship; to wit, in the "Bibliographia Zoologica" and "Physiologica" and the bibliography cards founded thereon. The work here done is the starting point for the reviews and summaries which appear later in the *Zoologischer Jahresbericht* and the much belated *Archiv für Naturgeschichte*. The recorders of *Zoological Record* and the *Année Biologique* depend also to no small degree upon the Concilium

for their finding lists for the literature reviewed in their annual summaries. "Applied to a practical case, this means that a publisher who sends the Concilium a press copy of a treatise on 'The Reactions of Unicellular Organisms to Light,' for example, insures thereby immediate mention of the work in the card catalogue, the 'Bibliographia Zoologica,' the 'Bibliographia Physiologica' and the bibliography of Protista. He may also be assured that the work will not be overlooked by the annual reviews: *Zoological Record*, *Zoologischer Jahresbericht*, *Archiv für Naturgeschichte*, *Jahresbericht über die Fortschritte der Physiologie*, *Jahrbücher der Medizin*, *Année Biologique*, etc."

The Concilium examines all the literature which it lists in its bibliographies and depends in part for the completeness of its work upon the cooperation of authors, editors and publishers who send their work or publications to its office at Zurich. The Concilium has no funds for the purchase of periodicals or books for this purpose of bibliographical record. It should be noted in this connection that the publication of the bibliographical analysis of a zoological work includes not only the formal listing of the title, but the printing of the names of all new genera, a report upon the number of new species or varieties proposed in its pages, and in some cases a brief statement of the nature of the contents of the paper. Furthermore, the paper or book is cited, it may be, not once merely, but often again for a number of times upon cards, by title, or in the "Bibliographia Zoologica," by number, in connection with each subdivision of the subject upon which the contents of the book or paper touch. For example, a paper upon the "Plankton of the Illinois River" would be cited under the headings of geographical distribution, invertebrata, and it might be under a half dozen or more subdivisions of the animal kingdom. It is thus no small service which the Concilium renders authors and publishers in extending publicity throughout the scientific world by such an extended analysis of the contents of the work. The service which the Concilium renders in this regard saves in the aggregate a large

amount of time for the investigators in the zoological and allied fields. It is evident that the completeness of the bibliographies issued by the Concilium and the promptness with which the references are published can be greatly facilitated by a hearty cooperation between the authors, editors and publishers, and Dr. Field's most helpful institution. In discussing this question of cooperation Dr. Field writes as follows:

According to a recent writer (Dr. Vaughan), this preeminence of the Concilium has been won in spite of the fact that in 1901 only 70 per cent. of the world literature (on sponges) was recorded. This percentage may be perhaps considered low; but it must not be forgotten that at that time the Concilium had not solicited in any general way the cooperation of publishers and editors. The material that was sent to Zurich came from those who had casually learned of the work and sent press copies on their own initiative. It is evident that, when the cooperation of publishers becomes more universal, the scientific public and the reviewers will rely still more on the information obtained from the Concilium, so that the usefulness of the agency as a means of publicity will correspondingly increase.

In the early debates regarding the foundation of the Concilium, it was contended that the institution might rely in part on financial contributions from publishers. The project of securing revenue from such a source was, however, deemed impractical, not because the services rendered were too slight to justify soliciting aid, but because of the difficulty of levying contributions. Completeness of the references is essential to the institution and no penalty of exclusion could be put into force against those who declined to give their quota. No work of interest could ever be excluded for fiscal reasons. On the other hand, it was thought unnecessary to provide funds for the purchase of works to be catalogued and no part of the subsidies can be so used. It is definitely assumed that all publishers will be glad from enlightened self-interest to make their publications accessible in Zurich. The Concilium agrees that all matter sent for review shall under no circumstances be offered for sale, so that there is no danger of a single purchaser being lost in consequence of copies sent to us. It is highly desirable that books and periodicals shall be kept by the Concilium for later consultation. In the case of publications with valuable plates, the latter may be withheld, provided they are described in the

text. Expensive works will be returned on request. With octavo publications it is assumed that the request to return "uncut" applies only to the tops of the books, for every page must be accessible to the recorders.

It is quite impossible to explain exactly what classes of books are required for the work. We therefore wish to receive from each publisher his book-lists as they appear. From these we shall make a selection. In cases of doubtful admissibility, we shall order the book for examination. It is, however, understood that, in so doing, we undertake no obligation to cite a work which is not found to fall properly within the scope of our bibliographies.

Already the English publishers have signified their willingness to cooperate and recent visits to a number of American firms elicited an equally favorable attitude. The Concilium has in press a list of some 2,800 periodicals arranged by countries. It is proposed to state for each country, as an appendix to the list of journals received, the publishing firms which maintain regular relations with the Concilium. For this reason we desire each publisher whom this circular may reach to signify his intention of cooperating and his willingness to have his name given in such a list. At the end of each year each publisher will receive cards showing which of his books have been cited. Authors will also further the work if they will assure themselves that their publications reach Zurich. When once the custom is fairly established, it will be found useful to all concerned, and the publisher, while acting in his own interest, will do a great service for the advancement of knowledge.

The preliminary list of the 2,800 periodicals which Dr. Field has published in his present report includes about 450 from the United States. Of these 450 publications of repeated or periodical nature less than 175 reach the Concilium regularly. The other 275 must be consulted elsewhere, if at all, or written for with resulting increased cost and loss of time, or one must depend on the chance courtesy of the individual authors. A cursory inspection of the list of the American journals which are "insufficiently easy of access" to the Concilium includes many medical journals of the subscription class, but by no means all of such journals, a surprisingly large number of the research publications of our universities, such, for example, as the "Bryn Mawr Mono-

graphs"; "Biological Lectures of Woods Holl"; "Bulletin of the Laboratory of Natural History, University of Iowa"; "Bulletin, Syracuse University"; "Columbia University Biological Series"; "Memoirs of the Biological Laboratory, Johns Hopkins University"; "Princeton University Patagonia Expedition"; several series issued by the University of California, and others. Some of our oldest and most widely known learned societies, as well as more recently organized ones, are not on the list of fully cooperating institutions, such, for example, as the American Philosophical Society, the Linnean Society of New York, the New England Zoological Club, Essex Institute, and the Philadelphia, Chicago, Michigan, Ohio and Kansas Academies and even the National Academy of Sciences at Washington. Many of our agricultural experiment stations fail to send the publications and even the Biological Survey, Bureau of Animal Industry and some other bureaus of the Department of Agriculture at Washington are not fully cooperating. In like manner many of our state natural history and geological surveys and boards of agriculture which publish more or less matter which falls within the scope of the bibliographies of the Concilium fail to send their publications.

An opportunity to advance the cause of science is here afforded to all American publishing agencies, and to American publishers to bring their publications very effectively and in permanent form before scientific workers throughout the world. It is to be hoped that the spirit of cooperation which has dominated the Concilium from its foundation will be extended more widely among our American institutions and that individual workers in the various biological and medical fields will take pains to see that all serial publications in their control are sent regularly in the future to the Concilium Bibliographicum, Zurich, Switzerland.

CHARLES ATWOOD KOFOLD

UNIVERSITY OF CALIFORNIA,

February 28, 1908

THE INHERITANCE OF FLUCTUATING VARIATION

Dr. R. P. BIGELOW has asked,<sup>1</sup> how I would

<sup>1</sup> SCIENCE, January 31, 1908, p. 192.