The reading of papers was continued as follows:

"Some Comparative Observations on Irradiated Ergosterol and Cold Liver Oil," by E. O. Prather, Jr., Martha Nelson and A. R. Bliss, Jr.

"The Strychnine-Brucine Ratio of Nux Vomica and the Relative Potency of These Alkaloids," by R. W. Morrison and A. R. Bliss, Jr.

"Thallium Poisoning in Migratory Birds," by Justus C. Ward.

"Studies on Strychnine. III. The Effect of Quinine upon the Taste Threshold of Strychnine," by J. C. Munch and J. C. Ward.

"Studies on Strychnine. IV. Further Studies on the Masking of Strychnine Taste by Sweetening Agents," by J. C. Ward and J. C. Munch.

"Studies on Strychnine. V. The Masking of Strychine Taste by Combinations of Sweetening Agents and Inorganic Salts," by J. C. Ward and J. C. Munch.

"The Application of Statistical Methods to Pharmaceutical Research. III. The Fitting of Straight Lines to Experimental Data," by James C. Munch.

"The Bioassay of Mydriatics and Miotics," by James C. Munch.

"The Bioassay of Adonis Vernalis, N. F.," by James C. Munch.

"The Bioassay of Apocynum, N. F.," by James C. Munch.

"The Bioassay of Convallaria Majalis, N. F.," by James C. Munch.

"Further Studies on the Biological and Chemical Assay of Anthelmintics," by James C. Munch and Wm. F. Reindollar.

"A Series of Toxicological Investigations. I. Mercury and Lead," by L. W. Rising and E. V. Lynn.

"A Series of Toxicological Investigations. II. Cocaine and Morphine," by L. W. Rising and E. V. Lynn.

"A Series of Toxicological Investigations. III. Phenol and Iodine," by L. W. Rising and E. V. Lynn.

"Further Studies of the Pharmacology of the Viburnums," by James C. Munch and H. W. Youngken.

The First Session of the Scientific Section was then adjourned.

JOINT SESSION SCIENTIFIC SECTION AND SECTION ON PRACTICAL PHARMACY AND DISPENSING.

The Joint Session of the Scientific Section and the Section on Practical Pharmacy and Dispensing was called to order by Chairman E. E. Swanson of the Scientific Section at 8:15 P.M., July 30th.

The first order of business was an illustrated talk by Prof. Anton Hogstad, Jr., on "The Activities of the Missouri Botantical Gardens." (This will be reported in the JOURNAL in a later issue.)

Professor Hogstad received a hearty vote of thanks.

The next order of business was the report on the U. S. P. by Chairman E. Fullerton Cook. The report follows:

REPORT OF THE CHAIRMAN OF THE U. S. P. XI COMMITTEE OF REVISION.

BY E. FULLERTON COOK.

The 1930–1940 decade in Pharmacopœial Revision is different in some respects from any other with which the present Chairman has been associated. The work of the Committee began a year ago with many changes in Sub-Committee organization and with new chairmen leading a number of groups. Such changes come periodically from entirely natural causes and are, of course, wise and necessary. It must be confessed, that as the General Chairman faced the work ahead, a year ago, without the active and experienced leadership in Sub-Committees of such men as Wood, Kraemer, Beringer, Arny, LaWall, Rosengarten, Lyons and Sollmann, who had helped for two or in some instances, for even three revisions, it was with some trepidation and wondering as to what a year would accomplish.

Fortunately, the policies of this former period had trained some of the yonger men into the work of Revision and others came well equipped for the great responsibilities of our task, and,

nine of the fifteen Sub-Committee chairmen had not served in that capacity during the last revision, the results have been most gratifying.

There is a great opportunity before this Revision Committee, the medical sciences are advancing with tremendous strides; science is in control and the United States Pharmacopœia must reflect the advances in therapeutic thought and in the supporting sciences and must offer leadership, not historic pictures. The sanctity of tradition must not blind us to truth, but we must not be swept from a judicial position by revolutionary tendencies and refuse to consider he findings of the fathers simply because they are not new.

Scope.—The Scope decisions have been reflecting this spirit of progressiveness, yet to date over 500 U. S. P. X titles have been admitted to the new Pharmacopœia. On the first vote, after discussion, at least a two-third vote has been required to either admit or delete a U. S. P. X title.

While all titles of the present Pharmacopœia have now passed this first stage there are a number which remain in the undecided group and must now be rediscussed and again voted upon. The Sub-Committee is just starting the consideration of new substances for admission to the U. S. P. XI.

The subject of admissions and deletions will always be of great interest to this ASSOCIATION both because of its active affiliation with Pharmacopœial Revision and the application of Pharmacopœial standards to the daily task, but also because these decisions influence the character and scope of the National Formulary.

The policies of the two books would seem to be drawn more sharply in this decade than ever before and, as a result, offer even greater justification for both books.

It must be remembered that the U. S. P. was originated by a group of physicians for the purpose of offering a selected list of remedies to physicians. These were intended to represent the substances considered of first importance by the therapeutic experts of the period of the revision. Each decennial revision was expected to revise this list in accordance with the developments of ten years.

The fact that the Pharmacopœia was made the basis of standards under the Food and Drugs Act took away no right established by those who controlled the Pharmacopœia, and had already followed this policy for almost a century.

The N. F., on the other hand, was started for the purpose of supplying formulas or medicines of uniform strength, which justified consideration because of use by physicians, yet had not found a place in the Pharmacopœia.

These policies give ample scope to both books and give to each a legitimate field without rivalry.

An excellent illustration is found in Solution of Potassium Arsenite (Fowler's Solution). The Scope Sub-Committee at the recent meeting discussed this solution at length. It was well known that it has extensive use by physicians and its therapeutic merit was not under serious question yet one Sub-Committee reported that pharmaceutically it was unsatisfactory as someone put it, "a pharmaceutical mess." It was shown that it was an imitation, about a hundred and fifty years ago, of a proprietary product and was variable in color and often precipitated. It was also frequently deficient in strength as indicated by the assay, due either to failure on the part of the pharmacist to get all of the arsenic trioxide into combination or perhaps due to chemical changes which rapidly altered the tri-valent arsenic to the penta-valent form. The Therapeutics Sub-Committee was asked if there was any known difference in the therapeutic values of these two forms of arsenic and reported as follows: "Three did not vote, two said they did not know, two voted 'no,' and two voted 'yes.'"

It was also shown that as an alkaline solution, it is frequently the cause of incompatibilities in prescriptions.

With this array of attack against it, it was shown that there was another official solution of arsenic, Liquor Acidi Arsenosi, which was of equal therapeutic value, was a creditable pharmaceutical preparation, did not deteriorate and was acid in reaction, thus avoiding most incompatibilities when in combination, especially with iron.

If you were a member of the Committee how would you have voted? The recommendation is to delete.

Here, however, the N. F. policy permits its inclusion entirely, properly and logically since a standard is important due to its present extensive use. The duty of the Pharmacopœia, of

course, will be to broadcast the facts here given and urge physicians to hereafter use Solution of Arsenous Acid rather than Solution of Potassium Arsenite, when its therapeutic effect is needed.

It is intended that early in the Fall a list of U. S. P. X titles will be announced which have failed to gain admission to the new Pharmacopœia. Such substances are usually referred to as "deleted" although this term does not properly apply since they were never included in the U. S. P. XI list.

The Chairman has requested the members of the Sub-Committee on Scope to provide statements explaining the reasons which influenced the action of the Sub-Committee in their exclusion of the more outstanding titles. Where statements will accompany the list of titles and, at the same time, the Chairman will invite anyone who does not agree with the action taken to submit reasons for disagreement. All such statements received will be copied in full with the names of the senders and the Sub-Committee on Scope will be asked to reconsider their action, if contrary evidence is presented.

Resolutions of Associations, asking for retention, are not an influential form of evidence; supply facts and personal experiences from individuals if possible.

Survey of Drugs Used in Prescriptions.—Several such studies have been made in recent years, but one other is now being carried on under the auspices of the U. S. P. Board and N. F. Committee. While "extent of use" is not a deciding factor, it must be recognized as one of the important points to consider when the U. S. P. Scope is revised. The General Principles recognize first *value*, secondly whether "*sufficiently used.*"

Literature Abstracts.—We are fortunate in having abstracts of literature made available from two sources, *i. e.*, the A. PH. A. "Year Book" and the "Squibb Abstract." Such literature studies are essential to the work of revision but the Sub-Committee chairmen cannot depend fully upon these prepared abstracts. One of the important qualifications of a Sub-Committee chairman is his personal familiarity with the current literature in his own field and also his individual experience with the practical application of the questions before his Sub-Committee.

Auxiliary Members to Sub-Committees.—The election of auxiliary members to Sub-Committees has again proven of help in the Revision. This is particularly true in special fields in which the Committee of Revision needs the aid of experts in a specific field. In Biological Standardization and in the Vitamin study this has been especially important.

Coöperation of the Food and Drug Administration and the Public Health Service.—It is gratifying to be able to report that the work of Revision is receiving the fullest support in the work of Revision from Mr. Campbell, Mr. Dunbar, Dr. Durrett, Mr. Warren and all officials of the Food and Drug Administration.

Revision questions have been freely discussed with these officials and there exists the fullest understanding and most harmonious coöperation between the Department and the Pharmacopœial Committee and the assurance that we shall have the assistance of their organization in every phase of the revision.

We also have complete understanding and coöperation from Dr. McCoy and his assistants in the National Institute of Health laboratory.

Coöperation of the A. D. M. A., the A. P. M. A. and the A. Ph. A.—The members and officers of the American Drug Manufacturers' Association and of the American Pharmaceutical Manufacturers' Association were conscious of the feeling of antagonism expressed against them so freely by some of the delegates to the 1930 U. S. P. Convention. The deliberate exclusion of valuable and experienced members of the scientific staffs, of both organizations from the Committee of Revision and the refusal to admit to the Convention delegates from the latter organization, developed a situation, which, if continued, would have been most unfortunate for the success of the work of revision. Fortunately, there has been restored the fine relationship formerly existing between the scientific groups in the first two of these organizations and the Committee of Revision and they and the A. PH. A. have supplied many individuals as auxiliary members to Sub-Committees. We have the assurance that we shall have the benefit of criticisms and constructive help on texts as the revised copies are made available. The Chairman will take full advantage of this, for the assistance of these scientific workers has been invaluable to the Pharmacopœial Revision for many years.

A Conference of the Committee of Revision.—A meeting of the Committee was called at the close of the first year of revision. This was held at the Pocono Manor Inn, Pennsylvania.

Forty-six of the members were present and excellent results followed both General Committee Meetings and Sub-Committee Conferences.

The Vitamin Conference.—This Conference, authorized by the Board of Trustees, met in New York on Thursday, May 7th. At least twenty-six of those invited were present, and results of the greatest value were obtained. It is anticipated that another meeting will be called early in the Fall after the London Conference of July 17th called by the Health Organization of the League of Nations. It is believed that the greatest benefit will come from this Conference.

The details of the Conference and the resulting recommendations will appear in full in the Circulars of the General Committee.

Bio-Assay Conference.—On Wednesday, June 24th, a conference of those interested in Bio-Assays was held in Philadelphia. Members of the Bio-Assay Sub-Committee had invited representatives of the Food and Drug Administration, of the Public Health Service and of many drug firms with others interested in these assay methods were present. It is hoped that from this conference may be developed correct standards and assay methods for a number of important drugs.

Volatile Oil Conference.—Carrying out a policy, followed for at least three decades, producers and dealers in volatile oils were invited to attend a conference called in Philadelphia on Wednesday, June 24th. It is expected that many suggestions will be offered as an aid to the Sub-Committee in establishing new standards.

The Cuban Auxiliary Commission on Pharmacopœial Revision.—The Cuban Commission on the U. S. P. Revision has been organized and is receiving the U. S. P. Circulars as they are issued. A voluntary Committee in Cuba during the last decade gave valuable suggestions to our Committee through a series of articles and it is anticipated that again we shall receive suggestions which will make the U. S. P. of greater value to our Sister Republic. The Commission is as follows: Dr. José Guillermo Diaz, Dr. Gerardo Fernandez Abreu, Dr. Rosa T. Lagomasino, Dr. José Capote y Diaz, Dr. Celestino Garcia Morales, Dr. Pedro Castillo, Dr. Antonio Valdes Dapena, Dr. Eugenio Crabb, Dr. José P. Alacan, Dr. Angel Pere André.

The Porto Rico Auxiliary Commission on Pharmacopœial Revision.—The following membership for this Commission have just been suggested by those in authority in Porto Rico.

For the University of Porto Rico: Lucas Luis Velez, Dean, School of Pharmacy; Louis Torres Diaz, Ass't. Professor Pharmacy and Drug Assay, School of Pharmacy.

For the Pharmaceutical Association of Porto Rico: Washington Llorens, Secretary of the Association.

For the Medical Association of Porto Rico: Dr. Julio B. Colon, Dr. Jacobo Simonet, Professor of Materia Medica, Pharmacy School; Dr. L. A. Salivia, Professor of Bacteriology, Pharmacy School.

The Philippine Auxiliary Commission.—The Chairman has sent several letters to Manila inviting the appointment of a Philippino Commission but up to this time no reply has been received.

Supplements to the U. S. P. X.—The 1930 Convention voted approval of the issuance of supplements to the Pharmacopœia whenever, in the opinion of the Committee, this was deemed necessary. This authority has been given the Committee for at least three decades and has been taken advantage of on a number of occasions. There has always, however, been an attitude of conservatism toward the making of interim revisions, for it has been found that proposed changes, especially when actively advocated, frequently represented some "special interest" and upon thorough investigation was found to be unnecessary or unwise.

The second objection to such interim changes in standards is the difficulty in securing complete publicity for the change. For this reason, the Chairman in his Report to the Convention suggested an "Annual Supplement" which he believed would be anticipated, if issued regularly and might gradually develop into an important feature of the Revision, in fact might eventually make unnecessary the long, drawnout decennial revision and furthermore would introduce some flexibility into official standards and insure the reflecting of the latest scientific developments by the Pharmacopœia.

The Committee on the Chairman's Report did not approve the Annual Supplement idea because it thought it might not always be necessary to issue such a supplement, but approved such publication whenever necessary.

Several standards of the present U. S. P. need revision and steps are being taken to adjust these as soon as possible when new standards will be issued. This applies particularly to Cod Liver Oil and Ergot.

Pharmacopœial Publicity.—Plans are being developed by a special Committee whereby it is hoped that monthly bulletins can be issued to the medical and pharmaceutical press covering the technique of medication and some therapeutic values of official preparations and drugs.

Death of Professor E. V. Howell.—It is regrettable to be compelled to introduce into the first report an announcement of the death of one of the members of the Committee. Dean E. V. Howell died from pneumonia on February 14th.

Within an appropriate time nominations were called for the filling of this vacancy, resulting in the election of Mr. Joseph Rosin. Mr. Rosin brings great strength to the chemical work of the revision through his experience as the assistant to Dr. Rosengarten during the revisions of the U. S. P. IX and U. S. P. X.

Conclusions.—Although only one year of revision has passed, the progress in many divisions is notable. This does not mean that the total time of revision is likely to be greatly reduced for the mechanical details of checking every test, the carrying forward of revised tests from Sub-Committee discussion, experimentation and approval, to the General Committee, to the public, then into manuscript, and laborious galley and still more exacting page proof and finally the printed book, requires time and labor. It is more important to have every text right when it does appear than to unduly speed the work.

Nevertheless, the present chairman pledges his best effort toward the prompt appearance of the new Pharmacopœia.

The report was on motion duly seconded, carried and received.

The report by R. L. Swain on Maryland Prescription Count was presented. (It is printed in the September JOURNAL, page 938.)

The report of the Committee on National Formulary was called for. Chairman E. N. Gathercoal summarized the report and spoke of the research work being done; he also referred to the surveys being made from the standpoint of useful suggestions for revision work and other values. The report of the Committee follows:

REPORT OF THE CHAIRMAN OF THE COMMITTEE ON NATIONAL FORMULARY.

BY E. N. GATHERCOAL.

To the Council of the American Pharmaceutical Association:

The Committee on National Formulary has maintained a high degree of activity since the Cleveland meeting of the Committee in 1930.

Bulletins and Sub-Committee Letters have been issued from the Chairman's Office to the extent of 300 pages during the year. These are distributed, in whole or in part, to about 66 persons including members, auxiliary members and coöperators on the revision work.

The Committee met for a two days' conference at Pocono Manor Inn, June 29 and 30, 1931, and accomplished much in the four sessions held on these two days. In addition to the sessions held by the entire Committee, each Sub-Committee held one or two meetings and markedly advanced the Sub-Committee work. All the fifteen members of the Committee were present and also Associate member Cook, Chairman Krantz, of the Committee on Unofficial Standards, and Secretary Kelly of the A. PH. A.

The work of the Committee during the past year may be described along five general lines, each of which will be presented under an appropriate heading, as follows:

Conduction of Research Investigations.
The Establishment of Foundational Principles of Revision.
The Preparation of Statistical Tabulations.
Admissions into N. F. VI.
The Study of Individual Monographs.

CONDUCTION OF RESEARCH INVESTIGATIONS.

The conduction of research investigations of important problems in connection with National Formulary preparations, and supported in part by grants from the N. F. Research Fund, is an outstanding feature of the work of the Committee during the past year.