

THE FIFTH INTERNATIONAL BOTANICAL CONGRESS

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In presenting this brief report of the Fifth International Botanical Congress it is believed that it may not be out of place to first give a short historical resume of the preceding four Congresses and a statement of some of the circumstances leading to them.

Before the eighteenth century and previous to the establishment of a system of binomial nomenclature, confusion and uncertainty existed relative to the different kinds of plants and to the proper manner of applying names to them. It was not until 1753, with the publication by Linnaeus of his "Species Plantarum," that the idea that plants could be adequately named with a binomial, rather than with a cumbersome polynomial of uncertain length, was introduced. The invention of the binomial as a means of designating a plant was, to a certain extent, responsible for the increased activity in exploration and the collecting and naming of new plants which developed greatly during the latter part of the eighteenth and the early part of the nineteenth centuries. Thousands of plants hitherto unknown to science were discovered, described and given names. In some cases the plants were named without even the formality of a description. Frequently specimens representing the species were not preserved. In many cases the same species was discovered by several botanists each of whom gave it a different name. This multiplicity of names caused considerable trouble and often was not detected until someone specializing in the group to which the plant belonged discovered the facts. The question naturally arose as to which of the several names was the valid one. National and personal jealousies, the scientific prestige of certain botanists and other influences were often factors in determining which name would be used. Botanical taxonomy was rapidly becoming an exceedingly difficult and complicated science. To botanists working in this field it eventually became apparent that if they were to accomplish any results of permanent scientific value rules and regulations were absolutely necessary.

Individual botanists from time to time had been proposing solutions to the problem. The first general attempt, however, to formulate rules of nomenclature was at Paris in 1867 when the First International Botanical Congress met. This meeting was largely dominated by the Swiss botanist, Alphonse de Candolle. At that time he was probably the world's best known and leading taxonomist. At this meeting it was agreed, among other things, that any species of plant can have but one valid name and that name shall be the oldest one applied to it, using Linnaeus' "Species Plantarum" of 1753 as the starting point.

Taxonomists attempted to bring some order out of the chaotic condition through the application of the Paris rules. It eventually was seen that revision and modification of the Paris rules were necessary and thirty-seven years later, in 1905, the second International Botanical Congress convened in Vienna. At this meeting a comprehensive code known as the "International Rules of Botanical Nomenclature" was formulated using the Paris code as a basis, but introducing

many modifications. It restricted Linnaeus' "Species Plantarum" as a beginning point to vascular plants only. It required that any new name of a plant to be valid must be accompanied by a description in the Latin language. There was also proposed a list of names of plants or groups of plants which for some reason botanists wished conserved although the rules were violated by such conservation. This list, known to botanists as the *nomina conservanda*, has been a subject of controversy among many taxonomists since the Vienna meeting.

Previous to the Vienna congress a committee of American botanists formulated a number of recommendations which they presented for consideration. These recommendations, however, were not adopted. After the meeting a number of the Americans, believing that the congress had not formulated a code in the best interests of everyone, drew up a set of rules of their own known as the "American Code." One of the things stressed in this code was the type-concept, or the idea that every species or group of plants should be represented by a nomenclatural type. This, they believed, would do a great deal toward stabilizing names. The Americans were not pleased with the rule that the Latin language be required when describing new plants. Nor did some of them believe that the *nomina conservanda* would accomplish any good and permanent results. Many botanists on this side of the Atlantic have been working under the American Code since it was published in 1907. There is, however, a number who have not used the American Code but who have believed that the International rules should be followed until they could be properly amended or changed. These differences in the rules and their application have created a difficult situation in the field of taxonomy, especially in this country.

In 1910 the Third International Botanical Congress met at Brussels with about three hundred members present of whom about a score were Americans. This congress carried toward completion the work of the Vienna congress respecting the rules on nomenclatural matters. Some minor changes were made in the Vienna code among which was the legalization of different starting points among the nonvascular plants in the matter of priority of names.

The next congress was to have met at London in 1915, but the outbreak of the war in 1914 prevented such a meeting. It was not until 1926 that such a meeting was possible and the Fourth International Botanical Congress was held at Ithaca, New York. At this meeting practically the entire field of botany was represented in the different sectional groups, but no important legislation on nomenclature was adopted. While the first three congresses met primarily to settle questions of nomenclature, the last two have become broader in their scope and designed to appeal not alone to the taxonomists but also to those interested in other phases of the science.

At the Brussel's meeting committees were elected to study the matter of starting points for the nomenclature of certain groups among the lower plants and also to compile lists of *nomina conservanda*. An editorial committee composed of Dr. John Briquet of Geneva, Dr. H. Harms of Berlin, Prof. L. Mangin of Paris and Dr. A. B. Rendle of London was elected. It was decided that the editorial committee should function as a "Permanent Bureau of Nomenclature" until the next congress. At the Ithaca congress the Brussel committees were continued. Additional committees on general nomenclature, cryptogamic nomenclature and paleobotanical nomenclature were added upon the recommendation of Dr. Briquet. To this permanent bureau were to be presented any suggestions or recommendations which were to be considered at the next congress.

The Fifth International Botanical Congress met at Cambridge, England this past summer with Professor A. C. Seward of the botany School, Cambridge University as President. The congress was divided into eight sections. The different sections and their presidents were as follows:

Section B—Bacteriology—Prof. R. E. Buchanan (Ames).

Section E—Phytogeography and Ecology—Prof. H. C. Cowles (Chicago).

Section G—Genetics and Cytology—Prof. O. Rosenberg (Stockholm).

Section M—Morphology and Anatomy—Prof. J. G. Schoute (Groningen).

Section My—Mycology and Plant Pathology—Prof. L. R. Jones (Madison).

Section P—Plant Physiology—Dr. F. F. Blackman (Cambridge).

Section Pb—Paleobotany—Dr. D. B. Scott (Basingstoke).

Section T—Taxonomy and Nomenclature—Prof. L. Diels (Berlin-Dahlem).

Nearly twelve hundred members registered at the Cambridge meeting. This, it is believed, represents the greatest gathering of botanists ever held. Of the twelve hundred about three hundred were Americans which number is in marked contrast to the number present at the Brussel's congress. This Academy was represented by Dr. and Mrs. J. C. Arthur, Professor and Mrs. D. M. Mottier, Professor and Mrs. M. S. Markle and myself. So far as I know we were the only "Hoosiers" present. The British Empire, as would be expected, was well represented by members from practically all of its colonies and dominions. France, Germany and the other European countries were likewise well represented. The Latin American countries and the Soviet Republic seemed to be least represented.

On Friday evening, August the 15th, the Rt. Hon. Christopher Addison, M. D., M. P., H. M., Minister of Agriculture and Fisheries on behalf of His Majesty's Government received the members of the congress formally at the Imperial Institute, South Kensington, London.

All day Saturday the members of the congress were arriving in Cambridge where they were housed in the various colleges, hotels of the city and private residences.

The meetings were held in the different college buildings of Cambridge University. The beautiful architecture and historical background of the University was of great interest to many of the visitors. There were also many points of interest in the city itself as well as in the surrounding countryside and nearby towns. Probably few other cities in England would have been as interesting to the members of the congress as was Cambridge.

The opening plenary meeting of the congress was held on Saturday evening. Following the opening session a formal reception was held at St. John's College by the Master and Fellows of the college.

The following day, for which no meetings were scheduled, was spent in attending the different church services and going on excursions arranged for the various groups. The writer spent the forenoon with a group visiting the old and well stocked and excellently kept botanical garden of the University through which we were conducted by Dr. H. Gilbert-Carter, director of the garden. The garden has an excellent collection, especially that part under glass. In the afternoon many availed themselves of the opportunity of visiting the magnificent cathedral in the nearby village of Ely. In the evening the members were entertained with an organ recital in King's College Chapel. The immense chapel with its incomparable fan-vaulted ceiling and interior decorations dimly lighted with candles made a very impressive setting for the recital.

For the rest of the week the members settled down to a routine of sectional meetings both morning and afternoon. Men of international standing were chairmen of the different sections, and the papers for the most part were presented by world authorities in their fields. The languages in which the papers were presented were English, French and German, although one could hear many other languages spoken by the different members as they met informally.

A total of two hundred and seventy-five papers were scheduled for the various sectional meetings. The botanists of the British Empire presented eighty-six titles thus leading all other countries. Forty-five titles by American authors were represented on the programs of all eight sections. The members from no other country, excepting Great Britain, showed such a breadth of interest. German botanists came third with thirty-two titles and those of the Soviet Republic fourth with twenty-six.

TABLE I. DISTRIBUTION BY COUNTRIES OF PAPERS PRESENTED AT THE MEETINGS OF THE FIFTH INTERNATIONAL BOTANICAL CONGRESS

COUNTRIES	Sections								Totals
	B	E	G	M	My	P	Pb	T	
Great Britain.....	10	8	9	12	10	9	10	4	72
U. S. A.....	3	5	10	4	9	10	2	2	45
Germany.....	1	4	6	11	1	6	3	.....	32
Soviet Republic.....	.....	1	9	4	1	9	1	1	26
Austria.....	.....	5	2	7	.....	4	1	1	20
Sweden.....	.....	6	2	3	1	1	3	.....	16
British (excl. Gt. Br.).....	.....	4	.....	2	4	3	1	.....	14
Holland.....	.....	.....	3	3	2	3	2	.....	13
France (Including Algeria).....	.....	1	.....	.....	4	1	4	1	11
Switzerland.....	.....	3	1	1	1	.....	.....	1	7
Denmark.....	2	1	2	.....	.....	1	.....	.....	6
Belgium.....	.....	.....	.....	.....	1	.....	2	.....	3
Japan.....	.....	.....	1	.....	.....	.....	.....	1	2
Italy.....	.....	.....	.....	1	.....	.....	.....	1	2
Hungary.....	.....	.....	.....	.....	1	1	.....	.....	2
Poland.....	.....	.....	.....	.....	1	.....	.....	.....	1
Bulgaria.....	.....	1	.....	.....	.....	.....	.....	.....	1
Finland.....	.....	.....	1	.....	.....	.....	.....	.....	1
Rumania.....	.....	1	.....	.....	.....	.....	.....	.....	1
Totals.....	16	40	46	48	36	48	29	12	275

All of the meetings drew large audiences which gave excellent attention regardless of the language in which the paper was presented. This was sometimes rather difficult because I cannot imagine any seats being made more uncomfortable than those which we found in the various lecture rooms of the University. I have profound respect for the endurance and patience of the Cambridge students who must use the seats for their entire University course.

Evening lectures were given by Mr. G. P. Hickson of Cambridge, on "Cambridge University and Its Colleges;" by Dr. W. M. Doetsch Van Leeuwen of Buitenzorg on "The Vegetation of the Mountain Tops of Java;" by Professor M. L. Fernald of Harvard University on his work with the Laborador flora; and by Professor H. G. Lundegårdh of Stockholm on "Carbon Assimilation in Relation to Ecology."

The sub-section on nomenclature attracted the most attention and had the largest attendance. Much work had been accomplished by the permanent bureau continued at the Ithaca congress and the section was ready to proceed immediately to the questions of most importance with a minimum of debate. The bureau had prepared a printed synopsis of the Vienna and Brussel's rules together with the proposals which had been made to modify them. A British sub-committee, which had been appointed by an Imperial Botanical Conference in London in 1924, came to the meetings well organized and prepared to present their points of view. They also had their proposals printed so that each delegate had before him a very clear statement of the matter under debate at all times. This was often quite important as speaking was carried on in English, French or German, sometimes simultaneously, and it required very close attention to always know just what was going on. The sub-section on nomenclature was very ably chairmanned by Dr. E. D. Merrill, Director of the New York Botanical Garden. The chairmanship of this section was undoubtedly the most difficult position in the entire congress, but Dr. Merrill seemingly made his decisions and carried the meetings through in a manner satisfactory to the majority of delegates. The points of view of the Americans were presented by a number of botanists chief of whom were Dr. A. S. Hitchcock of Washington, Dr. J. H. Barnhart of the New York Botanical Garden and Dr. M. L. Fernald of Harvard University.

A considerable amount of work was accomplished by this section. The details are of interest only to taxonomists. A complete report will be published and it will be available to those who care to obtain a copy.

There was apparent throughout the entire congress a very fine spirit of cooperation. It was evident that the groups representing the different points of view regarding the rules had come prepared to "give and take" with the hope of evolving regulations that would be acceptable to everybody. The American idea of the nomenclatural type gained consideration. The rule requiring the use of the Latin language in describing plants was modified. After January 1932 an author may properly describe his plants in any language, preferably in English, French or German, if he will, at the same time, also give a brief analysis of the plants in Latin. The permanent bureau was continued to consider proposals which may be brought before the next congress scheduled to be held in Amsterdam in 1935. To Dr. Briquet, *Rapporteur général* of the Permanent Bureau of Nomenclature, is due much credit for the preparation of the printed Synopsis and a vast amount of detailed work before and during the congress. A great many details were referred to the bureau during the meetings which will undoubtedly take considerable time for completion.

An interesting feature of the congress was the conferring of honorary degrees by the University upon several distinguished members among whom was Professor L. R. Jones of the University of Wisconsin. Immediately following this colorful ceremony Professor and Mrs. Seward received the members of the congress at a garden party at Downing College of which Professor Seward is Master. It was a beautiful day. The dresses of the ladies and the scarlet robes of the Cambridge doctors against the green of the lawn and the background of stately elms and college buildings made a very pretty picture.

It is proposed to hold these international meetings every five years. Attracting as they do hundreds of botanists from all parts of the world they cannot but accomplish a great amount of good in the way of cooperation in the field of botany and, perhaps, to some extent aid in the fostering of international good will.