

## THE INTERNATIONAL BOTANICAL CONGRESS.

IF success can be measured by numbers, the Fifth International Botanical Congress was eminently successful. About 1200 members registered, and the attendance at Cambridge numbered nearly a thousand. Though a large proportion of the members were British or American, the Congress was truly international, about fifty-five different peoples being represented. Many of the members, including overseas visitors, met in London before the official opening of the Congress at Cambridge on August 16. The Linnean Society generously provided a reception room for members on the two preceding days, and threw open their rooms to members of the Congress. An exhibit, of special interest to overseas visitors, of objects from the Linnean collections had been arranged, with a printed explanatory pamphlet, which also gave an account of the origin and history of the Society. On the Friday evening members who had already arrived were received at the Imperial Institute on behalf of His Majesty's Government by the Rt. Hon. Dr. Christopher Addison, H.M. Minister of Agriculture and Fisheries. It was quite a brilliant gathering and a happy augury for the success of the Congress. After the reception members were able to inspect the galleries of the Museum illustrating the industries and products of overseas portions of the Empire. The social functions, excursions and visits to places of interest in and from London and Cambridge, afforded ample opportunity for renewing old friendships and forming new ones, and for interchange of ideas and friendly discussion, and in these respects alone, to say nothing of the more serious work, the Congress was of inestimable value.

On August 16th a move was made to Cambridge, where many of the members were accommodated in the various colleges, a new and interesting experience for some, and one which was much appreciated, especially by overseas visitors.

The Congress was accommodated in the various University Schools adjoining Downing Street, the large Examination Hall and its annexes providing ample space for meeting and reception rooms. Special thanks are due to the Secretaries, Mr. F. T. Brooks and Dr. T. F. Chipp, for the general arrangements, the smooth working of which was an important factor in the success of the meeting. The Congress opened with a plenary meeting, at which the members were welcomed by the Vice-Chancellor of the University, who emphasised the value of Latin as an international means of communication between botanists by giving his speech in that language, and by the President, Prof. A. C. Seward. After the meeting the members were received by the Master and Fellows of St. John's in the beautiful combination room and hall of the College.

Serious work occupied the mornings and afternoons of the following week, when the members met in separate sections, namely Bacteriology (president, Prof. R. E. Buchanan, Iowa State College), Phytogeography and Ecology (president, Prof. H. C. Cowles, Chicago University), Genetics and Cytology (president, Prof. O. Rosenberg,

Botaniska Institutet, Stockholms Högskola), Morphology and Anatomy (president, Prof. J. C. Schoute, Groningen, Holland), Mycology and Plant Pathology (president, Prof. L. R. Jones, University of Wisconsin), Plant Physiology (president, Dr. F. F. Blackman, Cambridge), Palæobotany (president, Dr. D. H. Scott), and Taxonomy and Nomenclature (president, Prof. L. Diels, Berlin-Dahlem). A panel of vice-presidents shared the work of each section, which had also its own recorder and secretary. The Sectional programmes comprised mainly discussions or symposia on subjects of wide interest, under which individual papers were arranged. A survey of Modern Cytology was the theme of an address by the president of the Genetics section, which also discussed Mutation, and, jointly with Taxonomy, "The Species Concept." Post-glacial Changes of Vegetation in Europe were discussed by Ecology and Palæobotany, and Geographical Distribution in relation to the Species Concept by Ecology and Taxonomy. A symposium on the beech-forests of Europe was opened by Dr. Ruebel, of Zurich, who was supported by representative ecologists from the various countries. The morphologists discussed phytonic theories, causal anatomy, floral organisation, meristems, and (with the geneticists) chimæras; one session was assigned to the algologists, who were well represented at the Congress. Subjects of general interest dealt with in Mycology were the effect of environment on disease, the differentiation and classification of plant-viruses, and the dissemination of cereal rusts. The group-titles in the Physiology section recalled headings of chapters of a text-book—carbon metabolism, permeability, growth and development, &c. Familiar items in the programme of Palæobotany were the antiquity and origin of Angiosperms, the position of the Pteridosperms, and the origin of a land-flora. Taxonomists discussed methods of furthering the advance of their special study, and envisaged an International Bureau of Plant Taxonomy which should function as a centre of information and relieve heads of individual institutions of certain routine duties. The proposal was initiated by Dr. H. M. Hall, of Stanford University, California, and included preparation and publication of a finding-list of type-specimens, the establishment of a central clearing house to assemble and transmit information as to location and means of consulting specimens and literature, and to arrange for the making of photographs, drawings, &c.; also an adequate staff and apparatus for making preparations from material received on loan and to distribute duplicate prints. The objects are admittedly excellent, but the question of finance is a difficulty. The compilation and publication by each institution of a list of the contents of the herbaria located therein would be an excellent beginning and comparatively inexpensive.

A desire for standardisation in practice and terminology was reflected in the debates of several of the sections. The ecologists discussed the classification and nomenclature of vegetation, methods of mapping vegetation, and standardisation of descriptions of plant-communities; the bacteriologists, the criteria to be used for the differentiation of bacteria and, with the mycologists, the differen-

tiation and classification of plant-viruses; and the palæobotanists, the value of stratigraphical indices. But the subject of most general interest was the consideration of the rules of botanical nomenclature by the Nomenclature subsection of Taxonomy. The formulation of the "Rules" was the burden of the work of the two earlier congresses at Vienna in 1905 and Brussels in 1910. Experience of their working in the twenty-five years which have intervened indicated the necessity for certain revision and some clarifying of doubtful points. Work of preparation had been done by an international commission appointed at the last Congress, at Ithaca, U.S.A., in 1926. Dr. Briquet, of Geneva, who had acted as Rapporteur Général at Vienna and Brussels, had the onerous duty of receiving suggestions and resolutions from botanists generally, and digesting them into a Synopsis, which was then considered individually by members of the Commission. The results of this consideration were embodied by the Rapporteur in an *Avis préalable*, which formed the basis of discussion by the subsection at Cambridge. A session was devoted each day to the discussion, with Dr. E. D. Merrill, Director of the New York Botanic Garden, as chairman. A helpful feature was the obvious desire of the delegates, representing botanical institutions from all parts of the world, to come to definite conclusions on the various points at issue, and under the guidance of the Chairman, the Rapporteur Général, and other experts this was achieved, and at the last session a resolution to the final plenary meeting of Congress was formulated embodying the amended code of rules to be prepared for press by the same editorial committee which had been responsible for the issue of the Vienna and Brussels code. Messrs. Fischer, of Jena, will publish the amended "Rules," which will be available for workers as soon as possible. Suggestions embodied in a code of rules drawn up by a subcommittee of British botanists appointed at the Imperial Botanical Conference in 1924, and a series of amendments suggested by Mr. Rehder, of the Arnold Arboretum, were especially helpful during the revision.

The starting-point for the various groups was discussed. The date of publication of Linnæus's *Species Plantarum* was adopted for Flowering Plants and Ferns (fossils excepted), and later dates for some groups of cellular plants. The principle of lists of *nomina conservanda* for genera was adopted to avoid displacement of well-known names by those of earlier date. It will be the duty of an Advisory Committee to scrutinise these lists. A plea from representatives of Forestry and Horticulture for a similar conservation of specific names on the ground of long usage was rejected by a large majority. The compulsory Latin diagnosis also evoked considerable discussion, but in the issue was accepted by a very large majority of votes. It was realised that with the increasing spread of taxonomic publication the only logical alternative to the use of Latin was to accept a diagnosis in any vulgar tongue, which would entail far more inconvenience to taxonomists than the effort to crystallise in a brief sentence the salient characters of a new genus or species. It was also pointed out that the formulation of such a diagnosis would have a useful subjective effect, while the

brief epitome, though not fulfilling the purpose of a full description, was helpful in a preliminary review of a number of descriptions for purposes of identification. The plea for compulsory full Latin descriptions was not entertained. In order to legitimise already existing diagnoses drawn up in a vulgar tongue, January 1932 was agreed upon as the date from which the rule would operate. Exceptions were allowed for Bacteriology and Palæobotany owing to strong representations that a diagnosis was impracticable. There was a general feeling against the acceptance of provisory names; for the name of a group to be valid it must have been definitely accepted by the author; doubtful cases were left for decision by an Advisory Committee. A regrouping of the rules regarding publication of names, following the suggestions of the British Committee, which made for increased clarity, was accepted, as was also a recommendation more clearly defining the typification of a new taxonomic group. The importance of fixing or indicating the types of taxonomic groups was generally accepted, and in this connection the principle of the list of standard-species for conserved genus-names, prepared by Miss M. L. Green, was accepted, as also was that of standard-species for Linnean genera, by Dr. Hitchcock and Miss Green. These lists will be carefully scrutinised by the Advisory Committee. The rule as to the subsequent use of homonyms was also made definite, and some regrouping of the rules bearing generally on the reasons for rejecting, changing, or modifying a name, proposed by the British sub-committee, was accepted. Some discussion took place on the gender of Greek or Latin words adopted as generic names. The line of least resistance was followed, namely that the name retains the gender assigned to it by its author. Finally, a fully representative international Advisory Committee was nominated with a small executive, the functions of which would be:—(1) Interpreting the Rules in doubtful cases, and issuing "opinions" on the basis of evidence submitted. (2) Considering *nomina conservanda*, and doubtful or ambiguous names, and reporting thereon to the next Congress. (3) Considering proposals for the modification of the Rules, and similarly reporting thereon. (4) Reporting on the effects of modifications of the Rules accepted at the preceding Congress.

At the second plenary meeting, held on the Wednesday, the two hundred delegates from various Governments, Universities, and Institutions were presented to the President, and Prof. F. A. F. C. Went, of Utrecht, gave an invitation from Holland for the next Congress in 1935. The invitation was unanimously accepted. At the final plenary meeting, held at noon on Saturday, resolutions from the various sections were brought forward and passed, and votes of thanks were passed to the University, the officers, and others who by their willing services had contributed to the success of the meeting.

Fine weather during most of the week was a helpful factor; the old colleges in their setting of lawns and trees were seen at their best. A pleasant function was the garden party in the beautiful grounds of Downing College, given by the President and Mrs. Seward. The Vice-Chancellor entertained the recipients of honorary degrees,

the presidents of sections, and a few others to lunch in the hall of Magdalene College, and the British members were hosts to a number of the overseas delegates at a dinner in the hall of Trinity College, kindly lent for the occasion. The University gave a courteous imprimatur to the Congress by conferring honorary degrees—Doctor of Science—on seven of the most eminent overseas members, Dr. John Briquet, of Geneva; Prof. F. L. Diels, of the Botanic Garden and Museum, Berlin; Prof. T. G. Halle, of Stockholm; Prof. L. R. Jones, of Wisconsin University; Prof. C. J. Schroeter, of Zurich; Prof. F. A. F. C. Went, of Utrecht; and, in his absence through domestic illness, Prof. A. C. Dangeard, of Paris.

Exhibits and demonstrations had been arranged in the Botany School and elsewhere illustrating many of the papers presented to the sections, and there were also various sectional and general excursions. An interesting ceremony took place on Sunday, August 17, when a select party visited Halesworth, Suffolk, the birthplace of Joseph Dalton Hooker, where a memorial to this great botanist was unveiled in the parish church by Sir David Prain.

Many of the members met again in London in the week following the Congress to take part in various excursions and visits to places of botanical interest. These included Darwin's residence, Down, Kent; the Royal Botanic Gardens, Kew; the Department of Botany, British Museum; Rothamsted Experimental Station; the Royal Horticultural Society's Garden, Wisley; the John Innes Horticultural Institution, Wisley; and the Nurseries of Messrs. Sutton & Carter. Special arrangements were made for the reception, entertainment, and interest of the visitors by those in charge of the various institutions and establishments, and these visits afforded a pleasant and interesting epilogue to an eminently successful meeting.—A. B. R.

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