

The rooms containing the stalactites and stalagmites are similar to those described by Professor Ellis in *SCIENCE* for January 16, 1931. The roof and walls are four feet thick and are made of brick set in lime mortar. The roof is covered with vegetation, as at Fort Pickens. Apparently the date of construction, the date of abandonment and the climatic conditions agree with the corresponding elements in the situation at Fort Pickens, which is fifty-five miles due east on the shore of the Gulf of Mexico.

At the time of my last visit water was still dropping very slowly from the ceilings—the result of a recent torrential downpour caused by a hurricane. Scores of stalactites were noted in each of a dozen rooms, the longest being eight inches. The caretaker said that

tourists break off the longest. The stalactites are about the thickness of a lead pencil, are hollow inside and quite frail.

On the floors were noted a number of stalagmitic deposits, broad and low in make-up, overlying the charred remains of roof-timbers and window-casings that the caretaker said had fallen as a result of a fire in the year 1930. The largest stalagmitic deposit seen on a charred timber was three fourths of an inch high and eight inches in diameter. Hence it would seem that it had grown three fourths of an inch in two years.

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## SCIENTIFIC MEETINGS

### THE SIXTH INTERNATIONAL CONGRESS OF GENETICS

THE sixth International Congress of Genetics was held from August 24 to 31, inclusive, at Cornell University, Ithaca, N. Y. The registered members numbered about 700, of which 550 were in attendance. In spite of adverse economic conditions there was a representative and distinguished group of European geneticists on hand.

Official delegates from foreign governments were as follows: *Belgium*: M. le Prof. L. Frateur and M. le Prof. R. Vandendries; *Chile*: Señor Don Manuel Elgueta y Guerrin; *Denmark*: Prof. Dr. Ojvind Winge; *Finland*: Prof. Harry Federley; *France*: M. le Prof. A. Vandel; *Great Britain*: Professor R. Ruggles Gates, Ph.D., F.R.S., and Professor F. A. E. Crew, D.Sc., Ph.D.; *Italy*: Prof. Alessandro Ghigi, Prof. Cesare Artom, Prof. Fabio Frassetto, Prof. Corrado Gini and Prof. Carlos Jucci; *Norway*: Prof. Dr. Otto Lous Mohr; *Spain*: Señor Don Antonio de Zulueta y Escolano.

The program consisted of a series of invitation papers on special topics; contributions from members of the congress either as papers or exhibits; meetings of the congress as a whole in two plenary sessions, as well as of various groups interested in special topics; and social events.

The morning sessions numbered five with the following programs:

1. *General Genetics*: Professor T. H. Morgan, *chairman*
  - (a) "Mendelism in Man," Dr. C. B. Davenport, Cold Spring Harbor, N. Y.
  - (b) "Inheritance of Educability," Dr. F. A. E. Crew, Edinburgh.
  - (c) "The Use of Mosaics in the Study of the Developmental Effects of Genes," Dr. A. H. Sturtevant, Pasadena.
  - (d) "The Present Status of Maize Genetics," Professor R. A. Emerson, Ithaca, N. Y.
2. *Mutations*: Dr. C. B. Davenport, *chairman*
  - (a) "On the Potency of Mutant Genes and Wild-type Allelomorphs," Dr. O. L. Mohr, Oslo.
  - (b) "Mutations of the Gene in Different Directions," Dr. N. Timoféeff-Ressovsky, Berlin-Buch.
  - (c) "The Genetic Nature of Induced Mutations in Plants," Professor L. J. Stadler, Columbus, Missouri.
  - (d) "Further Studies on the Nature and Causes of Gene Mutations," Professor H. J. Muller, Austin, Texas.
3. *The Interrelations of Cytology and Genetics*: Dr. R. Ruggles Gates, *chairman*
  - (a) "The Cytological Basis for Crossing-over," Dr. Karl Sax, Forest Hills, Mass.
  - (b) "Neuere Ergebnisse über die Genetik und Zytologie des Crossing-over," Dr. Curt Stern, Berlin-Dahlem.
  - (c) "The Nature of Sex-chromosomes," Dr. O. Winge, Copenhagen.
4. *Genetics of Species Hybrids*: Dr. W. E. Castle, *chairman*
  - (a) "The Species Problem in *Datura*," Dr. A. F. Blakeslee, Cold Spring Harbor, N. Y.
  - (b) "Konjugation der artfremden chromosomen," Dr. H. Federley, Helsingfors.
5. *Contributions of Genetics to the Theory of Organic Evolution*: Dr. R. Goldschmidt, *chairman*
  - (a) "Genetik der geographischen Variation," Dr. R. Goldschmidt, Berlin-Dahlem.
  - (b) "The Process of Evolution in Cultivated Plants," Dr. N. Vavilov, Leningrad.
  - (c) "The Evolutional Modification of Genetic Phenomena," Dr. R. A. Fisher, Harpenden.
  - (d) "Can Evolution be Explained in Terms of at Present Known Genetical Causes?" J. B. S. Haldane, Merton.

- (e) "The Rôles of Mutation, Crossbreeding, Inbreeding and Selection in Evolution," Professor S. Wright, Chicago, Ill.

Among the features of the general program, the exhibition garden of live plants was outstanding. The preparation of all exhibits was under the general direction of Dr. M. Demerec. The garden was especially under the care of Dr. R. A. Emerson and members of the department of genetics at Cornell University. It included the main types of genetical interest in *Antirrhinum*, *Impatiens*, *Linum*, *Lycopersicum*, *Medicago*, *Melandrum*, *Nicotiana*, *Oenothera*, *Papaver*, *Petunia*, *Pharbitis*, *Phleum*, *Pisum*, *Raphanobrassica*, *Soja*, *Solanum*, *Sorghum*, Sunflower, *Vicia*, *Viola* and *Zea*, as well as plots showing disease resistance, floriculture and a collection of garden vegetables.

Other exhibits shown in the various rooms and laboratories numbered 15 types of invertebrate and 11 types of vertebrate animals, 4 types of lower plants, 31 types of higher plants, 13 types of garden vegetables and 20 types in the floricultural group. There were also exhibits dealing with fruit genetics and breeding, coffee, improvement of cultivated plants, tree breeding for timber production, varieties recommended by State Crop Improvement Associations, general cytology, cytology of *Triticum*, *Hordeum* and *Avena*, materials for elementary laboratory courses in genetics, pure cultural methods, quantitative phylogeny, radiation and genetics, and an international auxiliary language. A total of approximately 370 individual exhibits were listed.

In addition, over two hundred papers were included in the general program. These were presented on three afternoons in the following number of sectional meetings: General Genetics 2, Cytology 3, Animal Genetics 2, Human Genetics, Methods and Technique, Genetics and Phytopathology, Plant Genetics 2, Chromosome Structure and Crossing-over, Genetics of Species Hybrids, *Drosophila*, Problems Relating to Sex and Fertility, Genetics and Pathology. The chairmen of these sections included the following: Dr. E. C. MacDowell, Professor C. E. Allen, C. Jucci, Professor S. J. Holmes, J. Clausen, R. Vandendries, Dr. C. W. Metz, J. Hammond, S. C. Harland, C. D. Darlington, H. Federley, Dr. G. H. Shull, Professor B. M. Davis, M. Skalinska, Dr. A. H. Sturtevant, H. Nachtsheim, and Dr. F. A. E. Crew. The program was in charge of Dr. E. M. East as chairman of the program committee.

Special groups interested in sire valuation, corn genetics, mouse genetics, human heredity, poultry linkage and gene problems met for one or more informal evening sessions.

On Wednesday, August 21, the congress members visited the New York Agricultural Experiment Station at Geneva, New York. Here the program included an address of welcome by Professor U. P. Hedrick, a section on fruit and vegetable breeding, exhibits of fruit breeding, vegetable breeding, physiology, cytology, bacteriology, chemistry, animal breeding, entomology and publications. Five outdoor tours were also conducted. After a dinner and entertainment, the members returned to Ithaca.

On August 24, the opening day, the first plenary meeting was held. This was followed by an informal reception at Willard Straight Hall. In the receiving line were Provost A. R. Mann, of Cornell University, and all the members of the executive council of the congress.

At the plenary session it was decided to leave to the *ad interim* committee, to be elected at the final plenary session, the choice of the meeting place of the seventh congress to be held in 1937. A nominating committee, with Dr. T. H. Morgan as chairman, was also appointed to bring in names for the personnel of the *ad interim* committee. Two other committees were elected; one on resolutions with H. Federley as chairman and one on greetings to absent colleagues with Dr. G. H. Shull as chairman.

On August 25 a general meeting was held in the evening. The program consisted of organ music by F. S. Andrews, assistant university organist of Cornell University, an address of welcome by Provost A. R. Mann, a response by Dr. Richard Goldschmidt and the presidential address on "The Rise of Genetics," by Dr. T. H. Morgan.

At the final plenary session an *ad interim* committee to serve until the 1937 Congress was selected as follows:

Austria, E. von Tschermak-Seysenegg  
 Belgium, René Vandendries  
 Denmark, Ö. Winge  
 Finland, Harry Federley  
 France, Roger de Vilmorin  
 Germany, Richard Goldschmidt  
 Great Britain, J. B. S. Haldane  
 Holland, Tinne Tammes  
 Italy, Alessandro Ghigi  
 Japan, Seiitiro Ikeno  
 Norway, Otto L. Mohr  
 Sweden, H. Nilsson-Ehle  
 Switzerland, Otto Schlaginhaufen  
 Union of Socialist Soviet Republics, N. Vavilov  
 United States of America, R. A. Emerson

The following official delegates from institutions and societies were presented to the congress:

*Argentina:*

University of Buenos Aires, S. Horovitz,

*Brazil:*

Agronomical Institute of the State of Campinas, Carlos Arnaldo Krug.

*British Empire:*

*Canada:* University of Laval, Monsieur l'Abbe Maurice Proulx; University of Montreal, M. le Prof. Henri Prat.

*West Indies:* The Empire Cotton Growing Corporation, Dr. S. C. Harland.

*France:*

Ministry of Public Instruction, M. le Prof. Henri Prat.

*Germany:*

German Genetics Society, Prof. Dr. R. Goldschmidt.  
Kaiser Wilhelm Society for Advancement of Science,  
Prof. Dr. R. Goldschmidt.

*Holland:*

Dutch Genetical Society, Miss Dr. J. A. Leliveld.

*Italy:*

Central Institute of Statistics of Italy, Prof. Corrado Gini.

Committee for the Study of Population Problems, Prof. Corrado Gini.

Italian Society of Genetics and Eugenics, Prof. Corrado Gini, Prof. Cesare Artom and Prof. Alessandro Ghigi.

Ministry of National Education, Prof. Alessandro Ghigi, Prof. Corrado Gini and Prof. Cesare Artom.

*Norway:*

University of Oslo, Prof. Dr. Cristine Bonnevie.

*Poland:*

Free University of Poland, Mrs. M. Skalinska, Ph.D.

*United States of America:*

Department of Agriculture and Commerce, Puerto Rico, Arturo Roque.

National Institute of Social Sciences, Albert F. Blakeslee, Ph.D.

University of Florida, B. A. Bourne.

On recommendation of the committee on greetings, messages were sent to the following geneticists: E. Baur, C. Correns, K. Pearson, E. von Tschermak-Seysenegg, H. de Vries, E. B. Wilson. Greetings were also sent to the vice-presidents not attending. These included A. H. Buller, H. Nilsson-Ehle, E. Malinowski, L. Cockayne, Y. Tanaka, L. Cuénot, D. Paolo Enriques, V. Gregoire and A. Ernst.

On recommendation of the committee on resolu-

tions, the following action was taken: Votes of thanks to Cornell University, the local committee and to the members of the organization committee and executive council. A resolution that the congress approves the suggestion of Professor Tinne Tamme that the problem of standardizing genetic symbolism and nomenclature should be reconsidered and that the Genetic Societies of all countries concerned are asked to appoint committees which shall cooperate and prepare recommendations to be published two years before and to be discussed at the next International Genetics Congress.

The social program included an interesting and adequate series of events for visiting ladies. There were also excursions to spots of scenic beauty near to Ithaca, such as Watkins Glen, Enfield Glen and Taughannock State Park. At the latter an outing and picnic supper attended by 800 were held.

In spite of difficulties encountered in financing the congress, it appeared to be the general consensus of opinion that the occasion as a whole was extremely successful. Columbia University, the Carnegie Corporation, the Carnegie Endowment for International Peace, as well as the many institutions and individuals who contributed, all deserve their share of credit for making the congress possible.

Dr. Otto Mohr was asked to serve as chairman of the *ad interim* committee and to initiate the discussions within the committee concerning the place at which the next congress would be held. It was understood that full authority to settle this question is delegated to this committee, which is to act as representative of the international congress as a whole and is to reach its decisions without special consideration for the countries represented by its chairman or members. When it has reached a decision, it will transfer its functions to a committee to be formed by the country in which the Seventh International Congress of Genetics is to be held.

C. C. LITTLE,  
*Chairman of the Executive Council  
and Secretary-General of the  
Sixth International Con-  
gress of Genetics.*

## SCIENTIFIC APPARATUS AND LABORATORY METHODS

### SUCCESSFUL CAGE REARING OF *ANOPHELES QUADRIMACULATUS*<sup>1</sup>

Two years ago the result of efforts to establish a perpetuating colony of *Anopheles quadrimaculatus* in an insectary was reported.<sup>2</sup> While small numbers

<sup>1</sup> The studies and observations on which this paper is based were conducted with the support and under the auspices of the International Health Division of the Rockefeller Foundation.

of fertile ova were secured from cage-reared parents, the work was not deemed a success, inasmuch as reproduction in the insectary took place at a diminishing rate, which was bound to result in the early extinction of the strain employed.

Recently, in conjunction with studies of induced malaria, efforts to rear anophelines were resumed,

<sup>2</sup> Boyd, *Am. Jour. Trop. Med.*, X, 165. 1930.