SCIENCE

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FRIDAY, JULY 8, 1904.

CONTENTS:

MSS. intended for publication and books, etc., intended for review should be sent to the Editor of SCIENCE, Garrison-on-Hudson, N. Y.

THE INTERNATIONAL CONGRESS OF ARTS AND SCIENCE.

THE program has now been issued of the congress to be held as part of the Louisiana Purchase Exposition from September 19 to 25 of the present year. The purpose and plan of the congress are thus described:

The idea of the congress grows out of the thought that the subdivision and multiplication of specialties in science has reached a stage at which investigators and scholars may derive both inspiration and profit from a general survey of the various fields of learning, planned with a view of bringing the scattered sciences into closer mutual relations. The central purpose is the unification of knowledge, an effort toward which seems appropriate on an occasion when the nations bring together an exhibit of their arts and industries. An assemblage is, therefore, to be convened at which leading representatives of theoretical and applied sciences shall set forth those general principles and fundamental conceptions which connect groups of sciences, review the historical development of special sciences, show their mutual relations and discuss their present problems.

The speakers to treat the various themes are selected in advance from the European and American continents. The discussions will be arranged on the following general plan:

After the opening of the congress on Monday afternoon, September 19, will follow, on Tuesday forenoon, addresses on main divisions of science and its applications, the general theme being the unification of each of the fields treated. These

that of Miller on the constitution of ephedrine; the researches of Paul and Cownley on the alkaloids of ipecac; and those of Fischer, Schlotterbeck and others on various alkaloids, which have been published in the past few years in the *Proceedings of the American Pharmaceutical Association.* The physiological properties given in connection with some of the alkaloids might well be omitted in a work of this kind, particularly as a few of them are not entirely accurate. The index would be more helpful if the plant names were included in all cases, in addition to the names of the alkaloids derived from them. An enlargement on the parts dealing with physical properties and important chemical tests would add to the value of the book and make it appreciated by a larger number.

HENRY KRAEMER.

SCIENTIFIC JOURNALS AND ARTICLES.

THE June number (volume 10, number 9) of the *Bulletin of the American Mathematical Society* contains: Report of the April Meeting of the Chicago Section of the Society, by T. F. Holgate; 'The Heine-Borel Theorem,' by Oswald Veblen; 'On Self-Dual Scrolls,' by C. H. Sisam; 'On Some Tendencies in Geometric Investigations,' by Corrado Segre; Reply to Professor Snyder's Review of Study's Geometrie der Dynamen, by Eduard Study, with Note by Virgil Snyder; 'Notes'; 'New Publications.'

The July number of the *Bulletin* contains: Report of the April Meeting of the Society, by F. N. Cole; Report of the April Meeting of the San Francisco Section, by G. A. Miller; 'On Linear Homogeneous Difference Equations and Continuous Groups,' by Saul Epsteen; Review of Warren's Experimental and Theoretical Course of Geometry, by R. E. Moritz; a number of 'Shorter Notices'; 'Notes'; 'New Publications'; 'Thirteenth Annual List of Published Papers'; Index of Volume 10.

A general index of the *Bulletin,* from 1891 to 1904, is in preparation.

The American Journal of Science for July contains the following articles:

H. A. BUMSTEAD: 'Atmospheric Radio-activity.'

T. HOLM: 'Studies in the Cyperaceæ.'

C. E. BEECHER: 'Note on a New Permian Xiphosuran from Kansas.'

C. BASKERVILLE and G. F. KUNZ: 'Kunzite and its Unique Properties.'

R. O. E. DAVIS: 'Analysis of Kunzite.'

E. H. KRAUS: 'Occurrence of Celestite near Syracuse, N. Y., etc.'

L. F. WARD: 'Famous Fossil Cycad.'

H. A. PERKINS: 'Comparison of Two Ways of Using the Galvanometer.'

H. E. MEDWAY: 'Further Work with the Rotating Cathode.'

H. L. BRONSON: 'Transverse Vibrations of Helical Springs.'

D. B. STERRETT: 'New Type of Calcite from the Joplin Mining District.'

J. TROWBRIDGE and W. ROLLINS: 'Radium and the Electron Theory.'

J. P. ROWE: 'Pseudomorphs and Crystal Cavities.'

SOCIETIES AND ACADEMIES.

THE TORREY BOTANICAL CLUB.

THE club met in the morphological laboratory at the New York Botanical Garden, March 30, 1904.

The first paper on the scientific program was 'Notes on the Cytology of the Aquatic Fungi,' by Dr. Cyrus A. King. Schroeter's classification of the Phycomycetes was reviewed and attention called to the fact that the conidia of the Peronosporineæ resemble sporangia since they germinate by forming internal zoospores. In the Saprolegniaceæ, according to Trow, the eggs are at first multinucleate, all except the sexual nucleus in each egg being disposed of by digestion. Dr. King's researches have shown that in the Leptomitaceæ, as far as known, the oogonia are at first multinucleate and the supernumerary nuclei are disposed of by migrating to the periphery of the cell where they are cut off in a distinct periplasm. In *Araiospora* the peripheral nuclei surround themselves with cell walls in such a way that the ooplasm is surrounded by a layer of periplasmic cells. In *Sapromyces* there is also a periplasm in which the nonsexual nuclei are cut off; it is, however, reduced to a very thin layer. The formation of a body in the center of the egg