# SCIENCE

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

## *THE FUNDAMENTAL PROBLEMS OF PRESENT DAY PLANT MORPHOLOGY.*[1]

A FEW months ago I was in Jena in order to attend the unveiling of the statue there erected to M. Schleiden. Now there is hardly any other place which has been of so much significance in the development of plant morphology as this small university town. It was there that Goethe, the originator of the term 'morphology,' busied himself with morphological studies, and founded the idealistic system which has influenced our thought—often unsuspectedly—till the present day. There Schleiden, in outspoken opposition to the conceptions of the idealistic morphology, gave new life to the theory of development founded by Caspar Frederick Wolff in a neighboring hall in the middle of the eighteenth century, and so paved the way for the brilliant discoveries of William Hofmeister. And who does not know what meaning Jena has won as the citadel of phylogenetic morphology, first through the work of Haeckel in zoology and later through that of Strasburger in botany? In such a morphological atmosphere the question forces itself upon us, in what relation do the morphological questions of the present stand to those of the past? Are they still unchanged in spite of the immense increase of empirical ma-

[1] Lecture delivered at the Congress of Arts and Science in St. Louis, September 21, 1904, by Professor K. Goebel, University of Munich; translated by Professor F. E. Lloyd. The theme was proposed by the Direction of the Congress. Since the time allowed for the lecture was but forty-five minutes, the various questions could be indicated merely.

*SCIENTIFIC JOURNALS AND ARTICLES.*

THE *American Journal of Science* for July contains the following articles:

D. A. KREIDER: 'Iodine Titration Voltameter.'

F. A. GOOCH: 'Handling of Precipitates for Solution and Reprecipitation.'

R. H. ASHLEY: 'Estimation of Sulphites by Iodine.'

M. TALBOT: 'Revision of the New York Helderbergian Crinoids.'

L. V. PIRSSON: 'Petrographic Province of Central Montana.'

T. HOLM: 'Croomia pauciflora.'

E. RUTHERFORD and B. B. BOLTWOOD: 'Relative Proportion of Radium and Uranium in Radioactive Minerals.'

J. TROWBRIDGE: 'Side Discharge of Electricity.'

H. L. BRONSON: 'Effect of High Temperatures on the Rate of Decay of the Active Deposit from Radium.'

THE contents of the June issue, *Terrestrial Magnetism and Atmospheric Electricity,* are as follows:

*Frontispiece:* Portrait of Karl Selim Lemström.

H. GERDIEN: 'Die Absolute Messung der specifischen Leitfähigkeit und der Dichte des verticalen Leitungsstromes in der Atmosphäre.'

J. DE MOIDREY, S.J.: 'Mesures magnétiques en Chine.'

H. F. REID: 'Records of Seismographs in North America and the Hawaiian Islands.'

HJ. TALLQUIST: 'Karl Selim Lemström, His Life and Work.'

E. BIESE: 'Verzeichniss der Publicationen des verstorbenen Professors Selim Lemström.'

*Letters to Editor*—L. A. BAUER: 'Work of the Department of Terrestrial Magnetism of the Carnegie Institution for 1905.' W. F. WALLIS: 'Principal Magnetic Disturbances Recorded at Cheltenham Magnetic Observatory, March 1 to May 31, 1905.'

*Notes*—'Additional Eclipse (August 30, 1905) Stations.' 'Miscellaneous.'

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*SOCIETIES AND ACADEMIES.*

THE MISSOURI SOCIETY OF TEACHERS OF MATHEMATICS.

THE past few years has been a very widespread movement among teachers of mathematics towards the organization of local, state and sectional associations of teachers of mathematics. This movement is both a result and a cause of a very general dissatisfaction with methods of teaching mathematics in the recent past, and of various kinds of attempts to improve them. Among the many ideas that are prominently discussed are those suggested by the terms correlation, laboratory methods, individual instruction, self-activity, graphical methods, etc. The facts of modern life are furnishing material which is replacing obsolete problems. An effort is being made to bring mathematics into vital relations with the whole of life. Even the long undisturbed supremacy of the methods of Euclid in secondary education is being questioned. What will it lead to? Even the elementary teacher can not fail to see what the investigator has never lost sight of, that he is dealing not with a completed, a dead, a petrified subject, but with one of the most vigorous, living, growing subjects taught in our schools. Perhaps one of the strongest evidences that this is the case is seen in the large number of state and sectional organizations of teachers of mathematics throughout the country.

The first annual meeting of the Missouri Society of Teachers of Mathematics met at Columbia, Missouri, May 6, 1905. A preliminary meeting had been held at St. Louis in connection with the National Educational Association. The temporary organization of the society was effected at the meeting of the State Teachers' Association at Columbia, December 28, 1904. At a meeting of the mathematics section of that body a committee of organization was appointed, consisting of E. R. Hedrick, University of Missouri, Columbia; H. C. Harvey, State Normal School, Kirksville, and B. T. Chace, Manual Training High School, Kansas City.

The permanent organization was completed at the meeting on May 6. The constitution provides that there shall be at least two meetings each year, one in connection with the annual meeting of the State Teachers' Association, the next meeting of which will be held at Jefferson City, December 1905, and one during the month of April or May, which shall be the annual meeting for the election of officers and the transaction of general busi-