

THE formal opening of the new chemistry building of the University of South Dakota, Vermillion, was celebrated on October 12 and 13. Professor Louis Kahlenberg, of the University of Wisconsin, delivered the address on that occasion. His subject was "The Chemical Aspects of Osmosis." He also spoke at convocation of the university on the subject "Important Factors in choosing Life's Work."

THE *Journal* of the American Medical Association states that an important branch of the department of pathology in the Johns Hopkins University, to be devoted entirely to research work, will be opened within the next six weeks in the pathologic building, after Dr. William H. Welch returns from China. The rooms to be occupied in the new work have been equipped with scientific appliances and instruments costing several thousand dollars. A fund aggregating \$22,000 has been raised for supporting the work for three years. In the absence of Dr. Welch, Dr. Milton C. Winternitz, his first assistant, has been directing the work.

PROFESSOR ALFRED H. LLOYD, of the department of philosophy, has been appointed to succeed the late Professor Karl E. Guthe as dean of the University of Michigan Graduate School.

DR. WILLIAM G. SPILLER has been elected professor of neurology in the medical school of the University of Pennsylvania, filling the vacancy made by the resignation of Dr. Charles K. Mills. Dr. Mills has been elected professor emeritus.

DR. JOHN C. DONALDSON, recently from the Johns Hopkins Medical School and the Phipps Psychiatric Institute, has been appointed instructor in anatomy at the University of Cincinnati. Dr. Edward F. Malone has been advanced to be associate professor of anatomy in the same university.

DR. WESLEY M. BALDWIN has resigned as assistant professor of anatomy from the Cornell University Medical College to accept the position of professor of anatomy at the Albany Medical College. Dr. Charles V. Morrill has been appointed instructor in anatomy and

Dr. Robert Chambers, assistant in anatomy at the Cornell University Medical College.

At the Stevens Institute of Technology Mr. Samuel H. Lott, instructor in descriptive geometry and mechanical drawing has been appointed assistant professor. Mr. L. C. F. Horle, assistant in physics, and Mr. Lewis A. Belding, assistant in electrical engineering, have been made instructors.

DR. RICHARD M. HOLMAN, who received the degree of doctor of philosophy at the University of California in May, has been elected a member of the staff of botany of the University of Michigan. Before attending the University of California Dr. Holman spent two years in study at Leipzig with Dr. Pfeffer. Previous to that time and after graduating from Leland Stanford Junior University he was a member of the faculty of the University of the Philippines.

DR. CHAS. O. CHAMBERS, formerly of Peabody College, Nashville, Tenn., has taken up his work as head of the department of botany and station botanist at the Oklahoma College.

THOMAS L. PATTERSON, for the past three years associate professor of biology and physiology in the University of Maryland, school of medicine, has assumed the duties of assistant professor of physiology in the faculty of medicine of Queen's University, Kingston, Canada.

DISCUSSION AND CORRESPONDENCE

INTERNATIONAL RULES OF ZOOLOGICAL NOMENCLATURE

TO THE EDITOR OF SCIENCE: Frequent requests come to me for an English edition of the International Rules of Zoological Nomenclature, as emended to date.

The Rules in question are published in the following places:

English: Proceedings of the Ninth International Congress on Zoology, held at Monaco, March, 1913, published by the Imprimerie Oberthur, Rennes, France, 1914.

French: By Maurice Cossmann (*Revue Critique de Paléozoologie*), 110 Faubourg Poissonnière, Paris, France, 1914. Price 5 francs.

Italian: Regole Internazionali della Nomenclatura Zoologica. Translated by Professor F. S. Monticelli, and published by Luigi Niccolai, Florence, Italy, 1914. Price 5 lira.

Several unsuccessful attempts have been made to obtain a reprint in English, but the outlook for sale has been so indefinite, or other points have arisen, so that publishers have not been inclined to undertake the work as a business venture. Finally, in order to make it possible for zoologists to obtain a copy of the rules to date, arrangements have been made for a mimeographed edition of all the rules, with cross references to the opinions, and with an appendix containing summaries of the opinions No. 1 to No. 56.

This mimeographed edition is issued by T. O. Smallwood, 3216 N Street, Washington, D. C., price per copy 50 cents, plus 10 cents postage.

C. W. STILES,
Secretary to Commission

GERMINATING POLLEN

TO THE EDITOR OF SCIENCE: In the past, a number of requests have come in asking for the method employed by this station in determining the germinability of pollen of deciduous tree- and bush-fruits. Others who are interested in this matter will find the following method useful.

Mature pollen, either directly from the anther, or that which previously has been collected and stored, is used. Van Tieghem cells or 10×20 mm. moist chamber rings are fastened to ordinary microscope object slides by means of soft paraffin, employing as little as possible of the latter, and yet secure a waterproof joint. Put one or two drops of water into the cell and at two or three points about the upper edge place tiny drops of vaseline. This is better than the smearing of the entire circumference, since it serves as well to hold the cover in place and does not exclude air. Next place a small drop of the germinating medium in the center of a cover glass having a diameter somewhat greater than that of the cell. We employ 22 mm. squares. If the medium tends to spread over the glass, spread

very thinly with vaseline and wipe with a dry cloth until the vaseline apparently has been removed. Sow the pollen grains evenly and sparingly over the surface of the drop by means of a needle or camel's-hair brush. If the latter is used hold it above the drop and tap lightly to scatter the pollen. Pollen may be used directly from the expanded anther by touching the latter to the germinating medium. Quickly invert the cover, place over the cell, and press it down gently, having the drop of germinating medium approximately in the center. A temperature of 22° to 25° Centigrade is best.

The germinating medium is the most important item. It may be necessary to vary its composition for the several varieties of fruits or even for the same variety, depending upon prevailing environmental conditions under which the pollen developed or has been stored.

Sometimes a 3 per cent. to 10 per cent. aqueous solution of cane sugar is entirely satisfactory. If there is considerable bursting of the pollen grains soon after sowing, increase the percentage of sugar; decrease the amount if plasmolysis takes place. Solutions should be made up fresh each day. Frequently it has been impossible to secure the optimum germination from simple sugar solutions. Most of the difficulties were avoided and excellent results obtained, when from $\frac{1}{2}$ per cent. to 2 per cent. gelatin was added to the medium. The gelatine is first made up as a 4 per cent. or 8 per cent. solution. Soak the gelatin in cold water, then dissolve with the least possible heating. This solution, without sugar, will remain fit for use for several days. From this stock solution of gelatin, dilutions are readily obtained. In making up the germinating medium the diluted gelatin solution is reckoned as water and the cane sugar added directly to it. While not absolutely exact, perhaps, the method is sufficiently accurate. Thus, for a 4 per cent. solution of sugar in $\frac{1}{2}$ per cent. gelatin, add one gram cane sugar to 24 c.c. of a $\frac{1}{2}$ per cent. gelatin solution. Combinations of 3 per cent. to 12 per cent. cane sugar in $\frac{1}{2}$ per cent. to 2 per cent. gelatin have proved very satisfactory. No definite combi-