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THE NATIONAL ACADEMY OF SCIENCES[1]

ADDRESS OF WELCOME BY THE PRESIDENT OF THE UNIVERSITY OF PENNSYLVANIA

THE University of Pennsylvania has special gratification in extending a hearty welcome to the members of your distinguished body in the annual meeting which you are holding this week within our halls. You bring to our campus a group of scientists and educators who feel a certain definite obligation to the state in the several fields in which they are involved. Your association is one of creative possibilities. As your president pointed out in his remarks at the dinner of the academy a year ago your organization traces its origin into Colonial times, but there is a certain significance to the impetus which the movement gained through its incorporation under the approval of Abraham Lincoln at the time of our Civil War. And one reads with new inspiration these words from the first annual report of the academy submitted to Congress a year later:

It is a remarkable fact in our annals that, just in the midst of difficulties which would have overwhelmed less resolute men, the 37th Congress of the United States, with an elevated policy worthy of the great nation which they represented, took occasion to bring the scientific men around them in council on scientific matters, by creating the National Academy of Sciences. Such has been the way in which the public mind has been stirred before in the annals of other countries, leading to the organization of great systems of education, science, art and literature, to be encouraged and perfected when more peaceful and prosperous times recurred.

This historic association augments the significance of the academy by the tradition of a great man, the mere mention of whose name makes us search our hearts with a view of doubling the earnestness of our efforts.

Now that the progress of civilization is imperiled by the unbridled and destructive forces of evil which

[1] Autumn meeting held at the University of Pennsylvania, Philadelphia, October 28, 29 and 30, 1940.

the use of a standard preparation, a great deal of saving will be accomplished without sacrificing the accuracy of the assay.

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CELLOPHANE COVER SLIPS AND A METHOD FOR MOUNTING

BECAUSE the price and paucity of cover glasses used in the preparation of microscope slides have become almost prohibitive of their use, an efficient, economical substitute has been sought. O'Brien and Hance[1] have stated that isobutyl methacrylate may be used to replace the cover. This has not been found practical when slides are produced in large numbers. The solution seems also to detract from the brilliancy of the stain. Suntzeff and Smith[2] recommend a plastic, cellulose acetate, obtained in sheets the approximate thickness of No. 1 cover glasses. They experience some difficulty in its use because the plastic tends to curl unless the slides are carefully dried at room temperature for five to six days.

Plain transparent Cellophane[3] has been used in our laboratory during the past seven months. Cellophane covers have a refractive index of 1.53, dry rapidly and without curling, are very thin and inexpensive. Cellophane can be obtained in rolls 15/16ths inch wide, slightly less than the width of a slide. Strips of the desired length are cut as needed. No. 300 plain Cellophane seems to be most satisfactory. It is .00088 inch (0.022 mm) thick. (No. 1 cover slips average 0.13 mm in thickness.) It is possible to take photomicrographs from slides having Cellophane covers. Oil immersion does not affect Cellophane but for high magnifications replacements with glass covers may prove desirable.

The only difficulty so far encountered in the use of Cellophane as a substitute for glass cover slips has been the storage of the roll. During the winter months it can be kept at ordinary room temperatures, but under more humid conditions the Cellophane absorbs moisture, the edges of the roll wrinkle and will not lie smoothly. This wrinkling can be avoided by storing the roll of Cellophane in a desiccator, but continued storage over a long period causes warping and cracking.

Moistureproof Cellophane is less susceptible to atmospheric changes, but it too will wrinkle, and does not seem to be quite as clear as the plain. Cellulose acetate[4] No. 88 was tried, but was found not to adhere to the slide when dry. This is probably caused by the xylol used to mount the covers.

A method long used for mounting glass covers is successful with Cellophane as well. Instead of leaving the slides to dry in trays they are turned face down on clean paper towels and xylol is pipetted between them. An extra towel on top readily absorbs any excess on the back of the slide. In 15–30 minutes the slides are ready for use. This method has several advantages: (1) it insures a thin layer of mounting medium under the cover, (2) the slides are ready for immediate use. Further drying in an oven is entirely unnecessary, (3) it removes any excess mounting medium, leaving the edges and ends of the slide clean and dry. Canada balsam was first used in this manner but since the appearance of an article by Groat[5] we have used Clarite exclusively. It dries more rapidly than balsam, is clear and adheres well to Cellophane.

IRENE BUCHOLTZ

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[1] O'Brien and Hance, SCIENCE, 91: 412, 1940.
[2] Suntzeff and Smith, SCIENCE, 92: 17–18, 1940.
[3] A du Pont product obtained through H. D. Catty Distributing Company, 3311 Carroll Avenue, Chicago, Illinois.
[4] Courtesy of du Pont Company.
[5] R. A. Groat, *Anat. Record*, Vol. 74, No. 1, 1939.

BOOKS RECEIVED

ALLEN, PAUL W. and GEORGE M. CAMERON. *Microbiology Laboratory Manual.* Pp. 243. Illustrated. Mosby. $2.00.

Boletim do Museu Nacional. Vol. XII. Numero 3–4. Setembro-Dezembro, 1936. Pp. 138. Illustrated. *Vol. XIII. Numero 1–2. Marco-Junho, 1937.* Pp. 313. Illustrated. *Vol. XIII. Numero 3–4. Setembro-Dezembro, 1937.* Pp. 175. Illustrated. Museu Nacional, Rio de Janeiro.

Carnegie Institution of Washington. *Publication 514, Contributions to Paleontology; Studies of Cenozoic Vertebrates and Stratigraphy of Western North America.* Pp. 194. Illustrated. $3.25. *Publication 518, Contributions to Embryology, Vol. XXVIII, Nos. 170 to 178.* Pp. 451. Illustrated. $5.00. The Institution.

CROXTON, FREDERICK E. and DUDLEY J. COWDEN. *Applied General Statistics.* Pp. xxv + 944 + xiii. Illustrated. Prentice-Hall. $4.00.

D-G Biology Test Sheets. Loose-leaf. Illustrated. Denoyer-Geppert. Chicago.

GETMAN, FREDERICK H. *The Life of Ira Remsen.* Pp. 172. Illustrated. Messner. New York. $3.00.

GUDGER, EUGENE W., Editor. *The Bashford Dean Memorial Volume: Archaic Fishes. The Breeding Habits, Reproductive Organs and External Embryonic Development of Chlamydoselachus, Based on Notes and Drawings by Bashford Dean.* Pp. 523–633. 33 figures. 6 plates. American Museum of Natural History.

LANG, WILLIAM D., STANLEY SMITH and HENRY D. THOMAS. *Index of Paleozoic Coral Genera.* Pp. v + 231. British Museum. 15/.

MERCHANT, I. A. *Veterinary Bacteriology.* Pp. viii + 628. 135 figures. Iowa State College Press, Ames. $7.00.

Pennsylvania State College Bulletin No. 29; Petrology and Genesis of the Third Bradford Sand. PAUL D. KRYNINE. Pp. vi + 134. 37 figures. The College. 50 cents.

THONE, FRANK. *The Microscopic World.* Pp. 245. Illustrated. Messner, New York. $3.00.