

the stream of nitrogen is again led *via* A to D, so that the vacuum above the reductant is filled with nitrogen. By means of tap Z an accurately measured quantity of reductant may then be added to the oxidant in the electrode vessel. As a rule 9 cc. of the oxidant was brought into the electrode vessel and to this was added 1, 1.25, 1.60, 2.15, 3, 4.5, 7.5, 15 and 45 cc., respectively, of the reductant. Thus the ratios oxidant:reductant were gone through from 9:1 to 1:9. Likewise for the measurement of oxido-reduction curves with solutions of reducing salts this apparatus is very useful.

D. B. KROON

MUSEUM LABELS

REGARDING the suggestion of Professor Tolmachoff in *SCIENCE* of November 20, concerning an enamel patch and lettering system for museum labels, perhaps a simplified variation may also be of interest. Instead of ordinary gloss enamel, use is made of one of the modern lacquers such as white Duco. This not only has the advantage of rapid drying but has a surface which will take India drawing ink used with a steel pen. The inconvenience of cleaning a brush can be avoided by applying the white finish with a toothpick of the ordinary type which is flat at one end. After a little practice, a patch can thus be made as neatly as with a brush. The average operator will find it a great advantage to be able to do the lettering with a pen instead of a brush. It is even possible to dispense with a stirring paddle by merely keeping the can less than two thirds full and vigorously shaking before each occasion of use. For infrequent but busy occasions, this method of preparing labels is ideal, and during two years of use it has given all the satisfaction that could be desired.

CLARENCE R. SMITH

AURORA COLLEGE

THE FLAGELLA OF PERANEMA

DUE to the fact that there still remains considerable doubt in the minds of some investigators (Hyman, 1936)¹ concerning the existence of a second flagellum in *Peranema trichophorum*, it seems advisable to suggest a procedure by which this structure in the living organism can be demonstrated.

Korschikow (1924)² stated that weak solutions of gentian violet stain would cause the second flagellum, which is adherent to the periplast, to be loosened and to extend away from the cell because of the increase in metabolic movements of the organism. I have used a 0.02 per cent. concentration by weight of this stain and have obtained excellent results by the addition of

equal parts of the stain and culture medium on a slide. A cover slip was used and the resultant solution examined at once with a 4 mm objective. The peranemas which come into contact with the stain become very metabolic and, in many cases, after a short interval, the second flagellum is visible projecting from the anterior end of the animal.

Students in protozoology at Ohio State University have used this procedure repeatedly in classroom work and the stain has proved to be effective in approximately half the cases.

D. W. DUNHAM

OHIO STATE UNIVERSITY

BOOKS RECEIVED

- ADAMS, ROMANZO. *Interracial Marriage in Hawaii*. Pp. xvii + 353. 11 plates. Macmillan. \$4.00.
- BALDWIN, ERNEST. *An Introduction to Comparative Biochemistry*. Pp. xviii + 112. 11 figures. Cambridge University Press, Macmillan. \$1.50.
- Bibliographie Géodésique Internationale*. Tome I. Introduction et Années 1928-1929-1930. Georges Perrier et Pierre Tardi. Pp. 219. Association de Géodésie, Paris.
- Carnegie Foundation for the Advancement of Teaching. *Thirty-first Annual Report*. Pp. 193. The Foundation, New York.
- FORD, WALTER B. *A First Course in the Differential and Integral Calculus*. Revised edition. Pp. vii + 369. 168 figures. Holt. \$3.00.
- GURNEY, R. W. *Ions in Solution*. Pp. vi + 206. 45 figures. Cambridge University Press, Macmillan. \$3.00.
- HAUBER, U. A. and M. ELLEN O'HANLON. *Biology: A Study of the Principles of Life, for the College Student*. Pp. xii + 559. 244 figures. Crofts. \$3.90.
- HEDGES, C. C. and H. R. BRAYTON. *Laboratory Manual of Inorganic Chemistry and Elementary Qualitative Analysis*. Revised edition. Pp. iv + 271. Heath. \$1.48.
- LINDSEY, ARTHUR W. *The Science of Animal Life*. Pp. xi + 656. 304 figures. Harcourt, Brace. \$3.75.
- LUSH, JAY L. *Animal Breeding Plans*. Pp. viii + 350. 41 figures. Collegiate Press, Ames, Iowa. \$3.00.
- MEES, C. E. KENNETH. *Photography*. Pp. xvi + 227. 63 plates. 45 figures. Macmillan. \$3.00.
- Mikrochemie (Internationale Zeitschrift für Deren Gesamtgebiet) Festschrift*. HANS MOLISCH. Pp. viii + 454. 79 figures. Emil Haim, Leipzig.
- MILLER, W. J. *Introduction to Historical Geology*. Pp. xii + 499. 372 figures. Van Nostrand. \$3.25.
- ORTON, SAMUEL T. *Reading, Writing and Speech Problems in Children*. Pp. 216. Norton. \$2.00.
- RAMSEY, A. S. *Dynamics*. Part II. Pp. xi + 344. Cambridge University Press, Macmillan. \$4.50.
- Report of the United States National Museum, 1936*. Pp. 115. Smithsonian Institution, Washington.
- SHERMAN, HENRY C. *Chemistry of Food and Nutrition*. Fifth edition, revised. Pp. x + 640. 38 figures. Macmillan. \$3.00.
- TAUBER, HENRY. *Enzyme Chemistry*. Pp. xii + 243. 28 figures. Wiley. \$3.00.
- TAYLOR, F. SHERWOOD. *The World of Science*. Pp. xvi + 1064. Reynal and Hitchcock. \$3.75.
- VERNON, H. M. *Accidents and their Prevention*. Pp. ix + 336. 61 figures. Cambridge University Press, Macmillan. \$5.00.
- WILSON, P. W. *The Romance of the Calendar*. Pp. viii + 351. Illustrated. Norton. \$3.00.
- WOOD, HORATIO C., CHARLES H. LAWALL and others. *The Dispensary of the United States of America*. Centennial (22nd) edition. Pp. xix + 1894. Lippincott.

¹ Libbie H. Hyman, *Quart. Jour. of Micros. Sci.*, 79: 43-56.

² A. A. Korschikow, *Arch. russ. Protist.*, 3: 148-205.