ing, dehydrating and clearing processes in ordinary microtechnique, especially when objects and stages of diverse nature are to be passed through in large numbers at a time. Higgins's waterproof ink and preparations involving sodium silicate either wash off, or, if they survive to the end, rub off when dry in spite of even the most careful handling. West, in a recent number of SCIENCE,[1] suggests the use of numbered aluminum clips and a notebook. This method would appear to be clumsy and wasteful of time and imperfectly adapted to slides of varying thickness, besides necessitating permanent labeling of the slides as soon as the small supply of clips becomes exhausted. To meet these objections, an ink has been devised which apparently answers all ordinary requirements of the investigator. It has been used in the making of hundreds of slides, and one supply made two years ago is still giving great satisfaction.

The method of making the ink may be stated briefly as follows: 15 g. of best cabinetmakers' glue are dissolved at low temperature in 100 c.c. of water in a clear glass bottle. To this is added an excess of crystals of potassium dichromate and the mixture is exposed for a week or more to strong light, after which it is filtered. India ink is rubbed into this "stock solution," a slate ink cup or grinder being employed. A little of the solution is poured into the cup and a stick of India ink is applied, the rubbing being done with a circular motion. When sufficient blackness is obtained, the ink is removed with a dropper to a small bottle; the operation is repeated with a new supply of stock solution until a sufficient quantity of ink is accumulated. A supply sufficient for several years' use can be made in this way in the course of an hour or two.

The ink will keep indefinitely if care is taken to prevent evaporation. It may best be kept in a small narrow-neck balsam bottle with ground joint, the joint being further sealed with a thin coating of vaseline. The label end of the slide should be clean and free from fixative, when the ink will flow freely. An ordinary clean, medium-pointed steel pen may be used. A dozen slides may be labeled with accession number, thickness of ribbon and other data with a single dipping of the pen. The ink will dry thoroughly in a few minutes at ordinary room temperature, after which the slides may be passed through the alcohols, stains, water and xylol without deterioration of the label. On completion of the slides the label may be left as originally made and the slides stored in this condition until they are wanted. This will be found sufficient for most research problems. If it is desired at any time to replace the original label with a permanent one, the ink may be quickly scraped off with a scalpel and replaced by a pasted label. In doing this the figure or letter usually comes off entire with a slight lifting movement of the knife.

[1] N. S., Vol. XLVII., No. 1201, January 4, 1918, p. 22.

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PROFESSIONAL COURTESY

IN the January, 1918, number of the *Journal of Biological Chemistry* appeared an article by E. V. McCollum and N. Simmonds, now of Johns Hopkins University, entitled "A Study of the Dietary Essential, Water-Soluble B, in Relation to Its Solubility and Stability Towards Reagents."

This work, as the article indicates, was done, but not prepared for publication, in the laboratory of agricultural chemistry of the University of Wisconsin. The authorship of this article does not properly give credit to those participating in this research. On page 62 a footnote briefly states that "Credit is due Mr. H. Steenbock for the preparation of the extracts employed in this work." This representation is a gross injustice to Professor Steenbock and displays a marked transgression of common professional courtesy and ethical standards on the part of the authors of this article. Professor Steenbock not only contributed much, if not all, to the thought expressed in the preamble of this article, but the details of making the vitamine preparations and the

chemical work in reference to their stability reappear in the text practically verbatim as they were developed by him in his own notebooks. The method of experimentation on vitamine stability as published in this paper was the outgrowth of methods previously employed by Professor Steenbock in experiments with pigeons. He should at least have appeared as a joint author of this article.

Inasmuch as the records of rat feeding, although they were part of a continuing project of the experiment station, were removed in toto from the campus with the change in staff and consequently no longer available, it had not been possible for Professor Steenbock to correlate this material for publication.

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SCIENTIFIC BOOKS

Outlines of Comparative Anatomy of Vertebrates. By J. S. KINGSLEY, Professor of Zoology in the University of Illinois. Philadelphia, P. Blakiston's Sons & Co. Second Edition, Revised. 1917. Pp. 449.

A well-known teacher of comparative anatomy has characterized Professor Kingsley's "Outlines of Comparative Anatomy of Vertebrates" as "the best text-book of comparative anatomy in the English language." The rapid exhaustion of the first edition and the appearance of the second suggests that many other teachers share his opinion. The second edition is enlarged by the addition of fifty pages of reading matter and contains sixty more text-figures than the first edition, while the fundamental plan of the book remains unchanged. A list of Greek and Latin roots has been added to help the student to understand the meanings of the anatomical and embryological terms used.

From extended experience as a teacher of comparative anatomy Professor Kingsley has learned that a plain diet of anatomy is unacceptable to the average college undergraduate. "Boning" and "grinding" are college synonyms and the undergraduate does neither gladly. Anatomy therefore in the Kingsley text is made more palatable by the addition of enough physiology to give it flavor—and "meaning" in terms of function. Furthermore, an embryological approach to the study of each organ system is calculated to give a clearer conception of the fundamental relationships of the system within the organism as a whole. The text is well written with these pedagogical ends in view.

College students, however, are interested in comparative anatomy chiefly because of the bearing of the facts upon the theory of evolution in general and upon the history of the human body in particular. The text fails in general to utilize this interest. Were the bearing of the evidence upon the important problem of human phylogenesis more frequently pointed out and were much material devoid of such human interest omitted, the text would undoubtedly lose somewhat as a reference book in comparative anatomy, but it would make a much stronger appeal to undergraduates.

In its lucid and accurate descriptions and careful classification of materials the book serves as an admirable example of the scientific method. Its generalizations and interpretations, moreover, are cautious and based upon exceptional familiarity with animal structure and acquaintance with the extensive literature of comparative anatomy and embryology. The spirit of the book is open-minded and undogmatic. Errors of statement in the second edition are relative few. The statement (p. 132) that "the somatic wall of the myotome does not participate in muscle formation" needs qualification, since it is not true of all vertebrates. The retractor bulbi muscle (p. 134) is a derivative of the third and not of the first head cavity (Johnson, '13; Miss Fraser, '14). The electric organ of *Astroscopus* (p. 142) comes from the superior oblique muscle as well as from the muscles innervated by the oculomotorius. The "limiting sulcus" (sulcus of Monro) is not a characteristic feature of vertebrate embryos in general, as might be inferred from the descrip-