densis L. (*Ranunculaceae*), the stigma is fundamentally trilobate, but here the branching of the dorsal bundle is much reduced, while two or three major branches of each ventral divide again once or twice to produce the greater part of its vascular supply. In *Helleborus foetidus* L. the ventrals go part way up the linear style, where they fuse with the branched dorsal bundle, while in *Trollius laxus* Salisb. this fusion occurs at the summit of the carpel proper. In *Dillenia Reifferscheidia* Vill. (Dilleniaceae), the two ventrals each branch once and end in the middle of the broadened, but elongate style, while the dorsal continues to its end.

(2) *The ovary of the Cichorieae.* Although the anatomical pattern described by Koch[3] for *Lapsana* is identical with that of all other Cichorieae as regards the corolla, stamens and stigma, considerable variation has been found in the structure of the achenes, and this has proved a valuable aid in delimiting some of the genera of this complex group, and in determining the phylogenetic position of the species. It has already been used in distinguishing between *Lactuca* and *Ixeris,* which latter genus, though unquestionably distinct and actually more nearly related to *Crepis* as has been pointed out by the writer,[4] has regularly been confused with the former. In the genus *Prenanthes,* almost all its species differ from their relatives in *Lactuca* and *Hieracium* in possessing not only five main bundles within the ovary, but in addition one to twelve supernumerary ones. The homology of all these is not yet clear, but in some species the dorsal carpellary bundles are free from those of the corolla, in others the ventral bundle or bundles appear to be extended up into the ovary wall beyond the insertion of the trace to the basal ovule, while still others apparently possess more or less vestigial calyx bundles. Closely paralleling *Prenanthes* in ovary anatomy is the group of Sino-Himalayan high alpine plants generally referred to *Crepis* as the section *Glomeratae,* but which, on the basis of anatomy as well as the external morphology of the corollas, stigmas and achenes, should be placed in a separate genus more nearly related to *Prenanthes* than to *Crepis.*[5] A treatment of this genus is to be undertaken in the near future. In the case of both the *Glomeratae* and *Ixeris* floral anatomy has proven a valuable aid to systematic classification in groups of which preserved material of critical species would be difficult or impossible to obtain.

G. LEDYARD STEBBINS, JR.

UNIVERSITY OF CALIFORNIA,
BERKELEY, CALIF.

[3] Minna F. Koch, *Am. Jour. Bot.,* 17: 938–952, 1930.
[4] G. L. Stebbins, Jr., *Jour. Bot.* (London), 43–51, 1937.
[5] E. B. Babcock, Essays Geobot., in honor of W. A. Setchell, pp. 9–53, Univ. Calif. Press, 1936.

A SUBSTITUTE FOR WHITE INK FOR USE ON SHELLACKED KYMOGRAPH TRACINGS

THE use of white ink for writing on shellacked kymograph paper has proved very unsatisfactory. The fact that it chips and rubs off the paper makes it hazardous to add notes to a tracing. The writer has found that titanium dioxide added to white shellac makes an excellent preparation for this purpose. The advantages are that it can be applied with an ordinary pen—a stub point held sideways serving to the best advantage; it dries rapidly and is permanent; it does not rub off on handling or brushing; it photographs well and contrast slides are excellent.

Titanium dioxide is rubbed up to a soft paste with white shellac, and then more shellac or alcohol is added to give proper consistency. This will vary with the type of pen point used and the manner of individual writing. A slow motion in writing is necessary, and only a small amount of material is applied to the point. If the point is kept clean by frequent wiping and dipping in alcohol, there will not be an accumulation of pigment on the point.

Other substances used for pigment have proved unsatisfactory. Zinc oxide does not cover well and gives a distinct bluish cast to the writing. Lead salts apparently are too heavy to flow easily.

W. J. R. CAMP

UNIVERSITY OF ILLINOIS

BOOKS RECEIVED

ALBERT, A. ADRIAN. *Modern Higher Algebra.* Pp. xiv + 319. University of Chicago Press. $4.00.

BURNET, F. M., E. V. KEOGH and DORA LUSH. *The Immunological Reactions of the Filterable Viruses.* Pp. 227–368. University of Adelaide, Australia. 10s.

FROLOV, Y. P. *Pavlov and His School; The Theory of Conditioned Reflexes.* Pp. xix + 291. 26 figures. Oxford. $4.00.

GOLDBLATT, L. A. *Collateral Readings in Inorganic Chemistry.* Pp. 225. Appleton-Century. $1.35.

GRAY, ALBERT A. *The Basis of Tissue Evolution and Pathogenesis.* Pp. xix + 92. Jackson, Son & Co., Glasgow, Scotland. 7/6.

Handbook of Scientific and Technical Societies and Institutions of the United States and Canada. Third edition. Pp. 283. National Research Council, Washington. $3.50.

HUBBLE, EDWIN. *The Observational Approach to Cosmology.* Pp. vi + 68. Illustrated. Oxford. $4.00.

MERRILL, PAUL W. *The Nature of Variable Stars.* Pp. vii + 134. Macmillan. $2.00.

TAYLOR, GRIFFITH. *Environment, Race and Migration.* Pp. xv + 483. 158 figures. University of Chicago Press. $4.00.

WEGENER, ALFRED. *La Genèse des Continents et des Océans.* Pp. viii + 236. Illustrated. Librairie Nizet et Bastard, Paris.

WOODGER, J. H. *The Axiomatic Method in Biology.* Pp. x + 174. Cambridge University Press, Macmillan. $3.75.