treatment of the subject from the practical standpoint as thoroughgoing and suggestive.

Since the psychology of individual variation in handwriting characteristics is still an unwritten chapter of the science, it is not surprising that the analysis of handwriting habits in the volume under consideration should be largely in terms of the writing system learned by the penman and of the writing instruments and material utilized by him. Such an analysis is accompanied by an historical account of the rise of various systems of handwriting and by a description of their characteristics. The dependence of many peculiarities of writing, such, for example, as shading, upon pen position, should be noted by the investigator of the subject. The author insists upon the use of a sufficient amount of proved handwriting as a standard for comparison in the case of a disputed document and records instances of normal variation in handwriting in such a way as to show forgery by a tracing-process in the case of unnatural uniformity. The interesting observation is made that individual writing habits are found to be revealed more clearly in minor details than in striking features, such as large capital forms. Possibly the author might, with profit, have treated at greater length variations in handwriting due to age, disease and emotional disturbance.

The author insists that the testimony of the handwriting expert should, if acceptable, be the expression not of an opinion founded upon more or less vague intuitions, but of a scientific conclusion from facts, a conclusion based upon reasons which are intelligible to the non-expert and presentable in court. The author is sceptical of testimony that concerns itself with the general appearance of handwriting rather than with accurate analysis and measurement. He is, naturally, amused by the pretensions of the graphologists who would read from handwriting the physical characteristics of the penman and catalogue therefrom his vices and virtues.

The application by the author of the methods used in identification of handwriting to the study of questioned typewriting shows a new field of inquiry, one that appears well worth working by the expert.

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Tables for the Determination of Common Rocks. By OLIVER BOWLES, M.A., Instructor in Geology and Mineralogy, University of Minnesota. 16mo. Pp. vii + 64. New York, D. Van Nostrand & Co. 1910. $0.50.

This text is designed to meet the need of suitable tables for the determination of rocks and rock-forming minerals by microscopic methods and constitutes a convenient and useful pocket guide for field and laboratory purposes.

The usual classification of rocks is given but no attempt is made to group them in the tables accordingly. The grouping, based upon texture, is I., Glassy; II., Ashy or Cellular; III., Crystalline, even grained; IV., Porphyritic; V., Dense and Finegrained; VI., Banded; VII., Fragmental. The various types are arranged in the proper group and described briefly. In the case of crystalline rocks, mineral composition is made a basis for further subdivision and one chapter is given to tables for the determination of the more common rock-forming minerals, the classification being based upon color, hardness and cleavage.

The last chapter contains a short discussion of building stones. Terms used in the text are amply defined in a glossary at the end of the book.

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SCIENTIFIC JOURNALS AND ARTICLES

THE contents of the *American Journal of Science* for March are:

"Transmission of Light through Transparent Inactive Crystal Plates, with Special Reference to Observations in Convergent Polarized Light," F. E. Wright.

"Separation and Estimation of Barium Associated with Calcium and Magnesium, by the Action of Acetyl Chloride in Acetone upon the Mixed Chlorides," F. A. Gooch and C. N. Boynton.