

origin and presented in a similar all-round way. The later exercises under this head are listed according to their distribution in the United States and not primarily according to the class to which they belong.

Taken as a whole, however, the volume has few elements of weakness and many of strength. It has been tested in practise with beginning pupils and hence is not too advanced or specialized. It is a most valuable contribution to educational geography and ought to help strengthen and humanize physical geography teaching in our high schools, and it should be remembered that for many years such work has been unhuman, if not at times almost inhuman.

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The Principles of Electro-deposition. A laboratory guide to electro-plating. By SAMUEL FIELD, A.R.C.Sc. (Lond.), F.C.S. New York, Longmans, Green & Co. 1911, 12mo. Pp. xv + 383.

This is one of those manuals designed for the purpose of interesting further the purely technical worker, so that he may be led to learn something at least of the principles upon which the operations he observes daily are based.

After considering the apparatus for the production, regulation, and measurement of the electric current; plating with copper, nickel, iron, tin, zinc, silver, gold and brass are taken up in detail, from the theoretical as well as the practical viewpoint, the methods of preparing the object for plating, as well as the finishing, after that process is complete, also being considered. This is followed by several chapters on the methods for the qualitative and quantitative analysis of the substances employed in the various processes.

Whether the worker will actually gain the knowledge which the author hopes he may is a question, for much depends upon the elementary knowledge which can be assumed to be in the possession of the reader. One thing is quite certain, however,—the readers, or at

least some of them, will find their interest greatly aroused by a perusal of this book, even though it may not be thoroughly understood; with the result that they may be led to seek some school where a thorough training in the subject may be acquired. Books of this type are of the greatest value, for it is to them that we must look for the first step in that great advance in industrial work—the perfect combination of theory and practise.

J. L. R. M.

SCIENTIFIC JOURNALS AND ARTICLES

ANNOUNCEMENT is made of the establishment of *The Journal of the Washington Academy of Sciences*. It is to be a semi-monthly publication and will be sent to subscribers on the first and fifteenth of each month, or during the summer may appear on the fifteenth only, as double numbers. The first number will be issued about July 15, but after 1911 the volumes will correspond to the calendar year. The present *Proceedings of the Washington Academy of Sciences* will be discontinued after the completion of the current volume. The *Journal* will be a medium for the publication of original papers and a record of scientific work in Washington. It will accept for publication (1) brief papers written or communicated by resident or non-resident members of the academy; (2) abstracts of current scientific literature published in or emanating from Washington; (3) proceedings and programs of the affiliated societies, and (4) notes of events connected with the scientific life of Washington. The editors are: George K. Burgess, Bureau of Standards; Barton W. Evermann, Bureau of Fisheries, and Frederick Leslie Ransome, Geological Survey. Illustrations will be used only when necessary, and will be confined to text figures or diagrams of simple character. The editors, at their discretion may call upon an author to defray the cost of his illustrations, although no charge will be made for printing from a suitable cut supplied with the copy.

THE contents of the *Astrophysical Journal* for June are as follows:

"On Doppler's Principle in Connection with the Study of the Radial Velocities on the Sun," A. Cotton.

"On the Magnetic Separation of the Spectral Lines of Calcium and Strontium," B. E. Moore.

"On the Radiation of the Companion of Algol," Joel Stebbins.

"On Regularities in the Spectrum of Neon," Herbert Edmeston Watson.

"Application of the Interference Method to the Study of Nebulae," Ch. Fabry and H. Buisson.

"Observations of Nova Lacertae at the Yerkes Observatory," Edwin B. Frost.

"Photographic Determinations of Stellar Parallax made with the Yerkes Refractor." VI, Frank Schlesinger.

THE June issue of the *Journal of Comparative Neurology* contains the following articles:

"The Evolution of the Sympathetic Nervous System in Vertebrates," Albert Kuntz.

"The Olfactory Nerve and the Nervous Terminalis of Ameiurus," Charles Brookover and Theron S. Jackson.

"The Nervus Terminalis in Urodele Amphibia," Paul S. McKibben.

"Localization of the Motor Area in the Sheep's Brain by the Histological Method," Jessie L. King.

PRE-COLUMBIAN REFERENCES TO MAIZE IN PERSIAN LITERATURE

THAT maize is of American origin is no longer a disputed question, but the discussion of the possibility of its having been known in Europe and in the east before the discovery of America by Columbus is by no means closed.

There was much written on this subject in the first quarter of the nineteenth century, and one of the historical references to which much importance was attached is an alleged mention of *rous* by Mirkhond, a Persian historian of the fifteenth century (1433-1498). The authority for the existence of such mention by Mirkhond is Herbelot, an orientalist of note, who uses the word *rous* as synonymous with *blé de Turquie*, which was a name for maize in common use at the time.¹

¹ Harshberger, "Maize: A Botanical and Economic Study," University of Pennsylvania, Contributions from the Botanical Laboratory, Vol. 1,

Under the word *Rous*, in the "Bibliothèque orientale," Herbelot says (*italics ours*): "Rous. Name of the eighth son of Japhet, son of Noah, from whom Russia, which we now call Muscovy, has taken its name. Mirkhond wrote in the genealogy which he has given us of the Mogols, ancestors of Jenghiz Khan, that Rous was of a very different disposition from his brother Khozar . . . so that Khozar was obliged, in order to live in peace with his brother to yield to him all the islands of this great river (Volga) which empties into the Sea of Khozar which we call Caspian. Rous sowed in all these islands the wheat which we call *de Turquie* and which the Turks still call, to-day, in their language, by the name of *rous* and *boulgar*."²

Bonafous, in his monumental work on maize quotes the above and says (*italics ours*): "The celebrated orientalist, Herbelot, refers to a passage from Mirkhond, a Persian historian of the fifteenth century of which the translation, *if it is exact, would leave no doubt that maize was known in the Old World before the discovery of the New*."³ Bonafous proceeds to say, however, that after an examination of the text of Mirkhond, at the place p. 89; Browne, "Maize or Indian Corn," American Institute, Annual Report, Vol. 5, 1847, p. 412.

² "Rous. Nom du huitième fils de Japhet, fils de Noé, duquel la Russie, que nous appellons aujourd'hui Moscovie, a pris son nom. Mirkhond écrit, dans la généalogie qu'il nous a donnée des Mogols, ancêtres de Ginghizkhan, que Rous étoit d'une humeur bien opposée à celle de son frère Khozar, . . . en sorte que Khozar fut obligé, pour vivre en paix avec son frère, de lui céder toutes les isles de ce grand fleuve qui se décharge dans la mer de Khozar, que nous appellons Caspienne. Rous fit semer dans toutes ces isles le *bled* que nous appellons *de Turquie*, et que les Turcs appellent encore aujourd'hui en leur langue du nom de *rous & boulgar*." (Herbelot, "Bibliothèque orientale," 1777-78, Vol. 3, p. 137.)

³ "Le célèbre orientaliste d'Herbelot rapporte un passage de Mirkhond, historien persan du quinzième siècle, dont la version, *si elle est exacte, ne laisserait pas douter que le maïs n'était connu dans l'Ancien-monde avant la découverte du Nouveau*." (Bonafous, "Histoire naturelle du Maïs," 1836, p. 22.)