

facturers have been deliberately adding copper to their steel, because it has been found that small amounts of this element caused the metal to be more insoluble in dilute acids. Most investigators agree that an acid test should not be made the sole basis of specification where resistance to atmospheric corrosion is required in the product, but nevertheless the fact that a metal can be shown resistant to the attack of mineral acids has been in the past, and is still, used as an attractive salesmen's argument.

The writer can not help regretting that Professor Walker should have included a paragraph in a scientific review, written in such a manner that it could be reprinted and used in a commercial contest with the object of producing a false impression.

Professor Walker in the same review takes occasion to regret that Dr. Friend had recommended this pure open hearth iron as a possible standard on which to base a corrosion factor. The writer has used this material in this way for some time, and the U. S. Bureau of Standards has recently acquired a quantity of the same metal in which the sum of the total impurities present, including the gases, is less than two tenths of a per cent.

It would appear to the writer that there is such a thing as professional ethics in respect to the scientific treatment of scientific books reviewed in a scientific journal, and that such reviews should not be used to introduce false impressions to be afterwards touted about the country as "salesmen's arguments." It is an unfortunate fact that the development of this new step in metallurgy, namely, the manufacture for the first time of commercially pure iron in the open hearth furnace, on a large scale of operation, should have called forth active enmity from so many unexpected quarters in this country.

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ITONIDÆ VS. CECIDOMYIIDÆ

A NOTE by Dr. E. P. Felt in SCIENCE for July 5 (p. 17) calls attention to a matter somewhat aside from the question of priority

in nomenclature, but one which should not be disregarded by zoologists who are striving to attain stability and accuracy in the designation of taxonomic groups. There is much dissension among systematic zoologists regarding the status of Meigen's 1800 names for his genera of diptera which were rechristened by him in 1804. As is well known, the latter names were in common use for a full century and many workers are not in sympathy with those who advocate the adoption of the older, long-forgotten names. Whether the generic name *Cecidomyia* should become *Itonida* depends upon our acceptance of Meigen's earlier names, but no one should countenance the appearance in print of a family name "Itonidæ" in place of the proper form *Itonididæ* formed from *Itonida*. The international code is very specific on this point, stating that: "The name of a family is formed by adding the ending *idæ*, the name of a subfamily by adding *inæ*, to the root of the name of its type genus."

No one has seen fit to criticize this portion of the code, so far as the writer is aware, and students of these same Diptera have previously used in many instances the carefully formed family name *Cecidomyiidæ* even though this approaches dangerously near the tabooed "unpronounceable combination" which we are warned diligently to avoid. There has been much laxity in the use of carelessly formed family names by zoologists, particularly Americans, and the writer must plead guilty with the rest.

A little care on the part of systematists will serve to eliminate all such barbaric family names, and would add to the dignity of zoological nomenclature.

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SCIENTIFIC BOOKS

American Permian Vertebrates. By SAMUEL W. WILLISTON. University of Chicago Press, Chicago, Ill. 1911. Pp. 145 with frontispiece, plates I-XXXVIII, and 32 text figures.

This work from the pen of one of the most

eminent paleontologists is bound to attract attention from the clear anatomical descriptions of the forms under review and the conservative stand in the matter of conjectural speculations. The book, as the author says, "comprises a series of monographic studies, together with briefer notes and descriptions, of new or little-known amphibians and reptiles from the Permian deposits of Texas and New Mexico."

The sources of material are mainly three: the University of Chicago collection, made in recent years by field parties under the charge of Mr. Paul Miller or the author; earlier collections of the University of Texas, made by Professor E. C. Case; and finally the great Marsh collection in the Peabody Museum at Yale University, which proves an increasingly fruitful field for research as its varied treasures are brought to light. An interesting comment upon our knowledge of reptilian classification shows that the time is not yet ripe to attempt phylogenies of the groups other than the dinosaurs, crocodiles, phytosaurs, pterosaurs and rhynchosaurs, because we are less sure of them than we were a dozen years ago. "The more recent general classifications of the reptiles by Cope, Osborn, Boulenger, and others have offered suggestions of value, but they are by no means the real solutions of the reptilian and amphibian phylogenies. The recent classifications of Jaekel are not to be taken seriously." Certain morphological problems are discussed in the following pages and the author has given what seem to be the legitimate conclusions regarding the immediate relationships of the forms under discussion. The present work, however, is offered more as a contribution to our knowledge of ancient reptiles and amphibians, with such summaries and definitions, based chiefly upon American forms, as our knowledge at hand permits. The illustrations of the work throughout were made by the author.

A summary of the genera from the Texas Permian follows: Amphibia: *Lysorophus*, *Diplocaulus*, *Trimerorhachis* (apparently absent from the upper part), *Eryops*, *Cacops*,

Dissorophus, *Aspidosaurus*, *Cardiacephalus*. Reptilia: from the uppermost beds, *Labidosaurus*, *Naosaurus*, *Dimetrodon*; from lower horizons, *Naosaurus*, *Dimetrodon*, *Clepsydrops*, *Varanosaurus*, *Trispondylus*, *Casea*, *Aræoscelis*, *Captorhinus*, *Diadectes*, *Seymouria*, etc., of which perhaps the most characteristic are *Labidosaurus* of the upper and *Cricotus* of the lower zones. Williston feels confident, however, that no definite line can be made between the two divisions, and that at present Clear Fork can be used in a general way to designate the upper, and Wichita the lower part of the Texas deposits.

Most of the important specimens come from two isolated deposits known as the Cacops and Craddock bone beds, the former of which is among the most remarkable deposits of fossil vertebrates known, especially when one considers the almost universal rarity of Permian remains.

The Cacops deposit lies in the valley of the Wichita in northern Texas about five miles west of the Vernon road, not far from Indian Creek, while the Craddock bone bed lies about six miles northwest of Seymour, also in northern Texas. The Yale material, on the other hand, comes mainly from New Mexico, all of the Marsh types coming from a deposit which Williston has designated the Baldwin bone bed.

The research of Professors Williston and Case is one of great promise, not only in the ultimate clarifying of our vision with regard to the anatomy and relationships of these ancient forms, but in revealing to us the actual stages of transition between two great vertebrate classes, the Amphibia and Reptilia. For his present book Professor Williston deserves our gratitude, and we look forward confidently to still more notable results when his researches shall have been completed.

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Microbiology, for Agricultural and Domestic Science Students. By MARSHALL and others. Philadelphia, P. Blakiston's Son and Co. In this work, of which Chas. E. Marshall