

copper salts, both soluble and insoluble, of various strengths, and also in keeping oysters on a bottom of iron or copper salts—including rusty iron, old copper and copper fillings—but in none of these experiments (the full details of which will be published later) have they got sufficiently consistent and continuous results to enable them to determine whether or not the animal obtains its copper from the contents of the alimentary canal or from the water through the surface of the body. These experiments and observations are still being carried on. They add that the green oysters containing copper are found in some localities where there can be no question of copper mines or old copper from ships' bottoms, and suggest that the pigmentation may be due to a disturbed metabolism whereby the normal copper of the body becomes stored up in certain cells.

UNIVERSITY AND EDUCATIONAL NEWS.

It will be possible for Columbia University to open its academic year at its new site on November 4th, though there may be some delay in certain of the laboratory courses. It is noteworthy that of the six buildings now erected, two are for general university purposes, a library and university hall (which at present contains only the powerhouse and gymnasium), while the four other buildings are for the sciences, Schermerhorn Hall for the natural sciences, Havermeyer Hall for chemistry, and halls for physics and engineering. These buildings for the sciences have been erected at a cost of over \$1,200,000, and demonstrate the importance of the place now occupied by science in a modern university.

At the opening exercises of Dartmouth College, President Tucker stated that the plans are well formulated for the proposed new physical laboratory, the result of the \$75,000 bequest of the late Charles T. Wilder, of Lebanon, N. H. The committee has set apart \$50,000 for its erection and \$20,000 for maintenance. Additional appropriations have been made for an observatory, foundations for which will be laid at once.

Of the colleges that opened last week, Dartmouth, Lafayette and Dickinson report increases

in the entering classes, which are 185, 106 and 60 respectively. The classes at Union and Beloit are smaller than usual.

THE Hon. William L. Wilson, formerly member of Congress and Postmaster-General, was inaugurated as President of Washington and Lee University, Lexington, Va., on September 15th. Addresses were made by President Gilman, Johns Hopkins University; Chancellor Kirkland, Vanderbilt University, and Professor Cameron, in the place of President Patton, Princeton University. President Wilson made an inaugural address.

THE Rev. James G. K. McClure, a Presbyterian clergyman, has been elected President of Lake Forest University.

At Union College Mr. Frank S. Thompson, A.B. (Princeton), has been appointed assistant in physics, and Dr. A. A. Tylor, A.B. (Lafayette) and Ph.D. (Columbia), instructor in biology.

DR. W. E. THOMSON has been appointed professor of physiology at Anderson's College, Glasgow.

PROFESSOR CARL FRIEDHEIM, of Berlin, has been appointed professor of inorganic chemistry in the University at Bern, and Dr. Rodet professor of bacteriology at the University at Lyons.

DISCUSSION AND CORRESPONDENCE.

TYPES IN NATURAL HISTORY AND NOMENCLATURE OF RODENTS.

TO THE EDITOR OF SCIENCE: Three communications have recently appeared in SCIENCE, directly or indirectly relating to work of my own, and I would ask your permission to say a few words concerning them.

The first two are Mr. Charles Schuchert's paper on 'Types in Natural History', and Dr. Merriam's† critique on it, and it is to the latter I would first refer.

With characteristic emphasis Dr. Merriam scorns Mr. Schuchert's suggestions for further names to represent different classes of types, and incidentally speaks of 'several obsolete

*SCIENCE, V., p. 636, April 23, 1897.

†SCIENCE, V., p. 731, May 7, 1897.

terms which have never been used, as far as I am aware, even by the man who proposed them.' This statement is not quite correct. 'The man who proposed them,' myself, has already used them several times in print, oftener still in labeling and registering specimens, and has every intention of continuing the practice. Nor is he the only one who has done so. Moreover, had none used them as yet, in print, four years is rather a short time in which to consider obsolete terms admittedly proposed only for occasional use. The clear expression by such words of the exact relations of the specimens under discussion to the original description has been found of so much value by those who have used them that it is easy to sympathize with any one dealing with the classes of types that Mr. Schuchert refers to, wishing to have equally handy names by which to speak of them.

Mr. Schuchert has proposed to alter the definition of a *paratype* so that it should only apply to such specimens as are described or measured in the original description. This seems by no means an improvement, as the idea of a *paratype* is that it is one of the specimens whose examination induced the author to found a new species. In what way he worded his description, which specimens he mentioned and which he did not, in no way affect this central idea. Moreover, it is just the more aberrant individuals, and the extremes in measurement, that would be likely to be mentioned, while those that are best and most representative as *paratypes* would tend to be passed over in silence.

Probably Mr. Schuchert's '*plastotype*' will be of use to paleontologists and others having occasion to deal with casts, but I fail to see the benefit of his terms *hypotype* and *genotype*, of which the former is too general to be of much definite use, while the latter is based on a confusion of ideas, as while the type of a species is a *specimen*, that of a genus is a *species*, so that no *specimen* can be typical of a *genus*.

The objection to '*hypotype*' as being too general and covering too many specimens of different origins applies even more strongly to Lord Walsingham and Mr. Durrant's proposed extension* of *metatype* to cover any specimen

named by the original author, whether *topotype* or not. Many a museum worker, who has to name large series of specimens from all sorts of localities, must constantly put under one of his own names specimens which may be anything but typical, and it would be absurd to call the whole of a museum series of a common animal '*metatypes*' merely because the name of the species happened to have been proposed by the person who determined the specimens. Probably this result of their proposal had not presented itself to the authors referred to. But after reducing '*metatype*' to its original sense, Walsingham and Durrant's term '*homotype*' might suitably be employed for any specimens that had been compared with the type, such specimens being, I believe, looked upon by entomologists with a respect which, in view of the difficulty of a proper comparison, mammalogists find a little hard to understand. But, as in other cases, if entomologists find the word useful, by all means let them use it, and let not those who don't want the word object to its use by those who do.

Lastly, may I express my pleasure at the advantage mammalogical nomenclature has gained by Mr. Palmer's critique* on my recent arrangement of rodents. Every zoological paper nowadays has two sides, a real and a nomenclatural, and it so happens that the nomenclatural side of the paper discussed is particularly susceptible of improvement, partly owing to the fact that the prospect of the appearance of Mr. Palmer's own list of mammalian genera made it obvious that any labor expended in this direction would be largely wasted, and partly because my own views of nomenclature underwent a radical change just as the paper was being printed, so that some names could be altered in accordance with the newer views, and others not.

To the omitted genus *Fiber*, *Dasymys* Peters† may be added, and may be placed at 43a, while *Nectomys*, also of the same author, should, as elsewhere pointed out, be restored to full rank, coming at 74a. It also proves that *Chiruromys* Thos., should give way to *Pogonomys* M. Edw.

* SCIENCE, VI., p. 103, July 16, 1897.

† MB. AK. Berl., 1875, p. 12.

* Merton Rules of Nomenclature, p. 13, 1896.

which, instead of being a synonym of *Uromys*, should take the former's place at 52.

One change which I myself pointed out in 1895, but forgot in 1896, has escaped the lynx eyes of Mr. Palmer, namely, that *Pygeretmus Gloger** (1841) antedates and supersedes *Platycercomys* Brandt (1844), No. 117 of the list.

In what has been called the real part of the paper, I doubt if Mr. Palmer's criticisms on the suppression of the *Lophiomyidæ* and the separation of the *Spalacidæ* and *Bathyergidæ* would have been made had he ever compared the teeth—practically identical—of *Lophiomyis* and *Cricetus cricetus*, or realized to what an extent similar fossorial habits may mask real differences by a superficial resemblance, so that the two families referred to, really incomparably more different in essentials than the American *Geomysidæ* and *Heteromyidæ*, have yet become so alike externally that zoologists of an earlier generation naturally thought them to be nearly allied.

But on these and other points further criticism is much to be desired, and I can only repeat how fortunate it is that my mistakes and omissions in the nomenclatural part of the paper should have had the advantage of revision by such an authority on the subject as Mr. Palmer.

OLDFIELD THOMAS.

MARRIAGE BY CAPTURE IN ARABIA.

Antar is a Bedouin romance reputed to have been written by Asmai, one of the learned men of the court of Haroun-al-Raschid, shortly before the beginning of the ninth century.† From the translation by Terrick Hamilton (London, 8vo., 1820), Vol. IV., pp. 388-9, the following description of an early Arabian marriage custom is quoted. The custom is a well known one. Asmai's explanation of it is new to me.

"Now, there was a certain curious custom current among the Arabs at that period. The night on which a bridegroom should wed his wife they brought a quantity of camel pack-saddles and heaped them one upon another, decorating them with magnificent garments. Here they conducted the bride, and having

* *Naturgesch.*, p. 106.

† It is, in fact, a compilation of the XIIth century.

seated her on high, they said to the bridegroom, "Come on, now, for thy bride!" And the bridegroom rushed forward to carry her off, whilst the youths of the tribe, drawn up in line, right and left, with staves and stones in their hands, as soon as the bridegroom rushed forward, began beating and pelting him and doing their utmost to prevent his reaching his wife. If a rib or so were broken in the affair it was well for him; if he were killed it was his destiny.

"But should he reach his wife in safety, the people quitted him and no one attempted to approach him. ('I inquired about this circumstance,' says Asmai, 'and what it was they were about.' 'Asmai,' they answered, 'the meaning of this is to exhibit the bride to the warriors, that should her husband die, anyone else might take a fancy to her and take her off.')

So far as my reading goes, the explanation of marriage by simulated capture, which is given in the last sentence, is entirely novel.

EDWARD S. HOLDEN.

LICK OBSERVATORY,

August 15, 1897.

SCIENTIFIC LITERATURE.

The Foundations of Geometry. By B. A. W. RUSSELL. Cambridge: The University Press. 1897. Pp. xvi + 201.

Here is a book especially opportune, on a subject of transcendent interest. The author's mathematical equipment is refreshingly sound, and his metaphysical results are delightfully suggestive, even where the mathematician may feel constrained to return as verdict 'not proven.' So much the more to be regretted is it that the Chapter I., 'A Short History of Metageometry,' should open with a glaring error, as follows: "The liquefaction of Euclidean orthodoxy is the axiom of parallels, and it was by the refusal to admit this axiom without proof that Metageometry began. The first effort in this direction, that of Legendre, was inspired by the hope of deducing this axiom from the others."

Mr. Russell cites Halsted's Bibliography of Hyper-Space and Non-Euclidean Geometry (1878), but can evidently never have seen it, since its first page speaks of 'The enormous