given the dimensions of the standard rattler, the standard charge and the percentage loss of good approved brick, that the omission seems strange.

The second half of the book is devoted to engineering construction proper, to foundations, the discussion of which is particularly good, to bridges (thirty-nine pages), to highways, to water supply and sewerage. These subjects are necessarily but briefly taken up and probably no two educators, in carrying out the difficult task of presenting only the essentials, would agree on what should be excluded. It is, therefore, futile to compare these chapters with those of other authors or to weigh the values of the separate paragraphs of the present book. The lists of text-books given at the end of each chapter serve to refer the young officers, at need, to the proper sources of information and are a most important part of the book. H. N. Ogden.

Cornell University.

Morphology and Anthropology, a Handbook for Students. By W. L. H. Duckworth, M.A., University Lecturer on Physical Anthropology, etc. Cambridge, at the University Press, 1904. The Macmillan Company. $4.50 net.

This is a very good hand-book for the use of students, containing a great deal in moderate compass. It makes little pretense to be anything more than a compilation, except in so far as the author gives us the benefit of his own judgment on disputed points. To present a compilation so as to be most available is a task of more than average difficulty. We think the author has in this been very successful. He first considers man's position in the animal series in the light of comparative anatomy; which implies a general review of the anatomy of the primates. Special attention is devoted to certain parts, especially the skull and the teeth. The presentation of the various views concerning the latter is particularly interesting.

We quote the words with which the second section of the book opens as the simplest way of showing the author's plan:

> The foregoing chapters have as their aim the demonstration of the fact that man is associated in a natural zoological classification with certain other mammals of the order Primates. It is now suitable to take up the second subject proposed for consideration in these notes, and to endeavor to ascertain something of man's ancestral history, that is, of the path of evolution traced by man. The means available for carrying out this enquiry are, in the present day, threefold: (1) Embryology, (2) comparative morphology of the various human races, and (3) paleontology.

The book then continues on these lines. The author introduces the embryological portion with the remark that its importance depends on the generalization that ontology repeats phylogeny. Since this book appeared this generalization has received a severe blow by Bardeen's researches on the development of the human spine, and, indeed, the author is ready to point out facts which do not agree with it. Long ago Marshall remarked that the record was a very imperfect one. It may now be questioned whether it will serve even as a working hypothesis. Be this as it may, Duckworth's observations strike us in the main very favorably, as both candid and judicious. It is not necessary to follow his work in detail.

We have purposely avoided the section on variations, not because we do not like it, but because the discussion would carry us too far. We will say in passing that the author does not seem to have freed himself from the widespread error, fostered by writers of the class of Wiedersheim and Testut, that resemblance is evidence of relationship. This slipshod method of thought has been so long condoned by those who should have been outspoken that it is doubly pleasant to read Osborn's address on the 'Present Problems of Paleontology.' Though our present author does not seem, as we have said, to have freed himself from this delusion, yet one suspects that he does not feel quite comfortable in its meshes. The reader will find in this part of the book a very convenient account of many methods used in practical anthropology.

A considerable part of the division of paleontology is given to the discussion of the

Trinil remains. This is very interesting. The author gives us the names of the three groups of anatomists who consider the remains human, simian and intermediate, respectively. The first group is essentially English, the second German and the third composite. Duckworth joins the last group, though admitting that the femur may be human. It is unfortunate that, having given so much space to this interesting question, he has not discussed the evidence that the pieces belong to one individual.

There are many other points which it would be interesting, at least to your reviewer, to discuss at length; but enough has probably been said to show that in his opinion it is a very good and useful hand-book.

T. D.

SCIENTIFIC JOURNALS AND ARTICLES.

THE September issue of the *Journal of Comparative Neurology and Psychology* contains the following articles: 'A Study of the Functions of Different Parts of the Frog's Brain,' by Wilhelm Loeser. The brain was experimentally examined by the extirpation of various regions (twenty-two operations) and study of the deficiency phenomena and other symptoms. 'The Central Gustatory Paths in the Brains of Bony Fishes,' by C. Judson Herrick. This paper (which was awarded the Cartwright prize for this year) is a continuation of the author's previous studies on nerve components, in course of which the peripheral gustatory system has been isolated and experimentally studied in fishes. Selecting the types in which this system attains its maximum development, the central gustatory paths are demonstrated by various microscopical methods, the research including a description, accompanied by forty figures, of the conduction paths for all of the important gustatory reactions which have been experimentally observed in the normal life of these fishes. The central gustatory centers are found to be more closely related to the central olfactory system than to any other part of the brain.

PROFESSOR FRANK SMITH, of the University of Illinois, has been made zoological editor of *School Science and Mathematics*. The biological section, of which Professor Caldwell was formerly editor, has been divided into two sections, a zoological section and a botanical section. Professor Caldwell remains the botanical editor.

DISCUSSION AND CORRESPONDENCE.

THE LETTER K IN ZOOLOGICAL NOMENCLATURE.

THERE are some influential zoologists who, in their zeal for the integrity of scientific Latin (or Neolatin), propose to change the letters k and w, wherever they occur, into c and v. Thus Sir G. F. Hampson, in his great work on the moths of the world, cites a species as *Episilia voccei*, the specific name being a new rendering of *wockei*, originally proposed by Moeschler. Unfortunately, this method results in some unexpected duplication of names. Thus Gray, in 1846, applied the generic name *Kogia* to the pygmy sperm whale. Butler, in 1870, used *Cogia* for a valid genus of butterflies, which is recognized to-day by Dr. Dyar as occurring in our own fauna. Now Dr. D. G. Elliot, in a recent work, amends the name of the whale to *Cogia*, and if this is accepted the name of the butterfly-genus must fall. It is true that Elliot's *Cogia* is later than Butler's, but it is proposed as the correct way of spelling Gray's genus, and not intended in any sense as a new name.

Theobald has lately proposed *Cellia* as the name of a genus of mosquitoes. But in 1822 Turton named a valid genus of mollusca *Kellia*. According to the Hampson-Elliot method this becomes *Cellia*, and the mosquito-genus name is a homonym.

Kallima was proposed by Westwood in 1850 as the name of a well-known genus of butterflies. In 1860 Clemens named a valid genus of moths *Callima*. Now Dr. Dyar, because of *Kallima*, has named the moth genus *Epicallima*.

Again, *Cnephasia*, Curtis, interferes with *Knephasia*, Tepper.

A curious case occurs in a genus of African moths, *Xanthospilopteryx*. In 1893 Carpenter named a species *X. kirbyi*, but it is a synonym of *pardalina*, Walker. In 1897 Holland