As to primitive marriage the authors tend toward a promiscuity theory as *versus* Westermarck (p. 111). It is notable that the 'muscle' dance as sexual lure is found amongst the Arunta (p. 381). Religion as mere craft is suggestively noted (p. 130). The intense solidarity and communism of savage life is vividly portrayed in this work. The account of socialization suggests that if we could penetrate animal organization, for example, crows, we might find quite similar methods, a general animistic interpretation and adaptation, and a sort of unspecialized Totemism, for instance, in rain calls. In this work we find plenty of hard dry facts, of external description, thorough and precise, but we have little large, comparative and psychic interpretation. We learn very little of how the natives think and feel. The conservatism of savage life is alluded to, as also the rather narrow but real chance of variation. Their powers of observation and memory in what directly concerns their livelihood is mentioned, as is also their very limited power of numeration. In adaptive intelligence they are in one point inferior to the elephant, who thatches himself, for though the Australian has warm skins of kangaroo he has never thought to use them as defense from the cold which often goes below freezing point. As clothing is unknown to him, we must revise our definition of man as an animal that wears clothes.

The authors are far from making clear the concept of the natives as regards the life of the individual after death. They continually use the word 'spirit'; but the essence or vital core of the individual which changes residence is really concrete (pp. 137 and 516), and it seems obvious that the natives have not risen to the idea of body and spirit. It would certainly be highly desirable that a skilled psychologist should closely interpret the psychic basis of the ceremonies, etc., described, should study emotions and their expressions, and test the psychic power of the natives in various ways.

The work has good maps and photographic illustrations. Some of the faces and figures are finely sculpturesque, for example pages 35 and 43, and the full face, p. 38, is a veritable Olympic Zeus.

HIRAM M. STANLEY.

Guide to Excursions in the Fossiliferous Rocks of New York State. By JOHN M. CLARKE, State Paleontologist. June, 1899. Pp. 1–120. Or Handbook 15, University of the State of New York.

This booklet is somewhat of a novelty in American geological literature. Every student of geology knows that New York State is classic ground for many of the Paleozoic formations of America. But a knowledge of how to see the various formations and collect their characteristic fossils to the best advantage in the shortest time and with the least expense can be obtained only after much experience. Here, however, most of this information is at hand and students of geology can go directly to classical localities and lovers of nature to some of the prettiest spots in the State.

In this booklet are described in detail 27 excursions, each demanding from 1 to 7 days. All of the trips can be made in from 56 to 72 days. The best and most readily accessible sections are described and directions given to railroads, the places to stop over night and the localities and beds furnishing characteristic fossils from the Cambrian to the Chemung, including the post-Glacial clays.

It is to be hoped that other States will profit by New York's example and that similar booklets for Maryland, Ohio, Indiana, Illinois and Iowa will follow. C. S.

BOOKS RECEIVED.

Praxis und Theorie der Zellen und Befruchtungslehre. VALENTIN HÄCKER. Jena, Gustav Fischer. 1899. Pp. viii + 260. Mark 7.

Physical Nature of the Child. STUART H. ROWE. New York and London, The Macmillan Company. Pp. xiv + 206. $1.00

The Elements of Physics for use in High Schools. HENRY CREW. New York and London, The Macmillan Company. 1899. Pp. xiii + 347. $1.10.

SCIENTIFIC JOURNALS AND ARTICLES.

The American Naturalist for July opens with an article by T. H. Montgomery, 'Observations on Owls, with particular regard to their Feeding Habits,' which clearly demonstrates the comparative abundance of small rodents as well as the numbers destroyed by owls.

Incidentally it shows with what regularity these birds resort to certain chosen roosting places. J. H. Comstock and J. G. Needham bring to a conclusion the fourth chapter on 'The Wings of Insects,' which treats of 'The Specialization of Wings by Addition,' and terminates that portion of the series devoted to furnishing data for determining the homologies of the veins. Arnold E. Ortmann discusses 'New Facts lately presented in opposition to the Bipolarity of Marine Faunas,' stating that they do not at all support the theory of bipolarity and that we must wait for further investigation to show whether bipolarity as a relic of older times is realized in the distribution of any marine animals. The first of the promised 'Synopses of North American Invertebrates,' by C. B. Davenport, is devoted to the 'Fresh-water Bryozoa.' A brief sketch of the habits and habitats of these animals is given, followed by a key for their specific determination and a bibliography of literature on Fresh-water Bryozoa. W. E. Praeger presents some 'Notes on the Habits of Bascanion Constrictor,' which contains good evidence as to the climbing abilities of this snake. Leonhard Stejneger, under the title 'A New Name for the Great Crested *Anolis* of Jamaica,' shows that there has been a curious unanimity in misnaming this reptile *Anolis edwardsii* and proposes for it the name of *Anolis garmani*.

The June number of the *Journal of the Boston Society of Medical Science* brings the third volume of this periodical to a close. The index shows that it contains sixty-five papers contributed by forty-five investigators. While there is a greater tendency towards pathological subjects than formerly, there is yet very much of interest to the comparative anatomist. In the present number Calvin G. Page has a 'Study of Streptococci isolated from Throat Cultures from Patients Ill with Scarlet Fever,' and a 'Preliminary Report on the Diplococcus of Scarlet Fever.' Theodore Hough and Bertha G. Ballantyne give a 'Preliminary Note on the Effects of Changes in External Temperature on the Circulation of Blood in the Skin,' and S. A. Hopkins presents a preliminary report on 'Bacteria and Dental Caries,' stating that he has not yet been able to deduce from his experiments any definite laws or positive results. Theobald Smith describes and figures 'Some Devices for the Cultivation of Anaërobic Bacteria in Fluid Media without the Use of Inert Gases.'

DISCUSSION AND CORRESPONDENCE.

ABOUT A REFORM IN NOMENCLATURE.

In the 'Nomenclator Zoologicus' of Scudder 80,000 genera are mentioned and there are 7,585 genera of phanerogamia. Human memory is unable to retain all these arbitrary names (languages have from 20,000 to 30,000 words each) and the result of it all is that "the language of science is more difficult than science itself." Even professed naturalists cannot guess what the *Mormops megalophylla* or the *Ceroplastes psidii* is. It is high time to repair this mischief by introducing the reform following:

1. The generic names of animals shall end in *us*, those of plants, in *a*, and those of minerals in *i*.

2. Minerals shall have a genus formed with the abbreviations of their components. Thus *Sulphurzinci sphalerita* indicates a mineral (i), a Sulphur (Sulph.) of zinc (zinci), of the species *sphalerita*.

3. Plants shall have their genus preceded by the abbreviation of their family. Thus *Rosaspiræa limbata* indicates a Rosacea (Rose), of the genus *spiræa* and the species *limbata*, plant (a).

4. The genus of animals shall be relegated to special lists, substituting for those in common use the abbreviations of their class and family or order. Thus *Inscoccidus psidii* indicates an animal (us), insect (ins.), coccidæ (coccidus) belonging to the species *psidii*. The family (Cocciceroplastus psidii) is more difficult of interpretation, since at least 1,000 families of animals have been accepted.

5. In case there be two similar species in the same family of animals their genus shall be cited.

The reform proposed does not alter or change anything, but facilitates research, as well as the applications, popularization and teaching of science. There are no future inconveniences in the acceptance of this reform. No Inter-