Races,' that is, the Polynesians, Australians and Malays.

It may be appropriate here to ask why the translator renders 'Völkerkunde' in the title of Book I. by 'Ethnography,' while the work itself he christens 'The History of Mankind,' which it is not in any sense of the phrase, nor is it so called in the original.

The author sets for himself the task of describing mankind 'as we find it to-day throughout the earth;' that is, he confines himself to the ethnography of the present age, and does not deal in history or archæology. His remoter aim is 'to demonstrate the cohesion of the human race.' In this particular field he belongs to the historic school, and where he finds similarities, *e. g.*, in religions of American, African and Australasian tribes, which he cannot explain, he 'predicts' (p. 40) that they 'will be found germs of survivals of Indian or Egyptian tradition.' This antique explanation (why did he not say Hebrew tradition?) will no longer avail in the light of modern psychologic science applied to ethnography.

In his detailed descriptions the author has been careful to present an accurate perspective of the life of the ruder races. He aims to give them their just position in the scheme of the world, and safely steers between the rocks of indiscriminate praise and under-valuation. He is constantly on the alert to point out the connection between special forms of culture and the natural conditions which give it color and form. His work is one which will be hailed with pleasure by all interested in the diffusion of knowledge regarding man, and it may be recommended as much the best in the domain which it treats now accessible in English.

D. G. Brinton.

University of Pennsylvania.

SOCIETIES AND ACADEMIES.

New York Academy of Sciences, October 5, 1896.

At the meeting of the Academy, October 5, 1896, the following gentlemen were nominated as honorary members of the Academy, and on ballot were duly elected: Prof. James J. Thomson, Cavendish professor of physics in the University of Cambridge, England; Prof. Felix Klein, professor of mathematics in the University of Göttingen, Germany; Prof. Henri Moissan, of the University of Paris, France.

On the organization of the Section of Astronomy and Physics, Prof. J. K. Rees stated that the work of the Columbia College observatory upon the variation of latitude had been continued during the past summer in such a manner that forty pairs of stars were observed every two weeks. This is a part of the general programme to continue these observations for the next two or three years until the observatories contemplated by the National Geodetic Association should be established. Prof. Rees also referred to the work of Dr. Davis, of the Astronomical Department of Columbia, who is about to undertake the reduction of the Piazzi catalogue devoting himself especially to the reduction of declinations.

Dr. H. Jacoby reported on the proceedings of the meeting held at Paris to consider the astro-photographic star charts. He stated that the 36,000 plates to be used in the catalogue of stars down to the 11th magnitude have nearly all been made, and the work measuring these plates is well under way. The Postdam measurements are practically ready for publication. The Paris and Greenwich reports will be ready in from five to seven years. The limit of accuracy in all of this work is about 0″.2 of arc. This catalogue is expected to contain about 2,000,000 stars.

Wm. Hallock,
Secretary of Section.

Academy of Natural Sciences of Philadelphia, September 29, 1896.

Dr. S. G. Dixon communicated an experiment that tends to establish the spore formation in the Tubercle bacillus. A glass tube was made six inches in length, one-half inch in diameter, having two bulbous enlargements situated one and one-half inches apart. *Agar Agar* nidus was placed in these hanging enlargements and the tube plugged at either end with cotton. After thorough sterilization the tube was placed in the Dixon manipulating chamber, when the cotton was removed from one end and the *Agar Agar* in one of the culture mediums inoculated with a growth of the tubercle bacillus. Then the tube was carefully replugged and

capped with rubber. It was held in a horizontal position and placed in a brood-oven where it remained for three weeks, at the end of which time a growth was apparent on the *Agar Agar* which had not been inoculated, thus demonstrating that something lighter than the bacillus itself had floated in an air-tight chamber at least one and one-half inches distant, warranting a belief in the existence of spores.

October 6th, Dr. Goldsmith called attention to the trap formations in Pennsylvania, more particularly to that near Pottstown, known as 'Ringing Rocks.' Referring to the contention as to whether they were of plutonic or volcanic origin, he said that he had been examining them for several years and was now convinced of their volcanic origin. In support of this view he described the general land configuration surrounding these formations, which he thought in some instances indicated the former existence of a crater, while in others the outflow had been through fissures. In further confirmation he exhibited a number of rock specimens and microscopic sections of the same. The subject was debated by Profs. Pilsbry and Frazer and Dr. Rand.

Theodore D. Rand presented specimens of mica schist from the River road, in Fairmount Park, Philadelphia. The nodules resemble very imperfect andalusite crystals, but appear on examination to be almost wholly quartz with a little kyanite or sillimanite, resembling closely those described by the late Dr. George H. Williams, in the 15th annual report of the United States Geological Survey as occurring on Sligo Branch (probably Fairfax county, Virginia,) and as suggesting metamorphism of included fragments.

Papers under the following titles have been recently presented for publication:

'Fossil bones of Birds and Mammals from Grotto Pietro Tamponi and Grive St. Alban.' By R. W. Shufeldt, M. D.

'Contributions to the Zoology of Tennessee, No. 4, Mollusks.' By Samuel N. Rhoads and Henry A. Pilsbry.

'Mammals collected by Dr. A. Donaldson Smith during his expedition to Lake Rudof.' By Samuel N. Rhoads.

'The Hymenoptera collected by Dr. A. Donaldson Smith in Northeast Africa.' By William J. Fox.

EDWARD J. NELSON,
Secretary.

THE TORREY BOTANICAL CLUB.

THE first fall meeting was held on Tuesday evening, October 13th, 33 persons being in attendance. Eight new members were elected. Dr. Britton reported that the field meetings during July and August had been usually well attended. Arrangements were made for reprinting several exhausted numbers of the *Bulletin*, so that complete sets can again be supplied. Specimens of the Russian thistle, collected on Captain's Island, off the Connecticut coast, were exhibited. The members interchanged accounts of their summer field experiences. Specimens of fleshy fruits were exhibited which had been preserved perfectly well since the early part of May in a 4 per cent. solution of formalin.

H. H. RUSBY,
Secretary.

SCIENTIFIC JOURNALS.

AMERICAN CHEMICAL JOURNAL, OCTOBER.

Trimetaphosphimic Acid and Its Decomposition Products: By H. N. STOKES. The author has defined a metaphosphimic acid as a metaphosphoric acid in which one-third of the oxygen is replaced by an equivalent number of imide groups. The complexity of these acids is so great that in most cases at least four forms are theoretically possible. Reference is made to the work of several investigators in the same field, and it is pointed out that the results obtained by Gladstone are capable of a different interpretation from that which he gave, and that the acid under investigation may have been trimetaphosphimic acid. The constitution of trimetaphosphimic acid depends on that of the chloronitride $P_3N_3Cl_6$. The author considers that the methods of formation and decomposition can be most readily explained on the assumption that the nucleus consists of a symmetrical ring of three phosphorus and three nitrogen atoms. Replacement of the chlorine by hydroxyl and a transformation into a tautomeric form would produce the trimetaphosphimic acid. It can be easily identified by its salts, several of which are quite characteristic. If a solution of the acid is decomposed by a