

annual reports of the survey. The fossils of these beds (one of them, a turtle, from the hill in question) were sent Professor Cope, and are described by him in the fourth annual report of the survey. He says: "Its position is between the Loup Fork and *Equus* terranes. The fauna is intermediate and peculiar, as not a single species occurs in it which has been found in terranes prior or subsequent to it in time. The horizon is more nearly and strictly Pliocene than any of the lacustrine terranes hitherto found in the interior of the continent."

E. T. DUMBLE.

ON THE CLASSIFICATION OF SKULLS.

TO THE EDITOR OF SCIENCE: I learn from an article by Dr. Harrison Allen (SCIENCE April 5, 1895) that, in a paper entitled 'Observations on the Cranial Forms of the American Aborigines,' Proceedings of the Academy of Natural Sciences of Philadelphia, 1866, 232, J. Aitkin Meigs classified various types of crania, using nomenclature which in some part coincides with that proposed by me in my new 'Method of Classification of Skulls.'

I am very glad to learn that Meigs distinguished the various forms of human skulls as early as 1866, as I have done twenty-six years later. When two men, at so great a distance in time and space, have conceived a similar idea it is a strong argument that this idea is not a fantastic one.

I first tested my new method in the summer of 1891, examining a large collection of Malanesian skulls, and published my first memoir in the spring of 1892, which was translated into German (*Die Menschen Varietäten in Malanesian*. Archiv. für Anthropologie, XXI., 1892). In the same year, 1892, I had fortunately the opportunity of examining more than 2,200 skulls of the Mediterranean and Russian races, ancient and modern. I then systematized my classification, which was im-

perfect, and distinguished varieties and sub-varieties of human skulls in a systematic catalogue of ancient Russian skulls.

This method has the approval of many Italian anthropologists, a notable exception being Mantegazza, a strange type of man, and of some German anthropologists, as Ranke and Benedict. The French anthropologists are indifferent, but they find the method useful as an analysis of forms.

The memoir of Meigs is not known in Europe. The only work of this author that I possess is the Catalogue of the Specimens contained in the collection of the Academy of Natural Science of Philadelphia, 1857. In view of the notice published by Dr. Allen in SCIENCE, I am anxious to read the work referred to, and I should be much obliged if some American friend will procure a copy for me. I shall be glad to refer to the work of Meigs in a special note. G. SERGI.

UNIVERSITY OF ROME, April 23, 1895.

SCIENTIFIC LITERATURE.

The Geological and Natural History Survey of Minnesota, Volume III., Part I. Paleontology. 4to, 1895, Pp. lxxv., 474. Plates xxxiv.

Considerable activity has been manifested of late in a more careful and systematic study of the invertebrate faunas of the various geological horizons of this country, and several works upon the subject have already been published or are now under preparation. The value of a thorough examination and proper illustration of the faunas of many of our geological divisions will be very great to the stratigraphical geologist, for many problems are now obscure on account of the lack of knowledge of the very criteria most important for correlative purposes.

What is most required in this field is not so much the increase in number of species, although many horizons even in the eastern portion of the country have as yet been but