

to the expedition is being planned by Dr. Roszkowski and Prince O. Hajdukiewicz, who are both studying at Stockholm. If thirteen volunteers come forward, it is proposed to hire a steamer to accompany the 'Virgo,' which leaves Gothenburg with Andrée on May 1. After visiting Spitzbergen and the Norsk-öar, this steamer will return to the north of Norway to observe the solar eclipse."

AN editorial article in the *London Journal of Education* calls attention to the lack of psychological laboratories in England as compared with America, and emphasizes the fact by spelling 'psychological' 'pyschological' throughout.

#### UNIVERSITY AND EDUCATIONAL NEWS.

MR. THOMAS MCKEAN has offered to give \$100,000 to the University of Pennsylvania upon condition that \$1,000,000 be collected. Mr. McKean, who is a trustee and an alumnus of the University, gave \$50,000 about a year ago.

MR. CHARLES M. DALTON has given the Massachusetts Institute of Technology \$5,000 for a scholarship in chemistry for graduate students. Preference will be given to those undertaking chemical research applicable to textile fabrics.

REAL estate and securities valued at \$215,000 have been presented to the Northwestern University by William Deering, of Evanston, who had previously given the University about \$200,000.

MR. AND MISS HOUGHTON, son and daughter of the late William S. Houghton, of Boston, trustee of Wellesley College, have given \$100,000 for a chapel to be erected in memory of their father.

THE fourth summer meeting, conducted by the American Society for the Extension of University Teaching, will be held in the buildings of the University of Pennsylvania, Philadelphia, July 6-31, 1896. Botany, chemistry and psychology are especially well represented, five courses being offered in botany and four each in chemistry and in psychology. The lecturers include Dr. B. L. Robinson, Dr. John M. Mac-

farlane, Dr. J. W. Harshberger, Prof. W. P. Wilson, Prof. Byron D. Halsted, Dr. M. E. Pennington, Prof. William Freer, Prof. W. O. Atwater, Dr. F. G. Benedict and Prof. Lightner Witmer.

#### DISCUSSION AND CORRESPONDENCE.

##### THE SIGNIFICANCE OF ANOMALIES.

AT a recent meeting of the Boston Society of Natural History I remarked on the want of a satisfactory explanation of certain anomalies that it is the fashion to crudely class as reverisions. I referred to the occasional appearance in man of some peculiarity of a lower form, which is in no conceivable line of human descent. I pointed out further that these anomalies were not only very numerous, but included features of the most diverse groups. To account for them by inheritance we must assume that they existed in a common ancestor of man and of the animal in which they are normal, with the astounding consequence that this primitive form, instead of being comparatively simple, must have been a perfect museum of anatomical curios, which is directly contrary to the principle of evolution. I failed to receive any information, and indeed did not expect any, for I have talked on this question with many, and have written and spoken publicly on it before. Testut's great work on muscular anomalies is a case in point; the author seems to be perfectly satisfied that he has accounted for a variation if he has shown it to be normal in some animal, no matter which. If I remember rightly, Gegenbaur, at the time, commented on this point, hinting that Testut's explanation needed to be explained. Within a few years the difficulty has been more frankly acknowledged. Thus in the Robert Boyle lecture delivered two years ago, Prof. Macalister said: "I cannot see that when one finds in the limb of a kangaroo or of a sloth, or in the face of a horse, a certain form of muscle like one which occurs as an anomaly in man, we must therefore conclude that its human occurrence must necessarily be due to atavism. Indeed the more I survey the catalogue of such parts the more I am impressed with the failure of the method as a scientific mode of accounting for these anomalies, while at the same time I am filled with admiration at

the industry and ingenuity with which the process of matching has been carried on." Prof. George S. Huntington also recognizes the difficulty in his admirable paper on certain muscular variations in the Transactions of the New York Academy of Sciences. "I believe that we are right," he says, "in referring such variations \* \* \* to the development of an inherent constructive type, abnormal for the species in question, but revealing its morphological significance and value by appearing as the normal condition of other vertebrates." But if so are we justified in calling them 'reversions?' Dr. Huntington's views do not seem to differ widely from those that I expressed in a paper on this subject in the *Naturalist*, of February, 1895. "Those very irregularities, which we call abnormal, point to a law in accordance with which very diverse animals have a tendency to develop according to a common plan." I do not need to be told that even to establish a law (and I have only hinted at one) is not in the least to show how it acts. All that I claim is that some other principle than atavism must be invoked. The pitiable abuse of it is shown in a book that I met the other day on the vermiform appendix. After stating that this is to be considered as the end of the cæcum, the author went on to remark that the rare cases of a double appendix, which are said to have occurred, are presumably to be explained by the double cæca found in many birds. Dr. Frank Baker, in the April number of the *Anthropologist*, severely criticises similar abuses.

The question is associated with another of very general importance, namely, whether similarity of structure is necessarily evidence of descent or even of relationship. One would think from certain writings that it is conclusive; but, of course, every anatomist knows that it is not. It seems that similar special organs, or arrangements of structures, occur in widely different orders in species of similar habits or surroundings. Mr. Dobson\* instances a South American rodent with the habits of moles in which the arrangement of the muscles of the leg is the same as that of the true moles. This clearly points to a law which, it seems to me, the occurrence of anomalies tends to confirm. It is

\* Jour. Anat. and Phys., Vol. XIX.

in the hope of having this discussed that I lay it before the readers of SCIENCE.

THOMAS DWIGHT.

'PROGRESS IN AMERICAN ORNITHOLOGY. 1886-95.'

IN the *American Naturalist* for May (Vol. XXX., pp. 357-372) Dr. R. W. Shufeldt gives, under the above title, a statistical summary of the new American Ornithologists' Union 'Check-List of North American Birds,' with criticisms *passim* on various points, followed by an arraignment of the Committee which prepared it for ignoring all recent work on the classification of birds, there being no change in this respect from the 1886 edition. He proceeds to enumerate, for the benefit of this Committee and others, the various 'elaborate classifications of birds' and the various authors who have written on the taxonomy of birds, not omitting to mention, of course, those of Dr. Shufeldt. No doubt great advances have been made in the last ten years in the knowledge of the structure and relationships of various groups of birds; and while many moot questions remain, and authorities still differ respecting the propriety of many of the recently proposed changes, a few points may be considered as having been practically settled. While it might have been well enough for the Committee to have expressed its opinion on some of the questions thus raised, such a procedure, in view of the still very unsettled state of the subject, seemed not particularly called for; especially as there were practical difficulties in the way of introducing any change in the order or succession of the higher groups.

Dr. Shufeldt strangely overlooks the main purpose of the new Check List, which was not, as he seems to think, the incorporation of the various species and subspecies added during the last ten years, and the changes of nomenclature introduced during the same period, scattered through half a dozen supplements to the original list; while this was important, its main purpose was the revision of the matter relating to the geographical distribution of the species and subspecies, which the interval of ten years had rendered, in many instances, not merely imperfect, but absolutely erroneous and archaic. Yet this feature of the new edition seems to