

GEOLOGICAL SOCIETY OF DUBLIN.

A GENERAL meeting of the society was held on Wednesday evening in the Museum Building, Trinity College. The chair was taken at eight o'clock by the Rev. Professor Haughton, President of the Society.

George Smith, Esq., of College-green, was elected a member of the society.

The President read his paper on the "Comparison of Modern Theories of the Origin of Species." After explaining the opinions of ancient philosophers on this interesting subject, he said the sciences of geology and political economy are mainly answerable for the revival of these exploded and forgotten fancies—geology, in supplying the lost history of organic life, which could never be studied profoundly from the creatures living at any given time; and political economy, in furnishing, from its mean and sordid motives, a Malthusian force supposed to be sufficient to supply the wants of previous theories. One of the earliest speculators on the origin of the diversified forms of life we see around us, and class as varieties, species, and genera, was Buffon, who published in 1766 his theory of the derivation of all mammal forms, by Degradation, from fifteen primary and perfect types, and nine special or isolated species. Some of the classes given by Buffon are as old as the time of Moses, who defines with some approach to accuracy, the class Ruminantia, distinguishing it from Pachydermata and Rodentia, in his classification of human breeding on domestic animals to be capable of production in ten or twenty years, he denies the right of his adversaries to appeal to the unaltered condition of the ass, the ostrich, or the cat, for three thousand years as a proof that specific forms balance round central types, and have no tendency to depart indefinitely from them. He continues the progress made to develop the subject:—Lamarck is the father of the Progressionists, and of the many who quote his name as an authority in support of their system, or express their disapproval of his doctrine, few have taken the trouble to understand his theory or to trace it to its origin. It is apparently founded on the confusion of species, like that of Buffon; but there is in reality an *arriere pense*, like an unseen presence, which corrupts his reasoning and discloses the motive force of his entire system. This hidden spring of action and theorising is a profound, and, as many think, a well-founded, contempt for humanity, which pervade his writings as thoroughly as it does the Voyage to the Honyhuhums. Lamarck was too quick-witted and acute an observer, however deficient he may have been as a reasoner, to have believed his own theory, the mainspring of which is the desire to degrade man into an intelligent baboon or yahoo—what difference is there in a name? In his desire to do so he overlooks every fact at variance with his foregone conclusion, and writes of mankind with a virulence, which, though devoid of the wit of Swift, springs from the same profound and unalterable conviction of the worthlessness of the creature he describes. Lamarck's contempt for his species is again shewn in the strange list of resemblance he selects for his comparison between man and the chimpanzee, a comparison fully as degrading as Swift's mock imitation of a naturalist's description of a yahoo. Lamarck's theory consists in the assertion of six laws in number, which he dignifies with the title of laws of nature. Lamarck's theory is essentially one of Progression, and is totally opposed to that of Buffon, which is one of Degradation, yet it is remarkable that they both rest upon the same foundation—the assumed non-reality of species. Like his successors in the progression theory, Lamarck spent his life in the establishment of the reality of species, and it is a humiliating reflection that, at the close of it, he believed himself to have lived under a delusion. What must we think of the principles that guide the speculations of naturalists when we find minds like those of Buffon and Lamarck drawing opposite conclusions from the same premises. It matters little in this question whether the premises be true or false, whether species be truly distinct or not; our surprise at the logic of the naturalists is natural, and must border on a courteous contempt. The English revival of Lamarckianism, or progress in organic life, by Mr. Darwin, does not contain a single idea in advance of those contained in Lamarck's six laws which he explains. I propose to test this strange theory by a corresponding theory of the mineralogical succession of igneous rocks, which opens up a fertile field of speculation hitherto unwrought. The igneous rocks of the Palæozoic period contain abundance of felspars, whose principal constituent is potash; the Mesozoic igneous rocks abound in soda, replacing potash; and in the Tertiary period soda itself gives way to lime and magnesia. Viewed in the light of the Lamarckian philosophers, here is a distinct indication that soda and lime are only allotropic conditions of potash. We may read the history of their formation in the crust of the globe, if we will only open our eyes and see it written. I may add, by the way, that this theory of the origin of lime is more intelligible

than that of many geologists, who would attribute the greater accumulations of calcareous rocks in secondary and tertiary strata to the creation of lime by organic force. I may further add, that this allotropic condition of matter is not without support from our present experience (similar to that given to the law of natural selection from experiment on breeding), as one of the best living chemists believes it probable that chlorine, bromine, and iodine are really one. If any chemist or mineralogist were to put forward such a geological theory of the origin of soda and lime as the foregoing, he would be regarded as a lunatic by other chemists and mineralogists. How does it happen that a theory of the origin of species which rests on the same basis, is accepted by multitudes of naturalists as if it were a new gospel? I believe it is because our naturalists, as a class, are untrained in the use of the logical faculties which I charitably suppose them to possess in common with other men. No progress in natural science is possible as long as men will take their rude guesses at truth for facts, and substitute the fancies of their imagination for the sober rules of reasoning. It has been well observed by the greatest of living Palæontologists, 'that past experience of the chance aims of human fancy, unchecked and unguided by observed facts, shews how widely they have ever glanced away from the gold centre of truth.'

Mr. W. Ogleby made some remarks.

Mr. Alphonse Gages read a paper on the formation of orpiment in a mass of sulphate of pyrites, found interstratified with the carboniferous

