

DARWINISM.

Mr. Darwin's observations, reasoning and speculations have placed him in the very highest rank among Naturalists. Whatever may be the ultimate verdict concerning the group of theories that is commonly expressed by the word Darwinism (a word which has now as it were acquired a meaning and so general and classic an acceptance as Platonic, Epictetian, or as the terms Baconian, Newtonian, and Cartesian yet scarcely Mr. Darwin will be remembered in future times as one of those extraordinary intellects who have opened new fields of speculation, and furnished new topics for debate. In the work before us Darwinism is defined, and the explanations given in previous works of the origin of species, and of the changes produced in animal organization by the varied operations of the laws of selection, receive here their extensive application. Even when the expansion of these laws was confined to the lower races, each held deserving consideration the origin of species could not be shut up in the halls of science or in the schools of philosophers. The general public were aroused by such striking speculations, and supplied with more or less knowledge and skill

to share in the discussion. It was felt that these theories could not stop short at the lower races, but that man must be included in their scope. Mr. Darwin now boldly brings the race of man under the same analysis of his philosophical methods, and, as might be expected, assigns to man, as an animal, as a part of the great system of nature, a history similar to that of other animals. He claims for him a descent from inferior but related forms of life,—and places him in the Catarrhine group of animals; a splendid monkey with the addition of a higher reason, and therefore with new capabilities of intellectual and social development. Perhaps Mr. Darwin speaks too confidently of the acceptance of his theory among competent judges, when he assumes the almost universal assent of the best naturalists to his conclusions. That man is a glorified ape we must be allowed to regard at present as an open question. It is manifestly an *in generalis* theory. We are not yet accustomed to grub at the roots of our genealogical trees as to be able to reach such a result without some reservation. We may accept the Pterodactyl and the Noctuid, or the Pteridotea and Lepidoptera, as our propinquities with some satisfaction, but we shudder as we pass three or four to some wandering primitive savage, or some non-human ape. In many in our pride of birth and blood, which is after all a veritable sort of pride, we must beg that this question may be an open one a little longer.

We may be allowed, however, to assume that, as a scientific question, the Book of Genesis settles nothing at all about the natural history of the animal we call man. Whichever Adam may be, it seems to us that his falling separates the advent of the divine element into humanity, and not the entrance of humanity itself upon the surface of the earth. Scripture greatly ignores man till the breath of a divine life is breathed into him, and leaves us free to range the earth in search of traces of the human or simply animal occupants of the planet before this last and highest development was attained. From this time humanity became a unity—"one blood"—whatever other, any systems might have existed in separate channels antecedent to this event. It seems to us that there is a strong analogy between the advent of Christianity among the religions of the world, and the birth of the Divine life in the natural history of man. Christianity affirms all the scattered and isolated truths half unconsciously shared by other faiths, and blends them into one. And so, if it is affirmed by science that the Pre-Adamic man was derived by one or many streams of descent from half-human savages or non-human lower types of animal life, yet it is no less true that these lower roots of humanity are effectively buried in the earth, and that, since the union of human history which is represented by the word or the fact which we are told to call Adam, there is a Divine glory and open humanity which nothing in the past can efface, and which blends all the races of man into one indelible unity.

If this be granted, we really see no good reason why we should fall into serious errors when science traces the undoubtedly strong analogies between the human form, in its structure and development, and those of lower animals—save if the conclusion deduced from these analogies should be exactly what Mr. Darwin affirms. If such be the origin, we are disposed to say, not "he made the man," but rather, "he made the better

For the first time we do not think the alternative has been satisfactorily estimated by either the advocates or the opponents of Darwinism. One of the greatest puzzles which both metaphysicians and theologians have had to encounter is that suggested by the instincts of animals. What is there that has not again and again puzzled over the question what is instinct? What are those half or quite spiritual activities in animals which excite curiosity and interest, and even bring them within the circle of our human sympathies and attentions? In that beautiful composition where we have learned to regard with almost brotherly affection a piece of animal flesh, or an insect, being like ourselves? Now, if Darwinism be true, we may infer that some of the glory and prerogative of man is reflected back upon the inferior animals, and that they may be supposed to share his destiny as far as they are capable of doing so. The contrary would be any possible alliance with lower forms of life we designate as man, is, we think, utterly shallow and unphilosophical. It is always safer to interpret the lower by means of the higher, than to presume the opposite course and bring the higher to the level of the lower. As in theology it is safer and wiser to descend from God to man, so in biology it is wiser to ascend

and jump whither to apply the facts and laws of human nature to explain the analogous phenomena of lower levels of life, than to consider any high ideal of humanity when we find facts and suggestions in inferior forms which seem to connect them with ourselves. Therefore, if science leaves our philosophy in some Catholicism unshaken, we would by no means be ashamed, but frankly accept the distinction in the world, while we cling to all that we know of what is highest and best in man. The very repugnance with which we are apt to regard the grotesque caricatures of humanity which we see in the Zoological Gardens seem to invite an imaginative and severely realistic comparison of the Darwinian theory when it is thus illustrated upon us in such an offensively degrading style in these inferior instances of the human form, and much of the repugnance against Darwinism is nothing more than a reflexion of the instinctive aversion which is excited by a visit to the monkey house. This study is urgent, scientific conclusions should not be based upon which, like a shattering puff, they will probably be equally dashed with success and failure. Persons who merely self-indulge at Darwinism, and doubt for or against it rather by their own than by their intellect, cannot possibly arrive at any conclusions about it worthy of respect. On the other hand, though by taking as some indication in favour of Darwinism that it leaves the metaphysical and theological characteristics of the inferior animals unimpaired, meaning and a higher interest, and while deriving nothing from man, with the work of the inferior races.

Mr. Darwin is not a mere speculator, and he is primarily an observer, and his books are a storehouse of the most curious and interesting facts in all departments of natural history. It is quite possible to find abundant instruction in his books as to all his former works, quite apart from his paintings, in the study and contemplation of the magnificent facts by which he illustrates or supports his conclusions. The most important argument in favour of the theory of man's descent from inferior races, is derived from the striking analogies between the structure and development of the human body and that of animals belonging to groups in most relation to man. Mr. Darwin argues that there are certain peculiarities in man's structure that require to be accounted for—organs and apparently unnecessary organs or modifications of parts, occasional anatomical peculiarities not at present characteristic of man as a whole, corresponding to what is known in other groups or divisions to earlier types, passing phases in embryonic development and related to any permanent structures in the mature animal. When these peculiarities of structure are traced in other animals, they are generally explainable by reference to homologous forms in allied species, and indicate a relationship which is clearly and plainly, whether the explanation is accepted or not, by the ultimate identity of the related species.

Are these facts of nature, Mr. Darwin asks, to require a different interpretation, is man to stand which they bear to other animals? Are they remaining and unexplained facts of nature only intended to mislead us? Geology asked the same question once, and has obtained a satisfactory reply. Mr. Darwin "proves" for the same reply in his department.

instinctive nature, Mr. Darwin asks, is there to show how, by processes of "natural selection," that "man's very gradually change their forms and habits, and yet retain traces of their old condition. In the present his unobscured to show what other animal selection has had in qualifying them, in how circumstances which determine the passing of animals gradually to themselves or variations on the original stock. The argument therefore for the descent of man from other races is not to be taken by itself, it only emerges as a further application of laws which are copiously illustrated in inferior animals.

Mr. Darwin in his argument assumes that the intellectual and moral nature of man differs only in degree, and not in kind from that of the lower animals. This is, we think, the weakest part of his theory. It is necessary quite unnecessary as a link in his chain of reasoning, more logically not deducible from his premises. We think it would be quite fair for nature to draw what conclusions they like, whether they take us, from an examination of the bodily structure of man, as well as from all the appetites, instincts, passions or tendencies that are distinctly to be correlated with animal structures by a large induction among all varieties of animal life. But in the spiritual phenomena of humanity we cannot help feeling that there is that which requires a source of development in order that it may be explained. A spiritual, reasoning mind correlated with a material, and with a physiology of the Tullius and Virgil, is suggested by many of what Darwin long calls "divergent degrees" from all animals not so cultured, and whatever may be the history of his bodily organization is worth study, and claims higher attention than any other, and claims higher attention than any other, nature history ever holds. Here the appropriate steps in, and above that as in the ascending series of life, the typical steps lead into a tier almost that the fish has other developed, while the bird were into an element which to the reptiles and fishes is an unapproachable region. So the birds themselves are indicated by man as the highest of the mammals, when he takes a new and higher evolution flight, and leaves to man and breathe in the beautiful ether of intellect and absolute reason. Thus each of the ascending orders from fishes to mammals is introduced into an element unknown to the lower forms.

We do not forget that there are such things as flying fish and reptiles, and we are willing to allow that here and there we see flashes of intelligence among the lower races which are almost like an ascent into the higher ether of humanity. But, besides dipping for an analogy only what it is worth, we believe that the qualities that belong to humanity are at least as far removed from anything that mammals have been able to define in the lower animals, as the air is from the water. The real lesson that Darwinism might teach us, according to this analogy, is that as the fish does not breathe the air which the water in which it lives holds in solution, or is there a real separation between the highest intelligence of man and the lowest instance of inferior animals, and that such higher rank of life holds that the inferior life it has reached does not breathe and embrace the lower which has not learned to approach it. How what that connection is we hardly think a science of nature can explain. That man be left to a new science which we hope man is not likely to comprehend, the science of the supernatural—the science that reveals the laws which are implied in all the higher experiences of man, all that raised him above lower forms of life, and above himself to a new realm of ordinary laws of existence; all that raised him to any possible sense of the word a supernatural being.

Meanwhile, in all obscurity, we wish Mr. Darwin theologized in his hypotheses and applications. He is such an earnest worker after truth that he can calmly await the development of human knowledge and opinion, and commit his views to the safe custody of history. He has himself well remarked, and with this we take our leave of him, that—"False facts are highly injurious to the progress of science, for they often bring culture, but false views, if supported by some evidence, do little harm, as every one takes a voluntary pleasure in proving their falsehood; and when this is done, one path towards error is closed, and the road is broken in places at the same time opened." Vol. II, p. 262.

* The Descent of Man, and Selection in Relation to Man. By CHARLES DARWIN, F.R.S., F.L.S., &c. Two vols. London: Murray, 1871.