

THE CAPE MONTHLY MAGAZINE.

THE DESCENT OF MAN.*

“ A monstrous eft was of old the Lord and Master of Earth,
For him did his high sun flame, and his river billowing ran,
And he felt himself in his force to be Nature’s crowning race.
As nine months go to the shaping an infant ripe for his birth,
So many a million of ages have gone to the making of man :
He now is first, but is he the last ? Is he not too base ? ”

TENNYSON.—*Maud.*

THE relation in which man stands to other animals, and particularly to the class of mammalian vertebrates of which he is unquestionably a member, is essentially a subject of surpassing interest. Always matter for thought with the more reflecting part of mankind, and often the basis of most fanciful theories, the inquiry has of late received a very considerable impetus from the wide acceptance of the doctrine of Evolution. Surprise was felt by many that Mr. Darwin, in his renowned *Origin of Species*, did not (save by a single distant allusion at the close of the book) refer to the case of the various races of men, which, even upon the general belief in their common descent, seemed to afford some evidence in support of his views. The reason for this reticence appears to be afforded by the Introduction to *The Descent of Man*, lately published by Mr. Darwin, in which he writes:—

During many years I collected notes on the origin or descent of man, without any intention of publishing on the subject, but rather with the determination not to publish, as I thought that I should thus only add to the prejudices against my views. It seemed to me sufficient to indicate in the first edition of my *Origin of Species*, that by this work “light would be thrown on the origin of man and his history;” and this implies that man must be included with other organic beings in any general conclusion respecting his manner of appearance on this earth. Now the case wears a very different appearance.

* *The Descent of Man, and Selection in Relation to Sex.* By Charles Darwin, M.A., F.R.S., &c. 2 vols., 8vo. London : John Murray. 1871.

He goes on to say how the manifestly large number of naturalists who now receive the general theory of descent with modification has encouraged him to put together for publication the notes constituting the present work; and he has certainly most amply atoned in the latter for any omission of direct reference to man in the *Origin*.

Before proceeding, it will be well to give, in the author's own words, a statement of the scope and purpose of the treatise. He says:—

The sole object of this work is to consider, firstly, whether man, like every other species, is descended from some pre-existing form; secondly, the manner of his development; and thirdly, the value of the differences between the so-called races of man.

This brief abstract of the contents of the book states the three heads of the subject in the order of their importance, and must not be taken to indicate their successive treatment only; indeed, the first and second are necessarily reverted to, after the discussion of the third, in the "General Summary and Conclusion" of the work. Incidentally, however, the treatment of the third occupies very nearly two-thirds of the whole bulk of the two volumes; for, in considering the interesting question of the differences between the races of men, Mr. Darwin is forced to the conclusion that Natural Selection—the law of survival of the fittest—cannot have occasioned or perpetuated external variations which are apparently of no "direct or special service" to man, and considers that most of those differences must be traced to the agency of Sexual Selection, viz., the selection exercised by the members of one sex (almost always the female) in regard to mating with individuals of the other. But to strengthen his argument on this view, he "found it necessary to pass the whole animal kingdom in review," and thus thirteen of the twenty-one chapters of the work (including two which relate to man himself) are devoted to considering the action of sexual selection in all tribes of animals. The "inordinate length" of this portion of the work has led the author to divide the treatise into "Part I.—The Descent or Origin of Man," and "Part II.—Sexual Selection."

It will be obvious to every person at all conversant with anatomical zoology that Mr. Darwin's task would have been comparatively an easy one had he only endeavoured to demonstrate the intimate physical relations between man and other animals; for, in this respect, the further research is carried, and the more complete our knowledge of organic structures becomes, only the stronger and more convincing grows the evidence that the wide interval formerly supposed

to exist between the highest animal and those next to him in rank can no longer be insisted on, and must ultimately be recognized as imaginary. The differences that do exist are palpably differences of degree only, and not of kind, as will strike any one who peruses Owen's celebrated treatises on the great anthropoid apes, in which as formidable an array as possible of all distinctions is given. The effect of recognizing this close community of structure, added to a knowledge of the common conditions of reproduction, embryonic existence, communication of certain diseases (*e.g.*, hydrophobia), &c., will naturally depend almost entirely upon the light in which the observer regards the organic world; but he who accepts the doctrine of natural selection, and sees in community of descent the sole key to the meaning of community of structure and function, will probably experience but little difficulty in following Mr. Darwin to the conclusion that, physically, man is "the co-descendant with other species of some ancient, lower, and extinct form."

But Mr. Darwin is far too thorough an investigator to rest contented with a demonstration affecting only the bodily frame of man. He proceeds, in Chapters II and III, to discuss the origin of mental and even moral faculties, in the aspect of the possibility, to say the least, of their having been gradually developed from the vastly inferior intellectual powers of man's lowly progenitors. It is certainly here that most readers will find themselves wholly unable to concur in the gifted author's views. But it must not be supposed that he himself is not fully alive to the difficulties in the way of their reception; on the contrary, he freely admits them. Allowing, however, as he does, that "the difference between the mind of the lowest man and that of the highest animal is immense," he yet contends that that difference "great as it is, is certainly one of degree, and not of kind," and points out that "there is a much wider interval in mental power between one of the lowest fishes, as a lamprey or lancelet, and one of the higher apes, than between an ape and man; yet this immense interval is filled up by numberless gradations." After tracing the existence of some instincts unmistakably common to man and other animals, the author notes how the same emotions are also felt in common, such as happiness and misery; terror, suspicion; courage or timidity in varying degrees; good and ill temper; rage, love, revenge, and grief; and even the "more complex" emotions of jealousy, emulation, love of praise, pride, shame, &c. Much evidence also is given as to animals sharing in the faculties of wonder, curiosity,

imitation, attention, memory, imagination (as indicated by dreaming), and reason. The discussion grows in interest as it proceeds to indicate that the mental powers of animals, even in a state of nature, are capable of improvement; that the *Quadrumana* do, to some extent, make use of tools and weapons, though they do not fashion them; and that the higher apes roughly construct shelters of sticks and leaves. The origin and development of articulate language—that proudest of man's rich possessions—is considered at some length; a sense of beauty is recognized to exist in animals; and an ingenious comparative analysis is made to suggest that the "deep love of a dog for his master" evinces "some distant approach" to the highly complex feeling of religious devotion.

The chapter (III) in which Mr. Darwin deals with the moral sense, or conscience, will inevitably prove the stumbling-block of his work. But, in whatever light it may be regarded, no one will deny its exceeding interest, the care with which the author approaches so difficult a subject, or the skill with which he handles it. He recognizes the probable germ of conscience in "well-marked social instincts," such as the mutual help and sympathy which so many animals of all grades exhibit; and shows with much force that, as among the barbarous races of men at the present time, the strictly social (as opposed to individual or "self-regarding") virtues were at first alone regarded by primeval man. Those who have been quite unaccustomed to observe and reflect upon the phenomena of animal life around them, or who have been wont to look upon animals as mere machines in which the sole motive power is instinct, will be more inclined than others to reject a theory which allows in animals (at least in the higher ones) a large share of intellect and some share of conscience. But, on the other hand, as Mr. Darwin justly observes, "it is a significant fact that the more the habits of any particular animal are studied by a naturalist, the more he attributes to reason and the less to unlearned instincts." And it will be wise, before scouting as untenable a view which to many will be startling from its novelty, to reflect how very little we really know about the mental condition of animals, or can enter into their feelings or thoughts, even in the case of the domesticated species with which we are most familiar. On this it may be of interest to cite the well-weighed words of a thinker as profound as Mr. Darwin, and a religious teacher and theologian of the very first order—John Henry Newman. In the course of a sermon on "The Invisible World," the preacher

powerfully enforces his argument, as to the reality of the world of spirits, by a reference to the mysteries of the world of animals, in the following striking terms:—

If this—[the belief that man is in communion with an invisible spiritual world]—seems strange to any one, let him reflect that we are undeniably taking part in a third world, which we do indeed see, but about which we do not know more than about the angelic hosts—the world of brute animals. Can anything be more marvellous or startling, unless we were used to it, than that we should have a race of beings about us whom we do see, and as little know their state, or can describe their interests or their destiny, as we can tell of the inhabitants of the sun and moon? It is, indeed, a very overpowering thought, when we get to fix our minds on it, that we familiarly use—I may say, hold intercourse with—creatures who are as much strangers to us, as mysterious, as if they were the fabulous, unearthly beings, more powerful than man, and yet his slaves, which Eastern superstitions have invented. We have more real knowledge about the angels than about the brutes. *They have, apparently, passions, habits, and a certain accountableness*; but all is mystery about them. *We do not know whether they can sin or not, whether they are under punishment, whether they are to live after this life.* We inflict very great sufferings on a portion of them, and they, in turn, every now and then seem to retaliate upon us, as if by a wonderful law. We depend upon them in various important ways; we use their labour, we eat their flesh. This, however, relates to such of them as come near us. Cast your thoughts abroad on the whole number of them, large and small, in vast forests, or in the water, or in the air; and then say whether the presence of such countless multitudes, so various in their natures, so strange and wild in their shapes, living on the earth without ascertainable object, is not as mysterious as anything which Scripture says about angels? Is it not plain to our senses that there is a world inferior to us in the scale of beings, with which we are connected, without understanding what it is? And is it difficult to faith to admit the word of Scripture concerning our connection with a world superior to us?

The whole of this remarkable passage (and especially the portion which is here italicised to fix the reader's attention) is pregnant with warning to those who would hastily condemn views of the mental and moral status of animals such as Mr. Darwin so ably suggests.

The probable mode of development of man from some lower form, and of his intellectual and moral faculties during primeval and civilized times, are respectively treated in Chapters IV and V; while Chapter VI is devoted to the consideration of his affinities and genealogy. In a brief notice like the present, which is only intended to direct an intelligent attention to the work, it is not practicable to indicate with clearness and conciseness the line of argument pursued by Mr. Darwin; and selections here and there at random would give but little idea of its force and sustained interest, or of the array of facts and observations adduced in its support. But it may be noted that the general result of the inquiry into man's descent is to the effect that "the

early progenitors of man were no doubt once covered with hair, both sexes having beards; their ears were pointed and capable of movement; and their bodies were provided with a tail, having the proper muscles. * * * The foot, judging from the condition of the great toe in the fœtus, was prehensile; and our progenitors were, no doubt, arboreal in their habits, frequenting some warm, forest-clad land. The males were provided with great canine teeth, which served them as formidable weapons." And through the evidence afforded by the vertebrate animals of all grades, the common progenitors of them and of man in the dim recesses of the remote past are conjectured to have been "a group of marine animals resembling the larvæ of existing Ascidians," the larvæ in question having recently been discovered to present certain affinities with the lowest known vertebrate, the lancelet. The sixth chapter closes as follows:—

Thus we have given to man a pedigree of prodigious length, but not, it may be said, of noble quality. The world, it has often been remarked, appears as if it had long been preparing for the advent of man; and this in one sense is strictly true, for he owes his birth to a long line of progenitors. If any single link in this chain had never existed, man would not have been exactly what he now is. Unless we wilfully close our eyes, we may, with our present knowledge, approximately recognize our parentage; nor need we feel ashamed of it. The most humble organism is something much higher than the inorganic dust under our feet; and no one with an unbiassed mind can study any living creature, however humble, without being struck with enthusiasm at its marvellous structure and properties.

In the discussion which follows, regarding the value of the differences between the races of man under a classificatory point of view,—that is, whether or not those differences are sufficient to constitute distinct species,—Mr. Darwin sums up the evidence on both sides of the question, and, judging it to be pretty evenly balanced, concludes that the term "sub-species" can most appropriately be applied to the various races.

As already stated, the author considers that the large majority of the characteristic differences between the various human races or sub-species cannot be satisfactorily accounted for by the influence of natural selection, and refers the solution of the problem to the agency of sexual selection. He does not assert that this agency explains every difference of the kind, but points out that, judging from the evidence afforded by the rest of the animal world, "it would be an inexplicable fact if man had not been modified" by it; and further, that "the differences between the races of man, as

in colour, hairyness, form of features, &c., are of the nature which it might have been expected would have been acted on by sexual selection." The thirteen chapters, in which the action of this special kind of selection is traced through each great class of animals, constitute a treatise unsurpassed by any of Mr. Darwin's writings in mental range, penetrating observation, deep research, and fertile suggestion. Nothing short of the perusal of this portion of the book can afford a fair idea of the skill with which a vast array of recorded facts is marshalled and organized in support of the sustained argument. It will be to most persons a very novel idea that, in the numberless instances where the male differs more or less widely from the female in splendour of colouring, variety of ornament, proportionate size and strength, weapons and means of defence, musical organs, &c., the difference is to be traced to the simple selection by the females of the more beautiful, powerful, or otherwise attractive males. The following remarks in the closing "General Summary, &c.," perhaps afford as clear an idea of this subject as can be given in a few words:—

Sexual selection depends on the success of certain individuals over others of the same sex in relation to the propagation of the species; whilst natural selection depends on the success of both sexes, at all ages, in relation to the general conditions of life. * * * The belief in the power of sexual selection rests chiefly on the following considerations. The characters which we have the best reason for supposing to have been thus acquired are confined to one sex; and this alone renders it probable that they are in some way connected with the act of reproduction. These characters, in innumerable instances, are fully developed only at maturity, and often during only a part of the year, which is always the breeding season. The males (passing over a few exceptional cases) are the most active in courtship; they are the best armed, and are rendered the most attractive in various ways. It is to be especially observed that the males display their attractions with elaborate care in the presence of the females, and that they rarely or never display them excepting during the season of love. It is incredible that all this display should be purposeless. Lastly, we have distinct evidence with some quadrupeds and birds that individuals of the one sex are capable of feeling a strong antipathy or preference for certain individuals of the opposite sex. Bearing these facts in mind, and not forgetting the marked results of man's unconscious selection, it seems to me almost certain that if the individuals of one sex were, during a long series of generations, to prefer pairing with certain individuals of the other sex, characterized in some peculiar manner, the offspring would slowly, but surely, become modified in this same manner.

One of the admitted difficulties on this view is that of being able to attribute to the females of animals both high and low so keen and true a sense of beauty as the theory of sexual selection requires that they should possess. But, as far as the case of the vertebrata is concerned, Mr. Darwin,

with his wonted boldness and promptness of suggestion, remarks:—

Every one who admits the principle of evolution, and yet feels great difficulty in admitting that female mammals, birds, reptiles, and fish, could have acquired the high standard of taste which is implied by the beauty of the males, and which generally coincides with our own standard, should reflect that in each member of the vertebrate series the nerve-cells of the brain are the direct off-shoots of those possessed by the common progenitor of the whole group. It thus becomes intelligible that the brain and mental faculties should be capable under similar conditions of nearly the same course of development, and, consequently, of performing nearly the same functions.

The difficult subject of sexual selection in man is discussed with great ability in Chapters XIX and XX. Mr. Darwin admits that the views advanced “want scientific precision,” inasmuch as it cannot positively be asserted that one character, but not another, has been modified by the agency under consideration. But he finds reason, on the whole, to conclude that secondary sexual characters, both in men and women, and also the differences between the races of mankind, are due to the operation of this particular kind of selection. The points treated successively, after a notice of the more obvious differences between the sexes, are the law of battle, as still prevalent among savage tribes; the difference in the mental powers of the two sexes (and here Mr. Darwin fully supports the view of the pre-eminence of men); the voice and musical powers; the influence of beauty in determining the marriages of mankind; the causes which prevent or check the action of sexual selection with savages; the manner of action of sexual selection; the absence of hair on the body, and its development on the face and head; and the colour of the skin. Remarks of much interest occur throughout these chapters, and a few of these may be quoted as samples of the rest. After tracing the manner in which the mental superiority of man has probably been acquired, the author observes:—“It is, indeed, fortunate that the law of equal transmission of characters to both sexes has commonly prevailed throughout the whole class of mammals; otherwise it is probable that man would have become as superior in mental endowment to woman, as the peacock is in ornamental plumage to the peahen.” In referring the origin of musical powers to the practice, so generally prevalent among animals, of using the voice with peculiar power and variation during the pairing time (and after quoting Mr. Waterhouse and Professor Owen, on the musical gibbon—*Hylobates agilis*—an ape which, the Professor remarks, “alone of brute mammals may be said to

ing”), the apt note follows, that “Love is still the commonest theme of our own songs.” Treating of the causes to which Sir John Lubbock and Mr. M’Lennan have referred the common barbarian practice of procuring wives by capture, the author suggests, “In our own marriages the ‘best man’ seems originally to have been the chief abettor of the bridegroom in the act of capture.”

One of the most useful and characteristic features of Mr. Darwin’s works is his constant practice of giving “Summaries” at the end of the chapters, concisely recapitulating all that has been advanced under the particular head concerned. This is a very valuable aid in the perusal of treatises which make so large a demand upon the reader’s closest attention, affording, in fact, so many halting places on the ascent of the argument, where one can pause to take breath, and to survey the space just previously traversed, before entering on the next stage. In the volumes under notice, these summaries are drawn up with the greatest care, and that which concludes the work (as Chapter XXI) is naturally the most interesting of them all. Several of the passages above given are extracts from this last chapter, and it is difficult to refrain from giving many others of equal excellence. The closing paragraph runs thus:—

Man may be excused for feeling some pride at having risen, though not through his own exertions, to the very summit of the organic scale; and the fact of his having thus risen, instead of having been aboriginally placed there, may give him hopes for a still higher destiny in the distant future. But we are not here concerned with hopes or fears,—only with the truth as far as our reason allows us to discover it. I have given the evidence to the best of my ability; and we must acknowledge, as it seems to me, that man, with all his noble qualities,—with sympathy which feels for the most debased,—with benevolence which extends, not only to other men, but to the humblest living creature,—with his god-like intellect, which has penetrated into the movements and constitution of the solar system—with all these exalted powers—Man still bears in his bodily frame the indelible stamp of his lowly origin.

That the work here imperfectly noticed, so fearless and outspoken in tone, will meet with severe (and in many quarters, hostile) criticism, is only to be expected. And it may safely be asserted that no one will welcome competent criticism more gladly than the author himself; for nothing more distinctly characterizes this in common with his other works than his evident care, and even anxiety, to give due weight to all authenticated facts which appear to tell against the views which he himself maintains.* This rare

* It is within the knowledge of the writer of this notice that during the many years in which Mr. Darwin, with persistent energy, amassed the wonderful store of materials upon which his theory of organic development rests, he took great and unflagging care to note all facts and observations, however adverse, that seemed in favour of opposite views.

quality of impartiality in dealing with evidence in a cause where the judge is himself a party to the suit, of steady resistance to the ever-recurrent temptation to some slight *suppressio veri*, ought of itself to disarm adverse criticism of that unfairness which too commonly disfigures it. And when to this consideration is added a just apprehension of the great and varied acquirements which Mr. Darwin has brought to the work; of his life-long labours in the field of Nature, and his eminently original researches alike in zoology, botany, and geology—researches gratefully accepted by all naturalists, of whatever views,—it should be recognized that *The Descent of Man*, highly speculative as it is, and as its author admits it to be, is not a work to be treated lightly or contemptuously, as if it were but the crude notions of a mere fanciful theorist. Wide as are its generalizations, and bold as is its imaginative range, these find their ground and warranty in a knowledge of nature as intimate as it is extensive.

Whatever errors the progress of discovery may reveal in the elaborate superstructure of Evolution—and their disclosure is by no one more fully expected than by the distinguished author himself—it must be acknowledged that the foundations are securely based upon the broadest and firmest of the known facts of organic existence.

LIFE AT THE CAPE.

BY A LADY.

LETTER IX.

Easter Monday, April 21, 1862.—If first impressions are worth anything, I think I must say that Worcester is the prettiest place I have ever seen. It is handsomely and regularly laid out, with fine broad streets, grassy side-paths, some good public buildings, and capital gardens well supplied with water. At the top of the principal street is the Drostdy House—a brick palace, erected in the times of Lord Charles Somerset as his shooting-box, and now occupied by a very polite old gentleman, who, as Civil Commissioner, lives there, and pays great attention to the handsome grounds attached to it. They are well worth a visit, and possess some enormous fig-trees, the fruit of which is as large as a small orange, but coarse and fleshy, with leaves as big as soup plates.