The Descent of Man, and Selection in Relation to Sex. By CHARLES DARWIN, M.A., F.R.S., etc. With illustrations. In two volumes. Vol. I. 12mo. pp. 409. New York: D. Appleton & Co. 1871.

THE publication some years ago of Mr. Darwin's book on "The Origin of Species" created a considerable stir in the scientific world. His theories were not new, but they were sustained with so much ability, and, as he arrayed his facts to support them, were so plausible, that it was not easy to dispose of him, as of his predecessors in the same field, as an absurd visionary or a superficial speculator in science. A party was found ready to adopt his views, and to labor to promulgate and extend them. Others strenuously opposed these theories and their tendencies; some because they could not see that the proof adduced sustained, or even rendered them probable, while others believed them antagonistic to the christian faith. A fourth class readily conceded Mr. Darwin's ability and the cogency of much of the proof he brought forward, yet thought it proper to await further investigation, and a thorough review of all the known facts of science before jumping to conclusions so much at variance with generally-accepted opinions.

Mr. Darwin followed up his first publication by another on "Variation

of Animals and Plants under Domestication," and has now brought out the book which, when completed, will doubtless finish the revelation of his theories. This last work really adds nothing, theoretically, to the obvious conclusions to be derived from his book on "The Origin of Species." It is true, he did not, in that work, venture to carry his theory to the extent of accounting for the origin of man, but the inference was so apparent that other men of science, like Huxley and Lyell, boldly announced and advocated the extension of the principles where Mr. Darwin had been too timid to venture. He says, in the introduction to the book before us, that he had not originally intended to publish his speculations upon the origin and descent of man, but that he had pursued his investigations "rather with the determination not to publish, as I thought I should thus only add to the prejudices against my views."—(p. 1). Finding his theories accepted and his suggestions carried out by men of acknowledged standing, he now comes forward to avow these principles as his own, and to claim the honor of being their discoverer.

This volume is divided into two parts, the first treating of the descent of man, the second of sexual selection. This second part properly belongs to the subject as discussed in the work on natural selection, the treatise upon the descent of man being really the crowning portion of his work. He intends, however, to apply, in a forthcoming volume, the principles here investigated to the human race.

Mr. Darwin confines himself entirely to man's material origin, any further speculations being beyond the domain of physical science. With the origin and growth of mind, and the moral faculties, he has nothing to do. As he says, "In what manner the mental powers were first developed in the lower organisms is as hopeless an enquiry as how life first originated. These are problems for the distant future, if they are ever to be solved by man."—(p. 35.) He is very cautious in his statements, and, however his theories may conflict with existing beliefs, seems to try to avoid carrying them out to such an extent as will bring him into antagonism with ancient prejudices. "The question is, of course, wholly distinct from that higher one, whether there exists a Creator and ruler of the universe; and this has been answered in the affirmative by the highest intellects that have ever lived."—(p. 68.)

Were our grandparents apes, and our more remote progenitors oysters? is the gist of the question of which Mr. Darwin maintains the affirmative. Into the mazes of scientific discovery, curious and instructive as are many of the facts set forth in this volume, we have not space to enter. The majority of readers will be concerned only with results and conclusions, none but naturalists being able thoroughly to sift the evidence adduced. Some phenomena which our author brings forward as authentic could be shown to be at least questionable, and that upon the

best authority. As to the similarity of the germ of life in man and the lower animals, and the near approach we make to being born with tails (see pp. 15. 28-9), we think it not worth while to be frightened, as, according to this theory, the tendency is to advance toward more nearly perfect forms.

The ancient doctrine of metempsychosis is substantially reaffirmed in Mr. Darwin's system, though he says nothing of the individuality of the soul through all the various bodily transformations, and we presume would not venture thus to apply his principles. There is beauty and a valuable suggestion to humanity in this idea. If animals were deemed, even possibly, our progenitors, we should be inclined to treat kindly the beings who are developing toward a higher state; perhaps, even, we would cease to eat them.

The theory that man has developed from lower forms of animal life is not, as we have said, original with Mr. Darwin. It appears to have been first promulgated in modern times by the French naturalist, Lamarck, in his "Philosophie Zoologique." Mr. Darwin has, however, advanced his views leading to the same point so gradually, so cautiously, and with so much show of scientific research, as to gain considerable credence for his system, while it was at once scouted as put forward by his predecessors.

The conclusions of all thoroughly scientific naturalists have, however, been to the effect that there is permanency of type in the animal kingdom, admitting, so far as our knowledge extends, of only variations, but never tending to form distinct species. As to the invariability of the human race, it seems to be beyond question so far as we have any data. The proof may be found in the works of such thorough investigators as Buffon, Campollion, De Gobineau, Blumenbach, Cuvier, Pritchard, and Figuier. As to what is the germ of life, or how life is produced, all admit that it is useless for physical science to enquire. From the earth, the universal mother of material forms, spring a great variety of plants. We do not see that these diversified forms tend in any manner to approach each other, but rather the contrary. There is no process that will, in time, produce oaks from briers, or fruit-trees from nettles. We are all dust, that is certain; but how or why particles of earth are animated, and resolve themselves into living organisms, we cannot know.

The Duke of Argyll, in his "Reign of Law," says that, "whatever may have been the method or process of creation, it is creation still," which is as much as to say, that if a thing is, it is, however it came to exist; and that conclusion, unsatisfactory as it may be, is probably about all that we can attain in this sphere from scientific research. Our philosophers, with all their speculations, cannot tell us what mind is, or how it differs from matter, or acts upon it; still less can they satisfactorily explain

the cause of the unceasing movements of the heavenly bodies, and the constant activity of all portions of the universe. Looking downward, and studying strata and insects, they may imagine, as does Mr. Darwin, that they have discovered the laws of material life, but looking upward, they may well conclude that in their presumption they are indeed but little removed from the anthropomorphous apes.