

## MR. DARWIN AND THE 'ORIGIN OF SPECIES.'

THE editions of Mr. Charles Darwin's 'Origin of Species' are, he says, one Italian, one Dutch, two American, two Russian, two French, and four German, to be immediately followed by a fifth, corrected up to the standard of the present or fifth English edition. This English edition is the fifth thousand. How many thousand copies are contained in the whole of the eighteen editions is not stated. But if the foreign editions are as large as the English, thirty-six thousand copies of this book have been distributed among the libraries of the world. If we add to this immense publicity the discussions on the origin of species by the preservation of favoured races in the struggle for life in societies and periodicals, by tongues and types, it will appear that an hypothesis has commanded an amount of attention never yet won by a romance. Reading for amusement is out of the question here; and an author receives far more and a higher kind of attention who is not merely read but is also discussed.

Attention is not acceptance. Many editions do not mean real success. The book has sold; the guess has been talked over; and the circulation and discussion sum up the significance of the editions. Mr. Darwin prefaces his fifth English edition with an essay, which he calls 'An Historical Sketch of the Recent Progress of Opinion on the Origin of Species,' but which ought to be called, a Collection of Extracts, from Aristotle to Dr. Dalton Hooker, anticipatory or corroborative of the hypothesis of Natural Selection. For no account is given of any hostile opinions. This fact is very significant. This historical sketch thus resembles the histories of the reign of Louis the Eighteenth, published after the Restoration, from which the Republic and the Empire, Robespierre and Bonaparte, were omitted.

Aristotle, it has recently been discovered, or supposed, has said something which warrants the record of his suffrage or vote in favour of the hypothesis. Denying adaptation and ascribing all things to accident, and going so far as to assert that front teeth were not made to cut nor back teeth to grind, Aristotle says, "All the parts of a whole happened like as if they were made for the sake of something; these were preserved, having been appropriately constituted by an internal spontaneity; and whatsoever things were not thus constituted perished and still perish." Mr. Darwin thinks this "a shadowing forth of natural selection," although Aristotle is treating of instruments and not of species. Buffon is included in this counting of heads. He is said to have been the first author of modern times who treated the subject in a scientific spirit, but his opinions fluctuated, and he did not enter on the causes of the transformation of species. Now it may be doubted whether this statement conveys a correct impression of an author who, although he said "it is not impossible" that all species may have issued from a small number of stocks, discussed the effects of climate, food, and domesticity in degenerating animals, affirmed that whilst "there is relatively to certain qualities a bizarre variation in appearance in the succession of individuals, there is at the same time an admirable constancy apparent in the entire species"; and said that "species are the only beings, perpetual, ancient, and permanent as Nature herself;"—"the imprint of each species is a type of which the principal traits are engraved and in characters ineffaceable for ever." Buffon it was who declared continuous fecundity to be the characteristic of a species. Obliviousness of this characteristic is the fundamental error which visitates all the speculations of the guessers, who fancy they have something to say on the origin of species. Geoffroy St. Hilaire, it is stated, suspected in 1795 that species are various degenerations of the same type, and in 1823 published his conviction that the same forms have not been perpetuated since the origin of all things; but he did not believe that existing species are now undergoing modification. His son, M. Isidore Geoffroy St. Hilaire, says he deemed the question a problem reserved entirely for futurity, if futurity chose to take any notice of it. Dr. W. C. Wells as early as 1813, explaining the dark colour of the African races, says they

would be best fitted to resist the diseases of the country, and this accounts for the prevalence of the dark races. This view of the origin of varieties is quoted as an explanation of the origin of species, as if the negro formed a species. Dean Herbert held, in 1822, that species are only permanent varieties. Prof. Grant believed that species descend from species. And in 1831 Mr. Patrick Mathew published the view now associated with the name of Mr. Darwin: "the differences of Mr. Mathew's view from mine are not of much importance." 'The Vestiges of Creation' prepared the ground for the analogous views of 'The Origin of Species.' But the merit of repetition, if any merit there be, is all that can be claimed by Mr. Mathew, Mr. Darwin and Mr. Wallace, if, as we are assured, Goethe, Geoffroy St. Hilaire and Erasmus Darwin (the poetical grandfather of Mr. Charles Darwin), in addition to Lamarck, preceded them in announcing similar hypotheses. Respecting the views of Lamarck, De Maillet and Robinet, although the last two are not enumerated, there cannot be a doubt. Of physiologists with known names, Prof. Huxley is the most notable, and he is quoted as if he supported the hypothesis of Mr. Patrick Mathew, which he describes "as unproven and sorely damaged by some of its supporters," because, he says, it is the only one to which physiology lends any countenance." Thirty-eight years have gone by since the hypothesis was published by Mr. Patrick Mathew. Twenty years have elapsed since Mr. Darwin and Mr. Wallace submitted their repetition of the view of Mr. Patrick Mathew to the Linnean Society, and ten years since Mr. Darwin developed the view in the first edition of 'The Origin of Species,' and Dr. Dalton Hooker in his introduction to the Australian Flora. In less than forty years it has been egg, grub and fly. The refutations of Cuvier and De Blainville, Agassiz and Florens, and other notabilities, are, as we have already intimated, omitted by Mr. Charles Darwin from his historical sketch of the recent progress of opinion on the origin of species. In his ballot, most of the Noes are left out; the Ayes are carefully counted, and more are counted than can bear a scrutiny.

Mr. Darwin gives a table of additions and corrections in his fifth edition, but not of omissions. Yet one at least of the omissions is worthy of note. Prof. Owen in his 'General Conclusions' quotes from the first edition the following two sentences: "In North America the black bear was seen by Hearne swimming for hours with widely-open mouth; thus catching, almost like a whale, insects in the water. I see no difficulty in a race of bears being rendered by natural selection more and more aquatic in their structure and habits, with larger and larger mouths, till a creature was produced as monstrous as a whale." In the fifth edition the last sentence is omitted, as indeed it was in prior editions; and the omission is a proof that the opinions of Mr. Darwin have fluctuated. When he saw no difficulty in deriving a whale from a race of black bears, he seemingly held, with Lamarck, that circumstances, habits and volition could originate species; but when he left out this declaration he had reasons for doing it. In reference to the woodpecker, he avers in the introduction to his fifth edition that it would be "preposterous" to attribute its structure to mere external conditions. The result would scarcely reward the labour, else it might be shown that the author of the fifth has varied considerably from the author of the first edition of 'The Origin of Species' and from the author of the paper in the *Journal of the Linnean Society*,—differing from Lamarck and from himself whilst according with Mr. Patrick Mathew.

JOHN ROBERTSON.

## AMONG THE MOUNTAINS.

Gilon, Lake of Geneva, August 2, 1869.

THE first ascent of Mont Blanc this year has been made by Mr. James Koles, and the same gentleman has since succeeded in ascending the Matterhorn, from the Italian side. He left Breuil with three guides and a porter, slept in the hut on the mountain, and reached the summit the next morning. He intended to descend to Zermatt, but

there was too much snow on that side of the Matterhorn. Last year the guides of Val Tournanche fixed some ropes in the course of the ascent from the Italian side, and these have now been found to be in good condition. Such a circumstance is favourable to future climbers, as it shows that helps and hand-holdings will endure the winter. As I informed you last year, when I sent you a brief notice of the seven or eight ascents of the mountain which had then been made, I fully expect that the Matterhorn will become as thorough a mountain hobby-horse as Mont Blanc. The two huts, one on the Italian and the other on the Swiss side, now form half-way houses, and what with these and fixed ropes in iron rings, the great difficulties of the ascent are gone; nevertheless, the ascent of the final ridge on the Swiss side will always be a terrible trial to weak nerves and feeble legs.

A geologist, even while idling at a *penion*, may find curious phenomena. At Gilon, I have discovered some remarkably striated and polished rocks. Our host is excavating stone for a large new hotel, and for the first time for thousands of years the sides of the mountain or rock that slopes down towards the lake of Geneva are laid open. Here I saw the removal of the *moraine* or debris of an old glacier, and underneath this the distinctest and most indisputable scratches on the subjacent rock. These scratches all tend down to the lake, and on examination I find other traces of the presence of a great glacier filling up the hollow. Around the lake they have recently had *fêtes* of several kinds. At Lausanne I attended the *fête* of the boatmen of the lake. Much dancing, drinking and talking with a few flags and a great crowd of idlers. Here we had yesterday a choral society of amateurs from Vevey and Lausanne, who sang pieces from Körner, Mendelssohn, &c. very well. The same day the members of a gymnastic society dined at Les Avenas, a capital little *penion* for literary men with overmuch work, little money, and few wants. Only it is always full in summer.

A dinner was eaten at Montoux a fortnight ago for a singular purpose, viz. to *inaugurate* the gorge or valley of the Chaudron, wherein the speakers and diners declared it to be equal to the gorge of the Trient. It was open before Adam, but the feasters thought it necessary to declare "it open now." "It is curious," said a lady at our table to a Swiss gentleman, "that I never heard of the Chaudron before." "How should you, Madame," replied he, gravely, "since we have only *inaugurated* it this month!"

Of *fêtes* enough, but, better still, we have now religious services on Sundays, even in the most heathen hotels, followed sometimes by dances and characters at night! In my hotel, a good Evangelical-Swiss pastor has preached to us. I suggested to him the story of Shadrach, Meshach, and Abed-nego as most appropriate to the heat and the room, the latter being quite a Nebuchadnezzar's furnace, perhaps a little hotter. The pastor said the subject was not Evangelical enough. He had an odd congregation, consisting of two Plymouth sisters, six Genevese Rationalists, five Church people, one Independent, and three American Methodists. The cook attended, but I think he is a Catholic, for he gives us little meat on Fridays: It would be hard to gather again such an assemblage. J. R. L.

## OUR MONETARY SYSTEM.

25, Paternoster Row, Aug. 7, 1869.

THE movement for a decimal coinage has hung fire of late. Twenty years ago Government made an attempt in that direction by issuing the florin, value twenty-four pence, it being the decimal of a sovereign, or pound sterling; but it results in a dead lock—we cannot decimate the florin.

After this false move, we should now try the other tack. Having the penny, Government could very easily set us going again by issuing a ten-penny piece—a silver coin, weighing about 78 grains. It would be useful, and, if marked on the reverse with the distinct figure of an X and the words "ten pence," need never be mistaken for a shilling, even in the dark. Such coin would be of nearly identical value with the French *franc*, and abroad would, no doubt, be called the English frank. It would also reckon for two *dimes* in American