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LITERARY NOTICES.

The Origin of Species by Means of Natural Selection, or, the Preservation of Favoured Races in the Struggle for Life. By Charles Darwin, M.A. London: [illegible]

The Marvellous Adventures and Rare Conceits of Master Lyll Outglass. Newly Collected, Chronicled, and Set forth in our English Tongue. By Kenneth R. H. Mackenzie, Fellow of the Society of Antiquaries. And Adorned with many most Diverting and Cunning Devices, by Alfred Crowquill. London: Trubner and Co.

Life in Spain: Past and Present. By Walter Thornbury. In two volumes. With eight Illustrations. London: Smith, Elder, and Co.

Born in science and literature we are constantly hearing of new ideas, and new theories, calculated to upset all pre-conceived opinions. Men who have been brought up in a narrow circle of thought, and who inherit a disposition to look at things in the same way that they were regarded by their forefathers, are almost physically incapacitated from appreciating the endless progress in discovery that may be made by minds trained to a finer and more independent mode of thinking. Every mind is more or less trammelled by the force of circumstances, and requires no little intellectual vigour to break away from the fetters in which we have been educated, and to pursue the path of difficulty and prejudice, the untrodden paths of a new generation. When Mr. Darwin accompanied H. M. S. [illegible] naturalist, he shared in the widely-spread belief that each species of animal and plant is the result of a special creation. But in the course of frequent voyaging and observation a new light dawned upon him, and gradually, by dint of reflection, and by a steady accumulation of facts, he followed a theory to the production and development of which he has devoted the best part of the last twenty years. Failing health and strength have induced him prematurely to give to the world the ripe results of his argument in the form of an abstract. The work in its profundity requires still two or three years of patient labour, and, meanwhile, it will be unfair to criticise it with only half the data in the hand, to pronounce a decisive decision. The new hypothesis is so startling as to cause considerable excitement amongst scientific men, and have reason to think that it has already secured many supporters if not proselytes, and the author himself is distinguished for any of his productions [illegible] slightingly or with disrespect. If the writer [illegible] threw society into fits by endeavouring to prove that man is only a modified monkey, Mr. Darwin is likely to create still more disturbance. He goes very much further; but he obtains his results by a totally different process. His bold views are put forth in a volume of not quite two hundred pages, and he endeavours to prove that "[illegible] species, genera, and families of organic beings with which this world is peopled, have all descended [illegible] from their own class or group, from common parents, and have all been modified in the course of descent." He is fully convinced that species are not immutable; [illegible] that those belonging to what are called the same genus are lineal descendants of some other and generally extinct species, in the same manner as the acknowledged varieties of any one species are the descendants of that species. This doctrine of the modification of species by hereditary variation, is supported by abundant facts and illustrations, and it is applied both to the past and to the future. "I believe," says Mr. Darwin, "that animals have descended from at most only four or five progenitors, and plants from an equal or lesser number. Analogy would lead me one step further, namely, to the belief that all animals and plants have descended from some one prototype. But analogy may be a deceitful guide. Nevertheless, all living things have much in common, in their chemical composition, their germinal vesicles, their cellular structure, and their laws of growth and reproduction. . . . Therefore I should infer from analogy that probably all the organic beings which have ever lived on this earth have descended from some one primordial form, into which life was first breathed." This daring theory is pursued with courageous earnestness throughout the volume. We are shown, that [illegible] domestication, animals to a certain extent become [illegible] in our hands, and depart from the parental type. [illegible] may produce almost any variation that he pleases. He takes pains to select in each successive generation, [illegible] so slight as to be quite inappreciable [illegible] an educated eye. The same principle applies to [illegible] and the garden; for our oldest cultivated [illegible] yield new varieties, and "if man goes on [illegible] and thus augmenting, any peculiarity, he will [illegible] unconsciously modify other parts of the [illegible] owing to the mysterious laws of the correlation [illegible]." This inherent variability of which [illegible] is a power [illegible] is [illegible]

author Natural Selection, in connexion with man's power of selection; and unless it is engraved on the mind, every "fact on distribution, rarity, abundance, extinction, and variation, will be dimly seen or quite misunderstood." All organic beings are described as engaged in an unceasing and inevitable "struggle for existence." More individuals are produced than can possibly survive; and if there were no checks upon increase, in the course of time, even slow-breeding man would not find standing room in the world. Life is one never-ending battle, where the weakest sink soonest in the strife; and it follows, "that any being, if it vary, however slightly, in any manner profitable to itself, under the complex, and sometimes varying, conditions of life, will have a better chance of surviving, and thus be *naturally selected*." From the strong principle of inheritance, any selected variety will tend to propagate its new and modified form; but it must be borne in mind, that in the war of competition, everything happens through and for the good of each being. "It may be said that natural selection is daily and hourly scrutinizing throughout the world, every variation even the slightest; rejecting that which is bad, preserving and adding up all that is good; silently and insensibly working, whenever and wherever opportunity offers at the improvement of each organic being in relation to its organic and inorganic conditions of life." The theory teaches that structure is subordinate to habit, not habit to structure; but it is quite impossible to get a just idea of the hypothesis of gradual modification, without a very close perusal of Mr. Darwin's remarkable work. It is a book to which immense objections will be raised, and if the argument falls, it will not have been written in vain, as everything is useful that helps to promote free and enlightened discussion. We cannot resist giving a very striking extract, touching upon the present transitory, fleeting, state of things. It shows how the Principle of Selection tends towards improvement.

"Judging from the past, we may safely infer that not one living species will transmit its unaltered likeness to a distant futurity. And of the species now living very few will transmit progeny of any kind to a far distant futurity; for the manner in which all organic beings are grouped, shows that the greater number of species of each genus, and all the species of many genera have left no descendants, but have become utterly extinct. We can so far take a prophetic glance into futurity as to foretel that it will be the common and widely spread species, belonging to the larger and dominant groups, which will ultimately prevail and procreate new and dominant species. As all the living forms of life are the lineal descendants of those which lived long before the Silurian epoch, we may feel certain that the ordinary succession by generation has never once been broken, that no cataclysm has desolated the whole world. Hence we may look with some confidence to a secure future of equally inappreciable length. And as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress towards perfection."

THE LITERARY CHURCHMAN.

[JULY 16, 1862.

DARWIN, ON NATURAL HISTORY.

ON THE VARIOUS CONTRIVANCES BY WHICH BRITISH AND FOREIGN ORCHIDS ARE FERTILISED BY INSECTS, AND ON THE GOOD EFFECTS OF INTERCROSSING. By CHARLES DARWIN, M.A., F.R.S., &c. With Illustrations. (London: John Murray, 1862. 8vo., pp. 365.)

THE subject of this work is not new. It was made known chiefly by C. Sprengel towards the end of the last century, in his valuable work *Das entdeckte Geheimniss der Natur* (the Mystery of Nature revealed), 4to., 1753; then alluded to with some hesitation by De Candolle, *(Physiologie Veg.* II, p. 524); illustrated successively by A. Brongniart, a celebrated French botanist, and by Richard Brown, one of the greatest men of his day in this branch of Natural History, though not altogether approved by Mr. Lindley (Introduction to Botany, 3rd edition, p. 342); and lastly, this subject is now set forth in a series of the most perfect, honest, and satisfactory experiments, both on British and Foreign Orchids, by the gifted naturalist whose valuable work is before us.

In a review of this kind we cannot of course enter into details. But, for the benefit of those of our readers who have not studied botany—and we trust they are few—we will just mention that in Orchids in general (there are a few exceptions), and also in other plants, the Asclepiads, for instance, the anthers and pistils are so conformed and so situated in the same flower, as to make the fertilisation of