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REPRESENTATIVE MEN

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LITERATURE, SCIENCE, AND ART.



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REPRESENTATIVE MEN

IN

Literature, Science, and Art.

BY

EDWARD WALFORD, M.A.,

LATE SCHOLAR OF BALLIOL COLLEGE, OXFORD.

The Photographic Portraits from Life,

BY

ERNEST EDWARDS, B.A.

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P R E F A C E .

IN making the accompanying selection from the Biographies and Portraits already published in the 'Photographic Portraits of Men of Eminence,' the compiler has been guided by the desire of making it as far as possible a "representative" volume of the position taken by the great names of the present century, in the various branches of literature, in science, and in art. Many of these names have become "household words" among us. Since the first publication of the biographies, several of those whose portraits are here given have been removed by death. The biographies are in all cases rendered complete to the present time.

Any single Biography and Portrait may be had separately, price 1s. 6d.

December, 1867.

CONTENTS.



GEORGE BIDDELL AIRY, M.A., LL.D., D.C.L., F.R.S., F.R.A.S., ASTRONOMER ROYAL, ETC. ETC.

RICHARD ANSDELL, A.R.A.

SIR JOHN BOWRING, LL.D., F.R.S., ETC.

ROBERT BROWNING.

CAPTAIN RICHARD F. BURTON, F.R.G.S., F.E.S., F.A.S.L., F.R.A.S., F.A.S. BOMBAY, F. BERLIN A. OF S.

CHARLES ROBERT DARWIN, M.A., F.R.S., F.L.S., ETC.

CHARLES DICKENS.

THOMAS FAED, ESQ., A.R.A.

MICHAEL FARADAY, D.C.L., F.R.S.

JAMES ANTHONY FROUDE, M.A.

MARK LEMON.

LORD LYTTTELTON.

SIR RODERICK IMPEY MURCHISON, BART., K.C.B., D.C.L., LL.D., F.R.S., ETC., DIRECTOR-GENERAL OF THE GEOLOGICAL SURVEY OF THE UNITED KINGDOM.

HENRY O'NEIL, A.R.A.

RICHARD OWEN, M.D., F.R.S., D.C.L., F.L.S., ETC., SUPERINTENDENT OF
THE NATURAL HISTORY DEPARTMENTS, BRITISH MUSEUM.

COVENTRY PATMORE.

WILLIAM MAKEPEACE THACKERAY.

THE RIGHT REV. CONNOP THIRLWALL, LORD BISHOP OF ST. DAVID'S.

MARTIN FARQUHAR TUPPÉR, D.C.L., F.R.S.

THE REV. WILLIAM WHEWELL, D.D., F.R.S., LATE MASTER OF TRINITY
COLLEGE, CAMBRIDGE.



Portrait of Mr. J. M. [unclear] 1887

GEORGE BIDDELL AIRY, M.A., LL.D., D.C.L.,

F.R.S., F.R.A.S., ASTRONÓMER ROYAL, ETC. ETC.

AT Alnwick, a town of some historical interest, in Northumberland, the present Astronomer Royal was born on the 27th of July, 1801. His rudimentary education was obtained at private schools at Hereford and Colchester. At the Colchester Grammar School George Biddell Airy received the instruction required as the preliminary training, for a young man about to enter one of our ancient Universities. Having acquitted himself with great credit, he proceeded to Trinity College, Cambridge, in 1819, which he entered as a Sizar, being then eighteen years of age. Mr. Airy followed up his studies with great industry. In 1822, he was elected scholar of Trinity; and in 1823 he took his B.A. degree, winning the distinguished position of Senior Wrangler.

In October, 1824, he was elected a Fellow of Trinity College, and in 1826 he took his M.A. degree. About the same time he had published the first edition of his 'Mathematical Tracts,' in which much was done to make the mathematical education of the University available for Physical Mathematics. This work has passed through several editions, and is believed to have produced a considerable effect on the studies of the University. In 1826 also he was elected to fill the chair of the Professorship which had been founded by Henry Lucas, Esq., M.P. for the University, and rendered illustrious, by its first occupier, in 1663, being Dr. Isaac Barrow, and its second, on his retirement in 1669, the illustrious Newton. Mr. Babbage was, on this occasion, amongst the competitors for the chair.

The Lucasian Professorship had become a perfect sinecure, but Professor Airy resolved to make it of real importance, and in

1827 he may be said to have re-created the duties, by commencing the delivery of courses of Lectures on Experimental Philosophy, which he continued until 1836. Amongst these, the prelections on the Undulatory Theory of Light are especially remarkable. The principal part of these and other inquiries which engaged the attention of Professor Airy about this time, will be found in a series of Memoirs, published in the Transactions of the Philosophical Society of Cambridge, of which Society he had been admitted a member in 1823. At this period Professor Airy participated also in the labours of the Board of Longitude. In 1828, being elected Plumian Professor of Astronomy, the management of the then newly-erected Cambridge Observatory devolved upon him. Notwithstanding that he retained the Experimental Lectures, Professor Airy devoted himself most zealously to the business of the Observatory. He devised systems of calculation, and of publication, which were much more complete, and far more serviceable than any which had been previously adopted by any other Observatory. The 'Astronomical Observations, Cambridge, 1828-1835,' which were published in a clear and simple form, are models of exactness. The systems there set forth have since been adopted at Greenwich, and have been the patterns by which many of the astronomical establishments on the Continent have been guided. Professor Airy superintended the mounting in the Cambridge Observatory of the Equatorial, the Mural Circle, and the Northumberland telescope, which last was especially constructed from his own plans, and exhibits in an eminent degree the remarkable combination of mechanical skill and of optical science, which distinguishes other works emanating from the same mind. In 1828, Mr. Airy was also elected a Fellow of the Astronomical Society, and he became its President in 1835; since which period he has repeatedly filled the chair and sat on the Council. In 1835, the honourable post of Astronomer Royal became vacant by the resignation of Mr. Pond. Lord Auckland was, at that time, First Lord of the Admiralty, and with him rested the responsibility of properly filling this important office. His choice fell on Professor Airy, and the result has proved the correctness of his Lordship's judgment. The appointment has proved of signal advantage to science, and has greatly added to our national reputation.

In 1836 Mr. Airy was elected a Fellow of the Royal Society.

Mr. Airy was one of the original members of the Senate of the

University of London. He did not, however, hold that appointment very long. In subsequent years he was consulted with reference to the establishment of Universities in our Australian Colonies.

As Astronomer Royal, Mr. Airy has distinguished himself by giving the utmost precision to the proceedings in the Observatory at Greenwich, and by publishing the yearly observations with a completeness of reduction and a regularity which never were before attempted. The historical associations of Greenwich Observatory have imposed upon that Institution some characteristic features. At the same time as those have been preserved, Professor Airy has constantly introduced such new instruments, and modes of calculation, as maintained its position as one of the first Astronomical Institutions. The Altazimuth, the Transit Circle, the Reflex Zenith Tube, and the large Equatorial, were all constructed from Professor Airy's plans, and erected under his superintendence. These may be said to be—the first-class Equatorial especially—the finest instruments of their kind.

In the Cambridge Observatory, Mr. Airy first introduced the system of making an annual printed Report on the state of the Observatory, which system has been continued and extended at the Greenwich Observatory; till the "Reports of the Astronomer Royal to the Board of Visitors" form, perhaps, one of the most complete series of "Annals" that are to be found. This system has been copied and adopted with great advantage, not in Observatories only, but also in other institutions.

The observations of Groombridge, Catton, and Fallows, had long remained in a useless condition; these Mr. Airy computed, edited, and published. The Greenwich observations of planets and the moon from 1750 were useless to the world; these were also reduced and published by the unwearying industry of the new Astronomer Royal. Well might Admiral Smyth say of these, they were "an immense magazine of dormant facts, contained in the annals of the Royal Observatory," which now "are rendered available to astronomical use," and from which "we may perhaps date a new epoch in planetary astronomy."

In 1842, Mr. Airy made a journey to Turin, expressly for observation of the Total Solar Eclipse; and was one of the first discoverers of the Red Prominences which have since attracted so much attention. In 1851, he made a journey to Gottenburg, in

Sweden, for the same purpose; the observations collected on this occasion were very important. In 1860, he organized an expedition of astronomers to Spain for a similar purpose; on this occasion the Admiralty placed under his direction their large steamer 'Himalaya.' The greater part of the observations then made have been made public (especially the important photographic operations of Mr. De La Rue); some few, however, yet remain to be published.

Mr. Airy, shortly after his appointment to the Greenwich Observatory, proposed to the Government to attach to it a Magnetical and Meteorological Observatory. This was completed about 1838. Mr. Airy entered vigorously into the system of co-operative observations at many widely-distributed stations, commenced about the end of 1840. It was at his instance that the Government offered a reward for the invention of methods for the self-registration of magnetical and meteorological instruments, which was adjudged to Mr. Charles Brooke. Mr. Brooke erected the apparatus which is still in use at the Royal Observatory. Photography is here used to a great extent. The whole of the magnetical and meteorological establishment is in the highest state of efficiency.

Within a few years an apparatus has been attached to it, connected with two telegraph wires, each about ten miles long, for the continual registration of the spontaneous earth-currents first observed by practical telegraphers.

Professor Airy introduced from America the system of chronographic register, by galvanic currents, of transits and other observations of time.

In 1838, Professor Airy was consulted by the Government on the important question of the disturbances produced on the compass-needles in iron-built ships. An extensive series of experiments were made; and from these a theory was developed which introduced a system of mechanical correction, which has been universally adopted.* With the extension of the use of iron in ships, the question has become of still greater interest, and the utmost attention has been directed to the examination of all the conditions of disturbance. Although some improvements in the adjustments have been the result, still the principles arrived at

* See Phil. Transactions for 1839.

by Professor Airy are found to hold good,* and his methods are still adopted without alteration.

Professor Airy proposed a series of pendulum experiments for the determination of that difficult question—the Density of the Earth. In 1826 Mr. Airy made his first experiments. In company with Professors Whewell and Sedgwick, and Mr. Sheepshanks, the experiments were repeated in 1828 in Dolcoath Mine, near Camborne, at that time one of the deepest mines in this country. The results obtained, notwithstanding the advantages supposed to be presented by the neighbouring hill—Carn Brea, and the great depth to which the miners had reached, were not considered satisfactory. The attempts were frustrated by accidents (one of fire, and one of water) having no connection with the essential parts of the experiment, but which live as a traditional story among the miners, by no means favourable to the purity of science. This problem has, however, since been solved, with every appearance of the strictest accuracy, by Professor Airy, in the Harton Colliery, near South Shields, in 1854, in which two stations could be found with exactly the same vertical, but at 1256 feet difference of height. The results obtained gave the mean specific gravity of the earth as 6.566. The Schhallien experiments by Dr. Maskelyne gave 4.713 for the mean result. The experiments of Cavendish and those of Reich gave 5.435; and Mr. Bailey's celebrated observations with the Torsion Balance gave the mean density of the earth as 5.660. Mr. Airy's results give therefore a much higher density to our planet than any of those previously given; and he expresses his belief "that the value now presented is entitled to compete with the others on, at least, equal terms."

On October 16, 1834, occurred the fire at the Houses of Parliament, in which the national standards of length and weight were destroyed. Mr. Airy was then appointed Chairman of the Commission constituted to consider the general question of standards of length and weight. Their Report was presented to Parliament in 1841. In 1843 a committee of scientific men were appointed to superintend the construction of new parliamentary standards. Of this committee the Astronomer Royal was chair-

* "Discussion of the observed Deviations of the Compass in several Ships, Wood-built and Iron-built, with general Tables for facilitating the Examination of Compass-deviations," *Phil. Trans.*, 1855.

man. The Reports of both these committees were drawn up by the Astronomer Royal. His elaborate and valuable "Account of the Construction of the New National Standard of Length, and of its principal Copies," will be found in the Philosophical Transactions for 1857.

In 1844, Professor Airy planned and executed the complicated operations for determining the longitude of Valencia in Ireland by means of chronometers: a determination which he has since twice repeated by the electric telegraph. He also determined the longitudes of Brussels and Paris (in addition to several others) by the telegraph. The latter determinations are now combined with other continental determinations: and, by use of the whole series, an arc of longitude is formed, extending from Valencia to the eastern boundary of Europe beyond the Volga. The longitude of Valencia is combined with the arc of longitude from Valencia to Newfoundland, found by use of the Atlantic telegraph; and thus are ascertained the differences of longitude between Greenwich and the principal American observatories.

Professor Airy has given considerable attention to the testing and improvement of marine chronometers; and to him we are mainly indebted for the diffusion, by the aid of the electric telegraph, of accurate time-signals. Some of these consist in dropping time-balls, as at Deal; some are made public, by the firing of guns, as at Newcastle and Shields; some are simple needle-signals. As Astronomer Royal he has been continually at the service of the country in very varied capacities. Mr. Airy conducted the astronomical observations, preparatory to the definition of the boundary between Canada and the United States; and he also aided in tracing the Oregon territory. He has aided the Government in carrying out the Act applying to measures for the sale of gas. He was consulted in every stage of the manufacture of the clock and bells of the New Palace of Westminster; and Mr. Airy has rendered essential aid to the Royal Commission for the examination of Light-houses.

In 1845 a Royal Commission of three members, of whom Mr. Airy was second, was appointed to investigate the subject of gauge of railways. Mr. Airy joined in the Report which the Commission made in 1846, and shortly afterwards addressed a public letter to Sir Edward Ryan on the same subject. The influence of the "broad gauge" was sufficient to prevent the Government

of the day from fully adopting the principles of the Report and letter; but, under the influence of the progress of railways, the broad-gauge authorities have now spontaneously acted in the direction that was there recommended, and the principles of the Commission are completely carried out.

In the 'Cambridge Transactions,' 'The Philosophical Transactions of the Royal Society,' 'The Memoirs of the Royal Astronomical Society,' will be found numerous memoirs from Mr. Airy's pen. Among these are some important papers on Astronomical Chronology, and some on Terrestrial Magnetism, based on the magnetic observations made at Greenwich. In the 'Philosophical Magazine,' and in the 'Athenæum,' have appeared many valuable contributions. Some of the latter bear the signature A. B. G. In the latter journal his "Investigation of the Place of Cæsar's Landing in Britain," and his replies to the recommendations of the University Commissioners, should be especially mentioned.

Professor Airy contributed the excellent article on "Gravitation" to the 'Penny Cyclopædia;' and the articles "Trigonometry," "The Figure of the Earth," and "Tides and Waves," to the 'Encyclopædia Metropolitana.' All these articles have been separately published; and it should be noted, in connection with the last-named article, that he has published a memoir on "The Tides on the Coast of Ireland."

In 1848 Professor Airy delivered a series of lectures at the Museum of Ipswich; the object of which (in his own words) was "to explain the methods by which the distances of the sun, moon, and stars are measured by a yard-measure; and the weights of the sun and planets are ascertained by a pound weight." These oral lectures were taken down in short-hand, and have been republished under the title of "The Ipswich Lectures." The work has gone through several editions.

Professor Airy has lately (1866) published, for the use of Students in the University of Cambridge, small works on the Theory of Errors of Observations and on Partial Differential Equations, intended (as were the Mathematical Tracts in 1826) to promote the study of Physical, as distinguished from Pure, Mathematics.

So large an amount of labour, and all of it so important, not merely to science, but to society, could not be allowed to pass without its honorary rewards. Mr. Airy has received the Lalande Medal of the French Institute, the Copley Medal of the Royal

Society for optical researches, and the Royal Medal for his tidal investigations. On two occasions the Royal Astronomical Society have presented Mr. Airy with their medal,—in the first instance, for the discovery of an inequality of long period in the movements of Venus and the Earth; and, in the second, for the reduction of planetary observations. Edinburgh, Oxford, and Cambridge have conferred on him the honorary degrees of LL.D. and D.C.L.; and the Institution of Civil Engineers have elected him honorary member, and have lately awarded him a medal for the theory of a new construction of bridges of great span. Professor Airy is a Foreign Correspondent of the Institute of France, and he holds honorary titles from many other Continental and American societies.



Portrait of a man in a studio setting.

RICHARD ANSDELL, A.R.A.

RICHARD ANSDELL was born at Liverpool in 1815, and received his education at the Blue-coat School of that town, an institution similar to that of the Metropolis. He had, from a child, and felt that he had, an innate love of art; but until the age of one-and-twenty he was unable to commence his professional studies; he made various attempts to apply, but in vain, to other professions, which promised a more lucrative, though less congenial, career. Until 1847 Mr. Ansdell resided in Liverpool.

The subject of our memoir exhibited for the first time in the Royal Academy in the year 1840. The titles of his pictures were "Grouse-shooting" and "A Galloway Farm," and were the property of the Marquis of Bute. The following year, in the same place, he exhibited "The Earl of Sefton and Party returning from Hunting." In 1842 a picture of a much more ambitious character, and executed with great spirit and vigour; it is "The Death of Sir W. Lambton, at the Battle of Marston Moor." Sir W. Lambton was a Royalist; he was slain by a ball aimed at him by one of Cromwell's troopers. He is represented as lying extended in death upon the field of battle, whilst his wounded horse is rearing in the intensity of its agony. Mr. Ansdell's contribution to the Royal Academy Exhibition in 1843 was again a subject of suffering: a fine stag, hard pressed by the hounds, has entered a shallow lake, where the dogs are speedily upon him. His picture exhibited in 1844 was entitled "Mary Queen of Scots returning from the Chase to Stirling Castle." The Queen, surrounded by her attendants, is preparing to dismount from her steed. The picture exhibited by our artist in the subsequent year

was a group of portraits. It was entitled, "Fox-hunting in the North." It contained the portrait of a gentleman of Windermere, surrounded by various members of his family, his huntsman and dogs.

Mr. Ansdell's first contribution to the British Institution in 1846, was a work of great mark, of delicate execution, and evidently the result of long and careful study; it was called "The Drover's Halt." It was of considerable size, and contained a variety of human figures and groups of cattle halting at a roadside "bothie" in the Highlands. In the distance was seen the Isle of Mull. The same year he exhibited a very large picture at the Royal Academy, the figures of the animals life-size; it was entitled "The Stag at Bay." The background of the picture is extremely wild,—the rocky bed of a mountain-torrent, whither the stag has fled from the assailing dogs, several of which he has already severely wounded. You perceive, however, that the doom of the noble animal draws momentarily nearer and nearer, for already the rifle of the hunter is perceived above the screening rock. The following year, at the Academy, Mr. Ansdell exhibited a companion picture to his "Stag at Bay," "The Combat," two stags engaged in fearful conflict,—the whole picture terrible from its fierce power and marvellous embodiment of brute fury. These powerful pictures are well known to the public, through the large engravings from them by Ryall. Mr. Ansdell's contributions to the exhibitions of the British Institution that same year were "Turf-Stackers," a scene in Glen Lyon, Perthshire, and "The Death," Stag-hunting in the Olden Time. In 1848, at the British Institution, he exhibited "The Boggled Pony" and "The Wounded Hound." The last of these pictures possesses an especial interest in the plaintive, tender expression, mingled with resignation, so marvellously depicted in the wounded dog, which is having its foot dressed by the old keeper.

In the Academy of the same year appeared an historical picture, "The Battle of the Standard," representing the famous combat of Sergeant Ewart, of the Scots Greys, with several Polish Lancers, at Waterloo. This picture, at the time of its exhibition, was very highly spoken of by the press.

In 1849, in the British Institution, appeared "An Old Trespasser," a pony attacked by dogs in a newly-reaped field of corn; and in the Academy, "The Wolf-Slayer" and "The Death of

Gelert,"—both of them very powerful pictures, but, from the nature of their subjects, distressing to nervous and compassionate spectators.

In 1850 Mr. Ansdell exhibited works of an entirely opposite character at the British Institution. "South Downs," a picture painted in conjunction with Mr. Creswick, who elaborated the rural landscape background to our artist's peaceful sheep in the foreground; and "The Regretted Companion," the subject being taken from Sterne's story of the old man and his ass, whilst again in the Academy the picture by Mr. Ansdell was of a fierce character, another version of our artist's Academy picture of the previous year.

In 1851 Mr. Ansdell and Mr. Creswick exhibited two works in which their names were associated, entitled "England—a Day in the Country," simply a pastoral landscape, with a team of horses in the foreground—interesting from its charming truthfulness to nature. This picture was exhibited in the British Institution, and the second was exhibited in the Academy, and was entirely opposed in character. Its title was "The Shepherd's Revenge." A shepherd is seen slaying a wolf which is in the act of devouring a lamb which it has just killed. "The Auld Farmer's New Year's Gift to his Auld Mare Maggie," a subject taken from Burns, and "Turning the Drove, a Scene near the Grampians," were also in the same year's exhibition of the Royal Academy.

Mr. Ansdell and Mr. Creswick again exhibited their combined strength at the British Institution in 1852, in a picture entitled "The Drover's Halt;" and Mr. Ansdell also exhibited there a picture painted throughout by himself, called "The Common," and enlivened by numerous flocks grazing in the foreground. "Lytham Sand-hills, Lancashire," a picture in which sheep are a prominent feature, "The Cattle Fair, Isle of Skye," and "Sheep-washing, Isle of Skye," represented our artist in the Academy of the same year.

In the British Institution in 1853 appeared "Lytham Common," with a group of three donkeys and a few sheep. In the Academy, "The Sick Lamb" and "The Brave Old Hound" were exhibited,—two pictures fully manifesting Mr. Ansdell's peculiar powers of pathos and strength. The little incident depicted in "The Sick Lamb" is especially well treated, being the defence of her sick lamb, by an old mother-ewe, from an ever-watchful eagle.

In 1854, at the British Institution, were exhibited another "Lytham Common," the sheep and donkeys in the foreground rearranged in their grouping, and a picture of considerable size, entitled, "The Interrupted Meal," the meal made by an eagle upon the carcase of a sheep, interrupted by a collie-dog. In the Academy of the same year appeared "Sheep-gathering in Glen Higichan, Isle of Skye," and "A Traveller attacked by Wolves."

In the exhibition of the British Institution for 1858 Mr. Ansdell and Mr. Creswick again appeared as fellow-workers in a picture bearing the title of "The Park;"—the landscape formed, of course, Mr. Creswick's portion of the work; a group of startled deer, admirably painted, that of Mr. Ansdell. In the exhibition of the Royal Academy of this year, Mr. Ansdell exhibited two pictures, painted in conjunction with two artist friends: the first, "Feeding the Calves,"—a first-class picture of its kind,—was the result of the combined labours of Mr. Frith and Mr. Ansdell; the "Nearest Way in Summer-time," of Mr. Creswick and our artist. Two other pictures, entirely from the pencil of Mr. Ansdell, "The Scotch Gamekeeper" and "The English Gamekeeper," appeared in the same exhibition.

At the British Institution in 1856 appeared a picture of a Highland Shepherd rescuing some half-frozen sheep, and entitled, "Stray Sheep;" and at the Royal Academy, "The Highland Shepherd," and the "Browser's Hollow," together with a picture upon which the late Mr. J. Phillip, R.A., had equally worked with Mr. Ansdell, and bearing the title of "Going to be Fed."

In the year 1856, accompanied by his friend Mr. Phillip, the subject of our memoir visited Spain for the purpose of artistic study; and again in the following year, but this time without a companion. From the period of Mr. Ansdell's first visit to Spain, an entire change of subject is to be observed in the greater number of his works, which, however, rather gained than lost in their popularity. The earliest of Mr. Ansdell's Spanish pictures were exhibited in 1857 at the Academy, and were entitled "The Water-Carrier," "Mules Drinking," and "Ploughing." These were followed in 1858, at the British Institution, by "The Road to Seville," and at the Academy, by "Crossing the Road to Seville" and "The Spanish Shepherd." In 1859, at the British Institution, appeared a picture representing two or three Spanish peasants greeting each other on the road, and entitled "Dos Ami-

gos;" also "Isla Mayor," Banks of the Gnadalquivir. At the Academy were exhibited "The Highland Tod-hunter" and "Sheep-washing in Glen Lyon." In 1860, "The Spanish Flower-seller" graced the walls of the British Institution, and "The Lost Shepherd" and "Buy a Dog, Ma'am?" the walls of the Academy.

In 1860 Mr. Ansdell was chosen an Associate of the Royal Academy.

Between 1860 and 1863 inclusive, Mr. Ansdell exhibited in the Royal Academy, "The Hunted Slave;" "Going to the Lodge;" "Scotch Shootings;" "Old Friends;" "The Rescue from the Storm;" "Going to the Festa, Granada;" "The Wrecker;" "Coming out of the Mist—Hare-shooting, Glen Spean;" "Excelsior, from Longfellow;" "The West Highlands, Dmstaffnage Castle in the distance;" and "Tired Sheep."

In 1864, Mr. Ansdell exhibited a "Highland Spate, Sheep being rescued from the Rocks;" "Spanish Shepherd, Seville in the distance;" "Ronda—Spanish Travellers;" and a picture of "Lytham Sand-hills, with Southport in the distance." In the following year, the Academy saw three of Mr. Ansdell's productions, namely, "The Poacher at Bay;" "A Visit to the Shrine in the Alhambra," and "Treading out the Corn—as seen in the walls of the Alhambra, the Sierra Nevada in the distance." The titles of his pictures shown in 1866 were "Water-carriers—the towers of the Alhambra in the background;" "Spanish Shepherds;" "The Road to Gibraltar from San Roque;" and "Spanish Posada, Granada." At the last exhibition of the Royal Academy (1867), the works of Mr. Ansdell were likewise four in number, namely, "Highland Sport;" "Calvary, on the Plain of Granada—the Alhambra in the distance;" "A Visit to the Alhambra;"—this picture contains a view of the fountain placed there by Charles V. of Spain; and a painting illustrative of Byron's well-known lines on the dog:—

" In life the firmest friend,
The first to welcome, foremost to defend."

It is entitled, "Shipwrecked Friends."

On three occasions Mr. Ansdell has received the "Heywood Gold Medal" for works exhibited at Manchester; and a Gold Medal was awarded to him for his pictures, "The Wolf-slayer" and "Turning the Drove," at the Parish Exhibition of 1855.

One of Mr. Ansdell's most remarkable works, "The Hunted Slave," was re-exhibited in 1863, in aid of the fund for the relief of the distressed Lancashire operatives; its subject taken from the following lines by Longfellow:—

“ In dark fens of the dismal swamp
The hunted negro lay;
He saw the fire of the midnight camp,
And heard at times a horse's tramp
And a bloodhound's distant bay.

“ Where hardly a human foot could pass,
Or a human heart would dare,
On the quaking turf of the green morass
He crouched in the rank and tangled grass,
Like a wild beast in his lair.”



Portrait of [Name] [Date]

SIR JOHN BOWRING, LL.D., F.R.S., ETC.

SIR JOHN BOWRING is descended from an ancient Devonshire family, which gave its name to the estate of Bowringsleigh, in the parish of West Allington. The Bowrings had for many generations been engaged in the woollen trade of Devon, and in the year 1670 coined tokens for the payment of their workmen bearing the inscription, with a wool-comb for a device, "John Bowring, of Chulmleigh, his halfpenny." The subject of our memoir is the eldest son of the late Charles Bowring, Esq., of Larkbeare, by Sarah, daughter of the Rev. Thomas Lane, of St. Ives, Cornwall, and was born in the city of Exeter, on the 17th of October, 1792. Having received the rudiments of an ordinary education in the school of the Rev. J. H. Bransby, at Moretonhampstead, Devon, he entered a merchant's house at Exeter, as a clerk; but soon gave evidence of a higher order of abilities than those which fitted him for the counting-house. But his connection with mercantile pursuits necessitated much foreign travel and intercourse with many Continental nations, and gave facilities for studying the character, for entering into the domestic circles, and for learning and speaking the languages of the countries in which he temporarily dwelt. In 1822 he was arrested at Calais, being the bearer of dispatches to the Portuguese ministers, announcing the intended invasion of the Peninsula by the Bourbon Government of France, and detained for several weeks; during a considerable portion of which he was excluded from all communication. Canning insisted on an indictment or a release; but having been accused of complicity in the attempt to rescue the young "sergeants of La Rochelle," who were executed for singing

“republican songs,” he was released without trial, but condemned to perpetual exile from France. The illegality of the arrest was brought before the House of Commons by Lord Archibald Hamilton, but Mr. Canning explained that, however despotic and un-English the proceedings had been, they were warranted by the then existing laws of France, from which visitors to France could claim no exemption. The proceedings were reported at length in a pamphlet by Dr. Bowring, entitled ‘Details of the Imprisonment and Liberation of an Englishman by the Bourbon Government of Spain,’ 1823. Time brought more than sufficient compensation; for, after the overthrow of Charles X., Dr. Bowring was the writer of the address of the citizens of London, adopted in the Guildhall, congratulating the French people on the overthrow of their “legitimate” rulers. He headed the deputation that bore the address to Paris, and was welcomed by a public dinner at the Hôtel de Ville. He was the first Englishman received by Louis Philippe after his recognition by the British Government; and the papers of the day recorded the strange augury that the “gilded chair,” on which His Majesty was seated, was crushed by his too energetic action, and he was kept from falling by Odilon Barrot, the Prefect of the Seine, on one side, and Dr. Bowring on the other. He became in early life the political pupil of Jeremy Bentham, maintaining his master’s principles in the ‘Westminster Review,’ of which he was for some years the editor. He published during Bentham’s lifetime his ‘Deontology’ in two volumes; and on the death of Bentham, (with whom he had lived in habits of the strictest intimacy, and of whom he was the executor,) Dr. Bowring edited a collection of his works, accompanied by a biography of the great jurist, the whole consisting of twenty-three octavo volumes. He also distinguished himself by an extraordinary knowledge of European literature, particularly the lyrical, or rather the song-poetry of the different European nations, and in 1821–3 he gave to the public his ‘Specimens of the Russian Poets’ (2 vols.); this he followed up, in 1824, by his ‘Batavian Anthology,’ and ‘Ancient Poetry and Romances of Spain;’ in 1827, he published ‘Specimens of the Polish Poets,’ and ‘Servian Popular Poetry;’ in 1830, ‘Poetry of the Magyars;’ and in 1832, ‘Cheskian Anthology.’ Besides the above, he published translations of poems, songs, and other productions, from the Danish, German, Frisian, Dutch, Esthonian,

Portuguese, Icelandic, Biscayan, and several other languages, and also many volumes of hymns, original poems, and other works, amounting altogether to more than fifty volumes.

Tom Hood addressed to him the following extravaganza, which, we believe, has not been before published :—

To Bowring, man of many tongues,
 All over tongues like rumour,
 This tributary verse belongs,
 To suit his learned humour.

All kinds of gabs he knows, I wis,—
 Servian, Slavonian, Scottish ;
 As fluent as a parrot is,
 But far more *Polly-glottish*.

No language too obscure he meets,
 However dark and verby ;
 He gabbles Greek about the streets,
 And often *Rus(s) in urbe*.

Strange tongues, whate'er men may them call,
 In short, the man is able
 To tell you " What's o'clock " in all
 The *dialects* of Babel.

He talks them all with equal ease,—
 The German and the Danish,
 The Magyar, Polish, Portuguese,
 Bohemian, Tuscan, Spanish.

Try him with these and twenty such,
 His skill will not diminish,
 Although you should begin with Dutch,
 And end, like me, in *Finnish*.

He had the advantage of personal acquaintance with most of the eminent authors and poets of the last generation, and was assisted by them in a purpose, never fully carried out, of writing the history and giving translated specimens of the popular poetry, not only of the western, but of the oriental world. In this object he had the co-operation of Rask and Finn Magnusen (Icelandic), Oehlenschläger and Munter (Danish), Franzén (Swedish), in the Scandinavian field ; of Karamsin and Kriulov (Russian), Niemcewicz and Mickiewicz (Polish), Wuk (Servian), Hanka and Čelakowsky (Bohemian), Talvj (von Jakob), and many

coadjutors in the Moravian, Illyrian, and other branches of the Slavonic stem. In the Magyar, Toldy (Schedel) and Kertbeny lent him their aid; in Romaic, Faurel; in Finnish, Tengström; while in the various kingdoms of southern Europe he was enabled to gather together extensive materials for a work which would have demanded the dedication of a life afterwards destined to other objects;—but scattered translations from Chinese, Sanskrit, Cingalese, and other Oriental tongues, which have appeared in different periodicals, show that the subject has never been wholly abandoned, though nothing comprehensive, exhaustive, or really worthy of a scheme so extensive has been produced.

In 1829 he gleaned at Copenhagen the materials for a Collection of Danish Poetry, and he also translated ‘Peter Schlemihl’ from the German, at the suggestion of Adelung.

On the recommendation of Mr. Alexander Baring (afterwards Lord Ashburton) and the Parliamentary Finance Committee, Mr. Bowring was, in 1828, sent by the late Mr. J. C. Herries, then Chancellor of the Exchequer, to report on the public accounts of Holland, and it was during this period that he received the diploma of LL.D. from the University of Groningen. For this mission, Dr. Bowring received from Parliament nothing but the bare expenses of his journey, the Duke of Wellington having refused to confirm the appointment of so notorious a “radical” as a Commissioner for the reform of the Public Account. It is to the credit of the Duke that after Dr. Bowring’s unsuccessful motion in Parliament for the abolition of flogging in the army, his Grace said that he hoped the time would come in which it might be possible to put an end to a system so little creditable to the character of our soldiers, and which had been so strongly reprobated by the Member for Bolton.

While in Madrid, he published in Spanish his ‘Contestacion á O’Gavan,’ being an exposure of the arguments in favour of African slavery in Cuba; and he has also translated into French the ‘Opinions of the Early Christians on War,’ written by Thomas Clarkson. His ‘Matins and Vespers’ have gone through many editions, both in England and the United States; and we believe his ‘Minor Morals,’ in three volumes, being recollections of travel, for the use of young people, are now out of print. For his two volumes of ‘Russian Anthology’ he received a diamond ring from Alexander I.; and for his works on Holland, some of which

have been translated into Dutch, a gold medal from the King of the Netherlands, and he was made a Member of the Institute of Holland.

From the time of his connection with the 'Westminster Review' he had directed much of his attention to subjects of political economy, especially with respect to the commercial relations between Great Britain and the Continental Governments; and in 1831, he was appointed, with the Earl of Clarendon (then Mr. George Villiers, whose aptitude for so important an office had been strengthened by his having been a Commissioner of Customs and by diplomatic services abroad), Commercial Commissioner to France. Though not successful to the extent that had been anticipated, some liberal modifications of the tariff were obtained—the first concessions made. The export trade of the United Kingdom to France was, in 1831, £602,688; in 1866, it rose to £11,696,016. The import trade of French produce from France to Great Britain and British colonies in 1831 was, according to the French official returns, £3,192,300, whilst in 1864 it amounted to £35,600,000 to Great Britain alone. On our commercial relations with France, two elaborate reports were presented to Parliament by Lord Clarendon and Dr. Bowring.

The reports of his commercial missions undertaken at various times, and which have been published for the information of Parliament, are:—those to Egypt and Syria; to Lombardy, Tuscany, and Rome; and to Switzerland. He afterwards visited the different States of the German Customs' Union. His reports on the two latter countries were translated and published in German.

On Lord John Russell's appointment, he discharged the duties of an unpaid Commissioner to inquire into the state of extra-parochial records of births and deaths, and examined and reported on more than seven thousand volumes, which occupied him for many months.

He took an active part, both in Parliament and elsewhere, in the reform of our sanitary laws as bearing upon our commercial interests, and published a paper, read at the meeting of the British Association, in 1838, at Newcastle, "On Oriental Plague and Quarantines," proving the non-contagious character of the disease.

He was nominated in 1832, under Lord Grey's Government, Secretary to the Commission for the Reform of the Public Ac-

counts, of which Sir Henry Parnell was Chairman, and in that capacity he visited and examined in the greatest detail the *Comptabilité* of the French Government, and presented two reports, which were published for Parliament, and which form the groundwork of our present improved system. Sir Henry Parnell and Dr. Bowring wrote the Reports on the Exchequer, and prepared those resolutions which, after long delays, have become the law of public accountancy in Great Britain and the Colonies. Dr. Bowring also acted as Chairman of the Parliamentary Committee on Colonial Accounts, whose recommendations have led to some of the most important improvements. He carried, in opposition to the Government, a resolution that the gross revenues of all taxes should be paid, without reduction, into the Exchequer, and no payments be made without preliminary Parliamentary authority,—a principle which has become the groundwork of reform in our national accountancy.

He sat in Parliament as member for the Kilmarnock burghs, from 1835 to 1837, when he was an unsuccessful candidate, and he sat as the representative of Bolton from 1841 to 1849. He unsuccessfully contested Blackburn in 1832, and again in 1835, and was defeated on both occasions by a very few votes; he stood for the Kirkcaldy burghs in January, 1841.

He twice visited Belgium with a view to modification of the commercial system of the country, and heard from the lips of the king that he had been the main instrument in converting the Belgians to the advocacy of free-trade, in furtherance of which he had published two pamphlets, one 'On the Restrictive and Prohibitory System, from the MSS. of Bentham,' another 'On the Political and Commercial Importance of Peace.' He represented Great Britain at the meeting of the Zollverein in Berlin in 1838. His communications with Sir Robert Peel at that period were not without their influence in bringing about that change in our commercial system which has in its results proved so beneficial. It may be mentioned here that Dr. Bowring wrote the greater part of the report of Mr. Hume's Committee on Import Duties—a report which has been translated into all the commercial languages of Europe, and circulated to the extent of hundreds of thousands of copies, and that many of its recommendations were adopted by Sir Robert Peel.

He received a handsome service of plate from the inhabitants

of Blackburn, as a tribute to "the purity" which distinguished his conduct amidst the corruptions which surrounded him, when he was left in a minority of five votes in the election of 1832; another from the Manxmen for the services he had rendered by obtaining an Act of Parliament for their emancipation from feudal tyranny; and from the Maltese, in recognition of the success of his advocacy as their unofficial representative in the House of Commons; a beautiful silver urn from his Kilnarnock constituents, and a large silver salver from the electors of Kirkcaldy, for the representation of which borough he had unsuccessfully contended. Aided by the powerful support of the late Prince Consort, he obtained, after a discussion in the House of Commons, the issue of the florin, which was the first step towards the introduction of the decimal system into our currency. In January, 1849, he was nominated to the British Consulship at Canton, and in 1853 he was made Superintendent of Trade and Plenipotentiary to China, and subsequently held the appointment of Governor, Commander-in-Chief, and Vice-Admiral of Hongkong and its dependencies, as well as Chief Superintendent of Trade in China. He was also accredited to the Courts of Japan, Siam, Cochin-China, and the Corea, though the time had not arrived for the establishment of personal diplomatic intercourse with those regions. On receiving these last offices, and while on leave of absence in England, in February, 1854, he received the honour of knighthood. He was afterwards nominated a Knight-Commander of the Belgian Order of Leopold, a Knight-Commander of the Hawaiian Order of Kamehameha I., and a Companion of the Order of Christ of Portugal. While in China, he was nominated a Fellow of the Royal Society, and was President of the Chinese Branch of the Royal Asiatic Society. He is also an honorary member of many of the literary societies of Europe.

In 1854, he published an octavo volume on 'The Decimal System in Numbers, Coins, and Accounts, especially with reference to the Decimalization of the Currency and Accountancy of the United Kingdom.'

In the spring of 1855, Sir John Bowring proceeded on a special mission to Siam, and concluded a treaty of commerce with the two kings of that country,—a task in which several previous plenipotentiaries had failed. This treaty will, it is believed, in its realized results, be found one of the most satisfactory that

has ever been submitted for ratification. The trade created by that treaty is already of vast amount, and is susceptible of large extensions, in proof of which it may be stated that 195 square-rigged vessels were engaged in the Bangkok commerce during 1858, whilst previous to the treaty the average number was only six vessels yearly.

Sir John subsequently published his travels and experiences in that country, under the title of 'The Kingdom and People of Siam.' It was during his administration that the insult was offered to the British flag by the Chinese Government, which resulted in open hostilities between England and China, and which led to considerable discussion in Parliament, and to the temporary defeat of Lord Palmerston in 1857.

On quitting China, Sir John received from the Chinese some characteristic marks of their appreciation of his government. Twenty-two addresses were presented by the native schoolmasters, accompanied with a handsome mirror, with the inscription, "When you want to see the face of an honest man, look on me!" A deputation of merchants brought a shining brass basin, filled with water from the mountain-rills of Hongkong (the meaning of the word Hongkong is "Fragrant Streams"), having engraved upon the edge, "Your administration has been as pure as this water." And a third deputation, accompanied by Chinese musicians, flags, and other decorative devices, desired the Governor's acceptance of a large porcelain vase, inscribed with ancient characters, conveying the wish that his age might be as happy as his youth had been honourable.

He published in 1858 his 'Visit to the Philippine Islands,' principally with a view to its relation with the trade of Great Britain. Manilla had been the only port accessible to foreigners, but the more liberal policy of the Spaniards had opened the harbours of Sual, Iloilo, and Zamboanga, which he visited in H.M.S. *Magicienne*; and as the representative of free trade was everywhere welcomed.

On the close of his period of service, in 1859, Sir John retired on a superannuation allowance; and since his return to England has frequently contributed to the periodical literature of the day, including 'The Gentleman's Magazine,' 'The Fortnightly Review,' 'The Cornhill Magazine,' 'All the Year Round,' and 'Once a Week.' In 1860, he was appointed a deputy lieutenant and

magistrate of Devon, and in 1861, he was again sent abroad to report on the state of our commercial relations with the new kingdom of Italy.

In 1865, he published a pamphlet on 'Remunerative Prison Labour,' and read an elaborate paper on the same subject at the Dundee Meeting of the British Association in 1867, being the chairman of a committee of magistrates appointed to investigate this important question.

Sir John Bowring has been twice married,—first, in 1816, to Maria, daughter of the late Samuel Lewin, Esq., of Hackney, which lady died in 1858, from the effects of poison administered to herself and her family at Hongkong the year before; and secondly, in 1860, to Deborah, daughter of Thomas Castle, Esq., of Bristol. His eldest son, by the former marriage, John Charles Bowring, Esq., of Larkbeare, Devon, has given to the British Museum a splendid present of *Coleoptera*, consisting of more than 84,000 species, known by the name of the "Bowringian Collection." His third son, Mr. Lewin Bentham Bowring, after having been for some years connected with the Lahore Mission, was appointed by Lord Canning as his private secretary during his Indian Viceroyalty. He is a companion of "The Star of India," the Commissioner of Mysore and Coorg, and the country is gradually prospering under his administration, though the constant agitation in favour of the claims of the old Rajah must to some extent lessen the influence of the Queen's representative. Sir John's fourth son, Mr. Edgar A. Bowring, was for many years the librarian and précis writer at the Board of Trade. He has also been private secretary to Lord Clarendon, Lord Granville, and Lord Canning. He is Secretary to the Commissioners of the Great Exhibition of 1851. He possessed to a remarkable degree the confidence of the Prince Consort, upon whose death, and as a mark of his Royal Highness's attachment, her Majesty conferred on him, as an act of her own, the Companionship of the Bath. His translations of Goethe, Schiller, and Heine are well known.



Portrait of James M. Smith

ROBERT BROWNING.

A POET who, at the age of more than fifty, can look back with satisfaction to thirty years of the inspiration of his Muse, and to several editions of his collected works, may fairly be said to have attained a point of eminence in literature. There are few writers of verse, however, whose earnest thoughts and high imaginings have been less promptly understood, and appreciated as the emanations of a poetic genius, than those of Robert Browning. His dramas, notwithstanding the advantage of having an admiring and zealous exponent, kept but a brief existence on the stage; his poems, extolled by some, were denounced by others as being of the mystical and spasmodic school, and one able critic went so far as to describe them as incomprehensible,—annoying the judgment by obscurity, and offending the ear by discord. “But we have read most of the pieces with pleasure,” adds the same authority, “because we like to hear what a thoughtful, generous man has to say on a variety of subjects.”

Robert Browning was born in 1812, at Camberwell, and received his education at the London University. Music, painting, and the drama have in turn occupied his thoughts, and some of the best years of his life were spent in Italy, in the society of a wife of yet higher poetic genius, Miss Elizabeth Barrett, who died in 1861.

Mr. Browning's first published work, ‘Paracelsus,’ a poem in five scenes, appeared in 1835. It was founded on Renauldin's history of one of the travelling *litterati* of the early part of the sixteenth century, who spent their days in wandering from country to country, predicting the future by astrology and chiromancy,

evoking apparitions, and practising magic and alchemy; and was inscribed by its author to "his affectionate friend, Amédée de Ripert-Monclar." Two years later, Mr. Browning appeared in the more difficult and arduous character of a tragic dramatist. In May, 1837, he produced at Covent Garden Theatre his historical tragedy of 'Strafford,' supported in the delineation of its principal characters by Macready, Vandenhoff, and Helen Faucit. It was not, however, very successful. As an acting play, the interest fails after the third act, when Strafford is overthrown. The fourth act, in which he does not appear, somewhat lingers on the stage, amid the plots for his destruction and the vacillation of the King; and though his prison scene is touching, our sympathies are not sufficiently aroused for Charles, who is drawn more weak and treacherous throughout than even adverse history represents him. Mr. Browning made large amends, however, for this apparent want of sympathy for the royal martyr by his spirited 'Cavalier Tunes:—

"God for King Charles! Pym and such carles
To the Devil that prompts 'em their treasonous paroles!
Cavaliers, up! Lips from the cup,
Hands from the pasty, nor bite take nor sup,
Till you're marching along, fifty score strong,
Great-hearted gentlemen, singing this song."

In 1840 appeared his 'Sordello,' a poem in six books, and in 1841 the drama 'Pippa Passes,' with the following inscription:—
"I dedicate my best intentions in this poem, admiringly to the author of 'Ion,' affectionately to Mr. Serjeant Talfourd." Its opening is highly characteristic of what has been termed Mr. Browning's spasmodic style of utterance, full, however, of poetic fervour.

"Day!
Faster and more fast,
O'er night's brim, day boils at last;
Boils, pure gold, o'er the cloud-cup's brim
Where spurting and suppressed it lay—
For not a froth-flake touched the rim
Of yonder gap in the solid gray
Of the eastern cloud, an hour away;
But forth one wavelet, then another, curled,
Till the whole sunrise, not to be suppress't.

Rose, reddened, and its seething breast
 Flickered in bounds, grew gold, then overflowed the world.
 Oh, Day, if I squander a wavelet of thee,
 A mite of my twelve-hours' treasure,
 The least of thy gazes or glances,
 (Be they grants thou art bound to, or gifts above measure
 One of thy choices, or one of thy chances,
 Be they tasks God imposed thee, or freaks at thy pleasure)
 —My Day, if I squander such labour or leisure,
 Then shame fall on Asolo, mischief on me !”

Mr. Browning's next production, in 1842, was a tragedy, entitled 'King Victor and King Charles,' founded on some stirring events in Italian history during the middle of the last century, between Victor Amadeus, first king of Sardinia, and his son Charles Emmanuel, Prince of Piedmont. In 1842 he published his first volume of collected poems, under the title of 'Dramatic Lyrics;' it was followed at intervals of three and ten years by his 'Dramatic Romances,' and 'Men and Women,' all of which are now dedicated to "their promptest and staunchest helper," John Forster.

In 1843 Mr. Browning produced two acting tragedies of considerable poetic merit—'The Return of the Druses,' and 'A Blot in the 'Scutcheon.' The latter was represented on the stage of Drury Lane Theatre, but with only moderate success. Then came his play of 'Colombe's birthday,' dedicated in the following manner to Mr. Bryan W. Proctor:—"No one loves and honours Barry Cornwall more than does Robert Browning; who, having nothing better than this play to give him in proof of it, must say so." The last of Mr. Browning's acting tragedies, 'Luria,' appeared in 1846, dedicated in the plenitude of his enthusiasm, with extravagant eulogy, to the late Mr. Walter Savage Landor:—"I dedicate this last attempt for the present at dramatic poetry to a Great Dramatic Poet; 'wishing what I write may be read by his light:' if a phrase originally addressed, by not the least worthy of his contemporaries, to Shakespeare, may be applied here, by one whose sole privilege is in a grateful admiration to Walter Savage Landor."

This was followed by two other dramatic poems of less pretension,—'A Soul's Tragedy,' Part First being what was called the Poetry of Chiappino's Life, and Part Second its Prose; and 'In a Balcony, a Scene.' In 1850 a spirited poem, of between two

and three thousand lines, with the title 'Christmas Eve and Easter Day,' was published by Mr. Browning; it commenced in the following somewhat eccentric style:—

“ Out of the little chapel I flung,
 Into the fresh night-air again.
 Five minutes I waited, held my tongue
 In the doorway, to escape the rain
 That drove in gusts down the common's centre,
 At the edge of which the chapel stands,
 Before I plucked up heart to enter.
 Heaven knows how many sorts of hands
 Reached past me, groping for the latch
 Of the inner door that hung on catch,
 More obstinate the more they fumbled,
 Till, giving way at last with a scold
 Of the crazy hinge, in squeezed or tumbled
 One sheep more to the rest in fold,
 And left me irresolute, standing sentry
 In the sheepfold's lath-and-plaster entry,
 Four feet long by two feet wide,
 Partitioned off from the vast inside—
 I blocked up half of it at least.
 No remedy; the rain kept driving.”

Mr. Browning's tragedies and dramatic lyrics will be found in the collection of his works entitled 'Bells and Pomegranates.' It is stated that at the present time (November, 1867), Mr. Browning is at work upon another poem, which will appear shortly after Christmas, but the title of which is not as yet announced.

The most singular episode in Mr. Browning's literary career was the publication, in 1852, of a long introductory Essay, accompanying twenty-five letters alleged to be from the pen of Percy Bysshe Shelley, which afterwards proved to be forgeries. Mr. Browning edited the volume in which these letters appeared at the invitation of the late Mr. Moxon, the publisher of Dover Street, who bought them at a sale; and the clever deception was a great annoyance to both. The discovery of the forgery was made accidentally by Mr. Francis T. Palgrave. Happening one day to be turning over the pages of a copy of Mr. Moxon's volume that had been sent to the Poet Laureate, Mr. Palgrave suddenly recognized, in a letter set forth as having been written by

Shelley from Florence to Godwin, a portion of an article written more than ten years before by his father, the late Sir Francis Palgrave, for the 'Quarterly Review.' Inquiries were set on foot by a literary detective, most of the letters proved to be of spurious manufacture, and the volume had to be suppressed, along with a similar volume of alleged letters of Byron, which proved also to be forgeries by the same skilful hand. Mr. Browning was created an Hon. M.A. of the University of Oxford in 1867, and in the same year was elected to an Honorary Fellowship at Balliol College.



Portrait of a man in traditional Japanese attire, seated on the floor.

CAPTAIN RICHARD F. BURTON,

F.R.G.S., F.E.S., F.A.S.L., F.R.A.S., F.A.S. BOMBAY, F. BERLIN A. OF S.

IN the foremost rank of the noble band of explorers of which England is so justly proud, stands Captain Richard Francis Burton, late of Her Majesty's Bombay Army (18th Native Infantry), Chief of the Staff of Irregular Cavalry in the Crimea, the celebrated Eastern traveller, author, linguist, and gold medallist of the English and French Royal Geographical Societies. He is descended on the father's side from the Burtons of Barker Hill, near Shap, in Westmoreland, a family which owns a common ancestor with the Burtons of Carlow and Northamptonshire, and on the maternal side with the Montmorencis, Lejennes, and Drelin-courts, French Huguenots of the age of Louis XIV. His grandfather was the Rev. Edward Burton, Rector of Tuam, in Galway (who, with his brother, Archbishop Burton, of Tuam, was the first of this branch to settle in Ireland); he married Maria Margareta Campbell, daughter of Dr. John Campbell, LL.D., Vicar-General of Tuam. Their son was Richard Burton's father, Lieut.-Colonel Joseph Netterville Burton, of the 36th Regiment, who married one of the Beckwith Bakers, of Nottinghamshire, a descendant, on her mother's side, of the Scotch Macleans and Macgregors.

Richard Francis Burton was born on the 19th of March, 1821, at Barham House, Herts. His education as traveller and linguist commenced in his fifth year, when he was taken to the Continent, where, with the exception of a few months passed at a school at Richmond, in Surrey, he continued until the age of nineteen, tra-

velling through France, Switzerland, Germany, and Italy, thus acquiring a practical knowledge of modern European languages.

In 1840 he entered as a commoner at Trinity College, Oxford, where he remained until 1842. His studies hitherto, whether abroad or at home, had been directed towards his entering the Church. A commission in the Indian Army, however, having been offered him, he accepted it, and found himself, upon reaching Bombay, posted to the 18th Bombay Native Infantry, then at Baroda, in Guzerat. This was during the Affghan War. Within the first year of his Indian sojourn, he passed examinations in Hindostanee and Guzeratee. At a somewhat later period, he passed his examination in four other Oriental languages and dialects—Persian, Maharattee, Sindhee, and Punjaubec.

In 1844, Lieutenant Burton proceeded to Sindh with the 18th Native Infantry, and was soon placed upon the Staff of Sir Charles Napier, under Colonel Walter Scott. With the exception of a visit to Goa and the Neilgherries—the visit which gave rise to Lieutenant Burton's work entitled 'Goa and the Blue Mountains,' published in 1851—the five following years were spent by him in the Sindh Canal Survey, and in collecting materials for his works, 'The History of Sindh, or the Races which inhabit the Valley of the Indus,' 'Sindh, or the Unhappy Valley,' and 'Falconry in the Valley of the Indus.'

With a view to employment on active service in Mooltan, he published in 1849, in the 'Journal of the Bombay Asiatic Society,' "A Grammar of the Mooltanee Language," together with other valuable philological contributions. He joined his regiment when marching upon Mooltan to attack the Sikhs, with whom he had been affiliated; but the "hot season" and the march up the valley of the Indus were causes of fearful suffering to him. He was attacked by severe ophthalmia, the result of mental and physical over-fatigue, and thus was compelled by sickness, in 1849, to return to Europe *viá* the Cape.

Residing in France principally upon his return, he there was awarded the *Brevet de pointe* for the excellence of his swordsmanship. It has been observed of Captain Burton, that as horseman, swordsman, and marksman, no soldier can surpass, and few can equal him. In 1853 he published a system of bayonet exercise, which, although but little valued at the time, has since been made use of by the Horse-Guards.

In April, 1853, generously supported by the Royal Geographical Society, Richard Burton prepared to penetrate into Arabia, under circumstances unusually strange, and peculiarly well adapted to facilitate his object in view—the study of “the inner life of the Moslem.” With this expedition opens the most romantic chapter in the history of this remarkable man.

He had long felt within himself the qualifications, mental and physical, which are needed for the exploration of dangerous regions, difficult of access. Not only had his previous education and career specially prepared him for such enterprises, but his mind, at once practical and imaginative, grasping every contingency likely to arise, he had sought to accomplish himself thoroughly for his mission in the most trifling details as well as the most important matters. Thus it is related that he took lessons from a blacksmith in order to be prepared not only to shoe his horse, in case of need, but also to make its shoes.

In order to penetrate with safety into Arabia, it was necessary that our traveller should be skilfully disguised; indeed, he appears to have assumed and sustained various Oriental characters. He left London as a Persian, and travelled to Southampton with Captain Grindlay as his interpreter. Landing at Alexandria, he was received in the house of Mr. John Larking, the only person, throughout Richard Burton’s perilous expedition, who was acquainted with his secret. To Cairo he went as a Dervish, living there as a native until the time of the departure of the Pilgrims. Unable, as he had intended, to cross Arabia, on account of the disturbances caused by the Russian war, he performed the pilgrimage described in his work, published in 1855, entitled ‘A Pilgrimage to Mecca and Medinah.’ The peculiarity of this pilgrimage consists in the Holy City having been visited by this bold and subtle Englishman as one of “the Faithful.” He was thus the first European who had beheld the inner and religious life of the Moslem without having abjured his hereditary faith.

We have said that various were the Oriental characters assumed by this traveller of versatile genius. The one most easily sustained appears to have been that of half-Arab half-Iranian, a race who throng the northern shores of the Persian Gulf. With hair falling on his shoulders, long beard, face, hands, arms, and legs stained with a thin coat of henna, an Oriental dress, spear in hand and pistols in belt, such was Richard Burton, *alias* Mira

Abdullah the Bushiri, as he commenced his adventurous life, and who went from north to south, from east to west, and mixed with all nations and tribes, without betraying himself in manners, customs, or speech, often when death must have followed on discovery of his true character.

Returning to Egypt for a few months, he proceeded to Bombay, and, assisted by the late Lord Elphinstone, organized an expedition into Somali-Land, East Africa, taking his friend Captain Speke as second in command. The object was to visit Harar, the Timbuctoo of East Africa, the exploration of which had in vain been attempted by thirty travellers. Disguised as an Arab, he was successful, and returned to Aden with the first authentic notices of this mysterious city. The Somali Expedition terminated disastrously. They were attacked by the natives: one of the party was killed; Burton and Speke were dangerously wounded, and forced to endure terrible sufferings in the desert from want of water and food.

The severe nature of Burton's wounds compelled his return to England. Having read an account of his explorations before the Royal Geographical Society, he again left his native land, this time bound for the Crimea, and landed at Balaklava on the day following Lord Raglan's death. Here he was employed as Chief of the Staff of the much-calumniated body of Irregular Cavalry, which indeed he assisted in organizing. He also, by order of General Beatson, volunteered to Lord Stratford de Redcliffe to convoy any amount of provision for the relief of Kars. But Kars was already doomed: General Beatson and his Staff were compelled, by a complication of small intrigues, to resign, and the subject of this memoir returned to England.

At the instance of the Royal Geographical Society, Lord Clarendon, then Secretary of State for Foreign Affairs, supplied Captain Burton with funds for an exploration of the Lake Region of Central Africa. In October, 1856, he set out for Bombay, accompanied, as second in command, by his former companion, Captain Speke, and landed at Zanzibar on December 19th, 1856. Energetically assisted by the late Lieut.-Colonel Hammerton, Her Majesty's Consul at Zanzibar, in January, 1857, the explorers made a tentative expedition to the regions about Mombas. Struck down, however, by dangerous fever, they were forced to return to their head-quarters in the following March.

After a prolonged organization, Captains Burton and Speke set forth once more, bound for the regions of the far interior, into which only one European, M. Maizan, a French naval officer, had attempted to penetrate, and he, too, was cruelly murdered at the very commencement of his journey. The result of this memorable expedition, which occupied the years from 1856 to 1859, is well known to the world through Captain Burton's work, 'The Lake Regions of Equatorial Africa,' published in 1860, and through the volume of the Journal of the Royal Geographical Society for 1860.

During these African explorations Captain Burton felt severely the effects of the climate, being attacked by fever no less than twenty-one times, and having suffered temporarily from paralysis and stone blindness.

In May, 1859, this brave traveller returned to England, where he immediately proposed another expedition to the sources of the Nile: the Royal Geographical Society did not, however, encourage the proposal.

In April, 1860, Captain Burton started for the United States, and passing through the country of the Mormons, visited California. He returned to England in December, 1860, having spent six weeks with Brigham Young, the Mormon prophet, at the Great Salt Lake City, and travelled during his American expedition 25,000 miles. The experiences of this journey were given to the public in 1861, in a work entitled 'The City of the Saints.'

In 1861, Captain Burton received from Earl Russell an offer of the Consulship for Fernando Po, in the Bight of Biafra, on the west coast of Africa. The Bight, six hundred miles in extent, was under Captain Burton's jurisdiction, and much trouble was caused the Consul by the lawless conduct of rough, unruly traders, and of rum-corrupted natives. Nevertheless, in spite of the pressure of his Consular business, and of the dangerous character of the climate, our enthusiastic traveller still pursued his explorations with ardour. He visited the coast from Bathurst, on the Gambia, to St. Paul de Loanda, in Angola, and the Congo River. He marched up to Abeokuta in December, 1861. He ascended the Cameroon Mountain, the wonderful extinct volcano, described two thousand years ago by Hanno the Carthaginian. He advised the English Government to establish there a sanatorium for the West Coast, and a convict station for felons, who

might be made useful in constructing roads, and in cultivating cotton and chocolate. In 1863 Captain Burton published the result of his labours in Abeokuta and Cameroon Mountains. After visiting the cannibal Mpangwe (the Fans of Dr. Chaillu) in April, 1863, he proceeded to Benin city, a spot unknown to the European world since the death of Belzoni, and his description of the surrounding regions appeared in 'Frazer's Magazine' for February, March, and April, 1863, under the title of "Wanderings in West Africa." He next ascended the Elephant Mountain, an account of which was read before the Royal Geographical Society.

After a brief visit to England, for the re-establishment of his health, and a trip to Madeira and Teneriffe, Captain Burton visited the whole line of lagoons between Lagos and the Volta River, and spent a few days with the King of Dahome. Invited by this potentate to pass the three winter months with him, and directed by the Foreign Office, he returned to Agbome as British Commissioner, with presents from her Majesty, and paid his stipulated visits, witnessing the celebrated annual "customs," which he has described in 'A Mission to Gelele, King of Dahome,' published in 1864. Captain Burton's last work, 'Wit and Wisdom of Africa,' published in 1865, is a collection of five thousand proverbs, being an attempt to make the Africans delineate themselves.

Having spent ten years in Africa, Captain Burton was transferred by the Foreign Office, in 1866, to the Consulship of Santos, in the Brazils; and the last accounts (August, 1867) represent him as having gone on a visit of inspection of the mines of Golconda, no doubt with literary as well as commercial designs in view.

Captain Burton married, in 1861, Isabella, daughter of Henry Raymond Arundell, Esq. (nephew of the ninth Lord Arundell of Wardour), by Eliza, only surviving sister of the present Sir Robert Gerard, Bart., of Garswood, Lancashire.



Photographed by J. M. Watkins in 1860

CHARLES ROBERT DARWIN, M.A., F.R.S., F.L.S., ETC.

THE subject of the present notice is descended from two remarkable men, both of them equally distinguished in their respective paths of speculative science and applied science and art. Dr. Erasmus Darwin, F.R.S., the author of 'The Botanic Garden' and 'Zoonomia,' was the paternal grandfather, and Josiah Wedgwood, F.R.S. (the man who, above all others, advanced the art of the potter in this country), was the maternal grandfather of Charles Robert Darwin, who has given his name to a theory which will long agitate the philosophic world.

The naturalist whose portrait accompanies this notice, was born at Shrewsbury on the 12th February, 1809, his father being Dr. Robert Waring Darwin, also a Fellow of the Royal Society. He was educated at the Shrewsbury school under Dr. Butler, afterwards Bishop of Lichfield and Coventry, and in the winter of 1825 went, for two years, to the University of Edinburgh. After this, Mr. Darwin proceeded to Christ's College, Cambridge, where he took his B.A. degree in 1831, and proceeded M.A. in 1837.

Mr. Darwin inherited from the author of 'Zoonomia' that love of natural history and the allied sciences which has been the labour and the pleasure of his life. In the autumn of 1831, the late Admiral (then Captain) FitzRoy, R.N., having offered to give up part of his own cabin to any naturalist who would accompany H.M.S. Beagle in her surveying voyage and circumnavigation, Mr. Darwin volunteered his services without salary. His scientific acquirements were already so well known that the offer was at once accepted, and Mr. Darwin gave the country his ser-

vices, stipulating only that he should have the absolute disposal of all his collections.

The 'Beagle' sailed from England December 27th, 1831, and returned on the 27th October, 1836. During this absence of nearly five years, a survey of South America was made, Bahia, Rio Janeiro, Monte Video, St. Julian and Santa Cruz, with the Falkland Islands and Tierra del Fuego were visited on the one hand, Valparaiso, Lima, the Pacific Islands, New Zealand, Australia, and the Mauritius on the other. In 1834 Mr. Darwin was elected a Fellow of the Royal Society.

In 1839 he published a volume as part of Captain FitzRoy's general work, descriptive of this voyage. The interest excited by this, one of the most graphic, and at the same time most philosophic book of travels that was ever published, led to its reproduction in a modified form, in 1845, under the title of 'Journal of Researches into the Natural History and Geology of the Countries visited during the Voyage of H.M.S. Beagle round the World.' Such has been the popularity of this work, that we find Mr. Murray advertising, so far back as 1860, "the tenth thousand." This 'Journal' shows Mr. Darwin to have been a singularly close observer of every phenomenon in natural history, and of every variety of condition, physical and mental, of the people whom they visited during this remarkable voyage, exhibiting the possession of perceptive powers of the highest order; he displays at the same time the severe control which was maintained over them by a reflective capacity of the most exalted kind. No single phenomenon is described by Mr. Darwin until after it has been most cautiously examined, and the reader of the 'Journal' is soon impressed with the persuasion that the facts narrated are placed beyond a doubt, and that his reasonings on those facts are ever guided by a system of most severe inductive philosophy. This is most especially exemplified in Mr. Darwin's reasonings on the origin of the coral reefs of the Pacific.

In the beginning of 1839 Mr. Darwin married his cousin, Miss Emma Wedgwood, and shortly after this he left London, taking up his residence at Down, near Farnborough, in Kent. From that time, in the retirement of his country home, Mr. Darwin has devoted himself to the care of a large family, and the quiet and close investigation of the works of nature. His first labours, after this date, were spent in editing the 'Zoology of the

Voyage of the Beagle,' and giving an account of the habits and ranges of the various animals therein described. In aid of the publication of this and other works bearing on the same subject, the Lords of the Treasury made a grant of £1000. In 1842 Mr. Darwin published his work on 'The Structure and Distribution of Coral Reefs,' to which we have already incidentally referred as an example of that inductive logic which Mr. Mill so perfectly distinguishes in his remarks on the 'Law of Causation : ' " Let the fact be what it may, if it has begun to exist, it was preceded by some fact or facts with which it is invariably connected. For every event there exists some combination of objects or events, some given concurrence of circumstances, positive and negative, the occurrence of which is always followed by that phenomenon."

Equally good examples of this rule will be found in the 'Geological Observations on Volcanic Islands,' published in 1845, and in the 'Geological Observations on South America,' which were given to the world in 1846.

Continuing his researches without rest, we find the results of his unwearying industry in two volumes published by the Ray Society in 1851 and 1854, 'On Pedunculated and Sessile Cirripedes,' and in two other volumes published by the Palæontographical Society, on the fossil species of the same class.

Towards the close of 1859 Mr. Darwin published his 'Origin of Species by means of Natural Selection.' Of this work four English editions have appeared, and nine foreign editions, in French, German, Dutch, Italian, and Russian. The popularity of this work will be evidenced by the fact that more than one hundred reviews, pamphlets, and separate books have been published upon it, while the earnestness with which the question brought under notice by Mr. Darwin is still discussed, appears to show that these will be probably doubled in a short space of time. In a few words, the author has himself expressed the theory he teaches ; these few we extract from the last edition of the 'Origin of Species : '—"As man can produce, and certainly has produced a great result by his methodical and unconscious means of selection, what may not *natural selection* effect? Man can act only on external and visible characters. Nature (if I may be allowed thus to personify the natural preservation of varying and favoured individuals during the struggle for existence) cares

nothing for appearances, except in so far as they are useful to any being. She can act on every internal organ, on every shade of constitutional difference, on the whole machinery of life. Man selects only for his own good, Nature only for that of the being which she tends. Every selected character is fully exercised by her, and the being is placed under well-suited conditions of life."

On one hand we find the author and his theory denounced with unreasoning violence, while on the other Mr. Darwin is exalted into the founder of a new faith, and his views are regarded almost as revelations. As in the theory of "Natural Selection" we are taught that the process is extended over long periods of time, and that Nature proceeds with her work by almost imperceptible degrees; so the truth will slowly but surely be eliminated by an analogous process; and every member having been submitted to the test of time, will suffer some change, until "eventually the body of Osiris will arise in all its incomparable perfection," as Bacon has taught us in one of his beautiful apophthegms.

In 1853 the Royal Society awarded to Mr. Darwin the Royal Medal, and in 1859 the Wollaston Medal was given to him by the Geological Society. In 1862 he published a book full of curious research, 'On the Various Contrivances by which Orchids are Fertilized.' Of separate papers published by this naturalist, we find the following amongst the more important:—'On the Connection of Certain Volcanic Phenomena in South America;' 'On the Distribution of Erratic Boulders in South America;' 'On the Formation of Mould by the Earthworm;' and 'On the Geology of the Falkland Islands'—all published in the Transactions of the Geological Society. In the Journal of the Linnean Society three papers have appeared from the pen of Mr. Darwin, 'On the Dimorphous and Trimorphous States of Various Plants,' and one paper 'On the Movements and Habits of Climbing Plants.' This last one has since been published as a separate work. In 1864 the Royal Society awarded to Mr. Darwin the Copley medal, and he has also been elected a member of various foreign scientific bodies.

From the earliest work published by Mr. Darwin to his latest, there will be observed by every careful student a constant desire to search out the secret springs of nature. This is not shown, as is too often the case, by any imperfectly considered hypothesis;

but everywhere we discover the same painstaking experimental investigation, the same close and long-continued observation; and also everywhere we discover that high power of drawing with clearness and simplicity his deductions from his well-established facts, which distinguishes the true *Philosopher*.



CHARLES DICKENS.

CHARLES JOHN HOFFMAN DICKENS was born at Landport, near Portsmouth, on the 7th of February, 1812, and was baptized, as the register shows, on the 8th of May following. His father, the late Mr. Dickens, was a comedian, who had held in the earlier portion of his life a post in the Navy Pay Department, the duties of which office required his residence in different stations at Plymouth, Portsmouth, Sheerness, Chatham, etc. During the war with France, the father of our popular novelist became thus the witness of much stirring life, and was fond of describing the strange scenes and characters with which and whom he had become acquainted. Mr. Dickens from his birth, therefore, found himself enveloped in an atmosphere of mingled humour, jollity, and tragedy, which have, through the force of his genius,—the very product, probably, of these surroundings,—incorporated themselves with our popular literature.

At the close of the war Mr. Dickens, senior, retired from this branch of the public service, and received a pension. He subsequently took up his residence in London, and became a parliamentary reporter.

It has been remarked of his son Charles, “that acute, observant, genial, brimful of talent of the most versatile and available kind, enjoying life and loving his fellow-creatures, young Dickens was peculiarly fitted for the life of cities, as well as for achieving success in whatever path of life he might choose to select.” The study of the law was first selected for him, and he became a clerk in an attorney’s office; but, feeling that the life of a reporter for the daily press offered more scope for his literary tendencies, he

soon abandoned the law, and obtained an engagement as a reporter for the 'True Sun,' an ultra-liberal paper then struggling for existence. He passed from the 'True Sun' to the staff of reporters for the 'Morning Chronicle.' On this paper he soon obtained the reputation of a first-rate reporter, his reports being not only rapid but correct.

It was in the columns of the evening edition of the 'Morning Chronicle' that Dickens first appeared as an author. His 'Sketches of English Life and Character,' together with others which appeared in the 'Old Monthly Magazine,' were, in 1836, collected and published in two volumes, entitled 'Sketches by Boz.' With reference to this singular pseudonym, Mr. Dickens has told us, "that he had a little brother who resembled so much Moses in the 'Vicar of Wakefield' that he used to call him Moses; but that a younger girl, who could not then articulate plainly, was in the habit of calling him Bozie or Boz. This simple circumstance it was therefore which made him assume that name in the first article which he offered to the public, and that article having been approved of, he continued to employ it."

The 'Sketches by Boz,' having become popular, Messrs. Chapman and Hall, the publishers of Piccadilly, recognizing their fresh and humorous power, suggested to their author to commence the adventures of a party of cockney sportsmen, to be illustrated by the comic pencil of Seymour. In this way originated the inimitable 'Papers of the Pickwick Club,' which raised their author at once into his full blaze of popularity, and brought him before the public eye under his own name. Seymour's clever illustrations of the 'Pickwick Papers,' which in the commencement had conducted no little to the popularity of the publication, having been abruptly stopped through the lamentable suicide of the artist, the illustration of the work was continued by Mr. Hablot K. Browne, then, under the signature of 'Phiz,' just commencing his career. The success of the 'Pickwick Papers' may be regarded not only as an era in the life of its author, but in the history of modern English literature. It is very interesting to observe the immediate reponse to this remarkable book, not only amongst the public of readers but of critics; we will here give an extract from the 'Quarterly Review' of October, 1837:—

"The popularity of this writer," remarks the reviewer, "is one of the most remarkable literary phenomena of recent times, for it

has been fairly earned without resorting to any of the means by which most other writers have succeeded in attracting the attention of their contemporaries. He has flattered no popular prejudice, and profited by no passing folly; he has attempted no caricature sketches of the manners or conversation of the aristocracy; and there are very few political or personal allusions in his works. Moreover, his class of subjects are such as to expose him at the outset to the fatal objection of vulgarity; and, with the exception of occasional extracts in the newspapers, he received little or no assistance from the press. Yet, in less than six months from the appearance of the first number of the 'Pickwick Papers,' the whole reading public were talking about them; the names of Winkle, Wardle, Weller, Snodgrass, Dodson and Fogg had become familiar in our mouths as household words, and Mr. Dickens was the grand object of interest to the whole tribe of 'Leahunters,' male and female, of the Metropolis. Nay, *Pickwick chintzes* figured in linendrapers' windows, and *Weller corduroys* in breeches-makers' advertisements; *Boz cabs* might be seen rattling through the streets, and the portrait of the author of 'Pelham' or 'Crichton' was scraped down or pasted over, to make room for that of the new popular favourite in the omnibuses. This is only to be accounted for on the supposition that a fresh vein of humour had been opened; that a new and decidedly original genius had sprung up."

During the publication of 'Pickwick' Mr. Dickens had married the daughter of Mr. George Hogarth, the well-known writer upon music. The great success of 'Pickwick' turned the eager regards of the public upon the young author, and he published, in twenty monthly parts, the story of 'Nicholas Nickleby,' the aim of this second work being not so much amusement as a moral purpose, that of exposing the cruelties practised in cheap Yorkshire schools. In 'Nicholas Nickleby' Dickens commenced that crusade against public and private abuses and oppressions which has formed so marked a feature in the later works from his pen.

The 'Edinburgh Review' of October, 1838, observes, in reference to 'Nicholas Nickleby,' and to 'Oliver Twist,' its immediate successor:—

"There is no misanthropy in his satire, and no coarseness in his descriptions,—a merit enhanced by the nature of his subjects. The reader is led through scenes of poverty and crime, and all

the characters are made to discourse in the appropriate language of their respective classes ; and yet we recollect no passage which ought to cause pain to the most sensitive delicacy if read aloud in female society. One of the qualities we the most admire in him is his comprehensive spirit of humanity. The tendency of his writings is to make us practically benevolent, to excite our sympathy in behalf of the aggrieved and suffering in all classes, and especially in those most removed from observation. He especially directs our attention to the helpless victims of untoward circumstances or a vicious system, to the imprisoned debtor, the orphan pauper, the parish apprentice, the juvenile criminal, and to the tyranny which, under the combination of parental neglect with the mercenary brutality of a pedagogue, may be exercised with impunity in schools. His humanity is plain, practical, and manly."

'*Oliver Twist*' was originally published in '*Bentley's Miscellany*,' of which Mr. Dickens was for some time the successful editor. It has been observed that, "in many respects Charles Dickens's works bear a resemblance to the fictions of the modern French authors, and in some degree partake of their strong, if not exaggerated colouring ; but they excel them far, by their earnest purpose, by their deep pathos and tenderness, and by their humane love and pity, which are the essentials of true religion." From the publication of this work Mr. Dickens has taken rank amongst the reformers of the age. In various ways—not only by his pen, but by speeches at public meetings, and through other channels making use of his influence with the public—he has sought to forward social progress. He has, for instance, been a strong opponent to capital punishment.

In 1840 Mr. Dickens endeavoured to carry out a favourite idea, which he had long cherished, that of supplying the public with the best possible writing at the lowest possible price. This new undertaking, '*Master Humphrey's Clock*,' was a serial work in weekly, as well as monthly parts, and contained a collection of tales joined by a connecting narrative. The first of these tales, '*The Old Curiosity Shop*,' in the pathetic and poetical character of *Little Nell*, revealed a new phase of the novelist's genius. '*Barnaby Rudge*,' the second of the tales, is historical in its character, and full of vigorous descriptions of the Lord George Gordon riots in 1780. Nevertheless, it may be termed rather an

effort than a success, and has remained one of the author's least popular works. About the same period he published the 'Memoirs of Joseph Grimaldi,' the celebrated clown, to which he succeeded in giving an interest scarcely less romantic, pathetic, and humorous, than that which has characterized its author's works of fiction.

Mr. Dickens next visited America, and upon his return, in 1842, published, as the result of his American experience, 'American Notes for General Circulation,' a work which gave considerable umbrage to our American cousins. Neither were his delineations of certain scenes and incidents of American life, given forth in his succeeding work of fiction, 'Martin Chuzzlewit,' more flattering to their *amour-propre*. For variety of character, tenderness of sentiment, and freshness and originality of humour, this work may probably maintain a more permanent hold upon public estimation than almost any of Mr. Dickens's writings, combining, as it does, a constructive skill not so observable in his earlier writings, with the freshness and originality which were their peculiar characteristics.

In 1844 Mr. Dickens visited Italy, where he remained a year, with his family. Upon his return was commenced one of the most arduous of our author's undertakings, the establishment of a new liberal morning newspaper, the 'Daily News.' Mr. Dickens was assisted by a staff of distinguished literary men. Its first number was issued on January 21, 1846, and contained the first of his 'Pictures of Italy,' which were afterwards collected into a volume. The incessant labour of so great an undertaking was, however, ill-suited to the nature and engagements of a purely literary man, and, having established the paper, Mr. Dickens soon withdrew from its editorship, and re-entered those fields of literature more peculiarly his own. In 1847-48 he gave to the world 'Dealings with Dombey and Son,' and in 1850 the 'Personal History of David Copperfield the Younger,' in which, it has been stated, "many of his own youthful experiences and early struggles are introduced." These two works have enjoyed, perhaps, a greater popularity than those by which they were immediately succeeded, viz. 'Bleak House' and 'Little Dorrit,' which appeared in 1853 and 1856.

In 1850, amidst all this wonderful literary activity, Charles Dickens found both energy and leisure to undertake the manage-

ment of a literary journal, 'Household Words,' carrying out his favourite scheme of giving to the public "the best possible writing at the cheapest rate," and this journal speedily became one of the most successful periodicals of the day. In it appeared, from his pen, 'Hard Times' and 'A Child's History of England,' both since published in a collected form.

In 1843 Mr. Dickens commenced an annual series of Christmas stories, in which the fantastic imagery of the fairy-tale and ghost-story is ingeniously interwoven with the hard, common, yet pathetic incidents of every-day human life. These tales are,—'The Christmas Carol,' 1843; 'The Chimes,' 1844; 'The Cricket on the Hearth,' 1845; 'The Battle of Life,' 1846; 'The Haunted Man,' 1847; and 'The Boy at Mugby,' 1866.

Various of these works have been read aloud by their author to large audiences, not alone in the Metropolis, but in the larger provincial towns. The great dramatic power possessed by Mr. Dickens, and thus exhibited in the reading of his own works, has enabled him to benefit many public institutions and private individuals, to whose necessities the proceeds of these novel entertainments have been devoted. Mr. Dickens possesses remarkable talents as an actor and public lecturer, and these, as well as his gifts of literary power, have exhibited themselves in him since childhood. His first appearance before the public as an amateur actor was in 1846 at the St. James's Theatre, in association with other gentlemen, when 'The Elder Brother' was acted for the benefit of Miss Kate Kelly.

In 1857, a separation having taken place between himself and his publishers, Messrs. Bradbury and Evans, 'Household Words,' their joint property, was discontinued, and a similar publication was commenced by Mr. Dickens and his first publishers, Messrs. Chapman and Hall, under the title of 'All the Year Round,' which he still (1867) continues to edit.

In this new publication Mr. Dickens gave to the world a novel, entitled 'A Tale of Two Cities,' in which he returned with renewed vigour to the field of historical romance entered by him in 'Barnaby Rudge.' This tale was followed, in the same publication, by 'The Uncommercial Traveller' and 'Great Expectations,' novels since published separately.

In May, 1864, a new serial story, entitled 'Our Mutual Friend,' was commenced by Mr. Dickens, which, for care of construction,

romantic interest, and snatches of weird humour and wild beauty, may claim to take place as a romance by the side of any of the most popular works of its most popular author. It was completed in November, 1865. In the preface to 'Our Mutual Friend,' the author thus quaintly, and yet with deep feeling, refers to his presence in the midst of the terrible accident which occurred to a "tidal train" at Staplehurst, where he was one of the few passengers who escaped, as by a miracle, uninjured, and exerted himself with noble energy to aid and comfort his less fortunate companions:—

"On Friday, the ninth of June, in the present year (1865), Mr. and Mrs. Boffin (in their manuscript dress of receiving Mr. and Mrs. Lamble at breakfast) were on the South-Eastern Railway with me in a terribly destructive accident. When I had done what I could to help others, I climbed back into my carriage—nearly turned over a viaduct, and caught aslant upon the turn—to extricate the worthy couple. They were much soiled, but otherwise unhurt. The same happy result attended Miss Bella Wilfer on her wedding-day, and Mr. Riderhood inspecting Bradley Headstone's red neckerchief as he lay asleep. I remember with devout thankfulness that I can never be much nearer parting company with my readers for ever than I was then, until there shall be written against my life the two words with which I have this day closed this book,—THE END."

At present (November, 1867) Mr. Dickens has gone upon a second visit to the United States, for the purpose of giving 'Readings' from his works. He is also busy in preparing a serial tale, which is to appear as a *feuilleton* in one of the American newspapers. Before leaving London he was entertained at a public dinner at the Freemasons' Tavern, presided over by Lord Lytton.



Photo of a man standing in a studio, next to a fireplace.

THOMAS FAED, ESQ., A.R.A.

AMONGST the figure painters of the present day, there is one before whose works everybody stands to gaze and admire, be he or she old or young, gentle or simple. This favoured and favourite artist, who has a charm for all eyes, and whose compositions go straight to every heart, is Mr. Faed. Who is there who is not familiar with the humour, grave or gay, with which his works abound? and what critical judgment does not acknowledge, with sincerity, that in his hands there is always an elevating tendency, that the jocular element is never tainted with vulgarity, and that the homely and domestic is not without its touch of the sublime?

Something more than taste, however, is necessary to the success of a leading painter; and Mr. Faed's career is no exception to the rule, that only by long and arduous study is eminence in the arts to be achieved. He was born at Burley Mill, in the Stewartry of Kirkeudbright, in the year 1826. His father, who was an engineer and millwright, died in the year 1844, and the subject of our memoir, thereupon, or shortly before, betook himself, at the suggestion of his elder brother, to the Scottish capital, where he ardently pursued the bent of his genius in the School of Design. Whilst there, he came under the notice and tuition of the celebrated Sir W. Allan, and his skill and industry were rewarded by numerous prizes in the annual competitions with his fellow pupils and scholars. It is related that his earliest exhibited work was a water-colour drawing from the "Old English Baron;" but he soon abandoned this branch of art, and took to the higher domain of oil-painting, studying figures with unremitting assiduity.

In the year 1849, he was proficient enough to obtain the rank

of Associate of the Royal Scottish Academy. Among the works which he exhibited in Scotland, that which is best recollected is a group representing "Sir Walter Scott and his Friends at Abbotsford."

While still resident in Edinburgh, we find him, in the year 1850, exhibiting at the Royal Academy, with three works, "Cottage Piety," "Auld Robin Gray," and "The First Step;" but in the next or following year, as he rose rapidly in public estimation, and found his powers on the increase, he betook himself to London, and commenced a series of pictures which have been gradually but uninterruptedly successful. It is his good fortune to be the master of a class of subjects which are of all others most popular, and which, when multiplied by engraving, command an entrance to the hearths and homes of the million. Accordingly, not a work of social life or domestic incident makes its appearance, which is not at once submitted to the engraver, and so finds its way to circles which are perhaps closed to every other description of art production.

In 1852, a picture representing the "Visit of a Patron and Patroness to a Village School" excited some attention. In 1853 he painted "Evangeline," of all his small works perhaps the most successful. It has been twice engraved by his brother James, and four times in America. His "Sophia and Olivia," also exhibited in 1853, showed a good deal of experimental treatment in the lighting of the figures, but still was an advance; and a similar sparkling effect was attained in a subject called "Peggy," from Ramsay's 'Gentle Shepherd;' and also in "Morning Reapers going out;" these were both exhibited in 1854. In the following year, a still further progress in public esteem was achieved by the "Mitherless Bairn," where a simple tale is told in an obvious manner with much force and beauty. This has been engraved by Mr. Samuel Cousins, and is a great favourite; and it was this picture, perhaps, which first gave him an established position, and at once advanced him to the foremost ranks of the figure painters not members of the Academy. In 1856, the true scope and real extent of Mr. Faed's powers further revealed themselves in two capital productions. One of these was "Home and the Homeless," in which the contrast is presented between the interior of a thriving labourer's cottage, where the good man is coaxing his child with an apple, and the wan and ab-

ject figure of a beggar-woman outside, whose hungry orphan child creeps up to the table. This picture is a companion to the "Mitherless Bairn," and it has been engraved by Henry Cousins. The other was "Highland Mary;" this ranks as one of Mr. Faed's most carefully-coloured and best finished works; it has been engraved by W. H. Simmons, and is universally known and admired.

Next year came the scene, well known from Mr. T. L. Atkinson's engraving, the "First Break in the Family." The mail coach in the distance is bearing off the boy, the pride of the cottage family, from the old and young folks, who watch its departure with varied emotions.

In 1858 Mr. Faed exhibited a picture, in which the humour of the artist came out more powerfully than hitherto—"A Listener ne'er hears gude o' himsel'." The listener, it will be remembered, had written to his sweetheart a letter, "saft, conthie, and slee," and was now on the point of paying her a visit with the "brawest cheap shawl" he could find. He creeps to the doorway, and the scene which meets his gaze is best described in the words of the poet Ballantine, who wrote them on first beholding the picture:—

"There sat my braw Joe wi' young Colin Dalzell,
An' his glaiket sister, wha tongue's like a bell,
A gigglin, an' ettling my letter to spell—
A listener ne'er hears gude o' himsel'."

In this picture Mr. Faed displayed a more vigorous execution than before, stronger colour, and above all, a keen dramatic zest, which infallibly asserted his artistic strength. This work has also been engraved by Mr. Atkinson. The "Ayrshire Lassie" (since engraved by C. Tomkins) appeared also in the same year,—a fainter revival of the "Highland Mary" of two years before.

Mr. Faed's picture in 1859 was "Sunday in the Backwoods," representing the devotions of Scotch emigrants in Canada under the roof of a grander kirk than any they had left behind them—the stems and vaults of the overarching forest. This work has been engraved by Mr. Simmons. The painter was more at home in the genial picture, entitled "My ain Fireside," since engraved by Mr. J. Stevenson.

In 1860, the only exhibited work was a rare bit of Scottish

humour, "His only Pair," suggested by some lines from Burns's 'Cotter's Saturday Night,' a picture which has been engraved by Mr. Simmons. This was followed on the next occasion by Mr. Faed's hitherto greatest work, "From Dawn to Sunset." He had now (1861) become an Associate of the Royal Academy, and his first exhibition was worthy of his new honours.

The motto that accompanied this picture was, "So runs the round of life from hour to hour;" and the scene, it will be remembered, displays infancy, youth, middle age, and decrepitude, in the circle of one family, reminding us of the Shakespearian cycle of the Seven Ages of Man. Clearly as the ideas were conceived, the execution was of the highest order that had yet been seen, the boldness not frittered away by over-finish and prettiness, and the light not too much broken up and scattered. It was universally felt to be one of the most successful specimens of figure painting that has appeared of late years. A masterly engraving of this work, by Samuel Cousins, R.A., has appeared in the exhibition of the Royal Academy.

In the following year (1862), there were two single figures, "Kate Nickleby," and "A Flower from Paddy's Land," showing the painter in a new light, as a student of flowers of the most delicately intricate forms and dazzling colour. "New Wars to an Old Soldier" was a more elaborate group. A handsome country girl was seen leaning her elbow on the table, reading the news to her grandfather, on whose knee a child was perched, dressing up the old man's thumb in likeness of a red-coated soldier. The face and head of the old man were a marvellous example of exact and careful study. The details of furniture also were very curious and cleverly painted. In 1863 his pictures were, "Train up a Child," etc., the "Irish Orange Girl," and the "Silken Gown." These were followed in 1864 by a group of six figures, "Baith Faither and Mither," and "Our Washing-Day," with a single figure.

Mr. Faed was advanced to the full honours of the Royal Academy in 1864. In 1865 he exhibited his most important picture, "The Last of the Clan;" in 1866, "Pot-luck" and "E'er Care Begins;" the last-mentioned being his diploma picture—a work which all members of the Academy must present to the body on being elected into their number. His subject in 1867 was "The Poor the Poor Man's Friend."

THOMAS FAED.

Mr. Faed can scarcely be said to have reached the height of his powers, and the future before him promises to be a brilliant one.

It should be added, that his elder brother, Mr. John Faed, to whom allusion has been made above, having long been distinguished as a draughtsman and painter in the Northern Metropolis, now lives in London, and is a constant exhibitor at the Royal Academy.



Portrait of Rev. J. W. ...

MICHAEL FARADAY, D.C.L., F.R.S.

MR. DAVIES GILBERT, who was the early friend and patron of Sir Humphry Davy, and subsequently President of the Royal Society, is said to have remarked that "the greatest discovery Davy ever made was the discovery of Michael Faraday." Certainly no circumstance reflects more honour on the name of the discoverer of the metallic bases of the alkalies and earths, than the disinterested patronage which he bestowed on the bookseller's apprentice when he was struggling to enter into the service of Science.

Michael Faraday was the son of a smith; he was born at Newington, on the 22nd September, 1791. The limited means of his parents did not allow of their extending the education of the young Michael, beyond that afforded by a common day-school in the neighbourhood. Here he was instructed in reading, writing, and arithmetic; and he picked up, from such books as fell in his way, so much information of a general character, as deeply interested him, and induced a fondness for reading, at the same time as it quickened those habits of careful observation which appear to have been of natural growth in this young philosopher. When thirteen years of age, Michael Faraday was apprenticed to Mr. Riebau, of Blandford Street, a bookseller and binder. The desire of the boy to be amongst books appears to have led to this arrangement; and some scientific treatises falling into his hands, kindled in him that spirit of scientific inquiry, which has led him onward to those brilliant results, which add lustre to the history of British Science.

We are informed that thus early, in the intervals of business, which were few, he made an electrifying machine with a glass phial, and that subsequently he succeeded in constructing one with

a proper cylinder. With this instrument he made himself familiar with all the phenomena of this Force then known, and discovered the extent of the field of inquiry opening before him. Mr. Dance, who frequented Mr. Riebau's shop, was a Member of the Royal Institution, and being interested in the intelligence and industry of the apprentice, he took him to hear some of Davy's lectures. But this important event in the life of the philosopher is best described in his own words, taken from a letter to Dr. Paris, written in 1829 :—

“When I was a bookseller's apprentice I was very fond of experiment, and very averse to trade. It happened that a gentleman, a Member of the Royal Institution, took me to hear some of Sir H. Davy's last lectures in Albemarle Street. I took notes, and afterwards wrote them out more fairly in a quarto volume.

“My desire to escape from trade, which I thought vicious and selfish, and to enter into the service of Science, which I imagined made its pursuers amiable and liberal, induced me at last to take the bold and simple step of writing to Sir Humphry Davy, expressing my wishes, and a hope that, if an opportunity came in his way, he would favour my views; at the same time I sent the notes I had taken at his lectures.

“The answer, which makes all the point of my communication, I send you in the original,* requesting you to take great care of it, and to let me have it back, for you may imagine how much I value it.

“You will observe that this took place at the end of the year 1812, and early in 1813 he requested to see me, and told me of the situation of Assistant in the Laboratory of the Royal Institution then just vacant. At the same time that he thus gratified my desires as to scientific employment, he still advised me not to give up the prospects I had before me, telling me that Science was a harsh mistress, and in a pecuniary point of view but poorly rewarding those who devoted themselves to her service. He smiled at my notion of the superior moral feelings of philosophic men, and said he would leave me to the experience of a few years to set me right on that matter.

“Finally, through his good efforts I went to the Royal Institution early in March of 1813, as assistant in the laboratory; and in October

* “To Mr. Faraday. December 24th, 1812.—Sir, I am far from displeased with the proof you have given me of your confidence, and which displays great zeal, power of memory, and attention. I am obliged to go out of town, and shall not be settled in town till the end of January; I will then see you at any time you wish. It would gratify me to be of any service to you. I wish it may be in my power. I am, Sir, your obedient humble Servant, H. DAVY.”

of the same year went with him abroad as his assistant in experiments and in writing. I returned with him in April, 1815, resumed my station in the Royal Institution, and have, as you know, ever since remained there."

The duties of an assistant in a laboratory where Davy, Wollaston, and others were busy in original researches, or in examining the discoveries made by Continental and British chemists, at a time when science progressed rapidly, left Faraday but little time for any inquiries of his own. This was, however, the period of his apprenticeship as an experimental philosopher, and zealously did he cultivate those divisions of knowledge which have aided him in the maturity of his fame.

The progress of an experimentalist is to be marked only by his discoveries. In the quiet of the laboratory there would be but few incidents which would add colour to the portrait of the true philosopher.

In 1820 Mr. Faraday published his discovery of that interesting substance the chloride of carbon, and in that year Ersted announced his great discovery of the relation of electricity and magnetism. In the October of the same year Faraday commenced his investigations on this subject, with which his name must be forever connected; and in a paper dated September 11, 1821, he published his discovery of "New Electro-Magnetic Motions," and added thereto "A Theory of Magnetism," in the 'Quarterly Journal of Science.' In 1823 the condensation of chlorine into a liquid was first effected by our young chemist, and an account of his experiments published in the 'Philosophical Transactions,' with a note by Davy, "On the Condensation of Muriatic Acid Gas into the liquid form." In this year the English chemist was elected Corresponding Member of the Academy of Sciences of Paris.

We have been informed that the only feeling of anything approaching to jealousy shown by Davy towards Faraday, was exhibited in connection with this discovery of the condensation of the gases, and sundry papers by Davy show how deeply he was interested in the problem which had been solved by Faraday.

Davy is said to have discouraged the idea of recommending Faraday for election into the Royal Society, and certain it is, that he was elected a Fellow on the 8th January, 1824, mainly through the instrumentality of the late Richard Phillips, the chemist, who

was, to the day of his death, regarded by Faraday as his especial friend. In 1827 appeared the celebrated 'Chemical Manipulation;' a work which amply proved the versatility of the author's chemical knowledge, for it showed that there was no branch of chemistry then cultivated with which he was not practically familiar. The desirability of producing a very perfect glass for optical purposes engaged Mr. Faraday's attention for a considerable period, and we find him appointed by the Royal Society to deliver the Bakerian Lecture in 1829—the subject of it being "On the Manufacture of Glass for Optical Purposes." A very elaborate inquiry was also conducted by him into the composition of steel, and the effects of alloying it with other metals.

In 1831 began the series of Experimental Researches in Electricity, which have been published from time to time in the Transactions of the Royal Society; and the fourteen series which had then appeared were published in 1839 in a separate volume, which has been followed by two others, respectively published in 1844 and 1855.

Those Researches in electricity are beyond all doubt the choicest series of examples of pure and well-regulative induction to be found in this or in any other language.

The high character of those Researches led the University of Oxford in 1832 to confer on their author the honorary degree of Doctor of Civil Law. In 1833 Mr. Fuller founded the Chair of Chemistry in the Royal Institution, and at his express desire Dr. Faraday was nominated the first Fullerian Professor. In 1835 Lord Melbourne's government recognized the importance of his scientific discoveries by making Dr. Faraday the recipient of a pension of £300 per annum, and in 1858 her Majesty granted him a residence at Hampton Court.

With unwearying industry the subject of this brief memoir pursued his investigations; and in addition to the lectures regularly given by him in the Royal Institution, commencing in 1827, he, from 1829 to 1842, as regularly lectured on Chemistry to the Cadets at the Royal Military Academy, at Woolwich.

Dr. Faraday was one of the eight Foreign Associates of the Imperial Academy of Sciences at Paris; a Commander of the Legion of Honour; a Knight of the Prussian Order of Merit; and member of numerous Scientific Bodies on the Continents of Europe and America.

These honours, won by the industry and the zealous truthfulness with which his scientific investigations have been carried on, mark the appreciation of the English experimentalist by foreigners. Of him a Frenchman writes: "Mr. Faraday must be regarded as a penetrating and patient investigator, and as a profound and circumspect philosopher, who knows how to subordinate his most cherished ideas to the control of discussion and experiment. An hypothesis is to him only the stone on which he supports himself in rising toward the positive result."

No one has done so much as Dr. Faraday has done towards proving the relation of electricity to all forms of matter, and showing the action of matter in modifying the condition which this force assumes. The names of Ørsted, Ampère, and Faraday are for ever associated with electrical science as its high-priests. To the last especially is due the discovery of the obedience of matter to the influence of magnetic and dia-magnetic powers, and hence the conclusion, that all the forms assumed by the material elements of nature are due to those subtile influences which have their origin in the source of light and heat—the sun.

Dr. Faraday's mind, peculiarly gifted and educated in a school of its own, was remarkably inductive. Step by step, and every step most cautiously taken and carefully secured, he advanced towards the truth. By this power, patiently exerted, he extended the boundaries of human knowledge, and rendered his race greatly his debtor. Beyond the memoirs which we have named, several others might have been quoted, as showing the extensive domain over which his inquiries ranged. Indeed, he scarcely left a branch of chemical or physical science untouched; and whenever Faraday took up an inquiry, he let light in upon its hidden truths.

As a lecturer on science, Dr. Faraday was without his equal. At the table in the theatre of the Royal Institution, with his beautifully devised apparatus around him, he was perfectly at home and at ease. The first words which fell from his lips conveyed to all an impression of thorough earnestness, an intense desire to know, and to impart to others his knowledge of,—the truth. You felt that you were in the presence of a guide of the highest order, with whom you might go forward without fear of being led into error. Nothing but the truth could fall from his lips. Every truth would be made as clear as it was possible for a man to make it within the limits of the hour prescribed for those discourses, and with the limited resources of the lecture-table.

Dr. Faraday's language was always simple ; there was no ornament, and the only poetry in which he ever indulged was the earnest expression given to some of the great truths of which he was the discoverer. He sought to reach the mind of every hearer through more senses than one. He never *told* his listeners of an experiment, he always *showed* it them, however simple and well-known it might have been.

“ If,” Dr. Faraday once said to a young lecturer, “ I said to my audience, ‘ this stone will fall to the ground if I open my hand,’ I should open my hand and let it fall. Take nothing for granted as known ; inform the eye at the same time as you address the ear.” This was the great secret of Faraday's success. Every one left the theatre satisfied that he had acquired knowledge, and more than this, that he had gained that knowledge without much labour.

After a long and earnest struggle with nature for the discovery of her truths, and after having placed himself in the high position of being enabled to show that nature, in answer to his inquiries, had revealed many of her secrets to him, Dr. Faraday's mental faculties became clouded, and he was at length compelled to retire from active duty. He did not, however, long survive his forced retirement, for on the 25th of August, 1867, his spirit calmly passed away, at his residence near Hampton Court.

The evening of the days of such a man must be a period of happiness, far beyond that which can be enjoyed by ordinary men. The consciousness that mankind has been advanced by the labours of his life might render even a well-constituted mind proud. But the spirit of our experimental philosopher was so carefully trained, and so beautifully controlled by the influences of a pure and simple piety, that, instead of pride in his powers or his works, he expressed only a prayer of thankfulness that he had been guided to good, and aided in the performance of his duty—the search after truth for its own exceeding great reward.



Photographed by Ernest Edwards 20 Baker Street W

JAMES ANTHONY FROUDE, M.A.

JAMES ANTHONY FROUDE was born at Dartington, in Devonshire, in 1818, his father, the late Venerable R. H. Froude (who died in 1859), being Rector of that parish and Archdeacon of Totnes. He was educated at Westminster, and afterwards at Oriel College, Oxford. He graduated in classical honours in Easter Term, 1840, and was afterwards elected to a Fellowship in Exeter College. He obtained the Chancellor's prize for an English Essay on Political Economy in 1842, and proceeded M.A. in 1843.

Mr. Froude took Deacon's orders in 1844, but having, shortly after leaving the University, entertained views which seemed to him inconsistent with his entering the ministry of the Church of England as a profession, he proceeded no further in that direction.

In 1847 and 1848 Mr. Froude published two works, entitled 'The Shadows of the Clouds' and 'The Nemesis of Faith;' the latter of which in particular soon became widely read, and drew down on the author the severe censure of his College and of the University; but as this publication has long since been called in, it does not need any further comment. Subsequently, Mr. Froude contributed articles during several years to the 'Westminster Review' and 'Fraser's Magazine,' chiefly on subjects connected with English history during the reigns of the Tudors.

In 1856 appeared the first and second volumes of the work by which Mr. Froude's rank as an historian will be permanently decided—his 'History of England from the Fall of Wolsey to the Death of Elizabeth.' Probably no historical work of modern times has attracted greater attention, or elicited from students and critics more decided comments of approval or disapproval.

It is only fair, however, to the historian, to wait till the completion of his work, before an oracular judgment is pronounced on its merits or defects. Dealing as it does with one of the most important and eventful periods of our history, pregnant with the most vital results, a period of religious revolution and political change, the most careful and impartial study is required to banish those prejudices of education and habit of thought from which none can be wholly free. Mr. Froude states that he himself came to the study of this period of our history with a strong bias in favour of the popular opinion of the characters of the leading actors in the drama; but that he rose from that study with many of these preconceived notions either considerably modified or diametrically changed. The early chapters of the work are occupied with a discussion of the vexed question of the condition of the English peasantry during the early period of the reigns of the Tudors, as compared with their position at the present time; and he subsequently draws a most vivid picture of the distress caused in the rural districts by the dissolution of the monasteries. For the truthfulness of the favourable view which Mr. Froude takes of the position of the labourer in the fifteenth century, and of the light in which he regards many of the events of King Henry VIII.'s reign, he depends to a considerable extent on his researches among the Statutes of the Realm, a source of information the trustworthiness of which is strongly impugned by some of his critics.

The third and fourth volumes of the work, published in 1858, bring down the history to the death of King Henry VIII., and we have thus a complete narrative of that eventful reign. No portion of Mr. Froude's history has given rise to greater controversy than the character which he draws of this monarch. While it is incorrect to state (as is implied by some of his critics) that he comes forward as the apologist for the arbitrary acts committed during this reign, he undoubtedly presents the character of the king in a different light from that in which we were accustomed to regard it; and Mr. Froude thus describes his own portraiture:—
 “As it would be affectation to seem to be unconscious that the character of the king as presented in these volumes is something different from that which modern tradition has ascribed to him, so for my own sake I desire to say that I have not advanced any novel paradox or conjectures of my own. The history of the reign of Henry VIII. is a palimpsest in which the original writing can

still be read, and I have endeavoured only to reinstate the judgment upon his motives and his actions which was entertained by all moderate Englishmen in his own and the succeeding generation, which was displaced only by the calumnies of Catholics and anti-nomian fanatics when the true records were out of sight, and when, in the establishment of a new order of things, the hesitating movements, the inconsistencies and difficulties inevitable in a period of transition, could no longer be understood without an effort." An exceedingly bitter attack on the accuracy of Mr. Froude's delineation of the character of Henry in the 'Edinburgh Review' for July, 1858, produced the unusual result of a personal reply in the author's own name in 'Fraser's Magazine' for the following September; and a comparison of these two articles will furnish a good illustration of the two different points of view from which this reign may be regarded. The comments of a reviewer in 'Fraser's Magazine' on Mr. Froude's history of the reign of Henry VIII., may sum up the general opinion on its merits:—
 "Mr. Froude has produced a most instructive, vigorous, and original narrative of one of the most momentous periods in English annals; a narrative that, whatever may betide his theory, will always be of high authority for its facts."

The fifth and sixth volumes of Mr. Froude's History, which appeared in 1860, included the reigns of Edward VI. and Mary. Having in his earlier volumes given the records of the stirring events which accompanied the introduction of Protestantism into England, he now details the causes of the reaction towards Roman Catholicism under Queen Mary. But the greatest personal interest of these volumes centres round the vivid picture which he draws of the character of the Queen; her short and unhappy reign closing in heartbroken despair, religious fanaticism embittering still more her unloving and unloveable nature.

In 1863 were published what would naturally form the seventh and eighth volumes of the History; but which Mr. Froude has preferred to call the first and second volumes of a 'History of the Reign of Queen Elizabeth'; bringing down the narrative to the rupture with Spain which ended in the attempted invasion of the Armada. In his account of this reign, the historian has been materially assisted by his researches amongst the mass of MSS. relating to the proposed marriage between the Queen and King Philip of Spain, and the subsequent conflict, stored away in the Castle

of Simancas in Spain, and by the private papers of Lord Burleigh, preserved by the Marquis of Salisbury at Hatfield. In these volumes he presents to the reader his views of the religious policy of Elizabeth at home and abroad, of the proposed marriage with the King of Spain, and the pretensions of some of her own subjects, of the difficulties in the government of Ireland, of the story of Mary Queen of Scots down to the murder of Darnley, and of the private Court-life of the Queen.

The ninth and tenth volumes of Mr. Froude's History, bringing his narrative down to the year 1573, appeared towards the close of 1866; and he is still engaged on the latter portion of the reign of Queen Elizabeth, an occupation which will probably employ him for several years to come.

It is understood that Mr. Froude has been for some years the working editor of 'Fraser's Magazine.'

Mr. Froude has been twice married; first, in 1849, to Charlotte Maria, daughter of the late Pascoe Grenfell, Esq.; and secondly, in 1861, to Henrietta, daughter of the late John Ashley Warre, Esq., M.P.



Portrait of [Name] [Address] [City] [State] [Year]

MARK LEMON.

THIS gentleman, who has been for many years well known to the public as a writer of most pleasant dramas, charming novelettes, mirthful farces, and graceful lyrics, but whose silently-exercised influence as the director of 'Punch' is a still more noteworthy feature in his literary history, was born in the neighbourhood of Oxford Street, London, on the 30th of November, 1809, and part of the Oxford Street Crystal Palace, it is said, stands upon the site of his birthplace. He was educated at Cheam School, Surrey, where the Rev. James Wilding was head master, and the learned Charles Butler teacher of mathematics.

His earliest literary efforts were in the lighter drama, and he devoted himself to the rapid construction of a series of pieces, most of which were very successful at the time of their production, and many of which are stock plays with theatrical managers at the present day. Several of our best actors, extant or gone, it is said, have owed no small portion of their fame to the capital characters created for them by Mr. Lemon, and more than one theatre has been saved from disaster by the aid of his ready pen. He is the author of about sixty plays of various descriptions, principally farces and melodramas,—“Hearts are Trumps,” “What will the World Say?” “The School for Tigers,” “The Ladies' Club,” “Grandfather Whitehead,” “Camp at Chobham,” “Domestic Economy.” Many of the remaining fifty-six need not be mentioned to the present generation, and if the future does not hear of them, it will be the defect of the system of writing plays for particular actors.

During his earlier years, as a member of the Guild of Literature and Art, Mr. Lemon occasionally donned the sock and the

buskin. He was one of the knot of authors who in 1841 set on foot the periodical called 'Punch,' and from the first acted as joint editor; but on the secession of Mr. Henry Mayhew in about two years afterwards, Mr. Lemon succeeded to the chief post, which he has retained to the present time. To this work—which it was at first prognosticated could not live six weeks, but which is now in its twenty-sixth year—Mr. Lemon has devoted his best energies, his name is associated with its success, and the result is the best tribute to his talent and tact.

Besides the plays above mentioned, Mr. Lemon has written in 'Household Words,' 'Once a Week,' and 'London Society;' and his name is also familiar to the public from the pages of the 'Illuminated Magazine' and other serials, some of his contributions to which have since been collected and re-published under the modest title of 'Prose and Verse.' He has also published 'The Enchanted Doll,' a Christmas fairy-tale for children; 'Legends of Number Nip,' from the German; 'Tom Moody's Tales;' 'The Christmas Hamper;' and also four novels, each in three volumes, 'Wait for the End,' 'Loved at Last,' 'Falkner Lyle,' and 'Leyton Hall.' He has also edited a collection of jests (for Macmillan's 'Golden Treasury' Series); and has also written some hundred songs. At Christmas-time Mr. Lemon is a large contributor to the 'Illustrated London News,' where "M. L." may constantly be found appended to pleasant sketches and graceful verses. In speaking of Mr. Lemon's novel, 'Falkner Lyle,' which was published early in 1866, the 'Illustrated London News' says, "In the present instance Mr. Mark Lemon has addressed himself to his work with a keener artistic sense, and a larger artistic power, than in any of his earlier novels. . . . Society has for many years been indebted to him for much of its 'harmless gaiety.' His dramas were always welcome, and should be welcome now.

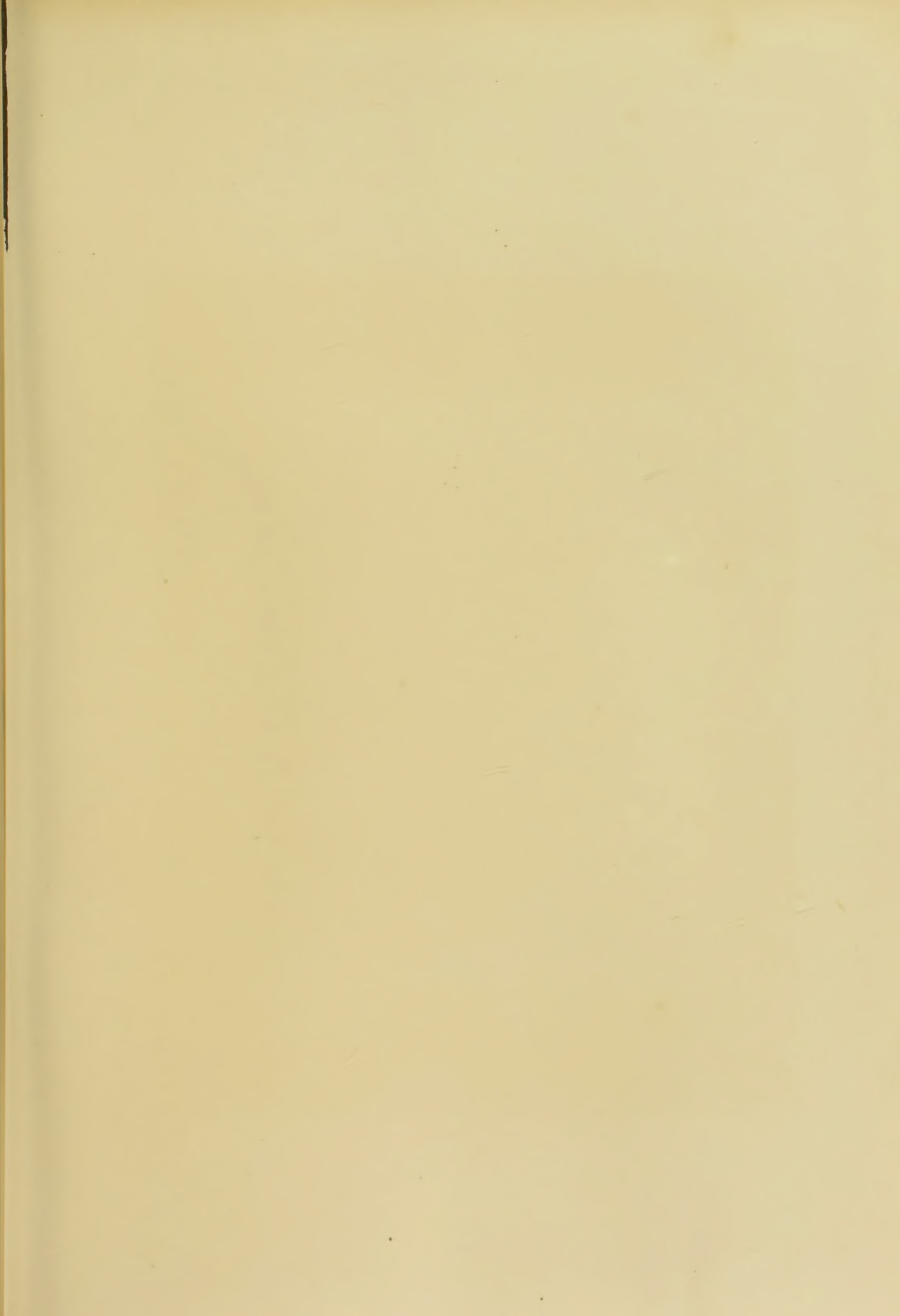
"But in other ways society has been, and is, Mr. Lemon's debtor, and notably for his eminent chariotteering skill in driving the car of 'Punch' round the political and social zodiac. He has displayed his singular versatility in addressing himself, in middle life, to a form of composition which many men take up in youth, but few much later, and he has shown himself a master in his new art. We say this emphatically, because each of his books manifests a proof of our assertion in its new thought and varied

treatment. 'Falkner Lyle' cannot fail to be a favourite; yet no one who studies it will be prepared to say that it will not be surpassed by its successor, for it is the work of a skilled artist, working in a rich field, and for such a worker there are no limits save those which are self-imposed."

The 'Era,' in a review of the same work, speaks of Mr. Lemon as "certainly one of the healthiest and soundest" writers of novels of the present day. He is "always (says the reviewer of that paper) natural, genial, painstaking in the delineation of character, gives a good plot, and crowns all by incident which never wants slurring over in reading aloud in the family circle. Exaggeration and caricature do not last in their effect; but Mr. Lemon has a strong touch of both the simplicity and solidity of Goldsmith. A like knowledge of the world, which pervades the poet's writings, is to be found in the pages of 'Falkner Lyle;' and a like appreciation, also, for whatever is good or right." Mr. Lemon has, we believe, in the press (Oct. 1867) a new novel, called 'Golden Fetters,' and also a Christmas Fairy Book.

In January, 1862, Mr. Mark Lemon appeared at the Gallery of Illustration in a course of lectures "About London." These lectures were exceedingly instructive and elaborate, not merely light and sketchy compositions intended to amuse and disappoint. The quantity of stern, sober matter contained in the lecture prevented anything in the shape of digression; but occasionally Mr. Lemon availed himself of the opportunity of throwing out an extempore witty suggestion, which produced a lively sensation, and stimulated attention amongst his audience. These lectures, which related to Old London City within and without the Walls, have been published by Messrs. Chapman and Hall in one volume, under the title of "Up and Down the London Streets."

It only remains to add that Mr. Lemon, who resides in the pretty village of Crawley, Sussex, on the old high-road to Brighton, is married, and has a numerous family of sons and daughters. One of his daughters is married to Mr. T. H. Martin, M.R.C.S., of Crawley; and another to Robert Romer, Esq., M.A., of Trinity Hall, Cambridge, who was Senior Wrangler in that University in 1863, and who, having lately resigned the Professorship of Mathematics in the Queen's College at Cork, is now at the Chancery bar.





Photograph by James F. Parks of Baker Street, W.

LORD LYTTTELTON.

GEORGE WILLIAM LYTTTELTON, fourth Lord Lyttelton, Baron of Frankley in the Peerage of Great Britain, Baron Westcote in the Peerage of Ireland, a Baronet, Lord Lieutenant of Worcestershire, and High Steward of Bewdley, M.A., F.R.S., LL.D., is the son of William Henry, third Lord Lyttelton, by Lady Sarah Spencer (eldest daughter of George John, second Earl Spencer), who, as the Dowager Lady Lyttelton, will be remembered as having held the important office of Governess to the Royal children. His Lordship was born March 31st, 1817. After having greatly distinguished himself at Eton, where he gained the Newcastle Scholarship, Lord Lyttelton proceeded to Trinity College, Cambridge, where he graduated in the highest classical honours, bearing off one of the Chancellor's Medals in 1838.

On the 25th of July, in the following year, Lord Lyttelton married Mary, the second daughter of the late Sir Stephen Glynne, Bart., of Hawarden, whose sister Catherine was married in the same year to the Right Hon. W. E. Gladstone, M.P. Such a connection between two men of habits of thought and acquirements so similar, could scarcely fail to be congenial on both sides, and we accordingly find it gracefully recorded in a few simple lines—

“Ex voto communi:
In Memoriam
Duplicum Nuptiarum.
VIII Kal. Aug. MDCCCXXXIX.”

prefixed to a volume of Poems, chiefly translations of classic English authors, into Greek and Latin, published jointly by Lord

Lyttelton and Mr. Gladstone in 1861. A touching interest is given to this record by the bereavement sustained by Lord Lyttelton in the loss of his wife on the 17th of August, 1857.

By this lady Lord Lyttelton has a large family. One of the daughters, the Honourable Lucy Caroline (married in 1864 to Lord Frederick Cavendish, second son of the Duke of Devonshire), was for some time Maid of Honour to the Queen; and for one of his sons, the Honourable Albert Victor, born in 1844, her Majesty herself stood sponsor.

In the year 1846, Lord Lyttelton accepted office as Under Secretary of State for the Colonies: this post he held for a short time only, though long enough, it would seem, to have acquired that interest in and practical acquaintance with colonial affairs, which has enabled him out of office to render such signal services to our colonial system in the various questions, especially that of Emigration, which have engaged the attention of Parliament and the public in reference to it since that time. Notwithstanding the inducements which his personal connections and experience might seem to have afforded, Lord Lyttelton has shown no desire to embarrass himself further with the cares and profits of political office.

A field of less obtrusive public usefulness for men of leisure and capacity has however been growing up amongst us of late years, to an extent which we are only beginning to appreciate, through the medium of the various voluntary associations which have arisen for the promotion of objects of social and benevolent science. Involving in those actively engaged in their direction all the qualities of administrative capacity, tact, and industry, which are in demand in the public administration of the affairs of the country, this sphere of labour may perhaps be regarded in some sort as its *social* and *moral* administration, and is indeed solely or mainly distinguishable from its prototype, by being unprovided with the attributes of pay and patronage. In this field of work, which, if it be indeed better to give than to receive, is not the least honourable of the two, Lord Lyttelton has found abundant and congenial occupation; and in it his services, more especially in the cause of Emigration and Education (which in fact lie at the root of all the most important of the social problems we are now seeking to solve), have been unsparingly rendered.

In the year 1847 an attempt was made, through the medium

of the Canterbury Association, of which Lord Lyttelton became Chairman, to found a settlement of Colonists in New Zealand, based avowedly on religious principles, as represented by the Church of England. This experiment proved highly successful; and the prosperity of the Settlement of Canterbury, with its harbour town of Lyttelton, named after its noble promoter, will, it is to be hoped, long bear witness to the value, for the purposes of Colonization, of a congenial moral and social organization.

In connection with Lord Lyttelton's labours in the cause of the Colonies, reference should not be overlooked to his speech in the House of Lords on the third reading of the Australian Colonies Government Bill in the year 1850,—containing, as it does, a wise and statesmanlike exposition of the principles which should regulate the consideration of the subject, both from the Liberal and Conservative points of view.

In the cause of education Lord Lyttelton's labours have been active and unremitting. Mindful of the obligations imposed upon us of not neglecting the work which lies at our hands, Lord Lyttelton's attention has been especially directed to the promotion of education in his own county, to the welfare of which, as its Lord-Lieutenant, and in that capacity the personal representative of the Sovereign, he has doubtless felt peculiar inducements to devote himself. By means of the Worcester Diocesan Training College, which he took an active part in founding, Lord Lyttelton has secured for his county the means of obtaining a supply of skilled teachers in its schools; and by his own example—for he has not disdained to fulfil himself the simple duties of a Sunday School teacher in his own parish.

As an active member of the Commission for inquiring into the constitution and practice of the great Public Schools of this country, as also of the Commission appointed for a similar investigation into the schools more generally frequented by the great mass of the middle classes, Lord Lyttelton's public services are well known.

In these inquiries, his sympathies with the institutions, the association with which assisted the moulding of his own mind, and in which some of, it may be not the least valued of its triumphs, were gained, have been leavened with that practical philosophical perception of the requirements of the present and future, which

is, after all, the true end of all education, and which has at all times characterized Lord Lyttelton's public and political utterances.

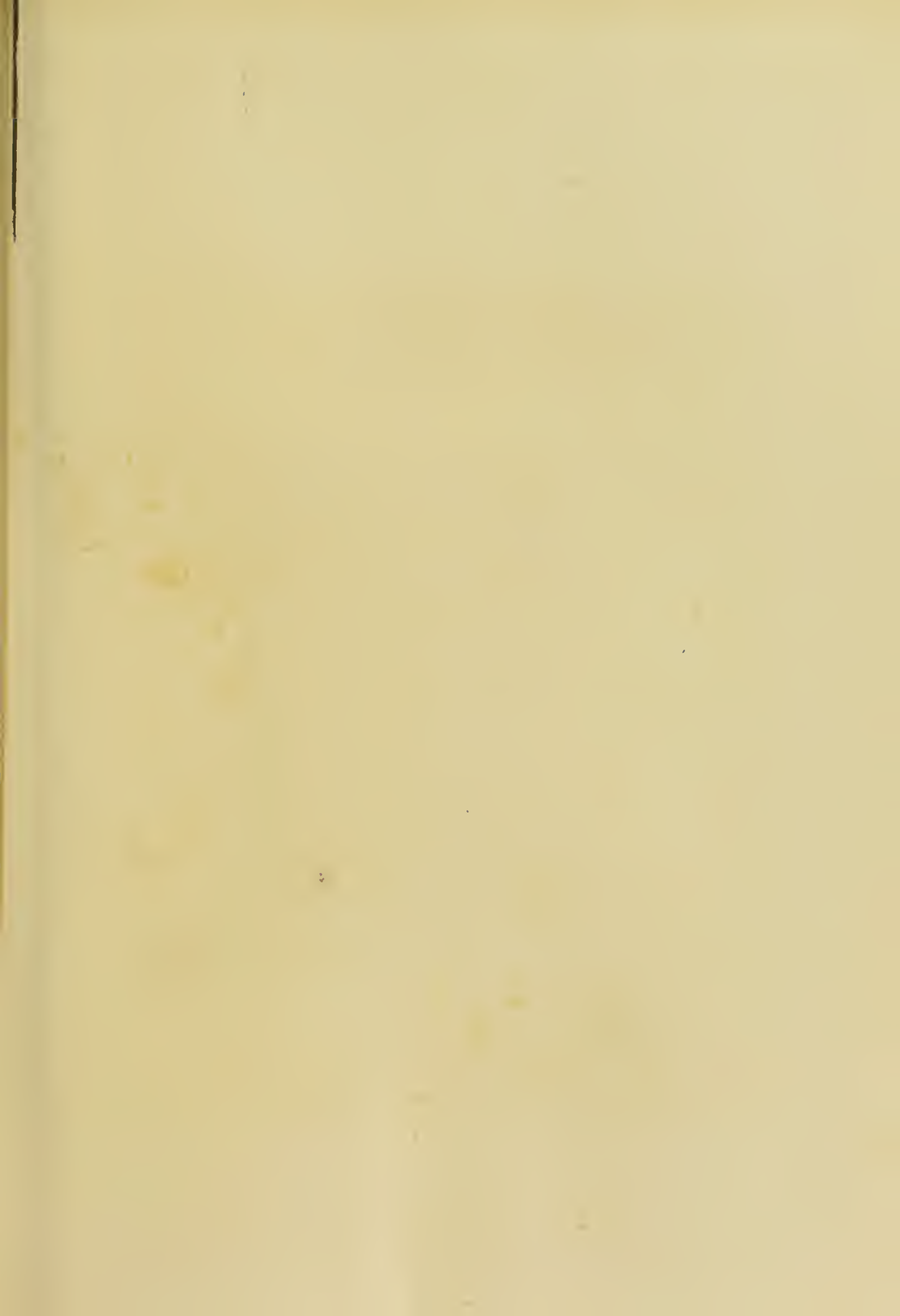
On the establishment of the Working Men's Club and Institute Union—a Society for promoting the moral, social, and intellectual development of the working-classes through the medium of associations of their own—Lord Lyttelton became one of its Vice-Presidents, and from his strong and active personal interest in it, more especially during the absence from England of its President, Lord Brougham, he may fairly be regarded as its Vice-President *par excellence*.

In all Lord Lyttelton's various labours, we find evidence of the strong conviction animating them, on his part, of the necessity for a moral and religious basis in all operations and organizations, for whatever purpose established,—a conviction which, if more generally entertained by the active promoters of intellectual progress, and what is termed civilization, might sometimes save them from disappointment at the too frequently insufficient results of their otherwise well-considered enterprises.

Lord Lyttelton is an earnest lover of the national Church, a steady supporter of its essential rights and privileges, and a strenuous advocate of the extension of its episcopate at home and abroad. His support of the Church is the more valuable, because associated with an unqualified recognition of the errors into which those of us must fall who are not careful to satisfy themselves that the spirit they reverence remains in the form in which they have been accustomed to look for it; and of the necessity to which all human institutions, whatever their origin, are subject, of gradual modification and reform.

Lord Lyttelton published in 1862 an elegant translation of Milton's 'Comus,' into Greek Iambic and Choral verse; and more recently, under the modest title of 'Ephemera,' a volume of essays upon subjects as little ephemeral as could well be conceived. We call to mind no work better calculated to afford to some future Macaulay an idea of the habits of mind and occupations of a Christian gentleman of rank, of the nineteenth century, than this unpretending little volume. Now, we have a letter of a landlord to his tenantry on some matter affecting their mutual interests, now a speech in Parliament on some question involving the interests of us all; here the improvement of an occasion by

an address to a domestic household, there, an essay on some important principle affecting the faith or the discipline of the Church at large; a lecture to a local club, or an Essay on Poetry or general reading,—but one and all relieved from any ephemeral character, which may have seemed to attach to the occasions in which they originated, by principles, belonging to all time, always earnestly sought to be deduced from them, and eloquently and pleasantly enforced.





Portrait of General [Name] at Baker Street

SIR RODERICK IMPEY MURCHISON, BART.,

K.C.B., D.C.L., LL.D., F.R.S., ETC.

DIRECTOR-GENERAL OF THE GEOLOGICAL SURVEY OF THE UNITED
KINGDOM.

To say that at long past seventy years of age health and intellect are vigorously retained, is saying much; but to say that at that advanced age, one of the latest scientific labours is brilliant as any in a long series of incessantly active life, is saying that which few indeed can lay claim to. Yet such may be—nay, must be—truthfully said of Roderick Impey Murchison. Famous as he everywhere is as the author and elaborator of the Silurian system,—that wonderful classification of the oldest, most unknown, and vastest of geological formations,—his last labours, in 1860–61, “On the Classification of the Mountain Rock-masses of the Highlands of Scotland,” go far to eclipse his former successes in grandness of intellectual grasp and simplicity of reduction. Whatever Sir Roderick might have attained to as a soldier,—for in early life he served in the Peninsula and elsewhere, from 1807 to 1816, under Wellesley and Moore,—he must ever be looked upon as a Commander-in-Chief amongst geologists. The same quickness of sight and command of combinations, the same careful and forethoughtful collecting of materials for a decisive blow, and the same decisive energy of attack when the means are ready, which are essential to the General dealing with troops, Sir Roderick exhibits in his intellectual marshalling of scientific facts, and his power of hurling them upon the decisive point. But so long, so voluminous, so excellent are his numerous works, that what would form important items in many a biography sink into secondary

positions, or can only receive the merest passing glance, in anything but a special memoir of his long and indefatigable career.

Sir Roderick is the eldest son of the late Kennett Murchison, Esq., of Tarradale, in the county of Ross. His mother, who was Barbara, the eldest sister of the late General Sir Alexander Mackenzie, Bart., of Fairbairn, N.B., lived to see her son achieving distinction in the field of geology.

A Highlander by birth, it must have been a gratification in the highest degree to bring the mature knowledge of his most experienced life to bear upon the grand, massive hills of his childhood, and there to gather his crowning laurels.

Murchison was born at Tarradale, an estate which he inherited, on February 19, 1792. He was first educated at Durham Grammar School, and afterwards at the Military College, Great Marlow. In 1807 he obtained an ensigncy in the 36th Regiment of Infantry, and served in the battles of Vimeira and Roldia, under Sir A. Wellesley, at Corunna, under Moore, and afterwards in Sicily, the Siege of Cadiz, etc. After the close of the great war, seeing no hope of active employment, he retired from military service with the rank of Captain of Dragoons (6th Regiment).

After some subsequent years, divided between foxhunting, which he pursued eagerly, and tours in the Alps, Italy, and various parts of Europe, he commenced his geological career with an observant paper, entitled 'A Geological Sketch of the North-Western Extremity of Sussex and the adjoining Parts of Hampshire and Surrey,' in which he ably made out and described the succession and physical structure of the Cretaceous and underlying rocks of the western portion of that very interesting district—the Weald of Sussex and Hampshire. In this year, too, he made a tour with his accomplished wife,—the only daughter of General Hugonin, of Nursted House, near Petersfield,—to the Isle of Wight, and along the south coast of England to the Land's End in Cornwall. The summer of 1826 was spent in exploring the coasts of Scarborough and Whitby, the Western Isles and North Highlands of Scotland, and in comparing Brora, in Sutherland, with the eastern moorlands of Yorkshire.

From 1825 to 1829 Sir Roderick was one of the Secretaries of the Geological Society, and in that period he contributed to its Transactions the following papers:—"On the Coalfield of Brora" (1827); "On the Isle of Arran" (1828); "On the Primary Rocks

and Oolites of the North of Scotland;" and "On the Bituminous Schists and Fossil Fish of Seefeld, in the Tyrol;" and "On the Tertiary and Secondary Rocks of the Alps," in the 'Philosophical Magazine;' the results of personal travels in the north of Italy, the Bassanese Alps (1828-30), and in Central France, and of a second survey of the Scottish Islands (1827-28). He also published, in conjunction with his friend, Sir C. Lyell, articles "On the Excavation of Valleys in Central France" and "On the Tertiary Beds of Aix" in the 'Edinburgh Philosophical Journal'; "On the Lacustrine Deposits of Cantal," in the 'Annales des Sciences Naturelles.' In 1826 Sir Roderick had been elected a Fellow of the Royal Society, and in 1831 and 1832 he filled the office of President of the Geological Society. In this period we have further geological essays (in 1830):—'Fossil Fox of Ænningen;' 'Structure of Austrian Alps;' 'Tertiaries of Lower Styria;' and 'Austria and Bavaria;' 'Structure of Eastern Alps' (illustrated from a drawing by Lady Murchison); 'Secondary Formations of Germany;' 'Austrian and Bavarian Alps;' 'Vertical Stems of Plants in Oolites of the Cleveland Hills.' Besides these, were two able Presidential addresses, and a 'Guide to the Geology of Cheltenham.'

This brings us to 1831, the memorable year in which, by the advice of his friend and instructor, the late Dean Buckland, he commenced those strenuous labours in Shropshire and Herefordshire, which, next extended to Wales, and subsequently applied to every region of the habitable globe, will make the name of Murchison pre-eminent in all time; and the Silurian System an indelible landmark in geology. The first public announcement of these labours was made at the British Association (of which Sir Roderick was one of the founders) at the York meeting, in October, 1831. From this date until 1837 his time was mainly occupied in field investigations in Shropshire, Herefordshire, Montgomeryshire, Radnorshire, Brecknockshire, Caermarthenshire, Pembrokeshire, etc., in collecting and elaborating the details of the geological structure and the succession of the vast primordial fossiliferous and metamorphic rock-masses, thousands of feet thick, which abound in those strangely contorted regions. Isolated papers from time to time mark the course of his progress in this interval, especially that in the 'London and Edinburgh Philosophical Magazine' for July, 1835, in which the term "Silurian

System" was first applied to the Ludlow, Wenlock, Caradoc, and Llandeilo formations. This led to the publication, in 1838-39, of his first grand work of eight hundred quarto pages and forty plates of fossils, coloured maps, and sections, 'The Silurian System,'—a magnificent work, far beyond the ordinary resources of individual efforts, equalled only by the best and finest of imperial and governmental productions, and dedicated to the only man whose name will be ever gloriously linked with Murchison's labours—Professor Sedgwick, of Cambridge. In a list of his published works during this period in our possession, we find against the date 1836 the simple touching entry, in Sir Roderick's own handwriting, "death of my mother." No labours, even the highest mental or most active, take off pain of domestic trials, and this slight reference speaks more of filial love and deep respect than marble monument or word-eloquent eulogy.

In 1836 and 1837, he first classified, with Sedgwick, the slaty rocks of Devonshire, referring them to an intermediate place between his own Silurian Rocks and the carboniferous limestone, and proving that they occupied the position of the "Old Red Sandstone." To these rocks, whether slates, sandstones, or limestones, Sedgwick and Murchison assigned the name Devonian, a term now as generally adopted in all countries as that of Silurian. These authors also showed that the Culm Rocks of North Devon were truly of carboniferous age; and thus most important changes were made in all preceding geological maps of Devon and Cornwall.

In completing his great work 'The Silurian System,' he showed how the thick coal of the South Staffordshire field could be profitably worked under the Red Sandstone west of Birmingham; and the late Earl of Dartmouth, availing himself of the suggestion, obtained the coal at Christchurch one mile beyond the margin of the so-called coalfield. In 1839, after the publication of 'The Silurian System,' he classified these older rocks with Sedgwick and De Verneuil in various parts of France, Belgium, and Germany.

At the invitation of the Emperor Nicholas I., he was engaged from 1840 to 1844, with Count Keyserling and M. de Verneuil, in the survey of the Russian Empire, having previously applied the Silurian classification to Germany. The results of these labours are recorded in another monumental work of large dimensions, 'Russia and the Ural Mountains' (1845), in two quarto

volumes of 1200 pages, and 140 plates of fossils, views, maps, and sections, the result of four years of labour.

The high respect and value in which Murchison's labours were appreciated are testified by the honours conferred upon him by foreign Sovereigns. In 1841, while again President of the Geological Society, the Russian Emperor decorated him with the Cross of St. Anne, second class, in diamonds, and presented him a magnificent vase of Siberian aventurine; and again, three years later, on the completion of his survey, with the Grand Cross of St. Stanislaus. In 1844 the Royal Society granted to him their highest honour,—the Copley Medal; and in 1846 his own Sovereign conferred on him the dignity of Knighthood.

It was in connection with these foreign labours that, in 1841, he proposed the term "Permian" for the classification of the highest Palæozoic rocks, and which system he subsequently applied to Germany, Britain, and other parts of Europe. Besides his labours in Russia, he worked out the Palæozoic Geology of Sweden and Norway by personal inspection, and classified the Silurian and Old Red formations of Scandinavia,—labours for which the King of Sweden and Norway honoured him with a Commander's Order of the Polar Star, and the King of Denmark granted to him the Order of Dannebrog.

Having suggested, as early as 1844, that Eastern Australia might prove an auriferous country,—which he inferred from the similarity of its rocks to those of the Ural Mountains,—he incited the unemployed Cornish tin-miners in 1846 to emigrate thither and dig for gold, and in 1848 he received specimens of the metal. Thereon he wrote to Earl Grey, then her Majesty's Secretary for the Colonies, pointing out that his theory *had been realized*, and that the Government should take immediate steps to secure the working of the metal on a well-arranged plan. In subsequent years, and also before the so mis-called *discovery* was made in 1851, Sir Roderick lectured on the same subject before the Royal Institute and the British Association for the Advancement of Science, and distinctly expressed his views regarding Australian gold in his article "Siberia and California," in the 'Quarterly Review' (1850).

In 1847-48 he travelled in the Alps and Italy, his work, 'The Alps, Apennines, and Carpathians,' being the result, and an Italian translation of it was made in 1850 by Professor Savi and

Meneghini. This work is considered by some geologists as equal to any of the author's publications, and particularly in the clear demonstration he offered of the transition from the Secondary Cretaceous rocks of the Alps into the nummulitic Tertiary deposits.

In 1851 he revisited Scotland, and made important investigations, in company with Professor Nicol, proving the existence of Silurian rocks with fossils, and developing their classification, embodying the information in two valuable papers before the Geological Society, "On the Silurian Rocks of the South of Scotland," and "On the Geology of the North-West Highlands of Scotland."

In 1854 he published his 'Siluria,' a history of the oldest known rocks containing organic remains,—a smaller form of 'The Silurian System,' but embracing the application of the system to all parts of Europe and America; in which, giving a complete view of the result of his own many years' researches and the contemporary labours of others, he brought up the history of all the primary fossiliferous rocks to the existing level of human knowledge. Three editions have since been sold off, and 'Siluria' being classed with the indispensable standard works of science, a fourth edition, *i. e.* including the original work, has just been completed, with very many additions, including the description of all palæozoic fossils from the Laurentian or fundamental deposit, up to the Permian, inclusive in all parts of Europe and America. The first edition was dedicated to Sir Henry De La Beche, whom Sir Roderick succeeded, in 1855, as Director-General of the Geological Survey of Great Britain and Ireland. The second edition was inscribed to his associates in preparing the large work on Russia; and the new edition of 1867 is justly dedicated to his distinguished contemporary, Sir W. Logan, the founder of the Laurentian system, and who has so successfully applied the Siberian classification to all parts of Canada.

Sir Roderick has published geological maps of Europe, and of England and Wales, besides his maps of Russia, the Alps, etc. He was also about this period active in applying the Silurian, Devonian, Carboniferous, and Permian classifications to Germany, Scotland, and other countries; and from 1858 downwards in making out the descending order of the older rocks beneath those rocks in the North-West Highlands, which he had shown to be

of Lower Silurian and Cambrian age—labours which produced his crowning reward; for in 1859 he received from the Royal Society of Scotland the first Brisbane gold medal, as a recompense for his classification of these Highland rocks, and for the establishment of the remarkable fact that the fundamental gneiss of the north-west coast is the oldest rock of the British Isles, and the equivalent of the Laurentian rocks of North America. An entirely new geological map of Scotland followed, in the preparation of which he was ably assisted by Mr. Geikie, of the Geological Survey.

Nor is Sir Roderick's name less known among geographers, although his fame chiefly depends on his geological labours. In presiding over the Royal Geographical Society during twelve years (having read thirteen addresses to that body), and in often officiating for other Presidents, his devotion to its interests and advancement have been always warmly recognized; for he has been the zealous promoter of every bold adventure, and the true friend of every young aspirant for fresh labours in the field. His energy in advocating the search after Franklin, his warm support of Livingstone, and his successful appeal to raise a monument to the French Lieutenant Bellot, who lost his life in the search after Franklin, are among the proofs of his entire self-devotion to such good causes. In one of his anniversary addresses he threw out the original view, that all the interior of South Africa would be found to be a vast watery plateau, from which the waters escaped to the ocean through fissures in loftier mountains,—a view that was first proved to be true by Livingstone, and since confirmed by Burton, Speke, Grant, and Baker.

Sir Roderick is a honorary member of all the principal academies of Europe and America; and in addition to the foreign honours already mentioned, he has subsequently received the Grand Cross of St. Anne of Russia, and the Commanderships of the Orders of St. Lazzaro and Mauro of Italy, and of Jesus Christ of Portugal.

His recent addresses on the discoveries of one great water basin of the Nile by Speke and Grant, and of the other vast interior lake, by Baker; his analysis of all the recent explorations in Australia, and his comparison of the state of Europe in former periods, show that his energies and intellect are unimpaired.

SIR RODERICK IMPEY MURCHISON.

We must not omit to state that Sir Roderick Murchison has been for many years an active Trustee of the British Museum, and that in recognition of his merits the Queen first conferred on him a Commandership of the Bath, and, more recently, a Baronetcy.





Manographia by James ... and ...

HENRY O'NEIL, A.R.A.

HENRY O'NEIL was born of English parents in St. Petersburg, on January 7th, 1817. When three years old, he was brought to England, where he has since chiefly resided. In 1837 he entered the Royal Academy as a student, and obtained several of the Academy medals. In the year 1840 he exhibited in the Academy his first picture, and has continued to exhibit there annually without one single intermission.

The first work by Mr. O'Neil which made an impression upon the public mind was 'Jephthah's Daughter,' exhibited in 1843, and subsequently engraved for the Art Union of London.

In 1844, Mr. O'Neil went to Italy, where he remained two years, studying art, in theory and practice, in the galleries and studios of Rome and Florence. In 1860, he was elected an Associate of the Royal Academy.

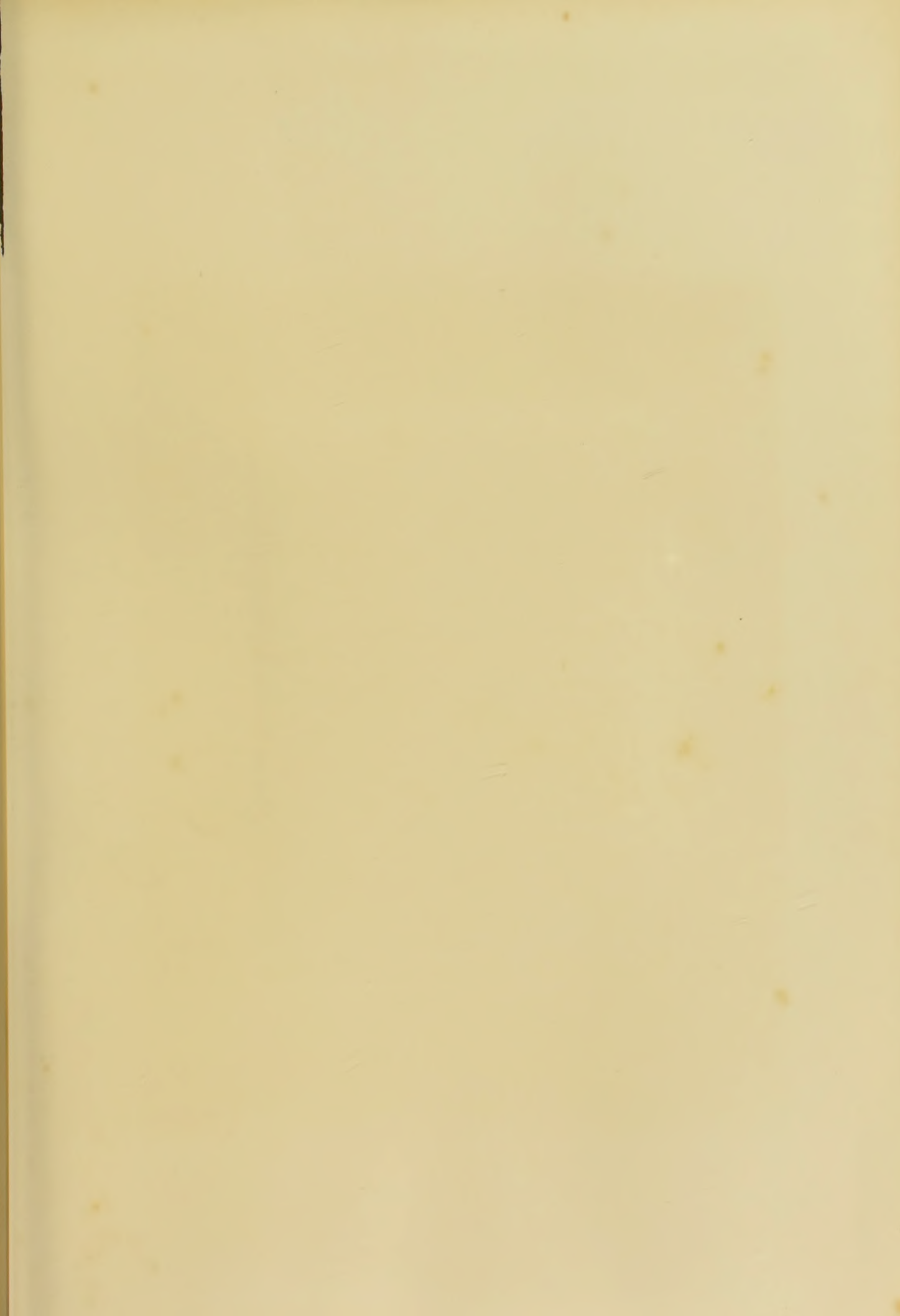
Amongst the pictures which Mr. O'Neil has annually exhibited, with more or less success, are :—In 1849, 'Mozart's Last Moments' (engraved). In 1850, 'Esther's Emotion.' In 1851, 'The Scribes reading the Chronicles to King Ahasuerus.' In 1852, 'Ophelia (mad) Presenting Daisies to Laertes.' In 1853, 'Queen Catherine's Dream.' In 1854, 'Marguerite and Faust.' In 1855, 'The Return of the Wanderer' (engraved). In 1856, 'Scene from "As you Like it."' In 1857, 'A Picnic in Windsor Forest.' In 1858, 'Eastward, ho! Departure of Soldiers on board a Transport for India at the time of the Mutiny;' and, in the following year, a companion picture, entitled, 'Home again!' (these two works have acquired great popularity from the published engravings of them). In 1860, 'The Volunteers;' 'A Seaman on board a

Wrecked Ship about to swim to shore with a rope.' In 1861, 'Departure of an Emigrant Vessel from Blackwall.' In 1862, 'Mary Stuart leaving France.' In 1863, 'Stradella.' In 1864, 'The Landing of the Princess Alexandra at Gravesend.' In 1865, 'The Lesson,' and 'Canute listening to the Monks singing the Vespers at Ely.'

In July, 1865, Mr. O'Neil accompanied the 'Great Eastern' on her voyage to lay the cable of the Atlantic telegraph, hoping to find on board a subject suitable for a picture: the unfortunate breaking of the cable, however, prevented the accomplishment of the artist's intention.

On his return to England after the failure of the expedition, Mr. O'Neil travelled to Italy, there to refresh his memory of Italian art-treasures by revisiting the picture-galleries. He returned to England *viâ* Madrid, and delivered a series of lectures on painting at the Royal Academy, during the following winter.

In 1866, Mr. O'Neil exhibited at the Royal Academy only two pictures: 'The Last Moments of Raffaele,' and 'Tidings of the War.' These were followed, in 1867, by 'An Incident in Luther's Monastic Life at Erfurt,' and 'Titian's Evening Study.' Mr. O'Neil has also painted some very striking portraits.





Portrait of General Edward A. Mott, 1862.

RICHARD OWEN, M.D., F.R.S., D.C.L., F.L.S., ETC.,

SUPERINTENDENT OF THE NATURAL HISTORY DEPARTMENTS,
BRITISH MUSEUM.

RICHARD OWEN, the youngest son of the late Richard Owen, Esq., of Fulmer Place, Bucks., was born at Lancaster, July 20th, 1804. He received his classical and mathematical education at the Grammar School of Lancaster, under the Rev. Jos. Rowley, M.A., and the Rev. John Beethom, M.A., and his scientific education at the University of Edinburgh and the Medical School of St. Bartholomew's Hospital in London.

He matriculated at Edinburgh in 1824, and, besides the professorial courses in the university (the third Monro, on anatomy and physiology; Jameson, on natural history; Hope, on chemistry; Alison, on the institutes of medicine, etc.), he attended the lectures on anatomy by Dr. Barclay, and the summer course on comparative anatomy given by the same learned professor at his private school. Here also Mr. Owen heard the first course of lectures delivered by Dr. Robert Knox, who became the successor to Dr. Barclay.

During his studentship at Edinburgh Mr. Owen assisted in founding the "Hunterian Society" for communications and discussions on medical and physiological subjects by students of the university, the professors granting the use of a room for that purpose. Of this Society, which we believe still flourishes, Owen was elected president in 1825. He appears to have gone up for his examination at the Royal College of Surgeons in London soon after his arrival in the metropolis; the date of his membership of the College in the official list being 1826, that of his fellowship, 1843. Mr. Owen commenced private practice as a surgeon in Serle Street, Lincoln's Inn Fields, in 1827, and communicated cases to

the Medical Society of St. Bartholomew's Hospital, of which he was an active member. His first published paper is, "An account of the dissection of the parts concerned in the aneurism, for the cure of which Dr. Stevens tied the internal iliac artery," in the 'Medico-Chirurgical Transactions,' vol. xvi. 1830. Dr. Stevens had transmitted an account of this operation, the first which had been performed on that artery, in 1812, from the island of Santa Cruz, announcing its success. Doubts were entertained, and had been publicly expressed, as to the possibility of reaching so deep-seated an artery. The patient died in 1822. Part of the body was preserved in spirits and brought to England in 1829. "Dr. Stevens," writes Mr. Owen, "at the suggestion of Mr. Lawrence, deposited the preparation in the Museum of the Royal College of Surgeons, and the dissection being intrusted to me, he requested me to communicate the particulars to the Society" (p. 3). The result of this dissection was to demonstrate the fact of the application of the ligature on the internal iliac, and its effect in the obliteration of the aneurism.

It appears that about this time, Mr. Owen, having been dissuaded from entering the medical service of the Navy by Mr. Abernethy, who had appreciated at St. Bartholomew's his attainments and skill as an anatomist, accepted an appointment, through Abernethy's recommendation, in the Museum of the Royal College of Surgeons, to which body the famous collections of John Hunter, purchased by Parliament in 1799, had been transferred.

The description of the numerous specimens and drawings of the different series,—physiological, pathological, and zoological,—originally undertaken by Sir Everard Home, was finally abandoned by him in 1825: the materials published by him in his "Lectures on Comparative Anatomy" were unavailable for the purposes of a catalogue. Public attention was called to this event by the strictures of the editor of the newly-established journal the 'Lancet.' Mr. Clift, the Curator, required the aid of a competent anatomist and zoologist in this undertaking. The first results of the combined labours of Mr. Clift and his young associate were the 'Catalogue of the Pathological Specimens' (two vols., 1830) and the 'Catalogue of Monsters and Malformations' (in 1831).

To determine the species of animals dissected by Hunter constituted the great difficulty of the cataloguing and describing, and Owen, who had acquired a knowledge of the principles of zoology

at Edinburgh, now resumed that study in amicable association with the eminent author of 'Zoological Recreations,' William Broderip, whose guidance at this important period of his life is gratefully acknowledged in Mr. Owen's work, 'On the Archetype and Homologies of the Vertebrate Skeleton.' The 'Catalogue of the Specimens of Natural History in Spirit,' 4to, 1830, was the earliest produce of this resumption of zoological studies.

All such expositions of the contents of public museums make known their needs, and stimulate to the supply of the missing links in the series. The living type of the great extinct group of chambered shells, *e. g.* Ammonites, etc., had long been a desideratum in natural history. The animal of the *Nautilus pompilius* was transmitted from the Pacific by a fellow-student of Owen, Mr. George Bennett, F.L.S., and presented to the Museum of the College. It was anatomized by Owen, and formed the subject of his first Memoir in Comparative Anatomy. The Board of Curators, in the advertisement to this work, which was published at the expense of the College (4to, 1832), refer to its author as "a gentleman engaged under their authority in preparing a descriptive catalogue of the anatomical preparations in the gallery of the Museum."

On the appearance of this memoir, it was translated into French by Milne-Edwards, and into German by Oken. In it the author enters, in a way characteristic of subsequent memoirs, into collateral questions on which the new facts throw light; he modifies the Cuvierian classification of *Cephalopoda*, based on characters of the shell, and proposed, on anatomical grounds, the orders *Dibranchiata* and *Tetrabranchiata*, which have been accepted.

Owen now appears to be fully engaged with his first great work, the 'Descriptive and Illustrated Catalogue of the Physiological Series of Comparative Anatomy,' of the Hunterian Collection, which then occupied the gallery of the single museum in Lincoln's Inn Fields.

The nature of the task is clearly explained in the author's quiet, business-like preface. Of the thousands of specimens and numerous drawings of animal and vegetable organs left by JOHN HUNTER, scarcely one had a record of the species from which it had been derived. Owen saw in the recently-organized "Zoological Society of London" the important aid which the dissection of the animals dying in their menagerie would afford him in his task. He became a life-member in 1830, was soon elected on the council,

and took an active share with the then Secretary, Mr. Vigors, the Vice-Secretary, Mr. Ed. Bennett, Messrs. Yarrell and T. Bell, in the establishment of the evening meetings for the purely scientific aims of the Society, and the prompt publication of the facts communicated. These originally appeared as the 'Proceedings of the Committee of Science' in 1830, Owen's 'Anatomy of the Orangutan,' 'Of the Armadillo,' and some other rare animals, forming part of the first volume. They took the title of 'Proceedings of the Zoological Society of London' in 1833, and have since appeared with exemplary regularity. Their value in the progress of Natural History science is appreciated by all its cultivators. A large proportion of Owen's zootomical researches is to be found in these volumes; the more important of which appear, with their illustrations, in the 'Transactions,' established in 1835. By the application of the facts thus accumulated, and the knowledge acquired by an extensive range of reading, the first volume of the catalogue, containing the preparations of the organs of motion and digestion, was completed and published in 1833. This was followed by a second, including the absorbent, circulating, respiratory, and urinary systems, in 1834; and in 1836 by a third, containing the nervous system, organs of sense, and connective and tegumentary systems and peculiarities. The series relative to the generation and development of animals, the most extensive and extraordinary in the whole museum, formed the two concluding volumes of the 'Descriptive and Illustrated Catalogue,' which was completed in 1840, the Council of the College acknowledging their "great gratification" at these results of "the unremitting labour which had been for many years bestowed on this work by Mr. Owen, one of the conservators, and now Hunterian Professor of Comparative Anatomy and Physiology to the College."

As a lecturer, Owen commenced his career at the Medical School of St. Bartholomew's Hospital, where he was appointed to the Chair of Comparative Anatomy in 1834. In the published syllabus of the course of lectures delivered in 1835, first appeared his proposed subdivision of the Zoophytes of Cuvier into the two provinces or subkingdoms *Acrita* and *Nematoneura*, the first characterized by "frequent repetition of the same organ in the same individual; no distinct respiratory system; no abdominal cavity," etc., as contradistinguished from "alimentary tubes separated from the parietes of the body, and contained in an abdominal cavity; a

circulation in vessels and respiratory organs," which are amongst the characters of the *Nematoneura*. Rymer Jones, Arthur Farre, and White Cooper were amongst the pupils attending this course.

In 1835, Owen married the only daughter of his friend and coadjutor, William Clift, Esq., F.R.S. In 1836 he became F.R.S., and was elected, on the retirement of Sir Charles Bell, to the Professorship of Anatomy and Physiology in the College of Surgeons. Parliament, in the purchase and transfer of the Hunterian Museum to the College, had stipulated that its contents should be illustrated in a course of twenty-four lectures. These had previously been divided between the Collegiate Professors of Anatomy and of Surgery. The College had now a man able and willing to grapple with the whole extent of zootomical science, and the stipulated number of lectures was assigned to Owen, with the title of "Hunterian Professor." He continued the useful practice of printing a 'Synopsis' of each course; and those who may have preserved the complete series of these summaries, as they were issued year by year, have the means of estimating the extent of scientific information communicated in the theatre of the College to the Fellows, Members, and privileged Visitors receiving tickets from the Council. In the Introductory Lecture to the last course delivered by Owen as Hunterian Professor, in 1855, he briefly alludes to the different aspects under which anatomy, properly so called, had been presented to his audience. First, as in the Hunterian physiological series, according to the organ, each organ or system or organs being successively reviewed and traced from its most simple to its most complex conditions. Second, each organ traced through the progressive stages of its development in the embryo of the several classes of animals. Third, the structure of the animal considered in its totality, and the zoological series anatomically described from the lowest to the highest species. Two courses or lectures were devoted to the skeletons or hard parts of animals, considered especially in their relations to "philosophical," or what Owen preferred to call "homological anatomy." At length, "having never deemed it the privilege of the Hunterian Professor to repose upon the repetition of the same annual course of lectures, with the mere addition of the chief discoveries of the preceding year,"* Owen entered upon the course of lectures devoted to the

* Introductory Lecture to the Course on Palæontology, appended to 'Hunter's Essays and Observations,' vol. i. p. 284.

“Organization and Affinities of the Extinct Species of Animals.” In the introductory lectures to this course, Owen made known, for the first time, the true position of Hunter in the ‘History of Geology and Palæontology.’* Early in the following year Owen received his appointment as Superintendent of the Natural History Departments in the British Museum, and resigned his Professorship and Curatorship in the Royal College of Surgeons. He had, indeed, completed the series of labours by which the Hunterian collections of specimens and drawings were rendered available to the students of physiology, zoology, and palæontology; his proper work at the College was done; and, in that sphere, his services to his country. If the Hunterian collections were worth £30,000 without a catalogue, what was now their value?

We resume the dates of the catalogues. The first volume of the ‘Palæontological Catalogue,’ containing descriptions of the Fossil *Mammalia* and *Aves*, appeared in 4to, with plates, in 1845. Concurrently with these, the catalogues of the recent osteology were proceeded with. These appeared in two 4to volumes of 914 pages, of mostly small print, descriptive of 5906 specimens, in 1853. The second volume of the Palæontology, including the fossil *Reptilia* and *Pisces*, was published in 1854. In the meanwhile, a second edition of the first volume of the ‘Physiological Catalogue’ had been called for, and was published, at Professor Owen’s suggestion, in the more convenient form of 8vo, in 1852, containing descriptions of numerous additional specimens. The convenience of the public had been consulted by the compilation of a general ‘Synopsis of the Contents and Arrangement of the Museum,’ of which the second edition, 8vo, from Owen’s pen, appeared in 1850. In the interests of the Museum and the convenience of voyagers, he drew up a volume of ‘Directions for Collecting and Preserving Animals and Parts of Animals,’ published by the College in 1835.

All these works, with the stimulus of the Hunterian Lectures, led to a rapid and ever-increasing ratio of acquisitions, chiefly by donations to the Museum. As the curator of a public museum, Owen had from the first foregone every opportunity to form a private collection. Every specimen, of whatever rarity or value, and under whatever circumstances pressed upon him, as a mark of personal regard or as a return for information imparted, he invariably

* These lectures are given in the first volume of the ‘Essays and Observations, etc., of John Hunter,’ 8vo., 2 vols. Van Voorst.

declined, save on the conditions of permission to transfer the gift to some public museum. All that were suitable as additions to the Hunterian collection were presented to the College. In 1845, the strain of labour producing its effects, Owen availed himself of the exceptional privilege of eight weeks' vacation to visit Italy. He accompanied Robert Brown and the Baron von Buch to Naples, to the meeting of Italian Naturalists held there in that year, and visited the principal cities and museums of Italy. He was everywhere received with marked distinction. At Rome he was the guest of Prince Charles Lucien Bonaparte, at the Palazzo Bonaparte, at that period containing the Natural History collections of the distinguished author of the 'Fauna Italica.' At Florence, Professor Owen was the guest of the Grand Duke, who desired him to select any subject or series of specimens of wax-models from the laboratory for which Florence has long been famous, and which was then presided over by the accomplished anatomist and artist Signor Luigi Calamai. Professor Owen signified his preference for the series illustrating the anatomy of the Torpedo; and at the same time intimated his wish that they should be donations to the museum of the College, explaining the principle on which he had refrained from commencing any private collection. The Grand Duke graciously acceded thus far, that the donation being intended as a mark of esteem for the Professor, he was to regard them as a gift to himself, with liberty to transfer the specimens as his own donation, if he thought them suitable, to the Museum of the College of Surgeons. On the arrival of this beautiful series of wax-models, Professor Owen accordingly presented them to the College.

The original museum in which Owen commenced his labours at the College, in 1828, was a single, rather heavily ornamented, and not well-lit apartment, with one gallery. In 1835 a more spacious and better-lit hall, with two galleries, designed by Mr., afterwards Sir C. Barry, was substituted for it; to this were added a second, similar but smaller hall; and a third, larger hall; the whole museum, at the conclusion of Owen's curatorship, in 1856, affording at least ten times the amount of exhibition space, and every portion of it well filled.

The proportion of Mr. Owen's labours devoted to the elucidation of those of his great precursor John Hunter, will ever constitute an element in the estimate of his character. There are

few examples in the history of science of the devotion of so much labour, by an original investigator, and not a mere commentator, to the reputation of a predecessor.

Some of Hunter's published papers had been collected in his lifetime from the 'Philosophical Transactions' to constitute the work entitled 'Observations on Certain Parts of the Animal Economy,' 4to, 1786. Professor Owen added to these papers every other on cognate subjects that Hunter had published, or sanctioned the publication of, during his lifetime, together with the "Croonian Lectures" which had been read before the Royal Society from 1776 to 1782, and brought them out in an octavo edition. The 'Animal Economy' thus enlarged, with a preface descriptive of Hunter's real discoveries, which had been more or less misunderstood or overlooked by previous commentators, was published in 1837. The evidence given by Mr. Clift before the Parliamentary Committee on Medical Education had revealed the fact that, during the period between the demise of Hunter (of whom Clift was the last articulated apprentice or pupil) in 1793, and the purchase of the "Collection" in 1799, he had availed himself of the manuscripts remaining with the museum in his care, to copy portions of them for his instruction. The portions selected being chiefly those on comparative anatomy and physiology, removed by Home in 1800, and afterwards destroyed. Certain extracts from these copies were communicated by Clift to Owen during the formation of the Physiological Catalogue, and added, by Mr. Clift's permission, as 'Notes' (vol. iii. p. v, etc.). On the demise of Mr. Clift, these transcripts came into Owen's possession, and he published them in two octavo volumes, entitled 'Essays and Observations on Natural History, Anatomy, etc., by John Hunter' (1861). The labours by which they were prepared for press are briefly detailed in the preface. The original copies by Clift were deposited by Owen in the library of the Royal College of Surgeons; and in the dedication of this work "to the Fellows and Members of the Royal College of Surgeons in England," Owen speaks of it as "the last of his labours in making known the thoughts and works of the founder of Philosophical Surgery."

The more congenial labour of comparing the Hunterian preparations with recent dissections, chiefly of exotic animals supplied by the Zoological Society, is at once the key to the secret of Owen's attainment of such profound knowledge of comparative

anatomy, and the reason why most of his papers have appeared in the Transactions of that Society; while the dissection of so many animals enabled him to enrich the Hunterian series with many contributions, supplying defective links or affording further valuable demonstrations.

The first paper communicated by Mr. Owen to the Royal Society was on the mammary glands of that strange duck-billed quadruped the *Ornithorhynchus paradoxus*; it was published in the Philosophical Transactions in 1832. This was followed by another, on the ova of the same animal, in 1834.

Some discussion with the famous Geoffroy St. Hilaire, who maintained the oviparity and non-mammiferous nature of the *Ornithorhynchus*, ensued. But Owen's inference from the structure of the ovisac, of the corpus luteum and of the uterine ovum, that the latter must be developed *in utero*, and the young be born alive, has been adopted in physiology. He was elected "Corresponding Member" of the Academy of Sciences, Institute of France. The problem still remained how a quadruped, with a beak like a duck, and without a nipple, could suck. In 1834 Professor Owen received specimens of apparently new-born *Ornithorhynchi*, which he minutely described in a paper printed in the 'Transactions of the Zoological Society.' The beak was soft and short, the mouth adapted to be applied to the areola on which the milk-ducts terminate, and to receive the milk that would be injected into the mouth by a muscle surrounding the large mammary gland. Professor Owen's next step was to settle the questions undecided on the generation of the marsupial animals, viz. the period of uterine gestation, the exact condition of the new-born young, the mode of its passage to the external pouch, and the term of its suspension there. For this purpose he took advantage of the collection of kangaroos, then living at the establishment of the Zoological Society at Kingston; the impregnated females being transferred, for better observation, to the gardens in Regent's Park.

The account of these experiments is contained in the Philosophical Transactions for 1834. It is to these investigations we owe the knowledge of the state of the new-born kangaroo (*Macropus major*). But an inch long, naked and blind, with hind legs shorter than its fore legs, the very reverse of the adult, it is transferred, after thirty-eight days' gestation, by its mother's lips to her nipple within her pouch, where it clings and hangs for a period of

six months, afterwards using the pouch only for shelter, and occasionally feeding.

In the Philosophical Transactions for 1837, the memoir on the brain of the Marsupialia was published, recording the absence of the corpus callosum. This was followed by the articles "Monotremata" and "Marsupialia" in the 'Cyclopædia of Anatomy and Physiology,' showing, among other characteristics, a similar cerebral structure in the Ornithorhynchus and Echidna. Two papers in the Zoological Transactions, "On the Osteology" and "On the Classification of the Marsupialia," completed the grounds for forming a primary group or subclass of the Marsupial and Monotrematous Mammals, for which the names *Implacentalia* or *Lyncephala* were proposed.

Pursuing his researches into the correlations of the cerebral with other systems of organs in the mammalia, Professor Owen was led to associate the Cuvierian orders or tribes, *Edentata*, *Rodentia*, *Insectivora*, and *Cheiroptera*, into a second "subclass" called *Lissencephala*, from the smooth unconvoluted character of the cerebrum. The *Cetacea*, *Pachydermata*, *Ruminantia*, *Carnivora*, *Quadrumana* form a third subclass—*Gyrencephala*, or with convoluted brains. The superior development of the human cerebrum, zoologically marked by its extension over and beyond the cerebellum with concomitant structures in the posterior lobe, called in human anatomy "hippocampus minor," etc., afforded the characters of a fourth equivalent group in the classification on the brain-system, which is called "*Archencephala*." Cuvier, pointing to the "feet" as fitted for erect stature, and "hands" for perfect manipulation, affirmed them to be peculiar to man, and founded thereon the order *Bimana*. But modified homologues or rudiments of the thumb, great-toe, hinder lobe of the cerebrum, etc., occur in certain species of the lower group approximating the higher one; to the objection to his cerebral classification, that some of the highest *Gyrencephala* possessed what might be called rudiments of a "hippocampus," etc., Professor Owen replied by contrasting those parts as they existed in the gorilla, chimpanzee, etc., and in the human subject. It was as absurd to suppose that he denied the existence of the parts which Tiedemann, Vrolik, and Kuhl had pointed out, as that Cuvier denied the existence of the homologue of the great toe in the orang. The graduation of structures in the chain of living beings affords similar grounds of

attack against all systems of classification, which, nevertheless, are indispensable to the comprehension of the science of animals and plants.

In 1847 Professor Owen published the facts and reasons for a re-distribution of the Pachydermata and Ruminantia of Cuvier into the Ungulata with hoofs in equal number (*Artiodactyla*), and into those with hoofs in unequal number (*Perissodactyla*). The Artiodactyles were subdivided into ruminants and non-ruminants, numerous extinct species being shown to have filled up the intervals that now exist; while in like manner the Horse tribe, the Solipedes of Cuvier, were shown to be more closely allied to the tapir and rhinoceros by other intermediate Perissodactyles of geological ages than would appear by the examination of living species only.

In regard to the Quadrumanous family, which makes the nearest approach to man, but little was known, and that imperfectly, at the close of Cuvier's labours. The orang-utan was placed at the head of the order, and both this and the chimpanzee were known to the great naturalist only in their immature condition. The osteological and dental characters of the adults of both forms were made known by Owen in a series of memoirs in the Zoological Transactions for 1835 and 1836, proving that the chief characters supposed to approximate these animals to man are transitory, and peculiar to the young state of the animal with deciduous teeth. The chimpanzee is placed above the orang; both are characterized in the adult state by a sexual distinction in the teeth. A smaller species of Bornean orang (*Pithecus Morio*) is defined: the larger one (*Pithecus Wurmbii*) had been supposed, from its huge canines and low facial angle, to be a baboon.

In 1847 Professor Owen's opinion was sought by an American missionary at the Gaboon, as to the skull of a large baboon-like quadrumane, of which Dr. Savage transmitted a drawing: in this was recognized a new species allied to the chimpanzee. It was described by Dr. Savage under the name of the "Gorilla," which name Professor Owen adopted, though aware of the improbability of its being the ape so called by Hanno. In a series of elaborate memoirs in the Zoological Transactions and Proceedings, from 1848 to 1862, the osteology, dentition, with the external and other characters of the gorilla, are described by Owen, and compared with the chimpanzee, Papuan, and Negro. Our anatomist con-

cludes, in opposition to Professors Isidore Geoffroy St. Hilaire and Wyman, that the gorilla ranks above the chimpanzee. The rich collection brought to London by M. du Chaillu illustrated the characters of the female and young of the gorilla; and through Professor Owen's consistent support and advocacy of M. du Chaillu, the striking and instructive specimens of this rarest and most interesting of brute-beasts have been secured for the British Museum, where they are now displayed.

With regard to the class of Birds, we may refer to Owen's monograph on the anatomy of the Toucan in Mr. Gould's work on the *Ramphastidæ*, to the paper on the anatomy of the Hornbill (*Buceros*) in the Zoological Transactions, vol. i., and to the two elaborate monographs on the anatomy of the *Apteryx* in the same Transactions. The incidental notices of the organization of the larger struthious birds in the comparative part of these papers, and above all the accessions to the same wingless order which we owe to the discoverer of the *Dinornis* and *Palapteryx*, supplied the grounds for separating from the Grallæ, or order Échassiers of Cuvier, the species that therein form the family "Brevipennes." Other modifications of the Cuvierian system, and an inquiry into the grounds for a binary division of the class, according to the condition of the newly-hatched young, *e.g.* into *Aves altrices* and *Aves precoces*, will be found in the elaborate article *Aves*, communicated to the Cyclopædia of Anatomy and Physiology, in 1836.

Perhaps none of Professor Owen's researches on fossil remains have excited more general interest than those to which we are indebted for a knowledge of the gigantic struthious birds of New Zealand, the first paper on which, entitled "Notice of the Fragment of a Femur of a Gigantic Bird of New Zealand," read November, 1839, was published in the first part of the third volume of the Zoological Transactions. In this paper the author concludes "that there existed, and perhaps still exists,* in those distant islands, a race of struthious birds of more colossal stature than the ostrich or any other known species;" and so confident was Professor Owen of the soundness of his inductions, that he boldly added, "so far as my skill in interpreting an osseous fragment may be credited, I am willing to risk the reputation for it on this statement." Ample confirmation came to hand in 1843, and has continued to arrive.

* We trust Mr. Frank Buckland's zeal may be rewarded by the ample fulfilment of this prediction.

Six or seven successive monographs have been devoted to the restoration of species of *Dinornis*, *Palapteryx*, *Notornis*, *Aptornis*, and other extinct birds of New Zealand. The Museum of the College of Surgeons is enriched by a restoration of the *Dinornis giganteus*; that of the British Museum by the reconstituted skeleton of *Dinornis elephantopus*, perhaps the most remarkable of all these feathered giants.

In palæontology Owen's labours have not been less important than in anatomy and zoology. In 1842 he communicated his first Report on British Fossil Mammalia, and his second and concluding Report on the same class of extinct animals; both at the instance, and with the aid of grants, of the British Association for the Advancement of Science. The matter of these Reports was incorporated with kindred researches, and beautifully illustrated in the 'History of British Fossil Mammalia and Birds,' 8vo, 1846. The *Coryphodon* there indicated by a small fragment brought up from a deep well sunk in the London clay, at Camberwell, has now been almost wholly restored by fossils from the older eocene of France; but this fragment included an entire tooth. Cuvier required a molar tooth, or a characteristic bone with the articular surface complete, as the basis of his restorations, which at the time appeared so marvellous. When the fragmentary fossil relics brought from Buenos Ayres by Darwin in Admiral FitzRoy's Expedition in 1837, were confided to Professor Owen, not having in many instances the requisite Cuvierian essentials, he brought the microscope to bear upon the portions of teeth, and by the characteristic modifications of the internal structure of seemingly valueless fragments, obtained the knowledge which his great predecessor could only predict from a perfect specimen. In the attempt to reconstruct these fragmentary South American fossils, in some cases Mr. Owen had not even fragments of teeth to build upon, nor a bone with the articular extremities. He then resorted to the grooves channelled in the bone by blood-vessels, or the perforations by nerves, and other previously neglected or unthought-of means, which were attended with paramount success. In this way he recognized the affinity to the llama of the long-necked, perissodactyle fossil *Macrauchenia* from a few neck-bones found petrified on the cliffs of the barren shores of Patagonia; and made out almost entirely from a study of the nerve-canals in a single fragment of a skull, the extinct *Glossotherium*. Unsuspected affinities of

Rodentia to *Ungulata* were brought out in the restoration of the *Toxodon*; but perhaps the most important principle laid down in the volume on the 'Fossil Mammalia of the Voyage of the Beagle,' 4to, 1838, was the conformity of the types of extinct with those of the existing mammalia characterizing the South American continent.

About the same time an analogous collection of fossil remains were submitted to Owen by Colonel Sir Thomas Mitchell, from bone-caves and freshwater deposits of Australia; these were described in an Appendix to Sir Thomas's 'Three Expeditions to New South Wales.' In it the genus *Diprotodon* was founded on a single fragment of an incisor-tooth. To this gigantic marsupial Owen shortly after added the *Nototherium*, *Thylacoleo*, *Phascolomys gigas*, etc. He sums up the whole of his discoveries in this field, and their general bearings in his "Report on the Extinct Mammals of Australia, and on the Geographical Distribution of Pliocene and Post-pliocene Mammals in general," communicated to the British Association in 1844.

It would be too long to cite even the titles of the numerous papers, reports, and works in which the results of Owen's researches into the mammalian and reptilian classes of fossils are recorded. We may allude to the close observation and reasoning by which the mammalian characters of the oolitic Amphitheria and Phascolotheria, and of the supposed Neocomian Basilosaurus, were established in the sixth volume of the 'Transactions of the Geological Society,' 2nd series; to the elimination of the parts of the *Glyptodon* from those of the *Megatherium*, with which they had been confounded; to the reconstruction of *Glyptodon* and *Myloodon* now the ornaments of the Museum of the College of Surgeons; and to the illustrations of the adaptation of the skeleton of *Myloodon* and *Megatherium* to the task of uprooting trees, fully developed by Owen in his 'Memoir on the Myloodon,' 4to, 1842, and the grandly illustrated work on the *Megatherium*, finally completed and issued in 1862, 4to.

The results of a general survey of all accessible specimens of British fossil reptilia appeared in two Reports, communicated to, and published by, the British Association; the first in their volume for 1839, the second in that for 1842. The matter of these Reports, and of subsequent discoveries, has been methodized into a systematic 'History of British Fossil Reptiles,' of which six parts

have been issued, in quarto, pp. 274, illustrated by 125 plates: we trust the author may be spared to bring this great work to a conclusion.

The curious edentulous reptile, the *Rhynchosaurus*, is described in the Transactions of the Philosophical Society of Cambridge. The allied but still more extraordinary Dicynodonts and Oudenodonts of South Africa were described in the Geological and Philosophical Transactions. These carry the Saurian grade of structure as far back as the Triassic series. In the Keuper of Germany, fossils had been found which were referred to a genus *Mastodonsaurus*; and in the older coal-deposits other remains, on which the genus *Archegosaurus* was founded. Owen, applying the microscope to the structure of the teeth, obtained very striking results, which, with other characters, led him to refer the supposed Saurians to a lower type of reptiles, more nearly akin to the Batrachia, but with affinities to sauroid fishes and saurian reptiles. More decisive batrachian characters were pointed out in the reptile from the coal-deposits of Nova Scotia, which he called *Dendrerpeton*. The Labyrinthodont type was shown in the *Baphetes* of the Pictou coal, and in the *Parabatrachus* of the Scotch Carboniferous series. In the class of Fishes he has added improvements, both on the old system of Cuvier, as also to the more recent one of classification by scales, proposed by Agassiz chiefly for simplifying the study of the imperfect remains of fossil fishes. The entire range of researches on extinct animal species has been condensed and summarized in Professor Owen's work on 'Palæontology,' of which two editions have appeared. (8vo: Black, 1860 and 1861.)

So inseparably interlinked have living and fossil forms been in the labours of Professor Owen, that it would be impossible to regard him in a separate light either as an anatomist or a palæontologist, for we cannot fail of speaking of him as both in the very same breath. Neither can we follow his labours in order of time, nor of subject. To-day he is investigating "parthenogenesis," to-morrow the "nature of limbs;" on one occasion he is demonstrating the existence of entophyta, or parasitic plants, as well as entozoa in the bodies of animals; at another, defining the footprints of fossil animals, and assigning them to the various classes of animals that made them. The paper on the *Protichnites*, in the Quarterly Journal of the Geological Society, vol. viii. (1852), is a good example of his mode of work in this very difficult line of interpretation.

Owen's discovery, in 1835, of the most extraordinary of human entozoa, the *Trichina spiralis*, infesting the muscles of the human body in such vast numbers as to produce sometimes cases of violent death in the midst of apparent health; his observations of the "blood-disks" which he published in the 'Medical Gazette,' in 1839, with other analogous investigations,—impressed him deeply with the value of the microscope for anatomical and physiological researches. Other branches of microscopical study being carried on about this time by Farre, Bowerbank, Busk, and a few other observers, a "Microscopical Society" was formed in 1840, of which Professor Owen was the first President; its proceedings being published under the title of the 'Microscopical Journal and Structural Record,' the first paper in which was by himself, "On the Structure of Fossil Teeth from the Central Division of the Old Red Sandstone, indicative of a new Genus of Fishes—Dendrodus."

His study of the microscopic structure of teeth was carried on in a laborious, searching, critical spirit, unsurpassed in any special investigation by any naturalist whatever. He was led to it by receiving, in 1837, from Mr. Darwin fragments of the teeth of the extinct megatherium and other animals from South America, in an incipient state of decomposition, when he was struck with the fact that, instead of their being resolved, like the fossil tusks of the mastodon and mammoth, into parallel superimposed conical lamellæ, they separated into fine fibres arranged at right angles to the plane of the layers. From this he went on to examine the differences in the microscopical structure in the teeth of every class of animals,—fish, reptiles, mammals; the result being the production of a book unique for amount, completeness, and value of research, and beauty and correctness of illustrations: his 'Odontography,' in 1840-45, consisting of two thick quarto volumes of 650 pages and 168 most exquisitely executed plates.

Owen became a Fellow of the Geological Society in 1836, and the "Wollaston Medal" was awarded to him in 1838.

In 1844 he received the Royal Medal from the Royal Society for his admirable description of certain Belemnites preserved with a great proportion of their soft parts in the Oxford clay.

No fossil shell had given rise to more conflicting opinions as to the affinities of its construction than the Belemnite. The application of the principles of physiological correlations had indicated its general relationship with the cuttle-fishes; but the speci-

mens from Christian-Malford, in Wiltshire, presented to the College of Surgeons by the Marquis of Northampton, displayed in a marvellous manner such traces of those soft and perishable parts so essential to determining the true nature of its living form, as to permit no longer any doubt of the nature and character of the animals to which they belonged; and the uncinated arms, the tentacles with their numerous hooklets, the muscular tunic of the mantle, the expiratory tube, the ink-bag and duct, the lining membrane of the stomach, and all the general details of the anatomy of the fossil *Belemnites*, were compared in the most complete and convincing manner with the corresponding parts of the recent entle-fishes and with those of the *Nautilus pompilius*, first dissected by Mr. Owen in 1831. The *Belemnitida*, though possessing the chambered and siphonated shell, were thus shown to belong to the higher, or dibranchiate order of *Cephalopoda*.

As examples of anatomical monographs, we may refer to the memoir 'On the *Lepidosiren annectens*,' and those on the singular and beautiful Sponge (*Euplectella*), in the Linnean Transactions; 'On the Rhinoceros;' 'On the Giraffe;' 'On the Great Anteater;' 'On the Brachiopoda;' 'On the Aye-aye (*Chiromys*),' in the Zoological Transactions; 'On the Development of the Carapace and Plastron of the Chelonia;' 'On the Dentition of the Phacochærus;' 'On the Exogenous Processes of Vertebrae;' and 'On the Placenta of the Elephant,' in the Philosophical Transactions. We cannot, however, attempt to enumerate the many papers that have proceeded from his pen. In the 'Bibliographia Zoologiæ,' published by the Ray Society in 1853, there are recorded upwards of two hundred and thirty of his published productions, and many of these are of the most voluminous and laborious character; and the works that have emanated from him since are not proportionably less in number or importance. His labours have been as varied as numerous, and have extended to every branch of animal life, living and fossil; and it has been justly said of him that, "from the sponge to man, he has thrown new light on every subject he has touched." In this series of untiring and uninterrupted researches, Owen has had steadily in view the higher generalizations of his science. The principle of "vegetative or irrelative repetition," hinted at in his 'Synopsis of the Lectures' in 1835, is fully developed in the volume of 'Lectures on the Invertebrate Animals,' published in 1843. (8vo: Longmans; second edition. 1855.)

The President of the Royal Society, in presenting to Professor Owen the Copley Medal, awarded to him in 1851, thus alludes to this most important of Owen's scientific labours:—

“The progress of all sciences is a perpetual struggle after generalizations of a higher and higher order. Anatomy and physiology, so actively cultivated in the time of Cuvier, had afforded at the latter end of his career glimpses of generalizations, which, under the vague terms of ‘unity of organization,’ became subjects of sharp controversy. The idea, so expressed, had two applications,—one, to the analogies which exist between the permanent organization of the lower animals, and certain transitory states of the higher species; the other, to the correspondences traceable between the parts composing the organization of different species.

“With reference to the first of these applications, I cannot do better than quote the author's own account of his conclusions, as given in the last lecture of his course on the Invertebrate Animals, published in 1843.

“‘The extent to which the resemblance, expressed by the term ‘Unity of Organization,’ may be traced between the higher and lower organized animals, bears an inverse ratio to their approximation to maturity. All animals resemble each other at the earliest period of their development, which commences with the manifestation of the assimilative and fissiparous properties of the polygastric animalcule: the potential germ of the mammal can be compared, in form and vital actions, with the Monad alone, and, at this period, unity of organization may be predicated of the two extremes of the animal kingdom. The germ of the Polype pushes the resemblance further, and acquires the locomotive organs of the Monad—the superficial vibratile cilia—before it takes on its special radiated type. The Acalephe passes through both the Infusorial and Polype stages, and propagates by gemmation, as well as spontaneous fission, before it acquires its mature form and sexual organs. The fulness of the unity of organization which prevails through the Polypes and larval Acalephes, is diminished as the latter acquire maturity and assume their special form.

“‘There is only one animal form which is either permanently or temporarily represented throughout the animal kingdom,—it is that of the infusorial Monad.

“‘Other forms are represented less exclusively in the development of the animal kingdom, and may be regarded as secondary forms. These are—the polype, the worm, the tunicary, and the lamprey; they are secondary in relation to the animal kingdom at large, but are primary in respect of the primary divisions or sub-kingdoms.

“ ‘ Thus the Radiata, after having passed through the Monad stage, enter that of the Polype ; many there find their final development ; others proceed to be metamorphosed into the Acalephe or the Echinoderm.

“ ‘ All the *Articulata*, at an early stage of their development, assume the form or condition of the apodal and acephalous worm ; some find their mature development at that stage, as the Entozoa ; others proceed to acquire annulations ; a head ; rudimental feet, jointed feet, and finally, wings : radiating in various directions and degrees from the primary or fundamental form of their sub-kingdom.

“ ‘ The *Mollusca* pass from the condition of the ciliated Monad to that of the shell-less Acephalan, and in like manner either remain to work out the perfections of that stage, or diverge to achieve the development of shells, of a head, of a ventral foot, or of cephalic arms.

“ ‘ The vertebrated ovum having manifested its monadiform relations by the spontaneous fission, growth, and multiplication of the primordial nucleated cells, next assumes, by their metamorphosis and primary arrangement, the form and condition of the finless cartilaginous fish, from which fundamental form development radiates in as many and diversified directions and extents, and attains more extraordinary heights of complication and perfection than any of the lower secondary types appear to be susceptible of.’

“ To the second application of the principle I must more particularly refer, as the subject on which perhaps Professor Owen’s investigations have been more fully and elaborately and systematically carried out, and have exercised a more important and universal influence on these sciences than any other,—I mean the doctrine of Homologies, or the correspondency of parts and of plan in the construction of animals. This had been the subject of close and sharp discussions in the Academy of Sciences between Cuvier and Geoffroy St. Hilaire, which are summed up by the latter in the ‘ *Principes de Philosophie Zoologique*,’ published in 1830 ; and it can be no matter of surprise, that with an antagonist so strong in his well-founded reputation as a great master in science, and so skilful in applying the weapons of a severe and sarcastic logic, Geoffroy St. Hilaire should have failed to impress the physiological world with those views which Cuvier objected to, as being based upon *à priori* speculation.

“ The effect of these discussions may be traced in most of the ablest works on Anatomy and Physiology which subsequently appeared, as, *e.g.* those of Professor John Müller, Professor Wagner, Milne-Edwards, Siebold and Stannius, in Sir Charles Bell’s work ‘ *On the Hand*,’ and in the ‘ *Outline of the Animal Kingdom* ’ and ‘ *Manual of Comparative Anatomy*,’ by Professor Jones, of King’s College, London. By all these

authors the principle of unity of organization, as it has been attempted to be illustrated and applied by Geoffroy St. Hilaire, and by the German anatomists of the Transcendental School of Schelling, is tacitly or avowedly abandoned. By M. Agassiz it was directly opposed.

“Nevertheless, the question whether the principle of a common pattern, or the principle of final causes, or, as Cuvier called it, ‘conditions of existence,’—I say, which of these two principles, or in what degree both have governed the development of organization of animals—the greatest question which can occupy the philosophical anatomist—was still far from having been satisfactorily decided.

“It enforced itself upon the most serious consideration of Professor Owen, when he was called upon to prepare the catalogue of the Osteological Collections in the Museum of the Royal College of Surgeons; and the results of this consideration were promulgated in his Lectures on Comparative Osteology.

“What those results are, may now be studied in his ‘Report on the Homological Relations of the Skeleton,’ submitted to the British Association at Southampton in 1846; in his ‘Lectures on the Vertebrate Animals,’ 1846; and in his works entitled ‘On the Archetype and Homologies of the Vertebrate Skeleton,’ 1848, and ‘On the Nature of Limbs.’”

The President of the Royal Society then quotes the opinions on these works, expressed by Dr. Carpenter in his ‘Principles of Physiology, General and Comparative;’ by Sir Charles Lyell, in his ‘Anniversary Address to the Geological Society, 1850;’ and by Dr. Carus, who, “in the attempt to follow out the homologies of the muscles, on the principles laid down by Professor Owen, acknowledges them as ‘indicating the only true way to the comprehension of a scientific myology.’”

“A great aim of Professor Owen’s works on Homological Anatomy, appears to be to put an end to the old controversy so long maintained, on the assumption that a special adaptation of parts was incompatible with a common type of construction. Having, after long painstaking researches, arrived at a clear conception of the archetypal plan of the vertebrate structures, he associates that idea with as clear a recognition of the teleological signification of the great principle as our finite capacities are able to attain to. ‘For it is certain,’ writes Professor Owen, ‘that in the instances where the analogy of a machine fails to explain the structure of an organ, such structure does not exist in vain if its true comprehension lead rational and responsible beings to a better conception of their own origin and Creator.’” (Proceedings of the Royal Society, vol. vi. pp. 110–112.)

This and other evidences of the spirit pervading the philosophical writings of our anatomist did not, however, shield him from attacks, in which the charge of atheism or pantheism was insinuated. Owen had been, finally, led by the accumulated proofs of the unity of plan in the vertebrate and articulate types of structure ; by the evidence of “ progressive departure from a general to a special type, given by the succession of extinct forms of animals ;” and “ by the analogies which the transitory embryonal stages in a higher species bear to the mature forms of lower species,” as also by some of the phenomena of “ parthenogenesis,” to the hypothesis of a “ continuously operative secondary creational law.” His first announcement of this stage of his philosophical faith was made in his ‘ Discourse on the Nature of Limbs ;’ but whilst admitting the principle, he acknowledges that he knew not how it worked :—

“ To what natural laws or secondary causes the orderly succession and progression of such organic phenomena may have been committed, we, as yet, are ignorant. But if, without derogation of the Divine Power, we may conceive the existence of such its ministers, and personify them by the term ‘ nature,’ we learn from the past history of our globe that she has advanced with slow and stately steps, guided by the archetypal light, amidst the wreck of worlds, from the first embodiment of the vertebrate idea under its old ichthyic vestment, until it became arrayed in the glorious garb of the human form ” (p. 86).

On the announcement of this conclusion as to the creation of species by the agency of natural law or secondary causes, an acute logician at once denounced this passage and the general scope of the homological works as supporting the “ theory of development.”

“ This theory, as our readers may know, assumes that God did not interpose to create one class of creatures after another, as a consequence of each geological revolution ; but that, through long course of ages, one class of creatures was developed from another.” “ It is not German naturalists alone who are contributing to diffuse scientific Pantheism.” (‘ Little Lectures on Great Topics,’ 1849.)

To this attack Owen briefly replied ; we may quote one passage :—“ The true state of the case is simply this : my assailant has his own notions of the exterminating character ‘ of each geological revolution,’ and of the way in which ‘ God, thereupon, interposed to create one class of creatures after another.’ ”

But there are phenomena which God, in His unsearchable ways, permits to be known by His observant instruments; and these phenomena, faithfully interpreted, plainly indicate that He has been pleased to operate differently from what some prefer to believe; thereupon the interpreter is charged with "blotting God out of Creation." But in such charge truly lies the impiety. Could the pride of the heart be reached when such imputation came, there would be found, unuttered,—“Unless every living thing has come to be in the way required by my system of theology, Deity shall have no share in its creation.”

The reasoning by which Owen shows that a creative power is fully recognizable, through whatever succession of regulated means it may operate in the production of species, we may refer to the concluding section of one of his late monographs, 'On the Aye-aye,' Zool. Trans., vol. v. p. 87.

Two or three hypotheses or guesses of the mode of operation of the secondary creational law have been propounded. The facts by which Buffon's and Lamarck's views could be tested are so applied in several of Owen's works and papers, more especially on the Anthropoid Apes. In his monograph on the Aye-aye, he applies certain facts in its organization and native habits to the latest propounded hypotheses by Mr. Darwin.

A few incidents in the biography of Professor Owen remain to be briefly noted. He received the appointment of "Fullerian Professor of Physiology," in the Royal Institution of Great Britain, in 1858.

On the revival, under the new statute made by the University of Cambridge, of Sir Robert Reade's foundation of public lectures, Professor Owen was appointed lecturer, and received the permission of the Trustees of the British Museum to hold the office in March, 1859. The "Reade's Lectures" date so far back as 1524; but during a long series of years they had ceased to be delivered. On the performance of this duty in 1859, Professor Owen was honoured by the University with the degree of Doctor of Laws. The University of Oxford had previously conferred on Owen a similar degree.

H.R.H. the late Prince Consort, desirous that the Royal children should receive the elements of natural history, made arrangements for the delivery of courses of such lectures at Buckingham Palace; those on zoology and geology were given by Professor Owen; those on botany, by the late Professor Henslow.

The Institute of France decreed to Professor Owen, in 1856, the triennial Cuvierian prize in comparative anatomy; and on the demise of the great botanist ROBERT BROWN, Professor Owen was elected to fill his place as one of the eight foreign Associates of the Institute.

The Emperor of the French transmitted, in 1855, to Owen the Order of the Legion of Honour; the King of Prussia sent the "Ordre pour le Mérite" in 1852; the King of Italy, through his Minister of Public Instruction, Matteucci, transmitted him the order of St. Maurice and St. Lazare. Her Majesty was graciously pleased to assign to Professor Owen, in 1852, his present residence, near Sheen Gate, Richmond Park.

The career of Professor Owen, of which the foregoing is a brief sketch, placed him before the public in such a position as inevitably led to demands upon his time and talents for co-operation in those public services which his science might be expected to promote. The late Sir Robert Peel, in 1843, recommended the formation of a "Commission for inquiring into the state of Large Towns and Populous Districts," and the following were nominated Commissioners by Her Majesty:—the Duke of Buccleuch; the Earl of Lincoln; R. A. Slaney, Esq., M.P.; George Graham, Esq.; the late Sir H. Delabèche; Professor Lyon Playfair; Dr. D. B. Reid; Professor Owen; Captain W. Denison; Sir J. R. Martin, M.D.; James Smith, Esq.; Robert Stephenson, Esq.; and William Cubitt, Esq.

The commission issued two general reports, besides special or local reports from particular members. The "Report on the State of Lancaster," 8vo, 1845, is by Owen. It has been followed by a system of water-supply and drainage which is regarded as exemplary, and has been attended with marked diminution of disease and death amongst the "wage-classes," as Owen usually designates the "working-classes," or "lower orders." The termination of the labours of this commission was followed by the formation of a second "Commission, in 1846, for inquiring into the State of the Metropolis," of which Owen was a member, in association with Dr. Southwood Smith, Mr. Edwin Chadwick, and others. Two reports were issued by this commission, which terminated its labours in 1849. At the latter part of that year a commission was appointed to inquire into the live and dead meat-markets of London; including the late Right Hon. Sir G. C. Lewis, Bart., M.P.; the

Hon. Fred. Byng; Sir Harry Verney, Bart., M.P.; Sir James Duke, Bart., M.P.; Sir William Miles, Bart., M.P.; Professor Owen; and Mr. John Wood (Councilman of Aldersgate Ward Without).

Owen strongly advocated the suppression of intramural slaughter-houses; but a compromise was carried by the City Members, and these were retained, whilst the market itself, for live cattle, was suppressed. The consequence is that the streets of London continue on certain days to be obstructed and defiled by droves of oxen and sheep on their way from Islington to the slaughter-houses in the midst of the Metropolis. With the exception of the first, the above commissions were "unpaid." We infer from the fact of Owen's being the only name on each in succession that he showed business-like qualities, in attendance, and the preparation of the reports which recommended him to the Governments under which the commissions were issued.

Owen took an active part on the committees for the arrangements, classification, and other preliminary work towards carrying out the Prince Consort's grand idea of an "Exhibition of the Works of Industry of all Nations." He accepted the office of Chairman of the Jury IV., "Raw Materials from the Animal Kingdom," etc.; he contributed an elaborate report on the subjects and awards of his jury, published in the official volume, and, at the suggestion of H.R.H. the Prince Consort, Owen delivered at the Society of Arts (Dec. 16, 1851) the lecture on "Raw Animal Products and their Uses in Manufactures."

On the organization of the "Exposition Universelle" at Paris, in 1855, Owen was requested to act on the Jury XI., for a similar class of objects (Alimentary Substances) as in 1851. The Prince L. Lucien Bonaparte was the chairman; he appointed Owen his vice-chairman, and on the arrival of Owen in Paris, resigned to him the office. In the 'Notes on Objects in the Paris Universal Exhibition,' furnished to the Board of Trade, octavo, 1855, the section on "Alimentary Substances" is from the pen of Owen. In the 'Admiralty Manual of Scientific Inquiry' the section "On Zoology," containing instructions for collecting and preserving animals, was confided to Professor Owen, and has been published as a separate treatise (12mo, 1859).

In 1858, Professor Owen was President of the British Association at its meeting at Leeds, having always been one of its most

active and influential members. He was succeeded in the Presidential Chair by H.R.H. the late Prince Consort, at Aberdeen. We need not say his address was an excellent one. It gives a lucid sketch of the progress and state of zoology, physiology, and palæontology, and the astronomical, mechanical, and other physical sciences were not overlooked by this great master of Natural History. The application of scientific principles to practical purposes is also elucidated, and the claims of science to administrative countenance and support were boldly advocated.

Since his appointment, in 1856, to the office of Superintendent of the National Natural History Collections, he has persistently and consistently advocated an extension of space for their display. In his series of Annual Reports, and in a special one with a plan, printed in a return ordered by the House of Commons, 16th March, 1859, are assigned the grounds on which the estimate of a space of five acres is founded for such increase as may be expected to the Natural History Series in the next thirty years, for the proper display of a Natural History Collection worthy of the commerce and rank of our country. His views, although at first deemed excessive, have been so entirely confirmed by the subsequent calculations and operations of Agassiz and other able naturalists, and the estimates for other museums, that no question is now made on this point. To the proposed transference of the National Collections Professor Owen has only so far assented, that believing the ground at Bloomsbury would cost more than any Chancellor of the Exchequer would be willing to apply to Parliament to expend, he considers the advantages to be gained for science by adequate means of display, so great and so pressing, that it would be desirable to have the requisite space in any accessible locality. Professor Owen's views on this subject are set forth in detail, with plans, in his work 'On the Extent and Aims of a National Museum of Natural History,' octavo, 1862. It is to be hoped that this question may soon receive a favourable and final consideration in Parliament, and that Professor Owen may be preserved to us, with health and strength, to realize his grand idea of a National Museum of Natural History.





Photographed by James Hawkins & Co. Boston, 1857

COVENTRY PATMORE.

MR. COVENTRY KERSEY DEIGHTON PATMORE was born July 23rd, 1823; he is the son of the late Mr. Peter George Patmore, author of 'The Months,' 'Chatsworth,' 'Literary Reminiscences,' etc., who was one of the earliest contributors to 'Blackwood's Magazine,' and the intimate friend of Charles Lamb, Hazlitt, Barry Cornwall, Plumer Ward, and various other writers of the last generation.

Coventry Patmore's early education was in great part conducted by his father, to whose accomplished taste in poetry, and strict but appreciative criticism of his son's early verses, that son in his maturer age attributes whatsoever artistic merit he himself discovers in his poetry.

For some two or three years he pursued the study of mathematics and chemistry with much ardour, the first impulse as to his career in life being towards science. During a subsequent period the Church was his intended profession, but his hopes in this direction were frustrated, firstly through the difficulty experienced by his father in providing him with the needful University education, and secondly through his own uncertainty as to the true position of the Church of England. He did not, however, abandon these studies until he had accumulated a stock of Scriptural and theological knowledge which materially assisted him in his subsequent writings, and which has tended to give his principal work that gravity of intention which distinguishes it from other poems on similar subjects.

In 1844, whilst his entering Holy Orders was still a matter of uncertainty, Coventry Patmore published his first volume of 'Poems,' which, although it met with much favourable notice

from the critics, nevertheless provoked a furious onslaught in 'Blackwood's Magazine.' The most important result of the publication of this volume, at least in reference to the career of the young poet, was, that, unsolicited, an eminent statesman offered to obtain for him some public employment which should relieve him from the necessity of making literature his principal means of livelihood. Thus, probably, the production of 'The Angel in the House' is ultimately, although indirectly, due to the thoughtful kindness of this nobleman.

Unquestionably, however, its direct cause was owing to the poet's marriage with Miss Emily Andrews, the daughter of the Rev. Edward Andrews, LL.D. This lady appears, from the dedication of the poem and a note appended to an edition of it which was published after her death, to have been not only the inspirer of the work, but to have constantly assisted its progress by her suggestions and criticisms.

Whilst still in the heyday of her youth and beauty, this lady, after a long illness, died, leaving her husband six children, and the consolation of having honoured her by his works to the fullest of his powers.

The 'Poems' published in 1844 were succeeded, after a period of nine years, by 'Tamerton Church Tower.' This volume consisted mainly of experiments and studies toward the chief work of the writer's life, 'The Angel in the House.' This graceful and carefully elaborated poem had already been some years in progress. It has been published in four separate parts, the first in 1854 and the last in 1862, only a few months previous to the death of the poet's wife.

To this beautiful and tender delineation of high-minded, noble-hearted, Christian conjugal affection, 'The Angel in the House,' Ruskin refers in the appendix to his 'Elements of Drawing,' when, enumerating the poetical works of the best English and American authors, he observes, "'The Angel in the House' is a most finished piece of writing, and the sweetest analysis we possess of modern domestic feeling."

To the above we may add, that the work which Dante, Petrarch, and Camoens did for their age and nations in the celebration of their ideals of female beauty and excellence, Mr. Patmore may without untruth be said to have done for the nineteenth century.

“ There lies before his constant mind
 An image, time-endear'd, of one
 Who is to him all womankind ;
 Honoria call her ; she confers
 Bright honour when she breathes his name.”

And around this cherished image, the loving husband and graceful poet has created a poetical world, filled with the refinements and ennobling influence of English domestic life. The prototype of “ Honoria ” was essentially his muse, his Beatrice, his Laura, his Catherine, and in the poet’s own words we will give the origin of the poem which began in the love of this lady and has closed in the unspeakable sorrow of her death. The poet, Felix Vaughan, and his wife, are conversing about the subject of the poem which he is about to commence. Honoria suggests the heroic deeds of “ Prince Arthur ” or the “ Fall of Jerusalem,” but her husband observes,—

“ Neither : your gentle self, my wife,
 And love, that grows from one to all.
 And if I faithfully proclaim
 Of these the exceeding worthiness,
 Surely the sweetest wreath of Fame
 Shall, to your hope, my brows caress ;
 And if, by virtue of my choice
 Of this the most heart-touching theme
 That ever tuned a poet’s voice,
 I live, as now I dare to dream,
 To be delight to future days,
 And into silence only cease
 When those are dead who shared their bays
 With Laura and with Beatrice,
 Imagine, Love, how learned men
 Will deep-conceived devices find,
 Beyond my purpose and my ken,
 An ancient Bard of simple mind !
 You Sweet, his Mistress, Wife, and Muse,
 Were you for mortal Woman meant ?
 Your praises give a hundred clues
 To mythological intent !
 And, severing thus the truth from trope,
 In you the Commentators see
 Some Faith, some Charity, some Hope.
 Some, wiser, think you all the Three.”

In the following lines the poet expresses the chivalrous and

ardent love for womanhood which has ever dwelt in his heart, and for the graceful expression of which womanhood will ever remain his grateful debtor.

“ I think with utterance free to raise
 That Hymn for which the whole world longs,
 A worthy Hymn in Woman's praise ;
 A Hymn bright-noted like a bird's,
 Arousing these song-sleepy times
 With rhapsodies of perfect words,
 Ruled by returning kiss of rhymes,

And were such post to seek I'd ask
 To live her Laureate all my life.
 On wings of love uplifted free,
 And by her gentleness made great,
 I'd teach how noble man should be
 To match with such a lovely mate ;
 And then in her would move the more
 The woman's wish to be desired,
 (By praise increased,) till both should soar,
 With blissful emulations fired.
 And, as geranium, pink, or rose
 Is thrice itself through power of art,
 So might my happy skill disclose
 New fairness even in her fair heart ;
 Until that churl should nowhere be
 Who bent not, awed, before the throne
 Of her affecting majesty,
 So meek, so much unlike our own ;
 Until (for who may hope too much
 From her who wields the powers of love !)
 Our lifted lives at last should touch
 That blissful goal to which they move ;
 Until we find, as darkness rolls
 Far off, and fleshly mists dissolve.
 That nuptial contrasts are the poles
 On which the heavenly spheres revolve.”

In this age of feverish hurry, and of rapid publication of rapidly conceived and rapidly executed works, honour is due to Mr. Patmore for the respect which he has shown to the public in the care with which he has matured his poems, and in the patience and self-restraint which he has exercised in giving them forth to the world, as shown in the long periods which have elapsed between the date of their respective publications.

The death of the Poet's wife appears, from a note appended to a subsequent edition of the whole poem, to be considered by himself as closing his career as a poet, since he thus expresses himself:—"The plan of 'The Angel in the House,' as it was schemed more than fourteen years ago, included a final section on the subject of the hope which remains for individual love in death. It is well, perhaps, for the interest of poetry in this great and hitherto unapproached theme, that my weak voice has been hushed. I no longer have at every step the needful encouragement of an approval which was all that my heart valued of fame. I can no longer feel that lively pleasure in the perfection of verbal expression for its own sake, without which such perfection cannot be attained; nor have I the aid of a criticism to which, I am bound to confess, now that the critic does not forbid the confession, that every page of the foregoing work is more or less indebted for such truth or grace as it may have."

In the intervals of leisure remaining to him after the discharge of his official duties as one of the Librarians of the British Museum, and the composition of his principal work, Mr. Patmore has contributed numerous articles to the 'Edinburgh,' 'North British,' 'National,' and 'Saturday' Reviews. These articles almost exclusively relate to art, especially to architecture, a branch of the fine arts to which he has given considerable study.

Mr. Patmore has also published a volume of poetry selected for children, entitled 'The Children's Garland.'

After remaining a widower for some years, Mr. Patmore married a second time, and, having resigned his post in the Museum, he now resides at Buxted Hall, a property which he has purchased near Uekfield, on the borders of Sussex.





Mr. J. H. [unclear] [unclear] [unclear]

WILLIAM MAKEPEACE THACKERAY.

NOTWITHSTANDING the assertion of Pope, that the life of a wit is a warfare upon earth, there are examples of wits who have lived as quietly as other people. The author of 'Vanity Fair' was one of them. His life was quiet and uneventful, although he held a very high place amongst the wits of his time. The personal career of William Makepeace Thackeray was simply that of a private gentleman, emphatically marked by the special characteristics which are popularly understood to distinguish the English variety of the species. His biography yields no materials out of which the most lively imagination could manufacture a striking narrative. The action of the life-drama of which he was the hero is entirely mental; and if it be asked what manner of man he was, and wherein lay the difference between him and the crowds of educated and intelligent gentlemen who, like him, have passed through the usual curriculum of the university, the clubs, and the *salons*, and who, when he had attained celebrity, still haunt the shadowy places in society, the inquirer must simply be referred to his writings.

To the bleak wolds of Yorkshire contemporary biographers have traced the family from which William Makepeace Thackeray was descended. His great-grandfather was Dr. Thackeray, Head Master of Harrow School, an excellent scholar, who is best known and remembered as having introduced at Harrow the Eton system; his epitaph was written by his pupil, Dr. Parr. There are numerous descendants of Dr. Thackeray in the Church and in the Indian Service, and traces of the influence of his family connections are found in many of the writings of the subject of this memoir.

Thackeray's father, and his grandfather before him, held civil appointments in India, and the novelist was born at Calcutta in 1811. India, however, had no further claim upon him than that of having given him birth. He was bred and trained under English skies, receiving the rudiments of his education at the Charterhouse, which was then presided over by the late Dr. Russell, who had the honour of launching into the world several pupils who ultimately won their spurs in different walks of life. Mr. Thackeray afterwards went to Cambridge; but at the end of two years he left the University without taking out a degree.

The literary foundations which were thus laid do not appear to have exercised much influence over his early tastes, or to have guided him in the choice of a pursuit. Art, and not literature, was the mistress to whom he offered up his first love. His ambition was to become a painter. He resembled Hazlitt in this particular, that his passion lay in one direction, and his power in another. But there the comparison ends. Hazlitt failed; and Thackeray gave abundant evidence of a faculty for art which, with perseverance, must have achieved success. He was so much in earnest about it upon leaving the University that he made a tour to Italy, and to Rome, where for some time he led the most delightful of all lives, known only to the enthusiastic student who, with easy resources at his command, is master of sufficient leisure to enable him to dream away whole days in the studios, listening to the talk of artists, and watching the canvas growing into life under their hands.

That luxury of thoughtful idleness, in which fancy builds up a future never destined to be realized, was of short duration. Rome was exchanged for London, and the palette was abandoned for the pen. How this transition came to pass is of less moment than the fact that the embryo artist had now become an author, and that, instead of following the course to which his inclination led him in the first instance, he occupied himself in working out the new vein which he had subsequently discovered, most probably by accident.

The early labours of men who have finally achieved distinction, present obvious materials for critical speculation, but they can seldom be traced with certainty. The difficulty is greatest in the case of writers who, like Mr. Thackeray, began in the journals,

and who had long contributed to periodical literature before they obtained a reputation which made it worth their while to count up their fugitive productions. It is by no means unlikely that heaps of articles may have been published by Mr. Thackeray in the commencement of his literary life, which he himself forgot, and which, from the nature of the form which they took, will never be recovered. He is said to have been a writer in the 'Times' when that journal was under the editorship of Barnes; and at a later period he was a constant contributor to the 'Chronicle,' before the traditions of the age of Perry had quite passed away. Of these contributions we know little, except that they embraced a wide variety of subjects, and that criticisms on books and elaborate essays on art were mingled with leading articles on society and politics.

It was in 'Fraser's Magazine' that, under the pseudonym of 'Michael Angelo Titmarsh,' the author of 'Vanity Fair' first became a recognized power in periodical literature. The power was not of a kind that always succeeded in conciliating the good-will of the reader. The papers of Michael Angelo Titmarsh were tinged with what seemed a sinister spirit of sarcasm, which gave great offence in some quarters. But everybody acknowledged the originality and, so to speak, depth of their humour; while a better knowledge of the writer, and the fuller development of his genius, enables us now to discover in the quips and cranks of Mr. Titmarsh a wiser purpose and a kindlier intention than anybody was then disposed to give him credit for.

To that period belong several volumes of travels, embracing Ireland, France, and the East, and written in a vein as unlike any other book of travels, as travels are unlike epic poems. The paramount interest of such works as the 'Paris Sketch-book,' the 'Irish Sketch-book,' and the 'Journey from Cornhill to Grand Cairo,' arises from the circumstance that they could not have been written by any one else, and that they bear the visible impress of their authorship. Marked by a keen insight into character, a quick appreciation of the ridiculous, and a humour at once subtle and brilliant, they are by no means of equal merit, nor are they sustained at an equal height throughout. But, although we could not have predicted from any of them the series of famous works by which they have been succeeded, it is easy to perceive in them the germs of something higher than themselves. Mr. Thackeray

seemed at this time to be playing with his resources, and to be pruning his wings for higher flights. His contributions to 'Punch' were more or less preparatory exercises; and the 'Snob Papers,' 'Jeames's Diary,' and the 'Fat Contributor,' may be regarded, like the 'Kickleburys on the Rhine,' and other sketches from life, as rough studies for the larger pictures that were to be afterwards executed by the maturer judgment of the experienced artist.

The opening number of 'Vanity Fair' appeared in 1846. It is said to have been rejected by the first publisher to whose opinion it was submitted; but it soon had its revenge in full. The town felt that there was a capable hand in its pages before it had run into its third number, and six months had not elapsed when the author took his place amongst the foremost novelists, not of our day alone, but of our language. The progress of the work gradually unfolded a greater variety of powers than had been previously combined in a story of modern life, and Waterloo divided the applause of the critics with Becky Sharpe and the dens of fashionable life. The severity of the satire in 'Vanity Fair,' and in all the subsequent novels by the same author, is vindicated by its justice. Nor is there any more conclusive test of the effect left by these works upon the public mind than the fact that Mr. Thackeray was familiarly known in his own generation not as the "Great Satirist," but as the "Great Novelist."

'Pendennis' succeeded 'Vanity Fair,' but cannot be said to have reached its excellence. Comparisons of this kind, however, involve questions of taste very difficult of decision; and, in spite of abstract canons of criticism, readers will be found who maintain predilections for which they cannot render a satisfactory reason. Upon the merits of the next novel, 'Esmond,' nearly all classes of readers are agreed. Even they who hate Beatrix, and do not like the complexion of the narrative, and who think that the structure is a mere piece of affectation, like a modern young lady dressed up in stiff brocade and Elizabethan lace, are compelled to admit that the English is pure and idiomatic. In this respect 'Esmond' is a remarkable and instructive work; it stands apart, in our time, for the beauty of its diction. Mr. Thackeray's style unites many of the highest excellences of our best writers, and it is shown in its perfection in 'Esmond,'—strength, ease, and simplicity are amongst its conspicuous qualities; there is no

vanity of manner, no false pomp of phraseology ; the expression is everywhere clear, direct, and resonant, and all without the slightest appearance of effort.

The 'Newcomes,' the 'Virginians,' the 'Adventures of Philip,' and 'Lovel the Widower,' followed 'Esmond;' and at intervals appeared the 'Humourists,' and the 'Four Georges,' which formed the substance of lectures Mr. Thackeray had delivered in England and America. Out of all these works, the character of Colonel Newcome will at once come to the mind as the prominent figure. Had Mr. Thackeray produced no other creation, it would have acquired for him a permanent place amongst our great writers of fiction. It is as perfect in its way as Don Quixote or Parson Adams,—a thorough gentleman, with a tender and loyal heart.

Judging from the verdicts of posterity in other cases, 'Vanity Fair' seems to us the most likely of all the novels to maintain its reputation. The work that is most compact and direct in treatment, that is nearest to general truth, and has most of the permanent elements of life, and least of the accidents of time and place, usually outlives its contemporaries. Of De Foe's novels and semi-novels, 'Robinson Crusoe' is the only one known to the mass of readers ; and, although 'Amelia' will probably always find a corner in choice libraries, and 'Jonathan Wild' is still occasionally talked of, Fielding survives mainly in 'Tom Jones,' which holds its ground by virtue of its constructive skill, unity, wit, and profound knowledge of human nature. For similar reasons, a long tenure of popularity may be anticipated for 'Vanity Fair;' it is the most complete, varied, and artistic of Mr. Thackeray's novels, displays more power in different directions than any of the rest, has more story in it, and is less broken up by excursions and digressions. We do not expect that this comparative estimate will carry universal assent. Many circumstances combine to distract opinion in the lifetime of an author, and to produce a diversity of judgments even for some time after his death ; and hence each novel has its own circle of admirers, who set it above the rest. We have heard that Lord Macaulay considered 'Pendennis' the best of the series ; and if the constituencies of the circulating libraries throughout the country could be polled for their favourite, there is no doubt that the 'Newcomes' would run away with a large proportion of the votes.

The fault which most people find with Mr. Thackeray's novels is that the story is less attended to than the humour and wisdom of which it is the vehicle. The old complaint over again—the half-pennyworth of bread to the ocean of sack; but such sack! Who would willingly relinquish those delectable bits of egotism, and snatches of wandering gossip by the roadside, for the sake of getting on a little faster with the incidents? Yet it is indisputably true that you must occupy your platform with action, if you would keep your audience awake, and that you must interest your readers in your plot if you desire to interest them in your characters, unless you are master of exceptional powers of some kind, or have some exceptional design to execute.

The 'Humourists' and the 'Four Georges' are pure literary and historical studies; and they are the only works in which Mr. Thackeray found full scope for his scholarship and critical taste. They bring together, with singular felicity, all those minor lights and shadows which history and biography generally consider beneath their dignity, but which are of the last importance to the true delineation of character. Many readers will be of opinion that the author's judgment is not always right; but differences on these and other points cannot render them insensible to the grace, geniality, and wit which abound in these volumes.

Mr. Thackeray was the original editor of the 'Cornhill Magazine' for about three years from its first starting in January, 1860; and he retired from its duties only a few months before his lamented death.

To Mr. Thackeray's connection with the 'Cornhill Magazine' we are indebted for the 'Roundabout Papers,' which, however, have not satisfied the public so well in their collected form as they did singly, when they appeared month by month. They are nevertheless amongst the most pleasant and characteristic of all Mr. Thackeray's writings.

Perhaps we should note as an incident in Mr. Thackeray's life that he once (in June, 1857,) contested in the Liberal interest the representation of the city of Oxford, and that he was defeated by the Right Hon. Edward Cardwell.

Mr. Thackeray died very suddenly at his residence at Kensington Palace Green, on the 24th of December, 1863, and was buried at Kensal Green Cemetery, his funeral being attended by a large

WILLIAM MAKEPEACE THACKERAY.

circle of friends, and by many persons of eminence in the literary world. A monument has been erected to his memory by his former schoolfellows and other old "Carthusians," in the cloister leading into the chapel of the Charterhouse. He left behind him a widow and two daughters, one of whom has recently (1867) been married to a son of the late Right Hon. Sir James Stephen.





Photograph by James M. Lewis 20 Park St. N.Y.

THE RIGHT REV. CONNOP THIRLWALL,
LORD BISHOP OF ST. DAVID'S.

THE name of this distinguished historian and eminent prelate will at once associate itself in the mind of the reader with the highest order of intellectual movement which has taken place during the last thirty or forty years, whether in the world of letters or of religious thought. His first introduction to the literary republic may indeed be placed at a far earlier date, and it is curious to mark, in this instance, a rare example of juvenile precocity sustaining its early promise, without failure, throughout a lifetime. In the year 1809 was published a small volume, entitled, "Primitiæ; or Essays and Poems on various subjects, religious, moral, and entertaining, by Connop Thirlwall, eleven years of age." It was dedicated, by permission, to the Lord Bishop of Dromore. The preface was written by his father, the Rev. Thomas Thirlwall, M.A., who is described as "Minister of Tavistock Chapel, Broad Court, Long Aere; Lecturer of St. Dunstan, Stepney; and Chaplain to the Lord Bishop of Dromore." The volume is a collection of productions, wonderful enough, considering the age of the writer, and contains a frontispiece, with a portrait of the youthful author before photography was dreamt of, announcing that he was born on the 11th of February, 1797. His father was then resident at Mile End, and afterwards became Rector of Bower's Gifford, in Essex. From the preface to this little work, we learn that he had learnt Latin at three years of age, and could read Greek at four with ease and fluency; and the result proves that these early signs of great ability were such as to warrant the indulgence of the highest anticipations on the part of his parents and friends.

From home he was sent to the Charterhouse, and thence to Trinity College, Cambridge. At the University he became Bell's Scholar in 1815, and Craven Scholar in the same year. In 1818, he graduated as twenty-second Senior Optime, and First Chancellor's Medallist (the Classical Tripos not having been established till 1824). In the same year he became Fellow of Trinity, and was appointed Classical Examiner in 1828, 1829, 1832, and 1834. In 1824, he was called to the Bar at Lincoln's Inn, but withdrew from practice in 1828. From that date commenced Mr. Thirlwall's well-remembered career as Tutor at Trinity College, where he contributed as much as any one to found and promote the modern school of classical study for which that society is distinguished. A succession of scholars, from that time, treading in the footsteps and following the method of Thirlwall, have sustained the renown of the college, but to him mainly is due the honour of having struck out for it the path to eminence.

In 1831, an important work, the production of the joint labours of the late Julius Charles Hare and Connop Thirlwall, was given to the world. This was the translation of Niebuhr's 'History of Rome,' which produced a great and lasting effect upon English classical literature. This work was violently assailed by the 'Quarterly Review,' in an article to which the translators replied with a power of criticism and force of satire which put an end to all such attempts for ever. Mr. Thirlwall also took part, with his friend Hare, in conducting the 'Cambridge Philological Museum.'

The publication, in 1835, of the first volume of Mr. Thirlwall's 'History of Greece' made known to the world at large those powers and accomplishments, the observation of which had hitherto scarcely extended beyond the University. The medium by which this celebrated work was given to the public was, as everybody knows, Dr. Lardner's 'Cabinet Cyclopædia,' of which it forms a very important section. It is interesting to observe the terms in which, on the 12th of June, 1835, it was first announced. "The plan of the little work," it is stated, "begun in this volume has been considerably enlarged since it was first undertaken, and the author fears that a critical eye may be able to detect some traces of this variation from the original design in the manner of treating one or two subjects. He would be glad if he might believe that this was its only fault." The writer pro-

ceeds to state that there are two classes of readers to whom it is addressed: one, those who desire to have something more than a superficial knowledge of Greek history, but who possess neither the leisure nor the means of studying the original sources; the other, those who have access to the ancient authors, but who need an interpreter.

Mr. Thirlwall had doubtless been preceded, as he was followed, in his remarkable enterprise. He came upon the traces of Mitford, a writer, who, by his inaccuracy and partiality, roused not only the severity of the more accurate scholar, but the indignation of the more high-minded political partisan; and every reader remembers what sharp stings of satire are to be found in the notes of Thirlwall's History, whether he is castigating the want of political honesty, or merely the bad scholarship of his predecessor. A few other writers come in for a share of this discipline; and the general aim which seems to have animated the writer's studies and lent weight to his arm, may perhaps be gathered best from the following note to vol. iii. of the History:—"The high authority which Boeckh has so well earned by his learning and candour, entitles even a passing, and perhaps hasty remark of his, to more attention than is due to all the attempts, which for the last forty years have been systematically made in our own literature,—the periodical as well as the more permanent,—for political and other purposes, to vilify the Athenians." The eight volumes were published at intervals down to the year 1844. It would be in vain here to point to the various remarkable features of a work, which has been so long before the public, and which is so necessary to the pursuits of the scholar.

A pamphlet which was published in the year 1833, in favour of the admission of Dissenters to some University privileges, led to the removal of Mr. Thirlwall from the Lectureship at Trinity College. In 1834 he was presented by Lord Brougham, then Lord Chancellor, to the living of Kirby Underdale, Yorkshire; and on the death of Dr. Jenkinson, in the year 1840, he was elevated to the See of St. David's.

From that period the Bishop of St. David's has taken an active part in the deliberations of the House of Lords. His first vote was given on the 11th June, 1841, in favour of the Jews' Declaration Bill, a measure of relief of which he has always been the

advocate. His speech on that occasion was an admirable specimen of reasoning, in dealing with the various objections to the measure which were most strongly presented, and coming from a Christian bishop, whose motives and principles were alike unimpeachable, its effect was doubtless very great. Still, the consideration that the Bill would alter the Christian character of our institutions was too mighty to be got rid of for the present. In 1843, arose the question of the union of the Sees of St. Asaph and Bangor, and Lord Powis introduced a Bill for the purpose of preventing that union. The measure obtained the unflinching support of the Bishop of St. David's, although it was opposed by the Duke of Wellington and the Archbishop of Canterbury; but, notwithstanding the pleas that were strongly urged in favour of the interests of the Welsh people, the first Bill was withdrawn, and another in 1844 was decisively rejected. The result was the foundation of the See of Manchester. In the following year came the proposal, by Sir Robert Peel's government, for the endowment of Maynooth. The Bishop of St. David's speech in favour of the endowments is another instance of close and concentrated argument, amongst the whole train of which, perhaps, the most pointed question was the following:—"Will you do no good, because you cannot do pure and unmixed good?" These and similar reasons were ultimately successful in carrying the measure. As may be expected, the Religious Opinions Relief Bill, and the measures for the Repeal of the Corn Laws, found a supporter in the Bishop of St. David's. He spoke in favour of the measure introduced by the Marquis of Lansdowne, in February, 1848, for establishing diplomatic relations with Rome, and the speech is remarkable as containing laudatory expressions on the character of the Pope, whom he described as "actuated by the very genius of good sense, and influenced by a spirit of the most exalted patriotism." How speedily this eulogium became a dead letter, and the grounds for congratulation on the good sense and patriotism of the Pope were dissipated by the political storms of the same year, it is needless to observe.

A more important proposal was that introduced by the late Bishop of London, in 1850, for transferring the jurisdiction in appeals from the Ecclesiastical Courts upon matters of doctrine from the Privy Council to a bench of fifteen bishops. In the debate on this vitally interesting measure, the speech of the Bishop of St.

David's will again command our admiration for its wisdom and political foresight; we may add, also, its patriotism, when we remember that to speak against such a proposal required a thorough emancipation from episcopal prejudices. To the Marriages Bill, on the other hand, Bishop Thirlwall has always been strongly opposed, and his judgment has been, in this matter, signally borne out by the deliberate voice of public opinion. So in the debate on the Ecclesiastical Titles Bill in 1851, the Rescript of the Pope was recognized by him to be not only an insult to the country, inasmuch as it ignored the established rights of the Church, but an injury, in that it violated the law of the land, and invaded the Queen's prerogative. In 1853, the Bill for enabling the Canadian Parliament to deal with the Clergy Reserves in that country was passed, and was aided in its progress by the Bishop, who considered that its rejection would be neither honourable nor safe, this being a matter of local domestic interest to the Canadian people. In the debates on the Divorce Bill in 1857, the Bishop of St. David's, though he did not formally oppose the measure, declared that he looked forward to its operation with "strong apprehension and much anxiety," feelings which experience has undoubtedly justified. He opposed Lord Shaftesbury's hasty measure for amending the Religious Worship Act, Lord Lyttelton's Bill for the Subdivision of Dioceses, and Lord Ebury's proposals for the Revision of the Liturgy. On the other hand, he supported the Church of England Special Services Bill, he voted in favour of amending the Act of Uniformity as to the "assent and consent" of the clergy to everything contained in the Prayer Book, and he recommended in Parliament that the Burial Service Question should be referred to Convocation.

In the later religious movements of the day, the Bishop of St. David's has been frequently called upon to speak and act. In a series of triennial visitations to the clergy of his diocese, he has from time to time delivered charges, which discuss in his own masterly and philosophical style the questions which have stirred the Church and the religious mind of the country during the interval. Thus, the address in 1848 is directed in a great measure against 'The Theory of Development' of Dr. John H. Newman. That in 1851 enters into a consideration of the case of *Gorham v. The Bishop of Exeter*, in which the Bishop found no ground for alarm as to innovation of doctrine in the sentence of the Judicial Committee.

In 1854, the revival of Convocation was the subject brought before the clergy of the diocese, a project to which Bishop Thirlwall lent much support; and in the deliberations of that body since he has taken an active share. Three years later, a class of subjects, which have since powerfully aroused the attention of clergy and laity, began to exhibit itself. Dr. Rowland Williams, the Vice-President of St. David's College, Lampeter (of which the Bishop is the Visitor,) published a pamphlet, entitled 'Rational Godliness after the Mind of Christ, and the written Voices of His Church.' Inasmuch as this production appeared to some, in the language of the charge, "seriously to affect the supremacy and infallibility of Scripture as the Divine rule of faith and practice," its contents were formally brought before the notice of the Bishop by seventy clergymen of his diocese; and to this representation the more important passages of the charge are an answer. The Bishop declares, that whilst he should feel himself bound to resist to the utmost the introduction of error, he yet considers it to be no less a sacred and important duty "to respect and, as far as lies in me, to protect that freedom of thought, word, and action which the Church has hitherto granted to her ministers and members, and neither to make nor sanction an attempt to place it under any new restriction which she has not thought fit to impose." He proceeds to lay down that "no man is to be convicted of heresy on a construction of words which he may not himself admit;" and after referring to the belief which any one may entertain as to the doctrine of the plenary inspiration of Scripture, he adds: "When this individual consciousness is set up as the common measure of truth, to which all are required to conform under penalty of excommunication from Christian fellowship, it becomes an instrument of aggression on the rights of conscience, and an usurpation of the authority which belongs to the Church." He reminds his hearers finally that "the Church has pronounced no decision, laid down no definition on the subject." This memorial, and the reply which it called forth, are a very remarkable prelude to the astonishing agitation which was produced in 1860 by the publication of a volume of apparently anything but exciting materials,—the well-known 'Essays and Reviews.' This is a history which is familiar to every one of our readers, and it is only necessary to allude to it for the purpose of completing our narrative by mentioning those points on which the Bishop of St. David's has since declared him-

self. A writer in the 'Edinburgh Review,' in an article which appeared in April, 1861, had commented with some severity upon the proceedings of the Bishops, who, as will be remembered, in a private meeting held some short time before, had unanimously agreed publicly to censure the work in question. When Convocation met in February, 1863, the Bishop of St. David's took occasion to remark that the strictures of the reviewer had proceeded, in some respects, upon a wrong assumption, viz. that certain extracts from the book which were appended to the names of the original subscribers, had been before the Bishops when their names were affixed to the document. The Bishop declared that not one of the extracts was placed before them, and expressed his wonder at the reviewer's silence, to whom this error of fact had been long before communicated. This called forth a letter from the reviewer, which appeared in the 'Guardian' of February 25, 1863,—an important communication in many ways, not only as respects the Bishop, but as regards the history of the 'Essays and Reviews' movement. It then appeared that a correspondence had taken place between the Edinburgh Reviewer and the Bishop, in the course of which the former explained that the complaints of the 'Review' were directed, not to the fact of the Bishops' having selected certain passages on which to found their condemnation, but that they had left the public completely in the dark as to the grounds of their decision. The writer went on to say that he was glad to acknowledge his mistake in supposing that there was any abandonment of his Lordship's views as expressed in his introduction to Schleiermacher's essay; and, after hinting pretty broadly at the additional animosity which had been given to the conflicting parties in the agitation, by reason of the 'Episcopal Letter' of 1861, he appealed to the Bishop that he would continue to lend his powerful aid, "as in former times," to calm the popular agitation, and that he would deliver his "weighty judgment" in favour of the views now pronounced to be heretical.

The mention of Schleiermacher's essay was an allusion to the publication, in 1825, of 'A Critical Essay on the Gospel of St. Luke, by Dr. F. Schleiermacher, with an Introduction by the Translator.' The translator was long believed, and is now acknowledged, to have been Mr. Thirlwall, then a Fellow of Trinity College, Cambridge, and a layman, as the above-mentioned dates show. The importance of this introduction, which contains some

expressions to the effect that the "verbal inspiration of Scripture had long been abandoned by the learned," and showing the distinctions that had been drawn between the "inspiration of suggestion" and the "inspiration of superintendency," is, under the circumstances we have pointed out, less than it might at first seem. The preface to the book is not by the translator, but by the writer of the essay.

In a reply to this letter in the 'Guardian' of the 4th of March, the Bishop acknowledges himself to have been the author of the introduction, and with reference to the subject of which it treats he refers to his charge of 1857 as being the expression of his views on the subject, by which he wishes to abide.

On the more recent subject of the writings of Bishop Colenso, the views of the Bishop of St. David's will be best gathered from the charge delivered to his clergy at the visitation of 1863, in which the whole bearings of this question, considered in relation to the Church of England, are discussed.

It may be added, that Dr. Thirlwall is the author of many sermons, essays, and lectures on occasional subjects; that he has devoted much care and attention to the cause of education, in all its departments, and that in his diocese he will long be remembered as the first Bishop who for some centuries had ministered to Welsh congregations in their own language.





Photographed by James F. Ward & Co. New York

MARTIN FARQUHAR TUPPER, D.C.L., F.R.S.

MR. MARTIN FARQUHAR TUPPER, widely known as the author of 'Proverbial Philosophy,' was born July 17, 1810, at No. 20, Devonshire Place, in the parish of Marylebone. He is the eldest son of a medical man, highly esteemed in his day, and possessed of an extensive practice at the West-End, the late Martin Tupper, Esq., F.R.S., to whom a baronetcy was twice offered,—in the first instance by the Earl of Liverpool, in the second, under the administration of the Duke of Wellington. This honour was proffered to Mr. Tupper, not alone as a mark of distinction to himself, but also to his elder brother Peter, who had, during the Peninsular War, evinced great diplomatic ability, and to whom the title had been first presented, but by whom it had been declined, on account of his having no son.

The family of Tupper (spelt Töpfer in Germany, and Toupard in France and the Low Countries) is of ancient and honourable standing, and was originally German. During the persecution of the Lutheran Protestants by the Emperor Charles V., about the year 1548, the Töppers were exiled from Hesse Cassel; and Heinrich Töpfer, the immediate ancestor of the "Proverbial Philosopher," settled, in 1551, in Guernsey, where he purchased an estate, and where his descendants still rank as one of the "first families" of the island. Rodolph Töpfer, of German celebrity, is of the same staunch stock.

Those learned in heraldry tell us that the ancient armorial bearings of this family include the "Three Escallops Gules," dating from the Crusades.

During the reign of William and Mary, an ancestor of Martin

Farquhar Tupper, in the direct line of ascent, received from the sovereign a gold medal and chain, with the privilege descending to his heirs of wearing medal and chain before the king, and of bearing them on a canton in his coat of arms. John Tupper received this mark of distinction in recognition of an act of important service, rendered to the Crown at the risk of danger to life and limb. Recognizing the helpless condition of the French fleet, John Tupper conveyed intelligence of it to Admiral Russell, intelligence which led to the action and victory of La Hogue. This fact is slightly referred to by Macaulay in his History of England; but no mention is made of John Tupper, on his way to the British admiral, passing in an open boat through the midst of the French fleet, as it lay enveloped in dense fog.

A branch of the Tupper family sailed with the "Pilgrim Fathers" to the United States, where many of its descendants are still to be found. A Major John Tupper, an ancestor of the subject of this memoir, commanded the Marines at Bunker's Hill, after the death of Piteairn, and gained for the corps their crown and laurel, as recorded at the Horse Guards. It is related that "by a strange coincidence there was in Washington's army another Major Tupper (originally of the same expatriated stock), and it is known to the family that when the cousins met in opposite ranks, some courtesies generously proffered by the 'rebel' were indignantly refused by the royalist."

The future popular author received his early education at the Charterhouse, during the period when the late Rev. Dr. Russell filled the important post of Head-Master. In due course of time he was transferred to Christ Church, Oxford, where he took his degree of B.A. in 1832, of M.A. in 1835, and of D.C.L. at a more recent period, 1847. At Christ Church, as a member of the Aristotle class, he was a fellow-student of many distinguished men,—as the late Duke of Newcastle, the late Marquis of Dalhousie, the late Earl of Elgin, the Right Hon. W. E. Gladstone, and Professors Jelf, Hill, Doyle, and Vaughan.

Having taken his degree of M.A., as we have already seen, Martin Tupper became a student at Lincoln's Inn, and was called to the Bar in the Michaelmas Term, 1835. He has, however, never practised as a barrister. About the same period commenced Mr. Tupper's literary career. He appears to have contributed to the periodicals of the day, but his first important essay in literature was a small volume entitled 'Sacra Poesis.'

In 1837 appeared 'Proverbial Philosophy,' which had been composed in a lawyer's chambers in Old Square, Lincoln's Inn, during the year previous. This work, which has spread its author's name far and wide, met at first with but moderate success in England, whilst in America it was almost a failure. Within thirty years, however, it has passed through forty large editions in England, whilst nearly a million of copies have been sold in America. The annual sale of some 5000 copies still witnesses to its almost unexampled popularity.

In 1835 Mr. Tupper was united in marriage with Isabella, only daughter of A. W. Devis, Esq., by whom he has four sons and three daughters.

In 1845 Mr. Tupper was elected a Fellow of the Royal Society. He has received the gold medal for science and literature from the King of Prussia; he has likewise been honoured by marks of distinction from other potentates.

Mr. Tupper resides near Guildford, in the parish of Albury, upon his own property, inherited from his mother, a direct descendant of Colonel Marris, who, in 1648, gallantly held Pomfret Castle for Charles I. against General Lambert.

In 1839 Mr. Tupper published 'A Modern Pyramid to commemorate a Septuagint of Worthies,' being sonnets and essays on seventy famous men and women; in 1841, 'An Author's Mind,' containing skeletons of thirty unpublished books; in 1844, 'The Crock of Gold,' 'The Twins,' 'Heart, a Social Novel,' tales illustrative of social vices, and which passed through numerous editions; in 1847, 'Probabilities, an Aid to Faith,' giving a new view of Christian evidences; 'A Thousand Lines,' 'Hactenus,' 'Geraldine,' 'Lyrics,' 'Ballads for the Times,' 'Things to Come,' 'A Dirge for Wellington,' 'Church Ballads,' 'White Slavery Ballads,' 'American Ballads,' 'Rifle Ballads,' 'King Alfred,' a patriotic play; 'King Alfred's Poems,' translated from the Anglo-Saxon into corresponding English metres. In 1856, 'Paterfamilias's Diary of Everybody's Tour,' 'The Rides and Reveries of Æsop Smith,' and 'Stephen Langton,' a biographical novel, which seeks, with much graphic painting, to delineate Old England in the time of King John. He has also published 'Cithara,' a collection of lyrics headed by the 'Hundred Thousand Welcomes to the Princess of Wales;' 'Three Hundred Sonnets,' 'A Prophetic Ode;' and a multitude of fugitive pieces, both verse and

prose, which have been scattered through newspapers and magazines. His most recent productions have been 'Raleigh,' a play; 'The Antiritualistic Directorium,' a satire; and 'The Third Series of Proverbial Philosophy;' the whole work to be concluded by a fourth series, now understood to be in preparation.

The writings of Mr. Tupper, bearing the impress of an impulsive, enthusiastic nature, are, it is asserted, poured forth with exceeding ease and rapidity, and partake much of the character of improvisation. That Mr. Tupper's sympathy is readily excited by the interests of the day, is not alone evinced in his numerous writings, both in prose and verse, but also by the acts of his life, as for instance the encouragement given by him to Liberian colonization, his bestowal of a gold medal for the encouragement of African literature, and his active exertions in the Rifle Corps movement.

A notice of the life and labours of Mr. Tupper would scarcely be complete without some reference to the disfavour with which he has been almost universally treated by the writers of the public press, to a degree indeed which almost amounts to persecution. Whether Mr. Tupper's works appeal invariably to the highest order of intellect, it is unnecessary to inquire; but assuredly some respect is due to a writer who, in an age remarkable for intellectual activity amongst all classes, has appealed so successfully to the public mind, has provided it with innocent and elevating *pabulum*, and has enjoyed so wide-spread—and on that account it may be inferred—deserved popularity, a popularity for which the author may at all events claim to be but little indebted to contemporary criticism.





Portrait of Mrs. E. W. 20 West Street W.

THE REV. WILLIAM WHEWELL, D.D., F.R.S.,

LATE MASTER OF TRINITY COLLEGE, CAMBRIDGE.

WILLIAM WHEWELL was born, May 24th, 1794, in the city of Lancaster, where his father practised as a house carpenter. He was educated first at a grammar school in his native place, and afterwards at Heversham, whither he removed in order to qualify himself for holding an exhibition at Trinity College, Cambridge. He gained this exhibition, and commenced residence at Trinity in 1812. The College soon recognized in him the most promising man of his years. In due course he obtained a foundation, sizarship, and a scholarship. In his second year he gained the Chancellor's prize for the best English poem, on the subject of 'Boadicea.' In 1816 he graduated B.A. as second wrangler in the mathematical tripos, and held the same place in the Smith's Prize examination. The following year found him a Fellow of his college, and lecturer, as assistant-tutor, on mathematics.

The varied works which subsequently emanated from the subject of this memoir, prove the intimate connection of a mind constantly quickened by the impulses of intellectual force, and a body capable of being stirred, through every nerve, into activity, and fitted to endure long-continued and arduous labours without wearying. Few men have been endowed with the power of dealing with equal facility with the hard facts of mathematics, the close inductive processes of experimental science, the charms of "divine philosophy," and the wild wingings of fancy over the realms of poetry.

The earliest labours of Dr. Whewell are found in useful manuals of 'Statics and Dynamics,' and in a 'Mechanical Euclid,' which

has compelled the approval of even the German mathematicians. An 'Elementary Treatise on Mechanics' (1819), 'On the Free Motion of Points and on Universal Gravitation' (1832), and 'The First Principles of Mechanics,' published in the same year, are valuable contributions to our knowledge of Motion and Force. The sciences of mineralogy and chemistry were next the objects of his profound study, which resulted in the 'History and Philosophy of Inductive Science;' while the leisure of a busy life could find repose and pleasure in translating the 'Hermann and Dorothea' of Goethe, and in pouring forth the luxuriant wealth of his mind in words wedded to verse.

If we examine with care the intellectual world around us, we shall perceive that it is divided between two sets of thinkers, or two schools of philosophy. One of these assumes the existence of innate conceptions,—the reception, or rather the birth, of truth, without the aid of experience;—while the other gives to the mind the highest degree of activity and power, but insists on the acquirement of knowledge, by experience. One school belongs to the followers of Plato, who advanced the powers of the human mind to an almost prophetic condition, and uttered his truths, as it were, with a Divine voice. The other, following in the path which Aristotle trod, collects and groups and systematizes—carefully soliciting Nature to disclose her secrets, and admitting only this kind of sifted evidence in support of truth. On the one hand, the mind thinks out that which is, on the other hand, the result of great labour, in which all the senses are compelled into action.

To the first of these philosophies Dr. Whewell was wedded, and individually, he nobly supported its claims to high consideration. In his 'History of the Inductive Sciences' we find a chronological review of the steps of progress in each department of physical inquiry, advancing us steadily towards the high considerations which are involved in the 'Philosophy of the Inductive Sciences.' This work may be regarded as a fine example of the exercise of reason in its pure and proper field; it is a monument of human thought, a record of mental progress, and an indicator of the tract which promises most to the voyager on the ocean of knowledge.

In 1828, Dr. Whewell was named the Professor of Mineralogy at Cambridge; and to complete his knowledge of this department of natural science, he visited Germany. The school of Freyburg

attracted his attention, and he studied with assiduity the Cabinet collections of that city, and the mines in its vicinity. The beautiful Mineralogical Museum of Vienna was no less a source of pleasure and instruction to the Cambridge Professor and Tutor. His attention to this division of science led to his election as President of the Geological Society of London in 1836.

In 1830, Dr. Whewell published his opinions 'On a Liberal Education in General, and with particular reference to the leading Studies of the University of Cambridge.' The question of the value of mathematics, as conducive to the development of the intellectual powers, became shortly after this the subject of eager discussion, into which Dr. Whewell entered in a very able pamphlet, 'Thoughts on the Study of Mathematics as part of a Liberal Education.' In this he contrasted mathematics and logic, and endeavoured to establish the high and general importance of the former, by showing its superiority to the latter as a school of practical reasoning. The question proposed is, What is the best instrument for educating men to a full development of the reasoning faculty? and the answer given is, Mathematics—insisting that "mathematics are a means of forming logical habits better than logic itself."

The positions maintained by Dr. Whewell were very warmly contested by the logicians, but by no one with that power—and may we add, passion—which distinguished the reply to this pamphlet by the late Sir William Hamilton, of Edinburgh. This did not, of course, pass without a rejoinder from the chivalrous defender of the Cambridge system of education; and it is difficult—now that we can look with calmness on the combatants—to say whether the victory rests with the hero of mathematics, or with him who ever wielded his logical lance with a giant's power.

In 1834, Professor Whewell published his 'Astronomy and Physics considered in their Relations to Natural Theology.' In 1838, he gave the world his great work, 'The History of the Inductive Sciences from the Earliest to the Present Times.' In this book we have the first earnest intimations of a favourable leaning to the philosophy of Kant, and of dissent from the schools of Bacon and Locke. In fact, the history was written mainly to prove that science is not inductive; that we advance in knowledge by "the colligation of facts." "The particular facts are not merely brought together, *but there is a new element added to*

the combination by the very act of thought by which they are combined; the facts are known, but they are insulated and unconnected till the discoverer supplies *from his own store* a principle of connection. The pearls are there; but they will not hang together till some one provides the string." The 'History of the Inductive Sciences' should be read with the most thoughtful attention, and the study completed by a no less earnest perusal of the third book of Mill's 'Logic,' which may be regarded as the finest essay on induction in our language.

In 1838, Dr. Whewell was elected Professor of Moral Philosophy in the University of Cambridge; and in the same year we again find him discussing the question of the best means of imparting knowledge, in his pamphlet, 'On the Principles of English University Education.'

In 1841 he succeeded Dr. Wordsworth in the Mastership of Trinity; and nobly did he uphold the pre-eminence of that college to the end of his days.

Supporting his position as Professor of Moral Philosophy, the ever-active mind of Whewell produced 'The Elements of Morality, including Polity' (1845), 'Lectures on Systematic Morality' (1846), and 'Lectures on the History of Moral Philosophy in England.'

Mr. Mill, in his chapters on the "Logic of the Moral Sciences," proposed the name of Ethology as signifying the science of character to distinguish it from Psychology, the science of the elementary laws of mind. The former he would regard as a purely deductive science; the latter being, as the author of 'Logic' would express it, a science of observation and experiment. Although Dr. Whewell deals most largely and logically with these two divisions of Moral Science, he treats the study of both as being equally dependent on the deductive powers of the mind rather than its inductive experiences. In this he differs from all those who have followed Locke, and allies himself to the band of earnest thinkers who regard Kant as their master amongst moderns, and Plato as the early prophet of their creed.

The great work of Grotius—'De Jure Belli et Pacis'—was edited by Professor Whewell in 1854, with a translation and copious English notes, which display in a striking manner his encyclopædic knowledge. Previously to the publication of these works, which we have named as having a direct connection with the Chair

of Moral Philosophy, the sequel and extension of the 'History' was produced as 'The Philosophy of the Inductive Sciences founded upon their History.' Here it is not possible to give the briefest analysis of this fine effort of thought, which aims—not always, as we think, successfully—to exalt the thinking mind above all the advantages of experience. "Experience," says Dr. Whewell, "must always consist of a limited number of observations; and however numerous these may be, they can show nothing with regard to the infinite number of cases in which the experiment has not been made. . . . Truths can only be known to be general, not universal, if they depend upon experience alone. Experience cannot bestow that universality which she herself cannot have, nor that necessity of which she has no comprehension."

These books have lately been issued in a new and expanded form, and with titles more consistent with the train of thought which pervades them. These are—'The History of Scientific Ideas,' 'Novum Organum Renovatum,' 'The Philosophy of Discovery.' In these works there is one expressed thought, which should take deep root and grow into a sublime tree; but it is unfortunately checked in its development by the luxuriant growth of less ennobling plants. Another one of England's greatest philosophers says, "Science has scattered her material benefits so lavishly wherever she has been in presence, that no small number of her followers, and all the multitude, have left off gazing on the resplendency of her countenance *in their eager scramble for her gifts.*" Dr. Whewell is not of the multitude. "I have not, therefore, aimed," he writes, "at imitating Bacon in those parts of his work in which he contemplates the increase of man's dominion over nature as the main object of natural philosophy; being fully persuaded that, if Bacon himself had unfolded before him the great theories which have been established since his time, he would have acquiesced in their contemplation, and would readily have proclaimed the real reason for aiming at the knowledge of such truths to be—that they are *true.*"

'Indications of the Creator' was an answer given by Dr. Whewell to the humiliating philosophy of the 'Vestiges of Creation.' In the 'Indications' there are beautiful outbursts of a true religious feeling, interwoven with the thoughts of a philosopher who is making his incursions into the realms of unexplored truth, to gather the evidences which are required to destroy the specious

and, as he conceives, dangerous arguments of his opponent. The same spirit which guided Dr. Whewell in the various philosophical labours to which we have referred, and that unchained, and too often irrepressible fancy, which is ever and anon flashing forth its meteoric beams, reached a culminating point in 'The Plurality of Worlds.' This work was always considered as coming from the pen of the Master of Trinity, and the authorship was never denied. There are internal evidences which appear to us to fix it unmistakably upon him. At the same time we are not disposed to consider the argument of the plurality of worlds as having been the creed of its author. A giant plays with an idle thought as the ambidextrous conjuror deals with his gilded ball, and he bewilders those who can see only circles of light in its rapid passage from hand to hand. Upon a premiss of the most unsubstantial character genius has playfully built a superstructure which looks like the temple of the living truth.

In 1859 Dr. Whewell published 'The Platonic Dialogues for English Readers.' In this work the matter and the manner of the dialogues is given with all fidelity, but numerous prolix and obscure passages are abridged, and this process peculiarly fits the book for those for whom it was intended. Dr. Whewell assures us that this work had been the loved labour of many years.

We have named already a sufficiently varied series of works as the offspring of one human brain. To these we have yet to add 'Architectural Notes on the Churches of Germany,' and a translation of Auerbach's 'Professor's Wife.' Dr. Whewell was also the editor of Butler's Sermons, and of Newton's 'Principia.'

Dr. Whewell was twice married; first, in 1841, to Miss Cordelia Marshall; secondly, in 1858, to Lady Affleck, a sister of Robert Leslie Ellis, but was left a widower a second time in 1865.

He died March 5th, 1866. His death was occasioned by an accident; he was thrown from his horse at Cambridge, and concussion of the brain ensued. He was buried in his college chapel.

