NEW BOOKS.

Mr. Darwin earned the gratitude of, or rather we ought to say increased the debt of gratitude due to him by all those who take an interest in the creatures that live and move and have their being on this earth of ours by his book on Worms. The title runs thus—"The formation of vegetable mould through the action of worms, with observations on their habits," and it is most thoroughly justified by the contents of the book. The most unlearned (scientifically speaking) can read and appreciate it to the full. A great many years ago Mr. Darwin's attention seems to have been called to the action of worms on the earth's surface, and in 1837 he read a paper on the subject before the Geographical Society of London; but since that time he, with the assistance of his sons, continued making the most patient and careful experiments, and gathering most minute information, the results of which are given in the work before us. The man who could conceive and carry out experiments extending over forty-four years or move in one single and apparently humble branch of investigation deserves the gratitude and the admiration of all. Mr. Darwin was first led to this enquiry by noticing the fact that after a while all things lying on the surface of the earth got buried often many inches deep, and he has most conclusively proved that this process of burial is due to worms. His experiments, as has been said, stretch over a great number of years, and have been very various in kind—from keeping the creatures in pots in his study to the devotion of portion of a field to special treatment and observation. Every one is familiar with the common earthworm, though every one is by no means cognizant of the fact that there is an enormous number of different species. Most people, moreover, look upon worms as stupid, nasty, or even noxious things, existing chiefly for the annoyance of the gardener and the delight of birds. It would be equally reasonable for some race of giants to assume from lack of observation that the end and aim of man's existence was to eat, drink, and die—with this difference, though: many men do live aimless lives, but worms never. It is in countries where the soil is generally damp that worms are mostly to be found at work, though they are to be met with in almost every country in the world except the very driest. The average number of worms in an acre of garden land has been taken at 53,767, but Mr. Darwin only allows half this number to average land, and even that number seems fabulous. With those figures before us we begin to understand what an amount of work is going on under the ground. The worm's body is made up of a very great number of small cylindrical segments covered with tiny bristles. It is by the aid of these bristles that the worms move along. They can also take hold of things both with mouth and tail, or, more correctly speaking, they can fix their tail on the earth, and thus move themselves back or forward very quickly; with the mouth lay hold of leaves, small stones, or whatever they require, and drag them along. In worms the intestines supply the place of teeth, which are absent; the digestive muscles are very strong, and the process of assimilation is further assisted by the secretions from six pair of glands, which produce a great quantity of carbonate of lime. The worm is the only animal known to possess such glands. Worms have no respiratory organs, no eyes, and no hearing apparatus. Respiration is effected through the skin. There does not seem to be any perception of sound whatever, but one portion of the body is very sensitive to light in direct ratio with its intensity. If, however, this part of the body be protected from the light then there is no sign given of sensibility. Hence it has been suggested that these cerebral ganglia, as they are called, are the last traces of the possession of eyes by former generations of worms—this of course is the newest conjecture; the sense of smell is extremely limited; sensibility, however, to movement or contact is very highly developed. When pots containing worms were placed on the piano and a note struck the commotion in the pots was great, and the least breath of air produces an instantaneous effect. From this we may conclude that worms have a well-developed nervous system. Let us hope they do not suffer from neuralgia. Worms are not at all particular as to what they eat, though they have their favourite dishes. Their staple food, however, appears to be earth. It has been thought that they eat earth as ostriches eat stones, for the purposes of digestion, but Mr. Darwin considers it proved by certain experiments and collected evidence that they derive their nutriment mainly from the earth they swallow during its passage through their bodies. It is this process which leads to the results so ably dwelt on by Mr. Darwin. Every one is aware that in untilled ground are to be noticed little mounds of fine loose earth with holes in the centre. These mounds are formed of the earth which is ejected by worms, briefly termed "castings." It will be at once seen what a system of upheaval is thus constantly being carried

of upheaval is thus constantly being carried on, for however deep the worm may go for his meal of earth—and the depth is often 4 or 5 feet—ejection always takes place on the surface. Thus the lower layers of mould are being constantly—day by day and year by year—brought to the top, and the surface of the earth covered by an ever-deepening layer of animal deposit. By careful experiment Mr. Darwin has been able to place most surprising figures before us. In one field the deposit was equal to 14·58 tons per acre per year. In another place the amount was equal to 18·12 tons per acre, and so on in other places. In ten years that deposit if spread out evenly would reach a depth of about 1½ inches. Each worm is estimated to bring thus to the surface annually about 20 oz. A new light is thus thrown on that apparent tendency things have to bury themselves, and Mr. Darwin adduces a number of examples proving the effects of this wonderful work of the earth-worm. All must in future look upon this humble creature as a true benefactor of mankind in thus renewing the surface of the earth. Mr. Darwin has lately passed away from among us, and this little book, full of the evidence of his great patience, perseverance, and knowledge, is no unworthy coping-stone to a long life spent in the pursuit of knowledge.

The revival of learning all over Europe after the middle ages is a most interesting chapter of history, and in the case of Italy the interest is enhanced by the memory of her greatness in the past and by the fact of her being then as now the seat of the successors of St. Peter. In two volumes or parts, under the title of "Italian Literature," Mr. Symonds has completed his work on "The Renaissance in Italy." The work has been given to the world in four instalments, each one in a measure complete in itself, but each one being also the complement of the others. The first volume, under the title of the "Age of the Despots," dealt with the political life of those times. The second portion, the "Revival of Learning," gave account of scholastic matters. The third was occupied with the condition of the "Fine Arts" at the time. And now the fourth, which may be considered the coping-stone, is devoted to the literature of the Italian Renaissance. Practically the other volumes were the stepping-stones to the present work, written and published first in order that Mr. Symonds's readers might come to the study of the literary life of the times well prepared by a general knowledge of all contemporary matters. The only objection to the plan which has been followed in making each volume self-contained and independent of the others is that matters are thus separated which are in fact closely interwoven. Thus, if a man be a poet and a painter, he would be dealt with in one volume as the poet, and in another as the painter. This, however, is a difficulty not easily overcome, whatever the form of the book. The two volumes before us cover a period of about 230 years, though the first 150 years is dealt with in a preliminary essay, the bulk of the book being devoted to the period from 1450 to 1530. The preliminary essay, however, is full of interesting and important matters, leading up, as it does, to the condition of things in which the Renaissance had its origin. After a brief account of the beginnings of Italian speech and writings, Mr. Symonds proceeds to discuss what he terms the mediæval sub-period—the term of Dante, Petrarch, and Boccaccio—and ending with the death of the latter. The next sub-period is spoken of as the "Orasition," or humanistic—a period marked by the work of several extraordinary men, but not producing literature of a high class. With the birth of Lorenzo de Medici we enter on the last and principal period — that of the Renaisiome, with the names of Poliziano, Boiardo, Ariosto, and many others—poets, historians, dramatists, and philosophers. There can be little doubt left in our minds after reading Mr. Symonds's book that many of the best characteristics of the literature of the Renaissance are due to the revival of scholarship in the period which followed the time of Boccaccio. The Italians seem, then, to have awoke to a consciousness of the rich and precious heritage of which they were the rightful heirs. Original work was for the time abandoned in the earnest pursuit of classical learning, and men wrote the little that was written in Latin rather than Italian. The result of this was that when the awakening came the national literature which sprang into existence was the stronger and richer and more various for the period of scholastic learning which ushered it into the world. It is, as we have said with the third sub-period —that of the Renaissance—that the great bulk of this book deals, and the critical analysis of the works of the principal writers of this period is admirable. Of Lorenzo de Medici, as the herald of good things, Mr. Symonds has, of course, very much to say, and of Pulci also he speaks in high terms. Lorenzo and Pulci turned their attention chiefly to the lyric and idyll. Boiardo and Ariosto, on the other hand, were most conspicuous for their power over the epic. Boiardo achieved his greatest work in the

Boiardo achieved his greatest work in the "Orlando Inamorato," followed by Ariosto in the "Orlando Furioso," in which the Italian epic reached its culminating point. To Ariosto Mr. Symonds devotes two chapters, and admirable chapters they are. He points out how thoroughly realistic the epic becomes in the hands of these men, with what delicacy of style yet completeness of detail everything is described, and yet how greatly even in the hands of this greatest of Italian epic writers the popular origin is discernible, for in this respect the Italian differed widely from other nations. Myths and legends are not native to Italian soil, but were received from other countries, and became food for the minds of the Italian populace through the medium of *raconteurs* or *improvisatori*. Mr. Symonds tells us to remember that at this time painting and poetry were so closely allied that the latter partook mostly of the nature of the former, and was indeed in large measure no more than word-painting. There was, moreover, little depth in the life of that time unless it were the depth of corruption and immorality, and such a social atmosphere as that does not tend to produce poetry of the highest kind. In the Arcadia of Sanazzaro we have a remarkable production of the period. Mr. Symonds thus writes of it:—"Hesiod and the Metamorphoses of Ovid, the Idylls of Theocritus, and Virgil's Eclogues, legends of early Greek civility and romances of late Greek literature, contributed their several elements for this conception of a pastoral ideal. It blends Biblical reminiscences of Eden with mediæval stories of the earthly Paradise. It helped that transfusion of Christian fancy into classic shape for which the age was always striving." Among all the remarkable literary productions of this time it is perhaps remarkable that we find no great drama, but Mr. Symonds offers one possible explanation of this which on the face of it seems likely. He suggests that tragedies constantly enacted in real life before the eyes of Italians in those days rendered any representation of them on the stage superfluous. To Pietro Aretino Mr. Symonds rightly devotes a whole chapter. He surmises, and no doubt justly, that great part of the enormous influence exercised by this man, contemptible as he was in many ways, was the result of an unscrupulous use of his pen against all who disregarded or opposed him. He seems to have comprehended "the power of the Press, which had not as yet been deliberately used as a weapon of offence and an instrument of extortion." Altogether in this chapter we have painted for us a most unpleasant character, but one of genius in certain lines. We cannot say anything of Mr. Symonds's able criticisms of the novelists, minor poets, historians, and philosophers. To Machiavelli scant justice is done. Great as were his faults and shortcomings, and utterly wrong as were many of his principles, he was nevertheless a great man—great both as statesman, scientist, and historian—and as such deserved somewhat more impartial criticism at the author's hands. While dwelling on this wonderful work which this Renaissance period produced, Mr. Symonds writes in terms of unmeasured severity of the horrible condition of society as depicted only too faithfully in the literature. In spite of seeming life and progress things were indeed utterly rotten at the core. In these volumes, as in all he writes, Mr. Symonds carries his readers along with him, both by the interest of his subject matter and the pleasant character of his style. In this "History of the Renaissance in Italy," in all its phases, he has given to the world a most able and valuable contribution—valuable both to the scholar and to the ordinary reader.

It is, generally speaking, an undoubted mistake to publish any account of the career of a man still living, but this rule, like every other, has its exceptions, and now and then a case may arise in which it is well to gather together and present to the world in concise form all the incidents of a notable career. Whether Mr. Barnett Smith may thus be justified in having published six volumes of the "Life and Speeches of the Right Hon. J. Bright" is perhaps open to question, but it may fairly be said on his behalf that Mr. Bright has enjoyed an uncommonly long public career, that he has been mixed up with and conspicuous in some of the most important questions of the century, and that though almost all the speeches contained in those volumes have been at one time or another published in public prints, yet it is well to have them all collected together for the information of those who have no personal recollection of the events they relate to, and who would not hunt over widely scattered sources for their information. Mr. Barnett Smith's original matter is almost necessarily very scanty, for he has had no access to diaries or correspondence, and he can but give the main incidents of Mr. Bright's life as generally known. It is also against the book that Mr. Morley's "Life of Cobden" appeared almost simultaneously, and as the two were close friends and political allies much of the ground gone over by Mr. Barnett Smith is covered in a far more close and interesting manner by Mr. Morley. Nevertheless we can com-

more close and interesting manner by Mr. Morley. Nevertheless we can commend Mr. Barnett Smith's book to our readers as well worth perusal. John Bright was the second of eleven children, and was born in the year 1811. His father, Jacob Bright, as is pretty generally known, was a Lancashire cotton-spinner, and John himself, at the age of fifteen, was set to learn the business. His schooling, therefore, was both short and desultory—a fact which, as our readers will doubtless remember, he is not unwont to dwell upon with perhaps a touch of sarcastic humour. He soon began to show signs of the power that was in him, for though working at the business and quickly acquiring a knowledge of all its details, he at the same time threw himself with earnest interest into public affairs. Mr. Barnett Smith has unearthed a very early speech of Mr. Bright's, which is more conspicuous for its florid and cumbrous style than for any particular merit. The occasion was a vote of thanks to a gentleman who had delivered a series of lectures at Rochdale on Egypt, Palestine, and other Eastern countries. A sentence or two will give an idea of the whole:—"We have ascended the Great Pyramid, and from its summit have surveyed in imagination the splendid prospect so beautifully, so poetically described to us, the glorious sun rising in the east proclaiming the approach of day, the silvery moon sailing in the pathless waste of sand, and as if unable or unwilling to compare with his superior brilliancy. We have trod the calm and peaceful retreats of the Mount of Olives, and have perambulated the streets of Jerusalem—the most renowned city on the face of the earth"—and a good deal more of the same sort. Mr. Barnett Smith also tells us how "the Rev. John Aldis (a Baptist minister of eminence)" gave Mr. Bright a few hints on the subject of public speaking—hints the value of which Mr. Bright afterwards acknowledged. It seems that in early years Mr. Bright committed his speeches to memory, and it was this habit against which Mr. Aldis chiefly cautioned him. In 1843 Mr. Bright was returned to Parliament for Durham, and made his first speech very shortly after taking his seat. This speech was neither more nor less than an appeal to the Houses to abolish the corn laws and establish thorough free trade. Thus began that long and stubborn fight, which ended only with the repeal of the obnoxious laws, and during and through which Bright and Cobden became so inseparably connected and so closely united in the bonds of friendship. This first speech is characterized by the same bitter invective and unsparing abuse of his opponents which has more or less pervaded all his utterances on all important questions ever since. Another matter on which Cobden and Bright stood shoulder to shoulder, the leaders of a small and much-abused minority, was the Crimean War. Mr. Bright has, of course, always been opposed on principle to all war, but against none has he taken so strong a stand as against that, and his speeches at that time are full of interest. It was by one such speech that he exasperated Lord Palmerson into using a sneering expression, for which he was called to order—he spoke of Mr. Bright as the hon. and rev. gentleman. As a sample of Mr. Bright's invective the following from a speech on the Foreign Enlistment Bill in 1854 is worth quoting. The noble lord is of course Lord John Russell:—"I am not afraid of discussing the war with the noble lord on his own principles. I understand the Blue-books as well as he, and leaving out all fantastic and visionary notions about what will become of us if something is not done to cripple Russia, I say—and I say it with as much confidence as I ever said anything in my life—that the war cannot be justified out of these documents, and that impartial history will teach this to posterity if we do not comprehend it now. I am not, nor did I ever pretend to be, a statesman; and that character is so tainted and so equivocal in our day that I am not sure that a pure and honourable man would aspire to it. I have not enjoyed for thirty years, like the noble lord, the honours and emoluments of office. I have not set my sails to every passing breeze. Let it not be said that I am alone in my condemnation of this war, and of this incapable and guilty administration." Whatever may be thought of Mr. Bright's opinions, all must acknowledge that he has never hesitated to condemn without stint what he believed to be wrong, and fight to the death for what he believed to be right, and that against his character either as a politician or a man no word can be said. Such we venture to assert will be posterity's verdict on the greatest orator of his day.