NEW PUBLICATIONS.

ANIMALS AND PLANTS UNDER DOMESTICATION. By CHARLES DARWIN. New-York: ORANGE JUDD & CO.

After a long delay—caused, we regret to hear, by the state of his health—Mr. DARWIN has given to the public the first installment of what is intended to be a compendious digest of the facts upon which he has based the celebrated theory advanced in his *Origin of Species*. In the two volumes before us he treats of variation only in animals and plants under domestication—that is, more or less influenced in their development by interference on the part of man with the conditions of their life. In another work, on which Mr. DARWIN is now engaged, he will discuss "the variability of organic beings in a state of nature," and "the problem of the conversion of varieties into species—that is the augmentation of the slight differences characteristic of varieties into the greater differences characteristic of species and genera." In the meantime, however, he confines himself mainly to the branch of his subject indicated by the title of these volumes—always, however, maintaining the position that man only works upon an initial variation, caused by changes in the condition of life. In devoting himself first to the subject of variation under domestication, his object is to throw some light on the causes of variability—"on the laws which govern it, such as the direct action of climate and food, the effects of use and disuse and of correlation of growth, and on the amount of change to which domesticated organisms are liable."

In these two closely-printed volumes, Mr. DARWIN has collected, at the cost of immense labor, wide research and close observation, a vast mass of the facts in natural history that first induced him to adopt his theory of "natural selection," or as he now prefers to call it, "the survival of the fittest." This is not the time or place to enter into any discussion on that theory. Mr. DARWIN gives his facts, and points out as he goes, how and why these facts, in his mind, justify the conclusions to which he has come. Those who have already adopted the Darwinian theory will doubtless be edified in the faith by the study of this work. Those who have not done so will be enabled to judge more fairly of Mr. DARWIN's method of reasoning, and readers of all kinds will be rewarded by finding, as Prof. ASA GRAY says in the preface to the American edition, "a perfect treasury of facts relative to domesticated animals, and some of the more important cultivated plants." All the principles involved in the production and improvement of breeds and races are scientifically discussed by a writer who has devoted most of his life to similar inquiries, and as Prof. GRAY adds, it is not only to the naturalist, physiologist and general reader that these volumes will be valuable, but they will be especially so to the intelligent agriculturist and breeder. We doubt if the interests of the intelligent agriculturist and breeder were in Mr. DARWIN's mind when he commenced his work, but as valuable discoveries in chemistry and useful sciences were made by alchemists and seekers for the philosopher's stone, so much profit may be derived from Mr. DARWIN's conscientious observations by the class in question—or at all events by the "fittest" of its members—without regard to any great philosophical issue involved.

Mr. DARWIN naturally takes the dog as the most prominent type of domesticated animal. He instances several authenticated modifications of well-known breeds, even in modern times, and sums up his deductions:

"These several cases of slow and gradual changes in our English dogs possess some interest; for, though the changes have generally, but not invariably, been caused by one or two crosses with a distinct breed, yet we may feel sure, from the well-known extreme variability of crossed breeds, that rigorous and long-continued selection must have been practiced in order to improve them in a definite manner. As soon as any strain or family became slightly improved or better adapted to altered circumstances, it would tend to supplant the older and less improved strains. For instance, as soon as the old foxhound was improved by a cross with the greyhound or by simple selection, and assumed its present character—and the change was probably required by the increased fleetness of our hunters—it rapidly spread throughout the country, and is now everywhere nearly uniform. But the process of improvement is still going on, for every one tries to improve his strain by occasionally procuring dogs from the best kennels. Through this process of gradual substitution the old English hound has been lost; and so it has been with the old Irish greyhound, and apparently with the old English bulldog. But the extinction of former breeds is apparently aided by another cause; for whenever a breed is kept in scanty numbers, as at present with the bloodhound, it is reared with difficulty, and this apparently is due to the evil effects of long-continued close interbreeding. As several breeds of the dog have been slightly but sensibly modified within so short a period as the last one or two centuries, by the selection of the best individual dogs, modified in many cases by crosses with other breeds; and as we shall hereafter see that the breeding of dogs was attended to in ancient times, as it still is by savages, we may conclude that we have in selection, even if only occasionally practiced, a potent means of modification."

Mr. DARWIN devotes much space to tracing with minuteness all the important variations in the different breeds of pigeons:

"As long as pigeons are kept semi-domesticated in dovecots, in their native country, without any care in selecting and matching them, they are liable to little more variation than the wild *C. livia*, namely, in the wings becoming checkered with black, in the croup being blue or white, and in the size of the body. When, however, dovecot pigeons are transported into diversified countries, such as Sierra Leone, the Malay archipelago, and Madeira (where the wild *C. levia* is not known to exist,) they are exposed to new conditions of life, and apparently in consequence they vary in a somewhat greater degree. When *closely confined, either* for the pleasure of watching them, or to prevent their straying, they must be exposed, even under their native climate, to considerably different conditions, for they cannot obtain their natural diversity of food, and, what is probably more important, they are abundantly fed, while debarred from taking much exercise. Under these circumstances we might expect to find, from the analogy of all other domesticated animals, a greater amount of individual variability than with the wild pigeon; and this is the case. The want of exercise apparently tends to reduce the size of the feet and organs of flight; and then, from the law of correlation of growth, the beak apparently becomes affected. From what we now see occasionally taking place in our aviaries we may conclude that sudden variations or sports, such as the appearance of a crest of feathers on the head, of feathered feet, of a new shade of color, of an additional feather in the tail or wing, would occur at rare intervals during the many centuries which have elapsed since the pigeon was first domesticated. At the present day such 'sports' are generally rejected as blemishes; and there is so much mystery in the breeding of pigeons that, if a valuable sport did occur, its history would often be concealed. * * * Hence, after a long course of domestication, we might expect to see in the pigeon much individual variability, and occasional sudden variations, as well as slight modifications from the lessened use of certain parts, together with the effects of correlation of growth. But without selection all this would produce only a trifling or no result; for without such aid differences of all kinds would, from the two following causes, soon disappear. In a healthy and vigorous lot of pigeons many more young birds are killed for food or die than are reared to maturity; so that an individual having any peculiar character, if not selected, would run a good chance of being destroyed; and if not destroyed, the peculiarity in question would almost certainly be obliterated by free intercrossing. It might, however, occasionally happen that the same variation repeatedly occurred, owing to the action of peculiar and uniform conditions of life, and in this case it would prevail independently of selection. But when selection is brought into play all is changed; for this is the foundation-stone in the formation of new races; and with the pigeon, circumstances, as we have already seen, are eminently favorable for selection. When a bird presenting some conspicuous variation has been preserved, and its offspring have been selected, carefully matched, and again propagated, and so onward during successive generations, the principle is so obvious that nothing more need be said about it. This may be called methodical selection, for the breeder has a distinct object in view, namely, to preserve some character which has actually appeared, or to create some improvement already pictured in his mind."

The following passage gives an idea of the process by which Mr. DARWIN works these isolated facts into the chain of argument by which he supports his previously enunciated theories:

"A breed of pigeons may never be produced with a beak shorter than that of the present short-faced tumbler, or with one longer than that of the English carrier, for these birds have weak constitutions and are bad breeders; but the shortness and length of the beak are the points which have been steadily improved during at least the last 150 years; and some of the best judges deny that the goal has yet been reached. We may also reasonably suspect, from what we see in natural species of the variability of extremely modified parts, that any structure, after remaining constant during a long series of generations, would, under new and changed conditions of life, recommence its course of variability, and might again be acted on by selection. Nevertheless, as Mr. WALLACE has recently remarked with much force and truth, there must be both with natural and domestic productions a limit to change in certain directions; for instance, there must be a limit to the fleetness of any terrestrial animal, as this will be determined by the friction to be overcome, the weight to be carried, and the power of contraction in the muscular fibres. The English racehorse may have reached this limit; but it already surpasses in fleetness its own wild progenitor, and all other equine species. It is not surprising, seeing the great difference between many domestic breeds, that some few naturalists have concluded that all are descended from distinct aboriginal stocks, more especially as the principle of selection has been ignored, and the high antiquity of man, as a breeder of animals, has only recently become known. Most naturalists, however, freely admit that various extremely dissimilar breeds are descended from a single stock, although they do not know much about the art of breeding, cannot show the connecting links, nor say where and when the breeds arose. Yet these same naturalists will declare, with an air of philosophical caution, that they can never admit that one natural species has given birth to another until they behold all the transitional steps. But fanciers have used exactly the same language with respect to domestic breeds; thus an author of an excellent treatise says he will never allow that carrier and fantail pigeons are the descendants of the wild rock pigeon, until the transitions have 'actually been observed, and can be repeated whenever man chooses to set about the task.' No doubt it is difficult to realize that slight changes added up during long centuries can produce such results; but he who wishes to understand the origin of domestic breeds or natural species must overcome this difficulty."

The above, as we say, gives an idea of Mr. DARWIN's method of deduction—it cannot be said to embody it, or even to present it in all its more conspicuous features. He devotes ingenuity of the highest class to working together his materials, in order to establish his original theory, and has spared no labor in arranging them symmetrically as in stating his conclusions with lucidity. We are not inclined to think he will make many converts—theories like his are so much more fascinating when broadly stated than when intermingled with minute detail—but his work is one that scarcely any one—certainly no naturalist or physiologist—can read without profit to themselves and admiration for the writer's grasp of detail and clearness of statement.

GENESIS: OR THE FIRST BOOK OF MOSES; together with a general Theological and Homiletical Introduction to the Old Testament. By J. P. LANGE, D. D., Professor in Ordinary of Theology in the University of Bonn. Translated from the German, with additions, by Prof. TAYLER LEWIS, LL. D., and A. GOSMAN, D. D. New-York: CHARLES SCRIBNER & Co.; 1:68. Pp. viii—665.

This is the first volume on the Old Testament of the Bible-work, covering both the Old and New Testaments, under the general title: "A Commentary on the Holy Scriptures, Critical, Doctrinal and Homiletical, with special reference to Ministers and Students. By J. P. LANGE, D. D., in connection with eminent European Divines. Translated from the German, and edited, with additions, by PHILIP SCHAFF, D. D., in connection with American scholars of various Evangelical Denominations."

This volume contains: 1. An exhaustive general introduction to the whole of the Old Testament. 2. A special introduction to the Book of Genesis. 3. The Book of Genesis in the common English version (occasionally corrected in brackets,) with marginal notes on points of criticism and philology, and annotations under three heads, exegetical and critical, doctrinal and ethical, homiletical and practical.

The general introduction treats, in five divisions, of the theological introduction to the Old Testament; of its practical explanation and homiletical use; of its theological and homiletical literature; of its organism, or arrangement of its books; of its so-called difficulties.

Under this last head we find the following pithy observations, which, if not sound criticism, are certainly a good hit, and a caution well put, for all whom it concerns: "Balaam's ass is intended to portray the fact, that the ass itself must become a prophet, when the worldly prophet who rides him will become an ass; this grand irony, according to which genius in its fallen state is more blind and dumb than the ass which its rides; according to which the prophet who rides the ass is changed into an ass, who rides the prophet. It is truly the fault of the apologetic school-theology if its falls into distress about the ass of Balaam, when the free-thinkers lustily ride upon it."

The special introduction treats, among many other topics, of the organic unity and arrangement of the Pentateuch; its origin and composition; character of Genesis; sources and composition of it; the old Testament names of God; essential ideas of creation; the creative days; ideas of nature and the supernatural in the Scriptures; how the creative history was revealed.

The last four topics are discussed by the leading American editor of this book (Prof. LEWIS,) and abound in suggestive thoughts of profound import. His style of interpretation is well exhibited in the treatment of the last-named topic, "How the creative history was revealed." It is unquestionably the only truthful mode of interpreting the Divine record. But it is adapted only to thoughtful readers, of sufficient intellectual culture to be able to follow the profound and closely logical reasoning of the writer. To them it will prove a welcome and satisfactory solution of many problems, such as are inherent in a narrative designed and fitted to unite two objects most difficult to combine, namely, to instruct and satisfy the humblest intellect, and at the same time to furnish material for thought and investigation to the most acute and far-reaching minds. These views will exert a wide and permanent influence, and will rebuke both the negligence of interpreters, who have not sought to penetrate the more external form of representation to its profound meaning, and the spirit of unbelief that scoffs at what it will not take the pains to comprehend.

On pp. 167-8 is a complete refutation of the "chasm theory," which finds between the first and second verses of Genesis a convenient crevice for inserting all the unknown ages of geologic formation in the earth's structure. Its avowed object is to get rid of the geological objections to the narrow-minded theory that the six days of creation must be interpreted as solar days of twenty-four hours. Even devout geologists sought this refuge for their science, in order to escape the odium cast upon it by a class of expositors, whom JOHN NEAL—speaking with more truth than reverence,—denominated "theological dunderheads." In his own exposition, (pp. 131-143) Prof. LEWIS has given, from a purely Scriptural point of view, and without any reference to the teachings of science, a full and triumphant vindication of the true import of the six creative days, as held by AUGUSTINE centuries before science had its birth. After his profound and truthful exposition of the sacred record of the creation, it is not probable that this emasculated conception of it will be heard of again.

The American editor's view of the site of Eden and of the four streams (so-called) which determine it, is learned and ingenious. If not in all points satisfactory, which could not reasonably be expected in such a case, it is commended by very weighty considerations; and it shows that the sacred writer's conception is a possible one, and is not, as many have represented it, an impossible combination of streams remote from each other, which could have no actual local relation, and could be combined only in an ideal and symbolical conception.

On "the law of homicide" (pp. 332-4,) the remarks of the American editor are eminently just and timely. "We need," he well says at the close, "these ideas to give the necessary strength to our relaxing judicial morality, and a more healthy tone to the individual and social conscience. The age is fast going into the other extreme, and crime, especially the crime of blood-shedding, is increasing in the ratio of our spurious tenderness. Those who speak with contempt of the divine law, are constantly railing at society as itself the criminal in the punishment of crime, and as especially malignant and revengeful in discharging the divinely imposed duty of executing justice upon the murderer."

Of equal interest and value are the discussions by the American editor on the Christian Sabbath, the astronomical objections to revelation, the confusion of tongues, and numerous other topics, embracing the most interesting and difficult questions in the interpretation of the book, adding greatly to the value of the original German work.

Miscellaneous Literary Notes.

—TICKNOR & FIELDS have published, in uniform style with *The Butterfly Hunters*, another charming little book entitled *Farming for Boys*, by the author of *Ten Acres Enough*. It was originally published in *Young Folks*, and the young patrons of that magazine will be glad to see it in book form. The volume is handsomely printed and bound, and illustrated with numerous well-executed wood engravings. It belongs to a class of books, of which young readers cannot have too many. Full of instruction and information, conveyed through the medium of a pleasant story, it will set boys to thinking, and lead them unconsciously take to right views of life, and teach them how to make the best use of their time and opportunities. The two books together—*The Butterfly Hunters* and *Farming for Boys*—show two sides of country life, its pastime and its work, and afford the very pleasantest reading that could be imagined for the young.

—WM. H. LYMAN, seedsman and florist, of Leverett, Mass., has published a pamphlet called *The Guide to the Flower Garden*, which contains precisely the information required by those persons who, having but a small garden, desire to embellish it with flowers. The pamphlet contains instructions for planting flower seeds, and also tells how to take care of the plants when they appear. A list is given of a large number of plants of easy culture, and which are calculated to give immediate enjoyment to those cultivating them. There is also a full catalogue of flowers and shrubbery, embracing several thousand varieties, designed for the use of those whose gardens are on a more extensive scale.

—*Ragged Dick; or, Street Life in New-York with the Boot-blacks*, is the title of a little book by HORATIO ALGER, Jr., which narrates the fortunes of an enterprising street-boy, who determined to "grow up 'spectable," and by dint of smartness, perseverance, and good luck, succeeded. The book is neatly illustrated, and is published by LORING, in Boston.

—BELKNAP & GOODWIN, of Hartford, Conn., have negotiated with CHARLES LANMAN for the publication of a new and greatly improved edition of his *Dictionary of Congress and the General Government*. It will appear about the 1st of July, and be sold by subscription.

—LEYPOLDT & HOLT have issued a second edition, in paper covers, of Mr. BRISTED'S essay on *The Interference Theory*. The work has excited a great deal of interest, and the publishers now issue a cheap edition in order to secure for it a still wider circulation.

Musical.

—DITSON & Co., of Boston and New-York, have issued a series of oratorio Librettos which will be much appreciated by the popular concert-goer. The series include the Messiah, the Creation, Elijah, Judas Maccabaeus, the Stabat Mater, David, Eli, St. Paul, Naaman, and Moses in Egypt—ten in all. These libretti give note by note, without accompaniment of course, the principal airs of the work, so that the singer can be followed and the melodies firmly fixed in the memory of the spectator. The libretti of all the popular operas published by the Messrs. DITSON are gotten up after a similar fashion, and are, in this respect, infinitely superior to other publications of the kind. Just now the oratorio-libretti commend themselves particularly to those persons who propose attending the musical festival during this week.

—FREDERICK BLUME is now publishing several collections of gems for the piano. The eighteenth production classified under the head of "Golden Waves" is the *Feather Ball Galop*, a simple arrangement of a popular piece by CARL FAUST; and the fortieth element of the "Musical Casket" is the *Sabre Galop*, the motive of which is, of course, familiar to everybody. "Silver Tones," now in course of publication, includes thus far the *Silver Trumpets*, a grand processional march, by F. VIVIANI.