

ity, can be made to secure perfectly that ideal of college education, a disciplined mind. We maintain, too, that the post-graduate course should be to a large extent elective, while at the same time it aims to train for some special profession.

LITERARY.

Messrs. J. Sabin & Sons announce as ready for delivery in a few days a new edition of the works of Henry Fielding, with an essay on his life and genius, by Thomas Murphy. The edition, which is presented in five styles of binding, and in ten volumes octavo, is said to be limited in number. The same firm announce themselves as agents for the supply of the American market with a series of works to be called "The Dramatists of the Reformation," edited by James Maidment and W. H. Logan. Six volumes will be issued annually, the first in January. The dramatic works of Sir Wm. Davenant will form the first three volumes, and the uncollected works of John Crowne the next three. It is expected to continue the series for a number of years, giving the works of Killgrew, Shedwell, Charles Johnson, Wilson, Ethrege, Centlivre, Wycherly, Sedley, Lacey, Congreve, Farquar, and others. The work is to be sold only by subscription.

A work which will be of interest to many scientific readers is announced under the title of the "Quarterly German Magazine." It is edited by Prof. Virchow and Prof. Holtzendorf, and is to consist of selections from the "Sammlung Gemeinverständlicher Wissenschaftlicher Vorträge," edited by the same professors, but unlike that publication, this will be printed in English. The regular annual issue commences with January 1872, but a preliminary number was issued last year. This volume has an article by Prof. Virchow, on "The Cranial Affinities of Man and the Ape"; one by A. v. Graefe, on "Light and the Visual Organs"; and one by H. W. Dove, on "The Circulation of the Waters on the Surface of the Earth."

The January number of the *New Englander* has appeared, and contains the usual number of carefully-written articles, and an unusually large number of notices of new books. Prof. J. L. Diman, of Brown University, has an article on "The Roman Element in Modern Civilization," based on Guizot's History of Civilization in Europe; Prof. Samuel Harris, D.D., of Yale Theological Seminary, contributes an article called "The Theological Department essential in a University," which is in reality his inaugural address, at his induction to the professorship which he now holds; Prof. J. S. Sewall, of Bowdoin College, gives "A Study in Chinese History"; an unknown author treats of "Herbert Spencer's Laws of the Unknowable"; and Mr. Wm. L. Kingsley, one of the editors, devotes sixty-six pages to "Recit d'une Sœur—Memoirs of a French Family." An arrangement has been made by which the *Congregational Quarterly*, heretofore published in Chicago, is with this number consolidated with the *New Englander*. The Chicago publication is represented on the editorial staff of the *New Englander* by President A. L. Chapin, of Beloit College, and Professor Samuel C. Bartlett, of the Chicago Theological Seminary, and Rev. George S. F. Savage, of Chicago, acts as western agent. The editorial staff of this standard Quarterly therefore now consists of five, instead of three, as formerly.

The Descent of Man.*—The rapidity with which Mr. Darwin's name has become a household word among all civilized nations, is remarkable. Up to the latter part of the year 1859, when he published the first edition of his "Origin of Species," although known among naturalists as a man of large and accurate acquirements in Natural History, yet to the average public he had ap-

peared only as the author of an entertaining book, describing his voyage round the world, in her Majesty's Steamer Beagle; a book which had attracted no special attention beyond the circle of those particularly interested in the subjects of which it treated. Now, however, it would be hard to find a person of average intelligence in any civilized community who does not know, not only that such a man exists, but also that he is the author of a theory of development. This rapid popularity appears to be due to two causes, both of them outgrowths of the book above mentioned. In the first place, the theory of development which it contains, called by the author, "Natural Selection," is at once so novel, so ingenious, and so well-sustained by the facts urged in its support, that it demanded and received the immediate attention of naturalists, the world over. In evidence of this, it may be stated that five thousand copies of the "*Origin of Species*" were exhausted within nine months after its publication. But the second and the main reason why Mr. Darwin has become so extensively known, is the fact that early in the discussion of the theory of Natural Selection, it became evident that it was simply another attempt to account for the origin of the present forms of life by natural laws alone; and, therefore, to place the connection between the Creator and His works more remote. Inasmuch as the church, in her teachings, had undertaken, and very unwisely, too, it must be admitted, to propound a theory of her own upon this subject, and to say that species came into existence, not by being evolved from previous species, but by being spoken into being by the Almighty fiat, there soon arose a fierce opposition to Natural Selection, not because it was, in itself, true or false; for this its opponents, most of them, were incapable of determining. The opposition arose simply because another view of God's method in nature had arisen; a view, having far more authority in nature, and quite as much in revelation as the one by which it was now attacked. And so the war went on. Neglecting to discriminate between the truths truly such, of which the church was the depository, and those accretions which human invention alone had added, both were held alike sacred, and he who ventured to differ from the latter was attacked as if he had denied the former. Both sides grew warm in the controversy; each side misrepresented the other. Mr. Darwin is an infidel, an atheist, seeking to undermine the foundations of religious truth, cries one party; for my part, says the other, I would as soon have a monkey for my grandfather as an archbishop. The natural and necessary consequence of all this was to bring Mr. Darwin's views before every man who had a religious faith to be undermined. And hence arose the paradox that the stronger a man's personal religion, and the dearer it was to him, the more strongly did Mr. Darwin and his views stamp themselves upon his mind. An appeal to no other faculty could have awakened so general an interest in Natural Selection, either for or against it, as did this appeal to man's religious nature.

But scarcely had the heated discussion of this question begun to cool, before another arose hardly second to it in importance. Though in his "*Origin of Species*" Mr. Darwin nowhere carries his theory of Natural Selection to its legitimate conclusion and applies it to man, yet this was pretty soon seen to be a natural inference from it. If all lower animals are descendants of earlier and more primitive forms, then man as a zoölogical species must have been so derived. And so the original opposition was re-aroused, this time stronger than ever. It cannot be true, it shall not be received, was the cry. Man is made in the image of God, and shall we admit that his ancestors were allied to the monkeys? And so, forgetting that man's nature is animal-like, as well as Godlike, the old story of the shield was repeated, and each party maintained that the entire fabric was made of the metal which appeared on the side on which he was standing. In the midst of this confusion what does Mr. Darwin do? He has continued his researches, and by patient investigation has pre-

**The Descent of Man, and Selection in Relation to Sex.*—By Charles Darwin. M. A., F. R. S., etc. With illustrations. 2 vols., 8vo., pp., V. I., 409, and V. II., 436. New York, 1871. D. Appleton & Co.

pared himself to apply his theory to the origin of man. Does he timidly reserve his conclusions till the storm shall be over? So far from this, it is when the controversy is at its height, when it is being pressed so actively that even Mr. Wallace, himself a co-originator of the theory, admits its inapplicability, in many respects, to man, that Mr. Darwin issues another volume, and squarely faces the question by calling it the "Descent of Man." In this book the whole matter culminates. The discussion is hereafter to be confined to the actual point at issue. Facts alone must be appealed to, and these facts alone must finally decide the case, however unpleasant the possible, not to say the probable, conclusions. In this controversy, henceforth, men must read Darwin before they denounce him; they must know his arguments, and they must bring against them arguments which are equally sound.

What now is this new extension of Natural Selection? By what chain of reasoning does Mr. Darwin seek to prove the descent of man from some less highly-organized form? Mainly, we reply, from the fact that the embryonic development of man is closely similar to that of the lower animals; that he resembles them in innumerable points of structure and constitution, both of high and of the most trifling importance; that he retains rudiments of organs possessed by them; and that he occasionally suffers abnormal reversion to a more or less distinctly marked animal type. "He who is not content to look," says Mr. Darwin, "like a savage, at the phenomena of Nature as disconnected, cannot any longer believe that man is the work of a separate act of creation." But the anatomical argument is the most readily conceded. It is the "high standard of intellectual power and of moral disposition" to which man has attained, which it taxes natural selection most to account for. Mr. Darwin however, attacks the question manfully in the second and third chapters of his book. He shows in the first place, that "there is no fundamental difference between man and the higher mammals in their mental faculties; illustrating it at some length and treating not only of the imagination and reason, but also of language, power of abstraction, and the sense of beauty. Then he passes to the moral sense, and says: "The following proposition seems to me in a high degree probable—namely, that any animal whatever, endowed with well-marked social instincts, would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well developed, or nearly as well developed, as in man." "A moral being," he says "is one who is capable of comparing his past and future actions or motives, and of approving or disapproving of them." He maintains that the moral sense flows from the enduring and always present nature of the social instinct, in the first place; and in the second, from the activity of the mental faculties, and the consequent vividness of the impressions of past events. "Owing to this condition of mind, man cannot avoid looking backward and comparing the impressions of past events and actions. He also continually looks forward. Hence, after some temporary desire or passion has mastered his social instincts, he will reflect and compare the now weakened impressions of such past impulses with the ever present social instinct; and he will then feel that sense of dissatisfaction which all unsatisfied instincts leave behind them. Consequently he resolves to act differently for the future—and this is conscience." As to the argument that man's innate belief in God separates him from the lower animals, Mr. Darwin denies the existence of any such innate or instinctive belief, and asserts that "numerous races have existed and still exist, who have no idea of one or more gods and who have no words in their languages to express such an idea." Hence, he says, "the idea of a universal and beneficent Creator of the universe does not seem to arise in the mind of man until he has been elevated by long continued culture."

Before deciding, however, the question of man's origin, Mr. Darwin thinks it important to discuss another

cause which may have an undoubted bearing upon it. This cause is sexual selection, a form of selection which is only alluded to in the "Origin of Species," but which occupies three-fourths of the "Descent of Man." Sexual selection, as its name implies, depends "on the success of certain individuals over others of the same sex in relation to the propagation of the species; the healthiest and strongest, or the most beautiful males, for example driving away or distancing the weaker or homelier ones; which last leave no offspring, the first only being perpetuated. Taken in connection with the law of inheritance, Mr. Darwin draws from it some very important conclusions, which we have no space to dilate upon here. We must content ourselves with quoting his closing words: "For my own part, I conclude that of all the causes which have led to the differences in external appearance between the races of man, and to a certain extent, between man and the lower animals, sexual selection has been by far the most efficient."

From this complete and carefully prepared argument, we learn "that man is descended from a hairy quadruped, furnished with a tail and pointed ears, probably arboreal in its habits and an inhabitant of the Old World. This creature, if its whole structure had been examined by a naturalist, would have been classed among the Quadrumana, as surely as would the common and still more ancient progenitor of the Old and New World monkeys. The Quadrumana and the higher mammals are probably derived from an ancient marsupial animal, and this through a long line of diversified forms, either from some reptile-like or some amphibian-like creature, and this again from some fish-like animal. In the dim obscurity of the past, we can see that the early progenitor of all the Vertebrata must have been an aquatic animal provided with branchiæ, with the two sexes united in the same individual, and with the two most important organs of the body (such as the brain and heart) imperfectly developed. This animal seems to have been more like the larvæ of our existing marine Ascidiæ than any other known form." And unless Mr. Darwin's facts can be disproved and his arguments, cautiously and candidly founded on them, be overthrown, we see not why the above conclusion must not stand in science.

One word concerning Mr. Darwin himself. Unfortunately his opponents have not always been careful to confine their attacks to his writings, meeting argument with argument, and fact with fact. They have descended in many cases to personal vilification, and have impugned his motives and traduced his private character. They seem not to see that this is the plainest confession of weakness on their part, which indeed it really is. But here too, the facts are against them. Mr. Darwin is a man of irreproachable private character. Truth, and that too, for its own sake, is as precious to him as a man, as it is invaluable to him as an accurate naturalist. The singular and even exceptionable candor everywhere displayed in his writings is markedly in contrast with the disingenuousness shown by many of the most prominent of his accusers. As an example of these falsehoods, take the assertion so often made that Mr. Darwin is a disbeliever in a personal God. And in answer to it, notice that in quoting the Duke of Argyll's remark that "mere variety must be admitted to be an object and aim in Nature," Mr. Darwin says: "I wish the Duke had explained what he here means by Nature. Is it meant that the Creator of the Universe ordained diversified results for His own satisfaction, or for that of man? The former notion seems to me to be as much wanting in due reverence, as the latter in probability." In another place, Mr. Darwin speaks of "the ennobling belief in the existence of an Omnipotent God."

We have not chosen, even had we been competent, to discuss the truth of the theory of natural or sexual selection, even as applied to Man. That is being done by the ablest naturalists in all countries. Their general conclusion, they tell us, is, that while these great causes are un-

doubtedly operative in nature, and while they may be conceded even to have produced some species, yet that there are many other laws also in operation to the same end. The general agreement is with Mr. Darwin as to the fact; the difference is only concerning the extent to which it is active.

THE METEOROLOGY OF DECEMBER, 1871.

The mean temperature of the month of December at New Haven was 26.5 degrees, which is 3.8 degrees below the average temperature of this month. The highest temperature of the month was 50.9 degrees on the 24th; the lowest was 4.2 degrees below zero on the 22nd. The range of the thermometer for this month was 55.1 degrees, which is somewhat more than the usual range. The low temperature on the 22nd was remarkable, only thirteen cases of equal severity having occurred in a period of ninety-four years. We have now had two successive months remarkable for their low temperature; but the month of October was unusually mild, so that the mean temperature of the past three months has been only 1.6 degrees below the average temperature of these months for the past ninety-four years.

The amount of rain and melted snow for the past month was three inches, which is a little less than the average fall. The amount of rain for the year 1871, was 46.76 inches, which is two inches more than the average fall.

E. L.

Yale College, Jan. 4, 1872.

ALUMNI REUNIONS.

WILLIAMS ALUMNI IN BOSTON.

The Annual reunion and dinner of the Williams alumni resident in Boston and vicinity was held at the Parker House on Monday evening Jan. 9. About fifty gentlemen were present, including Dr. Mark Hopkins, president of the college; Ex-Governor, Emory Washburn; Hon. John Wells, and Hon. James D. Colt, judges of the Massachusetts Supreme Court; Judge F. H. Dewey of the Superior Court; Lieut. Gov. Tucker; Hon. Oliver Warner; Hon. Joseph White, Hon. Rufus Woods and a number of more or less prominent clergymen, lawyers, etc. Previous to the dinner a business meeting was held at which the following officers were elected: President, Judge Wells; vice-president, Charles Stoddard; secretary, H. Buir Crandall; executive committee, George F. Brigham, Samuel Burnham, James White, Lyman Beecher, Daniel Dewey. After the viands had been disposed of President Hopkins made quite a long speech, in the course of which he spoke of the recent comparative financial prosperity of the college, of its increase in numbers till the war, its diminution then, which still continues, and the causes of it—all which indicated the necessity of increased efforts by its friends, and perhaps some modification of their former methods. Yet viewing the past efforts and successes of the college, its manifest fitness to supply the same want of the past which must exist in the future, he felt confidence that present needs would be met, and that future secured.

Speeches were also made by Ex-Gov. Washburn, Hon. Marshall P. Wilder, Judge James D. Colt, Judge Dewey, Lieutenant Governor Tucker, Hon. O. Warner, Hon. Joseph White, Hon. Rufus Woods, Hon. H. B. Knight, S. Burnham, Professor Wright, of the college, Rev. Mr. Hyde and Mr. Scudder. Letters were read from Hon. Henry L. Dawes, Hon. Mr. Benedict, of the New York Senate; and Rev. Richard S. Storrs, of Braintree, regretting their inability to be present. The festivities did not cease until nearly midnight.

BOWDOIN ALUMNI IN NEW YORK.

The second annual dinner of the Alumni of Bowdoin College was given at Delmonico's, at Fifth-ave., and Fourteenth-st., Tuesday evening Jan. 9. The following officers of the association were elected for the ensuing