

from W. Claver, F.G.S., W.E. Darwin

Published weekly. Price, \$1.50 a year, or six cents single copy.

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UNITY PULPIT,

BOSTON.

SERMONS OF M. J. SAVAGE.

Vol. 3.

MAY 5, 1882.

No. 34

DARWIN:

THE SIGNIFICANCE OF HIS LIFE AND WORK.

BOSTON:

GEORGE H. ELLIS, 141 FRANKLIN STREET.

1882.

Entered at the Postoffice, Boston, Mass., as second-class mail matter.

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BELIEFS ABOUT MAN.

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GEO. H. ELLIS, Publisher,

141 Franklin Street,

Boston.

Darwin: the Significance of his Life and Work.*

I HAVE selected two passages of Scripture, which I wish to use as my starting-point, and which are peculiarly appropriate to my subject: "He spake of trees, from the cedar-tree that is in Lebanon even unto the hyssop that springeth out of the wall. He spake also of beasts and of fowls, and of creeping things and of fishes" (1. Kings iv., 33). "Can ye not discern the signs of the times?" (Matthew xvi., 3.)

Garfield, and Longfellow, and Rossetti, and Emerson, and Darwin! All within a few brief months! How the great stars seem falling from the sky! Falling, did I say? No. I must change that thought. It is only a cloud that has passed over them, apparently blotting them out of the sight of man; and yet in a little moment they shine out again, and we learn that the great lights of human thought are fixed stars that hold their place in the heavens, lifting up human thought, enkindling human aspiration, and sending down their light upon our human pathway. Concerning Garfield, Longfellow, Emerson, and men like these, no one, whatever his religious opinion may be, would think of questioning the propriety of making them the theme of speech in the holiest place and at the most consecrated hour. But there may be some who feel differently concerning him who is the topic of my discussion this morning. In the popular mind, he has been for years associated with a work that has been supposed to be derogatory to man and lowering to the dignity of human nature, that has been supposed to be at least questionable in its bearings upon our belief in God and

* Photographically reported by E. C. Barrett.

of hope for the future of the human race. And yet I think, as we understand this matter better, we shall find that there is even a peculiar propriety in bringing his name and his work here into the very temple and close by the altar of our worship; for, before I am through, I trust that you will see that his name and his life-work are more intimately wrought into the moral and religious life of the age than that of almost any other man of the nineteenth century.

Let us consider two or three hints as to why it is not only fitting that we should consider him, but almost necessary that we should not pass him by. In the first place look at Charles Darwin simply as a man, and how many times in Europe or America can you match him? Simple-hearted as a child, singularly modest and unassuming, a man who may be taken as a model in his personal character, in his home life, in his life as a citizen,—a man who has made the single-hearted and clear-eyed pursuit of truth the one work of his life, and who has shown a singularly pure and unbiassed and unpartisan devotion to that truth. He did not seek to build up his own ideas or to glorify himself, but he looked calmly and dispassionately at every phase and all the infinite sides of every subject with which he dealt, looking simply to find out the truth, and settling down that truth in clear, dispassionate terms. I wish that those who claim to be holier than he could really establish their right to stand beside him in this marvellous characteristic of the earnest, simple-minded seeker after truth.

Let me give an illustration of the extent to which he carried this. The *Origin of Species*, his great epoch-making book, contains in itself the hint, more than that, the clear statement of every single criticism that has ever been made on it, of every single argument that has ever been brought against it. He overlooked, he covered up, none of the difficulties that stood against his theory. He put the weapons into the very hands of his enemies, and said, See, here is this theory; such things make for it, such things make against it; destroy it if you can. And this he said in no

defiant tone, but only as one who should say, If this be not a part of the eternal truth, it ought to be destroyed; and, though my life-work be lost as the result, yet I will help you in its destruction. How many men advocating moral, religious, sociological, political theories of any kind, have ever been so utterly candid and fair as this? So much simply to indicate the kind of a man he was.

Can religion, whatever interpretation you may put upon it, make anything nobler than an ideal man? And, if those who claim to speak for religion dare to say that such a man as he was not religious, then it means simply a confession that the best and noblest men of the world can get along without that which is called religion. To make such a confession is suicide.

Another reason why we must deal with him here to-day is on account of the transcendent power of the work that he has wrought, and the influence that he is having on the thought of the world. We dare not, if we will do our work rightly, and stand faithfully in the place that is given to us,—we dare not, even in the name of religion, ignore the great world-wide currents of influence that are shaping the present time, and pointing out the direction toward which the world is moving in the future.

Do you know it? Can you read the signs of the times? Can you recognize the significance and meaning of these influences that are in the air? Do you know that there have been not more than one or two other epochs in the entire history of this world so revolutionary, so significant, so far-reaching in their influences, as this one in the midst of which we are living to-day? No such mighty change has been wrought in the underlying fundamental thoughts and conceptions of man, concerning God and religion, and the great questions of the world, more than once or twice before in the history of the world. Since the change from the Ptolemaic to the Copernican conception of the universe, there has been no such radical revolution as that which is connected with the name of Darwin.

One more reason may be found in the subject of his thought, of his life-work. And this is nothing less than the nature of the universe, involving a consideration of the nature of God and the nature of man. That is, his work goes clear down to the bottom of all the great questions that concern mankind. No man to-day can discuss chemistry, geology, botany, zoology, biology, astronomy, questions of society, questions of politics, questions of morals, questions of religion, questions that go to the very roots of human life, without taking into account Charles Darwin, and without reckoning with the work which he has done.

Let us see who this man is. Charles Darwin was born in Shrewsbury, England, in the year 1809. And, when we look at his ancestry, and see the stock from which he is descended, we are compelled to think of him as a conspicuous illustration of one of the more important parts of his own theoretical and scientific work. Both his father and his grandfather were noted men of science; their fame, indeed, eclipsed by the greater brightness of his, and yet men noteworthy enough to be reckoned as helping to make up the scientific development of the life of England. All three — his father, grandfather, and himself — were members, one after another, of the *Royal Society of England*; perhaps the only case in English history where three men in the line of direct descent have been held worthy of that honor.

His mother was a descendant of the family of Wedgwoods, so noted in connection with the manufacture of pottery. He was educated at the grammar school at Shrewsbury, then at Edinburgh University, then at Cambridge, where he was graduated at the age of twenty-two.

Just about this time, a ship was starting on a voyage around the world; and that voyage has been made famous, and will be famous in all coming time, simply by the fact that this young man of twenty-two volunteered to accompany the ship in the capacity of naturalist. At the age of twenty-two, then, he sailed on the "*Beagle*," made a voyage round the world, and was gone five years. He was struck, in the

progress of this voyage, by some peculiar relations that he discovered between the plant and animal life of the Gallapagos Islands and similar life on the continent of South America; and then and there was planted the seed from which has sprung the great and mighty development of his thought, which has changed, and is still more to change, the life of the world. After five years, he returned, nursing in his mind this fruitful thought, which, as I have said, was to be the seed of all his future life. He published several works as the result of the discoveries and observations made during this voyage; but there was no public trace yet, nor for years, of that which was to be the most remarkable result of all.

In 1844, I believe it was, he wrote out a little sketch of his theory, not at all for publication, but simply as a nucleus or crystallizing centre around which to group his observations and to make the basis of his study. It was not till 1859 that he published the great work on which is to rest his fame. And here is an illustration of that singular fairness and earnest search for truth to which I have referred. He did not leap into print with a guess; but, after he believed he had found the truth concerning the life of this world and of man, he studied and thought and observed, and gathered new facts and new arguments for long years, that he might be sure, as far as it was possible to attain certainty, that he had attained the truth. As an illustration of this same spirit, which is really the spirit of science, and which I believe to be inherently and essentially religious, as all humble truth-seeking of necessity must be, take also the case of Newton. Newton conceived his theory of gravitation, and for sixteen years studied and gathered facts, arguments, and illustrations before he ventured to give it to the world. And Mr. Darwin would have waited and studied years longer than he did, had it not been for the fact that Mr. Alfred Russel Wallace, whose name will stand always as sharing the honor with Darwin, while exploring the islands of the Malay Archipelago, had come to the same conclu-

sions and arrived independently at the same theories with Darwin. Very curiously, he wrote out the results of his speculations and sent them to Mr. Darwin himself, to ask his opinion concerning them.

The result of this was that Mr. Darwin, for the sake of preserving the fruits of his years of labor, was compelled to publish his theories. He therefore wrote out and gave to the world his *Origin of Species*, then only an outline sketch, the beginning of what was to be his complete work. But he had wrought more completely, much more grandly, than he himself was aware. He found that his arguments and the clearness of his presentation had been so remarkable that the world, in a very brief space of time, considering the revolution involved, was converted to his theory; and he did not need to carry out his larger design.

I wish now to pass to the review of just what it was that Mr. Darwin did. What was the contribution that he gave to the scientific thought of the world? We talk about "Evolution" and "Darwinism"; but I take it that very few persons have looked into it sufficiently to comprehend just what it means and how much it implies. I propose, therefore, to see if I can make plain to you just the particular thing which Mr. Darwin did, just what he contributed to the world.

The question that Darwin tried to answer is the same question that has always presented itself to the curiosity of man. For we must suppose that, however far back the period may have been when man first stood up conscious of himself as a personality, conscious of the fact that there was a wondrous world around him of which he was an inhabitant, one of the first questions that would present itself to him must have been, Where did I come from? Who made these lights in the sky above me? By what process has the world come to be as it is? It is the same question exactly that every child, treading in the steps of a countless line of ancestors, is ready to ask of father or mother: Who made the tree, the dog, the cat? Who made the sun and the moon

in the heavens? *Who made me?* It is the oldest question of the world; and, until Darwin's time, nothing approaching a clear and rational and an authoritative answer had ever been given.

We look over the face of the world, and we know that very marked changes are going on. We have records of the past by which we know that now there are mountain chains where once they did not exist. We know that what are now islands — Great Britain, for instance — were once connected with the main land; that the shape of continents has changed; that rivers have shifted their beds. We know that once, ages ago, other kinds of flowers, other kinds of trees and plants, grew where now present species and families and orders are holding their places. We know that, if we go far enough back, there was a time when man was not here, when the highest kind of life that lived belonged to a lower order or type. It is inevitable then that, until it can be answered, the one great question that men shall ask will be, *Where did I come from? How did I come? By what power and through what process has this wonderful world been made as it is to-day?*

Only a very little of even superficial thought will enable you to see that this question goes right down deep to the very roots of morality and religion. It carries with it the questions: *What is God? What is his nature? What are his laws? How is he known to us? What kind of a nature have I? What ought I to do? Why ought I to do it?* These are only hints of the questions that are wrapped up in this one question that Darwin attempted to answer.

I said no adequate answer had ever been given before. Consider for a moment what I mean. The only theory — to use that term by courtesy for the present — that had ever been heard by the questioning mind of man was that which goes by the name of the "creation theory"; and that, in the true significance of words, is no theory at all. For what do we mean by a theory? A theory is a scheme of thought that attempts to account for certain facts. A theory must be

built on facts. When we talk about the creation, where are the facts? Did anybody from the beginning of the world ever see anything created? Did anybody ever know of any thing being created? Can anybody even imagine the process of creation? Can anybody even take the slightest step toward explanation of what creation means? Creation, then, is no theory. It is nothing more nor less than a confession of ignorance. When my little boy asks me who made the tree, and I say God made it; how did he make it, and I say by his wonderful power he made it grow,—do I answer the child, do I explain anything? It is only another way, a specious, pompous way, of telling the child that I do not know anything about it. For the very question that is up for discussion is how, by what process; show me some force at work that is adequate to produce these results. That is the question concerning the world.

What does Darwin answer? Here, it is only fair that I should say that Darwin is not the first man who has *guessed* in this direction. To find the first hints of a theory like this, we must consult Lucretius, Democritus, and one and another of the Athenian philosophers; but the wisest of them were only guessing. They showed no forces, no law, that was capable of explaining the results. If we come down to modern times, we must give such men as Goethe, Lamarck, and Saint-Hilaire the honor of having been the morning stars of this sunrise represented by Darwin; for they also found some indications that looked in this direction. But the time was not ripe for them to put their fingers to the fruit. They did not find the *Vera Causa*, the true cause, the real force that could bring about the result.

We are now ready to understand just what Darwin did. He starts with the well-known fact that in every department of life there are hundreds and thousands, yea, millions of seeds and of young that never grow to maturity. Step into the next field, and, if you know what is going on there, you will find thousands of little grass-blades starting that do not find room to grow, and are crowded out and perish. Perhaps

you are aware that every codfish in the ocean lays so many eggs every year that, if they were all hatched and the young should live to grow up, it would take only two or three years for the ocean to become solid fall. How many apple blossoms are sure to fall and come to nothing? So in every direction he recognized that which has come to be called the "struggle for life"; everywhere on the part of each of these individuals an attempt to grow. But only those comparatively few do grow which are adapted to their conditions, which are capable of finding room, air, food, light, dew, and rain. Those best fitted to live survive, and they are the ones that propagate offspring and become the progenitors of those to follow.

The law of heredity must be taken into account, and the law of variation, which tend not only to reproduce the life of the parents, but along with this a tendency to vary and be unlike the parent type. Now and then, some new faculty, some new power, or sense, or organ, is developed or enlarged this way or that, which proves of advantage in this wide-world struggle for life. Do you not see then how naturally this type of life gains predominance? It is that which survives, and which in its turn produces offspring and controls the future.

Darwin discovered and verified this law of natural selection, or what Herbert Spencer has called the "survival of the fittest," showing that here was a power capable, only give it time enough, of producing the wonderful results that we see in the various forms of vegetable, animal, and human life all around us.

Time enough, I say. Here was the difficulty. This was the only thing that so long stood in the way of the world's progress in this direction. Ever since Christianity came into the world and gained the control of Christendom, we had been shut up in this little narrow confine of six thousand years, and there was no room for any such process as this. So long as it was a part not only of a man's religion, but of science, to believe the world had existed but six thousand

years, any such theory was simply nonsense, because the causes which he demonstrated to be at work were utterly inadequate to produce such immense results in so brief a period of time.

But the study of the modern world was making a way for Darwin. He came in the very fulness of time, when the world was ripe for his thought. Geology had been at work, digging away at the crust of the earth and asking the old questions; and, just as by cutting through a tree trunk and counting the circles you can tell its years, so it was discovered that by digging away the crust of the earth we could read the records of the world, whose age was written by the centuries themselves as they passed over it and left behind their foot-marks.

Prof. John Fiske, in a recent article in the *Atlantic Monthly*, has proved almost beyond question that man was living in Europe at least two hundred and forty thousand years ago; and man is simply a blossom on the summit of the trunk of the century plant. Man is a *parvenu* of yesterday; time, even as far as this world is concerned, reaches back millions and millions of years. And life has been on this old planet cycles and cycles of ages, creeping from the lowest forms with feeble foot until at last its crown and culmination, man, has appeared. The thing, then, that Darwin did was to discover and verify the existence of this force of *natural selection*, by which the process could be rationally explained.

We may conceive of life under the image of a great tree: from man clear down to the little globule of protoplasm, one common life, represented and summed up in root and trunk. Toward the bottom runs off a great branch of the tree, and this represents the kingdom of fishes; limbs, branches, twigs, leaves, representing genera, species, individuals. A little way above this, another limb branches out, and here is the reptilian life. A little above this is the bird life of the world; and above this again the mammal life, of which the highest is the anthropoid or manlike ape. Above this,

the highest branch or outflowering of it all, is man, having as nearest of kin the anthropoid ape, but not his direct descendant in the sense that a child is produced from the father.

This, in a word, is Darwinism; and this is now so established in the thought of the world that those who are best capable of judging say that it is no longer a hypothesis, but proved as much as the Copernican theory of the heavens is proved.

As indicating some steps in the line of this proof, let me point out one or two things as bearing on it. It has been discovered, for example, that, as far apart as an oak and a horse may seem, yet the vegetable and animal kingdoms grade into each other so imperceptibly that not even the most skilled scientist can draw the line and tell you where one ceases and the other begins. There is no dividing line between the animal and vegetable kingdoms of the world. Cuvier, when Lamarck announced his guess in this direction, which was overwhelmed with ridicule by the wisdom of the scientists of the age, demanded that he should produce a missing link. A hundred missing links could be shown to Cuvier to-day, should he ask them of Huxley or Marsh, who could furnish as abundant an answer as he could desire.

Hardly anything would seem farther apart than a canary bird or a peacock and a tortoise or snake; and yet the reptilian and the bird-like classes of life grade into each other so imperceptibly that you can hardly tell where one leaves off and the other begins. We have discovered, in the rock records of the world that Nature herself has kept, and the door of which she has opened in this nineteenth century to the explorer, birds with scales and teeth like reptiles and reptiles with wings like birds. And only within the last few years Mr. Huxley and Prof. Marsh, of Yale, have, together, so accurately and completely traced the pedigree of the horse that now we know his ancestry back to a little being hardly larger than our present fox, that had no hoofs, but five toes, thus conforming to the ordinary type of life on earth.

So the pedigree is being discovered in this and that department; and hardly a week goes by but missing links are found in some department, or some new argument comes to add new conclusiveness to that which it is not too much to say is now accepted by every fair-minded and competent investigator in Christendom.

What is the moral and religious significance of this great revolution, for it is nothing less than that? It is not too much to say that it radically revolutionizes the world's thought about God; it radically revolutionizes our whole conception of the nature of man; it radically revolutionizes all our theological ideas concerning sin and salvation, and the future that stretches out before the human race. I am perfectly aware, and am not surprised, that attempts are made to reconcile Darwin and Genesis; but it can only be done in the same way that the lion is said to lie down with the lamb at the millennium, with one inside the other. There is no possibility of bringing these two theories into accord, except by letting one devour the other bodily. They are utterly irreconcilable. Fifteen years ago, I prophesied, in an essay which I read before an orthodox conference of ministers and delegates, that it would not be twenty-five years before Mr. Darwin would be orthodox; and already at least three or four books are published, showing that it is clearly proved that the whole thing is to be found in the Old Testament!

Here, then, is a new conception of God. What does it mean? To speak generally, it takes God from his throne outside of the universe and puts him within the universe, as my life, my soul, my thought, are in me. Go out to-day and listen with your ear close to the earth, and catch, if you can, some note of the growth of the grasses and the flowers, and you are listening to God. See the tinting of the rose, and you are face to face, as was Moses in the tale of the burning bush, with Deity. God is in the world and in humanity, and the unfolding laws of the universe and of man are the revelation of God.

The changed conception of man means man never fallen; man beginning at the bottom and climbing step by step under the divine impulse at his heart (the same impulse that pushes the rose through the sod in the spring), the impulse to climb through the different stages of human life until he blossoms into Darwin, Shakspeare, Jesus; into the grandest scientific, poetic, religious life of the world. No place for the fall; no place for total depravity; no place for miraculous redemption; no place for incarnation; no place for sacrificial atonement. The whole scheme built on the legends of the Hebrews swept away in a breath; not one foot of rational ground for any of them to stand on.

The salvation for man in the light of this new and proved theory of things means elimination of the evil, gradual outgrowth and upgrowth from the animal, the beastly, the repression of selfish and brutal instincts, the development of all that is high and pure and noble, the unfolding of the better, and the ever-reaching on toward that ideal of manhood that the best of the earth have already prefigured. This is scientific salvation, and this is religious salvation; for science is only the technical, intellectual side of the world and of man, the heart and the sentiment of which is divine and religious, and which is charged full with all that we can possibly mean by those terms.

When, like the infant Hercules, man lay
 In earth's young cradle, even then did he,
 With god-like vigor, reap a mystery
 Of dark and dread life-threatening monsters slay.
 But now grown strong, 'neath his advancing way,
 Disease and pain, and grinding poverty,
 Brain-shackles and the bonds of tyranny,
 And fear and hate,—all these "shall flee away."
 Love-crowned and knowledge-guided shall he stand,
 Facing the future with a god-like trust
 That good to-morrow follows good to-day.
 "It doth not yet appear,"—that other land;
 But through the low-arched gateway of the dust
 Breaks hope's glad sunrise with its deathless ray.