ALLOA WET DOCK.

We have pleasure in noticing that the Dock, which, with its five ton steam crane, gives great facilities in discharging and loading vessels, has been well employed of late. At present there are in it nine vessels varying from from 70 to 400 tons register, besides large rafts of timber, punts, and boats; and a few days ago, the "Patriotess" of Bristol, loaded with coal, and drawing 17½ feet water, left the Dock for the West Indies, which shows that the dock is of very great importance not only to Alloa but to the trade in general, in safely accommodating so many vessels of such large draught of water. The steam crane is powerful, very easily wrought, and capable of loading upwards of 50 tons an hour. On a late occasion 360 tons of coal were put on board a vessel in the dock in one day, and if necessary the quantity could have been considerably increased. We also understand that Captain Cobb, who some months ago was appointed harbour master, has been discharging his duties very efficiently and keeping the dock and harbour generally in first class order.

ALLOA SOCIETY OF NATURAL SCIENCE AND ARCHÆOLOGY.

On the evening of Tuesday last, the annual meeting of the Society was held in the Hall—Mr Wallace presiding. After the usual preliminary business, Dr Wilson, the Secretary, read the annual report, which showed a steady increase of members, enumerated the various papers read during the year, the excursions undertaken, and the state of the Library and museum. Mr R. Borthwick, the Treasurer, submitted a gratifying statement of the income and expenditure, showing the society's financial prosperity. The election of office-bearers was then proceeded with, when Mr Wallace stated that though he had been kindly urged by the Council of the Society to remain in office another year, he thought it better to retire from the office of President, which he now did. He had, however. great pleasure in proposing as his successor, Mr Alexander Forrester Paton, a gentleman who had taken the warmest interest in the society's prosperity, and judging from the enthusiasm which he has shown in various subjects, would, he was well persuaded, do honour to the Chair. This motion was seconded by Rev. A. S. Matheson, who, while he regretted the retirement of Mr Wallace, rejoiced to find Mr Forrester Paton proposed for the Chair. The motion was unanimously carried, whereupon Mr A. Forrester Paton took the Chair and made a few appropriate introductory observations. The other office-bearers were duly proposed and seconded, so that the list now stands as follows for 1868:—

A. Forrester Paton, Esq.,......President.
Rev. A W. Hallen, M.A., } Vice-Presidents.
James Wallace, Esq., S.S.C., }
Dr Duncanson, }
Mr Moir, junr., } Councillors.
Dr Brotherston, }
Mr Allan Drysdale,—Curator and Librarian.
Mr Richard Borthwick,.........Treasurer.
Dr Robert Wilson,..............Hon. Secretary.

In accordance with the rules of the society, the Secretary tabled a motion (which falls to be taken up next month) that in consideration of the great increase of members the Council recommends that other two names be added to the list of Councillors.

The volume of the transactions of the Botanical Society of Edinburgh, was laid on the table as a donation. Mr James Paterson, Cambus, exhibited three large dust-balls found some years ago in the intestines of a horse.

There was then read the following paper on

DARWINIAN SPECULATIONS:

BY REV. A. SCOTT MATHESON,
Junior Pastor, Townhead U.P. Church, Alloa.

Mr Darwin begins his celebrated work on the origin of Species by prefixing to it an aphorism from Bacon's Advancement of Learning. It is our opinion that Bacon's works are somewhat neglected by men of science in the present day. The Novum Organum is still as new as ever in the principles which it lays down for the right interpretation of Nature; and those "idols" of the human intellect, against which it is directed, have not yet been entirely renounced in these days of enlightenment and progress. There is an aphorism which cannot be too emphatically pronounced in the hearing of men of science, and it is to this effect. "There is a certain caution not to be pretermitted: for I foresee and augur, that if ever men, roused by my counsels, betake themselves seriously to experiment, and bid farewell to sophistical doctrines, then, indeed, through the premature and precipitate hurry of the understanding, the leaping or flying to universals or principles of things, great danger may be apprehended from philosophies of this kind: against which evil, we ought, even now, to be on our guard." A most seasonable caution this in view of certain speculations of modern science. The fears of Lord Bacon have been warranted by the number and audacity of scientific theories that have been hastily flung forth upon the world. This has been carried so far that Comte, the founder of the Positive philosophy, refuses to admit geology—so fertile a region of speculation—into the circle of the sciences. To such an extent has this hypothesis-making been carried in the present day that science has largely abandoned its proper work of analysing and classifying the phenomena of Nature, and has hurried off into transcendental and metaphysical regions. Where angels fear to tread, the man of science rushes headlong, and makes a few hurried inquiries, and comes back to those who care not to follow him, with a hypothesis cut and dry. It is all very well to frame theories to a certain extent; there are so many phenomena whose origin and previous history are so obscure, and yet have such a fascination to the human mind, that men will speculate about them for ever. Nay, we must construct theories in compliance with the craving of the intellect to assign a cause for everything. All that is granted freely; but the matter for regret is that there should be such an overweening confidence in the scientific dogmas of the present day, and such a common reference to them as if they were demonstrated truths. Whispers of opposition to these hypotheses are apt to be taunted with allusions to prejudice and the slavery of traditional beliefs. It is high time that men of culture should cease to charge one another with being dogmatic, prejudiced, and so forth. These things are not the signs of any one class; the human mind in the man of science as well as in the theologian is very much the same, in each alike apt to be played upon by vehemence and passion. When favourite dogmas are roughly handled, we are all ready enough to show some measure of temper. There is plenty of this sort of manifestation among men of science themselves. They have snarled and growled over a jawbone, or an old tooth out of a gravel-drift; they have torn to tatters before a class of medical students the pamphlet of a fellow-professor, with as fierce a relish as theologians ever fought over any of their dogmas. And so in the Darwinian speculations of the present time, the controversy is not between the champion of a stereotyped theology and the advocate of advanced science, but between hostile camps of men of science themselves. The differences of such *savans* as Sir John Lubbock and Mr Crawford, in their appearances before the last meeting of the British Association, should convince us that Darwinian speculations are very far from being clearly demonstrated or generally accepted dogmas of science. Darwin repeatedly acknowledges in his work on the Origin of Species that the leading geologists and palaeontologists are opposed to his views. His book is one of the most dispassionate treatises on a long controverted subject. It is rich in scientific facts, and it is replete with broad scientific generalisations. The student, who will give a month or two in earnest and close application to the mastering of its general principles and minute details, will be thereby put abreast the rarest and finest discoveries of modern physical science. The work of Darwin has this value quite apart from the theory which it propounds. We admire the author's candour in his statement of the difficulties attendant on his theory; for these difficulties, even as he states them, are so great that very few will be induced to accept the theory, unless previously they be strongly biassed in its favour. Thus far we go in praise of Darwin, but not of his theory or many of his followers. There are what we have called "Darwinian speculations," which Darwin might not altogether care about endorsing, but most of them are corollaries from his doctrine, and have been inferred by his enthusiastic admirers. In this paper we have to do with this wider reference. [Having here given a brief summary of Darwin's Theory, Mr Matheson proceeded as follows:—]

It will thus be seen that the cardinal principles of the theory consist in the variability observed between animals or plants and their offspring—in the struggle for existence by reason of such vast numbers that they could not all find the means of subsistence—in the power of natural selection, by which the individuals with most perfectly developed attributes are preserved. These attributes have gone on in a course of self-evolving growth and improvement, till from a single pair of monads, Life has risen up to its fair proportions in the bodily structure of man. Given so much time, or rather eternity, and Nature does all this. No student of Nature for a moment questions that the laws of variability, struggle for life, and natural selection, are in universal operation. They were noticed long before Darwin gave his theory of Transmutation to the world. He has the merit, however, of having somewhat fully and systematically traced out these laws, and put them into the mint of a new and more accurate phraseology. That considerable variation exists among individuals of the same species no man of science doubts, but it is an excessive draft upon our credulity which would have us to believe that there is no limit to this variability. From a monad up to man. Darwin owns no possible limit; when he is asked for proof, he has no direct proof to give. He cannot adduce a single fact to positively indicate progress from one species to another. It must have taken such a long time and must have been such a gradual process, he answers; but even with the geologic ages at his elbow, his theory finds no corroboration; and so while he admits the difficulty, he gets out of it by saying that the geological record is imperfect, and by expressing his confidence that the record, when more complete by further research, will in all probability establish his theory. We can wait till then; it is to be regretted that many Darwinians, prone to hasty induction, cannot wait till that time too.

The gradual ascent in time from lower to higher forms of life is one of the finest lessons of modern science, but to foist into it the doctrine of derivative descent is a conclusion nowhere to be found in the premises. As we run leaf over leaf of the Geological record we have looked hitherto in vain for evidence to substantiate this transmutational hypothesis. There is variability, we admit—to a considerable degree also in the case of widely distributed species; but it is exceedingly difficult to establish it, by any kind of evidence whatever, to such an extent that varieties may pass into species; and species in course of time come to inherit generic attributes. It is exceedingly easy to imagine such a thing; it is a pleasing dream of poetry to fancy such an evolution to have been going on through the past eternity; but we are wandering in a region that is transcendental to science, and which we are forbidden to invade by the express counsels of such leaders in science as Bacon, Newton, and Auguste Comte.

The evidence from variability for this development hypothesis is derived by Darwin from a very thorough study of the differences among pigeons, cattle, horses, and other animals that have come under the effects of domestication. Considerable differences can be produced among these animals by breeding; these differences man is able, as he pleases, to accumulate and perpetuate, by acting on the principle of selection. So, it is argued, nature may produce such divergencies, and may continue through incalculable ages, to produce them, and may preserve them by the law of selection till any amount of variation may be produced. But if any force lies in this argument, then man should be able to carry on the differences, till the breed of pigeons, for example, passes over into some other class of birds. On the contrary, while variation exists, it is only within a certain sphere, while there is always a tendency to revert to the original form. A breed of horses may be rapidly improved in quickness of pace, but they soon reach a point that becomes the utmost limit of variation, and then they tend to return to the average breed. There are many serious objections which may be urged against this theory and against the multitude of Darwinian speculations in general. We shall go into three of these objections. First, *we take exception to the way in which these speculations conjure with the element of time.* An unlimited draft of time is demanded—we might almost say, an *infinite* draft, in one word—eternity. Darwinians are continually asserting that millions on millions of ages have passed away since the epoch of life in some of the earlier strata. Darwin himself says that the denudation of the Weald must have required 300 million years and calls it "a mere trifle" in geological computation. This is, we think, a somewhat presumptuous freedom with the use of ciphers—an abuse of arithmetic. But it is necessary to Darwin's theory: he bids us at once shut his book, if we do not admit "how incomprehensibly vast have been the past periods of time," and after referring to the lapse of ages needed for the deposition of strata, he says, "The consideration of these facts impresses my mind almost in the same manner as does the vain endeavour to grapple with eternity." If speculators are thus to run away with the idea of time, the adequacy of almost any hypothesis may be assumed. That vast periods are needed to account for geological phenomena, every student of science grants, but such exaggerated calculations only tend to a low estimate of the evidence adduced to corroborate any theory.

In proceeding to advocate a restriction of time, we premise that the geologist must leave his underground speculations, and listen to the testimony of some other departments of physical and demonstrative science. Sir Wm. Thomson of Glasgow has been, and is still, engaged in carrying on some interesting researches with regard to the dissipation of energy. I had the pleasure of hearing him, at last meeting of the British Association in Dundee, give the results of his recent investigations into this subject, when speaking on the internal heat of the earth. The doctrine of the conservation of force has proved that there can be no loss of energy in nature, but only a transference of it from one mass to another, It might therefore seem that change is an eternal process, and all things continue as they are, and as they have been. But Sir Wm. has shown this to be a fallacy, and demonstrated the tendency in nature to the exhaustion of potential energy, especially in regard to heat. It is certain that "heat cannot have existed in the sun through an infinity of past time, since as long as it has so existed it must have been suffering dissipation, and the finiteness of the sun precludes the supposition of an infinite primitive store of heat in his body." The sun is nothing else but a vast fire of coals, and can only give out so much heat and for so much time. Falling planets or meteoric masses may be ceaselessly supplying it with fresh fuel, but the supply is still finite. Besides, it is demonstrable that the supply is not adequate to produce the witnessed results, and that no accumulation in the past would enable it to blaze for ever. The result of his inquiries in this direction has terminated in a probability that the sun has not illuminated the earth for a longer time than one hundred million years; but that is less than 'a mere trifle' in Darwin's estimation.

Sir Wm. Thomson applies the same method of reasoning to the rate at which our earth has cooled, on the supposition that it was at first an incandescent mass. The cooling of such a ball of fire may be calculated approximately by fine mathematical ratios; and the result of this eminent philosopher's calculations, gives five hundred million years as the utmost period within which organic life could have existed on the surface of the earth. Here, then, demonstrative science is utterly at variance with geology, or rather let us say, with Darwin. In the presence of these contradictions and disputations of modern scientific inquiry, we are almost warranted in taking Darwin's advice to close his book, and in accepting the declaration of M. Comte, that "inquiries into the formation of the universe, the origin of animals and so forth" are among "the ambitious dreams of a misty Atheism."

Again, *we take exception to this theory, inasmuch as it tries to do away with the activity of any supernatural Will in the universe.* Descent through adaptive modifications leaves all the forms of life to be evolved from one another by blind unconscious instincts and dead mechanical laws. Anything like creational interference is rigidly eliminated from this development hypothesis. Some Darwinians admit—being still, I fear, under the yoke of traditional beliefs—that there must have been a first creative act to account for the few original, primordial forms of life. Darwin himself seems disposed to accept, out and out, the theory of developmental descent. He sometimes alludes with reverence to the Creator, and goes the length of saying that his theory gives a loftier idea of the Divine Architect than any other. In concluding the argument for his theory, he speaks of "some one primordial form into which life was first breathed," by whom, or by what, however, he does not say. Other statements and the general argument of his book show, notwithstanding, a systematic antagonism to the recognition of creative energy and purpose. He asks, "Can they really believe that forms could so flash instantaneously into existence?" and he eludes, as he thinks, the absurdity of such a belief by taking refuge in his theory of adaptive modifications and cosmical evolutions. Or we may put this method of escape into the words of a somewhat dogmatic, but stout-hearted disciple of Darwin. "Should it be advanced, as is sometimes done, that the creation of a monad is as incomprehensible as that of a man, then to this we decidedly answer, No." This sapient philosopher imagines that by following up the complexity of organic forms to one or two germs of vitality, by shewing, so to speak, how next to nothing these monads are, he is able to bridge the chasm between nothing and something, and make the idea of creation less incomprehensible!

The absolute origination of anything is utterly transcendental to all our faculties, as any one of us may learn by trying to think *into* this mystery. Aristotle or Plato never conceived the idea of creation; it is one of those notions or "traditional beliefs," as many Darwinians would designate them, which have come from a book-revelation. It is therefore, altogether unphilosophical to minimize the originating act, and argue therefrom that the creation of a monad is more comprehensible than the creation of man. The one is just as deep a mystery as the other.

It is very awkward for Darwin's theory to have to admit a first creative act, as it grants the very principle against which it is one long elaborate argument. The advocates of this theory are perpetually affirming that creational intervention along with natural law is unworthy of the unchangeable Creator, and yet there it stares them in the face at the very outset of the vital scheme. Many Darwinians feel the dilemma they are in, and so they are working away hard at the problem of life itself, and trying to strike out a germ of vitality from combinations of inorganic matter and force. The author of "Vestiges of the Natural History of Creation" suggested many years ago the possibility of science winning this achievement. Let them try it; we would not throw a single obstacle in their way. As Professor Tyndall said to the working men at Dundee—"It is perfectly vain to attempt to stop investigation as to the actual and possible combinations of matter and force. Depend upon it, if a chemist, by bringing the proper materials together, could produce a baby, he would do it. At the present moment, there are, no doubt, persons experimenting on the possibilities of producing what we call life out of inorganic materials. Let them pursue their studies in peace; it is only by such trials that they will learn the limits of their powers." But while we do not strongly censure such experiments, though we think them beyond the region of genuine science, we cannot fail to mark the spirit of determination which incites these speculators to banish a supernatural Will from having anything directly to do with the present transactions of the universe.

Darwinian speculations would have us, then, to believe that new species are never created—that the laws of natural selection and progressive development in nature are amply sufficient to account for all organisms without the aid of any creative interference. There is no such thing as creative *purpose* in nature. Design in nature is pooh-poohed as the argument of "the poor old final causes" that once may have had value, but has none now. We have said that natural selection does, within moderate limits, preserve variations advantageous to the life and multiplication of a species, whenever these variations have really come into existence; but Darwin's theory does not explain how these particularly useful changes come to be produced at all. The real origination of species is quite as dark a mystery as before. It is assumed, without an atom of proof, that accidental variations of species must take place equally in all directions and in unlimited numbers of which only, those that are useful to the creature, and give it a fresh chance in the conflict of existence, will tend to perpetuation. This assumption, which after all is only a *maybe*, predicates that nature—blind, unconscious nature, has made a countless host of happy, accidental hits, and thus gone on to perfection. Truly this is about as huge a supposition as a fortuitous concourse of atoms dancing together into some finely elaborate mechanism. Of course, part of the assumption is that unnumbered useless or positively disadvantageous varieties existed for every great stroke of nature's; but it were easy to imagine that the difficulties in this delicate work of selection would be so many and great that the stock on which experiment was made must have been exhausted before the success was achieved. Let us give an example from the imitative side of nature. There is a principle of mimicry to be found in certain creatures, by which they are protected, and Darwin would explain it by natural selection. There is a race of Indian butterflies, Kallima inachis, which have a showy upper surface, but whose under surface is like a withered leaf, with radiating veins like the veins of the leaf. Besides, it has irregular botches like the mildew on a decaying leaf. And lastly its habits are exactly those which enable it to *act* the part of a withered leaf successfully. An actual observer thus describes them—"These butterflies frequent dry forests and fly very swiftly. They were never seen to settle on a flower or a green leaf, but were many times suddenly lost sight of in a bush or tree of dead leaves. On such occasions they were generally searched for in vain, for while gazing intently at the very spot where one had disappeared, it would often suddenly dart out, and again vanish twenty or fifty yards farther on. Once or twice the insect was found reposing, and it could then be seen how completely it assimilates itself to the surrounding leaves. It sits on a nearly upright twig, the wings fitted closely back to back, concealing the antennae and head. The little tails of the hind wing touch the branches, and form a perfect stalk to the leaf, while the irregular outline of the wings gives exactly the perspective effect of a shrivelled leaf." Now here is mimicry of a most marvellous kind. The observer of this fact, being a Darwinian, would explain it by saying that it was the result of centuries or thousands of years—that one resemblance after another would be slowly acquired, till all the minute shaping and graining of the leaf, in the first place *accidentally* introduced on the insect's surface, had been perpetuated in a similar way. Such an explanation, we think, utterly fails to account for it. The slow acquirement of these resemblances—one, it may be, ages after the other,—could not secure protection from the danger which such an imitative exactness implies; on the contrary, as the absence of one quality would be inevitable destruction, so the simultaneous existence of all the resemblances is necessary to their preservation. But this necessitates an independent act of creative energy. Before leaving this point, let us observe that there are many cases of imitation in nature, where neither the useful nor the protective are to be seen. The man-orchis and bee-orchis are cases in which the vegetable world imitates the animal, and yet the Darwinian principle of advantage is nugatory. These curious mimicries in the vegetable and animal creation do not only give us wonderful demonstration of mind in nature, but beautiful illustrations of *art* of the highest order, with which it has been the pleasure of the Creator to adorn the earth, even as it is the highest proof of intellectual refinement in man to surround himself with the noblest specimens of art.

But Darwinians scout at the idea of design in nature, and relegate it to the limbo of superstition. To affirm *purpose* of anything in nature is to be guilty of what is termed "anthropomorphism." The great problem of the universe—the existence or presence of a Supernatural Will—remains unsolved, so far as science is concerned. The physical philosopher, according to Professor Tyndall, is a pure materialist, and to him God is a nonentity. Thus do Darwinians (many of them, if not all) think and study, and they are ominously silent about any other light having descended to illuminate the problem.

"There may, or there may not be, a Builder of this great universe," is one of the last conclusions of modern science, and now Professor Huxley has nothing more to recommend but that very impossible kind of worship—the worship of the Unknown and the Unknowable, which may be, after all, only an infinite Cipher!

The oracles of modern wisdom tell us we are orphans, and have no Father in heaven—tell us that we are moving about in an abyss of naturalism without interruption or outlet. Is it possible that men have the heart to preach such philosophy? Do you tell me that I am hemmed in on every side by "laws" and "causes," behind which there may be no thinking mind or loving heart, then what an infinite solitude does this universe become to my throbbing, panting soul! The half, and what I had deemed the higher part, of my nature must be all mockery and a lie, if you cannot assure me that all this world around is but the living garment in which the invisible God veils, and yet reveals His own mysterious loveliness. The speculations which would ignore these higher demands of our nature cannot be the results of the true inductive method of inquiry, and must be ranked among the oppositions of science falsely so-called.

The third exception we take to this theory is that it promulgates views affecting the dignity of the human race. Man is sunk far enough below his ideal conceptions of humanity, but these Darwinian speculations would sink us very low. What then, is the hole of the pit out of which Darwin attempts to dig mankind? Hearken again to the oracle—"Man is neither a distinct creature, formed in a special manner, and differently from all other animals, nor provided with a special soul, and endowed with a divine breath of life: he is only the highest product of a progressive natural selection, and descends from the simious group standing next to man." A change, somehow, has always been taking place in an upward direction of improvement, till an ambitious baboon got it into his wise head to become a monkey, and the monkey would be an ape, and the ape aspired to be a gorilla, and at last the gorilla one day found himself a man! All this is sufficiently ridiculous, and Darwinians often get themselves laughed at for it. If it were a joke, it would be all very well, but they are awfully serious, and don't like the joke at all. "This jibing and jeering at the idea of an ape-ancestry" is a very sore point, and they try to be philosophically calm: but perhaps, the method of ridicule here, as in the case of Butler's Hudibras or Don Quixote, is the best way in which the common sense of mankind answers the fool according to his folly.

The sneering mood does not, however, befit the discussions of an Archæological Society: facts are the only arguments we have to deal with. Where are the facts, then, for this theory of man's descent from the primeval brutes? Not a single fact can be found. "Missing links" are sorely wanted, and are long in forthcoming. Nearly three hundred species of monkeys exist, and yet no intermediate form makes its appearance to span the chasm between them and man. The sum of Huxley's argument is that the difference between the lowest form of man and the highest form of the ape-tribe is not so great as that between the most civilized man and the lowest savage. Apparently plausible that, but most fallacious as a piece of rigid science. It may be answered by a counter-statement of this sort: How vast is the difference between the ape, an irrational creature of instinct, as intelligent at birth as at death, and man, on the other hand, capable of language, and ever progressive in intelligence. If man be a kind of subcreator in the power which he has to produce improved breeds of horses, dogs, and pigeons, then let him try his hand at developing some tractable ape into humanity. If man sprung from the ape, he may do so again: it might be worth experiment. We may conclude this part of the argument by again referring to the appearances of the above-mentioned *savans* at the Dundee meeting of the British Association. The Darwinian, Sir John Lubbock, argued for the unity of man, and yet for his descent from the monad through the ape; while his redoubtable opponent, Mr Crawford, who believes in sixty special creations of man—of Adams and Eves—answered the Darwinian to this effect, "I don't believe one word of the Darwinian system. It pretends to trace all organised beings to five or six monads, but what a monad is no man is able to say. Just suppose this famous monad growing gradually into something by selection! Fancy the monad selecting what it was to grow into! Fancy the donkeys selecting to become horses, or the pigs to become elephants! And when there are 200 or 300 varieties of monkeys, I do not know where their selection is to end. That, I think, is quite enough for the Darwinian system." In this scientific camp of Philistines, it would seem that every man's sword is against his brother. It is soon enough then for us to claim blood-relationship with the gorilla, when men of science arrive at something like agreement among themselves.

A few Darwinians try to escape from the degrading and destructive issues of this theory by asserting that man has been endowed with certain peculiarities, such as an improvable intellect, conscience, and the religious sentiment, which are the immediate gift of the Creator. This is a vain refuge, however, involving a logical inconsistency; for it grants that the Darwinian theory fails to account for a fundamental part of creation, and must call in the aid of the theory which it so earnestly seeks to demolish, namely, that which maintains the direct creational activity of a Divine will in the world. It is an excrescence which they add to Darwin's theory; it is a remnant of old traditional beliefs, hanging on to that theory like those rudimentary organs in animals which, Huxley thinks, are obsolete relics of the past. This rudimentary organ is a very useless appendage to the theory, and some of those who have stuck it on seem to be aware of it. For it is curious to notice, how, after they have admitted these specialties in man to be creational endowments, they contradict themselves by returning to Darwin's principle, and doing what they can to exaggerate the correspondence between the lower animals and man in their mental faculties, and declare it as their belief that the difference is one of degree rather than of kind. This creational interference in regard to man receives no countenance, however, from the leading defenders of this developmental hypothesis, such as Darwin, Huxley, and Herbert Spencer. The last two of this trio have carried out Darwin's theory to its logical and legitimate consequences, and developed it into a system of pure and unadulterated materialism. In Herbert Spencer's philosophy, Darwinian speculations enjoy the full length of their tether, and it is satisfactory to learn the length to which they may be carried by a logically rigid and consistent audacity. He tells us that "the common notion that there is a line of demarcation between reason and instinct has no foundation whatever in fact," that "there is a series of insensible steps by which brute rationality may pass into human rationality—and that "the religious sentiment in man" arose "not from an act of special creation," but "by a process of evolution." The fundamental principle of his philosophy is that latest and most beautiful discovery of modern science—the conservation and correlation of Force, or the mutual convertibility, equivalence, and virtual identity of all forces in the physical sphere. The ultimate elements of all physical phenomena are matter, friction, and force. S[illegible] we count this one of the finest generalisations of [illegible], but Spencer presses this principle into his service, and holds that the correlation of Force comprehends the mental as well as the physical forces, and that they are convertible into each other. A force existing as motion, heat, or light, may become a mode of consciousness: forces liberated by chemical changes in the brain evolve themselves into thought and emotion. All things are thus reduced to matter, motion, and force; mental and material forces are convertible: mind and body are one; and so man, whom we had once deemed rational, immaterial, immortal, is only a finer evolution of the brute, the stock, and the stone. Here we have the logical terminus of these Darwinian speculations. They carry away back the genesis of the universe to a distance which confuses the mind as with the idea of eternity; they declare the Power which the universe manifests to be a problem utterly inscrutable; they materialise every element of human nature, and leave us with nothing better than the wretched cry of the sceptic. "O God, if there is a God, save my soul, if I have a soul!"

Time, of which I regret that I have already taken such a large draft, prevents me pointing out how these Darwinian speculations ignore Christianity, and set aside everything like a supernatural revelation. Time forbids me pointing out the capital error of this physical philosophy—the huge assumption of its own metaphysical adequacy to explain all the phenomena of the universe. When the merely physical method is assumed to be adequate, it becomes misleading, fatalistic, and unintelligible in its revelations. The Scottish school of philosophy is an effective breakwater against this tide of destructive thought. For it asserts the ideal nature or constitution of soul, and the dependence of the brain itself on conscious mind; it asserts that we should think of our body as contained in mind, rather than of mind as contained in our body. Hence it is that in the northern part of our island a thorough-going Darwinian of any note cannot be found. Time forbids me pointing out another objection to this theory—the exaltation of the maxim, Might is Right,—to the throne of animated existence. By reason of the struggle for existence, and by the principle of natural selection, certain races, it is said, are surely doomed to extirpation. The white man, in virtue of having the power of adaptation, is to be the grand extirpator; and how he carries out this principle of might, the history of our colonies shews. It is vain then to try and civilise the subject races; their certain doom is extirpation. Goldwin Smith of Oxford notices this side of the Darwinian theory, and says: "Curious notions for a Christian nation are afloat; the great organs of our national morality tell us that the subject races are destined to melt away beneath the rays of a higher civilization. These are the sort of people against whom, in the garotting season, we provide ourselves with life-preservers, lest, falling in with them in some lonely place, we should melt away in the rays of their civilization. These principles, rightly viewed, mean, in fact, the unscrupulous dominion of strength over weakness, which in the end would be the overthrow of all civilization."

These Darwinian speculations would throw the race back some twenty centuries, and place us before an altar with this inscription on it "To the unknown God." And the time-hallowed Book of God still declares with all the inspiration of the great Apostle, "Whom ye ignorantly worship, Him declare I unto you." These Darwinian speculations resolve man's spiritual essence into a fine evolution of material force, prison him in blind unalterable laws, and leave him shorn of his immortality and his greatness. But the Lamp of revealed Truth taken down from off the throne of the Eternal still shines in undimmed lustre, and in its light the words of Matthew Arnold are beautiful and true:—

"Man is blind because of sin;
Revelation makes him sure,
Without that, who looks within,
Looks in vain, for all's obscure.

"Nay, look closer into man!
Tell me, can you find indeed
Nothing sure, no moral plan
Clear prescribed, without your creed?

"No, I nothing can perceive;
Without that, all's dark for men,
That, or nothing, I believe
For God's sake, believe it then!"

Mr Allan Drysdale said he had listened to the very able paper, now read, with much pleasure, and thought Mr Matheson had brought before the members of this Society very clearly the nature of the Darwinian theory—that it was evidently a theory in which no intelligent design governed the production of species—but depended on the chance meeting of a male and female of one kind, which, under some favourable circumstances, produced a higher class of animals. He did not, however, sympathise in the fear of Mr Matheson, that the sun would burn out; but held on the contrary that the universe of being was not made "out of nothing"—that idea was now exploded—but partook of some element by which it received enduring life from the Creator. He (Mr Drysdale) concluded by proposing a vote of thanks to Mr Matheson for his able paper.

Dr Duncanson thought the introductory remarks uncalled for, inasmuch as the Darwinian theory was not only strictly scientific, but had been advanced with the utmost caution, the difficulties in the way of its adoption having been better stated by Darwin himself than by any one since. Mr Matheson had urged three objections. The time admitted by him might possibly be ample. It was satisfactory to find they were not now restricted to 6000 years. Theological objections were altogether irrelevant, seeing the theory was a scientific, and not a theological one. If Mr Matheson's theological deductions from the theory were correctly drawn, things had come to a sad pass, as most of our younger eminent men of science had given in their adhesion to Mr Darwin's views. It was out of place to discuss theology, but for himself he might be permitted to say that the theory gave him a much grander conception of God than the common belief did. He believed that God no more created the organic world as it is, than He created the earth as it is. Both were evolved from an earlier condition, and creation is wholly beyond the sphere of science. As to human dignity, Mr Matheson's ridicule might be very amusing to ignorant people. He (Dr Duncanson) did not think his dignity at all affected by any speculations about what the progenitors of our race were made from, whether from earth or from monkeys. Our dignity depends on what we are, not on what we were made of. Those who, without acquaintance with science, like the late Lord Advocate, and many others before him, argue questions of science on theological grounds only, generally came in time to appear very foolish, but experience did not yet seem to have taught her lesson of prudence.

The Rev. Mr Matheson having made a few observations in reply, and a brief interchange of opinion having taken place between the members generally, a vote of thanks was duly accorded to Matheson, and thereafter the meeting separated.

ALLOA SHERIFF COURT.

A Court was held yesterday—W. Bennet Clark, Esq., presiding.

Mary Lundie or Cook, wife of James Cook, labourer, residing in Red Row, near Fishcross, Clackmannan, was placed at the bar, charged at the instance of the Procurator-Fiscal, with having been guilty of assault, aggravated by having been committed to the effusion of blood, in so far as on Monday the 6th of January, at or near the house occupied by Helen Hunter, residing in Red Row, the said Mary Lundie or Cook did wickedly and feloniously attack and assault Janet Scott or Allan, wife of and residing with David Allan, a miner, and did with her clenched fist strike the said Janet Scott or Allan, a severe blow on the face or other part of the person, whereby she was cut to the effusion of blood, also her eye much swollen and discoloured, and was thus assaulted to the injury of her person. The prisoner, who pled not guilty, was defended by Mr J. G. Wallace. After evidence had been led, the Sheriff found the charge proven. It seems that irritating language had been used on both sides, and that the assault was done hastily. His Lordship accordingly sentenced the accused to pay a fine of 15s or 14 days' imprisonment. The fine was not paid.

Yesterday was the first or pleading diet in the case of Peter Fogo, John Brown, James Malcolm, and James Ferguson, all belonging to Clackmannan, charged with assaulting George Henry, police constable, in Clackmannan, in the month of November last. Being placed at the bar, and on the libel being read over to them, each of the accused pled not guilty. The trial was then adjourned to the 27th current. Meanwhile a jury will be cited, and it is said that in all likelihood the accused will endeavour to secure the services of J. B. Balfour, Esq., advocate, Edinburgh.

SHERIFF SMALL DEBT COURT.—The usual Small Debt Court was held on Wednesday last—Mr Clark on the Bench. Before proceeding to dispose of the Small Debt cases, his Lordship took into consideration the application of James Harley, who has been for many years a Sheriff Officer before the Sheriff Court of Stirling, to be admitted a Sheriff Officer before the Sheriff Court of Clackmannanshire. Mr Harley being found duly qualified, his application was consequently granted. There were a considerable number of cases on the roll, but none of them presented features of public interest.

SCOTCH COMMISSIONS.—Stirling, Dumbarton, Clackmannan, and Kinross militia, Highland Borderers, Light Infantry—Capt. John Cornelius Craigie Halkett to be Adjutant, from the 5th Dec., vice Kenny, deceased. 2d Dumbartonshire Volunteers—The Rev. Wm. Speirs Shanks to be Hon. Chaplain—Alex. Hay, M.D., to be Hon. Assistant-Surgeon.