

THIRTEENTH MEETING. 21st December, 1876.

R. Gillies, President, in the chair.

New Members.—G. Grant, T. W. Whitson, J. R. Sinclair, J. O’Meagher.

“State Forestry: its Aim and Object,” by Captain Campbell Walker.
(*Transactions*, p. 187.)

ANNUAL GENERAL MEETING. 16th February, 1877.

R. Gillies, President, in the chair.

New Members.—G. Stevenson, G. Joachim, Dr. D. Blair.

ABSTRACT OF REPORT AND BALANCE-SHEET.

During the past year 13 meetings have been held, at which three lectures and 31 papers have been read by 14 different members, 13 of whom are resident in Otago.

Since the last annual meeting 33 new members have joined us, and 28 have retired, thus bringing our numbers up to 231.

During the past year 45 volumes have been added to the library, in addition to the scientific periodicals.

In order to excite a greater interest in the Institute, the experiment was made last year of alternating popular evenings with our scientific meetings, and the result was highly satisfactory. Arrangements are being made for giving six popular evenings, one a month, during the coming session.

The balance-sheet showed: Receipts (including balance from last year, £24 19s. 6d.), £263 6s. 6d.; expenditure, £230 16s. 6d.; balance to carry forward, £32 10s. 2d.

ELECTION OF OFFICERS FOR 1877.—*President*—The Right Rev. Bishop Nevill; *Vice-presidents*—R. Gillies, W. N. Blair; *Council*—Dr. M. Cough-trey, H. Skey, J. S. Webb, G. M. Thomson, P. Thomson, D. Petrie, Dr. Hocken; *Auditor*—A. D. Lubecki; *Hon. Sec. and Hon. Treasurer*—Professor Hutton.

The retiring President then delivered the following

ADDRESS.

After reviewing the work of the past session, and referring to the popular meetings held during the year, Mr. Gillies went on to say:—

I may mention now that it is our intention, at the beginning of the session we are now entering upon, to compile a programme for the popular meetings of the year, embracing a variety of interesting and instructive subjects, and to endeavour to get those most competent to undertake their elucidation. Several of the Professors have already signified their willingness to take part in these meetings. In this way we hope to make our Institute more educational in its character, and, judging by the crowded audiences with which we were favoured in the year that is past, we feel sure that there is in Dunedin sufficient mental vigour to appreciate and support such endeavours, and that we will only be supplying a felt want in our midst.

The subjects discussed at these popular meetings may all be ranged under the head of Speculations in Biology. It became my duty as your President, and as the proposer of these meetings, to take the responsibility and burden of the first of them. The subject chosen was "The Pedigree of Man," and the paper made no pretensions to anything else than being a concise summary of Hækel's "History of Creation," a new book, which was making some noise in the scientific world, and which members generally had not seen, but of which I had been fortunate in procuring a very early copy. The interest of the evening was greatly increased by the production by Captain Hutton of type specimens from the Museum of the various stages of development enumerated by Hækel. An interesting discussion ensued, in which many members took a part on both sides of the question. The most kindly feeling and courteous consideration for each other's opinions were shown by everyone, with one notable exception, though even then we cannot wonder that, in a matter which some consider as vitally affecting their dearest and holiest hopes and aspirations, an affectation of contempt should be assumed for the subject, as being "beneath the notice of theologians."

The same courteous consideration, I may say, characterised the discussions at all the meetings, even where, as in many cases, the subject was one of deep and all-engrossing feeling; and I am satisfied that great good resulted from these discussions by the correction of many misunderstandings and mistakes, and by the calling of attention to many difficulties which otherwise might be overlooked, and thus fail to exercise their due weight in any right estimate of the subject. I think I am justified in saying that since these meetings, from whatever cause it arises, the aspect of the combatants has been very different from the fierce, uncompromising attitude with which the sword first leapt from its scabbard, and has become more that of trying to see how far an agreement can be arrived at without an absolute surrender and acknowledgment of defeat. For this happy and desirable result, I think, we are largely indebted to Captain Hutton's wise and lucid lecture "On the Inductive Method, as applied to the Theory of Descent"—a lecture of which I think it is a public loss that it was delivered without notes, and that consequently no record of it remains.

To Bishop Nevill also, to almost a greater extent, we owe much of the high tone and gentlemanly feeling (so unusual in border frays between Theology and Science) which has characterised much of the discussion since. Though opposed to the current of scientific thought on this particular subject, his training and experience in natural history, and his high attainments in some branches, enable him to grasp and realise the difficulties of the subject from its scientific side, and to give due weight to the arguments and considerations which weigh with his opponents. And hence we find from him no sweeping denunciations, no pretensions to be able to see deeper than the owners of them into the hearts and motives of those who differ from him, no attempt to write them down as "infidels" or atheists, or to see anything else in them than humble, sincere, and God-fearing lovers of Truth, however mistaken in their views.

And this leads me to say that this is, I believe, one of the greatest wants and necessities of the theological training of the present day—the bringing students face to face practically with the facts and observations of physical science. The classical training of the schools, however valuable (and I would be the last to decry it), if allowed to monopolise all the attention, leads men to live only in the past—to view all things, to judge all things, by the light of the past—

"The living rule not this our age:
It is the dead—the dead—"

to habituate themselves to what is a false and one-sided view ; to look upon Truth as something communicated by authority—as something outside of their sphere, which is handed to them and received by them as an acquisition, instead of being, as it is, something that men must grasp and realise for themselves—something that they themselves must know and experience, or else it is nought but the parrot repetition of an acted part. The observation of facts, the seeing their sequence and realising their meaning, and then arguing from or upon them, is a very different process from taking these facts second-hand and founding theories, or raising objections, or drawing inferences about them. In the one case, the facts always mean a great deal more than can be expressed, and everyone who has observed the facts knows their significance, and unconsciously is influenced by this hidden meaning or power ; whereas the man who deals with facts second-hand misses all this, is continually pushing expressions further than are intended, drawing inferences which a fuller knowledge would have saved him from, building up objections founded on misconceptions which arise largely from the imperfections of language, and which a personal acquaintance with the facts would at once dissipate. “ The one deals with the raw material of fact, the other with the logical textures woven from that material. Now, the logical loom may go accurately through all its motions, while the woven fibres may be all rotten. It is only by practice among facts that the intellect is prepared to judge of facts, and no mere logical acuteness or literary skill can atone for the want of this necessary education.”

The antagonism which has been attempted to be raised between Science and Christianity is, I think, something more than a most unfortunate one ; and perhaps even at the risk of nauseating you with a *threadbare subject*, I cannot do better than employ the few minutes still at my disposal in clearing up some misunderstandings, and pointing out that the view which has been attempted to be forced on this community, that “ Evolution and Christianity are absolutely contradictory, and cannot live together,” is an extreme view, and not the position taken by many of our best and wisest theologians at home. To everyone accepting the Christian revelation as true, and as the source of their highest hopes and fondest aspirations, the position becomes, indeed, a most momentous one if the choice has to be made between it and what, in common with nearly all the scientific world, we have had forced on our convictions by the stern logic of facts. Those of us who have grown into manhood's years may be able to retain the fruits and experiences of our earlier years, and “ hold the beginning of our confidence firm unto the end,” content to wait for further light or to rest in implicit trust where we cannot understand or explain. But what of those who are growing up around us ? Are they to be told that it is at their peril that they open the tabooed book of science, or dare to look into any of the pages of God's glorious book of nature ? It is with a feeling of something akin to horror that I contemplate the position in which many of our youth in this colony will be placed by such an unwise and strained stumbling-block raised in their path. For assuredly we have sufficient evidence that the intellectual vigour of our youth is such, that come what may they will drink at the forbidden fountain, and rejoice in its healthgiving and refreshing streams. Yea, more, forbid it as we please, we cannot prevent them imbibing its principles, or becoming interested in its study. The whole literature of our age is saturated with it ; and even in our schools, the principles which lie at the roots of these things are being insensibly impressed and taught to the youthful mind. Surely, then, if it can be shown, as I believe in my inmost heart that it can, that there is no true antagonism between science rightly understood, and religion truthfully interpreted, it is not the place of those who love both, to make a divorce between them ;

yea, "what God has joined, let no man put asunder." The conflict, I must say, is largely on the side of theology; for, as a rule (I state it as the result of my reading), scientific men do not attack religion in their writings. Their business is with the observation of facts, and the elucidation of truth from these facts; and I unhesitatingly maintain, that it is no part of their duty to dwell on the relations of these facts with the teachings of theology. In this connection, it is refreshing to come across the following statement of Professor Bruce, D.D., of Glasgow, in the *British and Foreign Evangelical Review*:—

"Not that modern science is in itself atheistic in spirit or tendency, though a German philosopher of the last century, Jacobi, said that it was the interest of science that there should be no God. The statement is true only in the sense that science cannot allow the idea of a God or a Creator to be interposed as a barrier in the way of its pursuit of natural causes. In this view, science has certainly no interest in proving the existence of a God; it leaves the Divine existence to look after itself, and confines itself to its proper work—the investigation of the laws of nature. But neither, on the other hand, is science, as such, impelled by any atheistic animus. It does not propose to itself as its chief end, or even as a subordinate end, to expel God from the universe, but simply takes the liberty of pursuing its own proper end—the ascertainment of natural causes, without inquiring at every turn, How does this result square with existing theological opinions?" Still, a large portion of the opposition to the views of scientific men is founded upon this very ignoring of what is beyond their special province. Inferences are drawn from statements made in no way connected with the subject of these inferences; others are added to these, and then deductions are drawn, perfectly legitimate and logical perhaps, till at last the writer is made to hold what he had not the remotest intention of expressing any opinion upon. The treatment which Darwin, for instance, has received at the hands of his critics, is a familiar instance of this; and notably that much-referred to, and, in theological circles, much-admired book of Dr. Hodges on "Darwinism," is a painful illustration. It is, indeed, difficult sometimes to preserve that charity which teaches us never to assign intentional misrepresentation to our opponents, when reading some theological representations of what scientific men teach, and the only excuse that can be pleaded is that, amongst the endless and voluminous writings of the present day, it is impossible for men to read and study every subject, and hence most of their knowledge is arrived at second-hand, filtered through safe orthodox sources in books and reviews. I heard a very good story the other day, which illustrates the absurdity of those who act thus: A venerable prelate—not of this province—was deploring in earnest terms the atheistical tendency of Evolution and specially of Darwin's writings. The friend into whose ears he poured his plaint, is a scientific man of some eminence, and, wearied at last with the ceaseless accusation, he turned on him and asked him, "Had he ever read the 'Origin of Species?'" "No; but I have read many reviews of it, and I know its contents and principles thoroughly," was his reply, "Now, my lord, supposing I were to rail against Jesus Christ as an impostor, and against the Bible as a very immoral book, and you were to turn round on me and ask me had I ever read the Bible, and I should reply no, but I have read Tom Paine and Voltaire and all its opponents' reviews of the Book, and so very well know what is in it, would you not think me a very great fool?" The fact of the matter is, that there are in reality two doctrines of Evolution: one, the scientific doctrine, which is accepted by nearly all scientific men of eminence now, and is recognized by many of the leaders in theology and by hosts of pious, intelligent, Christian men, as in no way interfering with, or inimical to, their best and highest Christian hopes; and the other, the theological doctrine of Evolution, a system of logical deductions and metaphysical refinements, which are but

other names for Atheism and Materialism, which scientific men do not trouble themselves about, and which no one holds but those who avowedly are Materialists or Pantheists. I say not one word about these refined speculations; they have their place and their use in dogmatic theology, treated as a science, but for the world at large it is not wise nor fair to mix these up with what is essentially different.

The great error which is over and over again committed is in thinking that we can so foresee the results of any discovery that we are justified in opposing it on account of its supposed consequences. We forget that we have nothing to do with consequences. The question is not "If we admit this or that, then so and so will follow this dire evil or that pernicious error;" but it is, "Is this true or false? Is this right or wrong?" If it is true or right, then our place is to believe or do it. We have no right to speculate as to effects, as an element influencing our belief or action. Effects and consequences are God's, and His alone; and how often, in our short-sighted conceit, do we condemn and deplore what, in His mysterious ordering of events, turns out the wisest and best even to our view? At best, we cannot see an inch beyond our noses; and it is ours, in all meekness and humility, to accept day by day our daily bread as He sees meet to reveal truth after truth to us. The one crucial test for us is—Is it true? And if so, we are bound to accept and believe it; and we dare not, with loyalty to truth, compound with our consciences by saying this will produce such and such evils, and therefore we reject it. Another great principle which is lost sight of often is, the distinction between the spiritual and the physical. Science has to do with the latter, and the latter alone; and if sometimes, in its investigations of man, the fact of his dual nature seems to be forgotten or ignored, we must not conclude that therefore it is denied. That it is sometimes—by Materialists—denied, is true, but even then it is denied because simply unknown. With them, man's spiritual nature is but "a dream of the imagination," "the poesy of the soul." But shall we allow ourselves to be robbed of it because some know nothing of it? Could we demonstrate it, it would be gone for us. The scalpel of the anatomist cannot reveal it; the microscope, by its wondrous revelations, cannot show it; the chemist, by his powerful alchemy, cannot detect it: but for those who know it—who have experienced its power, and have grasped in their yearning hearts its reality and force—for those who have known and witnessed its potent action in this world of sin and sorrow for ages that are passed—surely to them it is as much a fact as any other in God's world; to them it is a force which in its own place cannot be gainsaid or put aside. They are not to be robbed of that which they know to be true simply because others know nothing of it. And the attitude of the great bulk of scientific men is this: They count not its elements into their chemistry, simply because it is beyond and above their sphere.

But besides, the teachings of science (apart from Materialism) in these our days, all go to requiring the existence of God as a fundamental necessity in any attempt to explain things as we see them. This world had a beginning, and therefore a Creator. Nor, however much the battle may have raged in times that are past over astronomy and geology, is there much difference of opinion now between science and theology as to the continuity of operations and the working of natural forces in the organic world: it is when we come to the organic that the existing differences appear. Biology is the great battle-ground of the present day; and when we think of the innumerable phenomena connected with it, and the essential unity of its phenomena with things we have hitherto looked upon as essentially different, such as fermentation, fevers, phosphorescence, heredity, etc., we cannot wonder that much that has been observed should conflict with

our former ideas, and we must not be surprised if much should be found to have a common explanation in a truer psychology. At any rate, in regard to the origin of life, there is nothing yet observed or taught as an ascertained truth that conflicts with our religious belief that God not only interfered with the stately march of continuity at the beginning for the creation of matter and force, but that again He interfered as the giver of the breath of life. It is true that specious theories have been put forth to account for the origin of life, but, with one exception, all are mere stepping-stones, helping the mind to take wider views, but do not touch the ultimate core and heart of the matter. They are, too, mere hypotheses, quite incapable of ever being proved.

The one exception I refer to is Dr. Bastian's "Abiogenesis, or, Spontaneous Generation;" and, of course, if his experiments can be confirmed, and his observations proved to be correct, then unquestionably our views of life will require to be very materially altered. But there seems little probability of this—at least when we find master minds, like Tyndall and Pasteur, utterly rejecting the alleged transmutation of dead and lifeless matter into the living form of even the lowest organism, we may well rest content that it is not ours to trouble ourselves about it just yet. Tyndall's latest utterance on the subject will be found in an article in the *Fortnightly Review* for November last, "On Fermentation, and its Bearings on the Phenomena of Disease," where he says:—"Is there, then, no experimental proof of spontaneous generation? I answer, without hesitation, *None!* In fact, this doctrine of spontaneous generation, in one form or another, falls in with the theoretic beliefs of some of the foremost workers of this age; but it is exactly these men who have the penetration to see, and the honesty to expose, the weakness of the evidence adduced in its support." It appears, then, that the conflict is not at all one as to the existence of a Creator, nor as to his power or ability to interfere at any time in His works, directing, adding to, or diminishing from them, but really as to what his plans of working and modes of carrying on His revelation in the Book of Nature are. Such being the case, it surely becomes us, viewing all the complicated relations of His works, and the innumerable and mysterious interactions of their forces and powers, to cherish the humblest spirit in our interpretation of them, and to allow to those who make these works and forces the study of their lives, the widest and fullest latitude in their labours. And it becomes the Christian apologist, of all others, conscious of the power and reality of the Truth which is specially in his keeping, to maintain an attitude of dignified confidence in the mighty power of Truth, remembering the wise advice of the old Jewish doctor, "Refrain from these men, and let them alone, for if this counsel or this work be of men, it will come to nought; but, if it be of God, ye cannot overthrow it, lest haply ye be found even to fight against God."

That many of the wisest and ablest theologians are realising that the attitude hitherto assumed of extreme condemnation is a mistake, is becoming very evident. There is a section, it is true, who must necessarily condemn and oppose, but happily it is a daily diminishing one. To all who believe in the strictly literal and plenary inspiration of every word in every chapter of the Bible, modern scientific discovery and thought, necessarily, can only be false and abhorrent. How such men can reconcile with their ideas such a simple text as this—"I have created the waster to destroy"—I know not. But, when we find a theologian of the stamp and in the position of Professor Leebody, of Londonderry, write as follows, in the *British and Foreign Evangelical Review* for October last, it becomes those occupying a less prominent position in the study of theological doctrine to pause in any dogmatic utterances:—"Now, is there any necessary antagonism between Scriptural teaching and the Evolution theories propounded by modern science?"

Of course, there is the sharpest antagonism, if we interpret the opening chapter of Genesis with strict literality. But theologians are universally agreed that we are not warranted in giving a strictly literal interpretation to this portion of God's Word. If that be so, then we are not obliged to interpret Scripture as inculcating the view of special creations rather than that of creation by development."

So, too, Professor Bruce, D.D., of Glasgow, on the same subject, says:—"It is very necessary that the Church should preserve this attitude of calm confidence. It is the best defence against two vices of opposite character—to one or other of which panic-stricken men are prone—the vice of overdone antagonism on the one hand, and that of a spirit of surrender on the other. The cause of Truth has suffered greatly from both. From the one cause has proceeded the defence of many an untenable position, *e.g.*, when Protestant theologians allowed themselves to be carried by their zeal against the Romish doctrines of tradition, into so exaggerated a view of the infallibility and inspiration of Scripture, as to maintain that the Hebrew vowel-points are inspired, and that the text of Scripture has been preserved absolutely incorrupt."

Putting aside, therefore, the opinion of such dogmatic literalists as in no sense now representing the mind of the Christian Church, I am justified in saying that not too soon are theologians of the best stamp recognising that, after all, they are not justified in the bitter opposition hitherto displayed. Professor Leebody says:—"In opposition to both these conflicting doctrines, the purely scientific and the extreme *theologic*—the extreme doctrine of continuity and that of discontinuity—the position we maintain is so and so.
* * * But we shall also seek to establish that there is nothing necessarily atheistical or contrary to Scripture in the acceptance of Evolution theories; there is nothing necessarily atheistical or contrary to Scripture in the Nebular hypothesis; there is nothing necessarily atheistical or contrary to Scripture in the theory of development, as applied by Darwin to account for the variation of species; and, finally, the whole tendency of modern discovery is in favour of the acceptance of the doctrine of continuity in a slightly modified form. * * * So far, then, as the direct teaching of Scripture is concerned, we believe we are free to accept the principles of the doctrine of continuity either as applied to cosmogony or the variation of living beings. But is not the teaching of Scripture indirectly opposed to the acceptance of those principles? To the belief that it is, we may trace most of the opposition and dislike of Evolution theories shown by many eminent and earnest men. Scripture teaches that God exercises a constant personal supervision over his universe. 'Not a sparrow falls to the ground without our Father, and the very hairs of our head are numbered. The eyes of all things wait upon God, and He giveth them their portion of meat in due season.' Now, is the conception of the universe, as a great mass of matter evolving itself and developing under the influence of forces originally impressed on the primeval atoms, compatible with this? Again, it is said that the doctrine, that things which are now fitted to fulfil the functions assigned to them have only attained this fitness by slow degrees, is inconsistent with rational views of the Divine forethought and wisdom. * * * If we regard the Deity as a being the same in kind as we are, and only surpassing us in degree, the objection is unanswerable. * * * But God is a being differing from us in kind as well as in degree. * * * God is not, as extreme special creationists would have us believe, limited in His working, as we are, by the properties of matter and force. He is not, as those who utterly repudiate any concession to Evolutionists implicitly assert, 'altogether such a one as we are.'

“It is a very common thing to hear the charge of irreverence brought indiscriminately against all advocates of the Evolution hypothesis. We are tempted to hurl back the charge against those who bring it. The mental constitution of that individual is certainly peculiar, who considers it an exalted conception of the Creator to regard Him as the great clockmaker and clock-mender of the universe, but a degraded conception to imagine Him as being capable of bringing about natural change in a way which utterly transcends our efforts, and which we are, even now, only beginning dimly to perceive and understand. There is no one, we believe, who has carefully considered the matter, who does not see that any intelligible theory of Evolution demands behind it a forecasting, intelligent will, and a constructive power far beyond any that we can exercise, or hope to exercise. Creation by law, as has frequently been remarked by our ablest thinkers, is not creation without God. * * * As to the second objection. * * * Can we, without irreverence, suppose that this method of trial and error is the plan of working which the Creator has, since the dawn of time, been continually employing in the world which he then pronounced good? * * * Are we competent to pronounce, off-hand, on the best plan of working for the Creator, and to decide on the precise properties which entitle any work of His hand to be pronounced good? * * * Why should the same method which is seen in the advancement of man, and also in the advancement of lower forms of being, be deemed atheistical, or, at least, inconsistent with true views of the nature and perfection of God? * * *

“In so far, then, as we can see, there is no reason for the theologian to feel any *a priori* hostility towards the doctrine of continuity. We see nothing to prevent the most devoutly-minded man from entering on the consideration of Evolution theories with as little prejudice or conception as he would enter on a consideration of the dynamical theory of heat. The great majority of questions raised are purely scientific, and must be examined by scientific methods and decided on scientific grounds. * * * In no respect does the advance of science tend to undermine the essentials of religious belief; and the inference may be drawn that the next generation will think as lightly of the difficulties we now feel in connection with Evolution theories as we think of the difficulties of those who were staggered by geological facts hostile to the interpretation of the opening chapters of Genesis, or as they thought of the perplexities of Galileo's persecutors.”

So, too, Canon Duckworth:—“I, for one, am no alarmist. I have always deplored the panic fear with which many good men receive the results of modern research. I see no necessary connection between the theory of Evolution as a means of accounting for the boundless diversity and yet perfect developments of life and an Atheistic philosophy. Unhappily, the two have now for some time been connected inseparably in the popular mind. Is it too much to say that the ark of God's truth has suffered almost as much from the well-meaning hands put forth to steady it as from the Philistine spoilers who would bear it away into a strange land? How much of the unbelief of this age, and of every age, has been generated by the rash antagonism and denunciation of ill-advised believers? Oh, for more faith in the unity and eternity of Truth! Oh, for that patient confidence (the lack of which is a reproach to Christian men), that ‘every good and perfect gift’ of knowledge, whether directly or indirectly revealed, is from above, and cometh down from the Father of Lights, with whom is no variableness, neither shadow of turning.” “Truly,” as Professor Bruce says, “the best apology for Christianity is Christianity itself, professed by men living saintly, noble lives.”

These are wise and weighty words, and deserve to be pondered by all who take it on themselves to ostracise their fellows on account of their sympathy with modern research. And I have strung these various extracts together in the hope that, coming as they do from leaders in Theology of the Evangelical school, they will carry more weight than anything I could say. I feel very sure, too, that you will pardon my detaining you so long, on the ground that such plain speaking is needed in a community where our Christian young men have been led to think and to act on the idea, that Evolution theories and Christianity are totally incompatible with each other.
