

# Ontario Workman

THE EQUALIZATION OF ALL ELEMENTS OF SOCIETY IN THE SOCIAL SCALES SHOULD BE THE TRUE AIM OF CIVILIZATION

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## PRE-ADAMITE EARTH.

[No. 3.]

BY R. R. Y.

We come now to the third, great geological epoch, the Tertiary, which presents many very interesting characteristics. The world here becomes increasingly disturbed. At one time large tracts of land are raised above the water, become clothed with a rich vegetation and peopled with animals, and then again gradually or suddenly submerged, while portions of the bed of the ocean become elevated, to form new islands or continents. This process is then reversed and repeated many times, and thereby causing the destruction of vast numbers of the animals existing at the time the changes occur, and causing the alternate deposition of land, marine and fresh water fossils.

At the commencement of the period not a single animal identical with any of those of the chalk era is to be discovered, and yet nearly all the orders are abundantly represented by numerous species. We observe, however, one new feature of importance, namely, that the marine animals are rapidly losing the supremacy they have so long maintained. Although not, perhaps, less numerous than at any previous time, they have now formidable rivals in the land animals, which before were comparatively few in numbers, but now are taking the foremost place in importance, and forming the most conspicuous characteristic of the period. Amongst the most remarkable of these we may observe the Palæotherium, the Dinotherium and the Megatherium. The second of these is an animal of gigantic size, and as it is supposed, the largest land animal which has ever existed. Its appearance approaches that of the elephant, both in its general form and the fact of its being provided with a short trunk, and two enormous curved tusks, attached to jaws over four feet long, but the structure of the creature is in many points more like that of the Tapir. It has a worthy rival in the Megatherium, an inhabitant of South America, and of which some curious particulars are given by Dr. Milnes. It rivalled in size the largest rhinoceros, was armed with claws of enormous length and power, its whole frame possessing an extreme degree of solidity, with a head and neck like those of the sloth, its legs and feet exhibit the character of the armadillo and the anteater. Some specimens of the animal give the measurement of five feet across the haunches and the thigh bone was nearly three times as thick as that of the elephant. The spinal marrow must have been a foot in diameter, and the tail at the part nearest the body twice as large, or six feet in circumference. The girth of the body was fourteen feet and a half, and the length eighteen feet.

Besides these colossal animals, we observe numbers of others, many of them of very peculiar structure, and as we pass on through the Tertiary epoch, bearing an increasing resemblance to the animals of modern times. Thus it has been found by Sir Charles Lyell, that in the Eocene period, or the first of the three divisions in which the Tertiary is divided, there are some 3½ per cent. of invertebrate animals of the same species as the modern. In the Miocene (middle) period, 41 per cent., and in the Pliocene, 95 per cent.

"The vertebrate animals" says Prof. Agassiz, "make a similar approach or recession from modern races as we ascend or descend among the Tertiary strata, and the fishes are so nearly related to modern forms that it is often difficult, considering the enormous number (above 8,000) of modern species, and the imperfect state of preservation of the fossils, to determine exactly their specific relations, but in general it may be said that not a single species has been found which was perfectly identified with any modern fish." This will also apply generally to the reptiles, among which we now see for the first time those nearly approaching in character, crocodiles, snakes, and those of the frog tribe, besides several genera of fresh water and marine turtles.

Of birds, eight or ten species are referable to the same genera as the buzzard, owl, woodcock, carlew, and pelican. Again, the greater part of the mammalia of this epoch, are strikingly allied to the modern forms. Thus we have genera and species of the elephant, hippopotamus, rhinoceros, horse, tapir, deer, ox, monkeys, &c., also others allied to the bear, dog, hyena, cat, hare, rat, &c. This increasing resemblance is equally noticeable in the vegetation. The elm, willow, palms, &c., have each representatives, and nuts, allied to the cocoon nut and other tropical kinds have been found in the land or basin.

The high temperature which had been increasing for a long time over the western hemisphere, has now probably reached its maximum, and the climate of England, Northern France, &c., must be nearly tropical. This is proved by the fact that in such portions of these countries in existence, not only was there a luxuriant growth of tropical vegetation, but large numbers of such animals allied to the elephant, rhinoceros, monkeys, &c. at present limited to hot countries inhabited these parts. From this time, the heat as gradually decreases, till the close of the Tertiary, when the whole of the northern latitudes become intensely cold, and covered with immense glaciers such as these on the mountains of Switzerland, and all land animals of the tropical kind, and probably all others in these portions of the globe, may be said to have ceased to exist.

This gradual rise and decrease of temperature, has not yet been satisfactorily explained, but there can be no question of the fact that during the whole history of the earth, there has been a succession of what we may call epoch seasons, that is to say, hot and cold periods occurring alternately, just as they do within the limits of a year, but each extending over thousands or tens of thousands of years. The last cold or glacial period was that forming the close of the Tertiary in the northern hemisphere, and the commencement of the modern epoch, or that in which the whole of the present species of animals, and plants, as well as man himself, were brought into being.

Into the question of the time which has elapsed since the present races began to appear on the earth, and especially the date of man's appearance, space will not admit of our now entering, although conclusions have been arrived at, and many curious discoveries are being made which tend to throw much light on the subject. Our present purpose is simply to establish two facts, which, as previously stated, have been looked upon as unwarranted, and for the holding of which geologists and others have been so strongly condemned. It must be abundantly apparent that even the most brief and imperfect review such as the foregoing of the history of the world is sufficient to show the entire groundlessness not to say absurdity of the idea of sudden creation, and that on the contrary, the formation of the world must necessarily have been not only gradual, but extended over incalculable periods of time; secondly, that the immense number of fossils found imbedded in the various strata are the remains of animals and plants, which lived during the time of the deposition of each, and must therefore be of equal antiquity.

But even regarding these facts as established, there is still another question to which the investigations of geologists have given rise, and to which so much attention has been given as to render it one of the leading topics of the day, especially among scientific men.

It will have been observed as we proceeded in our short summary that there were two facts particularly prominent. First, that from the first indications of life on the earth to the present time, there has been an upward progressive development in animals and plants; and secondly, that the fossiliferous deposits in each stratum represent forms of animal and vegetable life almost entirely peculiar to it, and these facts possess a greater degree of interest and importance than at first appears.

The question has been asked, what is the conclusion to which these facts lead, in regard to the manner in which the various forms of life have been successively introduced. To this, notwithstanding all the discoveries made, no satisfactory answer has yet been given, but the points at issue have and are being discussed with so much ability, seconded by such extraordinary and persevering research, that the solution of the question is probably not far distant.

Geologists and naturalists are divided at present into two great schools. One of these of which Prof. Sedgwick is the most eminent advocate, maintains that the animals and plants of which fossils are preserved were created successively, as the condition of the earth became fitted for their habitation, and that these races were again destroyed ones after the other by terrific disturbances of the earth's surface, which heralded in and closed geological epochs. This is known as the catastrophic, or separate creation school. The other, or evolutionary school, of which Sir Charles Lyell as a geologist, and Charles Darwin as a naturalist, are the ablest exponents, hold that the breaks in the geological record, are only apparent, that there was a perfect continuity in animal and vegetable forms, of which the fossils found are only fragmentary, and that all living forms which now exist or have existed, evolved, or developed from a very few primary germs.

The former theory is the more popular, and those who have confined their attention to the arguments urged in its support seem generally to be satisfied as to its correctness; this result being powerfully supported by the fact of the principal geological periods, having a supposed correspondence to the days or periods of scripture. This view may be the correct one, but there are still many difficulties to be removed before the theory could be worthy of acceptance.

The evolutionist theory is less exactly known and much misunderstood, consequently it has been regarded with a degree of suspicion and repugnance which is as unreasonable as it is unjust. In saying this, we do not wish to imply any inclination to accept the theory, or to favor it, but only to depreciate that spirit of intolerance and bigotry with which those actuated by prejudice and ignorant of facts, regard and attempt to ridicule any fresh views or ideas which may be introduced. That this theory is not the mass of absurdity and wild conjecture, is soon evident to any one who gives a little attention to the subject, but that on the contrary, it is a system based upon such a vast number of facts and careful observations, as to give it the right to command at least a fair and candid investigation.

## FAREWELL SUPPER.

The numerous friends of Mr. Wm. Rodgers assembled at the North American Hotel, Fergus, on the evening of Thursday, the 4th September, to testify their regret at losing the society of one who, since his first connection with the W. G. and B. railway has endeared himself to all, by his sterling good qualities and gentlemanly deportment. Mr. Rodgers has occupied the position of locomotive foreman of the W. G. & B. railway, and no greater proof of his efficiency in that position can be had than the fact that the Hamilton and Lake Erie railroad have secured his service to take charge of the mechanical department of that road, and there is no doubt in the minds of his numerous friends that he will be found to be the "right man in the right place." Mr. Rodgers had the honor of running the first passenger train over the Wellington, Grey & Bruce railway to Fergus; also the first train into all the principal stations on the road, and the Directors of the road, one and all, are very sorry to lose their "Pioneer Engineer." Mr. R. has been connected with the W. G. & B. for over 17 years, and during that period has shown himself both as a practical man and engineer to be fully master of his business.

The supper was given by Mr. Aperson of the North American Hotel, and was very much in praise of the "spread" all the delicacies of the season were there in profusion, and each and all were unanimous in saying that the "Banquet" had outdone all his previous efforts, which have been numerous. The chair was occupied by W. E. Fife, Esq., Division Superintendent W. G. & B. R.; on the right the guest of the evening, Mr. Rodgers, Mr. Thos. H. Taylor, of Guelph, Mr. John Cliney, the popular conductor, Mr. Dundas, and Mr. Rooney, of the Post Office Department, and a number of other gentlemen; on the left, J. M. Brown, Esq., of Elora, Dr. Orton, John Black, Esq., James Wilson, Esq., Thos. Ritten, Esq., The Vice-Chair was occupied by Mr. Charles Robertson, Car Inspector, W. G. & B. R.; on his right, H. Michie, Esq., Reeve of Fergus, Thomas Biggar, Esq., of Elora, and others; on his left, John Beattie, Esq., Thomas G. Ridout, Esq., Chief Engineer on the W. G. & B. R.; and a number of other gentlemen.

The usual loyal toasts having been disposed of, Mr. Carey sang, with his usual gusto the "Red, White and Blue." The toast of the "Army and Navy" was responded to by Dr. Orton, who in a few brief and really eloquent remarks, done full justice to the subject. The chairman, in proposing the toast of the evening, "Our Guest," said that himself and Mr. Rodgers had been connected since the first wheel had been turned on the road, and paid high tribute to Mr. Rodgers' efficiency, after which Mr. Fred. Hazlewood read the following:

## MEMORIAL.

To Wm. Rodgers, Esq., Locomotive Foreman, W. G. & B. R.

DEAR SIR.—It is with feeling of deep regret, that we learn that you are about to leave the W. G. & B. Railway, and also this part of the country, to expend your skill and ability in another part of the Province as Locomotive Foreman of the Hamilton and Lake Erie Railway Company.

We the drivers and firemen of this branch do most heartily congratulate you upon your newly acquired position, and earnestly hope that you may be long spared to enjoy the honor which you have attained, trusting that you may be as fully successful in the future, in your new undertaking, as you have been in the past, and that your successor may be as faithful in promoting the interests of the company and of the men, as you have been since you became identified with the W. G. & B. R.

We humbly beg that you will accept from our hands the small presentation of this gold watch, together with the address from your fellow workmen, as a token of their good feeling and high estimation of your character, as a fellow workman and as foreman of this branch. May every blessing attend you and your wife and family, may you and them be long spared to enjoy each others company; rest assured, dear sir, it will ever be a matter of much satisfaction to us, and to all the friends you have won for yourself in this place and elsewhere to hear of your welfare and happiness. May God speed you is our earnest prayer.

Fergus, 5th Sept, 1873.

The watch is a very handsome gold hunting case of the Elgin company manufacture, accompanied with a solid gold chain and locket, purchased from Mr. Charles Fox of Walkerton. On the inside was inscribed a suitable inscription.

## REPLY.

MR. CHAIRMAN, GENTLEMEN AND DEAR FRIENDS: It is with feelings of no ordinary kind that I now stand before you, though I cannot find words sufficiently strong to express the sentiments of my heart for this very excellent and touching address which you have just now read and presented to me, together with the very handsome presentation of this gold watch and chain, which are in my estimation, a tangible proof of your sincerity and devoted attachment to myself, and also of your appreciation of my conduct towards you as your foreman. As such, I always felt it to be my bounden duty to protect the interest both of the company and of the men under my charge. I prize this presentation, not because of its intrinsic value, but because I know that it comes with a good will from sincere hearts: this makes it all the more valuable. This token shall ever call to my remembrance the many incidents which have occurred

since this branch was first opened up, that many a stormy snow drift and blockade we have had to encounter, when those drifts rose in majesty and bade defiance to the power of the iron horse; but by patience and perseverance every difficulty was cleared away. Allow me to thank you, my fellow workmen, for your kind wishes for the future welfare of my wife and family. We shall always feel warmly attached to Fergus, because of the many kind and social friends we have made since we came into this place. Nothing but a change of position for the better could induce me to make a change. Again, my dear friends, I thank you most sincerely for this solid manifestation of your good will, and I assure you that it will be a source of joy in after life, to think that my conduct, as your foreman on the W. G. & B. railway was such as to give satisfaction, both to my superiors and the men under my jurisdiction. In conclusion, my dear fellow workmen, I wish from my inmost heart that you all may be as successful in the future, as you have in the past, and that every prosperity may attend the march and the progress of the W. G. and B. railway in all time to come. I now bid you all an affectionate farewell. Wm. Rodgers.

The toast was received with great enthusiasm, three times three for Mr. R. and family were given with a hearty good will, and Mr. Rodgers may well feel proud of his reception.

## THE KING OF BEASTS.

Fortunately for African hunters, the lion is a calculating fellow, and does not spring upon his prey till he has measured the ground, and has reached the distance of ten or twelve paces, where he lies crouching upon the ground, gathering himself for the effort. The hunters make it a rule never to fire upon the lion till he lies down at this short distance, so that they can aim directly at the head with the most perfect certainty. If a person has the misfortune to meet a lion, his only hope of safety is to stand perfectly still, even though the animal crouches to make a spring—that spring will not be hazarded if the man has nerve enough to remain motionless as a statue, and look steadily at the lion. The animal hesitates, rises slowly, retreats some steps, looking earnestly about him, lies down, again retreats, till having thus by degrees got quite out of what he seems to feel as the magic circle of man's influence, he takes flight in the utmost haste.

## Labor Notes.

The Southern States cotton mills are said to be doing very well and running at a good profit.

Iron mines are to be worked at Soumah, in Algeria, under the auspices of the Franco-Algerian Company.

Latest advices from Adelaide, South Australia, show printers very busy, but the Register thinks it is only a rush of passing work.

A demonstration in favor of the rights of laboring men was made in South London, England, on Sunday last. A large procession was formed to the meeting, and 6,000 persons were present.

The miners of the United States are endeavoring to organize a national confederation of their members in all parts of America. Representatives of Pennsylvania, Illinois and Ohio are signatories to the appeal that has been issued in this direction.

Mr. Prior, Secretary of the Amalgamated Carpenters and Joiners, reports that the advance in the rate of wages in London, England, has thrown a few men out of employment, but the society has good reason for believing they will soon be at work again.

The operative coachmakers of Wolverhampton, England, are moving with a view to secure the fifty-four hours. At present their application is not meeting with much sympathy from the masters. The men, however, seem to have made up their minds to obtain what they seek, and they are appealing to their fellows in other towns to remain away from Wolverhampton until the dispute is settled.