

success for the purity of his motives, the liberality of his sentiments, and his enlarged and manly policy.

15. Washington's administration established the national credit, made provision for the public debt, and for that patriotic army whose interests and welfare were always so dear to him; and, by laws wisely framed, and of admirable effect, raised the commerce and navigation of the country, almost at once, from depression and ruin to a state of prosperity. Nor were his eyes open to these interests alone. He viewed with equal concern its agriculture and manufactures, and, so far as they came within the regular exercise of the powers of this government, they experienced regard and favor.

16. It should not be omitted, even in this slight reference to the general measures and general principles of the first president, that he saw and felt the full value and importance of the judicial department of the government. An upright and able administration of the laws, he held to be alike indispensable to private happiness and public liberty. The temple of justice, in his opinion, was a sacred place, and he would profane and pollute it who should call any to minister in it not spotless in character, not incorruptible in integrity, not competent by talent and learning, not a fit object of unhesitating trust.

17. Finally, gentlemen, there was in the breast of Washington one sentiment so deeply felt, so constantly uppermost, that no proper occasion escaped without its utterance. He regarded the union of these States less as one of blessing, than as the great treasure-house which contained them all. Here, in his judgment, was the great magazine of all our means of prosperity; here, as he thought, and as every true American still thinks, are deposited all our animating prospects, all our solid hopes for future greatness. He has taught us to maintain this union, not by seeking to enlarge the powers of the government on the one hand, nor by surrendering them on the other; but by an administration of them at once firm and moderate, pursuing objects truly national, and carried on in a spirit of justice and equity.

18. Full of gratifying anticipations and hopes, let us look forward to the end of the century which is now commenced. A hundred years hence, other disciples of Washington will cele-

brate his birth with no less of sincere admiration than we now commemorate it. When they shall meet, as we now meet, to do themselves and him that honor, so surely as they shall see the blue summits of his native mountains rise in the horizon, so surely as they shall behold the river on whose banks he lived, and on whose banks he rests, still flowing on toward the sea, so surely may they see, as we now see, the flag of the Union floating on the top of the Capitol; and then, as now, may the sun in his course visit no land more free, more happy, more lovely, than this our own country! *Adapted from DANIEL WEBSTER.*

DANIEL WEBSTER, one of the greatest, if not the greatest of American orators, jurists, and statesmen, was born in the town of Salisbury, New Hampshire, January 18, 1782. At the age of fifteen he entered Dartmouth College, where he graduated in due course, exhibiting remarkable faculties of mind. When in his nineteenth year, he delivered a Fourth of July oration, at the request of the citizens of Hanover, which, energetic and well stored with historical matter, proved him, at that early age, something more than a sounder of empty words. Upon graduating, in 1801, he assumed the charge of an academy for a year; then commenced the study of law in his native village, which he completed in Boston, in 1805. He first practiced his profession near his early home; but, not long after, feeling the necessity of a wider sphere of action, he removed to Portsmouth, where he soon gained a prominent position. In 1812 he was elected to a seat in the National Congress, where he displayed remarkable powers both as a debater and an orator. In 1817 he removed to Boston, and resumed the practice of his profession with the highest distinction. In 1822 he was elected to a seat in Congress from the city of Boston; and in 1827 was chosen senator of the United States from Massachusetts. From that period he was seldom out of public life, having been twice Secretary of State, in which office he died. In 1839 he visited England and France, and was received with the greatest distinction in both countries. His works, arranged by his friend, Edward Everett, were published in six volumes, at Boston, in 1851. They bear the impress of a comprehensive intellect and exalted patriotism. He died at Marshfield, surrounded by his friends, October 24, 1852.

SECTION XVIII.

I.

77. THE SCRIPTURAL ACCOUNT OF CREATION.

WHATEVER may have been the various theories by which cosmologists¹ have tried to explain the formation of our globe, and the first functions of the immense atmosphere which from the beginning enveloped it, the general opinion of the greatest philosophers, beginning with Thā'lēs,² has been

¹ *Cos mōl' o ġist*, one who describes the universe. and one of the seven wise men, was born in Miletus, Ionia, about 636

² *Thales*, a Greek philosopher, B.C., and died probably about 546.

conformable to the inspired text of the Christian Scriptures. The earth, after its first condensation, is supposed by nearly all the great thinkers to have been surrounded by a vast en'velope of aqueous¹ vapor, a part of which was ul'timately condensed to form our ocean and the rivers it receives, the other part remaining suspended in the air and undistinguishable from it.

2. This primitive proc'ess of "the separation of the waters" must have been one of the grandest phenom'enā accompanying the birth of our globe. The Book of Genesis devotes two or three lines to it, with the simplicity of an ordinary chronicle. And this v'ery way of treating such a stupendous subject is, to every thinking man, a sufficient proof that Gōd Himself dictated the narrative. What was, for His power, the pōuring down of the liquid sea from the ocean of the air? Exactly what is, for man, the cooling of a few drops of water into a glāss receiver from the heated coils of a cubic foot alembic.² A simple word or two expresses sufficiently the wonderful fact.

3. But, to please all minds, the splendor of inspired poetry was to be thrown over the same creative act; and, in his terrible affliction, Job, the prophet of the land of Hus, was to hear from the lips of God, and to preserve for all time to come, the following words: "Who shut up the sea with doors, when it broke fōrth as issuing from the womb? when I made a cloud the garment thereof, and wrapped it in a mist as in swaddling bands? I set My bounds around it, and made it bars and doors; and I said: 'Hitherto shalt thou come, and thou shalt go no further; and here thou shalt break thy swelling waves.'"

4. The ocean here is individ'ualized. It is a new-born infant. It issues forth from the womb of the all-surrounding atmosphere. It breaks forth, having a cloud for its garment, and a mist instead of swaddling bands. Could the physical process be better expressed, or a more gracious image represent more truthfully the passage of invisible vapor to liquid through the intervēning state of cloud or mist? Uninspired poets have

He is said to have computed the sun's orbit, to have fixed the length of the year at 365 days, and to have been the first among the Greeks to predict eclipses. He taught that all things are instinct with life and

originate from water.

¹ A'que oūs, partaking of the nature of water, or abounding with it.

² A lēm'bic, a chemical vessel used in distillation, usually made of glass or metal.

often expressed physical truths under graceful imagery. But how often have they not failed, either in the metaphorical¹ expression or in the exact statement of the truth? Here bōth were ad'mirably rendered, many ages before Lavoisier,² by the invention of his gas-receiving tub, first rendered the process visible to the eye of man; for it is here the same phenomenon on a scale commēn'surate with the globe.

5. After all this magnificence of language, a yet greater height of sublimity is reached by the last words, which soar to the utmost height possible to human speech: "I set My bounds around it, and made it bars and doors; and I said: 'Hitherto thou shalt come, and thou shalt go no further; and here thou shalt break thy swelling waves.'"

6. We could indefinitely enlarge on this theme, and show how correctly Holy Scripture speaks, not only of the great features of the earth, but likewise of the beings which fill the air, the sea, and the land. Humboldt³ calls it an "individualizing accuracy." Compare its language in the description of the horse, or the crocodile, with that of the great naturalists of pāst ages, Pliny the Elder⁴ for instance, and the most renowned philosophers of Greece, not excepting Aristotle, and men may see on which side is true science. We can not, however, dispatch this branch of our subject without insisting on a particular reflection of a general character.

7. The whole hubbub which is now raised, not only among "scientists,"⁵ but among almost all classes of readers—since

¹ Mēt' a phōr'ic al, figurative; not literal.

² Antoine Laurent Lavoisier, a French chemist, born in Paris in August, 1743, was guillotined during the "reign of terror," May 8, 1794.

³ Friedrich Heinrich Alexander von Humboldt, one of the most distinguished of naturalists, was born in Berlin, Sept. 14, 1769, and died there, May 6, 1859. His great work, the "Cosmos," a philosophical description of the physical universe, has been translated into almost all modern languages.

⁴ Pliny the Elder, a Roman author, whose only extant work is a treatise on Natural History, in thirty-seven books. He was born in the year of our Lord 23, and died in 79, during an eruption of Vesuvius, which he had approached in order to study it closely.

⁵ Sci'en tist, one learned in science; the word is usually applied to those versed in the natural sciences, and sometimes as a term of reproach to those who pretend to find the facts of science opposed to the truths of divine revelation.

"science" is now popularized—is reduced in our days, to a great extent at least, to the theory of evolution as explanatory of the existence of all material substances, of the mind itself, and of its most intricate operations. We know what consequences are drawn from the theory by some "leaders of thought" in our age, to explain the formation of every species of beings from an original protoplasm,¹ by the action of laws independent, in their opinion, of any creative act.

8. There is undoubtedly some truth in the theory of evolution. But as the belief in the essential distinction of species has not been overthrown by all the arguments and facts adduced by the supporters of the system; since many learned naturalists are not only not convinced, but appear more persuaded than ever of the solidity of the doctrine opposed to the modern theories, it is probable that the only fragment of truth that the "new science" can rely upon, consists in the fact that the production of material beings has begun by the simplest forms, and proceeded gradually to more complex organizations, until the highest and noblest work of nature appeared in our humanity.

9. Now it is remarkable that the strongest proof, after all, that this is true as to the succession of material beings is contained in the first chapter of the first book of the Bible. For so it is. How could Moses begin his narrative by speaking first of the creation of mere inorganic elements: earth, light, ether, by him called firmament, and water, either in the form of vapor suspended in the atmosphere, or visible and gathered in the seas; next of vegetable forms, before reptiles and birds are introduced; to be followed by aquatic² mammalia³ first, and later on by tame and untamed quadrupeds; the whole of it to be crowned finally by the creation of man?

10. How could he do so, unless apprised of it by the Author Himself? His narrative reaches at once the most scientific form that any book on natural history can take. Modern naturalists, even now that the more proper and natural order is known, generally begin their descriptions with the *bimana*⁴—

¹ *Prō to plasm'*, that which is first formed; the original.

² *A quāt'ic*, pertaining to or inhabiting water.

³ *Mam mā'li a*, all orders of animals which suckle their young.

⁴ *Bī mā'na*, animals having two hands.

man; then the *quadrymana*¹—apes; afterward other *mammāliā*, before they speak of inferior organizations; thus unaccountably reversing the natural order. Moses was the first, long before "science" was invented, to give the proper classification of material beings, commencing with the most simple elements, and ending with the most complex being—man, whom some Fathers of the Church called, on that very account, a *microcosm*.²

11. Let it be understood that this was the *rēal* evolution of mundane³ things, and science will be reconciled with truth; and the first chapter of Genesis will be placed at the head of all scientific treatises on natural history, as it surely deserves to be for its accuracy and completeness.

THÉBAUD.

AUGUSTUS J. THEBAUD, S. J., was born in Nantes, Brittany, Nov. 28, 1807. He entered the Society of Jesus at Rome, Nov. 27, 1835, and was sent to America three years later, landing in New York Dec. 18, 1838. Until April, 1846, he lived at St. Mary's College, Marion county, Ky., whence he was transferred to St. John's College, Fordham, where he remained for ten years. At present he is attached to St. Francis Xavier's College, New York city. In 1873 he published his first volume, an eloquent panegyric of "The Irish Race." It was followed in 1876 by "Gentilism," an elaborate and learned study of the religious aspect of the Gentile world prior to the Incarnation. A third work by Father Thébaud, "The Church and the Gentile World," is now in course of publication.

II.

78. AGE OF THE WORLD AND AGE OF MAN.

PART FIRST.

IN the earliest age to which geologists can trace back the history of the Aqueous Rocks⁴—for they do not profess to trace it back to the beginning—this globe of ours was, as it is now, partly covered with water, and partly dry land. The formation of stratified rocks went on in that age, as it is still going on, chiefly over those *arēas* that were under water—not, indeed, throughout the entire extent of such areas, but over

¹ *Quad ru'ma na*, animals having four feet that correspond to the hands of a man.

² *Mūn'dane*, belonging to this world; earthly.

³ *Mi'cro cosm*, a little world; that which sums up and comprehends all lower forms.

⁴ *A'que oūs Rocks*, those which are deposited from water and lie in strata, or layers.

certain portions of them to which mineral matter happened to be carried by the action of natural causes. And the earth was peopled then as now, though with animals and plants very different from those by which we are surrounded at the present day.

2. Some of these happened to escape destruction, and to be embedded in the deposits of that far distant age, and have thus been preserved even to our time. And these strata, with their fossils,¹ are the same that we now group together under the title of the Laurentian Formation; which, being the oldest group of stratified rocks we can recognize in the depths of the earth's crust, occupies the lowest position in our table of chronology. Ages rolled on; and the crust of the earth was moved from within by some giant force, the bed of the ocean was lifted up in one place, islands and continents were submerged in another, and so the outlines of land and water were changed.

3. With this change the old forms of life passed away; a new creation came in; and the Laurentian² period gave place to the Cambrian.² But the order of nature was still the same as before. The deposition of stratified rocks still continued, though the areas of deposition were, in many cases, shifted from one locality to another. And the organic life that flourished in the Cambrian times left its memorials behind it buried in the Cambrian rocks. Then that age too came to an end, and gave place in its turn to the Silurian;² and this was, again, followed by the Devonian.²

4. As we advance upward in the series of formations, we soon perceive that the fossil remains, which in the earlier groups were scanty enough, become profusely abundant, until even the unpracticed eye can not fail to mark the peculiar character of each successive period; the exuberant vegetation of the Carboniferous, with its luxuriant herbage and its tangled

¹ Fossils, the remains of plants and animals embedded in the earth and there preserved by natural causes.

² Laurentian, Cambrian, Silurian, Devonian, are arbitrary names given by common consent to the different formations of

stratified rock belonging to what is called the Primary Period, which have been investigated by geologists. The rocks of the Secondary Period are known as the Triassic, Jurassic, and Cretaceous; those of the Tertiary Period as Eocene, Miocene, and Pliocene.

forests, its huge pines, its tall tree-ferns, and its stately araucarias;¹ the enormous creeping monsters of the Jurassic, the ichthyosaurs,² the megalosaurus,² the iguanodon,² which filled its seas, or crowded its plains, or haunted its rivers; and higher up in the scale, the colossal quadrupeds of the Miocene and the Pliocene, the mammoths, the mastodons, the megatheriums, which begin to approximate more closely to the organic types of our own age.

5. But amid these various forms of life the eye looks in vain for any relic of human kind. No bone of man, no trace of human intelligence, is to be found in any bed of rock that belongs to the Primary, Secondary, or Tertiary formations. It is only when we have passed all these, and come to the latest formation of the whole series, nay, it is only in the uppermost beds of this formation, that we meet for the first time with human bones and the works of human art.

6. Thus it appears pretty plain, even from the testimony of geology, that man was the last work of the creation; and that, if the world is old, the human race is comparatively young. These broken and imperfect records, which have been so curiously preserved in the crust of the earth, carry us back to an antiquity which may not be measured by years and centuries, and then set before us, as in a palpable form, how the tender herbage appeared, and the fruit tree yielding fruit according to its kind; and how the earth was afterwards peopled with great creeping things, and winged fowl, and the cattle, and the beasts of the field; and then at length they disclose to us how, last of all, man appeared, to whom all these things seem to tend, and who was to have dominion over the fish of the sea, and the fowl of the air, and every living thing that moveth upon the earth. We do not mean to dwell just now upon this view of the history of creation, so clearly displayed in the records of geology. But we shall return to it hereafter, when we come in the sequel to consider how admirably the genuine³ truths of this science fit in with the inspired narrative of Moses.

¹ Araucarias, cone-bearing plants of the pine species.

² Ichthyosaur, Megalosaurus, Iguanodon, extinct species of

lizards of enormous size, whose fossil remains have been found in various countries.

³ Genuine (jên'ü in).

III.

79. AGE OF THE WORLD AND AGE OF MAN.

PART SECOND.

THE Bible, then, does determine, though with some vagueness and uncertainty, the present age of the human race to lie between six and eight thousand years. We have now to consider whether, in fixing the age of the human race, it fixes likewise the age of the world itself. For this purpose we must turn our attention to the first chapter of Genesis, in which is briefly set forth the origin and early history of our globe from the creation of the heavens and the earth in the beginning to the creation of man at the close of the Sixth Day.

2. If it should appear that these two events were comprised within a very narrow limit of time, as is not unfrequently supposed, then, indeed, the age of the world must agree pretty nearly with the age of the human race. But if, on the other hand, between these two events the Sacred Record allows us to suppose an interval of indefinite length, then it plainly follows that the age of the human race, as set forth in the Bible genealogies, can afford no evidence against the antiquity of the earth.

3. The question is thus brought within very narrow limits. We have simply to take up the first chapter of Genesis, and inquire whether or no it is there conveyed that the creation of man, which is described toward the close of the chapter, followed after the lapse of only a few days upon the creation of the heavens and the earth, which is recorded in the first verse.

4. For many centuries this question received but little attention from the readers of the Bible. It was commonly assumed that, as the various events of the creation are traced out in rapid succession by the Inspired Writer, and strung together in one continuous narrative, so did they follow one another in reality, with a corresponding rapidity, and in the same unbroken continuity. The progress of physical science had not yet shown any necessity for supposing a lengthened period of time to have elapsed between the creation of the world and the creation of man; nor was there anything in the narrative itself to suggest such an idea.

5. Thus it was generally taken for granted, almost without discussion, that when God had created the heavens and the earth in the beginning, He *at once* set about the work of arranging and furnishing the universe, and fitting it up for the use of man; that He distributed this work over a period of six ordinary days, and at the close of the sixth day introduced our first parents upon the scene; and that, therefore, the beginning of the human race was but six days later than the beginning of the world.

6. These notions about the history of the creation continued to prevail almost down to our own time. It is to be observed, however, that they were not founded on a close and scientific examination of the Sacred Text. The hypothesis¹ of a long and eventful state of existence prior to the creation of man may be said rather to have been overlooked than to have been rejected by our commentators.² There was no good reason for entertaining such a speculation, and so they said nothing about it.

7. But now that the world is ringing with the wonderful discoveries of geology, which seem to point more and more clearly every day to the extreme antiquity of the earth, it becomes an imperative duty to examine once again, with all diligence and care, the Inspired Narrative of the creation, and to consider well the relation in which it stands with this new dogma of physical science.

8. We are not the first to enter upon the inquiry. Already it has engaged the attention and stimulated the industry of theological writers for more than half a century. Many eminent men, distinguished alike for their extensive acquirements and for their religious zeal, have protested warmly against the opinion of geologists concerning the antiquity of the earth, as one that can not be reconciled with the historical accuracy of the Bible. But, on the other hand, there are writers no less illustrious, and no less sincerely attached to the cause of religion, who contend that there is nothing in the Sacred Text to exclude the supposition of a long and indefinite interval—an

¹ *Hy pōth'e sis*, a supposition; a proposition or principle taken for granted, or assumed for the purpose of argument.

² *Cōm'men tā'tor*, one who comments upon, explains, or criticises the writings of others.

interval, if necessary, of many millions of years—between the first creation of matter and the creation of man.

9. Thirty years ago this opinion was defended by Cardinal Wiseman with great learning and with great felicity of illustration, in his famous Lectures on the Connection between Science and Revealed Religion. The eminent Roman Jesuit, Father Perrone, has followed the same line of argument in his Lectures on Theology, which, as every one knows, has long since become a classic work in schools of theology. It has been yet more fully discussed, and supported by more elaborate reasoning, in a work entitled *Natural Cosmogony* compared with that of Genesis, lately published at Rome by another distinguished Jesuit, John Baptist Pianciani (pē an che ä ne).

10. Among Protestant writers, too, this view of the Mosaic narrative has found no inconsiderable number of able advocates. It is defended by Doctor Buckland, the eminent geologist, in his celebrated *Bridgewater Treatise*; by Doctor Chalmers in his *Evidences of the Christian Revelation*; by Doctor Pye Smith in his dissertations on *Geology and Scripture*; by the eloquent and original Hugh Miller in his interesting work on the *Testimony of the Rocks*; and by a host of others scarcely less distinguished than these.

11. But these learned writers are not altogether of one accord as to the precise point in the first chapter of Genesis at which we may suppose a long interval of time to have intervened. Some, with Doctor Buckland, Doctor Pye Smith, and Doctor Chalmers, consider that this interval may best be introduced between the beginning of all time, when God created the heavens and the earth, and the beginning of the First Day, when He set about preparing the world as a dwelling-place for man. Sacred Scripture, they say, simply records these two events, (1) that "In the beginning God created the heavens and the earth," and (2) that at some subsequent time "God said: Let there be light: and light was made." But Sacred Scripture does not tell us what length of time elapsed between these two great acts of Divine Omnipotence. For aught we know from Revelation, it may have been but a single day, or it may have been a million of years.

12. Others again, as for instance Pianciani, prefer to suppose

that each one of the Six Days may have been itself a period of indefinite, nay, of almost inconceivable duration. So that between the beginning of the world and the creation of man six great ages of the earth's history may have rolled by, each one distinguished by a new manifestation of God's power and the introduction of new forms of life. These writers even fancy that they can discover a close analogy between the successive acts of creation recorded in Genesis and the gradual development of organic life exhibited in the great epochs¹ of geology.

13. To us it seems that either one or the other of these two systems, or both together, may be fairly admitted without any undue violence to the text of the Inspired Narrative; and this, we would observe in passing, is the opinion to which Cardinal Wiseman appears to have inclined thirty years ago in his Lectures on the Connection between Science and Revealed Religion. We maintain, then, in the first place, that there is nothing in the Mosaic narrative, when carefully examined, at variance with the hypothesis of an indefinite interval between the creation of the world and the work of the Six Days. And, in the second place, we contend that it is quite consistent with the usage of Sacred Scripture to explain these Days of Creation as long periods of time.

Abridged from MOLLOY.

REV. GERALD MOLLOY, D.D., was born in Dublin about the year 1832, and received his preliminary education in St. Vincent's College, Castleknock, Dublin. Entering the ecclesiastical college of St. Patrick, Maynooth, he pursued the usual course with uncommon distinction, and while a student of the Dunboyne or post-graduate establishment, he won, after a severe concursus, one of the chairs of dogmatic and moral theology, which he filled for more than ten years. On visiting Rome, he was made a doctor of theology by Pope Pius IX. Subsequently he was appointed to the vice-rectorship of the Catholic University by the Irish bishops. His work on "Geology and Revelation" was the result of the studies necessary to explain the Catholic doctrine in reference to the creation. It has met with general approval, and shows great scientific and theological knowledge. It has been translated into many languages, and republished by a Protestant firm in America.

¹ Ep'och, a period in the progress of events when some important occurrence takes place, or from which some great change is dated.