Vestiges
of
The natural history
of
Creation

Reviewed

By H D Andress

Meadville Pa
January
1851

Creation is the work of God.

Yet man is a creator. On the broad wings of thought, he soars beyond the bounds of mortal eye and lifts the veil from God's immensity. Or retiring into the inner temple of his own complicated being, he creates new germs to expand in eternal foliage on the fields of heaven. He rises from sun to sun from star to star, till on the outmost verge of this wide canopy of worlds, he folds his wings to grasp in one survey the stu-

O & M

prendous frame of the universal Temple, at whose door he reverently bows. Hee scrutinizes her workmanship and her mysterious laws. It is to the labor of one of these elevated spirits whose pen was dipped in fire that your attention is now invited.

Some apology may be thought due from one so little acquainted with the vast range of science involved in the examination of this volume. Yet may it not be hoped that with the great facilities now afforded,

a comparison may be made, between this book and the writings of scientific men on the subjects herein treated, and a fair decision rendered as to the truth of its statements.

The Author, has not deemed it advisable to favor us with his name, ~~yet~~ yet I am strongly inclined to regard him as sincere in what he has said.

However wide from the truth his statements or opinions may be considered, it is wholly unfair to set them aside by ridicule or mere assertion. My limits will compel me to omit many interesting portions of the work,

and only give you the Authors meaning in many others, leaving you to draw your own conclusions.

The work is one comprehensive scheme, yet in the examination it may well be divided into four parts.

The first, occupying thirty two pages, treats of the formation and arrangement of the bodies of space, and the constituent materials of which they are composed.

The second portion, comprising seventy six pages, treats of the geological formation of the earth, and the animals found in each stratum.

The third part, occupying eighty four pages, enlarges upon the origin, distribution, and development of the animated tribes.

The fourth portion, embracing eighty five pages of the work and which finishes the volume with the exception of three pages of conclusion, is taken up with an examination of the early history of man, the constitution of his mind, and the general condition and purposes of animated creation.

The arrangement of the work manifests great ingenuity. It is so written as to lead the mind gradually from

one thing to another, so that at the end the reader is prepared for statements which would shock him, if placed at the beginning of the work. The "Introduction" by G B Cheever, is intended to obviate this difficulty, but its bombast and ridiculous effect but little by way of argument against the book, to a reasoning mind.

Francis Bowen has given a far more clear and impartial statement of the principles of the work.

A more severe criticism may be found in the Princeton Review. I am also indebted to Asa Gray. This appears to me

to be the best review published on the subject.

I have not trusted in the scientific statements of reviewers, but appealed to works written free from any motive to misstatement.

Though the Author maintains a spirit of truthfulness yet I have received as truth only what I have tested by other means. And here I have placed much reliance upon J P Smith Williams Buckland and C M Mitchell. References to Agassiz, Herschel, and Cuvier, have been considered as authoritative on many

points. It ought to be here stated that the present advancement of geological knowledge is insufficient to settle many of the questions introduced into this volume.

I now proceed to consider the first part of this work.

He holds that there was a time when there were no particular bodies, that all matter was in a nebulous state, exceedingly diffused and intensely heated. He says "the nebulous matter of space previously to the formation of stellar and planetary

bodies, must have been a uni-
versal fire-mist," all consisting of
similar elements, and the
whole mass governed by the same
physical laws.

He here assumes that certain nuclei
or centers of aggregation were formed.
Yet says he "we know too little to enable
us to suggest how nuclei should be
formed." "But supposing that from
a peculiarity in the constitution
nuclei are formed, we know very well
how by virtue of the law of gravitation
the process of an aggregation of the
neighboring matter to those nuclei

should proceed until masses more or less solid should become detached from the rest.

Here it will be observed is a very important point assumed without a reason being even suggested.

He attempts to account for the rotary motion of these centers. His reason is that when a fluid mass collects towards or meets in a center it establishes a rotary motion".

Rotary motion could not be produced in such a mass by a single force.

This reason may satisfy many but it admits of much doubt.

He next supposes this mass to undergo a process of refrigeration. This cooling is accompanied by a corresponding condensation.

As this solidification proceeded the resistence to the attractive force would become greater, "meanwhile the condensation of the central mass would be going on.

Thus a separation would take place leaving an outward crust.

"The contention between the attractions of these two bodies the central mass and the crust "the crust would become a detached ring."

The ring would break into several masses. The larger would attract the smaller till they all settled into one spherical body and this revolve around the central mass. This proces is supposed to continue till all the suns planets and moons of our systems were formed. What Laplace presented as hypothesis is clearly possible, he gives in singular boldness and as being highly probable.

He regards the rings of Saturn as giving great support to this theory. There is a serious difficulty in this.

He has wholly failed to explain how the shell would become a ring; but granting that it would and that when broken it would settle into a spherical mass which he has likewise failed to account for, I say granting this, why should this sphere revolve around the central mass?

Again he appeals to the nebulous matter now supposed to be in existence. But here permit me to remark that many spots which were once supposed to be nebulous have since been resolved

into stars. And the stronger our telescopes, the more have they been dissected; hence analogy favors the view that they are all stars.

This is a hypothesis of some plausibility, but it can never be relied upon while it remains utterly destitute of proof.

We may be unable to disprove a theory while it is equally incapable of being established.

It may be as in this case wholly out of the range of our knowledge.

The Author felt this difficulty

and in a degree to the original work has virtually set it aside as not essential to his great scheme. He has thought best to relax his grasp upon universal empire and confine himself to the better government of a single state. Yet he would have us believe that the same great laws are producing the same great changes in all worlds as well as our own.

The primary elements of our own planet are about fifty six, which in their various combina-

tions compose every animate and inanimate object.

Whatever conclusions may be logically drawn from the authors views, there appears to be sufficient evidence that he believed in the existence of God.

He says on page two hundred twenty six "It has been one of the most agreeable tasks of modern science to trace the wonderfully exact adaptations of the organization of animals to the physical circumstances amidst which they are destined to live. From the mandibles

of insects to the hand of man, all is seen to be in the most harmonious relation to the things of the outward world, thus clearly proving that design presided in the creation of the whole, - design again implying a designer, another word for a creator"

Again he says on page 115 "That God created animated beings as well as the terraqueous theatre of their being, is a fact so powerfully evidenced and so universally received that I at once take it for granted."

This we deem sufficient.

The Author supposes at the origi-
nal creation of matter it was en-
dowed with certain qualities and
ordained to act by certain fixed
laws. Everything is performed by
the action of these laws without the
direct interperance of the Creator.
On page 117 he says "In a reasonable
mind, the divine attributes must appear
not diminished or reduced in
any way, by supposing a creation
by law but infinitely exalted.
It is the narrowest of all views of
the Deity and characteristic of an
humble class of intellects to

suppose him constantly
acting in particular ways for
particular means". — "Much more
worthy of him it surely is to sup-
pose that all things have been
commissioned by him from the
first." Thus you see he places God
at a distance from man, he
is no longer a Father to us.
The Author himself felt the sever-
ity of this iron rule; yet being
determined to have everything
done by law, he says on page 264
"God contemplating, apparently,
the unbending action of his great

laws, have established others, which appear to be designed to have a compensating & repairing, & consoling effect."

He enlarges greatly upon the power of gravitation. What he says of the motions and distances of the heavenly bodies accord with our best modern astronomers. It would be a sublime field for our contemplation yet supposing it to be familiar to you all I pass it by. I shall have occasion to refer to this idea of law in the course of this examination.

I now pass to the second portion of this work.

Though the earth has not been penetrated to a greater depth than three thousand feet, yet some powerful agency has broken the crust of the earth and thrown up the edges of this break to the observation of man.

He supposes the earth to have been once in a liquid state. This being produced by heat.

He here agrees with many modern geologists Says Wm Buckland "We therefore commence our

ing into that most an-
cient period when there is
much evidence to render it proba-
ble that the entire materials
of the globe were in a fluid state
and that the cause of this
fluidity was heat."

Says Cuvier "All the world agree
in believing that the mass of
the globe has been in a liquid
state but whether it was aque-
ous or igneous there is a difference
of opinion". It is generally agreed
that the first stratum formed
upon this fluid mass was

mostly composed of granite rock. This rock bears the marks of intense heat and is destitute of all fossil remains.

"Even this except in the few places where it projects above the general level in mountains other rocks are deposed in sheets or strata with the appearance of having been deposited originally from water". The young earth is supposed to have been enveloped in one vast sea.

All the remains of animals found in the lowest strata of the

earth evince an aquatic origin.
Our Author contends that the
highest order of animals are
not to be found in these early
ages, but that animals began
from a very low type and gradu-
ally increased by a regular law
of development.

Says Buckland in speaking
of the animal life of the
secondary strata "Although the
petrified remains of zoophytes Mol-
luscas Testacea and fishes show
that the seas in which these
strata were formed abounded

with creatures reperable to the four existing divisions of the animal Kingdom still the condition of the globe seems not yet to have been sufficiently advanced in tranquility to admit of general occupation by warm-blooded terrestrial animals mammalia" Again "Throughout all these periods there seems to have been a continually increasing provision for the diffusion of animal life" Again he says "It is indeed true that animals and vegetables of the lower class

prevailed briefly at the commencement of organic life but they did not prevail exclusively".

He says that these changes from a lower to a higher class are not always gradual but sometimes abrupt. A great change has taken place for he says that "not a single genus of all that are found in the Colite series exist at the present time." He says on p 222 that in the history of fishes we find actual gradations of structure that analogies exist between the various class Such are the statements of Buckland

The first vegetables were plants
These grew to an enormous size
These exceed a regular scale.
These ancient forests are supposed
to have formed the west coal
regions of the earth.
It is a fact that in the cold
region of the earth animals and
vegetables are larger than in
cold climates. Hence the great
size of the animals and vegt-
ables of the ancient earth in-
dicates a higher temperature
at that time. Says Buckland
on this point. "The third great

change in the vegetable kingdom
is considered to supply another
argument in favor of the opin-
ion that the temperature of the
atmosphere has gone on continu-
ally diminishing from the first
commencement of life upon
our globe". Says Daniel Page in
remarking upon the old red
sandstone system "from what
we have seen of the fossil flora
and fauna of this system they
seem to indicate a condition
higher in point of development
than that which existed during

the deposition of the grauwacke
and silurian rocks".
Proceeding on to the Oolite system
he says the change here taken
place attest a higher degree of organ-
ization among radiates ani-
mals. One more important
statement will close the
evidence on this branch of my
subject. Says Page in speaking
of the Tertiary strata which com-
prise the limestone clay marl
sand and gravel above the chalk
he says "the organic remains of
this system constitute its most

important and interesting feature

The fossils of earlier periods presented little analogy – here however the similitude is frequently so complete that the naturalist can scarcely point out a distinction between them and living races Geology (says he) thus unfolds a beautiful gradation from the corals mollusces and simple crustacea of the grauwacke – the annelled fishes crinoidea and cryptogamic plants of the lower secondary – the chambered shells saurioid reptiles and marsupial

mammalia of the upper secondary - up to the true dicotyledonous trees, birds and gigantic quadrupeds of the Tertiary epoch." Such are the simple statements of men of science and probably without a thought of the use that our Author has made of them. We here find it acknowledged that there has been a gradual development and progress in the animal and vegetable Kingdoms corresponding with the different periods of the for-

nation of the earth.

Now whether the conclusions of our Author be true or false it is useless to deny these facts.

I shall next consider the the third portion of this volume Says our Author on page 110 "In pursuing the progress of the development of both plants and animals upon the globe we have seen an advance in both cases from simple to higher forms of organization" Among animals were first infusoria then polyparia crinoidea

Then some humble forms
of articulates and Molluscs
Then after a long period fishes
appeared, Afterward land
animals first reptiles then
birds and on to mammalia
He considers it evident that
organic life has corresponded
with the physical condition
of the surface of the earth.
All this long line of succession
he endeavors to account for without
the immediate action of creative
power. It is all the result of natural
laws which are the expression of

this will. This he maintains is in harmony with the Mosaic account of the creation It says there that God made all these things so says he It does not tell there how God made them then why may not his theory be correct or in harmony with the divine word Assuming that all these beings were in existence he thinks he has accounted for their change and progressive development The next goes back to consider the origin of life and being

He speaks of the resemblance between inorganic and organic forms such as crystallization and the action of electricity

He then notices the resemblance between vegetable and animal bodies. They are composed of the same four simple substances He contends that animals small insects have been produced by mere chemical action He cites the experiments of Crosse and Weeks which are denyed by a majority of our most learned and scientific men

and to say the least are very doubtful.

Can Arthur says on page 127 "It is ascertained that the basis of all vegetable and animal substances consists of nucleated cells; that is cells having granules within them The ovum destined to become a new creature is originally only a cell with a contained granule" He contends that these ova are the same in animals and vegetables Hence he says All animated nature may be said to be based on this

mode of origin. "The fundamental form of organic being is a globule forming within itself a new globule by which it is discharged and which is again followed by another and another in endless succession."

These globules he says have been produced in albumen by electricity This he gives on the authority of Prevost & Dumas French physiologists.

In answer to the objection that this has never been proved he remarks. "This is not founded

a new-creation" for though no such instance has been noticed since the commencement of men they may have been before. He acknowledges that nine out of ten scientific men would deny his theory yet he perseveres.

He does not contend for entire regularity in the development of animals yet they are all variations of "one fundamental plan"

He next considers the resemblance between men physically and animals.

He looks upon development as the great principle which has been concerned in peopling this globe.

On page 155 we find these words "We are drawn to the suspicion that the first step in the creation of life upon this planet was a chemico-electric operation by which simple germinal vesicles were produced. "The first step after was an advance under favorable of peculiar conditions from simple to complicated and this through the process generation

Dr Reid remarks that man in his physical nature and tendencies very much resembles the animals The degree that intellectual power depends on the size of the brain.

Says Dr P M Roget "In comparing the relative proportions of the brain and of the spinal marrow in the four classes of vertebrated animals a progressive increase in the size of the former will be observed as we ascend from fishes to reptiles birds and mammalia". Again he says. "Thus far

we have followed an obvious gradation in the development of the different parts of the brain but on arriving at man the continuity of the series is suddenly disturbed."

"With regard to the distribution of plants and animals he agrees with Pritchard and Agassiz that they had not a common origin but created with an adaptation to the narrow sphere in which they are to live somewhat varying a much wider range than others.

Says Dr William Prout in speaking of the distribution of animals "We have seen that animals like plants have in general been adapted to particular climates".

Can Arthur Cooke for nothing supernatural all one silent harmonious progression

I conclude this portion of the work by a single quotation. Says the Author "The relation which I form of the progress of organic life upon our earth and the hypothesis is applicable to

all similar theories of vital being - is, that the simplest and most primitive type under a law to which that of like-production is subordinate gave birth to the type next above it that this again produced the next higher and so on to the very highest. The stages of advance in all cases being very small namely from one species to another"

I now proceed to examine the fourth and last portion of this work which treats of man.

The great brotherhood of man may be divided into five leading clans. First "the Caucasian or Indo European which extends from India into Europe and northern Africa Second the Mongolian which occupies northern and eastern Asia Third the Malayan fourth the Negro fifth the aboriginal American. They are distinguished by certain general features.

He considers color and other
physiological characters as superficial and accidental
Great modifications have been
made by the style of living
Resemblance in the language
of different nations and races
has been observed, both in
words and grammatical forms
Men have been divided into
families according to their
language.

He thinks the line of emigration of all the nations except
the African can be traced since

converging points to South-
eastern Asia.

He presents evidence to prove that
the various races of men descended
from one stock.

In this the Author appears to
coincide with the general belief
of Christians.

Had the writer closed here his work
would have had a much wider circu-
lation, but in opposition to the com-
mon opinion he maintains that
man first commenced in a very
low condition. He says to have
civilization a people should be

numerous and closely placed
If men once civilized were trans-
ferred to a wide wilderness they
would incline to barbarism
He states on page 210 "Density of residence
and thickening of population
are perhaps the prime requisites
for civilization." Hence it will be
civilizations
found that all ^ as yet known,
have taken place in regions physi-
cally limited. That of Egypt was
in a narrow valley. That of Greece
in a small peninsula
Mr Arthur considers the various
races of men as successive steps

in the development of man

He says on page 214 "The leading characters in that of the various races of mankind are simply representations of particular stages in the development of the highest or Caucasian type.

He is not alone in this view for the following may be found in Lords popular physiology. "During the soft pliant state of the bones of the skull the oblong form which they naturally assume approaches nearly the permanent shape of the Americans. At birth they

represent the Mongolian form while it is only as the child advances to maturity - that the oval face arched forehead and the marked features of the true Caucasian become perfectly developed"

Again in Flint's rudiments of Physiology you will find the following which has a direct bearing upon our subject.

Says the work. "It is a fact of the highest interest and moment that as the brain of every tribe of animals appears to pass

during its development, through
the types of all those below it
so the brain of man passes
through the types of those of every
tribe in the creation
Hee on Author endeavors to
account for human language
origin without any miraculous
interposition, That all human
languages can be traced to a
common origin which renders
it highly probable that before
they dispersed they had acquired
the faculty of speech. Man started
with an organization adapted to his

His peculiar circumstances brought those faculties into activity.

He appears to be a firm believer in Dr Gall's system of phrenology and makes much use of it in his theory he adopts the following quotation from Gall, "Banish music poetry painting sculpture architecture all the arts and sciences and let your Leonnes Raphaels Michael Angelos Glucks and Canovas be forgotten yet let men of genius of every description spring

up and poetry music poetry
ting architecture and sculpture
with all the arts and sciences
will again shine out in all
their glory"

Our Author holds that the
mental world is governed by
law as well as the physical
and that "the statistic[illegible] regu-
larity of moral affairs fully
establishes their being under
the presidency of law".

He supposes that mental phe-
nomena flow directly from the
brain by electric action

"Yet (says he) is) this very startling
when we reflect that electricity
is almost as metaphysical as
even mind was supposed to be"
He adopts Locks system of sensual-
ism. This in connection with
Galls phrenology opens the
way to his own materialism
He says that animals manifest
pride shame fear envy hatred
affection and memory.
He continues. "Common observa-
tion shows a great general supe-
riority of the human mind
over that of the inferior animals

Man's mind is almost
infinite in device it ranges
over all the world it forms the
most wonderful combinations
it seeks back into the past and
stretches forward into the future
while the animals appear
to have a narrow range of thought
and action. But so also has
an infant but a limited
range and yet it is mind that
works there as well as in the
most accomplished adults
The difference between mind in
the lower animals and in

man is a difference in degree only it is not a specific difference Again the continuous "bound up as we thus are by an identity in the characters of our mental organization with the lower animals we are yet, it will be observed strikingly distinguished from them by this great advance in development We have faculties in full force and activity which the animals either possess not at all or in so low and obscure a form as to be equivalent to nonexistence"

"We have veneration — hope — reason conscientiousness and benevolence The existence of faculties having regard to things is a good evidence that such things exist The face of God is reflected in the organization of man as a little pool reflects the glorious sun"

There is an adaptation in the mental constitution of man to the circumstances in which he lives. Notwithstanding these views he denies fatality, He says God does not make criminals

"And yet the criminal type
of them as it is called comes
into existence in accordance
with laws which the Deity has
established" He adds "The sum
of all we have seen of the phys-
ical constitution of man is that
its Almighty Author has destined
it like everything else to be devel-
oped from inherent qualities
and to have a mode of action
depending solely on its own
organization"
A person may suffer and yet
be innocent

Man may modify nature and is preparing the way for higher types of humanity" Man is to try his chance amid the great conflict the general tendency is good yet as man forms to himself a part of the great universe he ought not to complain He says on this point "It is clear moreover from the whole scope of the natural laws that the individual as far as the present sphere of being is concerned is to the Author of nature a consideration of inferior moment"

Such is the Authors great progress scheme of creation In order to avoid the charge of misrepresentation and misunderstanding I have given you much of the writers own language. It has been my aim to be impartial and candid presenting his main views and the main arguments in their favor both from the Author and others.

I would gladly close here but justice to the subject requires a word more to be said

Though it must be admitted that there is a gradation in the animal kingdom from a lower to a higher order it need not be in the manner our Author has suggested. And though man is of recent origin it does not follow that he is but a higher development of the animal kingdom. This development theory has been ably discussed and strongly opposed by Charles Lyell. He says a belief in the reality of species is not inconsistent with the idea of considerable variability yet this

is limited and does not require
a long time to be effected
We presents some facts which
seriously effect our Authors theory
Says Lyell. "In the first place it should
be stated that faint traces of an-
imal remains make their ap-
pearance in strata of as early a
date as any in which the im-
pressions of plants have been
detected" Again "We have already
vertebrated animals in the
most ancient strata respec-
ting the fossils of which we can
(Thor
be said to have any accurate informa

In speaking of the theory that man is developed from the animals he says "To pretend that such a step or rather leap can be part of a regular series of changes in the animal world is to strain analogy beyond all reasonable bounds" But this all follows from his system of creation by law if that fails this falls with it Let us then go to the foundation of his edifice and see if it is built upon a rock

He admits that God created the world but denies that he governs it. Judging from a human standard he deems it derogatory to the Almighty to be engaged in such small things.

I ask why is it difficult to suppose that God comprehends and governs alike the great and small May I not say in the language of Dod "It is only when men attempt to frame conceptions of the divine Being from their gropings among dead matter, when they resolve freedom into necessity,

will into laws the infinite into the indefinite and the absolute into the conditioned that they shrink from the irreverence of supposing that God notices the fall of every sparrow and brings forth every lily of the field and numbers every hair of our heads."

If every thing has been done by law where is the lawyer. If the creation of man and animals is a mere chemical operation where is the chemist. Do not the several species of animals and plants each

give evidence of a separate
creature act
Says the learned Agassiz "various
kinds of coral growing promiscuously
upon the same reef presenting
with permanent and unchanging
specific differences an identical
plan of structure — jelly fishes swim-
ming over them in the same waters
agreeing with each other in structure
but differing in specific characters
Sea urchins and star fishes crawl-
ing about upon the same coral
presenting the most minute ho-
mology in all their parts — are

facts which cannot be accounted for by the supposition that laws regulating the phenomena of the physical world had of themselves produced such combinations"

In Isaiah we read as follows (ch. 45:24)

"The Lord of hosts hath sworn saying surely as I have thought so shall it come to pass as I have purposed so shall it stand"

Do we not find evidences of thought in the creation. As soon as you acknowledge distinct thoughts the creation by law from the development of nature completely fails

We may grant a development in each species while we deny a development from one species to another. Hence Agassiz remarks "The circumstance that there is no evidence whatever of the transformation of one species into another leads to the direct conclusion that they are all and every one the product of direct creative acts." Independent of each other yet forming one great plan.

Though we cannot yet explain all may it not be hoped that a greater knowledge of science and

nature will reveal what is now dark,

It is most consonant with the facts of nature to suppose that God by separate creations placed animals on the earth according to the particular condition of the earth in its successive periods and all in accordance with some great design previously made. In such a system we should look for a higher order in each new creation as the things were adapted to it. Is not this more consistent than the law-creation

An Author makes greatest
of the word Law
What is the meaning force and
province of Law
Says the celebrated William
Blackstone "Law in its most
general and comprehensive sense
signifies a rule of action whether
animate or inanimate ra-
tional or irrational"
When God "put matter in motion
he established certain laws
of motion to which all movable
bodies must conform" If we pur-
sue advance from mere inactive

matter to vegetable and
animal life we shall still
find them governed by laws"
No branch of vital economy is left
to chance or the will of the creature
itself but are performed in a
wonderous and involuntary
manner and guided by unerring
rules laid down by the great
Creator" Such is the testimony of
Blackstone If I turn to Webster
find the definition to be a rule or
principle. The witness certain
phenomena are we not to look
for a cause Now I ask can the law

of the phenomena & the cause
of the phenomena can the
mode by which a thing is done
be its cause.

We call gravity the cause of certain
astronomical phenomena
but here we are liable to be deceived
For
~~"But"~~ in the words of "Bowen" "it is
not so, gravity is only the mode
in which the machine works -
not the cause of that motion"
The only rational ground appears
to be that "all action is personal
and begins from mind, and"
what we call the course of nature

is but the infinite activity
the constant government of
God" "If matter be considered
apart from mind it is dead
formless and motionless no
winds agitate the surface of a
chaotic ocean no tides heave its
waters no waves break upon its
silent shores".

We find law to be only a rule
without power or direction.

Says Bowen concludes reasoning
to the work under examination
"What shall we say then of a
hypothetical history of the

universe which pretends to explain both the genesis and the progress of all material worlds by the aid only of this imaginary force this mathematical fiction".

Says Sir Isaac Newton on this point. "That gravity should be innate inherent and essential to matter — is to me so great an absurdity that I believe no man who has in philosophical matters a competent faculty of thinking can ever fall into it. Gravity must

be caused by an agent acting constantly according to certain laws"

But in justice to our author I should say he also looks for a cause of this development He says "the immediate cause of the development of each line through its various general grades of being is to be sought in an internal impulse the nature of which is unknown to us" According to this plants and animals were not created but grew The deity had nothing to

do in the work.

That you may not mistake the full import of the Author's theory I give one more quotation "The frog for some time after his birth is a fish with external gills and other organs fitting it for an aquatic life all of which are changed as it advances to maturity and becomes a land animal. Man is man himself exempt from this law. His first form is that which is permanent in the animalcule. His organization

gradually passes through conditions generally resembling a fish a reptile a bird and the lower mammalia before it attains its specific maturity. at one of the last stages the embryo exhibits an inter maxillary bone which is characteristic of the perfect Ape. This is suppressed and the may then be said to take leave of the animal type and become a true human creature"

Thus we see that man is a developed animalcule with a material mind and this

and this animalcule
springing from the mere earth
without the intervention of any
direct creative power but by the
action of matter from its
inherent qualities.
It would require but one step
further to dispense with God
entirely.
If this system be true what-
ever means hope may be he
is certainly without God in the
world. However novel this theory
may appear to us it is by no means
new. He has drawn from Aboudeles

Epicurus and Lamarck

He has evidently derived much assistance from St Hilaire notwithstanding this the writer lays claim to much originality He evidently undertook too much The first portion is a useless burden and also the last chapter had nothing to do with this subject but was neither an apology for the severity of his view.

As the book has awakened much inquiry upon the subject it may be no great injury to the world But of the state of mind and heart

which prompted it we cannot speak so favorably.

How low an estimate of human nature must that person have who thus looks downward for its origin. Let us rather look to God whose divine image we bear.

The idea that the first human form is a permanent animalcule is directly denied by our best physiologists hence as the foundation is taken away the edifice. I can hardly deem it necessary to discuss such theories as the most of those advanced in this volume they need only to

be known to be rejected
with abhorrence But I reject them
not because they violate my
feelings but because I deem
them destitute of proof.

The pure in heart shall see God
Hence those who do not obey the com-
mands of God who do not feel his
love in their souls are ready to
believe that he is at a distance
As he is separated from them they
infer that he is separated from all
others. It is only by goodness that
we can be united to God. He who
holds daily communion with God

will never doubt his divine providence.

But there is a large class who either naturally or acquired possess cold and earthly minds. They have but little conception of things that are spiritual. It seems almost impossible for them to conceive of anything aside from matter To them heaven is only in their hearts. mind is material. They virtually reverence matter more than its author and do subject him to physical laws What shall we say of such a mind

I had rather compassionate
than condemn
Our Author evidently belongs to
this class of minds It is useless
to reason with them they have
not the foundation for belief in
their minds. Some caution
is requisite in reading such
a work that it do not make an
undue impression on the mind
For these men have intellect
if they have not heart. They arrange
their work in the most skilful
manner. They lead the mind gradually
away from the truth.

The two most pernicious
errors of this work are that it
makes everything material
and leaves the world without
any moral governor.
It takes away all the consolations
of our religion. If we are in sorrow
it is but the workings of a fixed
law. No one to fly to in the hour
of temptation and affliction.
How awful is the thought of such
a state of things to the devout
Christian. It sets aside even the
Old Testament view of God. How
much nine the precepts of Jesus

Surely we should compassionate the person who has so little sense of Spirit and of God.

Such a God seems to us a cold and barren rock rather let me be a Heathen Rather let God have some evil feeling than have no feelings at all.

We can see by this what the mind is lead when when it forsakes God. Why should we have such reverence for the laws of nature they are not eternal for Geology shows that the present state of things has had a beginning.

The powers of nature are but means which God uses for the production of his great designs Power resides only in mind.

But is it not the uniform course of nature that uniformly produces its like. How if they are consistent in their veneration for law why do they break this law Says Bulleyne of the first physiologists of the present day "All the phenomena at present observed in the animal Kingdom seem to prove that the species were originally created

distinct and independent of each other. There is no remote possibility of one species being produced from another"

Here then our Author must cease his veneration for law or give up his Theory of development.

The facts of nature teach us that the work of creation was not a single act begun and ended by one exertion of power.

Geology teaches that within a recent period the earth has been overflowed by water and all or nearly all of terrestrial

life destroyed. Hence if the
various orders were not created
distinct the development has
been much slower than
Arthur would have us believe
We have but to extend our view
from our own immediate circle
to observe that God has more
than once interrupted those
laws which are considered so
unbending. Says the learned
Francis Bowen "The world was never
an orphan left to the dominion
of chance — or what is little better — to
the blind and unbroken operation

of what are called natural laws
& Fathers care watches over it
& fathers hand peopled it again
again and again with living
beings — not by inflexible
ordinances nor by vicarious gov-
ernment through secondary means
But even as an earthly parent careth
for his children."

If I have succeeded in giving you
an idea of this book you see its
main difficulties I have endeav-
ored to give you a few facts and
opinions on the subject. How the
ability any limits would not

permit a thorough discussion
of the various topics involved
& I have offered a few suggestions
on the subject. You have but to
look into your own heart for a
decree of much that he has said
Many of us have at least experienced what he said not. We cannot
look around without tracing our
heavenly Father's hand.
The first step towards this desirable state is the decree of a divine
providence. This state of mind is
generally produced by speculations
about what we know not what

we neglect to cultivate the spiritual life and omit the great work of the heart which every man has to perform.

The great questions of Zoology and Geology in this volume are now passing a close examination by scientific men and it is to be hoped that as science is progressing by the continued accumulations of knowledge these questions may obtain a more permanent settlement

At the present time we should investigate with caution and decide

with hesitation. Things that now appear absurd may prove to be true. But never let us be shaken from what we know by speculations about what we do not know. Let us not be led away by the speculative theories that this active age may present but remained but with a strong faith in God and earnest devotion to his cause may we maintain the great truths of our religion. It ill becomes us to reject any scientific truth for what we deem a religious truth

Further investigation will reconcile the two God and nature will agree God's works are ways are what he has revealed them to be when we once understand them. But there are religious truths which no science should cause us to doubt.

Though we may feel ungratified to decide upon the truth or falsity of many things in this volume yet in the words of Gray. "When the unprofessional reader of the vestiges learns that Brewster condemns its physics

and Murchison and Lyell
and Sedgwick its Geology that
Cuvier (in advance) as well as
professor Owen Agassiz and others
its comparative anatomy &
physiology Whewell its whole
logic and philosophy — why
should not the unprofessional
reader rely upon their independ-
ent testimony in respect to facts
which they are the most competent
witnesses of and inferences of
which they have the best means
of judging" With these facts before
us and our own moral nature

teaching us that we are under
a divine government let
us remain unmoved like
the deep imbedded rock upon
the ocean's shore. Storm after
storm may beat rain and
snow and hail descend yet
be thou calm all will be
fair again and the sun of
gods eternal truth will shew
and beauty and bless thy soul.