ENQUIRY
INTO THE
TRUTH and CERTAINTY
OF THE
MOSAIC DELUGE,
WHEREIN
The Arguments of the Learned Isaac
Vossius, and others, for a Topical
Deluge are examined;
AND
Some Vulgar Errors, relating to that Grand
Catastrophe, are discover'd.

By PATRICK COCKBURN, M. A.
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AN
ENQUIRY
INTO THE
TRUTH and CERTAINTY
OF THE
MOASIC DELUGE.

BOOK I.
INTRODUCTION.

EVENTS out of the ordinary course of Nature, and which very rarely happen, find little credit with many, how well soever attested they come transmitted to posterity. Persons unacquainted with the Planetary motions, or who had never seen nor perhaps heard of a total Eclipse of the Sun, would hardly be persuaded that such a thing was possible, that when the Sun shone in its strength, it could be wholly obscured, and the Earth covered with darkness. Before the last total Eclipse of the Sun in the year 1715, which was very
An Enquiry into the Truth and
very visible at London, there were many fine Gentlemen there, who laughed at it as a thing ridiculous, and not to be believed, though several Schemes of it had been published, and it had become the common topic of conversation for some time before.

Among those rare and extraordinary Events that have happened in the natural world, none appears more wonderful and astonishing than the Flood of Noah, said to have overflowed the whole Earth to a very great height of waters; and yet there are things that happen every day, that are far more wonderful than that of the Deluge.-----That a vast and ponderous body of inert matter (such as this Earth we inhabit is) should once in twenty-four hours revolve upon its Axis, and besides make an annual Orbit round the Sun with incredible * velocity, is surely a greater and more amazing prodigy than an universal Deluge over the Earth: And if the Flood of Noah is in any respect wonderful, this of the diurnal rotation and Orbit of the Earth is much more so. This last we believe, because we are daily sensible of its effects in the regular vicissitude of day and night, and in the variety of seasons; but the other we give little credit to, because it happened but once, and that some thousand years ago; as if what happened four or five thousand years ago, could not be as certain, undoubted matter of fact, as what fell out last year. What was once certain fact, must continue such to all ages.

That there was a Deluge in the days of Noah, seems a point undisputed, being acknowledged on

* Captain Halley, in his Observation of Mercury in the Sun at St. Helena, in the year 1677, tells us, that the annual motion of the Earth is so exceeding swift, as far to exceed that of a bullet shot out of a cannon, and to be after the rate of three English miles and a half in a second, which is 210 miles in a minute, and 12,600 miles in an hour.
all hands; but that this Deluge was universal in extent, has been doubted by some, and denied by others. Some men of great name in the Republic of Letters, have judged it to have been only topical, or particular to some one part of the Earth; partly to avoid the many difficulties, with which they thought an Universal Deluge was incumbered, and partly because they judged such a Deluge altogether unnecessary; since, according to them, mankind had spread but a little way upon the Earth when it happened. We shall first, therefore, bring their Schemes of a partial Deluge to the test, and examine them by reason, to which if they appear agreeable, our Enquiry will soon be at an end. But if they are found to be inconsistent with reason, and involved in absurdities, we must then proceed in our search, and enquire whether there be not sufficient reasons to believe the Flood of Noah to have been universal over all the Earth.

To alledge the Divine authority of Moses in point of evidence here, would be to no purpose; not only because it would be of no force with those who acknowledge not that authority; but, even of those who do, some have nevertheless asserted the Deluge to have been only partial. In this Enquiry, therefore, we shall consider the character of Moses only as an historian. Not to pay the same regard to Moses as we do to Greek or Roman historians, would be contrary to both reason and justice.

This Enquiry will necessarily oblige us to treat of some subjects seemingly distant from the main question: It will likewise engage us to search into some of the manners and customs of those early ages, in which, it must be confess'd, we have but small light to guide us, there being so little recorded of those ancient times. With respect to these things, objections indeed may be started, which, at this great distance of time, it may be difficult or not possible...
An Enquiry into the Truth and
to answer, for want of fuller accounts of that in-
fant state of the world. All that the candid reader
can expect in such matters is probable reasons,
where no certainty on one side or other can be pre-
tended.

According to our proposed method, we shall first
lay before the reader some Schemes of a partial De-
luge, beginning with those of the learned Isaac
Vossius, and Mr. Coetlogon.

C H A P. I.

Sect. I. Containing two of the Schemes of a
partial Deluge, from the learned Isaac
Vossius, and Mr. Coetlogon.

"There is no manner of doubt, therefore,
(faith Vossius*) that there was but one Flood,
and that universal; the memory of which is still
retained in almost all nations. Nevertheless I
cannot approve the opinion of those, who think
the whole face of the Earth to have been so co-
vered with waters, that no part of it was ex-
empted from them. To effect this, many mira-
cles must have concurred. For since the waters
of the whole Globe would not suffice to over-

* Nullum igitur relinquitur dubium, quin unum tantum fuerit
diluvium, idque Universale: cujus apud omnes pene gentes ex-
tat memoria. Verum hic minimè corum probò sententiam, qui
totum terræ globum ita aquæ tectum susisse ut nulla prorsus eus
extaret portio. Ad hoc efficiendum multa debent occurrere
miracula. Cum enim Universi Orbis aquæ ad obruendum tam
alte terram, etiam si omnia maria siccantur, &c. Vossius de vera
estate Mundi, p. 283, & seq.

Note, The pages here are marked from the second Edition of
that Treatise, joined to his Differtation de Septuaginta Interpretati-
bui, printed at the Hague 1661.

flow
flow the Earth to such a height as is mentioned,
although all the Seas were drained, more waters
must either have been created for that purpose,
or we must say with some, that That vast quanti-
ty of water fell down from some or other of the
celestial Orbs, and, the Deluge ended, returned
back again to their former place. But these are
only pious fooleries. God works no miracles in
vain. What need was there to drown those lands
where no men lived, or are yet to be found?
'Tis a foolish thing to think mankind to have
multiplied so much before the Flood, as to have
overspread all the Earth. How flow and fllognih
the first men were in propagating their kind, is
evident from hence, that Noah was but the ninth
in a lineal Decent from Adam. Whoever there-
fore will compute rightly, will find, that many
more persons might have descended from those
eight, who escaped the Deluge, to the time of
the Dispersion of Nations, than could have pro-
ceeded from Adam alone in the Space of two
thousand years; but yet it is certain, that before
the Dispersion at Babylon, mankind possess'd but a
very small part of Asia. They are quite wide of
the truth, therefore, who think mankind to have
spread over all the Earth in the days of Noah,
who perhaps at that time had not extended them-
scives beyond the borders of Syria and Mesopota-
mia; but no reason obligeth us to extend the
Inundation of the Deluge beyond those bounds
which were inhabited *: Yea, it is altoget-
ther absurd to aver, that the effect of a punish-
ment inflicted on mankind only, should extend
to those places where no men lived. Although

* The learned Author is here under a mistake. A good rea-
son will be found, in the course of this Enquiry, why the De-
luge should extend over the whole Earth, tho' it had not been
all inhabited by mankind.
An Enquiry into the Truth and
we should therefore believe that part of the Earth
only to have been overflowed by the waters which
we have mentioned, and which is not the hun-
dredth part of the terrestrial globe, the Deluge
will nevertheless be universal, ecumenical, since
the destruction was universal, and overwhelmed
the whole inhabited world. If we conclude this
to have been the true state of the case, then those
vain and idle questions which some have moved,
concerning the Deluge, will fall to the ground of
themselves; and likewise all occasion will be
taken away from Infidels to doubt the truth of
the Sacred History."

Thus far our learned Author in his Treatise of the
true Age of the World. But in his first Defence of
it, or Animadversions on his Adversary Hornius, he
further adds what follows.

"* But to come to a conclusion; we ingenuously
declare, that we willingly submit what we have
written about the Deluge, as well as other mat-
ters, to the judgment of learned men, viz.
Bochart, Dalle, Amyrauld, and other Divines,
those especially who know how to weigh the
strength of arguments in an equal balance. Let
them consider, whether, in order to convince Un-
believers (whose reasons in this point are stronger
than those of Believers †) it is not expedient to
believe,

---* Sed terminum tandem aliquando flatuamus, illud in-
genue profidentes, nos libenter ut cætera, ifa quoque illa quæ
de Diluvio diximus, libenter submittere judicio illustrium viro-
rum, Bocharti, Dallei, Amyraldi, omniumque adoe Theologo-
rum, ac corum præsertim qui rationum momenta æqua lance
ponderare sciunt, &c. Cæstigationes in Hornium, p. 342, & seq,
the fame Edition.

† It would seem by this, that an Universal Deluge had been
but weakly defended before our Author's time; but I can find
no such strength of reason in either his or the other's objec-
tions against it. And this Enquiry will, I hope, serve to make
good an observation of a very judicious Divine, viz. "That
believe, that all the Earth, that was inhabited, was overflowed, but not the Islands or uninhabited Lands. Divines confess, that they would willingly embrace this opinion, if it was certain that the Animals and wild Beasts were no-where else upon the Earth than where Men inhabited. But as this is no way probable, since, from the beginning of the Creation, every Land had its own Animals, they rather follow the other opinion. But what hinders why we may not understand those words of Moses, which signify all the living creatures to have perished by the Flood, to mean all of the World that was inhabited. Every one knows, that in many places in Scripture the word all is not to be understood strictly of the whole, but also of any integral part. Even in the books of the New Testament, the word all is often to be taken in this sense; as where it is said, that the Devil shewed Christ all the kingdoms of the World from an high mountain, Matth. iv. 8. and where it is said, that by the Decree of Caesar Augustus all the World was to be taxed, Luke ii. 8.

Is it not better to think thus, than with Origen, and some ancient Rabbins, to extend the measure of the Ark to an immense magnitude? According to Moses, the Area of the Ark contained about four hundred and fifty thousand square cubits. But according to those Rabbins and Origen, the Area of the Ark would have been four hundred thousand times as large. This measure plainly arises from the Greek of Origen, which Ruffinus has partly omitted, and partly translated

no man departed from the common faith upon pretence of avoiding any absurdity therein supposed, but that he ran himself upon the necessity of believing greater absurdities than any he pretended to avoid.” Young’s Wisdom of Believing, p. 53.
wrong. To multiply miracles needlessly, is in effect, nothing else but to destroy them. If, as Origem and the Rabbins thought, the Ark had been ninety thousand cubits in length, two thousand five hundred cubits broad, and nine hundred in height, (for they extended in length the squares of all the sides *) then the contents of the Ark had been so immense, that it was not only sufficient for all the animals of every kind, but could easily hold all the men that may be found this day upon the face of the Earth, and also food sufficient for several years. But to let this pass.-- This one thing will I add before I conclude, that in all ages there have not been wanting those who have interpreted this passage of Moses as we have done. For, to omit the Jews, Schoolmen, and others, of this opinion was Theodorus of Mopsuestia of old, who was followed herein by Theodoret. And from the Orthodox Questions extant among the Works of Justin Martyr, it may be clearly collected, that many Christians of old were of this opinion. Josephus also clearly shews, that not the whole Earth was overflowed, when

* The Square of any number is the product of the given number multiplied by the same. Thus the Ark being three hundred cubits in length, that number multiplied by three hundred, the product is ninety thousand. Again, the breadth of it being fifty cubits, that multiplied by fifty, the issue is two thousand five hundred. And the height being thirty; that multiplied by the same, makes nine hundred. Now an Ark of ninety thousand cubits long, two thousand five hundred broad, and nine hundred cubits high, would have been a monstrous fabric indeed. What could induce the Rabbins to enlarge the Ark at this extravagant rate, contrary to the plain and express words of Moses, is not easy to conceive. Common sense might have taught them, that it was impossible for Noah and his sons to have built an Ark of these dimensions during the whole time of their life. But if Origem at first, in a panic, gave into these extravagant fooleries of the Rabbins, he retracted it afterwards; supposing, with St. Augustine and others, that the cubit of the Ark might be a Geometrical cubit; of which in its place.
he says, εἰς τὸν ἱπείρον μετέβαλε*, he
changed the Continent into Sea. Ἡ ἱπείρος the Con-
tinent, is less than ὑμηρών the World, or habit-
able Earth; for this, the Earth, the Ancients
divided into three Continents, as is notorious;
but for the whole globe of the Earth, that word
was never used.” Thus he.

Now from these quotations out of Vossius, it ap-
pears that he embraced this opinion of a partial Del-
uge, partly because he thought mankind to have
been but few in number at the time of the Deluge,
(a point to be examined hereafter) and partly to
avoid those difficulties and objections to which a De-
luge, Universal in extent, was liable. But difficul-
ties and objections will not justify the rejecting a
truth, otherwise sufficiently evident, though we
should not be able to give a clear solution to them
all, since unanswerable objections may be made to
some demonstrable propositions; our knowledge
here being limited, and very far short of Omniscience.
In matters of fact, as this of the Deluge is, all the

* This expression in Josephus seems rather to imply the con-
trary to what Vossius pretends; for had he meant only one Con-
tinent, it was far easier for him to have named which of the
three. Besides the meaning of the words ἔννοος and ἀναπέρας is not so fixed as to be taken always precisely in one de-
terminate sense. ἔννοος was used for the habitable World,
and also for the whole extent of the Roman Empire, which was
far from being commensurate to the habitable World. ἅμα
terra stands for the whole Earth, and also for any part of it; and
when ἅμα stands opposed to οὐκόν, it signifies simply the
Earth, of which see several instances in Stephanus Thesaurus; and
the meaning of Josephus is plainly this, that God turned the
dry Land into Water. As to the other authors here mentioned,
since we have only their opinion, but not their reasons for it, we
need not trouble ourselves about them: ‘Tis possible they might
incline to the notion of a partial Deluge, from the objections
of their adversaries, which they knew not how to answer; and
they are quoted here by Vossius, to shew that he was not singular
in his opinion, to take off that odium to which his ascertaining a
partial Deluge might expose him.
parts and circumstances must equally come into consideration, that the whole may appear rational, and consistent with itself; otherwise, to avoid difficulties on one hand, we may run upon absurdities on the other, as will appear to be the case, by the examination of this and every other Scheme of a partial Deluge.

But let us now proceed to another Scheme lately given us, and retailed all over the nation, to the great improvement no doubt of true learning. Mr. Coetlogon, in his Universal History of Arts and Sciences, Article Antediluvians, has given us a Scheme of a partial Deluge which he informs us, those persons are willing to allow, who deny the truth of Moses’s History, and it is the following, viz. “That the first inhabitants of the Earth being placed at the confluent of two great rivers, the Euphrates and Tigris *, those rivers may have overflowed their banks all of a sudden, and surprized the neighboring inhabitants, not yet accustomed to such fort of visits, and drowned part of them (and if really designed as a punishment) those who were the more guilty. That some of the animals, particularly the most slothful, and consequently not so apprehensive of danger, or so ready to take to flight to avoid it, might have been involved in the same calamity, as well as some of the Volatiles; which being deprived of food by the Earth’s being overflowed, might have perished; particularly those who by the too great weakness of their wings to support their bodies were not proper for

* This is taken for granted, without any proof. It is no ways certain, nor any where said, that the Ark was built, or that Noah lived between the Tigris and Euphrates, as is here supposed.

Here the Reader may observe, that the Deluge is first made accidental; and by and by, it is made not accidental, since Noah was admonished to provide against it, long before it came.
a long tract. As for others who had these advantages above the rest, no doubt they took care of their own preservation by flying to those parts of the earth, which their natural instinct could shew them free from the Inundation.

That Noah being represented as a just man might have been inspired to precaution himself against the imminent danger, and have built the Ark for that purpose, but that they cannot imagine he was so long in building it, because we are not yet certain what was the year of those times; if it consisted of twelve months like ours, if those months were of thirty or thirty one days, those days of twenty-four hours, those hours of sixty minutes, &c. or if those years mentioned by Moses were not rather our months or weeks.

As for Noah's taking a couple of each kind of animals along with him into the Ark, it might be attributed rather to his care for the preservation and subsistence of his family, than to any design in him to preserve the different Species of animals; that not knowing perhaps the Earth to be of farther extent than that he was acquainted with, he thought that without such precaution, if the waters were to continue long upon the face of the earth, or if they were ever to retire to their former beds, he and his family must have perished for want, had he not taken with him the male and the female, to propagate each species of animals sufficiently for its use (his or their use I suppose it should be) that what would be left of those animals, if ever the waters were to retire, would suffice perhaps to replace those lost in the Inundation.

This is the whole of the Scheme, to which he has added some objections against an Universal Deluge, and the content of the Ark, and spun out the Article in Animadversions on Theories long ago confuted.
futed by Dr. Keile. What has the appearance of an Argument will be considered as it comes in course. But our Author has been a little unlucky in the forming his Hypothesis: For though his apparent design was to frame the Article in favour of the Freethinkers, probably to ingratiate himself with the numerous tribe for the better sale of his book, and for that end to depreciate Moses as much as he could, yet he is compelled to allow such things, as utterly subvert the whole Scheme, as will be seen in the Sequel.

The Reader may observe, that both these Schemes of the Deluge are built on one and the same foundation, viz. the small number of mankind at the time of the Flood, whom they both confine to a small part of the Earth; Vossius to Mesopotamia and Syria, or perhaps a little farther, Coelologon to Mesopotamia only; but yet that they differ in a very material point. For whereas Vossius makes the Flood universal in its effect, that is, to have utterly destroyed all mankind, and all the animals where mankind inhabited, Mr. C------ on the contrary, out of his great indulgence, allows both some men and animals to have escaped the destruction. Nay, though in this Scheme he would seem to confine all mankind between the Euphrates and Upper Nile, yet in other parts of the Article, he would intimate, as if there had been men in other parts of the world, even no farther than Egypt, who knew nothing of the Deluge, nor of the Descendants of those who had escaped it.

I am sorry to couple authors of so great disparity together, but as they agree in some main points, viz. the paucity of mankind at the Deluge, their inhabiting a small part of the Earth, and the Flood’s reaching no farther than the part so inhabited; the same arguments will serve for the confutation of both; though where they differ, they shall be considered
Certainty of the Mosaic Deluge. 13

fidered separately. It will be necessary however to take the Subject from its first source, I mean from the Divine monition given to Noah of a future Deluge, as it stands in Mr. Coellogon's Scheme, being a matter of some importance.

SECT. II.

Of the previous Monition given to Noah, and whether the Deluge was owing merely to a Natural Cause, independent of all moral considerations.

We are bound to acknowledge it a great concession in those who reject the account of the Deluge given by Moses, that they are yet willing to allow thus much of it, viz. "That Noah " being represented as a just man, might have been " inspired to precaution himself against the imminent danger, and have built the Ark for that " purpose." It seems evident however that if Noah built the Ark to preserve himself and family from that imminent danger, he not only might, but undoubtedly must have had an Inspiration or Revelation to that purpose; for how else was it possible for him to have any foreknowledge of a distant future event of that nature more than others? Such a foreknowledge was utterly unattainable, either by natural sagacity, or philosophy or former experiences. This probability or possibility of theirs must of necessity then be advanced into an evident certainty, viz. that Noah had undoubtedly a Revelation; or Divine Monition, to build an Ark for his safety, some years before the Deluge came.

II. If Noah had a previous Monition to prepare a vessel for his safety, then the event which made that precaution necessary, was foreknown, and foretold several
several years before it came to pass. Here then we have both a Revelation and a Prediction of a distant future event, as early as the days of Noab, undeniably proved upon us at once, which I desire those Gentlemen to take notice of.

III. If this Event was foreseen and predicted long before it fell out, then it was no casual, accidental thing, as Mr. C------'s Scheme seems to make it; but a deliberate and determinate purpose and decree for some end or other, and for some cause or other.

IV. If it was necessary for Noab to build an Ark for his preservation, then it would seem evident, that he could not otherwise have been saved from the impending destruction. And if so, then none other could be saved in that part of the Earth where the Inundation happened, contrary to what this Scheme supposes, viz. "That when these Waters made the Inhabitants an unexpected visit, (as Mr. C------ is pleased to express it) it drowned part of them." If part only were drowned, then part also were saved, though he does not vouchsafe to tell us by what means. Again, if part of mankind were saved from the Inundation, then might Noab also have been saved the same way, without the great labour and trouble of building the Ark. But as the Ark was necessary to Noab's preservation, it is highly reasonable to conclude, that no others were, or possibly could be saved; because the Flood came upon them on a sudden and unexpected, when they had taken no precaution for their safety.

V. If there was no other way for Noab's preservation but the building of an Ark, according to the Monition and Command given, then there must have been a sufficient reason for the distinction made between Noab and the rest of mankind. That Axiom delivered to us, that verily God is no respecter of persons, but in every nation be that feareth him and worketh
Certainty of the Mosaic Deluge. 15

worketh Righteousness is accepted with him, seems highly agreeable to right Reason, and the notion we have of the Divine Realitude. According to this great truth then, we may conclude, that had there been more persons who feared God and worked Righteousness, they would have been saved as well as Noah and his family; otherwise God's ways were not equal, which it is reasonable to believe, and we are expressly told that they are: but as none others were saved, we must necessarily infer that they were such as neither feared God, nor worked Righteousness.

VI. The Deluge being proved a deliberate, determinate act, with a view to an end; the manifest distinction also made between Noah and the rest of mankind in the execution of that act; both these, I say, clearly shew that the Deluge was owing to a moral cause, and not merely to a natural cause independent of all moral considerations. This, I say, appears evident.

For, First, Every wise man directs important actions to important ends, much more will the all-wise and good God act in this manner. Now nothing could be of greater importance to mankind than their total destruction, one designed end of the Deluge. As this was one designed end, we cannot but conclude, from the acknowledged attributes of the Deity, that they were worthy of that end; that is, they had deferred it; which Demerit was the prime cause of the Deluge, and therefore a moral cause. Mr. C----- then might have spared his If (and if really designed as a punishment) since if destruction and preservation were things quite indifferent, or in all respects the same, then it might be no punishment; but if there be a manifest difference between preservation and destruction, and this difference manifested at the Deluge, in the preservation of a few, and destruction of the rest of mankind, then it was evidently a punishment on those who perished;
except Mr. C------ would have us think of the righteous God what Solomon relates of the mad fool, who scatters arrows, firebrands and death; and then faith, am I not in sport? Now punishment has always a moral cause for its reason.

Again, had the Deluge been owing merely to a natural cause, independent of all moral considerations, we may presume that in equity and reason the warning given to Noah had been also given or communicated to the rest of mankind, had there not been a manifest difference between their case and that of Noah's. Those Gentlemen who reject revelation will not allow it to be laid, that God ever acts arbitrarily with his creatures, but always according to restitute, and the truth of the case. We grant and assert the same. When therefore so manifest a difference was made between Noah, and the rest of mankind, the two cases must have been as manifestly different—that difference was a just and sufficient reason for the different treatment they met with—that reason was the moral cause of the Deluge, inflicted as a punishment on those who perished, while Noah, represented as a just man, was saved.

Should it be alleged, that the warning first given to Noah was by him communicated to the rest of the world (as the common opinion is, tho' it will in due time appear to be a mistake) that they might prevent the judgment threatened by a speedy repentance; I reply, that this, were it so, would only prove more strongly what I assert. For if this denunciation of the impending judgment was actually proclaimed to the world, and men paid no regard to it, then they had no regard to God from whom it originally came; that is, they neither feared God nor worked righteousness, but had arrived to a state of impenitence and hardness of heart, like the Jews before their captivity, who mocked the messengers of God, and despised his words, and misled his prophets, until...
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until the wrath of the Lord rose against his people, 'till there was no remedy.*

Thus by taking the matter from its source, viz. the Divine Monition given to Noah, and the command to build the Ark, acknowledged by the Adversaries (as indeed they could not deny it, because it is in a manner self-evident) we have proved these few but important points, as a sure foundation for our future reasoning on this subject. 1. That the Deluge was revealed and predicted to Noah several years before it came to pass. 2. That it behoved Noah to build an Ark for his preservation, without which he could not have escaped the destroying waters. 3. That no other persons could escape the Inundation, but Noah and those with him in the Ark; it being sent as a punishment, and for the destruction of the rest of mankind, and therefore, 4. That the final cause of the deluge was a moral cause. A few points of some moment we shall here leave with unbelievers to reflect on. 1. An early Revelation, and a Prediction of a distant future event, of the greatest importance to mankind, undeniable proved. 2. That the Deluge which involved all mankind in destruction, Noah excepted, was owing to a moral cause, viz. the wickedness of men; the necessary consequence of which is, 3. That God the righteous Judge beholdeth the things that are done upon earth, and will not suffer sin to go unpunished. So that men may say, Verily, there is a reward for the righteous, doubtless there is a God that judgeth the earth †.

* 2 Chron. xxxvi. 16.
† Psalm lxxi. 11.
THE Reader may remember, that the Deluge
is by Mr. C------ confined to Mesopotamia,
or between the two rivers of Euphrates and Tigris,
where he supposes all mankind at that time to have
lived; but Vossius joins Syria to Mesopotamia, as the
bounds of their habitation. Now

First, Had these two rivers been the boundaries
of mens habitation, and all the rest of the earth un-
affected by the Inundation, then I would gladly
know, what occasion or necessity there was for Noah's
building an Ark for his preservation, when a far ea-
erier and speedier way lay open for his safety? Might
he not have crossed either of the rivers in time be-
fore the Deluge came, have removed some miles or
leagues beyond them, and so have been out of the
reach of danger from the Inundation? This he
might have done in a few days, instead of more
years spent in the construction of the Ark. To
every considering person this must appear an insur-
mountable objection to this narrow Scheme of the
Deluge, which it is not possible to reconcile to com-
mon sense or reason. What reason then does Mr.
C------ gives for this procedure? Why, perhaps
Noah did not know the Earth to be of farther extent
than the country he lived in. But is it any ways pro-
bable that mankind living for many hundred years
between the two rivers (if these bounded their habi-
tation) should never have cast their eyes beyond
them, when the sight could reach far over the
broaderst of them, the Euphrates? Is it probable
that men could be for so many hundred years igno-
rant, that timber could swim on the water, or that...
no man had had the courage to make a raft or a boat, nor have the curiosity to set his foot on land on the other side of the river; when some hundred years before they had dug into the bowels of the Earth for Brass and Iron?

However, let us suppose (though contrary to all sense and reason) that Noah perhaps might not know, nay, that really he did not know the Earth to be of much larger extent than the country he lived in, was there no way to inform him of what he was thus ignorant? Could not that same Revelation which made known to him the destruction to come on mankind, have at the same time informed him of the Earth's larger extent; and instead of commanding him to build an Ark, have admonished him to cross the River, and pass to a convenient distance?

Nor is the matter a whit mended by Vossius his extending the habitation of mankind to Syria, as well as Mesopotamia; for still there was Land enough beyond these bounds, to which Noah might with far less trouble, and in much less time, have removed to be out of danger. We might surely then expect a better reason for this conduct of Noah's, or rather of the Divine Monition to him, from our learned Author, who, though he pass over the objection in the two preceding Tracts which I have quoted, thinks fit to take notice of it in his letter to Andrew Colvius, as it might be well expected that he should, being a very obvious objection to his narrow Scheme of the Deluge; but in truth it is not a whit better than the former. "They do not "(says he) argue rightly, who say, that unless the "whole Earth had been covered by the waters, "Noah might have removed to dry land, and thus "have saved his labour in building so large a vessel. "God reasoned otherwise when he thought fit that "Justice should be done in a convenient place. But C 2 "what
what more convenient place can be imagined than that, where the guilty should be punished in the fight of Noab, and he who was innocent preserved in the midst of sinners?" Why truly, had God thus reasoned, I should humbly have submitted to a reason that proceeded from infinite Wisdom, but it does not in the least appear that he reasoned thus at all; and we must beware of imputing our own shallow reasonings to the Divine Being. We have somewhat a parallel case to this, that will shew the weakness of such a reason. God designed to destroy Sodom, and the other cities of the Plain, for their abominable and unnatural crimes. Let dwelt in the midst of them, whose righteous Soul was grieved with the filthy conversation of the wicked inhabitants, as we may believe Noab's was with that of the Old World; but could not Justice be done upon those sinners, except Lot had seen it with his own eyes? So far otherwise, that he was expressly forbid to look back to see it, and it cost his wife her life for so doing. But to the case in hand. Before whom were the men of the old world guilty? Were their crimes against the laws of Noab, that he must needs behold the execution of the judgment; or against those of God, the Author of their being? What Satisfaction could it have been to Noab, to behold the dreadful destruction of mankind? I imagine it would have been a grief of soul to him, or any righteous person, notwithstanding they had so much deserved the punishment inflicted. But, indeed, how could he see it at all, when he was close shut up in the Ark? He could have seen it (had that been in the least necessary) much better on some distant mountain, which the Flood was not to reach. But as in the case of Lot, so here in that of Noab, God designed that neither of them should see the destruction of the wicked. This reason given by Vg., therefore, is so far from being a satisfactory solu-
solution, that it is nothing but a sorry shift and evasion; such as he frequently objected to poor Hur-"nius; and plainly shews, that the objection I have mentioned is unanswerable, upon this and every such narrow Scheme of the Deluge.

II. The utter improbability of building an Ark, on the supposition of a partial Deluge over so small a part of the Earth, is not the only strong objection to the two Schemes now under examination; there is another of equal force against them. Noah took with him into the Ark animals of every kind, birds of the air, beasts of the field, and creeping things, male and female. What necessity was there for this, or what reason can be assigned for this conduct? Had the Inundation covered only so small a part of the Earth as they pretend, there was no need to take in animals of any kind. Animals of all kinds must, in the course of one thousand six hundred, or two thousand years, have spread themselves far beyond the bounds of Syria and Mesopotamia, though but one pair of each kind had been created at first. They increase much faster than mankind does, and, where undisturbed, are exceeding numerous. Now a short time would have conveyed the Ark out of Mesopotamia or Syria, and a few days provision for his family was all that Noah stood in need of, in that case.

To this obvious and strong objection against his partial Scheme, Vossius gives not the least answer, no not in his Letter to Andrew Colvius; but Mr. C---, who could not but be sensible of it, offers a double reason for this precaution of Noah. First, "That it might be for the subsistence and prefer-" vation of his family." Or, secondly, "That he " did not know how long the waters were to con- " tinue on the face of the Earth, or whether they " were ever to retire into their former beds."
I desire the Reader may observe, that it is confessed that animals of every kind were taken into the Ark. Now this must have been done with a certain design, and to a certain end. That end must have been either for the subsistence of Noah and his family, during their confinement in the Ark, or else in order to propagate every species of animals upon the new Earth, after the retiring of the waters; or partly for one, and partly for the other. But that they were not taken into the Ark for the subsistence of the persons inclosed, will appear evident from the following reasons.

I. The far greater part of them was unnecessary for that purpose, not only because the number was too great for eight persons during a short confinement, as it would have been on their Schemes; but that much the greater part could not be for food, except we can suppose Noah's family to have been like the Hotentots at the Cape of Good-Hope, to eat Lions, Bears, Tygers, &c. or that they delighted in the flesh of Horses, Camels, Elephants, and such like; or that Frogs, Toads, Vipers, Serpents, and all manner of creeping things were their dainty food, instead of the domestick kinds, the now ordinary food of mankind, with plenty of which they might have stored themselves.

II. None of them could be taken in for food, because animals were not yet become the food of mankind. The permission to eat flesh was not given till after the Flood, when it was given in express terms to Noah. Every moving thing that liveth shall be food for you; even as the green herb, have I given you all things; but flesh, with the life thereof, which is the blood thereof, shall you not eat *. But the food appointed for man at the beginning, was no more than this: Every herb bearing seed, which is

* Genef. ix. 3, 4.
Certainty of the Mosaic Deluge. 23

upon the face of all the Earth, and every tree in the
which is the fruit of a tree yielding seed, to you it shall
be for meat *. Though man’s food, after his expuls-
ion from Paradise, was enlarged to bread-corn pro-
duced by labour and tillage †, which was not ne-
cessary to him before the Fall. That in the first
ages of the world men lived on the fruits of the
Earth, was the general opinion of the Ancients ||
which is a confirmation of the account of this mat-
ter given by Moses; and it was thought a kind of
impiety in those who first began to eat animal food;
whence that of the Poet,

__________________________ Ante

Impia quam caedis gens est epulata juventis.

As some Indian Caedis and Sects do abstain from it to
this day. Now, though we should suppose the

* Genes. i. 29. † Genes. iii. 19. ||
Quod Sol, atque Imbres dederant, quod Terra creatrat
Sponte fia, sat is id placbat pectora donum ;
Glandilera inter curabant corpora quercus—

Lucretius;

—Immunis rastrisque intacta, nec ullis
Saucia vomeribus, per in dabat omnia tellus :
Contentique cibis nullo cogente creatis,
Arbuteos foetus; montanaque fraga legebant,
Cornaque, & in duris herentia mors rubetis ;
Et quae decidenter patula Jovis arbores glandes.

Ovid. lib. 1. Metam.;

At vetus illa ætas, cui fecimus Aurea nomen,
Fœtibus arboreis, & quas humus educat, herbis
Fortunata fuit: nec polluit ora cruore.

Tunc & aves tutas movere per aera pennas ;
Et lepus impavidus mediis erravit in agris :
Nec sua credulitas pificeb suspenderat hamo.

Idem. lib. 15;

These passages shew, that it was the opinion of the ancients
that mankind, in the first ages, lived on the fruits of the earth;
and not on animal food; though I do not take them to have
been rude and unskilful, as to have no better fruits to feed on
than what are here specified.

C 4  wicked
wicked race of men before the Flood to have transgressed the Law given them for food, (which yet I can see no reason to grant, as it never can be proved) we can hardly suppose the righteous Line of Seth (whose descendants only were in the Ark) to have been guilty of the same transgression; since they could not forget the fatal effect which the eating the forbidden fruit had upon Adam and all his posterity. But to let this question, viz. Whether animal food was eaten before the Deluge, pafs for the present, which we shall have occasion to resume again; That the sole end of taking animals of all kinds into the Ark was to keep every species alive, and to propagate every kind upon the Earth when the waters were gone off, will appear evident; because,

I. They were taken in male and female, which was surely in order to keep up the breed: Had they been taken in for food, it was no matter whether male or female.

II. Because food was ordered to be laid up for them all, during the time of their confinement. Take thou unto thee of all food that is eaten, and thou shalt gather it to thee, and it shall be for food for thee and for them *, (which, by the way, implies that animal food was not the food of mankind, at least of that family at the time.)

III. From what is said to Noah concerning them, when the Flood was over. Ering forth every living thing that is with thee, of all flesh both of fowl and of cattle, and of every creeping thing that creepeth upon the Earth, that they may breed abundantly, and be fruitful and multiply upon the Earth †. Hence it is evident, that all that were commanded to be taken in were ordered to be brought forth; which shews, that they were all preserved alive in the Ark: And here likewise is expressed the end for which they were

* Gen. vi. 21.  † Gen. viii. 17.
preserved, which was, to breed and propagate their several kinds upon the renewed Earth.

Now if the Flood was universal in extent, the taking into the Ark animals of every kind was absolutely necessary to replenish the new World, which otherwise must have been destitute of all the Land animals, and, in that case, had stood in need of a new creation. But, upon the supposition of a partial Deluge over so small a part of the Earth, was altogether needless, a great and useles trouble, like carrying water to the Sea, or coals to Newcastle, as the vulgar saying is; a folly, which that infinite Wisdom, which gave the command, could not be guilty of.

II. As to the second reason alleged, viz. "That "Noah did not know how long the waters were to "continue upon the face of the Earth, or if they "were ever to retire into their former beds, &c." It is not indeed said, that the time of the waters continuance was revealed to Noah, and it may be thought not convenient to apprise him of it, lest the length of the time should have disheartened him and his young family; but it was necessary that he should know, though not the precise number of days, yet the Flood's continuance for a year and more; since otherwise he could never proportion the quantity of food to the time and the number of animals, but must either have fallen far short, or far exceeded; either of which had been highly inconvenient. But to imagine that he should be in any doubt whether the waters would ever retire into their former beds, is altogether absurd. For to what purpose did he build the Ark, but for his own preservation, while the rest of mankind were to be destroyed? And to what purpose was his preservation, if the waters were never to retire? He might as well have perished with the rest of mankind at first,
first, as to linger out a tedious and troublesome confinement for a few months or years longer.

III. Had the Inundation been designed for Mesopotamia, or that and Syria only, what occasion was there for such a profusion of waters, viz. A rain of forty days and forty nights, and the breaking up the fountains of the Deep for a much longer time? An infinitely less quantity would have sufficed for drowning so small a part of the Earth. One night's inundation by a violent rain, and the eruption of waters from the Earth, drowned a very large province in China about two hundred years ago, by which every living creature perished in it, save one child of seven years of Age*.

IV. Noah was a whole year and more in the Ark. In the case of an Universal Deluge over all the Earth, this is very credible; since the time here is proportional to the effect, viz. The drowning the whole Earth, and the drying it again for the habitation of mankind; but on the supposition of so small a part of the Earth's being inundated, (not the hundredth part, as Vossius pretends) the length of the time is no ways proportioned to the fact supposed. A much shorter time would have sufficed for that purpose.

V. If Syria and Mesopotamia were only subjected to the Deluge, how came the Ark to rest on one of the mountains of Ararat? Whether that mountain was one of the Gordyean hills which separate Armenia from Mesopotamia, or part of the mount Taurus, according to St. Jerome, or a mountain near Sagascythia on the hills beyond Bactria, as some moderns now suppose, all these hills are far beyond the limits prescribed by them to the Deluge. Before the waters, therefore, could reach and cover the top of any of these mountains, they must have

* See the relation in book ii. chap. 3. sect. 1.
spread a prodigious way beyond them, and on all sides of them, consequently not Mesopotamia and Syria alone were subjected to the Deluge.

VI. An insuperable objection to any partial or local Deluge is this: That it is impossible, in Nature, that the waters could have covered any high hills fifteen cubits upwards, till they had risen every where to an equal surface; for as they still mounted upwards, they would still spread and extend themselves on all sides, till there was no place vacant; and must have risen to an equal height every where over the Earth, before they could cover the mountains fifteen cubits upwards any where. This last argument, 'tis true, will not affect those who reject not only the Divine Authority, but the Truth of Moses's History; but it is strong against Vossius, who believed both.

1. Vossius pretends, "That Divines confessed they would have embraced his opinion, if it was certain that the animals and wild beasts had been no where else upon the Earth but where men inhabited; but they thought this no way probable, since, from the first creation, every Land had its own animals." To this he answers, that by the word all in Scripture (as indeed in other authors as well as in common speech) we are not to understand all univerfally, since it is often taken for any integral part. But the question is, whether it can be so understood in this place consistently with the Context. The words of Moses seem very express to the contrary. And all flesh died that moved upon the Earth, both of fowl and of cattle, and of beast, and of every thing that creepeth upon the Earth, and every man, all in whose nostrils was the breath of life, of all that was in the dry land died; and every living substance was destroyed which was upon the face of the ground, both man and cattle and creeping thing, and the fowl of heaven, and they were destroyed from the Earth,
and Noah only remained alive, and they that were with him in the Ark *. Now an entire destruction of every living creature upon the face of the whole Earth cannot be delivered in more full, express, and positive words than is here done, which extend the sense of the word all to an Universality. As little will these words of Moses agree with that narrow Scheme of the Deluge he has given us.—And the waters prevailed exceedingly upon the Earth, and all the high hills that were under the whole Heaven were covered †. Can this possibly mean, that the high hills in Mesopotamia and Syria only were covered? Or are there no other high hills under the whole Heaven but what are there? Moreover,

Secondly, Against the Scheme given us by Vossius, that passage in St. Peter’s second Epistle may be strongly urged. For this they willingly are ignorant of, that by the word of God, the Heavens were of old, and the Earth standing out of the water and in the water, whereby the World that then was perished. But the Heavens and the Earth which are now, by the same Word, are kept reserved unto fire against the day of judgment and perdition of ungodly men.——But the day of the Lord will come as a thief in the night, in which the Heavens shall pass away with a great noise, and the Elements shall melt with fervent heat, the Earth also and the works therein shall be burnt up ||. Here the Apostle speaks of this sublunary world, the Earth and its Atmosphere (for the fowls fly in the midst of Heaven). 2. He expressly says, the World that then was perished by water. 3. That the World that now is, is reserved unto fire, and that the Earth and all the works therein shall be burnt up §.

The

* Genef. vii. 21, 22, 23, 24. † Genef. vii. 19.
|| 2 Ep. iii. 5, 6, 7, 10.
§ That the present World is to be destroyed by fire, was an ancient and common tradition, mentioned by several authors as well
Certainty of the Mosaic Deluge.

The subject of the whole passage is one, the Earth or this World, distinguished into the old and the present. The Antithesis is between the destruction of the old World, and that of the present; the first was by water, this to be by fire. We may then as well suppose, that a small part of the present World will be destroyed by fire at the last day, as to say, that a small part of the old World perished by water.

But to our present purpose, it is farther to be observed, that when the Apostle speaks of the Earth at first Creation, he calls it γῆ, when destroyed by water, ὁ κόσμος: now κόσμος is surely a word of as large extent as διανομένος, and Vossius ought to pay some more regard to St. Peter than to Josephus, if he meant ἰτειμον in the sense Vossius would put upon it, though there is more reason to think he did not.

Thus it appears that the learned Vossius, who asserted a partial Deluge, had not well considered how many strong objections his Scheme was liable, as well as utterly inconsistent with the account of the Flood given by Moses and St. Peter; but to avoid some difficulties on one hand, which perhaps may be accounted for, has run upon unsurmountable difficulties on the other.

Thus much for Vossius; a word or two now to those who deny the truth of the Mosaic history. One reason why some persons are for dwindling the Flood of Noah into a partial Deluge is, that they are very shy to admit any such thing as a miracle; but now it falls out unluckily, that the Scheme they have given us by Mr. C------, or he for them, is impossible to have been effected without a miracle; whereas had they left the Deluge as they found it, universal in extent, there needed no miracle in the in-
An Enquiry into the Truth and

stance we are now to give. Let us then, for once,
set aside Moses and his history of the Deluge, and
see what will be the Issue.

By the Scheme they have given us it is acknow-
leged, that there was a Flood in the days of Noah,
that he built an Ark for his preservation, and that he
took in a great many animals into it, which it is pre-
tended was for the subsistence of his family, as not
knowing how long the Deluge would last, or that
the waters were ever to retire. If that was the true
reason, he must have taken in great numbers, and
the Vessel could be no small one. Before it could
float, the waters must have risen to some height, and
before it rested, to a much greater. We need not
have recourse to Moses to prove that it rested on a
mountain, for profane authors affirm the same ac-
cording to ancient tradition; and we may reasonably
conclude that it was on the top of the mountain it
rested, for had it been on the side, or a declivity, it
would instantly have tumbled down. Now before
the waters could cover the top of the mountain, so
as the Ark could be wafted upon it, they would na-
turally be running off on all sides, and wherever
they found a descent. To confine the Deluge there-
fore within the pretended limits, and at the same
time to raise the waters to cover any mountain to
such a height as the Ark would require (supposing
it might draw ten, twelve, or thirteen Cubits) is
absolutely impossible, without a miracle, to hem and
wall them in to the height required on all sides,
since otherwise they would naturally fall off to the
lower grounds without ceasing, till they met with a
stop. But what should stop them? Except we
should suppose a tract of higher mountains quite
surrounding and enclosing that part of the Earth
they have allotted to the Deluge, which is not pre-
tended, nor any where to be found, since there is in
all places an outlet for the waters that fall from the
mountains?
Certainty of the Mosaic Deluge. But if we will allow the Deluge to have been, as it is represented, universal in extent, there was no need of a miracle in this case; since if we can find but a sufficient quantity of waters to overflow the Earth, let them arise anywhere to what height you please, and be still encroaching, they will naturally run off on all sides, till they come to be of an equal height or surface everywhere, and at last put on the same spherical or spheroidal figure with that of the Earth. Is not the matter much mended now? To avoid a miracle, where it was not necessary nor wanted, they have framed a Scheme of the Deluge which cannot possibly be executed without a miracle, and a great one too, greater than that of dividing the Red-Sea, and walling it on each side for the passage of the Israelites; greater, because of its much larger extent, and much longer continuance.

* And the waters were a Wall unto them on their right hand, and on their left. (Exod. xiv. 22.) “That is, saith Sir Walter Raleigh, the waters so defended them on both sides, as the Egyptians could only follow them in the same path; not that the waters flood upright as walls do, as some of the Schoolmen have fancied. For had Pharaoh and the Egyptians perceived any such buildings in the Sea, they would soon have quitted the chase and pursuit of Israel.” But to this it may be objected, that the Egyptians might not perceive that they were entering the channel of the sea, it being in the Evening when they came in sight of the Israelites; and besides, the Pillar of the Cloud removed from before the Camp of Israel and went behind them, and came between the Camp of the Egyptians and the Camp of Israel; and it was a cloud and darkness to them, but gave light by night to these, so that the one came not near the other all the night. The whole Transaction appears to have been after this manner.

The Red-Sea lies South and North, and the breadth of it, where the Israelites passed, is about four miles. When Moses cried unto God, he was commanded to lift up his Rod, and stretch it over the Sea and divide it, and God confounded the Sea to go back by a strong East wind all that night, and the Waters were divided. As soon as Moses perceived the waters retiring before him
The reader may now please to observe, that from the Adversaries concessions (and it is a maxim in Law, that a man’s confession shall be strongly pleaded against himself) we have before proved undeniably,

1. A Divine Revelation as early as the days of Noah.
2. The Prediction of a future Event of great moment, of no less importance than the destruction of all mankind, long before it came to pass; and now,
3. The absolute necessity of a miracle to effect the narrow Scheme of a partial Deluge. We shall therefore dismiss our two Schemists for the present, till we have occasion to bring them again on

him (for the Pillar gave them light) he marched forward about the middle of the night. The Pillar of the Cloud which stood between the two Camps followed the Israelites as they marched forwards, and then the Egyptians, who were not far behind, pursued after Israel, so that indeed they entered the channel of the Sea by night; but whether they knew they were in the Sea or not, is uncertain; though one would think they might know it before they marched far, as their faces were directly to the Sea. By the fourth Watch, i.e. at break of day, the Egyptian Horse was all within the Seas (and then they could not but know it) though all the Israelites might not yet be arrived on the opposite shore. For then it is said, that the Lord looked unto the Horse of the Egyptians through the Pillar of fire, and of the Cloud, and troubled the Horse of the Egyptians, that is, put them into disorder and confusion, by rains, thunders and lightnings, as it is in the 77th Psalm, 16, 17, 18. which are generally understood of this passage of the Red Sea. The Rains moistened the sands, which at first made them drive heavily, and the Thunders and Lightnings disturbed the horses; and by Moses’s stretching his hand again over the Sea, when the people were all come to the other side, the Sea returned by degrees to its former place; and, as it rolled, took off the wheels of their chariots, which then must stick in the sands: And by this means the whole Horse was drowned, not one of them escaping. And whereas it is said by Moses in his Song. The flood stood upright as an heap, and by the Psalms, And he made the waters to stand as an heap. (Psalms xxxviii. 13.) These may be deemed only poetical expressions; and yet where the division of the waters on each side ended, to those who pulled along the Channel, they would appear as a wall and an heap, there being several fathoms between the bottom and the surface of the Sea, especially in the middle.
S E C T. IV.

A Third Scheme of a partial Deluge; but far more extended, in the learned Bishop Stillingfleet's Origines Sacrae.

The two foregoing Schemes of the Deluge, being found to consist with neither reason, nor the account of it given by Moses, I shall next consider what is offered in favour of a partial Deluge, though farther extended by our very learned Bishop Stillingfleet in his Origines Sacrae. This valuable author, when he comes to treat of the Flood, having mentioned the grand objection against the possibility of an Universal Deluge, from the want of sufficient waters to cover the whole Earth to the height mentioned; gives a two-fold answer to it: 1. On supposition that Noah's Flood was only local in extent, though universal in effect as to mankind. 2. On supposition that it was universal in extent also. It is the first of these only we have here to do with, and which seems to have been the Author's own opinion.

"First, says he, I cannot see any urgent necessity from the Scripture to assert, that the Flood did spread itself over all the surface of the earth. That all mankind (those in the Ark excepted) were destroyed by it is most certain according to the Scriptures. When the occasion of the Flood is thus expressed; And God saw that the wickedness of man was great upon the Earth, and that every imagination of the thoughts of his heart was only evil continually. And the Lord said, I will destroy man

"whom
whom I have created from the face of the Earth.*

It could not be then any particular Deluge of so small a country as Palestine, which is here expressed, as some have ridiculously imagined, for we find an universal corruption in the Earth, mentioned as the cause, an universal threatening upon all men for this cause, and afterwards an universal destruction expressed as the effects of this flood. And all flesh died that moved upon the Earth—and every man, and every living substance was destroyed which was upon the face of the ground; both man and cattle, and creeping things, and the fowl of Heaven, and they were destroyed from off the Earth; and Noah remained only alive, and they that were with him in the Ark †. So then it is evident that the Flood was universal as to mankind. But from thence follows no necessity at all of asserting the Universality of it as to the Globe of the Earth, unless it be sufficiently proved that the whole earth was peopled before the Flood, which I despair of ever being proved. And what reason can there be to extend the Flood beyond the occasion of it, which was the corruption of mankind? And it seems very strange that in so short an Interval, in comparison, as that was from Adam to the Flood, according to the ordinary computation, viz. one thousand six hundred and fifty six years, and not much above two thousand according to the largest computation, the world should then be fully peopled, when in so much a longer space of time since the flood to this day, the earth is capable of receiving far more Inhabitants than now it hath.

The only probability then of asserting the Universality of the Flood, as to the Globe of the Earth, is from the destruction of all living crea-

* Genef. vi. 5, 7. † Genef. vii. 21, 22, 23.

† A reason will be showed in the course of this Inquiry.
Certainly of the Mosaic Deluge.

cure, together with man. Now though men
might not have spread themselves over the whole
surface of the Earth, yet beasts and creeping
things might, which were all destroyed with the
Flood: for it is said, that all fowl and of cattle, and of
every creeping thing that creepeth upon the Earth,
and every man. To what end should there be not
only a note of Universality added, but such a
particular enumeration of the several kinds of
beasts, creeping things and fowls, if they were
not all destroyed?

To this I answer, I grant that as far as the
Flood extended, all these were destroyed, but I
see no reason to extend the destruction of these
beyond that compass and space of Earth where
men inhabited; because the punishment upon the
beasts was occasioned by, and could not be con-
comitant with the destruction of mankind; but
(the occasion of the Deluge being the Sin of man,
who was punished in the beasts that were de-
stroyed for his sake, as well as in himself) where
the occasion was not, as where there were
animals and no men, there seems no necessity of
extending the Flood thither.

But to what end will it therefore be replied,
that God command Noab with so much care to
take all kinds of birds, beasts, and creeping things
into the Ark with him, if all those living crea-
tures were not destroyed by the Flood? I an-
swer, because all those things were destroyed
where-ever the Flood was. Suppose then the
whole Continent of Asia was peopled before
the Flood, which is as much as in reason we may
suppose, I say all the living creatures in that Con-
tinent were destroyed; or if we may suppose it
to have extended over our whole continent of the
anciently known world, what reason would there
be, that in the opposite part of the Globe, viz.
“America, which we suppose to be unpeopled then, all the living creatures should there be destroyed, because Men had sinned in this? And would there not have been on this supposition a sufficient reason to preserve living creatures in the Ark for future propagation, when all other living creatures extant had been in such remote places, as could not have been accessible by them in many generations; and those beasts growing wild for want of inhabitants, would not have proved presently serviceable for the use of man after the Flood, which was certainly the main thing looked at in the preservation of them in the Ark, that men might have all of them ready for their use after the Flood, which could not have been, had not the several kinds been preserved in the Ark, although we suppose them not destroyed in all parts of the world.

All this proceeds on supposition that animals were propagated much farther in the World than mankind was before the Flood. Which I confess seems to me very probable on this account, because the production of animals is parallel in Genesis with that of fishes, and both of them different from man. For God faith, Let the Waters bring forth every moving creature that hath life, viz. fish and fowl; and accordingly it is said, that the waters brought forth abundantly every living creature after their kind, and every fowl after his kind*. Accordingly, in the production of beasts, we read, Let the Earth bring forth the living creature after his kind, cattle and every creeping thing and beast of the Earth after his kind, and it was so †. But in the production of man it is said, Let us make Man in our image, after our likeness §. From hence I observe this difference between the production of animals and of man; that in one God gave a prolific power to the Earth and Waters, for the production of the several living crea-

* Genef. i. 20, 21. † Genef. i. 24. § Genef. i. 26.


Now, therefore, although there were but one male and female of mankind at first, which had a special formation by God himself, yet there is no reason we should conceive it to be so as to the production of other living creatures, whether fift, or fowl, or beasts. But the prolific virtue being by God's power given to the material principle out of which they were formed, it may very well be supposed that many of the same kind were at first produced. For it seems very strange to imagine, that in the whole Ocean there should be but only two of a kind produced. But fift and fowl both arising from the Waters, we may have just reason to think that the Waters being separated before this prolific virtue was communicated to the whole mass of Waters, might in the several parts of the globe of the Earth, bring forth both fift and fowl after their kinds.

The same I say of the production of animals in the sixth day's work, which are ranked into three sorts, cattle, creeping things, and beasts of the Earth after their kinds. Now God saying, let the Earth bring forth her living creatures (and that after the Waters had divided some parts of the Earth from other, so that there could be no passage for the cattle, creeping things and beasts, of one part into another, without the help of man) it seems very probable that at least those parts of the Earth which were thus divided from each other, did bring forth these several living creatures after their kinds, which did after propagate in those parts without being brought thither by
the help of man. If now this supposition be em-
braced, by it we presently clear ourselves of many
difficulties concerning the propagation of animals
in the world, and their conservation in the Ark,
which many have been so much to seek satisfaction
in. As how the unknown kind of serpents in
Brazil, the flow-bellied creature in the Indies,
and all those strange species of animals seen in the
West-Indies, should either come into the Ark of
Noah, or be conveyed out of it into those coun-
tries which are divided from that Continent, by
so vast an ocean on one side, and at least so large
a tract of land on the other (supposing any pas-
sage out of one Continent into another, which yet
hath not been discovered) besides some kind of
animals cannot live out of that particular clime
wherein they are; and there are many sorts of
animals discovered in America, and the adjoining
islands, which have left no remainders of them-
selves in these parts of the world. And it seems
very strange that these should propagate into those
remote parts of the World from the place of the
Flood, and leave none at all of their number be-
hind them in these parts from whence they were
propagated.

These things at least make that opinion very
probable, which extends the production of ani-
imals beyond that of mankind in the Old World;
and that the Flood though it destroyed all man-
kind, and every living creature where mankind
inhabited, yet might not extend itself to those
parts, and the animals therein, in which men never
had inhabited. And by this means we need not
make so many miracles, as some are fain to do,

* For the same reason, viz. the new and unknown creatures
found in America,Mercator thought that the Deluge drowned
not those parts, supposing that men had not there inhabited, who,
with a deluge of fire, might procure that deluge of waters.

about
about the Flood; and all those difficulties concerning the propagation of animals do of themselves vanish and fall to the ground.

This is the first way of resolving the difficulty concerning the possibility of the Flood, by asserting it, not to have been over the whole Globe of the Earth, but only over those parts where mankind inhabited.” Thus far our learned Author.

In the above-cited passage the utmost is urged that can be said in Defence of a partial Deluge; and it must be confessed that it starts some considerable difficulties with respect to a Deluge universal in extent. Nevertheless I answer for the present,

1. That those passages of Scripture quoted partly by the learned Author, but more fully in the preceding Section against Vossius, are equally strong against this more enlarged Scheme, especially those words of Moses omitted here by our Author. And the Waters prevailed exceedingly, and all the high hills that were under the whole Heaven were covered; as also those words of St. Peter, that διά τὴν οἰκόν, the world that then was perished by water, which expressions will not allow us to admit even of this more extended Scheme.

2. That though a full proof that the whole Earth was peopled or inhabited by mankind before the Deluge, can neither be given, nor in reason expected, yet I shall shew

That by a moderate computation, with as large allowances with respect to increase as can be desired, the number of mankind before the Deluge must have been far greater than it is at present, or has been at any time since the Flood.

That though mankind had not been so numerous at the time of the Deluge as they are at present, yet they must have extended themselves over the face of the Earth, and that they could not live in such numbers...
numbers together as men do now, viz. some hundred thousands in one great city. And also shew the reasons why mankind has not multiplied since the Flood, in proportion to what it did before it. But these in their due order and proper places, to avoid repetitions.

3. If the World that then was perished by Water, according to St. Peter, and all the high hills under the whole Heaven were covered, as is expressly affirmed by Moses, then it is evident that all the animals, as well where men inhabited as where they did not (if any such place there was) must have perished.

4. If the Flood did not extend beyond the Continent of Asia, which our Author thinks might contain all mankind at that time upon the Earth, then some of the strongest objections against the two former Schemes will equally lie against this. For

1. On this supposition, there appears no manifest necessity for building the Ark. In far less time, and with much less trouble, might Noah with his small family have removed into any other part of the Earth, and have been out of the reach of the Inundation. And it is reasonable to think that in this case, God would not have put Noah upon the great labour of building so large a vessel; or the great trouble of taking care of the animals in it, had there not been an absolute necessity for it.

It may possibly here be urged, that Noah could not take such a journey with safety to his person, because as Violence was the crying sin of that generation of men, he might have been in danger to be cut off with his family. To this I answer, that the same Providence which preserved Abraham in all his peregrinations, notwithstanding his fears, and Jacob from the violence of Laban who pursued him with an evil intent, as also from the hand of Esau who came against him with four hundred men, and from the
the inhabitants of Canaan after his sons revenge upon the Shechemites, by striking them with a panic so that they pursu’d him not, and likewise Joseph from the hands of his brethren who purposed to kill him, could as easily have preserved Noah from all the perils of such a journey, could that have placed him out of the reach of danger from the Inundation. And thus it was he saved Lot from the destruction of Sodom, by taking him out of the place that was to be destroyed.

5. Had the Continent of Asia only been inhabited by mankind, as is here supposed, and the animals had extended themselves much farther, as would certainly be the case on that supposition, then, I say, there was no necessity for Noah’s taking into the Ark with him animals of every kind, which greatly increa’d his care and his trouble. Animals, I say, of every kind, fowls, cattle, beasts of the field and creeping things. Had Asia alone been inundated, and the Ark rested on some mountain in the same Continent, I agree with our Author, that it had been necessary for Noah to have taken in some animals into the Ark, such, namely, as were useful to mankind, because it might have been many years, perhaps an age or two, ere such animals had spread themselves again into Asia, from the other Continents of Europe or Africa. But then what necessity was there, or what reason can be assigned for his taking in animals that were not only not useful, but hurtful and pernicious both to mankind and other creatures, such as Lions, Tygers, Wolves, Serpents, &c. by which men are often destroyed? The noise of beasts being accounted one of God’s four sore judgments *. When men remove their habitation to some distant place or country, they may take useful creatures along with them, but not Rats, Vermin, or other destructive animals. Thus the Por-

* Ezek. xiv. 21.
tuguese and Spaniards, transported into the Islands they had discovered in the Indies, and into America, sheep, goats, hogs, horses, and the like, but not animals noxious or pernicious to mankind. We may therefore well suppose that had it been left to Noab's choice, he would have taken none such into the Ark. But the Command ran otherwise.

Hence it is evident that the main thing looked at in the preservation of the animals in the Ark was, not as is here alleged, that men might have all of them ready for their use after the Flood, since several kinds of animals were equally preserved that were not for their use, but the contrary. But the design of taking animals of every kind, male and female into the Ark, appears plainly to be this; that as God in his infinite Wisdom had thought fit to create a great variety of creatures of different kinds, for ends and uses best known to himself, and that all these were now to be destroyed with man; yet he would not suffer the creatures he had once made utterly to perish; but his Will was, that all and every kind of them should be continued while the Earth remained; and therefore he commanded the noxious, as well as the useful, to be taken into the Ark for propagating their species. Now this Command, to take into the Ark Animals of every kind, the hurtful and destructive, as well as the useful, is a clear and convincing proof, that not only that Land where men inhabited, but those parts also where no men lived, (if any such places there were) but where the animals had extended themselves, were all equally involved in the Deluge; and that all the animals every where perished, as well as every man, those only excepted which were in the Ark.

6. There are many high hills and tracts of mountains in Asia, and as high hills as in any of the three Continents; now it is naturally impossible that the Waters could have ascended fifteen Cubits above
above the high hills in Asia, without overflowing the other two Continents with it; for wherever there was a declivity, as there must be in their rising up to the top of the mountains, the waters would run off, and diffuse themselves on all sides, till they came to an equal surface every where, and so mount gradually and upon a level to the top of the hills. So that though Asia alone had been inhabited by mankind, and that Continent alone to be destroyed for man's sake; yet before the waters could have ascended fifteen Cubits above the highest hills there, the other two Continents must have been equally involved in the Inundation. If one Continent was to be overflowed to the height of the waters mentioned, the other two must of necessity have undergone the same fate, without a very great miracle.

7. But now as to the other part of this supposition, viz. That all the three Continents of the anciently known World, Europe, Asia, and Africa, might be involved in the Inundation, but not America. ["Or if we may suppose the Flood to have extended over our whole Continent of the anciently known World, what reason would there be, that in the opposite part of the Globe, viz. America, which we suppose to be unpeopled then, all the living creatures should there be destroyed because Man had sinned in this?"] As to this extension of the Deluge to the three Continents of the anciently known World, I confess some of the preceding objections will not lie. For if all the anciently known World was to be inundated, then it behoved Noah to build an Ark for his preservation, and also to take in animals of every kind into it, that every species of God's creatures might be preserved to propagate again in the three Continents overflowed by the Waters, though America had not been subjected to the Deluge: but then the last objection will equally affect even this enlarged Scheme. For
For tho’ America lie upon the opposite side of the Globe, and be divided from the other Continents by vast Oceans on one side, and a tract of high mountains on the other, yet is the Earth in a manner spherical, and moreover turns round upon its Axis once in twenty-four hours; it is naturally impossible therefore that the waters could cover one side of the Globe to the height mentioned, and not fall off to the other, without a miracle, in any partial Deluge, whether less or more extended, and the greater the extent, so much the greater the miracle.

8. As to the objection formed against an Universal Deluge, from the several kinds of Animals in America not to be found in the other Continents, and which I take to be the main reason that induced our learned Author, Mercator and others, to believe that the Deluge had not extended to that Continent, it must be confessed to have its due weight, and to carry a considerable difficulty with it. But though we cannot pretend to answer it to satisfaction (as Dr. Woodward undertook to do) as not being yet furnished with proper materials for that purpose, since we neither know how or in what manner America is joined to the other Continents, nor how mankind came into these remote parts of the world; nevertheless, when we come to treat of the Animals in particular, we shall shew that this difficulty is not so great as at first sight it appears. But though this objection should yet stand in its full force, we have before proved that no partial Deluge could be effected without a miracle, and that no one Continent could be overflowed to the height mentioned but the Waters would diffuse themselves every where, and cover the whole Earth.

2. In the course of this Inquiry we shall produce as full and strong evidences that America was subjected to the Deluge, as that any other part of the Earth was.
Certainty of the Mosaic Deluge. 45

These two points being sufficiently proved must needs over-rule and controul all objections to the contrary, and command our assent; and we must be contented to be ignorant of some things relating to America, as we must confess our ignorance in many other things, till Time and the Providence of God shall discover them.

The Reader may observe, that the main foundation of all the narrow Schemes of the Deluge is, the small number of mankind at the time. This we proceed next to enquire into, but several important points are first to be discussed; as, 1. The true length of the Antediluvian year. 2. The Longevity of the Antediluvians. 3. The Age or Duration of the World to the time of the Deluge. These material points being once ascertained, we shall then go on to calculate what number of mankind might probably be on the Earth when the Flood came, by which it will appear whether any small portion of it might be sufficient for their habitation.

CHAP. II.

SECT. I. Of the true length of the Antediluvian Year, and of the Longevity of the Antediluvians.

If what Mr. C—— pretends be true, viz. “That we are not yet certain what was the year of those times, if it consisted of twelve months like ours, if those months were of thirty or thirty one days, those days of twenty-four hours, those hours of sixty minutes, &c.” it would be in vain to investigate the proposition proposed in this Section. Had he, in treating of the ancient year of other nations, said, that we are not yet certain what the ancient year of the Egyptians or Chaldeans was, whether it consisted of one month or two, or of three
three or fix or thirteen, he might have been warranted by the authors quoted below *, who were probably drawn into this opinion about the ancient years, from the extravagant numbers in the pretended Egyptian and Chaldean Histories, in which (as they vied with one another for antiquity) they plainly seem to have designed to impose on the world, since they never mention by what years they reckoned, nor have we any other criterion by which to judge of them, than from the extravagant numbers of the one, and the more extravagant length of the Sri, Neris, and Sos of the other, to reject them all for imposture, except we should reduce their years to days, as some contend for.

But now to pretend the same uncertainty in the Mosaic or Scripture account of years, can proceed from nothing but either a mere ignorance of the history, or a worse principle, since the measure of the Antediluvian year is in so particular a manner ascertained by the sacred Writer, in the account he gives of the beginning and progress of the Dehige, as to leave no room for any question or doubt about it. The account in brief is this.

* Annum aliun num aetate determinabunt, & alterum hyeme; ali quattuorpartitatis temporibus, sicut Arcade, quorum annis tri-
Na. lib. 7.

In Aegypto quidem antiquissimum erant annum bimielrem
fuisset. Post deinde a Pione regno quadrimestriam faustum, novi-
ismo ad trdecim menses & dies quinque produxisse. Cresiius.

Cum traditum a veteribus effect, regnasse pratos illos reges
deque mille & ducentis annis singulo, idemque semma non ad-
mitteret, pro certo habiitum esse a plebique curulis lunares sola-
ribus nondum plene inventis, annos confecisse. Ita mirabiles
non crunt veteres fabula. Alios quatuor anni temporibus quia-
tuor annos definitisse fecer a nonnullis eit Gracis factitatum.—
Diodoros.

Idem Author Chaldais annos mentiros olim fuisset perhibet.

"That
Certainty of the Mosaic Deluge.

That in the six hundredth year of Noab's life, in the second month, and on the seventeenth day of that month, all the fountains of the great deep were broken up, and the Windows of Heaven were opened—that the waters prevailed on the Earth one hundred and fifty days—that on the seventeenth day of the seventh month the Ark rested on the mountains of Ararat—that the waters decreased continually until the tenth month—that on the first day of the tenth month the tops of the mountains were seen—that Noab waited forty days, and then sent out first a Raven, and after seven days a Dove—after seven days more he sent out the Dove a second time, which returned with an Olive leaf or twig plucked off—after other seven days he sent out the Dove the third time, which returned no more—that on the first day of the first month, and in Noab's six hundred and first year, the face of the ground was dry—and finally, that on the twenty-seventh day of the second month, the Earth was so well dried, that Noab received a command to go forth of the Ark, and release all the animals from their confinement.

Now in this very particular narration of the beginning, progress and ending of the Deluge we have days, months and years mentioned, viz. the first, the seventeenth, and twenty-seventh days of the month; also the first, the second, the seventh, and the tenth months, and the second month of the following year; and answerably to these, Noab's six hundredth and sixty-first year. Could one then who had any regard to sincerity or truth make a serious question, whether the Antediluvian years were equal to our weeks, or whether their days measured the same time they do now? For which egregious precaution or trifling, I leave him to the
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just resentment of those whom he imposed on by
his pompous promises in his Proposals.

Hence it seems evident, that the Antediluvian year
consisted of twelve months of thirty days each *; but
still I think we are not come to the true measure of
that ancient year. It is indeed the generally received
opinion "that the Antediluvian year had three hun-
dred and sixty days and no more, and that this
period was then commensurate to the Luni-Solar
year. But that since the Deluge some how or
other, the calendar is altered; that whereas before,
the Earth's Axis was parallel to the plane of the
Ecliptic, by which there was a perpetual Spring,
it is now oblique, and by the same means drawn
from a circular Orbit round the Sun to an Ellip-
tical. By this, or some other way we know not,
the year becomes now lengthened to three hundred
sixty-five days, five hours, and forty-nine mi-
nutes——that the Egyptians were the first who ob-
served the Solar tropical year to consist of three
hundred and sixty-five days, &c. (and that not
till after the Israelites had left Egypt) and there-
fore added five days more to the year, to which
they tacked a ridiculous fable of Mercury's playing
at Dice with the Moon." Now though this be

* Which appears thus. The waters prevailed on the Earth
for one hundred and fifty days, or five months of thirty days
each, which reach from the seventeenth day of the second month,
when the Flood began, to the seventeenth day of the seventh
month. From that day the waters decreased till the first day of
the tenth month. From thence forty days and twice seven reach
to the twenty-fourth day of the eleventh month. In thirty-six
days more; that is, on the first day of the first month of the year
following, the ground began to be dry; but Noah continued yet
fifty-seven days in the Ark, till the earth was not only dried but
had produced herbage, plants and fruits for the sustenance of those
men and animals who came out of the Ark, that is, until the
twenty-seventh day of the second month, in Noah's six hundred
and first year, so that he was more than a year in the Ark. Thus
it is evident that the Antediluvian year consisted of twelve months
of thirty days each at least.
taken for granted by the learned, I mean the different measure in the Solar tropical year in the Antediluvian World from the present, or from three hundred and sixty days to three hundred and sixty-five and odd hours, yet I am apt to think all this to be a mistake. For as Dr. Woodward in his Essay, Dr. Bentley in his Boyle’s Lectures, and Dr. Keil more fully in his Examination of Dr. Burnet’s Theory, &c. have clearly shewn, that a perpetual Spring was so far from being better, that it would have been infinitely worse for the production of the fruits of the Earth, and that the position of the Earth was the very fame, with respect to the Ecliptic, in that old World as it is at present, and its Orbit the same as now, not Circular but Elliptical; hence I think it will clearly follow, that the length or measure of the Antediluvian year was the very fame that it is at present, viz. three hundred and sixty-five days and odd hours and minutes. Let us now see if we can produce any thing in confirmation of this opinion.

I observe that in several civilized nations they reckoned no more than three hundred and sixty days to the Civil year, and at the end thereof added five odd days by themselves.

Thus the Persians reckoned three hundred and sixty days in their year, and five odd days at the end thereof, as days of nothing, that is, no working days, but days of idleness and diversion. In Abyssinia they began the year with their Spring on the first of September, numbering twelve months in the year, in each thirty days, reckoning the odd days between August and September by themselves. The Mexicans in America divided the year into eighteen months, each consisting of twenty days, which make allow three hundred and sixty in the year, and the five odd days were reckoned as days of nothing, during which the people did nothing, neither went to their temples, but spent the time in visiting each other;
the Sacrificers likewise ceased their sacrifices. The Egyptians also had three hundred and sixty days in their year, and the five ἐπαγόμεναι or additional days by themselves. As for the European nations of Italy, Germany, Gaul, Britain, Poland, Muscovy, &c. we cannot tell how they reckoned, having no ancient Records or Histories to give us an Account of such things.

Now if Persians, Egyptians, Ethiopians, Mexicans, reckoned thus in the self-same manner, three hundred and sixty days to the year, and five odd days by themselves, whence could this custom of reckoning the year by equal months and odd days come in different nations, and distant parts of the World, as in Asia, Africa and America, in nations who had no correspondence with one another, but from one and the same Original? namely, from the sons of Noah, by whom the whole Earth was peopled, and from whom this manner of reckoning the days in the year with other common customs was derived to all their posterity? It must needs then be, that this manner of reckoning obtained also in the Antediluvian World. But if that be the Original of this custom, in reckoning the year and the odd days in the several parts of the World (and it will be difficult to assign any other reason for this uniformity) then it will follow,
1. That the Antediluvian year was of the same length with ours at present. 2. That the adding the five supplemental days was not the invention of the Egyptians, nor were they the first that discovered the true length of the year: that was known from the beginning as well as now, and the method of reckoning twelve months of thirty days, and five supplemental days at the end of the year, came to them as it did to other nations from the Parents of Mankind after the Deluge *. 3. That the variety of the length of the

* Hence it is easy to account for those several Customs and falks brought by Mr. Allen in Mr. Whiston's Theory, and by Sir
the year in different nations pretended by several authors (as in the preceding note) is but a mistake. The Chinese, Japanese, and other nations in India divide the Year still by Moons, though their year be of the same length with ours; and as we divide the year by months, quarters and half years, so might other nations do the like, which Authors who wrote many ages after mistook for years. 4. That in the account of the Deluge, the five supplemental days at the end of the year come in their course, before the first day of the first month of the second year mentioned, after Noah had sent out the Dove the third time, so that Noah was a full year of three hundred and sixty-five days, and ten days more in the Ark from the beginning of the Flood.

If it should now be asked, how this method of dividing the year came to take place both before and after the Flood? I answer, because it was found to be convenient and an easy way of reckoning. It being much easier to reckon twelve equal months of thirty days, or with the Mexicans eighteen months of twenty days (who perhaps could not easily number to thirty, for such in America there were *) and add

Sir Isaac Newton in his Chronology, to prove that the Luni-solar year consisted only of three hundred and sixty days, before the just length of the Solar year was discovered by the Egyptians. For the Post-diluvians retaining the same manner with the Antediluvians of reckoning twelve months of thirty days each to the year, and the five odd days by themselves, as days of nothing; hence it came that what facts or customs were designed to signify the number of days in the year, were accommodate only to twelve months of thirty days, neglecting the odd days as not of any account, being held for days of nothing. Thus the Athenians erected three hundred and sixty Statues to Demetrius Phalerus, viz. as many as there were days of account in the year, i.e. twelve times thirty.

* One of the Missionaries acquaints us, that some nations in South-America, along the River of Guatagua, are so droll that they cannot count any number. The most dexterous among them can reckon only to five, and many can go no farther than two. If
add five days to the end of the year, than to reckon the months unequally as we do, some of thirty and others of thirty one days, which every one cannot so well remember. It seems pretty evident then, that the Antediluvian year was nothing short of our own, and contained three hundred and sixty-five days as ours does.

Having thus found the Antediluvian year to be of the same length with the present, no doubt can be made of the Longevity of the Antediluvians. In the course of a history wrote by the same person, the years must needs be supposed the same, or of equal length throughout the whole, when there is nothing said to the contrary. But so far from this, that manifold absurdities would follow, if we did not reckon the years to be what the Historian himself expressly makes them. Should we reckon, for instance, a month for an Antediluvian year, as some have thought, several of the Patriarchs would have had children at five, seven, and nine years old. Seth would have been born when Adam was about ten years old, before which time Cain had slain his brother Abel, according to the Numbers in the Hebrew. Nor is the matter much mended, if we take the number of years as they stand in the Septuagint: We shall then have them fathers and heads of families at thirteen, fifteen, and seventeen years, above a hundred years too early for that state of the world. At this rate also the eldest of Noah's sons could not have been above eight years old when the Flood

they would express 3, 4 and 5, they will say, two and one, two and two, two two's and one; or to signify the number 5, they hold out the fingers of the right hand, if ten, the fingers of both. If the numbers they would express surpasses ten, they fit down on the ground and shew the toes of each foot, one after the other to signify twenty. The Mexicans then were expert Arithmeticians, who without the help of fingers or toes could reckon eighteen and twenty.—Leviticus Curieus, &c. vol. 23 p. 314, &c.
came, the other two younger, in proportion, very unable to assist in building the Ark, and yet all three married or espoused before they entered into it. On this supposition the old World had lasted but one hundred and eighty-eight years, according to the largest computation in the Septuagint, though it contained fourteen or fifteen generations from Adam to the Flood *, and yet since the age of man has been reduced to the present standard, fourteen generations would take up four hundred and twenty years, reckoning but thirty to a generation.

In like manner, if the years after the Flood had been no more than months, Abraham, who came into Canaan at seventy-five and married, had been but six years and three months old. Isaac married at forty had been but three years and four months, when he was not yet weaned. Jacob, who came into Egypt with seventy Children and Grand-children, had been only ten years and ten months old. And Joseph when made governor of Egypt at thirty, would have been but two years and six months; with other such absurdities. It appears clearly then, that throughout the whole history of Genesis the years are the same, of the length of which Moses gives an express detail by days, months and years in the relation of the Deluge. And as no question is made of the length of the years after the Flood, as little doubt or question can be made of the years before it.

Nor was the longevity of the first race of men unknown to the Gentiles. To this purpose Josephus reckons up the testimonies of Manetho, Berosus, and several more who wrote that the first men lived a thousand years †, and Mr. Whiston observes, that

* See this proved in the following Section.
† It seems needless here to mention that when Josephus and others speak of a thousand years, they take an even round number for a broken or unequal one, as is common, since none attained a thousand years compleat, though many lived above nine hundred.
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had he been as well acquainted with the Roman Authors as with the Greek, he might have quoted many more, amongst the rest Varro accounted the most learned of the Romans; though he, comparing the life of man in his days with that of the first ages, could scarce think it possible that the human frame could have held out a thousand years, and therefore supposed those years to have consisted only of three months. But though the authors quoted by Josephus are since perished, there is no doubt but that he truly reported what he found in them, since it is highly improbable he would otherwise have quoted their authorities, when it was so easy to convict him of falsehood, while these authors were in the hands of the learned.

Nor need this longevity of the first ages seem so strange to us, since it is highly consonant to reason that it should be so. For as it pleased God to create but one man and one woman at first (and that for very good reasons that may be given) by whom the whole Earth was to be peopled; had not men at first lived many hundred years, the greatest part of the Earth had been for some thousands of years uninhabited and a desert, contrary to one end of man's creation, which was to be fruitful and multiply and replenish the Earth. The same Divine Wisdom is conspicuous in the new World: For when after the Deluge the Earth was to be peopled again, not by one, but by three pair (the Sons of Noab) the term of life was abridged one half, and as mankind multiplied, shortened gradually to two hundred and under, and finally by degrees to the present standard. Had all men lived to the same age as they did at first, the Earth in its present state could not have maintained them, as is well observed by the learned Mr. Derham.

But yet the reduction of man's life to the present general standard, did not take place so soon as some imagine.
Imagine. It is commonly thought that man's life was cut short to seventy and eighty years in the days of Moses, which opinion is grounded on an expression in the 90th Psalm, which has for its title, A Prayer of Moses the man of God. There it is said, ver. 10. The days of our years are three-score years and ten, and if by reason of strength, they be fourscore years, yet is their strength labour and sorrow, for it is soon cut off, and we flee away. But this will be found no just foundation for this opinion. For it does not seem at all probable that man's life was at this time reduced to seventy or eighty years. The Israelites are supposed to have been two hundred and fifteen years only in Egypt, to which if we add the greatest part of the forty years in the Wilderness, there will be from Jacob's coming into Egypt to the time this Psalm was penned about two hundred and fifty. Now the reduction of man's life from one hundred and forty-seven (for Jacob died at that age) to seventy and eighty in two hundred and fifty years, seems too precipitate and sudden a change, whereas it appears to have been more gradual.

2. It does not appear to be true in fact, but much otherwise. For besides Jacob who lived one hundred and forty-seven, Levi his son attained one hundred and thirty-seven, Kohath one hundred and thirty-three, Amram one hundred and eighty-seven, Aaron one hundred and twenty-eight, Moses himself one hundred and twenty, and both these might have lived to a greater age had they been permitted to enter into the promised land; since it is said of Moses when he died, that his eyes were not dim, nor his natural force abated; and their sister Miriam, the eldest of the three, could not be less than one hundred and thirty when she died, since she must have been eight or ten years old when Moses was born, for she went to watch him when he was laid in the flags, and had the courage and presence of mind to address the...
King's daughter and propose a Hebrew nurse for him. In the succeeding generations Joshua died at one hundred and ten, and Caleb must have been of the same or a greater age, for he was a prince or head of his tribe at their coming out of Egypt. And in the days of the Judges Booz and Obed must have reached above one hundred; and Elie was ninety-eight when he fell off his seat and broke his neck, who might otherwise have attained to an hundred. It was not till above four hundred years after their coming into Canaan that the present standard of seventy and eighty took place, for then we find Barzillai reckoning himself an old man at eighty, though he might live some years after, and David is reckoned to have died about seventy. It seems very evident then, that the fore-cited passage in the Psalm of Moses is not applicable to the common standard of life in that age of the world, but must be restrained to the state of the Israelites in the Wilderiness, as their History and the whole tenor of the Psalm will shew. For the same is a prayer to God after the severe sentence had passed upon the people for their disobedience and refusal to enter and take possession of Canaan, upon the evil report of the spies; when God swears that they should not enter into the promised Ref, but that their children after them should; wherefore he made them turn back again into the Wilderiness, where he kept them forty years, * till all

* This brings to my remembrance a passage that happened in conversation many years ago. A young Gentleman told the company that he had lately received a letter from a friend of his in Turkey wherein he wrote, that he had travelled from Egypt to Jerusalem in so many days (the precise number I have forgot) a journey which the Israelites were said to have forty years to perform, and then proceeded to ridicule the Scripture history. But one pretent soon took him up. Sir, said he, I suppose your friend did not make the journey on foot, and I'm afraid he forgot to take his Bible with him into Turkey, for had he consulted that,
all those who were rebellious died at the age here mentioned, not by the course of nature, but by the just judgment of God. This appears clearly from the 7th, 8th, and 9th verses preceding. For we are consumed by thine anger, and by thy wrath are we troubled. Thou hast set our iniquities before thee, our secret sins in the light of thy countenance; For all our days are passed in thy wrath, we spend our years as a tale that is told. Moses does not here then refer to the natural term of man's life, but to that period to which God had condemned the rebellious Israelites, by cutting their days short of the natural term in punishment of their sin.

But besides the reason now given with respect to the propagation of mankind, there was another, and that a moral reason for abridging man's years after the Flood. One great cause of the increasing corruption and wickedness of men in the old world was their longevity. Death was at a prodigious distance when life was prolonged to eight and nine hundred years and more. They lived as if they had been to live here for ever, and thought not of death. It does not appear that any visible judgment from Heaven had cut short their days before the natural term of life, till the Deluge came, which made them throw off all fear of God to follow their own corrupt affections. Because sentence against an evil work is not executed speedily, the heart of the sons of men is wholly that, he might have found that their journeying days (besides their days of rest) were only about forty or so, though they travelled on foot with wives and children, cattle and all their household stuff which they had to carry; and besides were not led the nearest way for fear of war, but made to fetch a Compass about. As for the forty years he harps on, it was the time of their continuance in the Wilderness, to which they were remanded back from the frontiers of Canaan, in punishment of their refusal to march into the promised Land, upon the evil report of the spies. Hence we may see how frantically Infidelity, through ignorance and supine negligence, imposes on itself.
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set in them to do evil *. This seems to have been
their case, no visible judgment had overtaken them,
and therefore their wickedness was great in the Earth,
and every imagination of the thoughts of their hearts
was only evil †. As soon therefore as the repopulating
of the Earth would permit it, the Divine Wisdom
saw it meet to reduce man's life to a much shorter
period (not all at once, but by degrees) that men
might not as before flatter themselves with a life of
ages, but that a nearer prospect of death might
keep them in awe, and deter them from wickedness,
especially from injustice, oppression and violence to
acquire large possessions, when they had but a short
time to enjoy them. But mankind has but little
profited by this gracious design of the Almighty in
thus abridging their days, since the same infatiable
avarice and ambition of adding lands to lands and
kingdoms to kingdoms have possessed the Sons of
Adam to this day, notwithstanding the experience
of so many ages might convince them of their folly,
when the unjust and wicked means they have made
use of, has defeated their own projects, and cut off
their pofterity from the Earth, as may be seen at
large by this and most other nations of Europe, in
that excellent preface which Sir Walter Raleigh has
prefixed to his History. But what signifies men-
tioning history to those who are unacquainted with
it? Princes and their Ministers dip not into such
obsolete matters, they are ignorant of what passed
in former ages, and know nothing but what has
happened in their own, and do not live to see the
fruitless issue of their own vain ambitious projects.

Man is in truth a compound of contradictions, he
complains that his life is short, and yet that his time
lies heavy upon his hands, because he knows not
how to employ it usefully, or to any good purpose;
he is desirous of long life, and yet by his follies, in-

* Eccl. vi. 11. † Genef. vi. 5.
emperance and debaucheries cuts the thread of life
and secs not half his days; he has daily spectacles
of mortality before his eyes, and yet never thinks
of his own end.

The true length of the Antediluvian year, and the
longevity of the Antediluvians being now ascertained,
we proceed to enquire into the age of the World
when the Deluge came.

\[\text{S E C T. II.}\]

\[\text{Of the Age or Duration of the World to the \time of the Deluge.}\]

As there was no great difficulty in ascertaining
the true length of the Antediluvian year, and the
long lives of the Antediluvians, so as little, one
would think, should there be in fixing the true age
of the world when the Deluge came; since it is evi-
dent that Moses's design in his history was not only
to give an account of the Creation of the World and
of Man, of the state of Innocence, the fall, and the
promise of a Redeemer, with the destruction of the
first race of men for their wickedness; but also to
acquaint us with the world's beginning, and the
time it had lasted, first to the Deluge, and then to
the grand Epocha of the Israelite Deliverance. This
he has done in a very clear and distinct method by
recording, 1. The age of the first race of men at the
birth of their sons, in a lineal descent from Adam to
the sons of Noah before the Flood. 2. By giving the
age of Noah at the Flood, and the age of the
Posdiluvian Patriarchs at the birth of their sons from
Shem to Abraham. 3. The age of Abraham at his
coming into Canaan, and the number of years from
thence to the delivery of his posterity from Egypt,
and finally the forty years that elapsed from that
Egressio to their taking possession of Canaan. From
these
these several dates thus precisely marked by Mofes, one would expect that the Chronology in that long tract of time from the Creation to the Egression of the Israelites from Egypt, should be uncontroverted, bating some little difficulty in fixing the head or Era of the four hundred and thirty years, that the posterity of Abraham were to be strangers, and in bondage in a Land that was not theirs.

Yet the Chronology of those ancient times so clearly ascertained by Mofes, is now rendered very doubtful, by reason of the diversity of the numbers, in the Genitures of the Patriarchs in the three celebrated copies of the Pentateuch, viz. the Hebrew, the Samaritan, and the Septuagint Translation, which has occasioned great disputes among the Learned. The Samaritan Copy making the number of years from the Creation to the Deluge no more than one thousand three hundred and seven, but the Hebrew one thousand six hundred and fifty-six, and the Septuagint reckoning two thousand two hundred and sixty-two years to that period. The difference between the highest and lowest of these computations is above nine hundred years, which must needs make a vast difference in the number of mankind upon the Earth at the time of the Deluge, the Point we are now in quest of, in order to shew how much those persons are mistaken who think mankind were but few in number at the time of the Deluge, and possessed but a small part of the Earth. To enter into this perplexed controversy of ancient chronology, and examine the several arguments of the contending parties would be too long a digression in this place, which I therefore waive at present; and choose rather to lay before the reader such internal arguments drawn from Scripture and the State of nature, as may strike some light into this intricate subject, and go a great way towards deciding the controversy.

I. Mofes,
CERTAINTY OF THE MOSAIC DELUGE.

I. Moses, as I observed, gives the age of the World from the Creation to the Deluge, and from that period to his own time chiefly by Generations. A Generation is the interval of years between the births of father and son. This the Latins call actas, and the Greeks γενεια. Now a Generation or the interval of years between father and son has not been, neither possibly could be, the same in all ages from the beginning, as Vossius justly observes; but has varied greatly according to the length or brevity of man’s life in the several periods of the world. Since man’s life has been reduced to seventy and eighty years (though there be some instances every year of those that exceed that term and arrive at a hundred or more, yet these are very few in comparison, and only a small exception to the general rule) since Man’s life, I say, has been abridged to seventy and eighty, the time of Puberty is in proportion to this brevity of life, and reckoned at twenty or twenty-one, which is the fourth part of a life of fourscore. The several stages of human life are infancy, childhood, youth, manhood, full age, declension, old or decrepit age; all which commonly bear a proportion to the whole term of life. Now the bounds and limits of these several stages cannot be precisely the same in all, but vary in respect of

* Quod itaque Herodoti γενεια five actates, quorum unaeque constituit annos 33\(\frac{1}{2}\), accommodas ad actates Patriarcharum, qui ante Abraham fuerant, in co plurimum eras. Pius ante diluvium fuere duorum plus minus secularum. A diluvio ad Abrahamum & Iaacum, dimidio serme breviores sunt factae. Potex γενεια fuere 60, dein 50, 40, & tandem denique 20 annorum. Itaque γενεια Graecis Grammaticis aliquando est spatium 20, aliandoque 25, 30, 33, nonne quam etiam plurium annorum; imo etiam 100 aliquando, uti est apud Theophrastum, vel etiam 110 annorum intervallum continet γενεια, ut docet Phlegon. Reece itaque notarum a Porphyrio. Quanto vetustiores tanto longiores esse γενεια. Vossi Caezizat. H.ii.

Tanto fierior fuit proportione pubertas, quanto vita totius major annolis, Augustinus.
the disposition of men's bodies, their course of life, and allo the places and ages in which they live. In the Antediluvian World then, when men lived to upward of eight hundred and nine hundred years, can it be thought that they passed through the several ftages of life in as short a time as men do now, who seldom exceed eighty, and not one in ten arrives at that age? But if the Antediluvians arrived at Puberty or manhood, as soon as men do now, then would the several ftages of human life have been lost or confounded, and men would have started from childhood to manhood at once, without any due or regular intervals, contrary to the order of nature. But if according to the present Oeconomy of nature, man is but a youth at twenty, which is a fourth part of our term of life, we may reasonably conclude, there would be a suitable proportion of years in a much longer term of life, since Nature is constant and uniform in her operations. And though in so long a life as the Antediluvians enjoyed, the time of puberty might be a fifth or a sixth part of their term of life, yet would they be but youths at an hundred and fifty or an hundred and sixty, which bears much the same proportion to the whole of their life, as twenty is to that of ours. Hence then I infer, that to give the Antediluvians children at ninety, seventy, and sixty-five as in the Hebrew, but much more at sixty-five, sixty-two, and fifty-three as in the Samaritan Genealogies, is much too early to agree with such very long lives, and quite out of the order of nature; whereas the years assigned in the Genealogies of the Septuagint are more agreeable to the state of nature in that first World; the intervals between the births of father and son, being posterior to the time of puberty in those long-lived Patriarchs. But in the others are by many years prior to it and premature *.

* I should be glad to know (with a learned friend) whether you think there was the same proportion between the Maturity
The age of puberty in the Antediluvian World being with good probability settled according to the order and Analogy of nature, let us next enquire into the number of generations from the Creation to the Flood. The received opinion is, that they are no more than ten, the first from Adam to Seth, the last from Noah to his sons Shem, Ham and Japheth. But here all our learned Chronologists and Critics who have hitherto treated of this subject, even Vossius himself, notwithstanding his great acumen in Criticism, have fallen into a very great mistake. It is true there are but eleven names in the Genealogies (whereof Adam is one) which constitute ten generations, and so indeed there were but ten in that line to the Flood. But then should they not have considered the great void of five hundred years between the birth of Noah and that of his three sons, which makes a large gap in the series of generations? We are not certain that Noah had no sons before those mentioned, but if he married at the usual time of puberty, and had children as early as others, he might have seen his Great Great Grandson above fifty years before the Flood came; so that there would be fourteen generations before the Flood, and a residue of years over towards the fifteenth, yea, perhaps fifteen compleat.

It may be thought that there would be a generation more in the line of Cain, since Cain would have a son ere Seth was born, and a grandson before Seth

"auty of the Understanding and the term of life, and why?" I believe there was. And the reason I think is given by that learned Physician Dr. Smith in his Portraiture of Old Age.—

"How often are persons in Scripture said to grow both in mind and body, and eminently concerning our Lord, which is infir omnium. He increased in Wisdom and Stature, and in favour both with God and man. The Soul is as weak as the Body, both at first and last. Senes bis puere, is a known maxim and daily experienced; and by all men understood of the feeble Understanding."

had
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had a son: And yet except the posterity of Cain
married earlier than the other descendants of Adam
did, which probably they might, there would be no
more generations in Cain's line than in that of Seth.
The reason is, that we cannot reckon the interval
between Adam and Cain, which was but a few years,
for a generation; and therefore the first generation
in this line must be reckoned from Cain himself to his
first-born Enoch, as in the other line we reckon the
first from Adam to Seth. The like number of genera-
tions there would be from Abel, whom we may
well suppose married before he was slain by Cain.

But supposing that Noah had no other sons but
those three that are named after he was five hundred,
and that by Divine Providence his wife was till that
time barren, for a reason that will be assigned here-
after, as in the case of Abraham and Sarah, yet La-
mech the father of Noah had many other sons and
daughters, between one of whom and Noah there
could be but a few years. The number of genera-
tions therefore upon the whole would be the very
same in that first World, whether Noah had or had
not any sons prior to Shem, Ham and Japheth, that
is fourteen generations at least, if not fifteen com-
plete.

Let us now see what use may be made of this dis-
ccovery of the number of generations before the
Flood. Fourteen generations at the interval of one
hundred and fifty years to a generation will make
two thousand one hundred years, and fifteen genera-
tions will amount to two thousand two hundred
and fifty; but at the interval of one hundred and
sixty years to a generation, fourteen will come to
two thousand two hundred and forty years, but fif-
ten generations at that interval would arise to two
thousand four hundred years. But now if, as has
been said, "That in the first ages of the world, both
before and after the Flood, men began to pro-
pagate
"pagate their kind as early, and indeed much ear-
lier than they commonly do in our days," we
shall presently see how well this fancy will agree with
the number of generations. Taking the interval
of generations in these last ages at a medium of
thirty years, which I take to be the most general at
present, fourteen generations at the interval of thirty
years, make in all but four hundred and twenty, and
fifteen generations no more than four hundred and
fifty years. How many generations then must we
have had at this rate to the Flood? And yet there
were no more than fourteen generations with a re-
sidue of years over, and could be no more than
fifteen at most: But let us now double this interval,
and take sixty years to a generation. Fourteen ge-
genations at the interval of sixty years make but
eight hundred and forty years, and fifteen gene-
genations no more than nine hundred. Nay take
the distance of generations at eighty years, fif-
ten generations at that interval make but twelve
hundred years; one hundred and seven years short
of the very lowest computation of all, the Samariai.
Let us now set the interval of generations at one
hundred years. Fourteen generations at one hun-
dred years distance makes but one thousand four
hundred years, and fifteen generations but one thou-
sand five hundred years, that is, one hundred and
fifty-six years short of the Hebrew computation of
the World's duration to the Flood. But we cannot
add another generation, being confined to the above-
said numbers: Fourteen generations there surely
were with a residue of years over, fifteen there might
have been, but more there could not be.

Hence now it is evident how strangely and with-
out-book those men talk, who fancy that in the first
ages of the world men began to propagate their kind
as early and even earlier than in these later ages?

2. How much reason we had to set the age of pu-

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berty in the Antediluvian world at one hundred and fifty, or one hundred and sixty years, since when set at one hundred years, it will not reach even to the Hebrew computation. And 3. That the years of the Generations in the Septuagint Translation being more analogous to the state of nature, and the age of puberty in the Antediluvian World, is a strong presumption that those numbers come nearest to the truth, and that the others fall far short of it.

2. A second argument is this. Noab's eldest son was one hundred years old when the Flood came, the second ninety-four, and the youngest eighty-eight, as I shall have occasion to observe in another place; yet none of them had any children before the Flood, nor were they indeed married in the sense we use the word now; for those three wives who entered with them into the Ark were only affianced or espoused some years before the Deluge, but the marriages not consummated till some time after the Deluge. Hence I infer, that the ages of ninety and an hundred were not the ages of puberty in the old World, and therefore that it must be an error in the numbers to give some of the Antediluvian Patriarchs children at seventy and sixty-five as in the Hebrew, a far greater still, to have sons born at sixty-two and fifty-three as in the Samaritan copies. Nor

3. Is this other argument without its weight. If the Antediluvians continued to propagate their offspring till after they were five hundred years old, as we find Noab did, who was surely not the only one who did so, then they could never begin to marry and have children so early as men do now, no nor even at sixty, eighty, or an hundred years, because in that case parents would have been overburthened with the care and nurture of too numerous an issue, and the world had been overstocked with inhabitants.
Certainty of the Mosaic Deluge: 67

Let us now go on to the ages after the Flood. After the Flood the life of man was by Divine Providence cut short one half and more for the first four generations; and after that by degrees abridged to three hundred, two hundred and under, none after Terah the father of Abraham reaching two hundred years. Now

1. If in the tenth and eleventh generation, when man's life did not reach to two hundred years, the age of puberty or marriage was not earlier than forty years, as we find by Isaac * and Esau, both married at that age, is it at all probable that when men lived to above four hundred, the age of puberty or marriage would have been so early as thirty-five, thirty, and twenty-nine, as the numbers stand in the Hebrew Copy? For naturally as the life of Man shortened, the age of puberty would be accelerated; and so it has by degrees, till it is advanced now to twenty or twenty-five. But in a life of four hundred years, the time of puberty would not be near so early as in a life under two hundred. The time of puberty or marriage in Terah's days (who lived to two hundred and five) seems to have been at seventy years, and as we go farther back to lives of three hundred and four hundred would be still later. The intervals of the generations therefore as they stand in the Hebrew Copy, after the Flood, seem far too short of the truth, and are not agreeable to the state and order of nature. But here it will be objected, that the interval of generations being put in the Septuagint Translation at the distance of one hundred and thirty years or more, this must needs be as much too far back, as those in the Hebrew are supposed too early.

But this objection will be of no force if it be considered, 1. That supposing those in the Genealogies

* Tum Abraham Idae filium juvenis actatis quadragesimam annum unam et haec. *Sept. 3. 24.15: *
were all of them the eldest sons, there is no such dis-
proportion here as is imagined. They had their first
children we will suppose at one hundred and thirty,
or one hundred and thirty-five, and lived (the three
or rather four first, taking in Caiin with St. Luke
and the Septuagint) to four hundred and sixty, the
next three to three hundred and thirty and three
hundred and thirty nine. Now one hundred and
thirty-five is not the third part of four hundred and
sixty, and not much above the third part of three
hundred and thirty. And how many are there now
that marry not till thirty, and yet few of them see
three times thirty, or live to ninety; nay many of
them do not exceed sixty, or a few years more.
There is therefore nothing uncommon here. We
may rather suppose that the proportion between the
time of marriage and the term of life has been much
after this rate since the Flood, for we shall find few
exceptions to the contrary. But 2. Why must we
needs take it for granted, that all the names in the
Postdiluvian Genealogies were the eldest sons? I can
find no proof of that, and it is easy to prove that
some of them were not, even as the far greater part
of the Antediluvian Patriarchs were in all probability
not the first-born.

2. Another argument against the correctness of
the Hebrew numbers in the Postdiluvian Genealogies
is this. The longest generation there till we come
to Terah is thirty-five years. Now at that short
distance between the births of father and son, how
many Generations might Shem, Arpaxad and the
succeeding Patriarchs have seen? No less than four-
teen or fifteen. But such a thing, as Vossius again
observes, is no ways credible, nor was there ever
any man that lived to see such a series of genera-
tions from the Creation to this day. To make this
appear evident we may observe, that no Language
has names for more than five degrees in generations of either ascent or descent *, and these formed on Nature and experience, as

Son. Father. Grandfather. Great Grandfather. Great Great
(Grandfather.
Γιος. Πατέρ. Παππάς. Ανάπαππάς. Προπαππάς.

Some few instances there are of those who have seen the fifth generation in a lineal descent from them, which with themselves make six in descent alive together. Ludovicus Vives, in his Notes on St. Augustine de Civitate Dei †, tells us of an old man in Spain who was the father of a whole village of near an hundred houses, the last generation whereof had no name by which to call him, the Spanish language ascending no higher than the Proavus or Great Great Grandfather. On a woman of the Dalburg family in Bzel the following Diftich was made,

\[
\begin{align*}
1 & 2 & 3 & 4 \\
Mater aut Natæ dic Natæ filia Natam, \\
5 & 6 \\
Ut moneat Natæ plangere Filiam. \\
\end{align*}
\]

Of Mrs. Honeywood born in Kent in 1527, married at sixteen, and dying in the ninety third year of her age 1620, the fame might be said, as it is in the English Diftich,

\[
\begin{align*}
1 & 2 & 3 & 4 & 5 & 6 \\
Rise up Daughter and go to thy Daughter, \\
For her Daughter’s Daughter hath a Daughter. \\
\end{align*}
\]

* The Hebrew has names for no more than father and son, and for remoter degrees, thy father’s father, and son’s son, &c.
† P. 820.

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We have a like instance very lately of a Gentleman in Cumberland, who likewise saw five generations of his offspring before he died, at the age of ninety and above.

But such instances are so very rare that men have found no necessity to coin words for them. And if instances in the sixth descent are but very few, what probability is there of men seeing more generations? Vossius therefore might well say, "That the time of puberty is commonly the third or fourth part of Human Life, rarely the fifth, and very rarely the sixth; but if Arphaxad, Sala and Heber had begun to propagate so early as they are made to do in the Hebrew, they might have seen fifteen generations descended from them, yea and possibly the twentieth, since the intervals of generations were by little and little more and more contracted. But it is absurd to think that any one was ever so long present with his posterity."

The truth of this observation is further confirmed, by looking back to the generations before the Flood. To take the years even as they stand in the Hebrew Genealogies, Adam could see no more than eight generations by his son Seth, and but nine by Cain. But according to the LXX, and agreeably to the order of nature, Adam saw but five generations by his son Seth, and six by Cain, possibly seven. But then no other person in that old world could see so many, because Cain was but a few years younger than Adam. For Seth according to the LXX saw only five, and Enos the like number. And 'tis very probable that none of them lived to see more than five generations notwithstanding their longevity, because though their lives were long, they were so much the longer in coming to maturity. But after the Flood, as the term of life was immediately reduced to the half of what it had been before, and by degrees more and more abridged, Arphaxad,
phexad, Sala and Heber would see but three generations, according to the LXX, if those named in the Genealogies were their eldest sons; but as that is no ways certain, and more probable that they were not, these Patriarchs might possibly have seen the fourth or fifth generation; but to have seen the tenth, twelfth, or fourteenth, as by the Hebrew numbers they must have seen, is by nature utterly impossible: And there is no need of having recourse to miracles on every occasion, when things may be accounted for in a natural way.

I might now rest the whole upon this single Point, which is alone sufficient to shew that there is an error in the Hebrew numbers; and if one instance can be produced of any Man since Noab that saw eight generations descended from him, I shall give up the cause. To offer the generations after the Flood according to the Hebrew (though herein contradicted both by the Samaritan and the LXX) as an instance, is begging the question. They cannot bring in as evidence that which is the matter in dispute. I have shewed from Nature and Experience that these cannot possibly be true, and hence form this demonstrative argument against them.

But besides this convincing proof taken from the number of generations, another argument may be brought from the state and circumstances of mankind at two remarkable periods, viz. The building of the tower of Babel, and the time of Abraham.

1. Peleg, or Phalec, had his name from division, for in his days the Earth was divided. In his days, according to some, must signify when he was born, or about the time of his birth, otherwise the name would not be peculiar to him more than others, for many others were alive at that time as well as he, of whom it might be as well said, that in their days the Earth was divided. But this is no necessary consequence; for his Name might be given him propheticall
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tically, as the Names of Noa\ and Methuselah were; tho' the Separation might not happen till many years after. The Name thus given shews the dispersion to have been foreknown and predicted. And this sense the turn of Expression seems to require. This division of mankind into separate companies and nations, was after they had left off to build the Tower upon the confusion of Tongues, and some years they must have been occupied in the Building before their Separation. Now Peleg was born, according to the Hebrew, in the year after the Flood 101. But how utterly improbable is it, that in less than one hundred years mankind should be so increased from three couple as to set about so large and laborious a work, when they had several other necessary occupations to take up their thoughts and time? Vossius has calculated the number of mankind in the first hundred years after the Flood according to the great increase of the Israelites during their abode in Egypt, which was indeed extraordinary, and yet finds there would not be above two hundred persons; most of whom must needs be children. But supposing they had been all men grown, were there a sufficient number to build a City and a Tower whose top should reach to Heaven, i.e. be exceeding high, and that over and above all their other necessary affairs? But in truth so far were they from attempting such an arduous work in less than one hundred years, that they had not come into the Land of Shinar till about four hundred years after the Flood.

I know not how all our modern Authors have taken it into their heads to suppose, that those who came into the Land of Shinar were but a part of Noah's posterity, who had left the father of mankind long before his death; and that others of them took another course, and went into India and China.

But what may not men believe when fancy is the folle
Certainty of the Mosaic Deluge.

Not to insist that on this supposition they must multiply mankind in less than one hundred years at such a rate as is utterly incredible, and naturally impossible. Let it be considered

1. That Noah lived according to Moses three hundred and fifty years after the Flood. Now is it at all probable that any of his sons or grandsons would have left the father of the New World while he lived, without necessity? But what necessity could drive them to so unnatural a behaviour? Was the place they inhabited too strait for their small numbers? or too barren to afford maintenance to all of them, when the champagne country of Ararat, as St. Jerome affirms, was exceeding fertile? Or could a small number quarrel about property who had all the world before them and in common? Or had they so soon forgot the destruction of the Old World that they could not live in peace and quietness under their ancient father?

2. But so far were they from being under any necessity to separate, that they were rather under a necessity to keep together, as for other reasons, so left the Wild-Beasts of the field should be too many for them, since we find that after their coming into the plain of Shinar, the hunting of them became a necessary employment, which gained Nimrod the character of a mighty Hunter.

3. When they came all together into Shinar, many years after the death of Noah, they seem to have had no thoughts of separating at that time farther than the conveniency of tillage and pasture required, which was probably the reason of the resolution they took to build a very high tower (for that is all that is meant by a tower whose top should reach to Heaven) and advance it by degrees as need required, that it might be as a beacon to be seen in a large plain at many miles distance, and likewise be the
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the center of Unity and common Assembly, where they might meet on publick and solemn occasions either of Religion or Civil affairs. Perhaps also to leave a monument to all future ages of that country to which mankind had first removed after leaving the place of their habitation at coming out of the Ark. But though there was no crime in this, it was highly inconvenient for mankind to keep so long together in one place, and therefore the Divine Wisdom saw it necessary to divide and disperse them, that they might the sooner and with less difficulty replenish the Earth, which by their continuing longer together would be so over-run with trees and shrubs, briars and thorns, that it would require both time and great labour to cultivate for man’s use, as is now the case of the uncultivated lands in America.
To this end he confounded their language or divided their tongues, (for it was he that first taught man speech) and this had the designed effect, obliging them to divide themselves, which otherwise, according to the common opinion, they had no intention to do.

4. It

* But here I’m afraid is a mistake again. We read Genesis xi. 4. thus. And they said, Go to, let us build us a City and a Tower, whose top may reach unto Heaven, and let us make us a Name, left we be scattered abroad upon the face of the whole Earth. But the LXX: have it thus, ——— καὶ παντοκρατοράνοι, διόμενο το διασπαρίων, ημῶν ὅπως ἐπὶ περισσότερο παραλής τῆς γῆς. ——— And let us make us a name before we be scattered abroad upon the face of the whole Earth. This gives a very different reason for that enterprise of Mankind. According to our Translation, the design was to prevent their dispersion, that they might keep all together in one place. But surely this would have been a very foolish thought, and a thing impracticable, when their numbers increased, as in some generations more they must have done. But I have not so mean an opinion of the sense of mankind at that time. The reading of the LXX therefore gives the true reason. Not lest we should be scattered abroad, but before we be scattered abroad. That they must in time disperse, they could not possibly be ignorant, since they were to replenish the whole Earth.
4. It was necessary that mankind should continue with Noah while he lived, that they might be trained up under his instructions both in Religion and Policy. They had received a most peremptory Law against Blood-fledging, the crying sin of the Old World, and Magittracy was therefore to be instituted. Neither was this all, the Earth had suffered a great change by the Deluge, other kind of care and culture would now be required than what was before, and this set them upon the invention of new instruments for that purpose, as the plough, &c. Wine seems also to have been the invention of Noah after the Flood; vines and grapes they had no doubt in the former World, but not the art of pressing their juice to keep and make wine of: for had wine been in use before, it is very improbable that Noah would have been drunken with it. But he was at first ignorant of the strength of it, and so was inadvertently overtaken with it.

5. I do not see how Moses could have given the precise age of Noah at his death, nor the names of the several descendants of Noah, had not all his posterity come together to Shinar. If a part of them only had come there, they could know nothing of those who had taken a different route. This he might have done, may they say, by Revelation, but what need of a Revelation in things that might be easily known by other means?

6. But what, I think, fully confutes this opinion is, the words of Moses himself, who after reckoning up the descendants of Noah's sons adds, These are the families of the sons of Noah after their generations in Earth. But while they kept together (which would have been longer than was convenient) they resolved to build a City and a Tower, as a Monument of that place to which Mankind had first removed, after leaving the Country where Noah the Parent of the New World, upon his coming out of the Ark, had lived and died, and also for the reasons above given.
An Enquiry into the Truth and their nations, and by these were the nations divided in Earth after the Flood*——And the whole Earth (i.e. all the men of the Earth) was of one language and of one speech, and it came to pass as they journeyed from the East, that they found a plain in the land of Shinar and dwelt there †. Now who were they that journeyed? Were they not all the men of the Earth who were of one speech? And again—So the Lord scattered them from thence——because the Lord did there confound the language of all the Earth (all mankind) and from thence did he scatter them abroad upon the face of all the Earth||. Hence it is plain that the language of all mankind was here confounded, and that from this place they were scattered over all the Earth.--------Therefore they were not divided nor separated before, of which there is not a syllable. All mankind then were here in one body.

That which may have given rise to this opinion is the credit they have given to Heathen Authors, who living many ages alter the time of the transactions they relate, and having nothing but uncertain or fabulous accounts of them, make Ninus first, and Semiramis after to levy vast armies of some hundred thousands to conquer India, but were opposed by as great numbers, and a people better skilled in war §. Mere fables! The tenth part of the numbers they give them were far too many for those early days in which they place Ninus and Semiramis.

II. The

* Gen. x. 32. † Gen. xi. 1, 2. || Gen. xi. 8.
§ Semiramis is said to have brought into the field against Zoroasters 1,700,000 footmen, 500,000 horsemen, 100,000 Chariots, and 200 Ships, as Diodorus Siculus relates out of Ctesias. Utterly incredible and impossible! In that Age in which they place Semiramis, there were not so many persons in the world, nor were horses used in war for many ages after. In the year 1699, the army which the Emperor of Ethiopia commanded against the Kings of Galla and Changalla (who had revolted from him) consisted of between 4 and 500,000 men. Now the Empire of Ethiopia comprehends a vast extent of Country, nor is there any Country...
II. The other period I mentioned is that of Abraham's coming into Canaan. He was then seventy-five years old, and born in the year of his father one hundred and thirty, as the best Chronologists allow, for he was not Terah's eldest son. Now to this period, according to the numbers in the Hebrew, there were no more than four hundred and twenty-seven years from the Flood, thus,

From the Flood to the Birth of Arphaxad 2
To Salah - - - - 35
To Heber - - - - 30
To Peleg - - - - 34
To Reu - - - - 30
To Serug - - - - 32
To Nahor - - - - 30
To Terah - - - - 29
To Abraham - - - - 130
To his coming into Canaan 75

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Let us now take a view of the state of mankind as it is represented at that period. They had spread themselves far and wide in Abraham's days, into many different countries, and were divided into many different nations; and though the several countries were not fully peopled, nor all the lands laid out in property, as is evident from this, that he with his nephew Lot, as well as his son and grandson afterwards, could find pasture for their numerous flocks and herds in Canaan without en-

Country whatever better peopled or more fertile. If in the very last Century then so large and populous a Country could raise on an emergent occasion between 4 and 500,000 men only (and that thought a very great Army too) how improbable and incredible is it, that Nimrod or Semiramis could have raised in those early ages the hundredth part of the numbers this Author (Crepsi) gives them? 20 or 30,000 men had been a prodigious Army in those days.
croaching on the inhabitants, who had collected themselves into cities, and occupied no more of the country than what lay contiguous to, and was convenient for them. Yet it is no less evident that there were many cities built, kingdoms erected, kings making war, subduing one another, and leading away the inhabitants captive. Now how highly improbable or rather impossible in the nature of things is it, that all these things should have been tranacted in the short space of four hundred and forty or four hundred and fifty years from the Flood, when all mankind sprang from three couple only? especially if what I have laid in the preceding argument be considered, *viz.* that the whole posterity of Noach came not into the Land of Shinaar till near four hundred years after the Flood, namely, not till some time after Noach's death, who lived three hundred and fifty years after it. To this purpose Sir Walter Raleigh observes,

"That if we look over all, and do not hastily satisfy our understandings with the first things offered, and thereby being satiated, do slothfully and drowsily fit down, we shall find it more agreeable rather to follow the reckoning of the Septuagint, who according to some editions make it above one thousand and seventy-two years between the Flood and Abraham's birth, than to take away any part of the three hundred and fifty-two years given. For if we advisedly consider the state and countenance of the world, such as it was in Abraham's time, yea before Abraham was born, we shall find that it were very ill done of us, by following opinion without the guide of reason, to pare the times over deeply between Abraham and the Flood; because in cutting them too near the quick, the reputation of the whole story might perchance bleed thereby, were not the testimony of the Scripture supreme, so as no objection
objection can approach it [so he thought in his
days, but times are now altered] and that we did
not follow withal this precept of St. Augustine,
that wheresoever any one place of the Scriptures may
be conceived disagreeing to the whole, the same is by
ignorance of misinterpretation understood. For in
Abraham's time all the then known parts of the
world were peopled, all regions and countries
had their kings, Egypt had many magnificent
cities, and so had Palestine and all the bordering
countries, yea all that part of the world besides
as far as India, and those not built with sticks,
but of hewn stone, and defended with walls and
ramparts. Which magnificence needed a parent
of more antiquity than those men have supposed.
And therefore where the Scriptures are plain in,
and best agreeable with reason and nature, to what
end should we labour to beget doubts and scruples,
or to draw all things into wonders and mar-
vels, giving also strength thereby to common ca-
villers, and occasion to those men apiish brains,
who only bend their wits to find impossibilities
and monsters in the story of the world and of
mankind *.

All these arguments now laid together may serve
to convince every unprejudiced person, that the
numbers of years in the present Hebrew and Sam-
ritan copies before the Flood, have been altered
from what they were in the copies from which the
Greek translation called the Septuagint was made.
But at what time, and by whom and for what rea-
son this change of the numbers was made, may per-
haps be the subject of a distinct Inquiry. However,
the arguments I have given are abundantly suffi-
cient to justify me in reckoning the age of the world
at the Flood according to the Septuagint: Which as
some copies make it is two thousand two hundred

and forty-two years, but as others two thousand
two hundred and sixty-two, or rather two thousand
two hundred and fifty-six according to Vossius, by
the correction of a small error in one of the numbers.
We need not be so precise for a very few years, since
in so long a tract of time, and after so many thou-
sands of copies taken, it is not possible but that some
errors, in numbers especially, must have crept in.

S E C T. III.

Of the time allotted to the nursing of Infants
in the first Ages of the World.

The three previous questions, viz. 1. The
true length of the Antediluvian year, 2. The
longevity of the Antediluvians, and 3. The age of
the world at the time of the Deluge being discussed
and resolved, it may be expected that I should pro-
ceed to the main and important question which de-
pended on the solution of them, viz. What number
of mankind might probably be on the Earth before
the Deluge came? But there is another point yet
to be considered, that must necessarily be enquired
into and determined ere we proceed farther; and
that is, What time might be allotted to the nursing of
infants in the first ages of the World both before and
after the Flood? as one of these will lead us to the
other. For till we can come at some certainty in
this matter, we shall but bewilder ourselves, and
multiply mankind at rovers, to the satisfaction of
neither ourselves nor our readers. And what is thus
inconsiderately built up, may easily be thrown down,
since it stands upon no sure foundation.

This is a point the more necessary to be enquired
into, as it has been in a manner wholly neglected by
others who have treated of this subject, who mea-
suring
furing the way of life in the first ages of the world
by the manners and customs of their own times,
have fallen into two gross and palpable errors, viz.
1. That in the first ages of the world, both before
and after the Flood, men began to propagate their
kind as early, and indeed much earlier than they
commonly do at present. 2. That the children of
the same father succeded one after another as fast as
they do now, that is, that the women brought forth
children every year. The first of these errors we
have already confuted in the preceding section, by
shewing that the several periods or stages of man's
life bear a just proportion to one another, and to
the whole term of life; and that the period of pu-
berty or maturity has not been the same at all times,
but is according to the length or brevity of life in
the different ages of the world, according to that re-
mark of St. Augustine. *Tanto ferior fuit proportione
pubertas, quanto vitæ totius major annositas.* The
other is an error, one would think, they could never
have fallen into, had they but once reflected, that
every mother suckled her own children in those early
days, and indeed where could she have found an-
other to have done it for her?

That women suckled their children from the be-
ginning, will, I think, not be disputed. It was for
this end that nature, or rather the author of nature
gave them milk in their breasts. In this respect
women differ not from other animals who bear their
young in the womb. The performance of this duty
appears to have been an inviolable law for many ages,
and still continues such in far the greatest part of
the world. The Greeks a luxurious people, seem to
have been among the first who began the unnatural
custom of giving their children strange milk, and it
is in Europe chiefly that it prevails among the rich
and great, though the law equally binds all the sex.
Agellius delivers a discourse of Pherorimus the phi-
losopher
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Isoopher against this unnatural custom, in order to prevail with his friend to make his wife nurse her own child. It is more than 1000 years ago, that both St. Chrysostome and St. Gregory inveighed against it in their public discourses, as our own Archibishop Tillotson pressed the duty in his time. But we may observe that St. Chrysostome did it at Constantinople, the Metropolis of the Empire, such being the places where corruption commonly begins; and St. Gregory says, Prae autem in conjuratorum moribus consuetudo sussurrit; an evil custom has crept into the manners of married people, by which it would seem, that that unnatural custom had not been long in use in his time. I say not this, as if the suckling their children was a law incumbent on all women of what degree or quality soever, that could in no case or circumstance be dispensed with; but that it is a duty arising from the law of nature, and the order of God, being the method he thought fit to establish for the first nourishment of mankind, incumbent on all women, where there are not very strong reasons to the contrary*, as no doubt sometimes there may be.

I take it for granted then, that it was an universal custom for women to suckle their children as well before as after the Flood; but the question is, for how long time they continued nurses? This is of importance to the point in hand, and yet not easy to determine, because it is a thing rarely taken notice of by authors, so that we have but small light to guide us in our search. I find however in the book of Maccabees, that the courageous mother of the seven

* Thé duty of a mother’s suckling her child is looked upon so indispensable in all the Islands of the Sunde, as Java, Angonia, Ball, Madura, Zunda, &c. that if a woman (especially if she be of quality) cannot suckle her child, she is obliged to have an authentic attestation of the true reasons of the nonperformance of the duty, as a very serious affair, and of the greatest importance to her honour. Mendez Pinto.
Martyrs (who in this particular may vie with the stoutest Spartan Ladies) to encourage her seventh son to suffer death for the law of his God, as his brethren before him had done, said, O my son, have pity on me that bare thee nine months in my womb, and gave thee suck three years and nourished thee.-----Again Hannah, the mother of Samuel refused to go up to the yearly feast at Shilo with her husband, till she had weaned her son; and then she went up, and presented him before the Lord, and left him with Heli the High Priest, and Samuel ministered before the Lord, being girded with a linen Ephod.-----But she could not bring him at two or three years old to minister; for in that case, she must have left a nurse with him. If we go up yet higher to the times of Abraham, it is said of his son Isaac, that the child grew and was weaned, and Abraham made a great feast the day that Isaac was weaned, and Sarah saw the son of Hagar the Egyptian mocking. Here Isaac is said to have grown before he was weaned, that is, to have been some years old, as is probable from the fact mentioned, of Ismael's deriding him, and St. Jerome * acquaints us that both Isaac and Samuel were fackled

* Quand0 Isaac natus est, tridecim annorum erat Ismael et post oblationem ejus, iles cum matre expellitur domo. Inter Hebraeos autem varia opinio est, afferentibus aliis, quinto anno ablacionis tempus flatuum, alis duodecimum annum vendicantis. Nos igitur ut breviorem elegamus aetatem, post decem & octo annos Ismael superavitum ejus, iles cum matre, & non convenire jam adolescenti, matris haesisse cervicibus. Verum igitur illud Hebraeorum linguæ idiona, quod omnis filius ad comparationem parentum infans vocet & parvulus: nec miremur barbam linguam habere proprietates suas. cum hodieque Romae omnes filii vocentur infants. Hieron.

I have transcribed the whole passage to shew that Ismael was not such a child when he was sent away with his mother, but a lad of 18 years.

Twelve years nursing would have been somewhat of the longest even in the Antediluvian World, but this is one of the least of the extravagant opinions of the Rabbins: And yet Purchas relates
fucked five years, according to the opinion of some Jews, but much longer according to others. But these three cases are singular, and no general rule can be drawn from them. Sarah expected no more children, the one she had being out of the course of nature, and the Heir of the Promise, of whom as she was very fond, she might nurse him the longer. Samuel again, according to his mother's vow, was to be offered to the Lord, as soon as he was capable of doing any little service in the Tabernacle, till which time she suckled him; and the mother of the seven martyrs might become a widow soon after the birth of her seventh son, whom therefore she nursed the longer, as he was her last; three years being, I suppose, too long for the common time of nursing in that age of the world.

But there is another instance in the early times which does not appear to have any singularity in it, and it is that of Moses himself. We have only three children named of his father Amram, viz. Miriam, Aaron and Moses. Miriam the daughter, 'tis evident, was the eldest, Aaron was three years and perhaps a few months older than Moses. If these two brothers succeeded one another, as soon as the ordinary time of nursing would allow, then in that age, while the Israelites sojourned in Egypt, the common time of nursing was two years. Now if when man's life was reduced to 130 or 140 years (for Kobotb the grandfather lived to 133, and Amram the father of Moses to 137) the ordinary time of nursing was two years, then I think we may reasonably infer that for three or four generations after the Flood, when men lived to above 400 years, the time would be so much longer in proportion, and would not be less than

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\text{lates, that in some parts of Florida, the women suckle their children till they be 12 years old, and able to get food for themselves, which they did because of the Famine in those parts, whereby they would otherwise have died.}
\]
three or four years; and consequently that before
the Flood, when life was protracted to 8 or 900
years, it would be still longer, in proportion to their
longevity; so that five years might be the ordinary
time of nursing in the Old World; and therefore
that we cannot reckon less than six years between the
births. For man's life being prolonged to so many
hundred years at first for the more speedy peopling
of the Earth, he came by slow degrees to mature
age, there being a long time required to rear up a
body that was to last near 1000 years. The inter-
vals therefore of infancy, childhood, youth and
mature age, were so much longer in proportion to
ours, as the difference is between our term of life
and theirs; and 150 or 160 years, with respect to
their longevity, was no more in proportion than 20
is to the brevity of our life. As the Antediluvians
therefore were so very long in growing up to mature
age, I conclude that the time of nursing could not be
shorter than five years, and that the distance be-
tween the births in a regular way must be set at six
years.

Now though the time here given to nursing, upon
which the interval between the births depends, be
agreeable to the state of nature in the first ages of the
World, yet that it may not be thought an opinion
extravagant as it is uncommon, I shall bring a proof
that the distance between the births was in fact the
same as I have here supposed it to be.

In Genesis x. 22. Moses records the children of
Shem thus: The children of Shem; Elam and Asur
and Arphaxad, and Lud and Aram. The very same
order in ranking them is also observed in 1 Chron.
i. 17. The sons of Shem; Elam and Asur and Ar-
phaxad and Lud and Aram. Hence it appears that
Arphaxad was not the eldest son of Shem but the third;
and yet in Genesis xi. 10. (where Moses gives the line
of Arphaxad to Abraham, not as the eldest son of
G 3
Shem,
Shem, but as the progenitor of Abraham) it stands in all the present copies Hebrew, Samaritan, and Septuagint thus, Shem was 100 years old and begat Arphaxad two years after the Flood. But the number two here is evidently an error in all the copies, for Arphaxad could not be born two years after the Flood, except he had been Shem's eldest son, which it is plain from the fore-cited texts he was not, but the third only. Two years after the Flood was as soon as we can well suppose the first son born.

But now Josephus, who affirms that the ages of the Patriarchs were exactly set down in the Sacred Books, from which he inserted them faithfully into his History, has the year of Arphaxad's birth agreeably to the order of Shem's sons in the fore-cited texts. Shem the son of 100 years, begat Arphaxad 12 years after the Flood. The number 12 here given is apparently the right number, Arphaxad being the third son; and thus it seems at first in the copies in the time of Josephus. And from the number thus corrected, I am able to make the following observations.

1. This gives us the true age of Shem at the Flood, viz. 88, for he was 100 years old 12 years after it, the Flood came in the year of Noah 600, consequently he was born in the year of Noah 512.

2. This restoring the right number 12 instead of 2, serves to decide an old controversy concerning the natural order or seniority of Noah's sons. Genesis x. 21. we translate thus, Unto Shem also the father of all the children of Heber, the brother of Japheth the elder, even to him were children born, and to the same purpose Junius and others. But the Vulgate renders the verse thus. De Sem quoque nati sunt, patre omnium filiorum Heber, fratre Japhethi majore—— and to the same purpose Castalio and others. The Hebrew is here it seems equivocal, and may be rendered either way. But the Greek version is not so, which
which has it thus. Καὶ τῷ Σημὶ ἐγεννηθεὶς ὑπὸ αὐτὸ πατρὸς παθὼν τῷ ὄνομ Ἀβεγαν ἄδειρον ἱστηθὼ τῷ μαθασ. This decides the eldership for Japheth; and the age of Shem 12 years after the Flood, viz. 100, does as clearly make him the youngest, consequently Ham was the second * contrary to what is commonly believed. And that this is the true order of their seniority is confirmed by Moses in Genes. x. who naming the descendants of the sons of Noah, first of all sets down Japheth and his sons, in the second place Ham and his children, and those of Shem in the last place. The same order is also observed by the author of the first book of Chronicles chap. i. In both these places the sons of Noah are without doubt ranked according to the order of their births, though for other reasons where they are barely named, they † are placed otherwise, the youngest first, and the eldest last. The same inversion of names is made in the sons of Terah, Abram, Nahor and Haran, the eldest placed last, and the youngest named first. We have something like this in the case of Solomon. By 2 Sam. xii. 24. it

* Junius in Genes. ix. 24. makes Ham to be filius natu minimus; but the LXX have it, ὁ οἷς ἀδεὶς ὁ νυμφάς, i.e. junior, not vestidos, ulimus vel natu minimus; and fo our Translators well, his younger son, that is, the second (for he had but three) not his youngest.

† Commentators observe that there are three different manners of ranking names or persons in Scripture, viz. natural, personal and historical. 1 According to the order of their birth. 2. According to their eminent worth; but 3., sometimes that person is named last whose story is to be continued. Scaliger affirms that they are always reckoned according to the order of their birth, but this is evidently a mistake, for why are they ranked in a different order in different places, but for the reason here assigned? sometimes according to the order of nature, at other times according to their eminency in piety or civil life. But in the fore-cited chapters of Genes. and Chron. Shem cannot be reckoned last for the third reason, because the history is there broke off, and another subject assumed, viz. The building of Babel, confusion of tongues and dispersion, after which Moses returns to the line of Shem from Arphaxad to Abramab.

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would
would seem that Solomon was David’s eldest son by Bathsheba after his repentance and the pardon of his sin granted, and yet he was but the fourth and the youngest of all his sons, as appears from 1 Chron. iii. 5. And these were born unto him in Jerusalem, Shimea and Shobab and Nathan and Solomon, four, of Bathsheba the daughter of Ammiel. But which is more immediately to our purpose,

3. This correction of the number gives us the true distance or Interval between the births in the Antediluvian world, in the first place. Japhet the eldest son was born when Noah was 500, that is, when he entered on the year of his life 500. Shem the third, when he was 512. There are then 12 years between the eldest and the youngest of the three. The second son Ham we may well suppose born about the middle of these 12 years, that is, in the year of Noah 506. And thus we have the interval of 6 years between the births, as I conjectured it would be in that first world.

4. This gives us also the interval between the births in the new world, or immediately after the Flood. I do not suppose any children were born till two years after coming out of the Ark. My reason is, that a full year of sorrow and trouble, of care, toil and confinement in the Ark, would indispose them for generation for some short time, neither yet had either sex attained the age of puberty of their fathers: but after a year they might be pretty well recovered both in body and mind, and so tolerably settled in the new world, that the women might conceive and nurse their children without inconvenience. Now here we have but three sons of Shem in 12 years after the Flood; the eldest we may suppose born at two, the second at seven, and the third at 12, at the distance of five years between the births, and the time of nursing about four, as I before judged it probable. For here too, as well as at the beginning, I sup-
I suppose no daughters born at first, but sons, the reason of which will appear hereafter.

5. We may from hence also assign the several ages of Noah's sons when the Flood came, viz. Japhet the eldest 100, Ham the second 94, and Shem the youngest 88; though there may be some doubt as to the precise age of Shem, because it seems uncertain what is the precise meaning of 2 or 12 years after the Flood, whether it be after it began or after it ended. Chronologists generally reckon from the time the Flood began, but I think it more reasonable to take the meaning to be from the time it ended, and the new world began, otherwise there is a year lost in the Chronology from the Creation, and the year of the destruction of the old world is not reckoned. If the expression is to be understood in this last sense, then was Shem but 87 when the Flood began, and 88 when it ended. And this proves the ages of Noah's sons to be the same that I gave them in the preceding section.

The subject we have been treating of in this section may seem too trifling to some. But, 1. That can be no trifling matter in itself, which is amongst the first laws of nature, and the method which the Creator established for the first nourishment of those whom he made in his own image. 2. It is the principal thing that must guide us in our search after the number of mankind at the Deluge, and moreover shews what a slow progression there must have been in the peopling of the earth after it, which utterly subverts the common computation of time. 3. It serves to shew the great mistakes of those who have entirely neglected this consideration in their calculations. These Gentlemen however whom we oppose in their narrow schemes of the Deluge, must acknowledge that we are exceeding favourable to them in this particular, since we hereby give them an
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an advantage which possibly they never dreamt of, though it will be found to do them little service in the end.

S E C T. IV.

Some general Remarks concerning the increase of the Antediluvians; and the argument of Vol−
sius for the paucity of mankind at the Deluge refuted.

HAVING now upon pretty sure grounds ascertained the time allotted to the nursing of infants in the old world, we proceed to enquire what might probably be the number of mankind at the time of the Deluge, still keeping in our eye the due distance of six years between the births; but first we will premise a few general remarks that may strike some light upon our present Inquiry. Let it be observed then,

1. That the first parents of mankind were created perfect man and woman at once, and might have had their first-born in a very few years after their Creation.

2. That though no children are mentioned but Cain and Abel till the birth of Seth in Adam’s 230th year, according to the LXX (whose computations we are henceforth to follow) we are not thence to conclude, that there were no children between; no reason obliging us so to think. There were probably a good many at the proper distances between the births: It is certain that Adam had several sons and daughters after the birth of Seth, and what should put a stop to his propagating mankind for more than a 100 or 200 years before it? I have often wondered that authors who treat of this subject, should only reckon upon the descendants of Cain and Seth for peopling the Earth. What became
Certainty of the Mosaic Deluge. 91

became then of all the other sons and daughters of Adam? It was not therefore by the issue of Cain and Seth alone that mankind was increased, but by all the other sons and daughters of Adam, whom he had both before and after the birth of Seth. Nay Abel might have had children before he was slain by his brother.

3. That though the sons of Noah born before the Flood were but the tenth names in a lineal descent from Adam by his son Seth, yet there were really 14 generations at least if not 15 to the Flood, as I have before proved. For Cain being banished from the Divine Presence or place of worship, and having no more Converse with the Deity, which others enjoyed, his posterity being more immersed in earthly things might marry earlier than the righteous descendants of Adam, particularly by Seth, whose offspring neither before nor after the Flood seem to have been very hasty in that matter. So that there might very well be 15 generations from Cain himself as the Head, exclusive of Adam in the reckoning, but more I think there could not be.

Not to insin that Lamech, one of that line, had two wives in which he might not be singular; tho' that practice would in great measure depend on the order of Providence; for if more females were born than males, that would very likely be the case of many, otherwise not.

4. That we need not suppose that the persons named in the Genealogies were all of them eldest sons. Those indeed who were born in the 162d, or 165th year of their father might be so, but not those born in the 187, 188, or 205th of their father's age. But these only are named because Noah the father of the new world reckoned his pedigree from them.

5. That though they were late in having children, because it was long ere they arrived at maturity, not marrying till they were 150 or 160, yet they continued
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needed to have issue for some hundred years. *Noah* was 500 years old, before he had any of the three sons, by whom the new world was peopled. What a numerous progeny might each of them have had therefore, when from 150 or 160 they continued to beget children till they were above 500?

6. That by reason of their great longevity, all that were born in any one Century were cotemporary for 8 or 900 years, which must prodigiously increase the number of mankind upon the earth at a time. Thus should we suppose all that were born in and about the year 1600 of the Christian *Aera* to have been alive at the year 1700 only, how vastly more numerous in that case would mankind have been than in fact it was? when of some millions born at the first of these periods, but a few persons might be alive at the last of them: whereas the *Antediluvian* were cotemporary not only for one hundred, but for 8 or 900 years, and a new brood every year arising.

7. That as the birth of Twins is not so very rare even in our days, it might probably be more frequent at first, when human nature was vigorous and healthful, as by their long lives appears. This we may suppose, without crediting the *Jewish* fable, that *Eve* brought forth twins of different sexes at a birth, and that *Cain* married *Abel's* sister, and *Abel* *Cain's*. For the same reason also, *viz.* the strength and healthiness of that primitive constitution and the long time of nursing, we may reasonably suppose that few children died in their infancy, whereas now numbers do every year.

Now from these general observations, we may perceive how weak the argument of *Vossius* is for the *paucity* of mankind at the Deluge. "How slow and "sluggish mankind were in propagating the human "race, says he, is evident from hence, that *Noah "was but the ninth in a lineal descent from *Adam." But
But what does this instance really prove? It proves indeed that men lived to a very great age, when 10 persons (for here we must include Adam) or rather as we have proved, 14 or 15 persons could reach beyond 2000 years; but as to the purpose he brings it for, it proves the very contrary: for if men lived to 8 and 900 years, and continued to have children for 340 or 360 years of that time, the increase of mankind must needs be vastly great.

Again he adds, "that whoever will compute rightly, will find that many more persons might have descended from the eight who escaped the Deluge to the time of the dispersion of the several nations, than could have proceeded from Adam alone in the space of 2000 years." How he made his computation he tells us not, but on examination it will appear that never was a man more out in his reckoning; not even Hornius himself, whom he so smartly rallies on his computations after the Flood; and indeed poor Hornius it seems had made a grievous mistake; for he had made all his numerous Postdiluvians males, quite forgetting that females were no less necessary for propagating mankind. But let us now shew Vossius mistaken in his turn.

1. Instead of eight there were but six persons to propagate mankind after the Deluge. Noah was 600 years old when the Flood came, and 'tis not probable that the Antediluvians had children after the age of 600, at least I shall reckon upon none such, because I find no instance of it, and besides am sure that Noah had not; since Moses expressly says, that of those three sons that were with him in the Ark, all the nations of the earth were descended. These are the three sons of Noah, and of them was the whole Earth overspread *.

* Genes. ix. 19.
2. The difference in the term of life is to be considered, the longest life after the Flood was 465, the longest before it 969, above double the term, and the number of years for propagation in each is in proportion to the term of life. The Antediluvians had children from 150 or 160 to above 500, or for about 350 years of their life, whereas the life of the Postdiluvians did not much exceed 400 in all. But

3. Let us consider the vast disproportion of time in the two periods compared. From the Creation to the Deluge there were 2256 years; from the Deluge to the Dispersion about 531 years (reckoning both periods according to Vossius himself and the Septuagint) the difference is no less than 1725 years, which the first of these periods had more than the last. Let us however set aside the first 500 years after the Creation, when the increase of mankind could be but small, there still remains an excess of 1225 years on the side of the Antediluvians. Now could three pair in 531 years have more increase than thirty times three pair at least in 1225 years, though the term of life had been equal in both? Utterly impossible! though the women after the Flood had brought forth 10 and 12 at a birth *

*—It is too hastily concluded, that in the Period of 1656, or as the Septuagint whom he (Vossius) follows, 2256, between the Creation and the Flood, that only Palestine, Syria or Mesopotamia were inhabited: For considering the Longevity of men in that Period, a small skill in arithmetical Calculation will render the number of coexisting Inhabitants of the Earth more than six times as many as would have happened in 5000 years, when mens ages were abridged to that ordinary dimension which now they have.—Sir Matthew Hale's Origination of Mankind, p. 188.

CHAP.
C H A P. III.

Sect. I. An equitable calculation of the great increase of mankind before the Deluge.

HAVING shewed how exceedingly mistaken Vossius was in his computation of the number of mankind before the Deluge, I shall now endeavour with much greater probability of truth, to calculate the numbers in the Antediluvian world; in which though we can arrive at no certainty, as was observed by the learned Bp. Stillingfleet, we shall yet build upon grounds certain and undeniable. We will first compute what number upon the whole might be born into the world from the Creation to near the time of the Deluge, and then dally, make the needful deductions for deaths and other deficiencies.

1. How long the parents of mankind continued in Paradise* we know not, though longer perhaps than

* Though the time of Adam and Eve's continuance in their first state, that of Innocence, is not mentioned, yet it is reasonable to think their fall was not immediate, it not being consistent with the Divine Wisdom and Goodness to expose them to a temptation (notwithstanding the warning given) before they had time to reflect or well know their state and condition. On the other hand it could not be many years, considering the command given them to increase and multiply and replenish the earth, and that Cain was not conceived till after their being expelled Paradise. I have therefore supposed them to have been two or three years in Paradise, and have given them the like number to lament their fall and degraded condition, ere they could think to increase the number of the unhappy. This seems far more probable than the opinion of those who suppose them to have fallen immediately, or in a very little time after their Creation, for no other reason I can think of, than that the account of the fall immediately follows the history of the Creation, whence they conclude that little or no time had intervened between them. Nay so ridiculous is the opinion of some writers (who herein follow the

Reveries
An Enquiry into the Truth and

is commonly imagined. We shall suppose two or three years, in which time there was no child born, nor any attempt towards it. We shall allow them two or three years more to lament their fall, and the miserable estate their want of faith and disobedience had brought them to, from a most happy condition; and suppose Cain to be born six years after the Creation (in which supposition few, I believe, will be apt to think us too haftly) and Abel again six years after him, and so every sixth year Eve to have had a child, the first seven, eight or nine whereof were probably all males (the males being longer in coming to maturity than the females) and this distance between the births, I suppose, will also be thought a sufficient allowance. At this rate of increase Adam would have in 100 years 16 children, in 200 years 32, and in 400 years 64 children; when we will suppose Eve to have left off child-bearing. Nor need this number of Adam's children be thought too great, when there are instances in these later ages, and this short period of man's life, of those who have had 40 children at single births by two successive wives, and of many others who have had 20, 25 and 30 by one wife, though in such cases it is not to be supposed that the women suckled their children.

2. Though it is reasonable to think that the Antediluvians, notwithstanding their longevity, came to mature age at 150, yet as we are not sure that they all married so soon as they were ripe for marriage, and that the earliest in the Genealogies is born in the 162d year of his father, who might probably be a first-born, I will not suppose Cain, Abel, or any of

Reveries of some of the Rabbins) that they suppose Adam and Eve to have fallen on the day of their Creation, and yet allow them created in the evening only of that day. I think it may admit a debate whether Eve was formed out of Adam on the sixth day.
the succeeding children or grandchildren of Adam to
have married till they were 160, but to have had
children from 161 or 162 till they were of the age
of 500, at the forenamed distance or interval be-
tween the births; though Noah we know had three
sons after he was 500 at the due intervals. And to
all the Antediluvians we may allow, without fear of
exceeding, 50 or 54 children in general, according
to the course of nature, and the longevity of those
first ages of the world.

3. Let us next enquire in what number of years
the men of that world might double themselves, not-
withstanding the long interval between the births.
The increase indeed will be found very small for the
first three or four hundred years, as they were late
in coming to maturity, but the succeeding ages will
swell the account exceedingly. Let us suppose at
present (what we shall prove afterwards) that in the
year of the world 500 there were 200 persons only,
male and female, of full age to marry, the men at
160, the women at 120 or thereabout. The first
or second year after the marriage will probably pro-
duce 100 births from 100 couple, and every sixth
year after 100 more. At this slow progression the
200 married persons will in 19 or 20 years be in-
creased to 600. So that the number of mankind
would be trebled in 20 years, after there came 100
pair to be married. And in this manner they would
increase and multiply every 20 years, or in that space
treble themselves.

It may perhaps be objected, that though it ap-
pears that such an increase might be at first from
the first 100 marriages, yet they could not continue
thus to multiply at such periods, because according
to the rule we have laid down, none of the issue of
these 100 first marriages could increase the number
of mankind, till the men had attained the age of
160. 'Tis true they could not, but then it must
be
be remembred, that the first 100 pair are still add-
ing every sixth year 100 more to the number of mankind, even till after the 400 born in the first 20 years are married, and begin a new stock for increase, so that when there came to be some hun-
dred couples married, the increase and multiplica-
tion would come on very fast, and in 1000 years mankind would be prodigiously increased.

But though there be nothing in this supposition contrary to reason, viz. That after the year of the World 500 they might treble themselves in 20 years, yet we will not reckon upon so short an in-
terval, but will allow a much longer time, even to their doubling themselves, and shall exhibit two ta-
bles of doubling, the first at the interval of 50 years (much too long indeed), the other at the interval of 40 years, and both beginning at the year 500, when there could not be fewer (whatever more there might be) than 100 married or marriageable persons de-
scended from Adam and Eve.

<table>
<thead>
<tr>
<th>Years of the World</th>
<th>Number of Mankind</th>
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<tbody>
<tr>
<td>500</td>
<td>200</td>
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<td>550</td>
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<td>700</td>
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<td>6,553,600</td>
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<td></td>
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In the table below, I have calculated the number of mankind during the years of the world, assuming a rate of doubling. It appears that even by underestimating the number of mankind, there would have been many millions born into the world before the Deluge, that they would have been obliged to spread themselves over the face of the earth, though but one half of the sum total of 429,496 millions had been alive at the time of the Deluge; but as I take the interval here allowed to be too long for the time of doubling, I have calculated the second at the interval of 40 years, which comes nearer to the truth of the case, though even this may exceed the time of doubling.

<table>
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<th>Years of the World</th>
<th>Number of Mankind</th>
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<tr>
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<td>13,107,200</td>
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<td>214,748,364,800</td>
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<td>2,050</td>
<td>429,496,729,600</td>
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<table>
<thead>
<tr>
<th>Years of the World</th>
<th>Number of Mankind</th>
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</thead>
<tbody>
<tr>
<td>500</td>
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<tr>
<td>540</td>
<td>400</td>
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<td>580</td>
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660
<table>
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<th>Years of the World</th>
<th>Number of Mankind</th>
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<td>1, 638, 400</td>
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<td>429, 496, 729, 600</td>
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<td>1,780</td>
<td>858, 993, 459, 200</td>
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<td>1,860</td>
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<td>1,900</td>
<td>6, 871, 947, 673, 600</td>
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<tr>
<td>1,940</td>
<td>13, 743, 895, 347, 200</td>
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<td>1,980</td>
<td>27, 487, 790, 694, 400</td>
</tr>
<tr>
<td>2,020</td>
<td>54, 975, 581, 388, 800</td>
</tr>
</tbody>
</table>
The reader may observe that I have brought the first table no lower than to the year 2050, and the second to the year 2020, though there remain by the first 206, and by the second 236 years to the Flood; the reason is, that in those last 200 years of the old world, mankind would not increase in any measure equal to what they had done in the preceding years (though regularly the increase should have been much greater) because that violence was then great in the earth, and thousands, yea millions might have been cut off by untimely deaths, for which cause the world's destruction was determined 120 years before the Flood came.

But now against this immense number of mankind that might in a regular and ordinary way have been born into the world between the Creation and the Deluge in 2056 years, it will no doubt be objected by some (as it has been done to far less numbers) that all such calculations are mere guesst work, the product of fruitful imaginations. That it is an easy matter to multiply men to what number we please upon paper, but that in fact it will be quite otherwise.

To this I answer, that in calculations of this nature some regular order or method must be observed, and though according to the course of nature, such an increase and multiplication of mankind there might have been periodically, especially at the beginning, when the command was to increase and multiply and replenish the earth, yet we will not suppose that all things went on thus regularly, without difference or interruption. We do not know what extraordinary obstructions or interruptions there might be to such a regular increase. Tho' every married pair might by the course of nature have had such a number of children as has been mentioned, yet the Divine Providence which superintends all things might order it otherwise in manifold instances, and it might possibly be in the old world as it has been since the Flood, viz. that some marriages have produced many
many children, others few, and some none at all. Thus for instance, Abraham had but eight children though he lived to 175. Isaac had but two, and those at a birth, who lived to 180. Jacob had but 13 by four wives, and some might be barren, and many such cases there might have been among the Antediluvians, as Noah for instance who had but three sons, at least that we know of. Now I acknowledge that this might be so in the old world, for any thing we know to the contrary, especially after it came to be pretty full of people, though it is not probable to have been thus at the beginning; and therefore allowing for all such obstructions and deficiencies, and likewise for all casualties and accidents (to which men might be liable in that world as well as in the present) in as ample a manner as can be desired, and more by far than I think the case will require, I shall reduce the former number to one half, viz. to 27,487,590,694,400, that is, 27 Billions, or Millions of Millions, four hundred and eighty-seven thousand seven hundred and ninety millions, five hundred and ninety-four thousand and four hundred. And this we shall now suppose to be the whole number of those who were born into the world before the Deluge. But from this sum is to be subtracted the number of those who died before that time.

Of those in the Genealogies from Adam by Seth, Enoch was translated at the age of 365, Lamech the father of Noah died just before the Flood at 753, Mahalaleel at 895. Adam and the other five Patriarchs lived to above 900. Before the year 900 therefore we may suppose there were no deaths, except that of Abel who was slain a young man, but that all born within that period were alive together. But in the tenth century death began to reign, and Adam and Eve we may presume were the first over whom death had power in a natural way, as their disobedience was the cause of it. The children also born of them in
in the first hundred years would also die in this 10th century, those born in the second hundred would die in the 11th, those born in the third century would die in the 12th, and so on. But though we are far from thinking that after the beginning of the 10th century (till which time few or none died) the deaths would be equal to the births, yet as we have made large concessions all along, we shall do the same in this case, and suppose them upon the whole to have been equal, especially since we cannot precisely say how soon that Violence or blood-shed, which was their crying sin, came to prevail; and therefore will reduce the last sum mentioned to one half again to allow for the deaths and prevailing violence, and suppose the total number of mankind alive upon earth at the time of the Deluge, to have been no more than 13,743,895,347,200, that is, 13 Billions or millions of millions, seven hundred and forty-three thousand eight hundred and ninety-five millions, three hundred and forty-seven thousand and two hundred; a number, I presume, vastly exceeding that of the present inhabitants of the whole Earth.

S E C T. II.

That the preceding Computation of the number of mankind before the Deluge is agreeable to Reason, and founded on Facts.

Notwithstanding the very large allowances and abatements made to reduce the number of mankind, yet even the last reduction to 13 Billions, or Millions of Millions, &c. seems so vastly great, as it will hardly be thought possible that such a number of men could ever be at one time upon the earth. Now though we pretend to no certainty in this point (which made it the more requisite to allow largely for deaths and deficiencies) yet the calculation we have
have given must appear highly probable, since it is founded on grounds certain and undeniable: for instance,

1. It cannot be denied but that the Antediluvians were come to the age of puberty and marriage at 160 years, when we find a son born in 162. Nor

2. Can it be said, that they could not have children at the age of 500, when we have an instance of one that had three sons at due distances, after that age. Neither

3. Can it be alleged that we have not allowed a due distance or interval between the births, viz. six years, when most will be of opinion that it could not be so long. Nor yet

4. Can it be judged that we have made the period of doubling far too short, when we had before shewed that after 100 marriages consummated, they would treble themselves in half the time we have taken for their doubling. Nor

5. Will any one I believe make a doubt, but that there might be 200 persons of mature age for marriage in the year of the World 500, the men at 160, the women younger. Nevertheless as this is the foundation of our calculation, we shall now shew that there was at least such a number of persons marriageable at that age of the world.

It may be observed, that as we take 160 for the year of maturity and marriage, according to that period all married or marriageable in the year 500 must have been born in or before the year 340, the males at least, though the females coming sooner to maturity might some of them be born later or after the year 380. Now according to this stated period of marriage

1. In or before the year 340 Adam might have had 54 children, males and females, or 27 pair married or fit for marriage.

2. Cain,
2. Cain, whom we suppose to be but six years younger than Adam (which by the by is more than others allow) and to have married in the year 166, might have in the year 340 twenty-eight children, or 14 pair fit for marriage, which added to the former makes 41 pair.

3. Abel married six years later, that is, in the year 172, and whom we shall suppose slain in the year 225 or 226, could in that case have no more than eight or nine children, or four pair, which with the former make 45 pair.

4. Adam's third son married in the year 178 will afford us in the year 340 26 children or 13 pair, which increase the number of marriageable persons to 58 pair.

5. A fourth son of Adam's married in the year 184, will give us in the year 340 25 children or 12 pair, which makes the number of pairs 70.

6. A fifth son of Adam's married in the year 190, might in the year 340 have 24 children or 12 pair again, which increase the former number to 82 pair.

7. A sixth son of Adam's married in the year 196, would have in the year 340 22 children or 11 pair, which added to the former make up 93 pair.

8. A seventh son of Adam's married in the year 202, will in the year 340 give us 20 children or 10 pair, which makes in the whole 103 pair, already three pair more than we reckoned upon. I need therefore go no farther on to the eighth or ninth son; but the following eight or nine births I may reasonably take to have been daughters, and married to the brothers that preceded them.

Here are now no more than 14 children of Adam's married, who have given us the 100 pair we have reckoned upon and three over. We might yet have 13 pair to bring in to the account, all born before the year 340, and marriageable in the year 500, which would very much increase the number of mankind.
mankind. And by this the Reader may perceive that we have been far from building on uncertain or precarious foundations, since we have omitted 13 pair more, which we might have taken into the account. And if it be considered that the command given to Adam was to increase and multiply and replenish the earth, no doubt I think can be made, but that his own and his children’s marriages were fruitful in the procreation of children that the Earth might be inhabited.

Now that there is nothing extravagant or incredible in this very large number of mankind I have reckoned, will further appear by what Sir Walter Raleigh hath on this subject.

"For what a strange increase did the long lives of the first Ages make, when they continued 800 or 900 years? Surely we have reason to doubt that the world could not contain them, rather than that they were not spread over the world. For let us now reckon the date of our lives in this age of the world, wherein if one exceed 50 years, ten for one are cut off in that passage, and yet we find no want of people. Nay we know the multitude such, that if by wars or pestilence they were not sometimes taken off by many thousands, the Earth, with all the industry of man, could not give them food. What strange heaps of Souls then had the first ages, who enjoyed 800 or 900 years as aforesaid? These numbers, I say, cannot be counted or conceived. For it would come to the fame reckoning in effect, as if all those which have been born in Britain since 3 or 400 years before the Norman Conquest (having such as by accident or violence were cut off) were now (An. 1612) alive, and if to these there were added as many as by Polygamy might have been increased.*"

Certainty of the Mosaic Deluge. 107

But now some may think that we might have saved ourselves all this labour in computing a new the number of mankind in the Antediluvian world, since it has been done by others before us, particularly by the learned Mr. Whiston in his Theory of the Earth, in a table of doubling at 40 years, and which was adopted by the Gentlemen who have published the laborious work of the Universal History in the first Edition, so far as the Samaritan Copy carries the age of the World to the Deluge, tho' in the Octavo Edition they have taken to the Numbers in the Hebrew Copy. But this table, though the numbers there may be thought sufficient for the peopling of the Earth, we could by no means depend upon, for the reasons we shall now give.

1. It is laid down there as a foundation, that the Antediluvians would double themselves every 40 years, as I believe indeed they would, and in less time, after there came to be 100 marriages. Now had the Author observed this regular progression in his computation, by adding 40 years to every former period of the age of the world, the Amount, instead of two millions of millions &c. would have been above five millions of millions at the year 1656, the age of the World at the Deluge, according to the Hebrew numbers which he contends for. What would the sum then have been, had we carried on the computation for 600 years more according to the Septuagint?

2. He supposes the period of doubling must have been much shorter in the earliest ages, and much longer in the later, contrary to reason and fact. For mankind being sprung from one pair only, the increase at first must have been very slow, but come on very fast when a considerable number were married. His Table therefore is made not regularly, but according to fancy, by unequal starts or chemins, at great intervals in the later part, where it should have
have been most regular; it would seem with no other view than to raise such a number upon the whole, as might be thought sufficient to people the Earth.

3. In that calculation the two material points, the time of nursing, and the age of puberty are quite overlooked, by which all computations of the numbers in the Antediluvian World must be regulated. What unavoidable mistakes this omission must occasion, will be seen by examining the first ten numbers of the said table.

<table>
<thead>
<tr>
<th>Years of the World and Intervals of Doubling</th>
<th>Number of Increase according to the Intervals</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2. Adam and Eve.</td>
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<td>6</td>
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<td>16</td>
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<td>1024</td>
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<td>110</td>
<td>2048</td>
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On this table I observe, 1. That though there were but two persons created at first, this computation makes four persons in the second year of the World. This could not possibly be, except Cain had been born within 12 months after the Creation, which is highly improbable, and Abel in the second year, yet far more improbable; for in that case Eve could not have suckled Cain.

2. In the sixth year of the World we have eight persons, that is, six children of Eve's in six years. But in the name of wonder, what shall Eve do with six children, and six infants in six years? Where could she find so many wet nurses for them? Or would the mother of all living deny her children that
that nourishment which the Creator had appointed for their first food, the milk in her breasts? Do they consider that there was but one woman in the world to do for herself, her husband and her children what belongs to women to do? We should surely have more respect and compassion for the mother of all mankind, than to lay such an intolerable burden upon her, whose sorrow for her own deception, and thereby ruining both herself and her husband, must have been very great for many years. In punishment of which, though God had said, he would greatly multiply her sorrow and conception*, the meaning was not, that she should have a child every year, which could not be, because the nature of that food and nourishment appointed by himself for her children would not permit it. Nor yet when he commanded them to increase and multiply and replenish the Earth, could the command be obeyed in such a manner as was contrary to the order of nature and Providence. But the method intended to answer the design of the Command was to prolong their lives to above 8 and 900 years, and their prolific powers for 340 or 360 years of that term of life, that by slow and sure and long continuance of increase, they might people the earth in due time. Hence it appears evident that there could be no such speedy increase of mankind at the beginning as is imagined, and that the time of nursing I have allowed in the first ages, was no more than necessary for that strength of constitution which was to last for 8 and 900 years; and that women who were to continue bearing children for 340 or 360 years of their life, should have them but slowly, and at the
distance of several years, that their strength might hold out, and that they might not be overburthened with too many cares at once, and therefore when Eve's first child was six years old, it was time enough for her to have another, and so on, though possibly sometimes twins.

3. The same exception lies to all the following periods of doubling, where the number far exceeds what it could possibly be in fact; but we shall pass them over, and come to the last of them in the year 110, in which the number of mankind is made 2048. Now in the year 110 not one of Adam's children were married, because not yet come to the age of puberty. In that year of the world, there could be no more than 18 or 20 persons, at single births, besides Adam and Eve. It is a grievous mistake therefore to imagine, that the periods of doubling were much shorter in the earlier times than in the later, the contrary of which is evident to reason.

S E C T. III.

An Objection against the Earth's being fully peopled before the Flood in the Origines Sacrae answered.

AGAINST this immense multitude, which we have shewed there might have been by the ordinary course of nature upon the Earth before the Flood, a considerable objection is made by the very learned author of the Origines Sacrae, viz. “That it seems strange, that in so short an interval in comparison as that was from Adam to the Flood, according to the ordinary computation, viz. 1656 years, and not much above 2000 years according to the largest, the World should be then fully peopled, when in so much a longer time since the Flood
Certainty of the Mosaic Deluge.

1. That though mankind might have been thus numerous before the Flood, it was many ages ere it became so populous. In the year of the Creation 1100, I have reckoned only 6,553,600*, even supposing all of them to have been alive at the time, a number not equal, by the most moderate computation, to what there are at present in Great-Britain, though yet they must have inhabited a much greater part of the Earth, for a reason that will be seen hereafter; and when once they came to number millions, they would increase exceedingly.

2. The immense numbers in the old World may be easily accounted for from their very long lives, and their being for 8 or 900 years cotemporary. Though they married not till 150 or 160, yet they continued to have children for 340 or 360 years after, so that each pair might have had 54 or 58, even at the distance of six years between the births. Of all the Antediluvian Patriarchs before Noah, it is said that they begat sons and daughters: they must then have had several of each sex, and the same

* Not that there were in fact no more persons on the Earth at that time, since there might have been double and treble that number, but only that we have reckoned on no more. For the Reader may observe, that in making up our Account from the year 500, we had three pair over to reckon upon, and omitted 13 pair besides, which, if taken in, would have greatly swelled the Account. 2. We have shewed that mankind would treble themselves in 20 years after 100 marriages, whereas we have reckoned only on their doubling themselves in 40 years; so that in the year 1656 (the Age of the World at the Deluge, according to the Hebrew Computation) Mankind might have spread themselves over all the Earth, tho' not so fully peopled it, as in some ages more. It was by no means therefore in order to multiply the Numbers that we have preferred the reckoning of the LXX, but for the substantial and unanswerable reasons that we have given.

fruitfulness
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fruitfulness we may reasonably suppose in the rest of
mankind in general.

3. The number of mankind since the Flood might
have been by many thousands of millions greater
than it is at present, were it not for the many bloody
wars, famines, plagues and pestilences, which sweep
away many thousands at once. How many millions,
or rather millions of millions, have been cut off by
wars alone, in all the several ages and countries of
the world, since the days of Abraham? The history
of the world is little else than the history of wars
and bloodshed. Again, so great and universal
has the Plague been sometimes, as almost to depopu-
late the Earth*. Whereas in the Antediluvian
world, 'tis probable that no extraordinary judgment
of that kind from Heaven had overtaken them, till
the Deluge came and buried them all in the waters,
at least there is no mention or intimation of any such
calamity having befallen them; for that Violence

* Under the Emperors Vbius Galius and Volutianus his son,
about 240 years after Christ, there arose a plague in Ethiopia
which spread itself into all the provinces of the Roman Empire,
and lasted by the space of 15 years together without any intermi-
sion. Yet was that more impetuous and outrageous under the
Emperor Justinian, when only in Constantinople and the places
adjacent, it cut off at least 5,000, and sometimes 10,000 in
a day. Neither less wonderful was that pestilence in Africa, which
only in Numidia, snatched away 800,000 men; or that under
Michal Duca in Greece, which was so sharp and violent, that
the living were no way sufficient to bury the dead. In the year
1359, in Italy, in the time of Petrarch, the plague scarce left alive
ten of a thousand throughout the whole country. And if we
credit Boccace, there died thereof in Florence, from March to
July, about 100,000 persons. See Hakewell's Apology, Lib. 2,
Sect. 3. And for destruction by Earthquakes, See Sect. 4.

In the year 1606 the Plague was so violent at Cairo, that there
died 10,000 every day. This terrible scourge fell upon all the
higher Egypt, and the country of the Barbarins, so that we
found several towns and a great number of villages without in-
habitants, and large provinces, at other times very fertile, quite
laid waste and entirely abandoned. Pocet's Travels.

which
which became outrageous at last, did not prevail till the latter days of that World, and might in part be owing to their very great multitudes.

4. That mankind does not increase in proportion to what it did before the Flood; and to what indeed it might even now do, is owing to various causes. As 1. The strong and healthy constitution of the Antediluvians (as appears from their longevity) and that strength probably confirmed by labour and exercise, made sicknesses and diseases more rare than at present, so that bating accidents, few died but of old-age, as we find all those mentioned in the Genealogies died at a good old-age. Whereas now, through idleness, luxury, &c. diseases have greatly prevailed in the World, and the greatest part of mankind never see old-age. 2. The many thousands that die yearly in the several parts of the world, which we do not think happened to the Antediluvians. 3. The many thousands that profess Cælibacy, not only amongst the Greeks and in Roman Catholic countries, but amongst the Gentiles and Mahometans, whereas in the old world, we have no reason to think that any such custom was in use, nor yet for many ages after the Flood. Add to this the many thousands more, especially in Europe, who from a principle of Libertinism decline marriage to indulge their lusts, and thousands more who out of poverty are faint to abstain from it, not being able by their labour to maintain a family. And 4. The many thousands that engage in the two profesions of Soldiers and Sailors, few of whom in comparison of the number, enter into the married state, Soldiers especially, who cannot always obtain leave to marry, and whose unsettled state seldom enables them to rear up their children. To which we may add, 5. The great numbers of Eunuchs in all the Eastern Countries, a Practice which has been in use for some thousand years.
But to these several causes we must add yet another, viz. the manifold Judgments of a righteous God upon a wicked World, in the utter overthrow by Earthquakes, Inundations and other means, of many flourishing cities and countries, from time to time, in all the several parts of the world, who turneth the rivers into a wilderness, and water-springs into a dry ground, a fruitful land into barrenness for the wickedness of them that dwell therein. These several considerations abundantly shew, why the increase of mankind since the Flood has not been in proportion to what it was before it: So that upon a serious review of all the particulars, 'tis rather a wonder that we find it so populous as it is at present.

4. That the Earth is capable of receiving far more inhabitants than it now hath, I believe to be very true, perhaps treble or quadruple the number, especially in America, was every spot of ground cultivated with art and care, as it is generally in China, or in Holland and Flanders. But how many millions of acres in the present earth lie uncultivated through the laziness and idleness of the inhabitants, or are still covered with vast woods and forests, large Moors and undrained Marshes. But yet was the present Earth cultivated as it might be, it could not maintain such a number of inhabitants as the former World did, for reasons that will be given hereafter.

Upon the whole then, I presume it appears pretty plain that the increase of mankind before the Flood might have been by the ordinary course of nature so great as our last reduced number by the abatements made, gives it, viz. 13,743,895,347,200. But if even this last number be thought prodigious, and that it is inconceivable there should be such an immense multitude at any one time upon the Earth: Nevertheless from all that has been said on this subject, it is very evident, that there could not fail to have been so great a number of mankind before the Deluge.
Deluge, as must needs have overspread the whole earth, and fully stock'd it with inhabitants. And therefore as it is granted by Vossius, Stillingfleet and others, that the Flood prevailed wherever man-kind inhabited, it necessarily follows that the whole Earth was drowned by the Flood. Which was the Point to be proved.

Hence the Reader may perceive likewise that the learned Vossius has espoused two opinions utterly inconsistent, viz. That mankind was so few in number before the Deluge that they might all have been contained in Mesopotamia and Syria, and yet that the age of the world at the Flood was 2,256 years according to the Septuagint. Whereas had he judged the number of mankind to have been so small, he ought agreeably to that number rather to have embraced the Samaritan computation, which makes it no more than 1,307 years from the Creation to the Deluge. But if this he could not do, as plainly perceiving, that the years therein ascribed to puberty and generation, contradicted the order and law of nature; and that this very reason obliged him to espouse the Septuagint Chronology against both the Hebrew and Samaritan; then one would think that the age of the world he contended for, might have convinced him that it was impossible for all mankind in the space of 2000 years to be confined to so small a part of the Earth as he pretends, or even to any one Continent. The only argument he brings for the paucity of mankind being so far from serving his purpose, that it is found to prove the very contrary, as has been before demonstrat'd.

I expect it will be said that whatever proves too much, proves nothing; and therefore it will be objected that we have made the number of mankind so immensely great, even in our last reduced number, that it is not conceivable how the earth could maintain such a multitude of people. I confess this
is a matter of some difficulty, especially when Animal food was not yet granted to mankind, as we have before shewed, and shall more fully prove hereafter. We shall therefore make this the subject of a subsequent Inquiry. But we have another point previously to be discussed, in order to remove some other objections to an Universal Deluge, since we must clear our way as we go along.

S E C T. IV.

Of the increase of the Animals, and whether every Land had its Animals from the first Creation; also of those peculiar to America.

If the Reader pleases to look back to the quotation from the Origines Sacrae, he will find that from a certain and well known fact, viz. That there are several kinds of Animals, birds, beasts and creeping things in America, which are not found in the other parts of the world, a double argument is formed.

1. “That it is highly probable that every Land had its peculiar animals from the first Creation.”

2. “That from thence it would appear that America was not subjected to the Deluge.” Now to the first of these I answer,

1. That how large soever the surface of the Globe of the Earth be, yet it pleased the Creator to make but one man and one woman, by whom the whole Earth was to be peopled in time, and that for a wise and excellent reason (which we shall have occasion perhaps to take notice of hereafter) well therefore might the Earth be furnished with animals of all kinds by degrees, and in due time, though but one pair of each kind had been created at first.

2. Had
2. Had more than one pair of each kind of animals been created at first, they would in 4 or 500 years, while men were few in number, have multiplied to that degree that mankind could not have subsisted for them. They propagate yearly, and many of them have more than one at a time, none of them were eaten for food, and but few kinds offered in sacrifice. Now as the food of man was only vegetables, fruits and grain produced by culture (or if anything else it will be enquired into in another place) there was nothing of man’s food which was not also food for some or other kind of animals. Had many of a kind then been created at first, and every Land had some of these in it, they must have increased in a few Centuries to such numbers, that when men came in process of time to spread themselves on the Earth, the animals would have devoured almost every thing that mankind had to live on. That this is no vain imagination is evident from facts and experience*. We have good reason therefore

* In the Kingdom of Champa in the Indies, the river called by the Natives Tinacoreu, but by the Portuguese Varella, goes up 80 leagues into the Country to a mountain called Moncalor, above which it is much broader, but not so deep by far; there being banks of sand in some places and lands overflowed with water, where there are an infinite number of fowls that cover all the country, in somuch that by reason of them, the whole kingdom of Chintalekus had for 40 years before become desolate, though it was 8 days journey in length, which at 30 miles a day, made it 240 miles long. That after passing this country now inhabited by fowls only, there was another more wild and full of great rocks, were there were a great many animals yet worse than the fowls, as elephants, rhinoceros’s, lions, bears, buffles and other beasts in such multitudes that whatever men cultivated for the support of life was spoiled or destroyed by them, nor was it possible for them to prevent it. Mendez Pinto.

The Isle of France, formerly called the Isle Maurice may be said to be the kingdom of Rats. They come down from the mountains like an army, they creep up the steepest rocks, they march into the flat country, assemble in the marshy grounds,
fore to conclude, that there was but one pair of each of the animal kind created at first, that they might not increase too fast for mankind; and though they would multiply much more and increase faster than men could do, they had room to spread themselves for a long time without much annoyance to man; and as men increased in number and extended their habitations, they would be able to drive them further off, or defend themselves from their depredations.

The same we say with respect to the fishes of the Sea and the Rivers, for though the increase of the Aquatic animals could be no annoyance to man living on the land, so that the creation of more than two of each kind could be no prejudice to him, yet if we consider what a large and numerous spawn fishes cast at once, and in how short a time they would multiply to immense numbers, notwithstanding they prey upon one another; as also that all rivers run into the sea, and that all seas have a communication with one another, we may, I think, reasonably conclude, that but one pair of each kind of Water animals was created at first, and that the command to the waters to bring forth abundantly both fish and fowl, and the same to the earth to bring forth her living creatures respected the va-

and bring defoliation everywhere especially in the night. I have myself seen them in the entrance of night coming out of the earth in great numbers like pismires, and carry destruction everywhere: Nothing escapes their teeth. Men can scarce sleep for them and are obliged to roll themselves in such things as may save them from their bitings: They are so bold as to fight upon their very bodies. It was the same in the Isle of Bourbon, which was as much infested with them at first, till it became more fully peopled. Miss. Letters.

Of the great inconvenience from and mischief done by variety of creatures in the Indies, see Hackius’s Redivivus, by Purchas, p. 565. And of a two years famine by grasshoppers in the country above Buenos Ayres, p. 909. Many more like instances might be adduced.
variety of the several kinds, and not a number of each species.

3. In confirmation of this we may observe, that though there were eight persons saved from the Deluge, by six of whom the earth was again to be replenished, whereas at the beginning it was only by two; and though animals of all kinds were then given to be food for men, which till then they were not, nevertheless Noah was commanded to take into the Ark, no more than two of a kind to keep up the breed, clean beasts (which are but few in number) only excepted, and yet which is observably so much were the animals increased in about 500 years, when the posterity of Noah settled in the land of Shinaar, that they were obliged to hunt them in order to destroy or drive them further; and Nimrod for his courage and skill in that necessary employment, became famous in after ages as well as powerful in his own. And so numerous were the animals before the flood, though but two of a kind created at first, that Dr. Woodward, from the remains of that earth as well the Animal as Vegetable productions of it still preserved, concludes, "that at the time the Deluge came, the earth was so loaded with herbage and thronged with animals, that such an expedient was even wanting to ease it of the burden, and to make room for a new succession of its productions."

4. If all the animals were created for the use and benefit of man, as is by the learned Author and others supposed, and that America was not inhabited by mankind before the Deluge, as is by the same Authors supposed, then what occasion was there for animals in America 3 or 4 thousand years before it was inhabited? "To what purpose is it, says Mr. Wbiffon, that all proper provision be made for the entertainment of a company of guests at a table, when it is certainly known that not one of those guests"
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"guests will be there?" This is apropos to the present case, but if applied to the Earth in general would prove too much and run into an absurdity, since it may as well be asked, why was so vast a Globe as this Earth created at once, when it could not be inhabited by mankind in 1,800 or 2,000 years?

But neither of these suppositions mentioned can we admit for truth. Not the first of them, viz. That all the animals were made for the use and service of man, since it is evident that many of them are pernicious and destructive to him, not only to single persons but to whole cities and countries. And therefore when we reflect upon the vast variety


Madurae in the Indies is very much infested with tygers, who come out of the woods in quest of water, which is generally in ponds near the villages, and often devour not only beasts but even children and men. The fear of them was so great, that they were obliged to keep guard every night in the villages and light great fires. No body durst stir abroad after it was dark, and men must be well accompanied even in the day time. In passing through the woods in the night time, some carried lighted torches, others beat a drum, the noise of which frightens the tygers and puts them to flight. Mission. Letters. T. S.

The natives in the country about Malacca lodge in trees for fear of tygers— which in the height of 8 yards will reach and devour men. Their chief preservatives against them are night-fires. The multitude is such that many enter into the city by night for prey. After the Portugese had taken it, a tyger leapt over a high wall, and carried away three slaves tied to a piece of timber together with the wood, leaping again upon the wall with admirable lightness. Alfo at Negrais in Pegu, their houses are set
rity of animals, birds, beasts, and creeping things from the smallest animalcula, which cannot be discerned by the naked eye to those of the largest size, as elephants, &c. as also on their different natures and properties, we shall have reason I think to conclude, that they were not all made for the use and service of man only, but to manifest the power, wisdom and bounty of the Creator, and for ends and uses we are not fully acquainted with. But yet thus far have all a respect to man, that in the hand of Providence they are made subservient either to his benefit or his punishment. And from this great variety of animals, some beneficial, others destructive, we may collect that man was created and placed in a probationary state. Had he continued in his innocence and obedience, none of all the creatures would have been prejudicial to him, and he would have retained that dominion over them with which he was at first invested; but in a state of sin and disobedience, they became many of them destructive to him, and are often made the instruments of his punishment.

Not the second, viz. That America was not inhabited by mankind before the Deluge. Because America is so very large a portion of the habitable Earth,

set on high posts, to which they go up by ladders, for fear of tygers. Purchas.

Not only lions, tygers and other fierce beasts, but the most contemptible animals may prove mischievous to mankind. Pliny relates that anciently a town in Spain was wholly undermined by rabbits, and a town in Thebes by moles. The inhabitants in a town in France were constrained to quit their dwellings on account of the great number of frogs there, Grasshoppers produced the same effect in a town in Africa. Nay serpents in other places have devoured the people; for they being of the opinion of Pythagoras, and not daring to kill them, this gave them an opportunity to multiply to a prodigious number.—— The devastations made by locusts is well known.——The Israelites were forbid to destroy the inhabitants all at once, lest the beasts of the field should increase and prevail against them.

that
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that should that be cut off, the remainder, viz. the
other three Continents could not possibly have
maintained the numbers of mankind that were upon
the earth before the Flood. And thus much in an-
swer to the first argument drawn from the strange
animals in America, viz. That every Land had its pe-
culiar animals from the Beginning.

The second argument brought from the strange
creatures in America is, that it would appear that
America was not subjected to the Deluge. The
strength of this argument lies in the following dif-
ficulties. "If every Land had not its own animals
"from the first Creation, how should the several
"kinds of animals have passed from the place of
"their creation into all the parts of the earth, after
"the waters had divided some parts thereof from
"the other, so that there could be no passage for
"the cattle, creeping things and beasts of one part
"into another without the help of man."

2. "How should the unknown serpents in Bra-
zile, the flow-bellicted creature in the Indies, and
all those strange species of animals in the West-
Indies, either come into the Ark of Noah or be
conveyed out of it into those countries, which are
divided from the Continent where the Ark was,
by so vast an ocean on the one side, and at least
so large a tract of land on the other, supposing
any passage out of one Continent into the other
which hath not yet been discovered."

3. If

* Though the modern Geography is much more improved
than the ancient, yet is it far from being perfect. Few countries
besides those in Europe, that of China and some parts of Ame-
rica by the Missionaries are exactly described, and the greatest
part of America as well as vast parts of Asia and Africa are but
little known to us.

California was supposed to be a very large island, but is now
by the Missionaries discovered to be a part of the Continent of
America, separated only by a river to the north, and an arm of
the sea running up for many leagues into the land.

Geographers
3. "If those strange creatures that are now in "America" came first out of the Ark, how comes it "that they have left no traces of themselves behind, "neither about the places where the Ark rested, "nor in any other land between, but are now only "to be found in America"? And "

4. "Some Animals cannot live out of that parti-
"cular clime wherein they are, whence it is highly "probable that every land had its animals from the "beginning; and there being animals peculiar to "America, and no where else to be found, this is a "strong argument that America was not subjected "to the Deluge." Now "

In answer to the first of these, why should that be thought a difficulty with respect to the Antediluvian world, which is not accounted such with respect to the present? All the men and animals in the other three Continents came originally out of the Ark of Noab, and yet have found a passage into all those parts of the earth and islands belonging thereto, though separated by mountains, rivers, lakes and seas. As the earth was made to be inhabited both before the Flood and after, so have both men and animals found their way into all the different parts of the earth.

Geographers have described Japan as a grupe of Islands contiguous and forming as it were one body, but now it is doubted whether it may not be part of a Continent to the north. For the Jesuits who lived a long while in Japan, and after them some European merchants who travelled over all the country, probably conjecture that it joins upon Jezzo or Yedo, by a chain of impassable mountains; but is separated by an arm of the sea which runs a great way up between the lands, which obliges travellers to cross that arm of the sea from one place to the other. Jezzo or Yedo is supposed to border on East Tartary.

Father Hennepin, in the account of his travels through a great part of Louisiana positively affirms that Japan is contiguous to the northern America, of which opinion was also the learned Gronovius.

2. The
2. The second difficulty or objection consists of two parts. 1. How those animals peculiar to America should find a passage from thence into the Ark of Noah in order to their preservation. And 2. How they should be able to get back again from thence after the Deluge. As to the first of these, we must examine a little that supposition on which it seems to be grounded, viz. the place of Noah's habitation when he built the Ark. That is supposed to be in Mesopotamia or Chaldea, but there is no manner of certainty of this. Moses gives us no account of the country where Noah lived. Men may suppose if they please, that he lived near the place where Paradise first was, or where Adam dwelt after his expulsion from that happy abode; but I may as well suppose the contrary, and that he or some of his ancestors in the course of 1600 or 2000 years might have removed far enough from thence to some other part of the world, so that for aught we know to the contrary, those very animals now peculiar to America might have no great way to travel to the Ark. But leaving these conjectures, let us suppose that Paradise, and the place of Adam's abode, and where Noah dwelt and built the Ark were all in the country of Eden, and that country lay in Mesopotamia, where the moderns place it. Yet there will be no great difficulty to bring animals of every kind to the Ark, since we need not believe that they so totally forsook the place where they were first created, that none of the kind were to be found within some thousand miles of it. We may rather, I think, suppose, that some of every kind would remain in or near the place where they were first brought forth, or otherwise that God who had determined the destruction of the world 120 years before the Deluge came, and known unto whom are all his works from the beginning, could have brought every kind of animals to the place of the Ark (in whatever country that was) with
with as much ease, as a shepherd can lead or drive
his flocks and herds from one pasture to another, for
all his creatures animate and inanimate obey his com-
mand and fulfill his word.

As to the other part of the objection, viz. "How
the animals which are now peculiar to America,
should be able to get thither from the mountains
of Ararat where the Ark rested," I have already
observed, that both men and animals have found
means to travel from the Ark into the most distant
parts of the world, though we can no more account
for their coming into many parts of the earth, than
we can do for their getting into America. But it is
further urged

3. "That if those creatures which are now pecu-
liar to America had come originally from the
Ark of Noab, how comes it that they have left
no traces of themselves behind in any part of the
world through which they made their passage?"
To this I answer, that though there be some kinds
of animals in America (though not so many as is
imagined *) as are not now in the other parts of
the

* If by the unknown serpents in Brazil mentioned in the quo-
tation, the author means serpents of a prodigious size, such are
not peculiar to Brazil nor to America, there are those of no less
dignity in the Indies. In the Island of Java there are serpents
of a prodigious length and bigness, one being taken at a certain
time that was 13 yards and a half long, and so big that they found
a young boar in his belly. The like are also in Congo and Angola.
Even one bigger was about the river Ganges which did much mis-
chief, devouring even men. Huge serpents or dragons also were
in the Deserts of Egypt and Syria. Near the river Bragada in
Africa, the Roman Consul encountered with a serpent of 120 foot
long, which he slew not without loss of many soldiers, being
driven to use against it such engines of war as served properly for
the assaulting of towns.

But if by that expression is meant the rattle-snake, the same is
found, if I am not mistaken, in other parts of America, though I
think there only. But this argument of our authors if it proves
the earth, that is no proof that there were none such formerly. Many causes might concur to the driving animals from one country to another, or else totally destroying them. None of all those creatures peculiar to America are serviceable or beneficial to mankind, but the contrary. What wonder then is it, that when lands came to be inhabited and full of people, men should endeavour to destroy all such noxious creatures as much as they could? Or that such should subsist in America, where the natives for the most part had no settled habitations, but removed from place to place as their occasions served, where there are vast woods and great tracts of land uninhabited, where all such creatures may live undisturbed. This we know, for instance, that there are not now, nor have been for some centuries past, any wolves in Great-Britain, but we know too that this island was before exceedingly pestered with them. In like manner some animals are known to have been formerly in some countries where now there are few or none.

4. It is said, "that some animals cannot live out " of the particular clime wherein they are, &c." Now supposing this was true, which I think it is not, since we find that many foreign animals from very different parts both hotter and colder than our climate, are brought into this and other neighbouring countries and do yet live though under confinement; supposing it true, it will not necessarily infer that every land had its animals from the first Creation, since it may be otherwise accounted for, viz. from the power of custom. For let it be considered

any thing, will prove too much. It will prove after the same manner that neither were Asia or Africa subjected to the Deluge, since there are birds and beasts peculiar to each of them, and no where else to be found.

1. That
1. That the posterity of Noah first settled in the Plains of Shinar about Babylon, but when upon the confusion of tongues they dispersed, they by degrees, and in time, spread themselves over all the earth, and even into those parts of it, where one would think they never could have endured the extreme cold which reigns in them, as in Lapland, Siberia, Iceland and Greenland, in which last place the Danes or Norwegians found natives when they first discovered it. Now so very different are the climates of Shinar and Greenland, that it can scarce be imagined, that men's constitution could bear those cold and frozen regions, who came from so much a warmer climate. This shews that the constitution of mankind is such, that though it cannot bear the extremes of heat or cold on a sudden, yet by degrees it may be inured to either. And though to transport the inhabitants of Guinea to Iceland, or vice versa, they could not live on so great and sudden a change, yet by slow removals and long intervals (as the progress of mankind was from the center of the most distant parts of the earth) they can accustom themselves to any climate in time. The same I say as to the animals, which bringing a natural covering with them into the world, and being thereby better fenced from the cold than man, and being also better able to shelter themselves from heat by retiring in the day time into woods, caves and dens, and ranging for their prey in the night, though they could not perhaps live in a contrary climate on a sudden, yet by degrees may be inured to any. All that this argument proves then is, that custom is a second nature both to men and animals.

2. We must therefore distinguish between the animate and inanimate parts of the Creation. Vegetables will not thrive in all soils and all climates indifferently, but require different degrees of heat and moisture according to their specific natures. The several
several parts of the earth therefore, according to their distances from the Equator, lying under various climates and containing very different soils, it pleased God to furnish every country from the beginning with vegetables, plants and trees proper to the clime and soil; but not so with men and animals, who being not fixed to a place as plants, could extend themselves to all the distant parts of the earth, and by degrees accustom themselves to any climate. Besides the several tribes of animals are endowed with a wonderful sagacity or instinct to discover their proper food, and the place fittest for their abode; as also to shun their particular enemies, whether men or other animals. But

4. There is I think a strong proof that there are no animals in America, but what came originally out of the Ark arising from their numbers. Had that large continent been furnished with its own peculiar animals from the first Creation (as is supposed in the Objection) and had no men inhabited there before the Deluge, nor yet America been subjected to the Deluge, (as is likewise supposed) then in that case, animals there of all kinds must have increased and multiplied in that spacious continent to such infinite numbers, as to have almost covered the face of the earth; and yet it does not appear, that animals of any kind are more numerous there than in many other parts of the world; Buffaloes alone excepted, which lived unmolested in the vast woods and uninhabited lands above Buenos-Ayres. Of these it is reported that a wandering traveller might fall into a herd of 50,000 of them, from which he could not extricate himself in three days. But to such a number might they have increased (unmolested as they were) though but one single pair had been brought thither 2000 years after the Flood. The Spaniards indeed have made good riddance of them since, for having set up a traffic for their hides only
only at Buenos-Ayres, leaving their carcases to be devoured by the wild beasts and ravenous fowls, they have through covetousness so reduced their numbers as almost to destroy the brood, to the great injury of the now civilized natives, who being by the Missionaries brought from their hills and woods into more convenient habitations and formed into societies, stood in great need of them for their Winter provisions.

With respect to the point we are now upon, viz. America, Mr. Woodward in his Essay towards a natural History of the Earth promises to close up, Sect. 2. of Part. III. with a discourse concerning the migration of nations after the Deluge, and to make out, 1. Who they were who first peopled America. 2. When they departed thither. 3. What course they took, and by what means both men and beasts as well serpents and the other noxious and more intractable kinds of them, as the more innocent and useful got thither. 4. Whether there remain any certain vestigia or tradition in the writings of the ancients about these Americans, and what country they intended under the name of Atlantis. 5. Whether the Phoenicians, or any other nation in old times, maintained anciently any commerce or correspondence with them. 6. How it happened that both the inhabitants of that and of our world, lost all memory of their commigration hence. 7. Whence arose the difference in person, or in the external shape and lineaments of the body, in language, in diet, and manner of living, in arts and sciences, in customs religious, civil and military betwixt those Americans and their old relations in Asia, Europe and Africa. With animadversions on the writings of Grotius, De Laet, Hornius, and others on this subject. (p. 165. 2d. Edit.)

These are all curious particulars and would have fully exhausted the subject; but whether he was
able to make them all out at the time, or only set them down with an intention to search afterwards into them, I know not; but should think, that if he was able to give a satisfactory account of these important subjects, from the writings of the ancients, and modern discoveries and relations of those regions, some learned and inquisitive person might be able to do the same. Such an undertaking would enlarge the History of mankind, and give a further insight into the ancient manners and customs of the world.

S E C T. V.

A Recapitulation of the answers to the several arguments against an Universal Deluge brought from the state of America.

THOUGH I have insisted somewhat largely on the subject of animals in the preceding section, because it appears to be the main difficulty with some learned men, to their admitting a Deluge universal in extent, and to have inclined even our learned Stillingfleet, as well as Mercator and others before him, to think that America was not subjected to the Deluge, yet I judge it may not be amiss to reduce the answers given to the arguments brought from America into a narrower compass, and place them in one short view for the reader's consideration.

In order to make it probable that America was not subjected to the Deluge, four things are first supposed, which are

I. "That all the animals were created for the use and service of man."

The answer to this assertion is, 1. That it is very evident, that they were not created solely for the use and service of man, since many times they prove pernicious and destructive to him.

2. Had
2. Had they been created solely for the use and service of man, what occasion was there for any animals in America before the Flood, when according to the same authors, America was not inhabited before and could not be for many ages after the Deluge.

II. "That every Land or Continent had its own peculiar animals from the first Creation." To this it is answered,

1. That though the earth was chiefly designed for the habitation of mankind, who were to replenish the whole in due time, yet there were no more than one man and one woman created at first, much more then was one pair of each kind of animals sufficient for stocking the earth, which breed much sooner and multiply much faster than men do.

2. That if every Land had had its own animals from the first Creation, they would in 4 or 500 years, while mankind were but few in number, have increased to such an immense multitude, as men could not have subsisted for them; there being at that time nothing the food of man, which was not eaten also by some or other of the animals.

III. The third is, "That some kinds of animals cannot live out of that climate in which they are bred." To this it is answered,

1. That custom is a second nature to animals as well as to men, who though they cannot bear sudden removals from one extreme to the other, yet by degrees and intervals can injure themselves to any climate in time.

2. That animals from many different parts of the world are brought into Europe, and live in this and other kingdoms though under confinement.

IV. "That as America is supposed not to have been inhabited before the Flood, there is no reason to think it was subjected to the Deluge." To which it is answered...
1. That it is more than probable that America was inhabited by mankind before the Deluge, because the other Hemisphere alone could not have maintained the vast numbers of men that were on the earth.

2. That though America had not been inhabited before the Deluge, yet it must necessarily have been subjected to the same fate with the other continents, because it is naturally impossible that the waters could have risen 15 cubits above the highest hills in any continent without overflowing the others equally. Again

From the state of America, which is separated from the other continents by vast oceans on one hand, or impassable mountains on the other, and in which there are several animals, which are not to be found in the other continents, the following objections are raised.

1. "The distance and situation of America considered, how could any of those animals peculiar to that continent travel to the Ark of Noah, in order to their preservation, particularly that creature called the Iguana or Sloth, which by report can scarce make 50 paces in 24 hours?"

2. "How should they be able to travel back again into America from the Ark of Noah over impassable mountains, or pass those vast oceans that lie between, without the help of man?" And

3. "If indeed they came originally from the Ark of Noah how comes it, that they have left none of their kind behind them in any place through which they have passed?" To these objections it is answered

1. That there is nothing singular in the case of America, its having animals of several kinds peculiar to itself, and not elsewhere to be found. The same is true of both Asia and Africa, which have each of them peculiar animals that are nowhere else;
every species of animals not being designed for every place, but some for one country and climate, and some for another according to their several natures.

2. That though America be now separated from the other continents by vast oceans or unpassable mountains, it might be quite otherwise before the Flood, which has made very great changes in the face of the earth, especially with respect to the oceans, as will appear hereafter. Before that, the communication might be easy between America and the other continents.

3. That though we are told where the Ark rested, viz. on the mountains of Ararat *, yet it is not said where it was built, or where Noah lived that built it, which might be far enough from the place where it is commonly supposed; so that those animals which are peculiar to America might not have so far to travel to the Ark as is imagined. Why should we then form all our schemes about the Ark and the animals, with respect to one particular place, when there is not the least certainty, in what country it was that Noah lived? But

4. In whatever part of the earth Noah lived, and the Ark was built, it was at God's command that the several kinds of animals came thither in order to their preservation; and his command could bring them from the farthest parts of the earth, during the 120 years that the world lay under the sentence of condemnation. If it should be said, this would infer an extraordinary power out of the ordinary course of nature, the Reader has my free leave to conclude it thus to have been effected, since we have

* Ararat, according to St. Jerome, is a champaign country incredibly fertile, through which the Araxes flows at the foot of mount Taurus, which extends itself to that plain. Wherefore by the mountains of Ararat, on which the Ark rested, are not to be understood the mountains of Armenia, but the highest mountains of Taurus that overlook the plains of Ararat.
several instances in Scripture of the like kind, where lions, bears, ravens and whales obeyed his word, and executed the commission he gave them. And how should not the like word be obeyed by all the animals, in this extraordinary case of universal concern, as by single animals in some singular and private concerns? But after all, none of the animals might have so very far to travel to the Ark; for if one pair only of each kind was created at first, as we have given sufficient reasons to believe; and all those in, or near one place, since they were all brought before Adam, and received names from him, there is no absurdity in the supposition, that some of every kind might remain in the country where they were first produced, from whence Noah's habitation might not be many hundred miles distant.

5. That some kinds of animals have been formerly in places and countries, where now there are few or none at all; as abundance of deer in Switzerland, when full of woods, now few or none, as is reported; and in England where in one reign all the wolves were destroyed, which before pestered the nation. Few or none of those creatures peculiar to America are useful or beneficial to mankind, what wonder then that such should be hunted and destroyed in places well inhabited, and yet remain in the vast woods or uninhabited lands of America? Even as monstrous serpents or dragons, and other strange animals in the wilds and deserts of Africa and Asia.

6. That as both men and animals have found their way into all the distant countries and islands of Asia, Europe and Africa, and even into such cold regions, where it may be thought no men could live, though they be separated by seas, lakes, rivers, deserts, mountains and vast woods, so might they find their way into America, which it is highly probable is joined to the other continents and which was
was certainly intended to be inhabited as well as the rest of the earth, though we know neither when or how, nor at what different times men or animals got thither: But what has not yet been discovered, may in time, as many things formerly unknown have since been found out.

7. That it is in vain to form an objection against the extent of the Deluge from the difficulty of accounting for the passage of animals into America, when the same objection lies in a manner as strong against the passage of mankind thither. And yet they who make this objection acknowledge that the inhabitants of America are sprung from those who came first out of the Ark. Now could they tell us, when and by what means, and at what times mankind came thither, then might we be able to tell them also, by what means the animals came thither.

8. That most probably, serpents, ravenous birds and wild beasts have passed to America over those mountains of Tartary, by which it is joined to Asia; but that other animals have been transported thither by mankind; and such as they did not transport, were not there to be found till brought by the Spaniards, and other Europeans*: and as in those large groups of islands lately discovered in the East-Indies, there were no four-footed beasts nor tame fowl.

CHAP.

* In insulis fortunatis, & in his quae nostra aestate sunt inventae, multa animalium genera, quae inter nos sunt frequentissima, omnino nulla erant, itaque importata sunt, quemadmodum in stirpium generibus quotidie usf venit, ut fermen aut fuscus alquius ab alius ad alios gentes transferatur. Lud. Vives.

America had very few of such creatures as Europe yieldeth until they were transported thither, and therefore they have no Indian names for them, but those which the Spaniards that brought them gave unto them, as horses, kine and such like. Of fowls they have many kinds as we have, partridges, turtles, pigeons, flock-
Sect. I. How the earth could maintain so great a number of men and animals as were upon it before the Deluge.

THE learned Mr. Derham hath judiciously remarked, "That the whole surface of our globe can afford room and support only to such a number of all sorts of creatures. And if by their doubling, trebling, or any other multiplication of their kind, they should increase to double or treble that number, they must starve or devour one another. The keeping therefore the balance even is manifestly a work of the Divine Wisdom and Providence." But now we have made the number of mankind, that were, or might have, by the ordinary course of nature, been upon the earth 200 years before the Deluge came, so immensely great that it will be thought impossible that the earth could afford sufficient maintenance for such multitudes, besides the numerous tribes of animals that were upon it. And this difficulty will be further increased, if it be considered

1. That no animal food was then eaten. And this is the reason, why I said before, that the Antediluvians could not have lived in great cities containing some hundred thousand inhabitants, as men do now, since a very large tract of ground for the fruits
doves, quails, poultries, herons, eagles, and a world of parrots, hens they had before the Spaniards arrived. Purchas.

The useful, domestic kinds of beasts, as bullocks, cows, horses, and goats in Virginia were transported from England, and so by the Spaniards into other parts of America. Idem.

There were no elephants nor rhinoceros in America, which are numerous in Asia and Africa.

† Physo-Theology, p. 169.
of the earth, and very widely extended had been requisite to the maintenance of so great numbers in one place, which would have proved greatly inconvenient.

2. That a much larger quantity of food was necessary to the Antediluvians than for men now a days. That strong and robust constitution of theirs which held out to eight and nine hundred years would require it. Besides it is highly probable that they were men of a larger stature than the human race most commonly is at present, and consequently would require a proportionable quantity of food. I do not mean that they were all of a gigantic size, for that was extraordinary even then, but that they were of a larger stature than the present race of mankind, and that as between 5 and 6 foot is the common size now, 9 or 10 might have been the ordinary measure then. Even now in America there are some savage nations of a much larger stature than the Europeans. When Ferdinand Magellan wintered in those Straights, which from him have taken their name, a native of the place was brought to him, to whose girdle a man of a low stature indeed only reached, and who seems to have had an appetite proportionable to his stature, for he died in the voyage for want of sufficient food, which they could not spare.

In Cândido's Voyages it is said that our men measured the print of men's feet 18 inches in the sand, and Knivet writeth that he saw footings at Port Desire as big as four of ours, and two men newly buried, one of which was 14 spans long, and a young man who was yet above 13 spans high. Now allowing two spans to a cubit, the man newly buried was 7 cubits or 10 ½ feet in height, and the young man was not yet come to his full stature; but if they really saw footings four times as big as ours, and the body was in proportion (as ex pede Herculem) such men must have been giants in a gigantic nation, about
about 24 foot high. But however that is, the very large size of the natives there is confirmed by other relations. The Hollanders carried away four boys with them, one of which learning their language, told them of three tribes in those parts of ordinary stature, and of a fourth which were giants of ten or eleven foot high who warred upon the former. The same has also been confirmed by some of the Missionaries since, while the ships lay several months in those freights by bad weather. That the stature of mankind was larger both before and after the Flood seems apparent from the measure of the cubit. We reckon it a foot and a half or 18 inches. Now 18 inches is the cubit of a man about six foot. But several learned men have shewn that the ancient cubit was something more than 21 inches; but 21 inches and something more may be the cubit of a man of 9 or 10 foot high. Whence I think we may infer that the stature of mankind both before and several ages after the flood was greater than it is now, and consequently that a larger quantity of food was required to so much larger bodies. This was certainly the opinion of the ancients, as besides other evidences appears from that line towards the end of Virgil's first book of Georgicks,

Grandiagae effossis mirabitur offa sepulchris.

Several learned men are, I know, of another opinion, and think that mankind have suffered little or no diminution in their stature since the beginning. They might with as good reason say, that mankind had suffered no diminution in their years or term of life since the beginning. The arguments they go upon are these. 1. "That the stature of mankind now is the same as it was 1000 or 1500 years ago, that our Queen Elizabeth, for instance, was of the same stature with Julius Caesar." They might have gone back 500 years more from his days and perhaps
perhaps found it much the same then as now. For I reckon that the stature of man and the age of man bore some proportion to each other, and that as after the Flood man’s years were by little and little reduced to the present standard, so was also his stature. 2. “That if we suppose mankind to have been of a much larger stature before the Flood, we must also suppose the animals to have been so much larger and taller in proportion, else they could have been of no service to men; for instance, how should horses of the ordinary size now have been able to carry men of 10 or 12 foot high?” Now though I see no great reason for allowing this supposition, yet I see no great inconvenience in granting it. 1. I see no great reason to allow it, because mankind might then be of a larger stature, but the animals much the same as now. I find not the least hint that the animals about the Straights of Magellan, nor yet in other parts of the world where men are of a gigantic size, are any thing different from what they are in other parts, having only the difference that may arise from their pasture, which may make a considerable difference in the size of animals; for instance, how much larger are the cattle in Holstein and Denmark, than those that come from the Highlands of Scotland, and how much larger are the mares in Flanders, than the Manks horses. 2. That horses of the present size could not well carry men of the size I suppose the Antediluvians to have been, I readily grant, but the question is, whether the Antediluvians used horses for riding and travelling as we do now? I rather think they did not, and that the way of travelling then, as it was for many ages after the Flood, was much on foot, but for riding and carrying heavy burdens they had elephants, camels and other beasts of great strength. I find no instances of horses used either for riding or war in the days of Abraham, Isaac or Jacob,
Jacob, though there were horses for chariots in Egypt in the time of Joseph, but for journeying, camels and asses of which they had plenty, the asses in those countries being of a much larger size than those with us, and of much greater value. But then again neither do I see any great inconvenience in granting that the animals in the Antediluvian world were of a larger size than they are at present. So far as the more luxuriant fertility of the primitive earth would make them such, they would undoubtedly be so, as we have observed the different size of animals at present, according to the different pastures and climates they are bred in; nor need we fear room enough for them in the Ark, especially as to their height, the point now in question. I know not whether we might not make some conjecture, (and it will be but guessing at best) of the stature of mankind from the dimensions of the Ark, which being given by that Wisdom which orders all things in number, weight and measure, would neither be greater than was necessary, nor less than was convenient. The height of it was 30 cubits, and that height divided into three stories, allowing a cubit for the thickness of each of the floors (though perhaps the bottom or ground floor would require more) there would then be left 2½ cubits, or near it, that is 9 cubits or 1½ x feet to the height of each story. Now as it would have been vastly inconvenient for Noah and his family who had occasion every day and several times in the day to be in each of the stories, had the stories been so low as that they must have stooped all along; so on the other hand, had the men been no taller than 6 foot high, as men are now, the height of the stories at 13 foot or 13½ seems very disproportionate, and the height of the Ark much more than was necessary; whereas if we suppose them 10 foot high, the remaining 3½ feet gave sufficient room for free air, both to them and the
the animals. Let us now hear what Sir Walter Raleigh faith on this subject in his account of Sicily.

"It may perchance seem strange to the reader, that in all ancient story, he finds one and the same beginning of nations after the Flood; and that the first planters of all parts of the world were said to be mighty and Giant-like men; and that as Phœnixia, Egypt, Lybia and Greece had Hercules, Orestes, Antæus, Typhon and the like, as Denmark had Stærbaterus remembered by Saxo Grammaticus; as Scythia, Britany and other regions had giants for their first inhabitants, so this Isle of Sicily had her Lestrigones and Cyclopes. This discourse I could also reject for feigned and fabulous, did not Moses make us know that the Zantezumims, Ensims, Anakims and Og of Bashan, with others which sometime inhabited the mountains and deferts of Moab, Ammon and Mount Seir, were men of exceeding strength and stature, and of the races of Giants; and were it not that Ter-tullian, St. Augustine, Nicephorus, Procopius, Ili-dore, Pliny, Diodorus, Hordotus, Solinus, Plutarch and many other authors have confirmed the opinion; yea Vesputius in his second navigation to America, hath reported that himself hath seen the like men in those parts." * B. 5. Ch. 1. S. 4. § 1.

Now

* "There is a manifest alliance and congruity observable in nature between the stature of man's body, and his age, during the time of his growth, whence the Greeks thought it not improper to express both these by *σώματα*, which signifies promiscuously stature as well as age. And as 5½ feet may well be esteemed the most settled and ordinary degree of height in a man, so about 70 years may justly be allowed the most common period of his age; yet daily experience and observation acquaint us with those that vastly exceed these limits in both their respects: and as we have certain history that informs that the youngest of these, Thomas Park and Henry Jenkins both of England, and the old Countess of Drury and Mrs. Littleton both of Ireland, fully complicated double that usual term
Now whence could it come that the first planters of all nations were men of gigantick stature, but from hence that they were sprung from those Antediluvians that were of like stature, and that even Noah and his sons were of much greater stature than men are at present.

Hitherto we have instead of removing, only increased the difficulty of the earth's furnishing sustenance for such immense multitudes of men and animals as were upon it before the Deluge, we must therefore in the next place endeavour to solve it. But here, I think, it will be first of all necessary to trace this matter to its source, and to consider particularly the food that was appointed both for men and animals before and after the Fall, which shall be the subject of the next Section.

"term of life; so we have no reason to question the account given us of others that have been found in stature double the common standard of man. Nay both these properties longevity and high stature do so naturally result each from their proper causes, that they are often observed to become hereditary and run in whole families; whence the Greeks had their ἰαράσκοι, and the Romans their Cefii, and in Palestine of old they had their Anakims or sons of the Giants. So that human gigantick bodies are no way inconsistent with the course of nature. And indeed we have some clear testimonies given us by authors of unquestionable credit and veracity, that there actually have been men in the world, and likely still are, of so large a bulk, and so high a stature of body, as properly to deserve the name of Giants."—— And after giving some instances of such both antient and modern, he adds, "from these warrantable histories, we may clearly deduce that there have been in nature human bodies of 11 and 12 foot high." Dr. Th. Molineux. Lowthorp's Abridgment, Vol. 3. p. 6.

The same Dr. Molineux by measuring an Os frontis, in the Medicine School at Leyden, found that the man to whom it belonged must have been 11 or 12 foot high. Ibid. Vol 3. p. 2.
S E C T. II.

Of the food of men and animals at the beginning and after the Fall to the time of the Deluge.

HOW necessary food is to the support of men and animals in this their present state on the earth we need not be told, since we sensibly feel that necessity, and Moses has given us a particular account of that food which was appointed for each, and it is this. And God said (to man) Behold I have given you every herb bearing seed, which is upon the face of all the earth, and every tree in the which is the fruit of a tree yielding seed, to you it shall be for meat: And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein is life (or a living soul) I have given every green herb for meat *. Now we cannot doubt but that the food here appointed both for man and animals was sufficient for their support and maintenance, and that no more would have been necessary for man had he continued in his state of innocence. They who think that mankind fed on animal food from the beginning, and that the grant of this was included in that dominion which was given to man over all the other creatures in these words———-and have dominion over the fishes of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth, † would do well to tell us, that if this was the case, what occasion there was to renew this grant after the Flood, and to add, every moving thing that liveth shall be meat for you, even as the green herb, have I given you all things §. This surely implies that the green herb and fruits of the trees were

* Genef. i. 29, 30. † Genef. i. 28.
§ Genef. ix. 3.

all
An Enquiry into the Truth and all that was granted to man at first, but now over and above that, was added the grant of animal food. For in a deed of gift all is specified that is given or granted, and whatever is not expressly mentioned, is excluded or not given. Here man's food is appointed and specified, what is not expressly mentioned is therefore reserved and not granted. Besides this grant of appointment of man's food respected not Adam only but all his posterity till an additional grant was made. And if mankind before the Flood made bold to eat animal food, they exceeded the grant made to them, but it is a strong argument, I think, that they did not. That after the Flood God was pleased to make them a new grant of animal food, which considering the change that the Deluge had made in the Earth, when men began to multiply, would be needful for them, which before that it was not, and therefore not given.

But what is then meant by that Dominion which was given to man over all the creatures, if they were not for food? The animals though they were not designed for food at first, as not then wanted, yet were useful and serviceable to man in many respects as will appear. But as most of those who are serviceable to him are either stronger or swifter than he, others again are destructive to him. He could neither have made use of the one, nor defended himself from the injuries of the other had not an impressed love of man been laid on the creatures.

To the animals no further grant was made than at first, but to man another was made immediately after his Fall and expulsion from Paradise, implied in these words. *In the sweat of thy face shalt thou eat bread, till thou return unto the ground.* This was in truth a punishment for his transgression, as well as a grant of other food, but yet what was now become necessary to him. Paradise was no doubt planted with the most excellent fruits, sufficient to have sustained
Sustained his life in health and vigour in his innocent and happy state; but after his transgression, being thrust out from that happy abode, and having then only the fruits of the common earth to feed on, which were not so nutritious as those of Paradise, he stood in need of something else to sustain life, and therefore bread produced by culture and other preparations for his food was now added, which before was not necessary, and thence called the staff of life. This seems a plain reason why bread was added after he came to live on the common earth, though perhaps another reason also for that addition may be given from the change that happened in man's body after his fall, which we may have occasion to take notice of in another place. Bread being now become the staff of life, Cain the first man born, became a tiller of the ground or an husbandman, as the next in birth Abel, became a keeper or feeder of sheep.

But though Sheep are only mentioned, yet the occupation of a Shepherd, was to look after herds of cattle as well as flocks of sheep. When five of Joseph's brethren were presented before Pharaoh, and asked their occupation, they answered thy servants are Shepherds, both we and our fathers, yet it is certain they had numerous herds of cattle as well as large flocks of sheep, as appears by their history; and by the noble present of both kinds which Jacob made to his brother Esau, likewise from Joseph's speech to Pharaoh, My father and my brethren and their flocks and their herds, and all that they have are come out of the land of Canaan, and behold they are in the land of Goshen; and from what Pharaoh said to Joseph, If thou knowest any men of activity among them, make them rulers over my cattle. But the flocks of sheep and goats being more numerous than the herds of cattle, and requiring greater care and watchfulness to defend them from the wild-beasts, the name
of the office was taken from the principal care, viz; that of the flocks.

Abel's becoming a shepherd then in the full extent we may suppose of the office, looks at first sight as if mankind fed on animal food from the beginning, and is no doubt the reason of many learned men's embracing that opinion; but as I have before given reasons to believe the contrary, I must shew what reasons there might be for such an employment so early. Now the first and most obvious that occurs is, the necessity of providing animals for sacrifice. That sacrifices were of human invention and not of divine institution, as some learned men contend, I can never persuade myself. But though this be a matter something foreign to our present inquiry, nevertheless as the learned Bochart, and others since who allow the divine Institution of animal sacrifices, do also believe that animal food was granted to mankind from the beginning, it will be necessary to consider the reasons given for that opinion; and this is a-priori to our present subject. The argument of Bochart is to this effect.

"That as sacrifices were in use before the Flood, so was the eating of flesh, for that Abel would not have offered that to God, which he believed unlawful to eat; and it had been in vain for him to have fed lambs, which he could not himself make use of. But the very distinction between clean and unclean, shews that some were permitted and others forbidden, since by their own nature, there is nothing unclean in animals, but that is unclean which is forbidden by the law. And therefore what is said Genesis i. 29. To you it shall be for food, we refer not only to plants, but also to animals, whereof mention is made in the verse preceding."—— Now to this I answer.

1. That in the account of the Creation given by Moses the animals are first created, and upon consultation,
fultation, man after them. After man's creation his food is distinctly appointed him, and that also of the animals as distinctly. Now it would be strange if animal food should be included in the grant to man, when it seems expressly excluded, there being not the least mention made of it, which one would think could not have been omitted, had it been granted.

2. If animal food was included in the original grant of absolute dominion over all the creatures (which man's superior reason in some measure gave him) what occasion was there for making this grant in express terms after the Flood? The same blessings which were given to Adam the parent of the first world, were renewed to Noah the parent of the second, to be fruitful and multiply and replenish the Earth, the same dominion given him over all the creatures, not in the same words indeed, but in words equivalent; and yet the grant of animal food is made in express terms over and above. This I think clearly shews that it was not included in the original grant of food, but now first superadded.

3. That the distinction between clean and unclean solely respected animals offered in sacrifice in the Antediluvian world is evident from hence, that Noah upon his coming out of the Ark took of every clean beast and of every clean fowl, and offered burnt offerings unto the Lord;* and that upon the grant of animal food to him and his posterity, which was posterior in time to the sacrifice, there is not the least mention of any distinction between clean and unclean with respect to food, but the very contrary, since the grant runneth, Every moving thing that liveth shall be meat for you, even as the green herb have I given you all things †. That distinction of clean and unclean as to food, came in with the Law of Moses, and was dis-

* Genef. viii. 20. † Genef. ix. 3.
ferent from that of sacrifices, there being several creatures clean for food which were not to be offered in sacrifice.

4. I can perceive no necessary connection between these two, of man's offering unto God and of his eating the same things, or why men might not offer unto God, that of which they might not eat, if in the one case it was commanded, and in the other not granted, as not yet needful for man's support. By the Law of Moses several things might be offered and dedicated to God, which man neither did nor could eat of.---But neither were the animals offered in sacrifice of no use to man's bodily life; for as the first cloathing of Adam and Eve was made of skins (probably of those beasts which were offered in sacrifice) so might that be the chief cloathing of mankind for many ages or till the Flood, yea and long after it too, as it is of the wild Americans to this day. Here then we see a sufficient reason for the office of a shepherd as well as of an husbandman after the fall.

But it is further urged "That there could be no merit in making offerings unto the Lord of that which cost them nothing." To this I answer, that the merit lay in giving obedience to the divine Institution. Nor can it be said, they offered of that which cost them nothing, since they were obliged to tend and take care of sheep, goats and cattle for the purpose of sacrifices, which 'tis highly probable were offered every Sabbath day, that being the instituted mode of worship. And this tending and taking care of herds and flocks* made those creatures as much their own, as the same care made the flocks and herds of the Patriarchs after the Flood, and of the Israelites under the law their own; and so were fit to be offered unto God, as being in this

* N. B. All animals offered in sacrifice were of the domestic kind, as bullocks, calves, lambs, kids, pigeons and doves.
fence their own, though in a higher sense all the creatures are God's. To have offered any animals of which they had taken no care, but might per-
chance meet with amongst those that went wild, had
dwhelmed great disrespect and contempt of the divine
Institution. And for this very reason the office of a
shepherd became necessary immediately after the fall
of man; and both these employments, that of tilling
the ground for his sustenance, and that of a shep-
herd of flocks and herds for sacrifices, were incum-
bent on Adam, till his son grew up to eafe him of
that burden and partake of the trouble.

Again it is allledged " That unless men had eaten
animal food themselves they could not have di-
" stinguished between the fat and the lean, or be-
" tween the good choice pieces and others."-----There is no distinction between the good choice
pieces and others in any account of the Antediluvian
world.-----The distinction between fat and lean beasts
is easily known to those who are conversant about
such matters by the eye or by feeling. The most
thriving animals are the fatterst and the best; and
the best of any kind is the fittest to be offered unto
God who gave all, and therefore Abel brought for
an offering, of the firstlings of his flock and of the fat
thereof, that is, of the fatterst and so the best *. 

But though from the answers given it appears,
that the arguments brought for men eating animal
food before the Deluge be of no force, yet they may
have but little weight with those who regard names
and authorities more than reason; and as great men
have often great singularities, so the great Grotius,
on the supposition that animal food was not included
in the original grant of absolute dominion given to
mankind over all the creatures, attempted to explain
away all animal sacrifices before the Deluge; and

* De primogenitis gregis sui, & de aliis eorum, i. e. Hique

that
that Cain's oblation was of the turf of the Earth; and Abel's of the wool and milk of the flock. But as great a name as Grotius deservedly has, I can yet oppose a greater name than his to the contrary, viz. that of Moses, who relates that Noah builded an altar unto the Lord, and took of every clean beast and of every clean fowl, and offered burnt offerings upon the altar. Now Noah's sacrifice upon his coming out of the Ark (for which no command is given) is only to be accounted for, by its being the established mode of worship in the Antediluvian world, and what had been his devout observance before: and that it was the established mode of worship from the beginning appears from Abel's offering and the defect of Cain's *. And Moses giving an account of the offerings of the first men that were born into the world, attended with many remarkable circumstances was sufficient to shew that it was from the beginning, and he had no need (in his designed brevity) to repeat the same again, till another remarkable occasion offered, viz. Noah's sacrifice when the Deluge was over. His mentioning it therefore first at the beginning of the old world, and again at the beginning of the new, is a full evidence of its being the established mode of worship.

But as Error is more fruitful than Truth, others have refined upon this opinion of Grotius, and gone lengths beyond him; and a late learned and ingenious author is so far from allowing any kind of sacrifice to be of divine institution, "that he declares "the general notion of the thing itself to be in every "view of it so glaring an absurdity, that he is "amazed that it should ever enter into the head of "any rational creature." But I think there is a yet greater absurdity, which is, to contradict the common sense and reason of all mankind, who have ever thought that God was to be honoured with his own

* See Kennewick's Discourses.
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gifts, and that the best of the kind, was fittest to be
offered to the Deity or employed in his service, and
who never approached their superiors without a pre-

tent, as is the constant custom of all the Eastern
Countries to this day; till these latter ages, wherein
men have learned to estimate the goodness of a reli-
gion by its cheapness; and who think every thing
waisted that is employed in the service of God, but
nothing too good or grand for themselves, however
extravagant or profuse the expences be. But will
God accept of words or compliments (which the
most covetous may be as liberal of as the most reli-
gious) as a testimony of honour, when every thing
valuable is withheld? Or can we testify the sincere-

ty of that profound respect, which as creatures we
owe to the Almighty Creator and Governour of the
world, by words or thoughts only, when he has
bountifully given us so many other things where-
with to honour him and his service? There is there-
fore good fene as well as piety in David’s prayer at
the dedication of his own and the peoples offerings
for the building and service of the Temple, 1 Chron.
xxix. 11. & seq. This is all the answer I shall give
to this singular notion at present, since the reasons
for the divine institution of animal sacrifices will
come more properly into our third Book, when we
enquire into the state of Religion and Morals in the
ANTEDELUVIAN WORLD.

Two things I have here endeavoured to defend in
opposition to the opinion of some learned men. The
first that animal food was not eaten by the ANTEDELUVIANS, at least by the race of Seth and other pious
sons of Adam. In proof of this I have given a rea-
son why, though the descendants of Cain should
have made bold to transgress the law of their food,
yet the posterity of Seth and others would not *. But 2dly, I have shewed that no animal food was

* Ch. 1. sect. 3.
An Enquiry into the Truth and

eaten by Noah and his family during their year's confinement in the Ark *, because there was no provision made for it, since every living creature that was taken into the Ark was ordered to be brought forth when the Flood was over †, it was not eaten by them, because the grant was not made them till after the Flood. And this I think is full to the point.

The second is, that yet notwithstanding, animal sacrifices were of Divine Institution from the beginning. In proof of this the sacrifices of Cain and Abel, the one accepted, the other rejected is an argument of some weight. 2. I have shewn that the distinction between animals clean and unclean before the Flood solely respected sacrifices and not meats. This distinction is first mentioned, when animals were to be taken into the Ark. Again it is observed by Noah in his first sacrifice who offered of every clean beast and of every clean fowl, and 3dly when the grant of animal food is given there is not a syllable of this distinction with respect to meats but the contrary. Now if the distinction between clean and unclean at this time, solely respected sacrifices, who should make this distinction, man or God? He that had offended and was the guilty person, or He that was to be propiciated? Reason will surely convince us that it was God who appointed the mode of worship and made the distinction. A worship acceptable to God from sinners and offenders must be appointed by God, and could never be left to the inventions of men, who could not in their case know in what manner the offended Deity was to be approached or appeased without his special direction, as a ground of their Faith in their addresses to the infinite Being; and this I take it, is also fully to the point.

But now in an Enquiry after Truth I must not conceal an argument that may be brought against

* Ch. i. sect. 3. † Gen. viii. 17.
the first of these points, though I have not seen it urged by any one, and it is this. It is said (in Gen. iv. 20.) that Jabal the son of that Lamech who was of the race of Cain, was the father of such as dwelt in tents, and have cattle, that is, he taught men to erect tents or build cottages in the fields for the better management of herds of cattle, and keeping them together. Here the question is, whether the race of Cain (in whom the corruption of the old world began) could offer sacrifice, after he was banished from the place of worship, and of Divine acceptance? If not, what use had they for keeping cattle unless it was for food? I confess, I am of opinion that Cain could not offer sacrifice after his banishment, for which I shall give my reason in another place, at least not for a long time, though he might (if truly penitent for his crime) have been allowed that privilege afterwards; but of this we can be at no certainty, having no light to guide us in our search here. But 2. Many uses might be made of cattle, both alive and dead though they were not eaten, viz. alive, for carriages and burdens &c. dead, for their skins and horns; as is the practice of the Spaniards at Buenos-Ayres, who made a great traffick of the skins of Buffaloes, though they eat not the flesh, but leave the carcasses to be devoured by the wild beasts and ravenous birds, which happens in a very short time. But it may be objected that “if this was “all the use which those Antediluvians of the race “of Cain made of the cattle, there was no need of “herding them, and erecting tents in the fields for “that purpose?” The different circumstances of times and persons will show that that might be necessary in one case which was not in the other. In America the natives lived then at many hundred miles distance, till they were civilized by the Missionaries, and brought to live in society and community, and nearer to the Spaniards. These again were but few, living
living about the sea-coasts, and the country above un-inhabited, so that the cattle were no man's pro-
erty. But it might be far otherwise in the Antedi-
cean world in the time of *Jabal*. According to
the ordinary and regular course of nature, *Jabal* who
was the seventh from *Adam* by *Cain*, might be born
about the year 976, and he might be 300 years old
ere this improvement of erecting tents in the fields
was made, which brings us to the year of the world
1,276. Now by our second Table it appears that
before that year mankind was increased to above
104 millions; or if *Jabal* may be supposed 400 years
old before this invention, which is no unreasonable
supposition, then was mankind increased to above
419 millions, so that by that time and even before,
it would be necessary to have both lands, cattle and
flocks in property to avoid contentions and quarrels;
and *Jabal*'s invention of erecting tents and cotts in
the fields was a good improvement and highly con-
venient. But flocks and herds might be of great
service to mankind though their flesh was not eaten,
for another reason which I am now to mention.

I have sometimes thought that mankind, though
they had not yet the grant of animal food, might
nevertheless use the milk of animals, and this in
truth seemed necessary to them. Milk was their
first nourishment while they were babes, and that
during five years, which I have shewed to be the
time of nursing in those early days, nor could a
longer time be well allowed, as mankind was to be
propagated, and the whole earth to be peopled.
When they were weaned, they were yet but in an in-
fant state, and milk still the most proper nourish-
ment for them for many years after, and there was
an easy and natural transition from *Breast* milk to the
milk of cows, sheep, goats or other animals. This
might have been intimated to *Adam*, after the
Fall upon the birth of his children, or if you will,
It might be virtually included in that dominion which was at first given to man over all the other creatures, many of which in this case were of great service to him. There is no express mention of this it is true; no more is there of many other things relating to that old world. For instance, in all the account of the Antediluvians there is no mention of prayer; but can we therefore think that holy and righteous men never prayed to God in all that time? Moses gives us an account of the Creation of our world, of the animals, and lastly of man male and female, of Paradise and the state of Innocence, of the Tempter, of the transgression and Fall of our first Parents, and thereby the introduction of natural and moral evil into the world, (whereas before, all things were good and the generations of the world were healthful) of the judgment past on all the offenders, and of God's great mercy in admitting man to a state of penitence, with the intimation or promise of a Redeemer to come, (to keep up their hopes) who should give them at last the victory over their enemy that had deceived them; of the mode of worship established for sinners in their addresses to the Divine Majesty, of the cause of the separation of the first son of Adam and his posterity from the others, of the universal corruption which men fell into at last, which brought the Flood upon the world of the ungodly and destroyed them all, of a remnant both of men and animals saved in the Ark for the peopling and replenishing the earth again, of whom all the nations in the world are descended, and finally of the time or number of years which elapsed from the Creation to the Deluge. All these were facts highly convenient and proper for all mankind to know to the end of the world; but almost all other things, which might serve rather for curiosity than real use are passed over in silence, though some of them may yet be discovered by reason from the analogy of nature, when there
there is occasion to illustrate the works of God or his Providence over mankind.

Now if the milk of animals was in use before the Flood, as for the reason given it seems highly probable, then was it of great service not only to children and young folks, but would also be to aged persons*, and might be necessary besides in many cases. Here then we have another reason for men's early keeping flocks of sheep, and herds of cattle, besides the necessity of them for sacrifices and for clothing, namely the great use they were of to themselves on account of their milk. And therefore, as I have said at the beginning, that I saw no great reason to allow that even the race of Cain did feed on animal flesh, so now, I think, I may say that they had no occasion, and that there is no reason to believe that animal food was at all eaten by mankind before the Deluge. And as ancient tradition had preferred some memory of the way of life in the first ages of the world, which we noted before, viz. that the first men lived on the plants and fruits of the earth, so likewise it was believed that at the same time they lived also on milks, as appears by those two lines of Ovid.

Laetè mero veteres usi memorantur, & herbis;
Sponte sua, fiquas terra ferebat, ait. Lib. 4.

But though I have here and in one or two places more quoted Ovid and Virgil for the tradition of the food and stature of mankind in the first ages of the world, yet I believe their veteres will reach no higher than the first Posidiluvians; for as to the Antediluvians,

* The time of oblation of the child, and of the alteration of the diet of the old man, is most certainly indicated by the beginning and ceasing of the use of teeth. Milk is fit for babes before their teeth come, and old men when their teeth decay again become such as have need of milk and not of strong meat. Smith's Portraiture of old Age.
Certainly of the Mosaic Deluge.

... they and all their works perished in the Deluge, *Sub illo (Noe) omnia retro opera quieverunt per diluvium*, as St. Jerome expresses it, and all of that world was forgotten in after ages, except what was preserved by Moses, from whose writings ancient authors might borrow what they relate of that first world. But though this be the truth of the matter, it is so far from invalidating what I have said of the food of mankind before the Flood, that it is the strongest confirmation of it. For why did men in the first ages after the Flood, live on vegetables, fruits and white meats, but because that was the food of those, who came out of the first world, who still continued the same and brought up their children with it. And though the grant of animal food was given immediately after the Flood, yet is it very probable that neither Noah nor his sons &c. made use of it. 1. Because they had not been used to it, and did not want it, the earth bringing forth plenty enough for the small number of mankind in the first ages. 2. Because of the few creatures that were preserved in the Ark, two only of each kind of the Unclean, and seven of the Clean. Had they presently fallen to feed on either of them, the brood had been soon diminished, nor had there been sufficient for weekly sacrifices. And therefore the grant of animal food did not so much respect the first as future ages, when mankind would be increased and necessity would compel them to make use of the liberty given; and in truth in many hot climates there is but little animal food eaten to this day, in respect of what is used in colder climates, where it is more necessary.

The same I say as to the much larger stature of human bodies, verified by the bodies or bones dug up in after ages. These cannot be supposed the bodies of the Antediluvians, but of those who died after the Flood; and why are they found of so much larger
larger size than men can measure at present, but that they are the offspring of those who came out of that first world, who were men of like or larger stature? This Enquiry into the first food of mankind, the Reader, I hope, will perceive has not been in vain, since from thence we have been able to illustrate some points of importance. And from hence we have found that the whole food of mankind before the Flood consisted of vegetables, fruits, corn and the milk of animals. Nor was this a scanty provision, considering the great fertility of that primitive earth, since from these they might make a great variety of dainty dishes, as we shall have occasion to observe in another place.

SECT. III.

Of the State and Constitution of the first Earth and its fertility both before and after the Fall of man.

THOUGH in the preceding Section I have shewed that the food appointed man, of vegetables, fruits, corn and milk, was ample provision for his sustenance, yet as I have made it apparent, that mankind was increased to an immense multitude before the Deluge, and also that the bodies of men that were to last 8 or 900 years, and their larger stature would require a much greater quantity of food for nourishment than is necessary at present, I must now endeavour to shew how the Antediluvian earth was able to maintain that prodigious number of men and animals, that by the course of nature and regular procession of increase, there would be upon it.

That the earth in its Virgin state, as it came out of the hands of its Maker, adorned and beautified with
with all that variety of flowers and herbage, plants
and trees of different fruits or verdure, was exceed-
ing fertile as well as beautiful to the eye, will not, I
think; be in the least doubted, but how long it con-
tinued in this glorious state is the question, or
whether it might not suffer some alteration and
change upon man’s transgression may seem to admit
of no question. For though the earth itself was in
no fault, as not being capable of any, yet man, to
whom it was given for an habitation, was in a very
great one; and therefore it may be well supposed,
that that earth which was made for man innocent
and obedient to the laws of his maker, would not
continue such to man guilty of transgression and
an offender. Since its good or bad state depended
wholly on the pleasure of him that gave it a being;
and in punishment of man’s offence, its first ferti-
licity and beauty might be diminished; of which
the earth itself would be wholly insensible, being in-
animate and brute matter, but man would be very
insensible to his great grief and sorrow. In this point
however authors are not all agreed.

That a very great change indeed happened to the
earth at the Deluge is agreed on all hands, but in a
very different manner and to quite different purposes.
Those who maintain the much greater fertility of the
Antediluvian earth than of the present, do hold,
that the curse upon the ground pronounced after the
transgression of our first parents, did not take place
in any great measure till the Deluge, by which it
suffered a great change, and was made far less fer-
tile than before. Others again, and those of great
learning and eminent station are of a contrary opi-
nion. They think that the curse pronounced after
the Fall, took immediate hold of the earth and sub-
fitted in its rigour till the Deluge, which was the
completion of the curse, and that after the Deluge
the earth was blessed to Noah, and restored to its first
fertility.
fertility. These opinions are directly opposite, the first being that the Deluge was the infliction of the curse, the other that it was the completion of it, and as both of them endeavoured to support their assertions with reason, it will be the more needful as well as require the more accurate search to come at the truth of the matter, which is necessarily connected with our present subject. The Scriptures are the only writings that can give us any light into this matter, and 'tis upon such passages as we find there relating to it, that we must form our reasonings, which we shall now produce in their order.

1. In the first place then, after the dry land appeared and was furnished with grass, herbs, trees &c. it is said Gen. i. 12. that God saw that it was good; and again, v. 31. And God saw every thing that he had made and beheld it was very good, that is, exceeding fruitful and beautiful, and answerable to the ends for which he had thus furnished the earth, viz. for the plentiful nourishment and support both of the animals and of man, who was blessed and commanded to be fruitful and multiply and replenish the earth; for the Almighty Creator deals not his bounty with a niggardly hand, but liberally and plentifully. And in this abundant plenty and richness of its productions the earth had continued, had man abode in his Innocence, but that upon man's transgression it would not probably remain as before. Accordingly in the sentence passed 2. It is said Cursed is the ground for thy sake * (not for its own) in sorrow shalt thou eat of it all the days of thy life, thorns also and thistles shalt it bring forth to thee, and thou shalt eat the herb of the field, in the sweat of thy face shalt thou eat bread till thou return unto the ground †----Therefore the Lord sent him forth from the garden of Eden, to till or cultivate the ground from whence he was taken §. Now

* in τη, τηρήσεις LXX.
† Gen. iii. 17, 18, 19. § Gen. iii. 23.
from this it would appear that the ground immediately felt the effect of the curse pronounced. But we may observe that as the penalty annexed to the law of the forbidden fruit was this, in the day thou eatest thereof thou shalt surely die, or rather dying thou shalt die, that is, become mortal, which I take to be the true meaning (for had the former been the true sense of the words, then death must have been immediately inflicted on our first parents) and therefore though by their transgression they forfeited their immortality and former happy condition, and that the sentence of death hung over their heads, and might be inflicted at any time, yet it pleased God to prolong their lives above 900 years, in order to make good that which God had primarily designed, that they should increase and multiply and fill the earth. So in like manner though the earth lay under the sentence of the curse instead of that benediction given it at first, yet the execution of that sentence might in a great measure be respited, or suspended till men’s sins became ripe for judgment, when it would be inflicted fully; even as in several cases since, we find that judgments have been suspended several years after they have been peremptorily denounced. Besides as the sentence here passed upon man respected not himself only but all his posterity, so the curse pronounced on the earth for his sake, might respect not so much that present as future ages, when transgressions were multiplied. But yet that some change did happen to the earth, or that the first benediction given to it was in some measure withdrawn seems apparent from the consideration of the several parts of the sentence passed.

1. In the sweat of thy face shalt thou eat bread. Here the labour of tilling or cultivating the ground was laid upon man, to which he was not subjected before, though he lived not in idleness even in his Innocence, having the trees of the garden to prune and dress and
to keep the whole in order and beauty, which a luxuriant fecundity would require. 2. He was driven out of Paradise. He had no longer the delicious and fragrant fruits of Paradise for his food, but was to eat the herb of the field, or what grew on the common earth, where the repetition of those words thou shalt eat the herb of the field upon this important occasion shews clearly that no animal food was then granted to man, being it seems not yet necessary for his sustenance. But 3. That which was further added to his food, besides the herb of the field, was bread produced by the culture of the earth and man’s labour, and 4. Notwithstanding his culture of the earth, it should bring forth other things than he wanted for his nourishment, thorns also and thistles shall it bring forth to thee, not that these were now first created, but as the earth brought forth every herb and plant that was made, in luxuriant plenty, so should it also these, which he stood not in need of, but would increase his labour and toil in clearing the ground of them. Hence I say it seems apparent, that the first benediction of the earth was in some measure withdrawn, because what the earth brought forth of itself and without culture which was first given to man for food, was not now sufficient for that purpose, as wanting much of those rich juices and substantial nourishment which it before afforded, and therefore bread was added which thenceforth became the chief staff and support of life.

3. After Cain’s murder of his brother Abel it is said ----And thou art cursed from the earth, which hath opened her mouth to receive thy brother’s blood from thy hand, when thou tillest the ground, it shall not henceforth yield unto thee her strength----. In the first sentence passed, Adem was not cursed, but the ground for his sake; but here the curse is first laid on Cain himself, and then on the ground, because his sin was
was wilful and deliberate and a high offence both against God and his poor brother. Here the first benediction is further withdrawn (the ground shall not yield unto thee her strength) not indeed from the whole earth, but from that part of it only which Cain was to inhabit, by which the culture of the earth would become more toilsome and laborious to him and his posterity, than it was to the rest of the sons of Adam.

4. And He (Lamech) called his name Noah, saying, this same shall comfort us concerning our work and toil of our hands, because of the ground which the Lord hath cursed. This text is the hinge of the Controversy, but before we consider it as a prophecy, it may not be improper previously to shew that whatever the state of the earth at that time might be as to fertility, man’s life was then become truly toilsome and laborious on several accounts; as

1. From the state and condition of the earth itself. For several ages after the Creation the number of mankind was but small and could occupy but a small part of the earth. In the mean time the earth would be overgrown with grafts, plants, shrubs and trees, all which man would have to root up and clear the ground of, that he might cultivate it for the production of corn, now become necessary for his sustenance; and the more fertile and luxuriant the earth was, the greater would his labour and toil be. And thus our first planters in America found it, where their first and greatest labour was and is still to clear the ground of the woods &c. before it can be fit for culture.

2. If man’s stature before the Flood was larger than it is now viz. of 10 or 12 foot, as we have given reasons to believe; and if the culture of the earth was also by the hand only as there is reason to think; the plough being an invention after the Flood, and not necessary before, for a reason that will be given,
given. The culture of the earth by the hand only, to men of great stature would make it very laborious, though they were not obliged to dig so deep as we do now.

3. Before the days of Lamech they had dug into the bowels of the earth for bræs and iron and perhaps other metals, gold and silver; but as the two first were of the greatest use to mankind in facilitating the culture of the earth, they would use all diligence to procure them: Now the digging for bræs and iron would be as laborious then as it is now, only their greater strength making some difference.

4. At the time of Noab's birth mankind was greatly multiplied. According to the Chronology in the LXX which I take to be the true, Noab was born in the year of the world 1656. Now by our second table it appears, that the number of men born into the world in the year 1620 was 53,687 millions and more. Before that year all that were born in the first seven hundred years would be dead, but all that were born after the year 800 might be alive; and though it be not necessary to deduct one half for that sum mentioned for deaths, casualties and deficiencies, yet for arguments sake we shall allow that one half would be the sum total that were alive; there will then be 26,843 millions and above; and because in our former computation we have abated one half again, we shall do the same here, and suppose there were no more than 13,421 millions, ninety-seven thousand and eight hundred of mankind upon upon the earth about the time of Noab's birth. Now thirteen thousand, four hundred and twenty-one millions is a prodigious number, and as the number of mankind increased, so would the greatness of their labour increase to procure bread for all of them, for men of such large bodies and stomachs proportionable.

5. Before
5. Before the birth of Noab there were probably Giants in the earth, whose prodigious stature making them much more unfit for the culture of the earth, and yet at the same time their huge bodies requiring a much greater quantity of food for their nourishment, they would chiefly live by spoil and rapine, which would still make the lives of other men more laborious and flashy, and might be one means of driving men to the furthermost parts of the earth to avoid their depredations. Add to all this

6. That by the time of Noab's birth, all the land animals would be increased to a prodigious number, which notwithstanding all the care and precaution that men could use, would devour a good deal of the fruits of their labours. From all which considerations it appears that man's life was at that time very laborious, how great forever the fertility of the earth might be.

We come now to consider the import of Lamech's speech as it was prophetic by the name he gave his son and the reason annexed. This name shall comfort us concerning our work and toil of our hands, because of the ground which the Lord hath cursed. Now though the Septuagint, Philo Judeus, St. Jerome and our Ainsworth derive the name Noe from a verb, that signifies rep and not comfort, this name shall make us think of the toil of our hands, yet there is no great matter in this, because in so far as he gave them rest, he brought them comfort, though it had been better to have kept to the true meaning of the word. The question then is, what Lamech might mean by that rest which his son Noah was to give mankind from the work and toil of their hands, because of the ground which the Lord had cursed? If we take St. Jerome's reason for the name given, the question will soon be decided.
for according to him * it respects not the time to come but the time past, "for that because in his " days all former works should cease or rest for " ever by the Deluge he therefore had the name " Noe (which signifies rest) given him." In this sense indeed the words are both true and prophetical, foretelling both the destruction of mankind that was to come in his son's days, and the ceasing or rest from all former works and labours upon the face of the earth. But yet I do not take this to be the true import of Lamech's words. For we may observe that Enoch who was a prophet, as we learn from St. Jude, named his son Methuselah or Methuselab, which according to Ainsworth implies, He dieth and the dart cometh, that is, the dart of God's judgment on a wicked world. For Methuselab died in the year of the Flood, and as soon as he died, i.e. in that year, the world was destroyed by the Flood. Now Lamech the son of Methuselab could not be ignorant of the import of his father's name, and therefore to have called his son by the name of Noab for the reason given by St. Jerome was only arium agere, to foretell that which was foretold before by his grandfather Enoch; whereas it is more reasonable to think it would import something more or besides, not yet foretold. And therefore if we consider only the literal sense and meaning of the words, they imply a blessing that was to accrue to mankind by his son Noab, by which the labour and toil of men would be very much alleviated, as it happened by the grant of animal food to him after the Deluge, which very

* Et vocavit nomen ejus Noe, dicens, ite requiescere nos faciet ab operibus nostris. Noe requires interpretaur. Ab eo igitur, quod tubillo omnia retro opera, quieverunt per diluvium, appellatus est requies. The LXX seems to favour this opinion of St. Jerome. Όδος διαπεισανεται αμαρτία των ερημών κρατούσα και αυτή των λυπών των χριστιανῶν, και από την γῆς. ——και επάνω τῆς γῆς and from the Earth.
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much lightened man’s labour, since a great part of his food, flesh and fish comes to him with little labour, and without the toil of tilling the ground for it. Not that I think that either Enoch or Lamech knew that mankind was to be destroyed by a Flood of waters, no, nor even Noah himself till he received the command to build the Ark. Their prophecies were only general. But here lies the difference between the prophecy of Enoch and that of Lamech. Enoch’s was only a prophecy of destruction to mankind for their wickedness without any glimpse of hope implied in it; but Lamech’s implied indeed the same destruction to come, but contained besides the hope of a blessing to come by his son’s piety, though he might not know what the particular blessing was, his prophecy being only, as I said, general.

But neither do I take this to be the full import of Lamech’s prophecy. The great prophecy and promise upon which the faith and hope, of mankind depended, was not yet fulfilled, viz. That the seed of the woman should bruise the serpent’s head who had deceived our first parents. Eve probably imagined she had got this seed when she had brought forth Cain, I have gotten a man from the Lord, or as the LXX has it, I have gotten a man by the Lord, meaning that man who was to give them the victory over their enemy, but how miserably was she deceived, when instead of that blessed seed she expected, her son proved to be the child of the Devil, and murdered his brother to her great sorrow and woe? But this first prophecy being not yet fulfilled, and the world’s destruction foretold, Lamech’s prophecy implying a blessing to come to mankind by his son Noah did also virtually contain the hope of this first desirable promise, and that though mankind was to be destroyed for their wickedness as by Enoch’s prophecy, yet his son Noah was to continue the race and bring a blessing with him to it, out of whose loyns was to come
come the man by the Lord who should break the serpent’s head, and give mankind the victory. Whatever was the literal meaning of Lamech’s prophecy this was certainly implied in it, and by clear consequence deducible from it, so that the faith and hope of mankind relying on the first prophecy were still kept alive. And thus was the first promise made to our first parents continued to mankind, and still to be made good in due time, though the world’s destruction had been foretold by Enoch. So that this our interpretation is so far from making a gap in the chain of prophecies, that it shews a most gracious renewal of the first grand prophecy and promise, at a time when it was exceedingly wanted to keep up the faith of Lamech, Methuselah and other righteous persons, (of whom there might be many still living, it being yet 600 years to the Flood) as also of the patriarchs and other righteous men after it.

5. After Noah had offered his sacrifice, The Lord said in his heart, I will not again curse the ground any more for man’s sake, for the imagination of man’s heart is evil from his youth *, neither will I again smite any more

* Our last Translators often put in the margin that reading which affords the most commodious sense. For the imagination of man’s heart is evil from his youth. The relative particle for should render the reason of the determination, but it appears an odd reason that God should determine not to curse the ground again, because the imagination of man’s heart was evil from his youth. This would rather seem a reason why God should not determine as he did, since the evil imaginations of men’s hearts from their youth might in time increase to the same pitch of wickedness (as in truth they have done and to greater) and so merit the same destruction. But now if we read the words as in the margin. I will not any more curse the ground for man’s sake, (ἡτατε ἐγώ τοις καθαρέως, LXX) i.e. the imagination of man’s heart be evil from his youth, they afford this sense, That tho’ God knew that the imagination of man’s heart was and would be evil from his youth, yet he determined not to destroy the world again by a flood of waters, as it would not conflict with the divine economy for the redemption of mankind; but that the world should continue
more every living thing as I have*: while the earth re-
maineth, seed time and harvest, cold and heat, summer
and winter, and day and night shall not cease †. But
neither will this sentence I fear enable us to decide
the question, since the first part of it may be inter-
preted to the advantage of either side, thus 1. If the
Deluge was the completion of the curse, then these
words naturally imply a blessing, and that the earth
should not any more bear the like curse. But 2. If
the Deluge was the infliction of the curse in its full
rigour, which would inevitably make a great change
in the surface of the earth, then, it should no more
be cursed in that manner so as to destroy every liv-
ing thing that was upon it, as had now been done;
notwithstanding that God foreknew that the imagination
of man's heart would still be evil from his youth. Nei-
ther will the latter part of the sentence necessarily
imply that there had been no regular seasons in the
Antediluvian earth, but this rather. 1. That there
had been these different vicissitudes of seed-time and
harvest, summer and winter before the Flood. 2. That during the continuance of the Flood they
had ceased, and 3. that they should cease no more in
like manner while the earth remained.

6. And God blessed Noah and his sons, and said unto
them, be fruitful and multiply, and replenish the earth,
and the fear of you and the dread of you shall be upon
every beast of the earth, and upon every fowl of the air,
and upon all that moveth upon the earth, and upon all
the fishes of the sea, into your hands are they delivered,
every moving thing that liveth shall be meat for you, even
continue with the same vicissitude of seasons as before till the ge-
neral conflagration, which was to be the last, as the Deluge was
the first inundation of the world.

* Neither will I again finite any more every living thing as I
have done. This I think is a clear proof, that every living thing
upon the earth, both men and animals were destroyed by the
Flood, except those preferred in the Ark.
† Genef. viii. 21, 22.
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as the green herb have I given you all things; but flesh with the life thereof shall you not eat. Now here.
1. God blessed Noah and his sons, as he had at first blessed Adam. 2. They were commanded to be fruitful and multiply and replenish the earth, the same as was enjoined to Adam and Eve. 3. The dominion over all the other creatures was given them, not in the same words, but in as full and express terms.
4. The grant of animal food was given, every moving thing that liveth shall be meat for you; and here first given, even as the green herb have I given you all things: This surely implies that the green herb (by which all things that spring out of the earth are understood) was all they had before, but now they were to eat of every living thing also, which is further confirmed by what was forbidden in it, but flesh with the life thereof, which is the blood thereof shall you not eat; for had mankind been allowed animal food before, we should certainly have heard of this condition here annexed, as well then as now, since whatever reason there was for this prohibition (which we stay not to enquire in this place) the same was as necessary before as now. But then here is no express mention made of the earth’s greater or lesser fertility which might determine the point in question. The same blessings indeed are renewed to Noah and his sons as were first given to Adam, because as Adam was the parent of mankind in the first world, so were they of this second; but that is all, the rest we are left to collect from circumstances. Now from this circumstance of the addition of animal food, I collect that the earth would not be near so fertile and abundant in her productions as she was before the Flood. For why was this additional food now first granted but because it became necessary? It is not likely it would have been given without necessity, and whence did

* Gen. ix. 1, 2, 3, 4.
that necessity arise but from this? That the earth after the Flood would neither yield that luxuriant abundance which it did before, nor yet would its productions yield that nourishment and strength to man, which they did formerly*. Thus did the goodness of God by a natural gradation provide for the sustenance of man, as occasion or necessity required. 1. In the state of Innocence the food appointed him was that which the earth produced without his labour, which productions were so nourishing and strengthening in its virgin state that they were abundantly sufficient for his maintenance, especially the fruits of Paradise where he was placed. 2. After the Fall when God withdrew in part his blessing from the earth, so that the spontaneous productions thereof were become less nutritive than before, bread was added, to be produced by man’s labour and culture of the earth. And 3. After the Flood, when the earth (from a natural reason to be given) would become still less fertile, and her productions also less nutritive than before it, animal food was then added, and now man had all given him that could naturally contribute to his support and maintenance. And in this last additional grant, the wisdom of God is apparent as well as his goodness. Would men make use of all those things which God has given them for food, they would not want so often as they have done, but when they neglect or despise one or other of them, they greatly suffer, as in America, where the natives are too lazy to till the ground for corn, and the most of what they have to live on are the beasts they take in hunting; or in many parts of the East-Indies where many will not

* The use of flesh after the Flood was granted rather to supply necessity, when the flood had weakened the earth, than to minister a greater abundance than it had before, and least of all to satisfy the greedy and curious appetites of more than beastly men. Purchas.
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*eat animal food, they are often exposed to great wants
through the inclemencies of seasons. In China 'tis
true they not only cultivate the earth with great in-
dustry but eat every thing that is eatable, and yet
are often exposed to famine, sometimes for want of
rain, but more frequently by inundations of the ri-
vers; but the main reason of that is, that the coun-
try is overstocked with inhabitants, there being at
least double the number of people, than the land
is able to maintain; and was it not from the great plen-
ty of fish in their rivers and seas, half the kingdom
would starve. And was this least provision of food
duly taken care of, as the seas and rivers in almost
all places yield abundance of it, men might be much
better stocked with food in the winter than they com-
monly are.

These are all the Passages in *Moses* which have
any relation to the subject in hand; but there is one
passage in the New Testament which may cast some
further light on it. They are the words of *Jesus* in
*Luke* xvii. 26. "And as it was in the days of *Noe,*
"so shall it be also in the days of the Son of Man;
"they did eat, they drank, they married wives,
"they were given in marriage, until the day that
"*Noe* entered into the Ark, and the flood came
"and destroyed them all: Likewise also as it was
"in the days of *Lot,* they did eat, they drank,
"they bought, they sold, they planted, they
"builted, but the same day that *Lot* went out
"of *Sodom* it rained fire and brimstone from Hea-
"ven and destroyed them all."--- Now as the same
things are in a manner predicated of both these re-
markable times, we may suppose their circumstances
(as to the point we are now upon) to have been much
alike. The facts here mentioned look more like
the natural consequences of great plenty and a fer-
tile soil than of great infertility; and as they are
both put into the comparison, we know that one of
them,
them, viz. the land of Sodom and Gomorrha with the adjacent plains, was exceeding fertile, and compared to the Garden of the Lord, to Paradise; we may therefore justly think the Antediluvian Earth to have been very fertile also.

From all which laid together, I think it may be fairly inferred, that the earth was much more fertile before the Flood, than it was, or could be in the nature of things after it. And why the earth after the Flood could not be so luxuriantly fertile as it was before, and also why it was not fit that it should be so, two reasons may be given, for both which we hold ourselves indebted to the learned and inquisitive Dr. Woodward.

1. There is a natural reason why the earth could not be so fertile after the Flood as it was before it. As the first earth brought forth all manner of plants of itself without any labour or culture of man, and even before there was a man to till the ground, we may reasonably suppose that the exterior stratum or surface of the earth consisted of such terrestrial matter as was fit for these productions, that is, of a rich light mould affording plentifully matter for vegetation. Now though God was pleased upon man’s transgression to withdraw in part his benediction from the earth, as has been shewn, yet the earth itself was untouched till the Deluge, the same surface of rich mould was still upon it, and brought forth plentifully, especially when man’s culture for corn was added. But the inundation of waters at the Deluge greatly altered the constitution of the earth itself; it mixed and confounded this upper stratum of vegetative earth with other terrestrial matter not fit for vegetation, with sand, gravel, stones and all kinds of mineral matter, which must needs render the earth in general much less fertile than it was before; and which made the plough necessary to dig up the proper vegetative mould and bring it to the surface, and also...
2. There is a moral reason why it was not fit that the earth should be so abundantly fertile as it was before. The luxuriant productions of the first earth, after man’s nature became corrupted and to deviate more and more from righteousness, served only to excite and foment his lusts, and to minister plentiful fuel to his vices and luxury, as we find it has done in many nations and in several ages since; to cut off therefore such occasion of sin and wickedness, God in great mercy to men retrenched the earth of its former fertility, thereby obliging them to labour and diligence, and employing most of their time to procure their necessary subsistence, which the earth by diligent culture will still afford, but not that luxuriant abundance it did before the Flood. If we take a survey of the different regions and countries of the world, we shall find this to be the truth of the case. In many parts of the earth men have much ado to live, in others industry and diligent culture procures sufficiency and abundance, so as to be able to supply others that want, and some places are still exceeding fertile; Egypt and Sicily for instance, of corn, and some places in America, along the River Mississippi yielding with little culture two crops in the year, probably on account of its being but then first broken up. Some places both in Asia and America are as it were a Paradise in respect of the rest, to shew us perhaps what was and would have been the state of the earth had not man sinned; but far the greatest part is nothing to be compared to these, and evidently shews that effect which the sins of men had upon the earth itself. In a word, if we take a survey of the whole, it cannot be thought that the first blessing was restored to the earth after the Flood, or that it came at first out of the hand of its maker in the state it is at present, since so great
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great a part of it bears still the marks of the curse laid upon it.

But here it is necessary to observe that all the barrenness and infertility of the present earth is not owing to the Deluge nor the effect of the first curse laid upon it, though it be owing to the same cause, the wickedness of its inhabitants. The earth has suffered great changes since the Deluge. Many great and flourishing cities and kingdoms have been destroyed, and the land itself laid waste and rendered infertile for the sins of those that lived therein, witness those fertile plains of Sodom and Gomorrah now turned into a standing lake, the dead sea; witness the land of Palestine itself, which from being one of the most plentiful spots of the earth when it enjoyed God's blessing, is now rendered barren and unfruitful. It is surprizing to think what vast multitudes it was able to maintain in great abundance of all things in the days of David and Solomon, and some of the kings after them; when the kings of Judah and Israel could bring 500,000 and 800,000 men into the field at a time, whereas now it could scarce maintain the hundredth part of the numbers it once had upon it. The like has befallen many other places besides, verifying that of the Psalmist *. He turneth rivers into a wilderness, and the water-springs into dry ground; a fruitful land into barrenness for the wickedness of them that dwell therein, and so vice versa.

Upon the whole then we conclude that the Antediluvian earth was generally far more fertile than the present is, which we give as a second reason how it was able to maintain such a prodigious number of men and animals as were upon it.

* Psalm. cvii. 33, cx. 37.
S E C T. IV.

That the fertile surface of the Antediluvian earth was of much larger extent, than what it is at present, or has been since the Deluge.

Notwithstanding the much greater fertility of the Antediluvian earth than of the present, yet that alone will not answer all our demands upon it for those many millions of millions of men we have placed there before the Deluge; we must therefore find some other causes (since this alone will not do) which together with the former may be proportioned to the effect, the maintenance of such numbers both of men and animals; and this we take to be the much larger extent of land in the Antediluvian earth than in the present. To this purpose we may observe, that a very large part of the surface of the present earth can afford little or nothing for the sustenance of man or beast, since there are 1. Innumerable barren rocks and chains of mountains in many parts of the earth. 2. There are vast wild and sandy deserts of many miles extent in several parts of the world, which not only afford no sustenance, but where passengers often hazard their lives in going over them *. 3. There are very large lakes and marshes of great extent, which occupy millions of acres. That it is thus in the present earth is notorious, but that it was so from the beginning may be justly questioned, and we need not in the least hesitate to affirm, that it came not in this condition at first out of the hands of its maker. There are for the most part the effects of

* In those vast wildernesses (the deserts of Libya) there is neither to be found bird nor wild beast, nor herbs, ne nor so much as a little sty; and nothing is to be seen, but mountains of sand and the cavities and bases of canals. Pompon’s journey from Granada to Ethiopia, An. 1608.
the Deluge, which left upon the earth indelible marks of God's displeasure against sin in all the several parts of the world, and are a lasting memento to all future ages what sinners have to fear from the judgments of a righteous God. For

1. It is reasonable to believe that the hills and mountains were at the first Creation covered with a surface of verdure and vegetables, which afforded sustenance for men and animals; which surface was impaired or washed off by the Deluge and has now left so many of them bare and barren. 2. Though several lands have been overflowed by particular inundations since the Deluge, yet those very large lakes which are in some parts of the world are very probably the remains of the waters of the Deluge. The Millionaries in Canada found a vast lake of 400 leagues, and yet did not reach to the end of it. In Africa in the land of the Caffres, there is a lake called Nhozura, on which they had sailed several weeks, and yet not come to its utmost bounds, which lake is not marked in the maps. 3. Those vast deserts of sand in Africa and other parts of the earth, we impute with great probability to the same cause, viz. that they are the effects of the Deluge, which as it left large tracts of land covered with waters, so other large tracts covered with sand, which were not so at first, it being reasonable to think that the earth at its first Creation was fertile more or less in all the parts of it. We see here then that many millions of millions of acres are now rendered unfruitful by the Deluge, which in the Antediluvian world were fertile and afforded sustenance for men and animals. But

* Fairnir's Hydrography, p. 800, 801.
† In the city of Bodekia, the streets are half deserted and filled with heaps of sand occasioned by floods from the mountains. Prince's Journey. This shows how the floods of waters at the Deluge might leave vast tracts of land covered with sand.
we are not yet come to the full extent of the Antediluvian earth.

That there were seas from the beginning is evident, 1. From the express testimony of Scripture. 2. From the reason of the thing, or their great use and benefit in the natural world, and 3. is demonstrable from the vast number of sea shells and other marine bodies, which the overflowing of the waters at the Deluge left upon the surface, and in the bowels of the earth in all parts of the world. But yet that the seas were of that vast extent in the Antediluvian world, as they are in the present, may I think, very well bear a question. An inspection of the Globe or general map of the world will shew that the seas and oceans of the present earth take up two thirds of the superficies of the Terrestrial Globe; as for the Terra Australis incognita it is no more to be seen in our modern maps. This is a great disproportion between the dry land and the waters, and not likely, I think, to have been so from the beginning.

Dr. Keile I know in his learned and accurate Examination of Dr. Burnet's Theory of the Earth &c. has endeavoured to prove by calculation that the present extent of the surface of the waters is necessary to raise such a sufficient quantity of vapours, as may supply the earth with rain, and with springs, fountains and rivers. In answer to this I say 1. That it is not certain that vapours are the sole origin of all springs, fountains and rivers, though they be of some, but that there is reason to believe, that the waters of the great Abyss are the origin of many or most of them, as is the opinion of many learned men confirmed by several observations, some of which we shall have occasion to mention in the sequel. But

2. Supposing vapours were the sole origin of all springs, fountains and rivers, it may justly be questioned whether such a quantity of vapours was necessary
cessary to the fertility of the primitive earth, as is for the productions of the present? The earth has suffered great changes in her exterior surface by the Deluge, as appears from the natural reason given in the preceding Section, and for that very reason may require a much greater quantity of vapours and rain for vegetation, than the former earth did, whose surface was of a richer and kindlier mould. And therefore, if the present extent of the surface of the waters be necessary to raise a sufficient quantity of vapours for the earth's supply as it is now constituted, this is an illustrious proof of the Divine Wisdom and Goodness, thus to contrive and accommodate the state of things to man's present necessity; but yet it will not prove that the surface of the waters was as large in the Antediluvian world, where there was not the same necessity. It will rather, I think, prove the contrary, since according to that trite maxim Deus & Natura nil bil faciunt frustra.

Dr. Woodward indeed is of opinion, that the seas in the Antediluvian world took up the same, or near the same space they do at present. His reason is, "that the spoils of the sea, the shells and other marine bodies are left in such prodigious numbers and in heaps upon heaps in the earth besides those which have long since perished, that they could not have been left in such quantities, had not the seas occupied much the same space as they do now." But this consequence does not necessarily follow, because such quantities there might have been, though the seas had not been of half the extent they are at present. For 1. Animal food neither fish nor flesh was the food of mankind before the Deluge; but 2. suppose it had, yet for the first 500 years the number of mankind was but small, and likely at a great distance from the sea, what a prodigious increase then of all kinds of fish must there have been in the space of 500 years considering their
their large spawn? * and how immensely greater during the time the old world lafted. We need not be surprized then at the immense quantities of the Eus vivae of marine bodies left in and upon the earth by the Deluge. But the reason he brings to prove that the several continents of the world were encompassed with seas as they are now, viz. that as there are different sorts of fishes in the different seas of the world, so the Eus vivae of the same kind are generally found upon the contiguous lands does not always hold, since there are some shells found in the continent, which are strangers in the parts of the sea conterminous to those continents.

2. That the seas in the present earth are vastly more extended, and consequently the dry land so much less in proportion, may likewise be inferred from the great multitude of islands that lie near the shores of the greater continents, if it be true, what some alledge, that they are parts broken off by the Deluge from the main land, which before that reached to, and beyond them †. And though islands are thought to be rarely found in the great Ocean, yet there have been of late discovered in the midst of the Indian ocean vast clusters of Islands, all lying South-East of the Philippines; one cluster of which is called by the Spaniards the Marian Islands, another the Caroline Islands, and a third the Islands

* Mr. Lovrenbroke assures us, that in 15 cubical inches of spawn which a Codfish may emit in a year, there are ten times more living animals than men upon the face of the earth. That he has likewise seen a prodigious number of those insensible creatures in the spawn of Pikes, Toms, Carps and Tenches, as well as in the sperm of Ducks and Cocks.

† Neeque idem minabimus adjacentior plerumque littoribus majorem Commentium multis insulis, ut Maldivae Indiae, Novo Orbis Americae, Hesperides Africae, et aliae in Agro mari, atque eis de alis, et eis semper circa ipsas magnas aliqus Commentis, aut finibus & frebis reperientur insulam, perraro in Magnlo Oceano.
of Paleu or Palaos, all of them full of inhabitants. Now all these islands may have been part of a large continent before the Flood.

And for this reason also (besides that before given) that so great a part of the earth lay covered with the waters of the Deluge, and therefore could not maintain the number of inhabitants it did before, God was pleased to give Noah and his posterity the grant of animal food both fish and flesh, (every moving thing that liveth shall be meat for you) by which that deficiency was made up again to mankind, especially by that infinite number and great variety of fishes that are in the seas, lakes and rivers, whereby millions are nourished, as in China, and millions more might in other parts, were they as diligent to catch them, and ready to use them. So that those waters which remain as a standing monument of the Divine Vengeance on sinners, are also a lasting monument of the Divine Mercy to mankind.

We might here allude in confirmation of what we have said in this particular, that ancient tradition mentioned by Plato of a large Continent bigger than Africa and Asia lying under water, and which they called Atlantis; but Dr. Woodward has precluded us from this Allegation, since among the other particulars relating to America before-mentioned, one is, what country the Antients intended under the name of Atlantis*. It appears hence that he believed this country the Antients called Atlantis to be that now called America, and very probably it might; for having lost all memory of the first commigration of mankind into that Continent after the Flood, and having for several ages had no communication with

* As to this Atlantis of Plato, Acosta alledgeth divers Platonians, who interpret Plato after a mythical manner, and proveth by the words of Plato himself, that they can be no true History. Purchas.— But little regard is to be had to the mythical interpretations of the later Platonists.
them, they imagined that part of the world to be still lying under the waters of the Deluge. But allowing Dr. Woodward's conjecture to be very probable (for we can call it no otherwise now, since that larger work of his never appeared) I have given some reasons to believe, that a great part of the *Terra firma* of the old world lies buried under the waters of the Deluge. This consideration added to those preceding, may serve to shew how the *Antediluvian* earth was capable to maintain so great a number of men and animals as were upon it before the Flood, the *dry land* being then so much more vastly extended than it is at present.

The End of the First Book;
AN
ENQUIRY
INTO THE
TRUTH AND CERTAINTY
OF THE
MOSAIC DELUGE.

BOOK II.
INTRODUCTION.

It is not from any fondness of novelty or affectation of singularity (two very bad companions in the search of truth, and which seem to have led our modern Theorist out of the way) that I have departed from some generally received opinions, or opposed the sentiments of men in great repute and just esteem for learning, in the first Book, and am likely to do the same in this. But having taken the subject from its first source, viz. the Divine Monition given to Noah, That led me on to consider several particulars that had not been much adverted to before. And the discovery of truth in
the first instance opened the way to it in the following, and equally to point out the mistakes others had fallen into.

That men of much greater learning, and a more extensive knowledge have not hit upon the same things before, I take the reason to be, that they had only some particular parts or portions of the subject under consideration; and so could not see how one part would tally with another, or all the parts bear a just proportion to each other and to the whole; whereas by extending the view to the whole in all its several parts, this inconvenience has been avoided: And as one thing depends on another as links in a chain, so they all contribute to establish and illustrate the grand Point in view, viz. the demonstrating the truth of the fact, which is the design of this Enquiry.

The reader will perceive that I have not tied my self down to any man’s opinion in all things, but how much soever I honour their persons, or admire their works, or have been edified by their labours, I adhere to them no farther than as I am able to perceive truth on their side, or the greatest probability of it, and so it happens, that I have been obliged to oppose the opinions of the very same persons in some things, whole sentiments I have espoused in others. But if some things shall appear new, as some such there are, I have endeavoured to support them with the most probable reasons.

Having in the first Book refuted the several Schemes of a partial Deluge, and given some account of the state of the Antediluvian world with an answer to such objections as may be made against what I have represented it to be, I come now in this second, to give some account of the Deluge itself, and of the several particulars that have any relation to it, beginning with the common opinion of Noah’s being 120 years in building the Ark.
C H A P. I.

Sect. I. Whether Noah was 120 years in building the Ark?

All truth is of more or less importance, and the discovery of the minutest truth is of some utility. It may serve to correct some errors, may strike light into some subject, or may give greater evidence of that whole, whereof itself may be but a small part. It may be of some use therefore to enquire into the number of years which Noah had to prepare the Ark for his preservation from the approaching Deluge.

The received opinion is, that Noah was 120 years employed in preparing the Ark, and the time appearing very long and disproportioned to the nature and quality of the work, is made an objection to the truth of the Mosaic account of the Deluge. But if we narrowly inspect the history itself, and critically examine the several declarations made of the world’s destruction, we shall have reason to think that this opinion of 120 years has been inadvertently taken up, and that there is no just ground for it. Certain it is, that Moses does not say in so many words that Noah was 120 years in building the Ark, nor can it be reasonably inferred from the several parts of the Relation compared together. It is said indeed that God designing to destroy mankind for their wickedness, did yet resolve to give them a respite of 120 years for reasons to be given; but it will not thence follow, that therefore Noah was all that time in building the Ark. These have no necessary connection. Noah could not begin to build the Ark till he received a command to build it, and the rea-
son of that command likewise imparted to him, which was not till long after.

To set this matter in its true light, let it be observed that Moses in the 5th chapter of Genesis (as in many other places) recapitulates some things he had said before, and designing to give the number of years the first world lasted, he does it by setting down the age of the several Patriarchs at the birth of their sons in the Genealogies from Adam by his son Seth to the sons of Noah, who were born before the Flood came, and so concludes the Genealogies. Not that Noah's three sons were prior in time to the matters related in the 6th chapter; but that he makes an end of the Genitures of the Patriarchs at once before he enters on another and quite different subject.

After setting down the years of the Genitures, being in the 6th chapter to enter on a new and most important matter, viz. the great corruption of mankind, whose sins called for vengeance from Heaven, and the original cause of that general corruption; he takes notice of some things he had omitted before, referring them to this as their proper place. And it came to pass that when men (i.e. the race of Cain) began to multiply on the face of the earth, and daughters were born unto them, that the sons of God (i.e. the race of Seth and other pious descendants of Adam's children) saw the daughters of men that they were fair, and they took them wives of all which they chose. The meaning is, they had a regard only to beauty and not to piety in the choice of their wives, as most men now have regard only to wealth. Now this fact had surely come to pass long before Noah's 500th year (for it was when the race of Cain began to multiply on the earth, which they had done some hundred years before Noah's sons were born) that by those intermarriages and mixtures of the several races, the pious line of Seth and other sons of Adam became
became corrupted themselves; by which means immorality spread over all, which before was chiefly in the race of Cain. 2. It must surely have been some hundred years before the birth of Noah's sons, that there were Giants in the earth, and that the mighty men born of that profane mixture had become men of renown of old. Nay 3. It may be collected from some circumstances that those intermarriages, and the corruption occasioned thereby, had fallen out pretty early, even in the days of Enoch, who being a righteous man and a prophet, foresew the destruction that was to come on the world on account of their increasing wickedness; as appears by the name he gave his son, which we have taken notice of before. It is evident then that Moses in this 6th chapter relates some facts which he had omitted at the time when they first fell out, viz. the cause of the more general depravation of mankind, the rise of Giants, and of those mighty men of old, who sprang from the mixture of the several races that had before kept distinct.

2. He next proceeds to acquaint us with what God had determined with respect to men on account of their wickedness. And the Lord said my spirit shall not always strive with man, for that he also is flesh, yet his days shall be 120 years *. The LXX have it, My spirit shall not always abide with man. Hitherto it seems the spirit of God continued with men †, that is, with the righteous seed while they continued such, but they being no longer guided by the Spirit, but become also flesh, that is, earthly, sensual and wicked, the spirit of God was withdrawn from them. Nevertheless they were not immediately to be cut off, but suffered to continue upon the earth

* Gen. vi. 3:
† Amator es animarum, quia spiritus tuus bonus habitat in omnibus. The sense of the Syriac translation of Wisdom, ch. xii. 1. See the learned Mr. Arnold's Commentary on that Book. p. 73.
An Enquiry into the Truth and for 120 years longer *. There might be several reasons for prolonging their judgment, or reprieving the execution of their sentence till that period. As 1. Lamech, Methuselah and other righteous persons were to be gathered to their fathers in peace. 2. Those three persons who were to renew mankind were not yet born, though it was necessary that they should not only be born, but grown up and provided of wives before the Deluge came †.

3. God

* Porro ne videretur in eo esse crudelis quod peccatibus locum paenitentiae non dedisset, adjunct sed erat dies eorum centum & viginti annis ad agenda m pactum. Hieron.

† The reasons of things are not always assigned in Scripture, and sometimes one reason is given when others of greater importance are passed over in silence. Thus in the command for keeping three solemn feasts unto the Lord yearly, viz. the Passover, the feast of Pentecost and that of Tabernacles, a reason is given for the first, but not for the other two; not in Exodus xxiii, nor in Numbers xxix, nor yet in Deut. xvi, where all are mentioned. Only in Levit. xxiii. 40-43. the people are enjoined at the feast of Tabernacles to take boughs of goodly trees, Palms, Willows &c. and to make them booths to dwell in seven days, to the end that your generations may know that I made the children of Israel dwell in booths when I brought them out of the Land of Egypt, at which this annual practice was to be a memorial; but yet this does not seem to be the only or the chief reason of the appointment of this Festival. The main design of that would seem to be that after God had pardoned their heinous transgression of the Golden Calf at the intercession of Moses, he was pleased to set up his own Tabernacle among them, to fill it with the cloud of glory (the symbol of his more immediate presence) from thence to give forth his oracles, and thus to dwell in a Tabernacle among them in a very extraordinary manner, a favour which no nation on the earth besides enjoyed.

Thus also in the command given to Abraham to offer up his only son Isaac, the only reason given is, that it was to tempt or try Abraham, and indeed a severe trial it was; since though Abraham did know the design or import of the command, yet he did not know but that his son was to receive the sacrificing stroke; but the design of that command was a thing of much higher import, as now appears by the new light in which the very ingenious and learned Mr. Warburton has placed that transmigration.
Certainty of the Mosaic Deluge. 189

3. God is slow in his judgments, long suffering and patient, not willing that any should perish, but that all should come to repentance. And therefore St. Peter faith, the long suffering of God waited in the days of Noah while the Ark was a preparing. Hence it is thought that the Ark was 120 years in preparing. It was preparing indeed within the 120 years, but not during all that time.

4. Sometime after this (how long is uncertain) the wickedness of men still increasing, and violence and bloodshed prevailing in the world, the final resolution is taken to cut off the whole race of men from the earth, and every living creature with them. And God saw that the wickedness of man was great in the earth, and that every imagination of the thoughts of his heart was only evil continually, and it repented the Lord that he had made man upon the earth, and it grieved him at his heart; and the Lord said, I will destroy men whom I have made from the face of the earth, both man and beast and creeping thing, and the fowls of the air, for it repenteth me that I have made them. This is spoken of God not properly, but after the manner of men, when they have no complacency in the work of their hands.

In the two preceding passages we see how the scene opens, and the world’s destruction is revealed by degrees. In the first of them the time of man’s farther abode in this world was limited to 120 years. In the second it was determined that not only men

And thus in the passage now before us, Yετ οι δαίμονες θαλλεῖσθαι ἐν 120 οὖσαι, though the only reason assigned by St. Peter, and admitted by others, is that of God’s long-suffering, yet I have given two substantial reasons besides, which clearly shew that the Flood could not be brought on sooner. The meaning of that passage in St. Peter is, that God patiently bore with the wickedness of men, notwithstanding his determined resolution to cut them off, till the Ark was ready for Noah’s reception, which for weighty reasons was delayed for 120 years.

* Genesis vi. 5, 6, 7. but
but every living creature for their sakes, should be cut off from the earth; but no revelation is yet made of the means by which the world was to be destroyed. Only as in wrath God remembers mercy, there is a glimmering of hope given, that mankind was not to totally be destroyed, but that one was to be saved, as a reviving root, or seed of the new world; for it is added, but Noah found grace in the eyes of the Lord *. And upon this Moses returns to Noah again, whom he had but just mentioned in the close of the preceding chapter, and gives the reason, why he found grace and favour with God more than other men: Noah, says he, was a just man, perfect and upright in his generation, and Noah walked with God, the same character that was before given of Enoch, who was translated that he should not see death.

5. After these declarations made of the cause of that Universal Corruption which had overspread the world, and the resolution taken to destroy mankind and every living creature also with them, as a necessary introduction to that stupendous and never to be forgotten overthrow that was to come upon the world for sin; last of all and not before, a revelation is made to Noah of the means by which the world was to be destroyed, namely by a flood of waters that should overflow the whole earth †, when he received at the same time a command to build an Ark for his own preservation, and likewise to take in two of every kind of living creatures, male and female in order to replenish the earth again, and to lay up food for himself and for them.

Now from this view of the method used in these two chapters in relating the several transactions contained in them, and by remarking the several different times or periods of the three several declarations made of the future destruction of the world, it is clear and evident,

* Gen. vi. 8. † Gen. vi. 13. to the end.
Certainty of the Mosaic Deluge.

1. That Noah could not begin to build the Ark, till he had a command for it, and till the dimensions of it were given him, which was not till the third and last declaration made, that the earth was to be destroyed by a Deluge of waters, a point that had not been revealed before. 2. As the Flood began in Noah's 600th year, if we count 120 years backwards from the Flood, that account will bring us to the year of Noah 480. But that could not possibly be the year in which Noah began to build the Ark. For when the command was given him for that work, his three sons were grown up, but in his 480th year not one of them was born; no not the eldest for 20 years after. It is very evident therefore that the Ark could not be 120 years in building, nor half that time; and 'tis strange how that opinion could prevail so long in the world, when by comparing the several parts of the history together, it may be so easily confuted; but we may observe that an opinion once taken up, though inadvertently, passes for ages from hand to hand without further examination.

What number of years were given to prepare the Ark cannot be precisely determined, though it may be nearly conjectured. Was it certain that Noah's sons were all married, before the command given to build the Ark, the time allotted for it must have been very short. And this it would seem was the case from that expression, Thou and thy sons, and thy wife and thy sons' wives with thee. But yet this will not necessarily infer that they were actually married at the time, as none of them were yet come to the age of marriage in the Antediluvian world. I rather take that expression to be an intimation to Noah to provide wives for his sons before the Deluge came, who accordingly betrothed three young virgins to them in convenient time after, but that the marriages were not consummated till after the Deluge was
was over. For two years after their coming out of the Ark was as soon as we can well suppose Shem's eldest son to have been born, when Shem himself was 90 years old, as we have proved before, which was more than the sixth part of the term of his life, very rarely the age of puberty in that world as has been already noted. But moreover a virgin betrothed is from that time accounted as a wife, though they be not yet come together, and how long or for how many years the espousals might precede marriage in the long lives of the Antediluvians we cannot tell. Highly probable it is, that the command to build the Ark was not given till Noah's sons were come to some age, and able to assist in the work, so that the Ark could not be above 20 years a preparing, if indeed so much, perhaps not above ten. If it was 20 years in building, then Noah's sons were the eldest 80, the second 74 and the youngest 67, when they began the work: but if it was finished in 10 years, Japhet was 90, Ham 84 and Shem 77, when Noah began to build it.

But now it may be thought that by rectifying an Error we have run ourselves into an Inconvenience. That by thus shortening the number of years, we have not allowed Noah time sufficient for the work, since some thousand trees were to be felled, barked, sawed, dried and prepared for the building, ere so much as a nail could be driven into it, which would take up some years, and how could four men be sufficient for this in 20 years much less in ten? In order to take off this objection, let it be considered 1. That close application and diligence especially when necessity requires it, will rid a great deal of work in a short time. 2. That besides the four men there were four women to assist, who might be useful in a great many things belonging to the work, and gathering the stores to be laid up in it. For more than 1,500 years after the Flood we find that
the women however nobly born, were not brought up to an idle and indolent life, and we may well suppose that the Antediluvian women were inured to like labour. And to such a work as this, none would refuse to put their helping hand who were to be saved by it. 3. The wood whereof the Ark was made, might not be of the hardest kind, that would require much labour in preparing, but of the softer sorts, that may be got ready with much less. The word in the original is Gopher wood, which what that was, is not now known, except we will take the interpretation of the LXX *, which excludes the Cypress tree, and makes the Ark to have been built of the Cedar, Pine, Fir trees and others of the like sort. 4. There is a method of cutting down trees, which makes them soon fit for use, viz. by hewing them round near the roots, yet so as that the trees may still stand; thus the sap runs out in a little time at the incision, and the trees are soon fit for service, as in this case they might presently be, for the Ark being pitched within and without, it might be sufficiently secured from the entrance of water for 6 months and 17 days, for it was no longer from the beginning of the Deluge to the Ark’s resting on the mountains of Taurus which overlook the plains of Ararat.

Now this enquiry into the time given Noah to prepare the Ark, which as near as can be guessed was between ten and twenty years, serves to correct

* Make thee an Ark of Gopher wood, θέτεις αὐτόν ἐν ψευδῷ μεδός, v. 10, LXX. which Vossius contends should not be translated ligna quadrata, but arbore quadrangulos, that is, trees whose branches shoot quadrangularly, or by four and four at equal distances from the earth, and so making four angles in form of a cross, such as the Pine, the Fir tree, the Cedar and some others, but not the Cypress. Also that in the Vulgate, fac thi dream ex lignis haerepatis, should have been rendered, fac thi Arcanum ex arborebus refixae vel refixiferis, another description of the same kind of trees.
some hitherto received opinions. One of which I shall mention here, the other will be the subject of the following section. Upon the supposition that what is contained in the sixth chapter, follows in order of time the contents of the fifth, that is, the year of Noah 500, and the Flood coming in his 600th year, it has been concluded that there were 20 years cut off from the 120 first allotted to that generation for their continuance and repentance; which it is supposed was done on account of their increasing wickedness instead of amendment. But there is no ground for such imagination. The 120 years first allotted them coincide with the year of Noah 480, from whence to the Flood, which came in his 600th year, are just 120, the time given them at first. As God’s mercies are over all his works, though he may reprieve the sentence of judgment for some time, as in the case of Abab upon his humiliation, yet he will not hasten it before its determined time.

S E C T. II.

Whether Noah gave any previous warning of the Deluge to the world?

It has been another prevailing opinion that Noah published to the world the judgment that was to come upon them by a Deluge of waters, if they did not repent; so that all mankind were sufficiently apprized of their destruction before it came. This is the opinion of the Jews, who tell us, that Noah took Lamech and Methuselah with him, and went into every country to denounce the impending judgment; nay Josephus I think adds, that he left monuments of the Deluge in every place by erecting pillars on which it was engraven. But Lamech and Methuselah were rather too old for such long journeys,
neys, after the revelation of the Deluge was made; and the denunciation of it had been too dangerous in an age of violence for Noab himself, who might have been requited for his unwelcome news, with a violent death, as many of the Prophets were afterwards in their generations. In this opinion however they are followed by Christian writers, who seem to have been confirmed in it by St. Peter’s calling Noab a preacher of righteousness; this no doubt he was both by his words and works, but yet it will not necessarily follow from thence, that he published to the world their destruction by a Deluge of waters. I am far from denying that the judgments of God in general against men’s wickedness might have been published many times, and even some hundred years before the Deluge came by Enoch, Methuselah, Lamech and Noab himself, who all seem to have been prophets. That Enoch was such we learn from St. Jude, as also that he prophesied of the destruction of the wicked: and that he foresaw the destruction that was to come on that very world appears by the name he gave his son, viz. Methuselah, i.e. He dieth and the emission or dart cometh, that is the dart of God’s vengeance against the wicked, as interpreted by Ainsworth; accordingly Methuselah lived to the year of the Flood, and when he died the Flood came. Lamech also seems to have been endued with a prophetick spirit and foreknowledge of the world’s destruction, by giving his son the name of Noe, this same shall make us rest from the labour of our hands, foreseeing that blessing which his son’s piety would procure to mankind by the grant of animal food, that would greatly alleviate the labours of men in the tillage of the ground.

Thus the destruction of the world might have been prophesied of in general by these holy men and others in different parts of the world, though
they might not know the particular way in which it was to be effected; even as it was done to Nineveh by the prophet Jonas, yet 40 days and Nineveh shall be destroyed, without acquainting them by what means it was to be accomplished, which the prophet himself did not know, though it be probable, he might think it would be consumed by fire from Heaven, as Sodom and the cities of the plain had been long before. But against Noah's proclaiming to the world the Deluge that was to destroy them, after the revelation of it made to himself, I have these reasons to offer.

1. We read of no Commission given to Noah to publish the Deluge to the world, and 'tis not to be thought that he would undertake such a task without it. When the prophets in after ages declared the judgments to come upon the people, they were expressly commanded so to do. 2. There was no time for it. From the revelation of the Deluge made to himself, which was not till he had a command to build the Ark, the time remaining was no more than requisite to finish the work, and therefore he would set about it immediately. 3. It could not be done, because of the imminent danger which would have attended it. Noah was not to sacrifice his life by denouncing the judgment of God to come upon a wicked world, but to preserve it that he might become the father of the new world. Had he therefore attempted such publication in that earth which was filled with violence, he could not have escaped with his life. But suppose they had not proceeded to that degree of violence, how would he afterwards have been suffered to build the Ark for his own safety? Though some perhaps might only have mocked at the dotage of the man to be afraid of a deluge to drown the world, of which there was not the least appearance; others more wicked would have interrupted his work, and pulled down.
down or burnt it as fast as he built it up, telling him, he should even take the same fate with the rest of the world, to whom he had denounced destruction. *Josephus says that Noah being wearied with the wickedness of men, who had no regard to his admonitions, he departed from them, and retired with his family into a remote place. If this was the case, as probably it might, Noah might build the Ark, and the world know nothing of the matter, as it was not fit they should, left they should have obstructed the work. 4. It had been to no purpose. Their doom was irreversibly decreed, and all hopes of their amendment past, they were become hardened and incorrigible. 5. That they knew nothing of the Deluge seems evident from the words of Jesus—and they knew not till the Flood came, and took them all away*. 'Tis true ἐν ἐγγυσία, may signify they minded it not, or paid no regard to it, but we may observe that the ignorance of the time of their destruction is here compared to the days of the Son of man, or the time of his coming to judge the world, of which he says, But of that day and hour knoweth no man, no not the Angels of Heaven, but my Father only. As men therefore shall know nothing of the time when that dreadful day shall come, so neither did the old world know any thing of their destruction. Again in Luke xvii. 38. the days of the Son of Man are compared not only to the days of Noe, but to the days of Lot and the destruction of Sodom. Now we know that the cities destroyed by fire from Heaven in the days of Lot, were wholly ignorant of their fate, till it came suddenly upon them. From this best authority therefore I conclude, that Noe did not proclaim to the world their destruction by the Deluge, since they knew nothing of it. And if the Sodomites or the

* Matth. xxiv. 29.
An Enquiry into the Truth and
Antediluvians should complain, that they had no
warning given them of their destruction, God will
no doubt be able to answer them in Judgment.

S E C T. III.

Of Noah's Ark and dimensions; its sufficient
capacity demonstrated by several Authors.

Mr. C—— in his Antediluvian Article has so
little regard to truth and sincerity, that
though he was conscious that the sufficient capacity
of the Ark, from the dimensions given by Moses,
had been demonstrated by several persons, and even
names the first who did it (if miscalling one may be
called naming him) yet he is pleased to throw in that
stale objection of the incapacity of the Ark, which
had been refuted over and over. And instead of
assuring his readers, as he might have done, that
those who objected to the capacity of the Ark did it
without reason, he delivers himself so doubtfully
and sneeringly upon the matter, as if he had a mind
it should be looked on, as a strong objection to the
truth of the Mosaic History.

"Celsus, says he, long ago had the criminal pre-
sumption (this is exactly the language of Free-
thinkers) to laugh even at the dimensions of the
Ark as given by Moses of 300 cubits in length,
50 in breadth and 30 in height, which compared
with the great number of things it was to con-
tain, seemed to him too scanty, and therefore he
calls Noah's Ark ἡπωτός ἄλλωστον, an absurd
Ark.—Again, all those difficulties, says he,
are started by those who favour Moses's relation of
the animals brought into the Ark by Noah, and
who suppose them incredible, if they were not to
render the Ark fit for the reception of so large
a family, either by making the Ark of a greater
extent
extent than that described by Moses, or by reducing the number of animals contained therein.”

How absurd? Did those who favoured Moses’s relation, believe that relation incredible? Or did those who believed the relation true, start difficulties to make it appear false? Or was it a crime in those who believed Moses, to examine the dimensions of the Ark, and the number of animals to be taken into it, that they might shew the objection of its incapacity to be without any foundation?

At the first propagation of the Gospel, when the Sacred Books came to be read both by Believers and Unbelievers, some of the last, particularly Celsius, did with great confidence, though from mere ignorance and malice, affirm that an Ark of those dimensions given by Moses was utterly incapable to contain all the things said to be taken into it. This bold though ignorant assertion startled the Fathers, who being no better Geometricians than their adversaries (for their learning lay another way) did imagine that the cubit mentioned by Moses, was a Geometrical cubit, which is supposed six times larger than the common (if such a cubit really ever was in use.) But they were not aware of the inconvenience of this opinion, since to avoid one difficulty they run upon a much greater: for as the cubit must be the same throughout the whole history, and is the measure of the height of the waters above the mountains, as well as the dimensions of the Ark, to have made the waters instead of 15 to have risen 90 cubits above the hills had been prodigious indeed, as well as quite unnecessary: since the waters needed to rise no higher above the mountains, that no living creature, not even the Giants should escape who might fly to the top of the mountains, or than the depth of water which the Ark might draw, so as to pass over them without danger of striking.
Some have supposed a sacred cubit, which is said to have exceeded the common by a Span, even as the shekel of the Sanctuary is supposed to have weighed more than the common; though others again, and perhaps more justly, are of opinion that the measures of the Sanctuary were only the several standards by which all other measures were to be regulated, that they might be of just weight and measure. But there is no reason to think that Moses meant any other cubit than that which was at that time in use. This indeed has been generally computed at a foot and a half, or 18 inches. But Dr. Cumberland, Mr. Greaves and others have shown that the cubit in Egypt when the Pyramids were built exceeded a foot and a half of our measure, and that it comes nearer to 22 inches, or more exactly to 21-188, which would much enlarge the capacity of the Ark had it been measured by that cubit.

Nevertheless those who have undertaken to demonstrate the sufficient capacity of the Ark for all the uses intended, as Butaeo, Bp. Wilkins and F. Fournier, have done it upon the common reckoning of a foot and a half to the cubit; and though I might refer to their performances, yet as these works are not in every one's hands, I suppose it will be more to his satisfaction, to lay here before the reader some demonstrations of it; and first that of F. Fournier's in his Hydrography.

* Sir Walter Raleigh after reckoning up the several cubits as the common at 1½ foot. 2. The Palm cubit, which is a handful more. 3. The Regius cubitus or Persian, which exceedeth the common by 3 inches. 4. The Sacred, which is double the Common wanting only a fourth part, and 5. the Geometrical, add.;—But of all these sorts which were commonly measured by the Vulgar cubit, the alteration and diminution of men's figures have made the difference. For as there is now a less proportion of bodies, so is the common cubit from the sharp of the elbow to the point of the middle finger of less length than it was in older times. p. 94.
F. Fournier's Demonstration of the sufficient capacity of Noah's Ark.

"Among the Heathens, says he, many made a jeft of the Ark, being persuaded that it was impossible it could contain all the animals, as Moses assures us it did. The impious Porphyry said it was a fable like to that of Deucalion. Origen in his second Homily on Genesis, where he treats of the fabrick of the Ark, tells us of one Apelles, a disciple of Marcion who was wont to say that scarce four elephants could be placed there commodiously. To refute these impious fools, I will not have recourse to the Geometrical cubit of nine feet (six times greater than ours) as some have done, but taking that space only which the Scripture gives me, and the cubit to be a common one of a foot and a half, I shall demonstrate that the Content of the Ark was more than sufficient to contain all the animals preferred in the Deluge.

"It is near 100 years ago since Butaeo (whom Mr. C—— calls Bureo) an excellent Geometrician began to discover the ignorance and folly of those authors who found fault with the dimensions of the Ark, and to shew against those Infidels, that there is nothing in the Scripture account of it repugnant to reason or truth. The length of the Ark, according to the Scripture account, was 300 cubits, the breadth 50, and the height 30. Upon this Area then I make 6 squares, each side of which will be 50 cubits, which being multiplied by themselves will give 2,500 cubits square; and as there are six equal squares the whole will make 15,000 square cubits: and seeing the Ark was 30 cubits high, we must multiply these 15,000
15,000 by 30, which will make the whole
450,000 cubits square, or 675,000 square feet,
reckoning according to the common measure a
foot and a half to the cubit. From which con-
tents I will nevertheless subtract that space which
the floors, partitions and allies necessary to se-
parate the animals from one another &c. might
take up; although the roof, which was finished
in a cubit above the 30 cubits, might in my opi-
nion be sufficient to make up for all these defi-
cencies. For the roof being in the middle of it
of a cubit height in form of a Prisim, it would
contain the half of its Paralelipipiedon, that is, 7,500
cubits, and therefore the whole content of the
Ark would be 457,500 cubits square.

This being laid down, I divide the whole con-
tent of the Ark into three stories, allotting the
lower for fourfooted beasts. And since we have
shewed, that its Area or floor contained 15,000
cubits, although we should give 3,000 to the
partitions and allies for the more convenient pas-
tage of those who were to range, feed and clean
them, we shall still have 12,000 square cubits
remaining, which space I would divide into cells
(as the Septuagint calls them) or rather into cab-
bins or stalls, each of which should have 6 cubits
square, and 36 in their Area, which is equal to
54 feet: and if I give them 10 cubits or 15 feet
in height, there will be found 333 rooms or stalls,
and 12 cubits remaining over and above.

Now Aristotle, Pliny, Gesner and Aldrovandus,
who have made the most diligent search into the
animal kind, and wrote several volumes on that
subject, have not been able to find 150 original
different kinds, and of insects, reptiles and serpents
could never reckon up 40. We find then in this
lower story much empty space, especially since
excepting
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excepting the elephant * (to whom nevertheless six or eight cubits square will suffice) there are few or no animals bigger than the horse or ox; and that in a Camp they allow no more space to a horse than 10 feet in length and 4 in breadth, which makes in the whole no more than an Area of 40 feet, whereas every one of our stalls here has 54 feet.

It must be granted me then, that since there are few animals bigger than the horse; though there had been seven of every kind, they might all with ease have been placed in the lower story. But if with St. Augustine we say, that they were only those which the Scripture calls clean beasts that were taken in by sevens [This is clear from the express words of Scripture, Gen. vii. 2.] and that all those animals were excluded, which are gendered by different kinds, as well as amphibious creatures, fishes and those which are bred of putrefaction [such was the common opinion at the time our author wrote] and the like, there will be abundance of room to spare.

Let us now come to the second story. To this middle story I give 8 cubits or 12 feet in height for a Granary, which will be more than sufficient to contain all the food necessary for those animals. In two thirds of it which will contain 80,000 cubits square, or 120,000 square feet we shall place our hay and straw, since there are very few animals that cannot live on these. In the other part we shall find 40,000 cubits or

* Our author here makes the height of the first story 10 cubs, and it could be no higher. In India and Ethiopia elephants are said to be of 10 cubits height or more. But elephants live to a great age, and are many years in coming to their full height. There was no need to take into the Ark two of age and full grown: two young ones were sufficient, which might not be 7 or 8 cubits high.

" 60,000
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"60,000 square feet, space enough to contain as
much grain or corn, as would suffice a pretty
large town for a twelvemonth. All this then
put together, will be more than sufficient, for the
food of all the animals, especially considering that
in the rooms or stalls, which remained in the
lower story, many creatures might be put for the
nourishment of those who live on prey.

"In the third or upper story, although we should
give one third thereof to Noab and his family,
there will still remain much more room than we
need for all the winged or feathered Tribe; since
in Aldrovandus we cannot find 150 different kinds,
of which there are few bigger than a Swan. Of
this space giving one half to the birds of prey,
and the other half to the rest, all of them will
have large room to skip about at their ease. We
conclude therefore that all the creatures that live
on the land were preserved in the Ark of Noab."
Thus he.

I intended next to have given the learned Bis hop
Wilkins's Demonstration of the Ark's sufficient capa-
city &c. but as it takes up six pages in folio besides
the Diagram or Draught of the Ark, it is too long
for this place. I shall however set down some of
his general and judicious remarks, with an abstract
of some things in it.

Abstract of Bishop Wilkin's Demonstration of the
sufficient capacity of Noah's Ark.

"He observes that there is a great difference be-
twixt those opinions and apprehensions, which
are occasioned by a more general and confused
view of things, and those which proceed from a
more distinct consideration of them, as they are
reduced into order,

"He
"He that looks upon the stars, says he, as they are confusedly scattered up and down in the firmament will think them to be (as they are sometimes stiled) innumerable, of so vast a multitude, as not to be determined to any set number; but when all these stars are distinctly reduced into particular Constellations, and described by their different places, magnitudes and names, it appears that of those that are visible to the naked eye, there are but a few more than a thousand in the whole Firmament, and but a little more than half so many to be seen at once in any Heavensphere, taking in the minuter kinds of them to six degrees of magnitude. It is so likewise in other things. He that should put the question, "How many sorts of beasts or birds &c. there are in the world, would be answered even by such as are otherwise knowing and learned men, that there are so many hundreds of them as could not be enumerated; whereas upon a distinct enquiry into all such as are yet known, and have been described by credible authors, it will appear that they are much fewer than is commonly imagined, not a hundred sorts of beasts, nor two hundred of birds.

From this prejudice it is, that some Hereticks of old, and some atheistical Scoffers in these later times have taken the advantage of raising objections (such as they think unanswerable) against the truth and authority of the Scripture, particularly as to the description which is given by Moses concerning Noah's Ark. Gen. vi. 15. where the dimensions of it are set down to be 300 cubits in length, 50 in breadth and 30 in height; which being compared with the things it was to contain, it seemed to them upon a general view (and they confidently affirmed accordingly) that it was utterly impossible for this Ark to hold so vast a multi-
multitude of animals, with a whole year’s provision of food for each of them.

It is plain in the description which Moses gives of the Ark, that it was divided into three stories, each of them of 10 cubits or 15 feet high, besides one cubit allowed for the declivity of the roof in the upper story. And it is agreed upon as most probable that the lower story was assigned to contain all the species of beasts, the middle story for their food, and the upper story in one part of it for the birds and their food, and the other part for Noah, his family and utensils. Now it may be clearly made out that each of the stories was of a sufficient capacity, for the containing all those things to which they are assigned.

[This he does by enumerating the several kinds of beasts, and reducing them into classes according to their food. 1. Such as feed on hay. 2. Such as feed on fruits, roots and insects, and 3. Carnivorous beasts, distinguishing the clean from the unclean: of the clean reckoning 17 species ex abundanti.]

And though it seem most probable (he goes on) that before the Flood, both men, beasts and birds did feed only upon vegetables, as may appear from Gen. i. 29, 30. compared with chap. ix. 3. where after the Flood, when the productions of the earth were become of less efficacy and vigour, and consequently less fit for nourishment, God faith to Noah, Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things; yet because this proof is not so very cogent to convince a captious adversary, but that he may be still apt to question, whether the rapacious kinds of beasts and birds, who in the natural frame of their parts, are peculiarly fitted for the catching and devouring of their prey, did ever feed upon herbs and fruits; therefore to pre-
"vent such cavils, I shall be content to suppose,
"that those animals which are now predatory were
"so from the beginning. Upon which it will be
"necessary to enquire what kind of food might be
"proper and sufficient for them during their abode
"in the Ark. Now 'tis commonly known that
"the ruminant kind are most usually the prey of the
"rapacious kind of beasts."

[Here having before reckoned up the beasts of
the carnivorous kinds to be 40 in all or 20 pair
only, and what proportion they bear to a wolf, he
computes that it might require 1,825 sheep to serve
them for a year, and shews that there was in the
lower story in the Ark sufficient room for all these
also. And having next shewed the sufficient ca-
ACITY of the second and third stories for the uses they
were designed, he concludes the whole thus.]

"Upon the whole matter, it doth of the two
"appear more difficult to assign a sufficient num-
"ber and bulk of necessary things to answer the
"capacity of the Ark, rather than to find sufficient
"room for those several species of animals already
"known. But because it may be reasonably pre-
"fumed, that there are several other species of birds
"and beasts, especially in the undiscovered parts
"of the world, besides those here enumerated,
"therefore it is but reasonable to suppose the Ark
"of a bigger capacity than what may be sufficient
"for the things already known. And upon this
"account it may be asserted, that if such persons
"who are most expert in Philosophy or Mathema-
ticks were now to assign the proportions of a ves-
"sel, that might be suitable to the ends here pro-
"posed, they could not, all things considered, find
"any, more accommodate to these purposes than
"those here mentioned.

"From what hath been said it may appear, that
"the measure and capacity of the Ark, which some
"atheistical
atheistical irreligious men make use of as an argument against the Scripture, ought rather to be esteemed a most rational confirmation of the truth and Divine authority of it. Especially if it be well considered, that in those first and ruder ages of the world, when men were less versed in arts and philosophy, and therefore probably more obnoxious to vulgar prejudices than now they are, yet the capacity and proportions of the Ark are so well adjusted to the things it was to contain. Whereas if it had been a mere human invention, 'tis most probable that it would have been contrived according to those wild apprehensions, which as I said before, do naturally arise from a more confused and general view of things, as much too big, as now such men are apt to think it too little for those ends and purposes for which it was designed."

To the two former let me add the sentiments of our Historian Sir Walter Raleigh.

"How the appointed number of the creatures to be saved, that is, seven of the clean, and two of the unclean, with necessary food, might have place in the Ark, Bucceo hath very learnedly declared; the brief sum of whose discourse to that purpose is this. The length of the Ark was 300 cubits, which multiplied by the breadth, namely 50 cubits, and the product by the height of 30 cubits sheweth the whole concavity to have been 450,000. Now whereas the posts, walls, and other partitions of lodgings, may seem to have taken up a great part of the hollow, the height of the roof which (the perpendicular being

* Wilkin's Essay towards a real Character and a Philosophical Language. p. 162. & seq.
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one cubit) contained 7,500 cubical cubes was a sufficient recompense. If therefore in a ship of such greatness we seek room for 89 distinct species of beasts, or, left any should be omitted, for 100 several kinds, we shall easily find place both for them and for the birds which in bigness are no way answerable unto them, and for meat to sustain them all. For there are three sorts of beasts, whose bodies are of a quantity best known; the Bœve, the Sheep and the Wolf, to which the rest may be reduced, by saying with Aristotle, that one elephant is answerable to four beesves, one lion to two wolves, and so of the rest. Of beasts some feed on vegetables, others on flesh.

There are one and thirty kinds of the greater sort feeding on vegetables, of which number only three are clean according to the law of Moses, whereof seven of a kind entered into the Ark, namely, three couples for breed, and one odd one for sacrifice: the other twenty-eight kinds were taken by two of each kind, so that in all, there were in the Ark, one and twenty great beasts clean, and 56 unclean, estimable for largeness as 91 beesves, yet for a supplement, (left any species be omitted) let them be valued as 120 beesves. Of the lesser sort feeding on vegetables, were in the Ark 26 kinds, estimable for good allowance for supply as fourscore sheep. Of those which devour flesh were two and thirty kinds, answerable to 64 wolves. All these 280 beasts might be kept in one story or room of the Ark in their several cabins, their meat in a second, the birds and their provision in a third, with place to spare for Noah and his family and all their necessaries *.

What becomes now of Celsius's absurd Ark?

When Butaeo, Raleigh, Wilkins and Fournier, men

of learning who understood the matter, as well as
others later, have demonstrated it to be, a rational
Ark, and fully sufficient, wisely contrived and adap-
ted to all the purposes it was intended? And how
could it be otherwise, when the dimensions of it were
given by that High Wisdom which knoweth all
things, and ordereth all things in measure and number
and weight? And what else have Celsus and Porphyry,
Apelles and the rest of the Infidel tribe done by their
objections against the capacity of the Ark, but shewn
their own ignorance and folly, as well as malice in
pretending to judge of things they understood not;
since the very thing they object against (as Bp. Wil-
kins juftly observes) is a moft rational confirmation
of the truth and Divine authority of the Scripture?
And what are we to think of him who at this time
of day retails such ignorant objections which have
been long ago confuted by demonstrations?

But here we may obferve 1. That the number of
the several kinds of animals is not the fame in all the
authors I have quoted. The reason of this dif-
ference may be, either that some of them have re-
ckoned more of those animals which have been lately
discovered in America and other formerly unknown
countries, some les: or else that some reckon cer-
tain animals to be of a different species; which others
account to have been originally the same. Concern-
ing which let us hear once more our judicious Sir
Walter Raleigh.

—

"It is manifest and undoubtedly true, that
many of the species which now seem differing
were not then (i. e. before the Flood) in rerum
natura. For those beasts which are of mixt na-
tures,—either they were not in that age, or else it
was not needful to preserve them, seeing they
might be generated again by others; as the Mules,
the Hiaena's and the like, the one begotten by asies
and mares, and the other by foxes and wolves.
"And
And whereas by discovering of strange lands wherein there are found divers beasts and birds, differing in colour or stature from thosē of these Northern parts, it may be supposed by a superficial consideration, that all thosē which wear red and pyed skins or feathers are different from thosē that are less painted, and wear plain russet or black, they are much mistaken that so think. And for my own opinion I find no difference but only in magnitude, between the cat of Europe and the ounce of India; and even thosē dogs which are become wild in Hispaniola with which the Spaniards used to devour the naked Indians, are now changed to wolves, and begin to destroy the breed of their cattle, and do oftentimes tear asunder their own children. The common crow and rook of India is full of red feathers in the drowned and low Islands of Caribana: and the blackbird and thrush hath his feathers mixt with black and carnation in the north parts of Virginia. And the dog-fish of England is the Shark of the South ocean. For if colour or magnitude made a difference of species, then were the Negroes, which we call the Black mores, non animalia rationalia, not men but some kind of strange beasts; and so the Giants of the South America should be of another kind, than the people of this part of the world. We also see it daily, that the natures of fruits are changed by transplantation, some to better, some to worse, especially with the change of climates. Crabes may be made good fruit by often grafting, and the best melons will change in a year or two to common cucumbers, by being set in a barren soil. Therefore taking the kinds pre civilly of all creatures, as they were by God created, or out of the earth by his ordinance produced, the Ark after the measure of the common cubit, was sufficiently capacious to contain of all, according
according to the number by God appointed. For if we add but half a foot of measure to the common cubit, which had a foot and a half of stature (and less allowance we cannot give to the difference between them and us) then did the Ark contain 600 feet in length, and 100 feet in breadth, and was 60 foot deep *.

S E C T. IV.

A farther Inquiry into the Content of the Ark; and the several things necessarily to be taken into it.

The Reader may observe that all the three forenamed authors have supposed, that those animals which are now rapacious or carnivorous, were fed in the Ark with flesh, for which end Bp. Wilkins has made a very large provision, no less than 1,825 sheep; but it may be observed too, that he has done it only to prevent the cavils of captious adversaries, for that in his own judgment, it appeared most probable, that before the Flood, both men, beasts and birds did feed only on vegetables. And this indeed I take to be the truth of the matter. 1. From the food appointed for all the animals in general, at the beginning. And to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth, wherein is life, every green herb for meat †. Now though man's food at first was much the same, viz. vegetables and fruits which

* Ibid. Now that Sir W. R. was not mistaken in judging the Antediluvian cubit (by which the dimensions of the Ark were given) to be 2 foot of our measure, appears from the instance of a young man of Ireland, shown at Oxford 1684, who was 7 foot 6 inches high, and whose cubit was 2 foot 2 inches. Lowthorp's Abridgment, vol. III. p. 1.

† Gen. i. 30.
the earth brought forth of itself without his culture, yet after his Fall, bread was added to be produced by tilling the ground; either because his body had suffered a change by the Fall, or that the earth's first fertility was somewhat abated and its productions not so efficacious and nutritive as before, or for both these; but I can see no necessity for changing or adding to the food of other animals, whose lives were not to be lengthened out to the age of man, they coming much sooner to maturity, and multiplying much faster than mankind does; and though in the rapacious birds and beasts the natural frame of their parts be peculiarly fitted to catch and devour their prey, yet may their stomachs also be fitted to digest vegetables (as that of man's is to both flesh and vegetables) upon which I suppose they now often feed also, or else would many times starve; and in the Ark it was only necessary to keep them alive, not to feed them to the full. 2. Because the animals that were reckoned unclean (and such are all of the rapacious kinds) were ordered to be taken in only by two's, male and female, and the clean by sevens only; so that there could not be such a number of sheep or other clean animals as Bp. Wilkins thought good to allow, and 3. Because the provision to be made is expressed in these words. And take thou unto thee of all food that is eaten, and thou shalt gather it to thee, and it shall be for food for thee and for them. Now the gathering of all kinds of food seems restricted to vegetables, corn, &c. 4. Because the slaying, skinning and dividing so many animals for the sake of the rapacious kinds, without absolute necessity, would have been so great an addition to the labour of the family (which we shall find to have been great enough without it) that I think it would have been avoided if possibly it could, as here it might be; since though those animals had been wont to live on flesh, they could yet live for a time
time without it, if they had sufficiency of other things. And therefore though those grave and learned authors I have quoted, did very well to allow for such provision for the present carnivorous kinds of birds and beasts, to shew that notwithstanding all this, there was sufficient room in the Ark and to spare: yet in an Enquiry after Truth, I see no reason to give up any point, which I do not think to be true, to the cavils of unreasonable and captious men; and therefore for the reasons I have given, do not think there was any provision of flesh made for the rapacious animals in Noah's Ark.

But in so doing it may be thought I have only made so much more needless work for myself; for if notwithstanding the room allowed for provision of flesh for the carnivorous animals, Bp. Wilkins was of opinion "that of the two, it doth appear more " difficult, to assign a sufficient number and bulk " of necessary things to answer the capacity of the " Ark, rather than to find sufficient room for those " several species of animals already known," if we shall discharge the 1,825 sheep, which he had allowed, and which would take up a good deal of room, then there will be still a greater vacancy; and if we shall besides allow of what Sir Walter Raleigh believes, that the cubit by which the Ark was measured was the Antediluvian cubit according to the stature of those first men, which could not be less than 24 inches, or two feet of ours (which seems but reasonable) and that thus the length of the Ark would be 600 of our feet, the breadth 100, and the height 60. Hence I say a very great difficulty, or strong objection may be raised against its being made so much larger than necessary. For to what purpose was there so much waste of time and labour to make it so much bigger than was needful?

Now to remove this difficulty and answer this objection it might suffice to say, though we had no-
thing else to offer, that it was absolutely necessary that the Ark should be of much larger capacity in all its dimensions, than barely to hold the family, the animals and their several foods; and that, for the free circulation of the air, for the preservation of the life and health of those contained in it. Had there been no more space than barely to flow the things contained in it, the air would probably have stagnated and corrupted to the endangering of both health and life, as well as to the spoiling the stores of provisions laid up in it, especially as the Ark was close shut up, there being but one window in it. The ingenious and learned Dr. Arbuthnot, in his *Essay concerning the effects of air on human bodies*, remarks, "That the *Effluvia* of human live bodies are extremely corruptible. The water in which human creatures bathe, by keeping smells cadaverous. Less than 3000 human creatures living within the compass of an acre of ground, would make an *Atmosphere* of their own steam about 71 feet high, which if not carried away by winds, would turn pestiferous in a moment. From whence it may be inferred, that the very first consideration in building of cities, is to make them open, airy and well perfumed. Pestilential constitutions have been often preceded by great calms. From hence the air of prisons produceth often mortal diseases, and ships crews turn sickly in bays and harbours, which would be healthy in the open sea."—But though our author speaks here only of the *Effluvia* of human bodies, yet the *Effluvia* of other animals may in some degree have like effect, especially where the steams had but 10 cubits height to arie; and though the number of all the living creatures within the Ark were much short of the number here mentioned by him, yet

* P. 17.
as all the four-footed beasts were in one story, it was very necessary that there should be space enough for the free circulation of air.

But besides this general and apparent reason for the largeness of the Ark, there were many other things to be taken into it over and above their dry food, which have not been much adverted to by authors. And

1. A very large quantity of water was to be provided sufficient for the whole time of their abode in the Ark, without which neither men nor animals can live. The great difficulty will be how to keep it sweet for so long a time. To this end it could not be kept in close casks as they are obliged to do at Sea, and which is the reason I suppose of its corrupting, but in large tubs open at the top, or in some large cisterns at each end, as the filling them with water might be part of the women's task while the men were employed in more laborious work. Rain water will keep sweet for a very long time, but that probably they could not have, since it is more likely that it had not rained for several months before the Deluge, all the vapours exhaled by the Sun, being fast bound up by the clouds, till the time came to pour them down on the earth; yet Bristol water (and doubtless many such waters there are besides, of like nature) as well as the waters of some rivers will keep sweet a twelvemonth; particularly of the water of the Ganges which is carried a hundred miles by the Banians out of devotion; it is said that it does not corrupt, nor will it stink how long soever kept, so that there might be no great difficulty in finding a sufficient quantity of proper water.*

2. A

* Against the necessity of providing a sufficient quantity of water to serve for all needful uses during the whole time of their abode in the Ark, two objections may lie.

1. That
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2. A very large quantity both of lights and fewel were to be provided to serve their occasions during their abode in the Ark. The Antediluvians had nights and winters as well as we, and without question could furnish themselves with what was necess-

arily.

1. That it does not seem necessary that any great quantity of water should be laid up in the Ark, since by letting down vessels from the window, they might draw up from time to time sufficient for their use. 2. That in the violent agitation of the Ark for some time, it does not appear how water could be kept in open tubs or large cisterns. In answer to the first of these objections, it will soon appear, that no water fit for use could be got in any manner of way after they were entered and shut up in the Ark. 1. Not rain water collected at the window, how large soever it might be, because during the 40 days rain, probably accompanied with thunder and lightning especially at the first, the window behaved to be close shut, to defend them from the violent rains; since for that purpose the Ark was not only made floating in form of a prison, but had a covering over it besides; by both which the rain would have been thrown off at some distance from the window, so that they could not well catch it, though the rains had not been attended with thunder and lightning. 2. No water could have been drawn up by vessels from the window fit for use after the rain ceased, for as the fountains of the Great Deep were broken up the same day the rains began, and thereby the Seas were poured out on the earth, which carried a mixture of all things with them; the floating waters therefore would have been so salt, or brackish and muddy, that they would have been utterly unfit for the use of the men and animals enclosed. Not to insist that the distance from the window (which was in the upper story and near the roof) to the surface of the waters was too great, to draw up water from thence without more time and labour than could be spared. For though the Ark should draw 12 or 13 cubits of water, that is 24 or 26 feet, according to Sir Walter Raleigh's measure, there would yet remain above 30 feet more from the surface of the waters to the window, too great a depth to draw up any quantity of water daily by mere strength of arm.

To the second objection, I say that the Ark stood firm on the ground, till the waters had risen to 24 or 26 feet or more, when it would begin to be lifted up and float; but when the waters were at that height, and of an equal surface over all, there would be no violent agitation, tho' a gradual increase of the waters (as there was no wind) till they had reached the height designed. For these reasons I conclude that the whole quantity of water needful was laid up in the Ark, before Noah entered into it.
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fury for both, as well as we do now. As to the con-
veniency of light, because the word Zohar, which
we translate window, is derived from a verb, that
signifies to burn or shine, some have imagined some-
thing else to be meant, as a large Carbuncle or a
Phosphorus, or some such artificial composition, but
these are vain fancies; nothing of that kind could
give light sufficient to a tenth part of one of the sto-
rries, whereas light would be wanted daily in all the
three, in the upper for themselves and the fowls,
in the Granary to fetch the provisions necessary, and
in the lower for the feeding the fourfooted beasts and
reptiles, and that at least twice a day. And as lights,
so few would be daily wanted for firing, both for
warmth and dressing their victuals. Though the
Antediluvians lived on vegetables, fruits and corn,
yet we can hardly think that they eat all these raw,
but that they dressed them by fire, and could make
even dainty dishes out of them. To this purpose,
a Missionary in the Isle of Tsong Ming opposite to the
mouth of the river Kiang in China relates, “That
the inhabitants from the grain of some herbs (he
had before mentioned) express an oil which serves
instead of butter, and is of great use in sauces.
The Cooks in France, says he, who have refined
the most on what may raise the appetite, would
be surprized to see, that the Chinese had carried
the invention with respect to Ragouts yet farther
than they have done, and at much less expence.
One would hardly believe, that with plain Beans,
which come to them from Chantong, and with
the flower which they draw from Rice, and their
corn or wheat, they prepare an infinite number
of dishes, all different from one another to the
eye and to the taste.” Now I cannot think but
that the Antediluvians were as ingenious this way
as the Chinese. But besides fires necessary to bake
their bread and dress their victuals, they would want
want them also for warmth against the cold in winter, which would be increased, by the whole earth's being covered with water. Fires then we see were absolutely necessary, and a large stock of fuel therefore to be laid in. There is no mention of Funnels for vent of the smoke indeed in the Text, any more than of tubs and cisterns for water (which they could not be without) nor was it needful. An Architect who had the dimensions of a house given him as to its length, breadth and height, and number of stories, need not be told that he was to make chimneys for fire in all the Lodging-rooms; so Noah having the dimensions of the Ark given him, with its division into three stories, with separate stalls or cubbins, as to all other things necessary or useful for his family or the animals, he was left to order and provide them according to his wisdom; and he had sufficient time to think of all things that would be wanted, while he was employed in the fabric of the Ark.

3. I do not suppose Noah and his sons would throw away the tools with which they had built the Ark, but as they would want all manner of necessary instruments at their first coming out of the Ark, and that it must be a considerable time ere they could make tools of any kind for themselves, or dig into the bowels of the earth for iron, the most useful of all metals; we may take it for granted, that they would take into the Ark with them all things they stood in need of to begin the world anew, all manner of tools and instruments for building, husbandry, gardening &c. eight tents at least for themselves (the women's tents being separate from the men's) all manner of household and kitchen-furniture, as well as plenty of garments, and of every thing else that might be needful or useful to them in the new world. All which things considered, the difficulty of filling so large and capacious an Ark will
will now vanish, since we find there were so many other things to go into it, besides the animals and their dry food. If it should be asked how I come to know all this? I answer 'tis easily known, because all these things were necessary or useful, and that I believe Noab at 600 years old, to have been a wise man as well as a good man, and that every considerate person would have taken the same care in the like case.

4. But there is yet something farther to be considered with respect to air, so necessary to the life and health of the men and animals contained in the Ark. That there was a window in the Ark is evident, for out of it Noab sent forth the raven and the dove. Now by opening this window now and then, there would be a strong suction or in draught of air in so large a building, and a free circulation of it from top to bottom. And thus the Effluvia or fumes issuing from the bodies of living creatures, would be dispersed, and fresh air let in as often as was necessary. Here Mr. C—— asks by what means Noab could know, how many days he was in the Ark since all was in darkness? a sure sign that he never read or consulted any of the authors on this subject, when he took it into his head to write on it; since he might have seen in both French and English authors, draughts of the Ark with the animals in the second story, and the sides mostly open, which might have at least prevented his asking such a silly question. But though I take this disposition to be wrong, as I shall shew presently, yet Noab was not without means of distinguishing day from night, though he should have had neither clock nor watch in the Ark: for I do not suppose the window to have been close shut up with boards, but to have been so made as to let in the light, though not perhaps a Glafs window; which is but a late invention, and not used in all countries. Even so
late as in the end of the last Century, multitudes of houses in the polite city of Paris had no glass in their windows, but oiled paper or some such thing. Now I must needs think that the Antediluvians were as good at inventions and contrivances as the Post-
diluvians; and if they had cities as early as the days of Cain, they must have had houses of which those cities consisted, and if they had houses they had windows that would let in the light, though not made of glass. What we translate a window some Translators render it thus, a clear light shalt thou make to the Ark, and in a cubit shalt thou finish it (that is, the Ark) above. By which it appears they took it not for a window shut up with shutters, but for a window that gave light, and how large that might be, is not said, not a very little one to be sure in so large a building, and which was to give light to the family. For the words in a cubit shalt thou finish it above, do not refer to the window, but to the Ark, otherwise the description of the Ark had been defective, without any direction for the roof, which by these words is ordered to be made declining from the middle, the length of a cubit, and in form of a Prifm, for the more speedy descent of the rain which fell upon it.

5. Let us next consider the placing of the animals. Bp. Wilkins and F. Fournier have placed them in the lower story, as generally agreed on to be the most convenient, nevertheless F. Calmet, the authors of the Universal History, and Mr. Stackhouse in his History of the Bible have placed them in the middle story, which they have made mostly open on both sides for the benefit of air to the animals, as may be seen in the draughts or Prospects of the Ark in their several works, at least on one side; for the Prints cannot give us a prospect of both sides at once. But this their disposition of the animals I take to be wrong for several reasons. In the description of the Ark,
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Ark, we have it divided into three stories with a
door in the side of it, and a window. Now it is
most natural to suppose the door to have been in the
middle of the Ark, and also in the lowest story, as
being by much the most convenient; for though
the animals and reptiles might have got up to the
second story by a gradual ascent contrived for that
purpose, yet was it far more easy and convenient
both for their going in and coming out again, for
them to be stationed in the lower story. I should
likewise have thought that the stairs from the lowest
story to the highest, might go up directly from the
door in the middle, and the window be opposite to
both in the upper story, as these seem in some re-
spects the most convenient positions; but Bp. Wil-
kins places stairs at each end of the Ark, which in
other respects might be likewise convenient, as the
fire hearths might be at each end of the upper story,
the one for the men and the other for the women,
for as the sons marriages were not yet consummated,
they would keep their lodgings separate; and in-
deed I see no reason why there might not have been
stairs both in the middle and at each end, which
considering the length of the Ark, of 600 foot,
would be convenient for the family, and there
wanted not room for them.

2. I cannot admit of the Ark's being open all
round in any of the stories, or even on one side of
it. During the 40 days rain, which was probably
attended with thunder and lightning (to strike the
greater terror on the wicked devoted to destruction,
and as it has happened in the like cases since, the
Ark had more need to have been close shut up. Nor
was such an opening at all necessary to the animals,
since they can live not only under covert, but even
under ground, which is evident from the practice
in several coal-pits, into which horses are let down
for turning engines, and where they will live several
years;
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years; and in the salt-mines near Cracow in Poland, there are always three horses to draw the salt to the openings.

3. The lower story was by no means fit for the Granary or Storehouse of provisions, for as that would be all or most of it under water, the dampness arising thence would affect and spoil the provisions, for the preferring of which the second story seems much the most convenient.

This method of theirs seems preposterous, for whoever put the horses or cattle in the loft above, and the hay and straw in the stalls below? Whereas the hay being placed in the loft above, and a small space left between the floor and the wall, it is easily let down into the Racks below. And thus if the larger animals were stalled along the sides of the Ark, they might all have their provender let down to them after the same manner, which would save some trouble to the family, who in that case had only provisions to bring down to the lesser animals stationed in the middle. For these reasons I conclude that the lower story was the station of the animals, who could not want air, considering the largeness of the Ark, and the letting in fresh air as often as necessary by the window, which would pervade all the stories even to the lowest.

There are two or three questions more that may be moved with respect to the animals in the Ark, as

1. Whether by taking in the clean animals by sevens, be meant seven pair or seven single, that is, three pair and one odd? It is not very clear by the Text, which was intended. Some think it was seven pair, others that it was only three pair, and that the odd one was in order to that sacrifice which Noah offered after his coming out of the Ark, viz. one of every clean beast and bird, as Abraham did afterwards. Of this last opinion is Bp. Wilkins, and I am inclined to think it the most probable, because three
three pair of each would be sufficient to stock the new world and to serve the family saved, since in a few years they would increase as fast as they could have occasion for them, the distinction of clean from unclean at this time being only with respect to sacrifices, and not to food; as to food after the Deluge it was lawful for them to eat of every kind of animals, they beft liked; in this there was then no restriction, but * Every moving thing that liveth shall be meat for you, even as the green herb have I given you all things, and *tis probable they would not eat of animal food at first, having not been accustomed to it before.

2. Whether all the kinds of animals, birds, beasts and creeping things, were to be sought for and gathered together by Noah and his sons, or if they came to him by instinct and impulse? That it could not be in the first way seems pretty evident for these reasons. 1. They could not be gathered together of a sudden. It would require a good deal of time and pains to assemble them by degrees, which I think Noah could not well spare from other necessary labours †: having besides the building of the Ark all kinds of food to gather for himself and them. 2. As the animals were gathered they must have been confined, and fed even before the Ark was ready to receive them, which would have been a double trouble and expense of food. 3. Every kind of every living thing to be saved, might not be

* Gen. ix. 3.
† The outward frame of the Ark was not much above half the work, for besides the floors and the stairs, the tubs or cisterns for water, the cabbins or stalls for the beasts, nets or divisions for the birds and divisions in the forehouse, for the several sorts of food, it would be necessary to have two walls or rows of pillars running crofs from side to side to support the floors and the roof; the breadth being 50 cubits or 100 feet, would necessarily require it, if even that would serve, and perhaps that great breadth might require three such supporters.
within Noab's reach, nor even within his knowledge. He might not know all of them, nor be able to come at all of them, if he did. Many of them were wild, and not easy to be managed till they were confined and in the dark. I therefore think it far more probable, that they all came to him of their own accord, after all things were ready and a little before he himself entered into the Ark; that they were brought to him, even as God had at first brought them to Adam when he gave names to them all. And he that could order even ravens to carry flesh and bread, morning and evening to the Prophet Elia by the Brook, could as easily order every kind of living creatures to travel to the Ark and enter into it. And this seems confirmed by the Text. Two of every sort shall come unto thee to keep them alive. 3. It is queried how the dung of all the animals was conveyed away, which was necessary to be done both for their health and cleanliness? To this end some have imagined a double bottom to the lower story, where the four-footed beasts were stalled, the upper of which might be so contrived that the dung and urine of the animals might fall or be swept through it into the lower. But such a thing could not possibly be. For to have left such a space between these two bottoms as to contain the dung of all the animals for more than twelve months, would have taken up so much of the height of that lower story as the remainder would not have sufficed for the animals themselves, but that they would be in danger to be stifled for want of free air. 2. Though there had been room for it, it had been highly inconvenient, because the stenches arising both from the bodies and the dung of the animals in so close...
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a place, must needs have made the air infectious, and 3. The weight of the dung in so long a time might have endangered the true bottom of the ark itself. This could not possibly therefore be the case. Indeed I know no other way possible or probable (though a laborious one it was) but that the eight persons in the Ark, should every day, or as often as they saw needful, clean all the stalls and aviaries, carry the dung to the upper story, and throw it out of the window.

And now if we reflect on the several particulars mentioned, and consider the daily and troublesome occupation of Noab and his family, in feeding and watering all the animals and cleaning all the stalls and aviaries, besides what was necessary to be done for themselves. If we reflect moreover on that heaviness of heart they must have been under for the destruction of all mankind (among whom no doubt they had several relations and kindred) and of every living creature upon the earth; as also on that dread and terror, with which so stupendous a judgment must affect them, when the heavy rains descended, the lightning flashed, and the thunder roared, we may in some measure conceive the afflicted and laborious life they led during their confinement for a year in the Ark; and may truly say, that when the vengeance of a righteous God was poured forth on a wicked world, scarcely or with difficulty, were the righteous saved.
S E C T. V.

Whether more than eight persons were saved in the Ark? And of the Origin of servitude after the Flood.

I had no thoughts of making this any part of my Inquiry, as believing it to have been universally acknowledged by all both Jews and Christians, that no other persons were saved in the Ark except Noah and his wife, his three sons with their espoused wives; but the Reverend and learned Dr. Harris in a work of his not many years ago published* seems to be of another opinion, and names a very learned man as concurring with him, in the same, viz. Bishop Cumberland. As I have not the book itself, I must take what is said on our present subject, as it is abridged in the Literary Magazine for August 1735. It is from his second Dissertation on the Hebrew word Dort which the LXX translate yevéa, and we generation.

He observes "that the custom of enrolling mankind was very ancient, as appears from the practice of the Athenians, who refer the origin of it to Cecrops. But as mankind were very early divided into two estates of freemen and slaves, the former only were entered into these Enrolments, as being the only persons who had a real interest in their country; the slaves being placed to their masters account, and considered as part of his wealth, as any other of his estate or chattels. Hence Dr. Harris observes by the way, that though only eight persons were said to enter into Noah's Ark (whereof four only were men and fit

* Observations Critical and Miscellaneous on several remarkable Texts of the Old Testament &c. 4to. Printed in 1735.
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for labour) it may not be impossible, that as
these were heads of families, and so consequently
only named, some servants might be taken into
the Ark with them: for such doubtless were ab-
sent from Noah in the building of the vessel, who
by being long engaged with him in that work,
must be informed by him (a preacher of righteoun-
ess) of the judgment which God was bringing
upon the world; and therefore very likely con-
curred with him in his faith, and were equally
objects of Divine Mercy. And therefore it is
not impossible that some of these might be taken
into the Ark with him; their hands probably
being necessary for the management of it, dur-
ing its great storm, and for taking a proper care
of so many living creatures as were preferred in
it for so long a time, which doubtless must have
been a work of great fatigue and labour. This
will more easily account for the speedy peopling
of the world after the Deluge, and I find, adds
our author, the very learned Bishop Cumberland
was of this opinion.

Our author here expresses himself with great mo-
desty and according to his known character, and be-
sides offers seemingly good reasons for his opinion,
and yet I think there are stronger reasons against it,
as will appear on its examination: In some things
however I must concur with him, as namely 1. That
the taking a proper care of so many living creatures
as were preferred in the Ark for so long a time, was
doubtless a work of great fatigue and labour. And
this I have shewed at large in the preceding section.
2. That though mankind were very early divided
into Freemen and Slaves, the former only were en-
tered into the enrolments, or even named. Thus in
Abram's numerous family none of his servants are
ever named, but his steward or major demo, and that
upon some very remarkable occasions; nor yet in
Isaac's
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Isaac's nor in Jacob's, nor any other in those early days. 3. That there were slaves or servants in the Antediluvian world is very probable, that being one effect or consequence of the violence that so universally prevailed in it. But whether Noah made use of such in the construction of the Ark (if any at that time he had) is uncertain, I should rather think that he would not. The world's destruction by water was revealed to himself and for himself only; from the rest of the world it was to be kept secret, and could not be communicated even to his servants, if he had any, because of the danger that would have attended it; and therefore I think he would choose to employ no other hands in the work, but his own and his family's, since had he employed others, it would be thought hard, that they who laboured so much to save others, could not be saved themselves in that Ark which was the joint labour of them all.

It is true there were but four men to build the Ark, but they were men of great strength, and doubtless inured to exercise and labour, and there is no comparison between these and men now a days; nor how great a difference is there at present between the strength of labourers and artificers, daily inured to hard labour, and that of men of studious and sedentary lives who seldom use exercise or labour of any kind? Six such persons would not be equivalent to one of the other in any long and laborious work. But besides the four men, there were four women, who could be assisting in many things belonging to the fabric of itself, as also in gathering and storing food of all kinds, and providing the Ark with water sufficient. For more than 1,500 years after the Flood, we find that the women however nobly born, were not brought up to an idle and indolent life, but to useful employments befitting their sex, either in the house or the field, and we may well suppose the...
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Antediluvian women were inured to like labour; and in the present case they would be obliged to put their hands, not only to such things as they had been before accustomed to, but to every thing else wherein they could be afflicting, since it was for their common preservation.

But as to the management of the vessel, during so great a storm, had there been an hundred servants in it, they could have helped nothing, they being all close shut up within, and the Ark having neither fails, nor rudder, nor what else serves for managing ships at sea. Noah had done all things that he was commanded, and the Divine Providence would take care of the rest. And though it be true what our learned author says, that none but the names of free-men were entered into the publick Enrolments, and though in profane History servants probably would not have been mentioned though they had been taken into the Ark, because by the Civil Law, servus non est capit, and so not named; yet we cannot think that Moses would upon so solemn an occasion have omitted their names; at least their number, had any servants been taken into the Ark; since in God's account all souls are alike, the greatest and the meanest equally in his favour, if equally righteous.

But there are some passages in Scripture, which I think will absolutely exclude any servants being taken into the Ark. 1. It seems very certain that Noah would not go one jot or tittle beyond the command given him, and that expressed no more as to persons than that himself and his wife, his three sons with their espoused wives should go into the Ark.

2. This is confirmed again by Moses *. And the sons of Noah that went forth of the Ark were Shem, Ham and Japhet, these are the three sons of Noah, and

* Genes. ix. 18, 19.
of them was the whole earth overspread. But Moses could not have said with truth that the whole earth was overspread of them, had servants been taken into the Ark, whose offspring would have replenished the earth as well as the sons of Noah, and even more had they been more in number. 3. The words of St. Peter * are a further confirmation of the same truth. And if God spared not the old world, but saved Noah the eighth person, a preacher of righteousness, bringing in the Flood upon the world of the ungodly. Where our Translators have supplied the word person to shew that the number eighth, was not to be referred to the Preacher, but to the persons saved: without that supplement, it is literally, but saved Noah the eighth, a preacher of righteousness. Novae locutio, faith Clarinus, cum intellegat ostro animas servatas, inter quas esset Noe, qui cum septem secum haberet, ipse erat Othnus, yet it is a form of speech which has got into some modern languages, as in French moy buitieme is, I and seven more; but yet more expressly—Wherein few, that is eight souls were saved by water †.

But let us now look into the foundation of this opinion. Bishop Cimberand our author seem to have been led into it from the belief of the speedy peopling of the earth after the Deluge. But in truth the earth was not so speedily peopled after the Deluge as those imagine who take it for granted that the reckoning of the years in the present Hebrew Copy is the true and original reckoning. In the days of Abraham though many countries were peopled, cities were built, kingdoms erected and kings making war yet was the earth but thinly inhabited, as appears by the histories of Abraham, Isaac and Jacob; great part of the lands lying yet in common; those who had collected themselves

* 2 Ep. ch. ii. 5. † 1 Ep. iii. 19.
into cities, claiming no more of the ground than what lay near them and served their own exigencies. Had the number of years between Abraham and the Flood, been no more than the Hebrew Copy allows, this state of the world in his days had been very wonderful. "But as for those, says Sir Walter Raleigh, who make Nimrod to have arrived at Shinar in the year 101, and the confusion to have been at Peleg's birth, (according to the years in the Hebrew) these men do all by miracles: they begot whole nations without the help of time, and build Nimrod's tower in the air, and not on those low and marshy grounds (which require found foundations) in the plain of Shinar." But now according to the LXX, the space given between the Flood and Abraham's birth (viz. 1192 years) accounts very well for that improvement of the world in his time. Some of those who would account for the so speedy peopling of the world after the Deluge have alleged that those first patriarchs might have had children at 14, 16, or 20 years of age. But this would be wonderful indeed that they should begin to procreate so early and yet live so above 400, whereas I have proved before that 30 was a great deal too early for them, there being no proportion there between the age of puberty and the term of life according to the established law of nature. Father Lobo indeed in his Relation of Abyssinia, tells us that the males there marry at ten, and the females younger, and the same is said of some other hot climates, viz. with respect to the females at 10.

This may indeed be possible in some but could not be the general custom, though it is known that in hot countries, they come sooner to puberty, than in colder regions. But I wish the same Father had told us likewise what strength of body such early"
fruits have, and to what age they live; for as the same judicious Historian observes, "That the hafty marriages in tender years, wherein nature being but yet green and growing, we rent from her, and replant her branches, while herself hath not yet any root sufficient to maintain her own top, is one cause why such half ripe seeds, for the most part, in their growing up wither in the bud, and wax old even in their infancy." In the Lead-mines in the mountains of Hertz in Germany, in which the King of Great-Britain as Elector of Hanover has a large share, it is said, that the men married there at 12 and 14, left they should not live to taste the pleasures of matrimony, they being frequently subject to accidents in the mines, but it was observed also, that they did not live to any great age, nor arrive to any great stature, which confirms Sir Walter Raleigh's observation. But these are singular cases and not conformable to the order of nature, which requires maturity before generation.

But had our author given as the ground of his opinion, that he could not see how there could have been servants so early as in Abraham's days, except servants had been likewise preserved in the Ark, it would have looked far more probable; and in truth were we to adhere to the computation of time in the present Hebrew Copies it could not easily be accounted for. For after the Flood all men were upon a level, with no other difference than what elderhood or seniority gave, all Freemen, and all alike nobly born, being all of them the descendents of Noa the father of the new world. How then could so many of them become servants to others in so short a time, except necessity had compelled them to barter their liberty for their maintenance? But this can never be supposed the case so early, since

* P. 66.
the earth was large enough to have maintained more thousands than there were tens at that time in the world; and every father of a family would endeavour to provide for his own; nor could there well be any dispute or contention about particular places, since the younger branches must yield to the elder, especially when there was room more than sufficient for all. It seems to me evident therefore, that there could have been no servitude after the Flood till there had been first wars. But wars, I think, could never have happened so early in the new world as 400 years after the Flood; since after the first dispersion of mankind (at what time forever it happened, of which we have said something before) the time and care of the several colonies must have been to clear the grounds that they might be fit for culture, to build cities, and make the places of their settlements as commodious as they could. Wars then were the original of servitude in the new world; for as some are slain in battle, whose widows and orphans might by that means be reduced to hard shifts, so all that were taken captive in sight, or carried captives from a conquered country, would become servants to the conquerors; as the people of Sodom must have been, had they not been rescued by Abraham. All of them, men, women and children had been either kept or sold for slaves. But now this difficulty, as well as several others, vanishes when we reckon the years according to the LXX, for by their computation, Abraham was not born till more than eleven hundred years after the Flood. And then indeed when mankind was greatly multiplied, and ambition with other vices began to take possession of men's hearts, there might have been wars, as we find there were in his days, though we read of none earlier.
Chap. II.

Sect. I. Whether there were any high Hills and Mountains before the Deluge, and of the height of the present?

THAT there are very high hills and mountains on the present earth, many of which extend themselves several hundred miles in length is well known. But it has been questioned whether such high mountains were originally from the beginning of the Creation, or were some way or other owing to the Deluge.

Dr. Burnet in his Theory of the Earth will have it, that there were no hills nor mountains on the primitive earth, that is, according to his manner of forming it, but we may safely leave him to Dr. Keil's Examination of his Theory. Nevertheless some others who do not go into his Scheme of the Earth's formation, are yet of opinion that there were no such high hills or mountains from the Creation, as are now upon the earth, but only Eminences or Prominences, some parts elevated above others; which if it were the truth of the case, it would be much easier to account for an Universal Deluge than upon the contrary supposition, since a far less quantity of water would have sufficed; but as we must not pretend to account for difficulties on precarious suppositions, it will be necessary to consider the arguments on which such opinion is founded. And

1. It is alleged that "Moses makes no particular mention of the creation of mountains, which had they been from the beginning 'tis reasonable to think he would have done." True he does not, and for a very good reason, because he could not. For after that the waters which at first covered the
the whole earth were divided into those that were lifted up above the Expanse or Firmament, and those that were left still upon the earth till the third day; when those were commanded to retire into their several receptacles that the dry land might appear; the dry land when it appeared or became visible, appeared with mountains and valleys at once; of which more hereafter. Moses therefore could make no particular mention of the creation of the mountains distinct from the rest of the earth, since the earth rose out of the waters with the mountains on it; and his silence in this point is no argument that there were no mountains from the beginning.

2. It is alledged "that when Moses, faith Gen. VII. 19. And the waters prevailed exceedingly upon the earth; and all the high hills under the whole Heaven were covered, fifteen cubits did the waters prevail, and the mountains were covered, he only spake here ad captum vulgi, that it might be understood that the highest parts of the earth were covered 15 cubits." To this I reply, that Moses undoubtedly spake to the common capacity and understanding of mankind, but that he as undoubtedly spake truth, and related facts as they really were; and therefore when he faith all the high hills and mountains under the whole Heaven were covered, we may certainly conclude that there were high hills and mountains to be covered when the Deluge came. For when Moses wrote his History, it was well known what was meant by high hills and mountains, since they were to be seen in so many parts of the earth, and had there been no high hills and mountains before the Deluge, but only Em-}

3. "That this opinion seems confirmed by Ge-

ref. ii. 5, 6. The Lord God had not caused it to rain upon the earth, but there went up a mist from the
The earth and watered the whole face of the ground; from whence it seems to follow, that had there been high hills (the laws of nature being supposed the same then as at present) the vapours so plentifully raised must have condensed and fallen in drops as they do now.” In answer to this, it is sufficient to observe that the want of rain there spoken of, is plainly limited not only to the time before the Fall, but even to the time before the Creation of man, since it immediately follows, and there was not a man to till the ground. The design of Moses in that place was to shew, that the earth’s being furnished with herbs and plants at once in their perfection, was the effect of the Almighty Fiat, and not owing to the natural and gradual productions of the earth as afterwards.

4. “That if we understand by the earth’s being watered by a mist that there was no rain before the Deluge, (as some have been of opinion) it will be a strong argument against the height of mountains, since had there been such; rain and storms would have been inconsistent with the perpetual calmness and serenity of the Atmosphere, which man would have enjoyed in his state of innocence, for which state the earth was originally formed.” We have justly observed that that expression of Moses is limited to the time before the formation of man, and cannot be extended to after times.—Rains seem as well necessary before the Flood as after, though not perhaps in such great quantities; since otherwise it is not easy to conceive how the earth could have brought forth her annual productions, and so far from being inconsistent with the calmness and serenity of the Atmosphere, that nothing would have been more delightful especially in that warm climate where mankind first lived, than gentle refreshing showers of rain in proper seasons. But whether there were storms and tempests in that
earth as in the present, we can neither positively af-
firm or deny, though, as man did not long abide in
his state of innocence, in all probability there were;
being generally owing to natural causes, but yet per-
haps not so frequent as now, since the whole sur-
face of waters is far more extended in the present
earth than in the former, as we have before given
reasons to believe.

5. "That had Moses made the mountains the
standard of the height of the waters, he would
have given us the height of the mountains,
but all that Moses has expressly said, or given
us the exact standard of is, the height of the
waters above the highest part of the earth." Moses I believe never measured the height of the
mountains which are of very different heights in dif-
ferent regions of the earth, but having in express
words said, that all the high hills and mountains under
the whole Heaven were covered, it was sufficient to
say that the waters rose 15 cubits above them.

6. "That there were high hills and mountains
from the beginning is not apparent from any ab-
solute necessity for them, but only probable from
their use and ornament, since as for rivers, me-
tals and the beauty of the earth, these might have
been answered by Eminences only without high
hills—that few animals are so fitted to the
mountains but that they could live upon emi-
nences, besides that the highest mountains are
uninhabited by any living creature whatever——
and therefore that it is not entirely absurd to sup-
pose that there were no high mountains before
the Deluge." That hills and mountains are ne-
cessary to the well being of the present earth is ac-
knowledged by Philosophers, who have shewn the
great use of them towards the gathering and con-
densing of vapours for watering the earth, for the
direction of winds, and for the course of rivers,
which without them would be such flow runners, that they would be more like stagnating waters and unwholesome, though there may yet be other uses that we are unacquainted with. Nor was the constitution of the earth (though it suffered great changes) so totally altered by the Deluge, but that what is necessary and useful now must have been in some measure so before.—That metals are generally dug out of hills and mountains, and many curious and useful plants found on them which grew not on lower grounds—that animals both birds and beasts live on high hills, and though the tops of the highest be uninhabited by any living creature whatever, as being moystly covered with snow, yet the other and more necessary uses still remain—and that though it be not entirely absurd to suppose that there were only eminences and not high hills in the primitive earth, yet it is not well consistent with the reason and nature of things.

But though what has been said, is sufficient to shew the weakness of the arguments offered for this opinion, yet it may be still necessary to give some reasons for the support of the contrary, since if we pretend to account for an Universal Deluge, we must suppose that there were high hills and mountains before it, otherwise it would give no satisfaction to those who from the words of Moses cannot but believe that there were high hills and mountains in the Antediluvian world. Now though it be easy to conceived that the earth would suffer great changes by an Universal Deluge, as has been in part shewed before, and will more fully appear hereafter, yet I confess I am not able to apprehend how any high hills and mountains could be reared up by the Deluge. For

1. Supposing that the fountains of the great Deep were broken up by concussions of the earth, we

* See Derham's Physico-Theology, book 5. ch. 4.
find by all the accounts of earthquakes that they will frequently overturn mountains, or remove them from their site sometimes, and throw them on other places near, but not that they ever raised up any of a considerable height where there were none before. Besides if those long chains of mountains which are now on the earth were raised by earthquakes at the Deluge, what should support them when thus raised, or on what Bases could they stand? When the subterraneous fire (or whatever else it was) that lifted them to such a height was spent, they must necessarily fall down again into that great deep or vacuity from which they had been so raised. But then

2. If the mountains were raised by the waters of the Deluge, it must either be by the violent incursion of the waters as their first coming on the earth, or by the violent descension of the same at their drawing off, after they came to their height; but by neither of these ways could mountains possibly be raised. 1. Not at the beginning of the Deluge. Upon the first pouring down the heavy rains from Heaven, the waters would run with a rapid current from the higher to the lower grounds, overturn whatever stopped their passage, and carry huge massy stones along with them to a considerable distance, but could never raise them to the surface of the waters; light bodies would swim on the top, but bodies specifically much heavier than water, as huge stones could only be hurried along by the force of the waters, but could never be raised to the surface. At this rate therefore the heavy rains would be more like to wash down the supposed eminences and fill up the lower grounds and make all level. But neither would this violent current of the waters from the heavy rains continue long; for as the fountains of the great deep were broken up at the same time that the rains were poured down, and the waters from
from thence were with violence thrown upon the earth, these meeting with the other waters, would soon stop their current, and force it back, as the tide of flood coming into a river stops its course and turns its waters upwards. Thus these different waters running from different directions would stop the violence of each other’s current, and be soon on a level; and when the waters came to an equal surface on the lower grounds, they would rise gradually to the higher, but would carry no heavy bodies along with them at all, to raise those supposed eminences into mountains. And this gradual rising and increase of the waters we learn from Moses.

1. That the waters increased and bare up the Ark, and it was lift up above the earth. 2. That the waters prevailed and were increased greatly upon the earth, and the Ark went upon the face of the waters, and 3. That the waters prevailed exceedingly upon the earth, and all the high hills that were under the whole Heaven were covered, fifteen cubits upwards did the waters prevail and the mountains were covered. The waters then could never rise up mountains by their rising higher and higher upon the earth, since they could never carry heavy bodies along with them, after their first violent current ceased, which would not continue long, the earth itself therefore would remain pretty much in statu quo, notwithstanding the increase and gradual rising of the waters; and this is confirmed by what Dr. Woodward observes.

3. When the waters were at their height, and an equal surface of waters over all the earth, they would be at a stand, quiet and calm for some time more or less, and then all heavy bodies, stones and rocks would naturally fall to the bottom though they had been carried up by the force of the waters before, and it would be many days ere the higher grounds were discovered; now as the declivity from the higher to the lower grounds increased, so would
the current of the waters be more or less rapid in proportion, but how could they possibly raise any high hills in their descent? They might indeed carry down the upper surface or strata of hills and mountains, and leave the rocks bare, as they have done in a thousand places, and by that means raise some little hills and eminences where there were none before, but that was all they could naturally do.

I can think of no supposeable way that the waters of the Deluge could occasion such high hills and mountains as there are at present on the earth but one, which will surely appear very extravagant, viz. That the waters on their descent running with violence between, or along the sides of those supposed eminences, should excavate or scoop the earth to the depth of two miles or more, and so have made that great inequality of hills and dales now visible on the earth. But then that prodigious bulk of earth thus scooped up by the descent of the waters must have been at last carried into the abyss of the ocean, which would be so filled with it, that there could be small room left for the reception of the waters, which in that case would have recurred on the earth, and endangered another Deluge. Besides that the earth excavated to that depth had been utterly unfit for vegetation (as the vegetable surface of the earth is of no great depth) and the hills and mountains in that case had been only fit for vegetation and habitation.

I might farther add that the length of time taken for the waters to overtop the highest parts of the earth viz. 150 days, and also their recede during 170 more, shews plainly that there were high hills and mountains on that earth; for had there been only eminence, or prominences as is supposed, the tenth part of that time would have sufficed to cover the earth, and for the waters to retire.
But now to put an end to this question, and for ever to silence this opinion for the future it may easily be confuted from the supposition itself, thus. Let us suppose those Eminences which they allow to have been only on the primitive earth were a quarter of a mile in height or even half a mile (for if they were higher than that, they were high hills.) The waters rose 15 cubits or 30 feet above these, so that the height of the waters could be no more than 30 feet above half a mile at the highest. How was it possible then that the waters rising no higher than half a mile and a little more should raise up mountains of two miles and an half in height? If they can account for this according to the laws of nature, they may then account for the greatest impossibilities. Upon the whole therefore I conclude, that the high hills and mountains on the present earth were the same before the Deluge, and that they stood fast and firm on their bases notwithstanding the violent incursion or decursion of the waters. These indeed at their running off, might carry away some small depth of earth from their bottoms, suppose 20, 30 or 40 feet, which would make them so much higher, but then they might take off some of the surface from their tops, so that the difference would not be great. But notwithstanding what has been now said, there is reason to think that our highest mountains have received an addition to that height they had before the Deluge, as will be seen presently.

The highest mountains on the present earth that we know of, are either such whole tops are covered with perpetual snow, or have been formerly (as some may be still) Volcanos. On the first of these the snow is never dissolved, but lies and increases from year to year. What a height of increase then must there be during four or five thousand years since the Deluge? Nor can this additional height be judged
of by the eye, since snow lying for a course of years and hardened may change its colour, and become brown or blackish. Nor were such mountains, I believe, ever ascended in order to measure the height of the snow above their real tops. And that mountains covered with snow yearly increase see an instance in Helvetia *.

As for the others which have been Volcanos it is reasonable to think that they have also received an additional height by the prodigious quantity of matter thrown up from time to time by the subterraneous fire. This will appear highly probable from what is said by Mr. Gordon in his Geographical Grammar, of the Pike of Teneriffe. "This Isle of Teneriffe, says he, "is famous all the world over for its prodigious Pike, which appearing to the eye as a large mass of many rocks promiscuously heaped up in form of a rugged Pyramid; it is thought by some curious Naturalists to have been raised on a sudden by a mighty conflagration of much subterraneous sulphurous matter, whose forcible eruption the very rocks themselves could not withstand, but were thereby piled up in the manner they now appear. For strengthening of this conjecture, they allege the great quantity of sulphur, with which this Island doth still abound (especially nigh the foot of the Pike) and the colour of the rocks themselves, many of them seeming to Spec-tators as if long burnt in the fire." The same author relates, "That in the Molucca Islands are divers Volcanos, particularly that called Gounon-epi in Banda, which some years ago made a dreadful eruption, not only of fire and sulphur, but also of such prodigious numbers of stones that they covered a great part of the Island, and so many

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dropt into the sea, that where it was formerly 40.
fathom water is now a dry Beach.” Thus have both fire and snow apparently added to the height of the highest mountains above what they had before the Deluge.

Dr. Woodward indeed seems to be of a contrary opinion; for he says, “That rocks, mountains and the other elevations of the earth (especially those whose surfaces are yearly stirred up by digging, plowing or the like) suffer a continual decrement, and grow lower and lower; the superficial parts of them being by little and little washed away by rains and borne down upon the adjacent plains and valleys. That even the stone itself (whether naked and uncovered as in rocks, or invested with a stratum of earth, as is that in our ordinary hills) is not by its solidity privileged and secured against them, but is dissolved by degrees as well as the looser earth &c.”—But though this be true of the lower hills, yet does it not invalidate what I have before said as to the additional height of the highest, because 1. The tops of these are never disturbed by digging or plowing, and so the surface is never loosened. 2. ’Tis seldom or never that rain falls on their tops but snow, which by lying undisturbed and yearly increasing, must considerably add to their height.

I come now to the other subject of this section, viz. the real height of the highest mountains on the present earth, which seems necessary to be determined in order to know how high the waters of the Deluge must rise to overtop them.

It would seem at first sight that Sir Walter Raleigh thought, that there might be mountains 30 miles high, but upon a closer examination, it will I think appear not to have been his real opinion that there were any mountains of that height or any thing near it; nor could he who had seen so many parts of the
An Enquiry into the Truth and
the world himself, and no doubt more than once
the Pico of Teneriffe (then supposed the highest in the
world) ever entertain such an extravagant opinion;
but he only makes that supposition for argument's
fake. The case is this. He thought it a piece of
folly in any question, whether there could be wa-
ters enough in the bowels of the earth and from the
heavens to raise the Deluge 15 cubits above the
highest mountains without the creation of new wa-
ters, he therefore endeavours to shew, that though
there had been hills 30 miles high there was a suf-
cient quantity of water to overtop them; but let
us hear his own words.
Against the supposition of a new creation of wa-
ters to effect the Deluge he argueth thus. "Of this
proposition whether God hath so restrained himself
or no I will not dispute, but for the consequent,
which is, that the world had want of water to
overcover the highest mountains I take that con-
cept to be unlearned and foolish; for it is written,
that the fountains of the great deep were broken up,
that is, the waters forsook the very bowels of the
earth, and all whatsoever was dispersed therein
pierced and brake through the face thereof. Then
let us consider that the earth had above one and
twenty thousand miles in circumference, the dia-
meter of the earth according to that circle seven
thousand miles, and then from the superficies to
the center some three thousand and five hundred
miles. Take then the highest mountains in the
world, Caucasus, Taurus, Olympus or Atlas, the moun-
tains of Armenia or Scythia, or that of all other
the highest in Teneriff, and I do not find, that he
that looketh highest, stretcheth above 30 miles
upright. It is not then impossible, answer ing
reason with reason, that all those waters mixed
within the earth, 3,500 miles deep, should not
well help to cover the space of 30 miles in height;
this 30 miles upright, being found in the depths
of the earth 116 times, for the foundations of the
great deep were broken up, and the waters drawn
out of the bowels of the earth.

2. "If we consider what proportion the earth
beareth to the extension of the air over and above
it, we shall find the difference exceeding great.
If then it pleased God to condense, but so much
of this air, as every where compasseth and embraceth the earth, (which condensation is a con-
version of air into water, a change familiar in
those elements) it will not seem strange to men
of judgment, yea but of ordinary understanding,
that the earth (God so pleasing) was covered over
with waters without any new creation."

Hence it would seem that our author speaks only
comparatively, intending thereby to shew that there
were waters sufficient in the depth of the earth and
in the Atmosphere to have overflowed the whole
earth, though the hills had been 30 miles high
without any new creation of waters, not that he
believed or thought there was any such height in the
hills. And if he believed there were waters enough
to have covered them at 30 miles height, how
much more, when none of them reacheth 3 miles
in height?

But Mr. Whiston's account of the height of the
waters will appear yet more extravagant, though it
had been Raleigh's real opinion that there were
mountains 30 miles high. His proposition is this.
"The waters at their utmost height were 15 cubits
above the highest mountains, or about 3 miles
perpendicular above the common surface of those
plains, which adjoined to the Ark, or about 50
miles higher than the usual height of the com-
mon surface of the earth before *.

R 4 waters
waters rose but 3 miles above the common surface of those plains which adjoined to the Ark, how could they possibly rise 50 miles above the common surface of the earth, or even the level of the ocean, which is still lower? Or can there possibly be so great a declivity as 47 miles from the top of the very highest hills to the level of the ocean in any part of the earth? Dr. Keil in his Remarks on this New Theory reckons no more than 3 miles perpendicular height from the height of the highest mountains to the level of the ocean, or if Varenius's calculation of the height of the pike of Teneriff be exact, 4 miles *, what occasion then have we for waters 50 miles high? I should in truth have thought it an error of the Press of 50 for 5, sufficient and more than sufficient for raising the waters 15 cubits above the highest hills, had he not repeated it a second time, and what is more surprizing even in his second edition after Dr. Keil's Remarks had been long published. Dr. Burnet reckons it would take eight oceans to drown the world, if you will not admit the earth to have been formed his way without hills or mountains, but Dr. Keil demonstrates that (allowing Dr. Burnet's calculation of the depth of the ocean, and the difference of extent between the seas and the dry land) it would take 23 oceans, and if Varenius's calculation of the height of the Pico was right, 28 oceans; but if the waters rose 50 miles above the common surface of the earth, I am afraid 200 oceans would scarce have served. What extravagant Hypotheses then are these! which can serve for nothing else but to discredit the truth of the History and render it incredible, just as the Rabbins did with the dimensions of the Ark by extending in length the squares of all the fides, and thereby making the length of it 90,000 cubits, the breadth 2,500, and the height 900 cubits.

* Pag. 173 and 175. 2d. Ed.

Dr. Keil
Dr. Keile saith that Varenius in his General Geography calculates the height of the Pico in Teneriff to be one German mile or about 4 English miles in height, though he is inclined to believe that its height is yet greater than Varenius makes it, because he seems to allow too much both for refraction and errors in observation. How that matter may be I know not, but another who measured it much later, does not give it near half that height.

Bp. Wilkins justly observes that there is a great difference between those opinions and apprehensions which are occasioned by a more general and confused view of things, and those which proceed from a more distinct consideration of them, and so it is as to many vulgar opinions of things built only on superficial views or reports of others. No great credit therefore can be given to the reports of Travellers in this point who judge only by the eye, nor yet to what the ancients have ascribed to the height of some of their famous mountains, for later observations have shewn that they are far wide of the truth. Before the discovery of America, the Pike of Teneriff was accounted the highest mountain in the world. Of this Island and Mountain one of the Missionaries gives the following account in a Letter dated February 20, 1711.

"In the midst of this Isle rises the famous mountain called the Pike of Teneriff. It may be perceived (as is said) 50 leagues off. It has the figure of a Cone, whose Basis is very large. What is said of its height in some relations, of the cold which reigns there, and of the time it would take to arrive at its top, is no ways conform to truth. I have discoursed with persons who had the curiosity to ascend it, and I concluded from what they told me that the journey may be made in seven hours. It is true it appears to rise above the clouds, snow falls there, whilst in the plains we were
were very much incommoded with heat. Altho' the instruments I made use of to measure its height, were not very exact, nevertheless I judged it was no more than 1,300 toises high." Now a Toise is 6 feet; 1,300 then multiplied by 6 makes 7,800 feet. Allowing 5,280 feet to a mile, according to this measuring, the Pike wants 120 feet of being a mile and a half high. But because the Paris foot is something more than the English, viz. \( \frac{5}{6} \) or as others reckon \( \frac{5}{6} \), and because he acknowledges that his instruments were not very exact (though he seems to have taken that into consideration) we may allow the 120 feet on that account and for errors in observation, and suppose the Pike a full mile and a half high. But how much does this fall short of its reputed height? Again, near the Town of Orissava in the gulf of Mexico is the famous mountain of the same name, which they perceived 25 leagues off at sea, and whose top is always covered with snow, although it lies under the Torrid Zone. This mountain the same Missionary tells us, is much higher than the Pike of Teneriff. Let us give it then 2,640 feet or half a mile more, and that will make it two miles in height; and this is a very great addition, for half a mile added to the height of a mile and a half, will make a mountain appear vastly higher. But if the Andes in Peru (which are now accounted the highest in the world) are yet higher than this mountain of Orissava we shall add a quarter of a mile or 1,320 feet more to their height, they will then be two miles and a quarter high. And this height we give to the mountains is confirmed by what the late learned Professor of Mathematics at Edinburgh Mr. Maclaurin delivered in his Lectures, that there was no mountain in the known world of two miles and a half of perpendicular height from the plain it stood on. But if it be judged reasonable to allow for that additional
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ditional height, which our highest mountains have received since the Deluge, either by the snow's lying on them for some thousand years, or by the eruptions in the Volcanos throwing up prodigious heaps of stones and other matter, we may suppose the highest mountains in the Antediluvian world to have been two miles in height or little more *

The height of the mountains being thus nearly ascertained, it may not be amiss to enquire why the waters were made to arise 15 cubits above them, when it may be thought sufficient to have destroyed every living creature, had they barely reached the tops of the highest mountains, or even some cubits below them. For this several reasons may be assigned, as 1. The Ark might possibly draw not much less depth of water, being of great bulk and heavy laden with the animals, reservoirs of water &c. in the lower story, and with the large store of provisions in the second: Now as the current of the waters (from which forever quarter it came) would necessarily carry the Ark along with it, when once it floated (for the Ark went upon the face of the wa-

* I have somewhere read that one who had measured a very high mountain in Wales, computed it to be 3 miles in height. It might possibly be the Kadur Idris in Merionethshire accounted by much the highest in this Island. If his observations were just, they would overthrow what we have now said of the height of the mountains. But no mountain in this Island, nor in all Europe besides, was ever computed equal in height to the Pike in Tineiff, and what the height of that is, we have seen. In Derham's Physico-Theology I find that Snowdon hill in North-Wales was measured by Mr. Cafler with Mr. Adam's Instruments, and found to be 1,240 yards high, or 3,720 feet: allowing as before 3,280 feet to the mile, Snowdon hill was short of a mile by 1,560 feet, or was 240 feet more than three quarters of a mile. It is highly improbable then, that any hill in Wales should exceed Snowdon hill by more than two miles. I must suppose therefore that by measuring the fore-aided mountain, the performer meant no more, than that in ascending from the Base of the mountain to the top, they measured 3 miles, and that might well be, though it had not a mile and a half of perpendicular height.
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it was highly requisite that the waters should rise to such a height above the hills, that the Ark in its moving along might not incur the danger of striking upon them, though it should pass over the very highest. 2. The earth was then crowded with men and animals, and the hills not then bare and barren rocks as now, but covered with grass and vegetables, and as several animals fed on the mountains, so doubtless they were inhabited also by mankind as well as the lower plains. 3. There were Giants in those days, who might be 15 cubits high, (and bodies of a much larger size than that have been by credible relation found in Sicily.) Now as the waters rose gradually, and were full five months or 150 days in coming to their height, 'tis natural to think that both men and animals that lived near would fly to the mountains, and as the waters approached them would still climb higher. But as every living creature, save those in the Ark, was devoted to destruction, it was necessary on this account also, that the waters should rise 15 cubits above the highest hills, that no animals or men, not even the Giants themselves should escape.

S E C T. II.

Whether it be not apparent to sense and reason that there was a sufficient quantity of waters to cause an Universal Deluge and elevate the same above the highest mountains?

The height of the mountains thus nearly ascertained shews, that there was no such prodigious quantity of water necessary to effect the Deluge, as has been commonly imagined, when the hills were supposed to be some miles higher than they really are: yet a very great height of waters there
there must have been to cover the whole earth at once and to rise 15 cubits above mountains of two miles perpendicular height, which many think incredible.

Were we to embrace the opinion of some, who, to avoid the difficulties with which an Universal Deluge seemed to be incumbered, imagined that the Deluge was **ambulatory**, that is, that the waters first drowned one part of the earth, from whence they rolled round to the others, till the whole earth was drowned, this would greatly abate the quantity of waters. And of this opinion Mr. Whiston seems likewise to have been, since he makes the Deluge to have begun in one certain part of the earth, while in all the rest the day was serene and clear. But this opinion cannot possibly stand with reason, because 1. Without a very great miracle the waters could not rise to the height of two miles and more in any one part of the earth, but they would first run off wherever there was a declivity, and diffuse themselves over all, till they came of an equal surface every where before they could rise to the height of one mile any where as I have before shewed in confuting the schemes of a **partial** Deluge. 2. Suppose they had been thus miraculously hemmed in, and walled round as it were, till they had risen above two miles in height to overtop the mountains and drown every living creature in that first part of the world, when that obstacle which kept them up to the height of two miles was removed, the waters would run down with such an impetuous rapid force and velocity as to cause desolation and devastation wherever they came, so as to render the earth a heap of rubbish and confusion utterly unfit for vegetation or habitation afterwards. 3. This method of drowning the earth must have been repeated several times, and every time at the expense of a new miracle; for supposing that part of the earth thus first inundated
to have been so large as one of the four Continents, the waters which covered that, would not serve to cover the other three, except they were stopt again at proper distances, or else must receive a very great addition of new waters to accomplish the designed end; or if you should suppose one whole Hemisphere to have been thus overflowed at once, for example, from the Equator to the North Pole, and when that was effected, the waters to run off again from the Equator to the South Pole, the waters must there have been stopt again after the former miraculous manner, otherwise the first Hemisphere had been twice overflowed. This opinion then of an ambulatory Flood is foolish, as well as highly derogatory to the Wisdom and Power of God; we may therefore without hesitation affirm that the Deluge could not be effected after this manner, but that the waters were poured out on all the earth at once; that in a short time they would rise with an equal surface over all, till at the end of the 150 days the whole earth was overflowed and the mountains covered by the waters 15 cubits upwards.

Hence two material points offer themselves to our consideration. 1. Whether there could be such a quantity of waters as to cover the whole earth at one and the same time, to the height of two miles and above, without the creation of new waters, or bringing them down from some or other of the Celestial orbs. 2. After what manner such a wonderful Event could be effected.

Great and wonderful Events out of the ordinary course of nature, as I observed at the beginning, have always been thought incredible or impossible, and when men could not conceive by what means they might be brought to pass, they have always thought it impossible for the Almighty to perform them. Thus when the Israelites murmured for flesh in the Wilderness, and God had said, that he would
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give them flesh to eat not only for one or ten days, but
for a whole month, until it came out at their nostrils,
and became loathsome unto them, even the faith of Mo-

es was staggered, because he could not conceive
how it could possibly be; and therefore he answered,
The people among whom I am are 600,000 footmen
(exclusive of women, children and the mixt multi-
tude that came out of Egypt with them) and thou
best said I will give flesh to eat a whole month. Shall
the flocks and the herds be slain for them to suffice them?
or shall all the fsh of the sea be gathered for them to
suffice them? To which he received this reply. Is the
Lord's hand waxed short? Thou shalt see now whether
my words shall come to pass unto thee or not. And they
came to pass accordingly. When there was a great
famine in Samaria by reason of the long siege, so
that the women had been compelled to eat their
young infants, and the Prophet Elifba had told the
King, that to morrow about that time, a measure of
fine flour should be sold for a shekel in the gates of Sam-
aria, a Courtier answered the man of God and said,
If the Lord would make windows in Heaven this thing
might be, and yet that and much more came to pass
on the morrow. And thus in the present case, the
whole earth covered with waters above the highest
mountains, how can this thing be?

But now somewhat to abate our wonder at such
an amazing event, it may be expedient to consider
the quantity of water that is at present on the earth.
Dr. Burnet in his Theory supposes the surface of the
waters, to be only equal to that of the dry land, but
the learned Scaliger more justly supposes that the sur-
face of the waters is twice as great as the surface of
the dry land, and had he gone even beyond that,
had not exceeded. For let any one take an exact
survey of the Globe or Map of the world and he may
perceive that the dry land scarce makes one third
part of the terrestrial Globe, and that the seas and
oceans
oceans take up other two thirds of the earth’s surface, as it is in them represented to us at present, whether with sufficient exactness I shall not contend. But should we take into the account, all that space which the many large rivers and vast lakes, take up, what is left of the dry land would not make above one fourth of the earth’s surface. Nevertheless there may be other lands or islands yet undiscovered, we shall only suppose that the surface of the waters is double to that of the dry land.

Again Dr. Burnet supposes the depth of the seas and oceans to be no more than a quarter of a mile in one place with another throughout their whole extent. But in this calculation he must be greatly mistaken; of that depth indeed they may be not far from the shores in many places, but in the oceans which surround the world, the waters are of two or three miles depth as mariners find by their Line and Plummet, nay in many places they cannot found to the bottom. Now this shews that there are depths in the ocean greater than the heights of the highest mountains.

When the Psalmist is setting forth his faith and confidence in God under the greatest imaginable dangers, he doth it in this manner. Therefore will we not fear though the earth be removed, and the mountains carried into the midst of the sea, though the waters thereof roar and be troubled, though the mountains shake with the swelling thereof *.

Let us for a moment suppose this to be done, that the earth was removed and the mountains carried into the midst of the sea; as the seas and oceans are in proportion of two to one, they could receive the whole and to spare, the oceans in the American Hemisphere could alone contain the greater part of the other three Continents, and as the depth of the ocean is greater

* Psal. xlvii. 2, 3.
than the height of the highest mountains, the waters would rise above them considerably.

But not instead of this removal of the earth and the mountains into the sea, which never was, nor ever will be done, let us suppose on the contrary that all the water in the seas and oceans was brought upon the earth and the mountains, the effect would be the same, the waters would cover the earth and the mountains to a greater height, than that assigned to the waters of the Deluge. The prodigious number of hills and mountains in the earth would be so far from making a greater quantity of water necessary, that on that very account a far less quantity would serve, than if they had been to rise to the very same height from the level of the ocean without the mountains, since the solid content of the mountains would take up so much space as must otherwise have been occupied by the waters.

We have here only reasoned from the open and visible waters on the earth, but if to these we shall add that vast treasury of waters within the earth, (of which more hereafter) that alone might be sufficient to raise the Deluge to the height mentioned. For though we do not with Raleigh, suppose that treasure of waters in the bowels of the earth so great, as if poured upon it, would overtop the mountains, even had they been 30 miles high, because I think it impossible to know how great their quantity may be, yet so far as we may judge from what is known of the subterranean waters, they might drown the earth, and overtop the mountains that were not much above two miles high.

Hence the Reader may perceive that one of the grand objections against an Universal Deluge, *viz.* that it is incredible there should be such a quantity of waters as to raise the Deluge to the height mentioned by Moses, is easily answered, since it is evident to sense and reason, that there are within and upon
upon the earth a greater quantity of waters by far than were necessary for that purpose. And though those vast oceans which now surround the Globe should in a great measure be the remains of the waters of the Deluge, as we have before given reasons to believe, and which it might please God to leave still upon the earth to convince mankind to the end of the world, that there was no want of waters to bring an Universal Deluge over it, yet this would not weaken the force of our argument, since it is a sufficient answer to the objection, to shew that there are actually in and upon the earth more waters than were necessary to effect an Universal Deluge, and raise it to the height mentioned by Moses.

Thus I hope I have fully answered our first important Querie, viz. Whether there could be such a quantity of waters as to cover the whole earth at one and the same time to the height of two miles and above? The other was, How such a wonderful event could be effected? But in order to this it will be necessary, 1. To consider the several sources of the waters of the Deluge distinctly. 2. To take a view of some particular Inundations that have happened since the Flood of Noah, because from thence we may the better comprehend after what manner the Universal Deluge was brought about.

SECT. III.

Of the Waters above the Firmament or Heavens.

We can conceive no other sources of the waters of the Deluge than these two, the rains from heaven, and the waters in and upon the earth. If these were not sufficient for the purpose, it will be in vain to bring to their assistance a new creation of waters, or the Atmosphere and Tail of a Comet, which
which are precarious suppositions and can never be proved. Accordingly the account Moses gives is this, That in the 600th year of Noab's life, in the second month, the 17th day of the month, the same day were all the fountains of the great deep broken up, and the windows of Heaven were opened, and the rain was upon the earth 40 days and 40 nights.* These were the two sources of the Deluge and there were no other. But what is meant by the windows or flood-gates of Heaven being opened and pouring down their waters upon the earth, has been matter of question, and given occasion to various conjectures.

Some it seems not well understanding, where those waters were placed, which were said to be raised on the second day above the Firmament or Heavens, have imagined them to have been among the stars. For thus Mr. C---- arguing against Mr. Whiston's notion of the Deluge being occasioned by the Trefection of a Comet, faith, that it is contrary to the account of the Deluge given by Moses, for "that by the window of Heaven being opened, Moses meant the "irruption of those waters he had placed above the "firmament," (Gen. i. 7.) and then adds sneeringly, "which waters have never been found there by "any Astronomers whatever." But small wit there is in this jest. For if those waters which Moses had placed above the Firmament or Heavens had been poured forth on the earth at the Deluge, how should any Astronomer find them there some thousand years after it. But that we may know what is meant by the windows or flood-gates of Heaven being opened, it will be necessary to look back to the account given of the second day's work at the Creation, which is this. And God said, let there be a firmament in the midst of the waters, and let it divide the waters from the waters: and God made the firma-

* Gen. vii. 11, 12.
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ment, and divided the waters which were under the firmament from the waters which were above the firmament. And it was so. And God called the firmament Heaven, and the evening and the morning were the second day *. Now

1. Before the Light was created on the first day, it is said, darkness was on the face of the DEEP. What is meant by the Deep in this first verse, we may learn from the Psalmist, who rehearsing the works of Creation and Providence, faith †, Thou coveredst it (the earth) with the Deep as with a garment, the waters stood above the mountains. The whole earth, mountains and all, was then covered with waters at first, whence St. Peter faith § that the Earth stood out of the water and in the water; in the water while it was wholly covered with it, and out of the water when the dry land appeared.

2. The Hebrew word Rachjang which we translate firmament, signifies Expansion (as in the margin) or a thing spread abroad and widely extended. Now under the word firmament, or that vast expansion which our eyes behold above us, is comprehended the air and all that is to be seen above the earth; for the fowls fly above the earth in the open firmament of Heaven; and the sun, moon and stars are set in the firmament of Heaven to give light unto the earth ||.

3. When it is said, Let there be a firmament or expanse, and let it divide the waters from the waters—the meaning is, that of the waters of the great deep which wholly covered the earth, part was lifted up into the air, or Atmosphere, and spread abroad into thin vapours, or bound up in thick clouds. In reference to which the Psalmist faith, Whatsoever the Lord pleased, that did be in Heaven and in earth, in the sea and in all deep places. He causeth the vapours to ascend from the ends of the earth ‡. And Job, He

* Genef. i. 6, &c. † Psl. civ. 6. § Ep. iii. 5. || Genef. i. 16, 17, 20. ‡ Psl. cxxxv. 6, 7. bindeth
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bindeth up the waters in his thick clouds, and the cloud is not rent under them*. Thus the waters which were above in the Atmosphere or air (above the lowest region whereof the waters are) were separated from those which remained still upon the earth and covered it.

4. This vast Expansë is called Heaven. And God called the firmament Heaven. In Hebrew Shamijim, derived from šam, there, and Mejim, waters, because these waters are lifted up from us and above us; and so the waters are said to be above the Heavens, meaning those Heavens and that firmament wherein the fowls fly; for above that are the watry clouds. For as every part of the water is called water, whether it be upon or under the earth, whether rivers, lakes or seas; so every part of the Heaven or firmament is called by the name of the whole. And thus the word Heaven is put.

1. For the Air or Atmosphere, in which fowls, winds and clouds do fly. Thus where in Genesis, they are called the fowls that fly in the open firmament of Heaven, in the Psalms they are called the fowls of the Air. And in Daniel the four winds are called the winds of Heaven, and the clouds, the clouds of Heaven†. And this is the lowest firmament or Heaven, as in Gen. i. 20.

2. The word firmament or Heaven is put for the upper firmament, where the sun, moon and stars are placed, as before in Gen. i. 16, 17.

3. The word Heaven is put for the high places, where Angels dwell, as in Matth. xxii. 30. but are as the Angels of Heaven.§

Some think that the LXX translated the Hebrew word Rachjang, which signifies Expansë, by σεφέωμεν, as we from them firmament, because they took the firmament for a solid thing, wherein the stars were

* Job xxxi. 8. † Dan. vii. 2. § Ainsworth.

S 3 fixed;
fixed; but Vossius gives another and better reason for their using this word, viz. by firmament they understood the clouds, which bear up and support the vapours and carry them over the earth *, as it is in Job, He bindeth up the waters in his thick clouds, and the cloud is not rent under them. Mr. Coetlogon’s Astronomers then left their labour, when they looked for the waters above the Heavens among the stars, when they were never raised above the clouds. —Thus much to shew from whence the rains from Heaven came, viz. from the clouds.

Again what we translate the Windows of Heaven, the LXX turn the Cataracti of Heaven. Now Cataract signifies not only what is commonly understood by it, viz. a precipice or stoppage in the channel of a river, from which the water flows down with a rapid and noisy current, as the Cataracti of the Nile, Danube and Rhine, but also any other stoppage or hinderance; so that sluices and floodgates may be termed Cataracti, because they stop the course of the waters, till they are opened to give them free passage; and therefore also because windows not only open but shut, the word hath been expounded windows for bars or floodgates (as in the margin) “for as the clouds (faith Sir W. R.) retain the vapours or waters, so when that retention is taken from them, the clouds pour forth their waters, and the floodgates or windows are said to be opened, to give the vapours or waters a full and free passage, so as to be poured down

--- Nempe Interpretis LXX recte vertitse Rachjung ἐξοβρασὶ, i.e. firmamentum aut fulcimentum. Per firmamentum in lacris literis nubes intelliguande sunt, illae namque foliae superioriores aquas ab inferioribus distinguunt, nec supra nubes illae aquae concipi possunt. Jam vero firmamenti appellatio ideo recte tribuitur nubibus, quia illae tanquam fulcha, vehicula aut ἐξοβρασὶ sunt humorum. Attamen cum sol et luna in firmamento eile dicuntur, jam latius accipitur firmamenti vox, nempe pro toto eo spatio quod supra nos est.

“with
with violence upon the earth. For the opening
the floodgates of Heaven expresses the violence
of the rains and pouring down of the waters, and
whoever (faith he) hath seen those fallings of wa-
ter, which sometimes happen in the Indies, which
are called the Spouts, where clouds do not break
into drops, but fall with a restless violence in one
body, may properly use that manner of speech
which Moses did, that the windows or floodgates of
Heaven were opened, that is, the waters fell con-
trary to custom, and that order which we call na-
tural. God then loosened the power in the up-
permost air, and the waters fell in abundance.
Behold, faith Job *, be withholdeth the waters and
they dry up (or rather all things are dried up, omnia
fiscantur) but when he sendeth them out, they destroy
the earth; and again, be bindeth the waters in the
clouds. But these bonds God loosed at the time
of the general flood, and also called up the waters
which slept in the great Deep, and these joining
together covered the earth, till they performed
the work of his will †. But though our author
here faith that the opening the floodgates of Heaven
expresses well the violence of the rains after the man-
er of the Water-spouts in the Indies, yet I do not
think the rains fell in that manner. 1. Because in
that case the clouds would have poured out all their
waters in much less time than 40 days and 40 nights.
2. Because this judgment, though the most terrible
ever inflicted on mankind, does not seem to have
been so precipitate, though heavy and without in-
terruption, but more leisurely (for God is even slow
in his judgments) that he might make man sensi-
ble of the hand that smote them, and acknowledge
God in their punishment and destruction. The rains
from Heaven then were one principal source of the
waters of the Deluge.

* Ch. xii. 15. † History, p. 91.
But now Vossius, to invalidate this effect ascribed to the clouds of Heaven, in his Letter to Andrew Colvius affirms, "that it may be proved by certain " and geometrical arguments, that although all the " waters suspended in the air and æther were pour-" ed out on the earth, they would not raise the fu-" perficies or height of the waters above a foot and " a half over all the earth," though others say 32 feet above the level of the ocean. But Vossius's arg-" uments in his partial scheme of the Deluge, and defence of it in the above-said Letter, are all founded on this false principle, That God never works but according to the established Laws of Nature. If this was true, there would be no room for any distinction between ordinary and extraordinary, natural and super-" natural (which yet he himself shall be obliged to al-" low:) This would establish a kind of fate and neces-" sity, and in a great measure exclude a Divine Provid-" ence out of the world, as if God had tied up his hands that he could do nothing out of the ordinary course of nature; an Impotence we would not ascribe to the meanest artificer, who has surely a power over the work of his own hands. The Psalmist thought not so meanly of God, when he faith, "Whatsoever the Lord pleased, that did be in Hea-" ven and in Earth, in the sea and in all deep places. God worketh according to his own will, and He who gave laws to nature can stop or controul those laws when he pleases, so as to answer the ends of his Providence in the government of the Moral world. The ordinary laws of nature then can never be made the rule or measure of extraordinary cases. By the law of nature or the method established by Divine Providence, man's life is sustained by the fruits of the Earth; but could not God therefore rain Manna from Heaven for the sustenance of the Israelites during 40 years in the Wilderness?
But now suppose, that God was pleased in this extraordinary case not to suspend or control the ordinary laws of nature, could not the clouds of Heaven have poured down a much greater quantity of rain at the beginning of the Deluge during 40 days, than at other times falls on the whole earth in a whole year? Is it against the laws of nature that the rains should be withheld from one or more countries for a considerable time or course of years? In the time of Joseph it rained not in Abyssinia for seven years, which brought a famine on Egypt, though commonly the rains there are constant for three or four months in the year and more. At another time it rained not in the kingdom of Israel for 3 years and 6 months; and once in the Eastern Empire it scarce rained for seven years. We read of a famine throughout all the world, i.e. all the Roman Empire in the days of Claudius Caesar*, taken notice of by other authors†, most probably for want of rains; at other times again famines have been occasioned by excessive rains which have destroyed the fruits of the earth in this as well as other countries. Nay in the prophet Amos, the Lord faith—§ Also I have withheld the rain from you, when there were yet three months to the harvest, and I caused it to rain upon one city, and caused it not to rain upon another city, one piece was rained upon, and the piece whereupon it rained not withered, &c. Now the withholding the rain for several years, or the bringing excessive rains on the earth, the causing it to rain on one city and the keeping it up from others in the same kingdom, are all consistent with the ordinary

* Acts vii. 28.
† Suetonius in the life of Claudius, saith it happened ob officiosi seminates, thro' a long harvest; Josephus, that it raged so much in Judaea, that many people perished for want of victuals; and Dion Cassius, that it was a very great famine. The cause of it, the withholding the rains in their relation.
§ Acts iv. 7, 8.
and established laws of nature, or else it is ridiculous to make the ordinary laws of nature a fixed rule for the Almighty to work by, so that he cannot suspend, or control the laws he himself hath given to nature, when, or how or in what manner he pleases to bring about the ends of his Providence in the government of the world?

Where is then the absurdity to suppose that God, in order to bring such a quantity of rain on the earth, as should be necessary to cause in part an Universal Deluge, should have withheld rain from the earth, or the greater part of it, and suspended the vapours in his thick clouds for one, two or more years before, till the time of the Deluge came? This very probably was the case, and the words before cited out of Job seem plainly to refer to the Deluge. Behold he withholdeth the waters, and all things are dried up; but when he sendeth them out they destroy the earth *

Mr. Whitson supposes that there was a second rain towards the end of the Deluge; but as Moses mentions it not, so neither can it be necessarily inferred from the words on which he grounds it. The fountains also of the Deep, and the windows of Heaven were stopped, and the rain from Heaven was restrained †. For these words must be understood agreeably to what he had said before, that the rain was upon the earth 40 days and 40 nights, and having so precisely marked the time of the rain's continuance, we may well conclude there was no farther rain. The general import of the words is no more than this, that when the clouds had poured forth their waters, the rains ceased, and that when the Abyss below had

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* Job xii. 15. Here Junius in his Notes refers the Reader to the 7th and 8th chapters of Genesis, which contain the relation of the Deluge.
† Genef. viii. 2.
poured forth its waters, the fountains of the deep were stopped, not that both these did or could happen at the same time.

S E C T. IV.

Of the waters of the great Deep.

We come next in order to consider the waters of the great Deep, the other and much larger source of the waters of the Deluge, for all the fountains of the great Deep were broken up on the day the Deluge began; a fund of waters so immense (for in it we must include the seas) as might have served to overflow the whole earth again, had God so pleased. To shew this we must once more look back to the first Creation of all things.

On the second day after the Expansae or widespread firmament was made, and part of the waters which at first covered the whole earth to a great depth were lifted up into the firmament, there remained still waters upon the earth till the third day, when they were commanded to retire, that the dry land might appear which it had not yet done. Now if after part of the waters were raised up into the Expansæ, those which remained still on the earth till the third day covered the whole earth, they could have done the same again at the Deluge, had God thought fit to make the whole aggregate ascend.

Vossius indeed would elude this argument, as supposing that the waters left on the surface of the earth, after part of them were lifted up into the firmament, covered only the flat and even surface of the earth before the mountains were formed, which a very small quantity of waters would do; for thus he argues against Hornius: "That you may prove " (faith he) that there was no need for a new Cre- " ation of waters to cover the earth at the Deluge, " this
"this is your chief argument, viz. that at the first
Creation the whole earth was covered with waters
to a very great height, but you reason very badly
in my opinion. At the first Creation, when all
things settled according to their specific gravity,
and every element kept its natural situation and
place, the earth as the more ponderous, would
necessarily subside below the water. But because
the earth was perfectly spherical, hence it is ma-
nifest, that a small quantity of water would suf-
fice to cover the whole Globe of the earth. Hence
it is also that Moses saith that the earth was ἔκ
τος και ἡκαταπνάραχος as the LXX and Josephus
have translated it. It was invisible, because every
where covered with waters: It had not its form
and shape, because the mountains and valleys
were not yet made, which God did not create till
the third day, when he commanded the earth to
ascend and the valleys to subsside. Either then
you must assert that all the mountains perished at
the Deluge, which is contrary to the Scriptures
and experience, or you argue very foolishly."

But, with Volusius's good leave, Hornius was no such
bad reasoner in this case (whatever he might be in
others) as is here pretended, and it is he himself
that misrepresents the matter of fact, which was per-
formed in the following order. The earth's being
invisible and unformed was at first when it was yet
in its Chaotic state; then 1. On the first day the
Light was created. 2. On the second day the wa-
ters were divided into those above and those below
the firmament. 3. On the third day, the waters
under the firmament, which still covered the earth,
were commanded to retire, that the dry land might
appear. But 4. When the dry land appeared, it
appeared with mountains and valleys at once, hav-
ing received its form and figure under the waters,
while the several matters whereof the earth is com-
posed,
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posed, and which were mingled with the waters, were reduced into their places, not always according to their specific gravity (which is contrary to manifold experience) but as it pleased God in his Wisdom to order it; for nothing is further said about the formation of the earth, nor does Moses make any mention of the creation of the mountains distinct from the rest of the earth. But had the earth upon the subsiding of the waters appeared perfectly spherical, or of an even and flat surface, the creation of the mountains afterwards must have been particularly mentioned. For the mountains are so considerable a part of the earth, such stupendous fabricks and so highly useful to the necessities of the earth, that we have the utmost reason to think that the creation of them in particular would not have been omitted. And though nothing is impossible to the Almighty that does not imply a contradiction, yet it is not easy to conceive how such wonderful fabricks could have been raised, after the dry land appeared, and at its first appearance was perfectly spherical, or of an even surface all over. What is here said by our learned author therefore is only in favour of his Hypothesis or partial scheme of the Deluge; and was it true that when the dry land appeared, the earth was wholly spherical, Dr. Burnet would have had a specious reason to say that the Antediluvian earth had no mountains.

Now that the mountains were formed before the waters subsided and uncovered the earth (which is the reason that Moses could make no particular mention of them) seems evident from the CIV Psalm, wherein the Psalmist enumerating the several works of Creation and Providence, faith v. 6. Thou coveredst it (the earth) as with a garment, the waters stood above the mountains, at thy rebuke they fled, at the voice of thy thunder they haste away; they go up by the mountains, they go down by the valleys into the place which
which thou hast founded for them, thou hast set a bound that they may not pass over, that they turn not again to cover the earth. From the tenor of the Psalm it appears that the Psalmist here speaks of the Creation and not of the Deluge, though the matter be true, when predicated of both, but it is not easy to apprehend how, when the waters stood above the mountains, they could upon their subsiding go up by the mountains? But we may observe that the preposition by is twice supplied by our Translators, though not in Italick as usual, and so is per by Junius and Tremellius. The marginal reading is the literal rendering, and more intelligible with the help of a small parenthesis.—At thy rebuke they (the waters) fled, at the voice of thy thunder they hastened away (the mountains ascend, the valleys descend) unto the place which thou hast founded for them. In like manner Ainsworth. At thy rebuke they fled, at the voice of thy thunder they hastened away (the mountains they went up, the valleys they went down) to the place which thou foundedst for them. And thus Caesalio renders the words with a parenthesis. Quam (terrain) cum profundo tanquam veste opercuisse, quae super montes fiebant aquae, te increpante fugerunt, et ad tuum tonitrum fons, in locum fibi a te destinatun (ascenditibus montibus, descedentibusque Vallibus) praeceptaverunt. And to the same sense the LXX. Αἰσθανάτος ὁς ἑκάστως τὸ περιβάλλον αὐτοῦ, ἐπὶ τῶν ἑρεῖων ἔξελεται ὁδατι. Ἀπὸ ἐπιτιμήσεως συν φεύγονται, ἀπὸ φωνῆς βροντῆς συν ἐξιλατοῦν. (Ἀναβαινοῦσιν ὅρη, καὶ καταβαινοῦσι πέδα) εἰς τόπον ὑν ἐθεμελίωτας αὐτοῖς. The sense of the passage seems plainly this. That notwithstanding part of the waters were raised up into the firmament on the second day, the earth was still wholly covered with those that remained until the third day (otherwise the dry land would also have appeared on the second.) But that when at God’s command they hastened to retire on the third day, as they run off, the
the mountains first and afterwards the valleys appeared; which the Psalmist expresses by, the mountains ascended and the valleys descended. Hence it is evident that the mountains were formed before the waters went off, but appeared not till the waters subsided, consequently that the same remaining waters, which covered the earth, and the mountains at the beginning, might, as has been said, have covered them again at the Deluge, had God so pleased. But whereas the Psalmist faith, Thou hast set them a bound that they may not pass over, that they turn not again to cover the earth. This is to be understood according to the law of nature, which God has established, by which they cannot return again to cover the earth. But the Deluge was an extraordinary case, the work of an Almighty Power, who has all nature at his command, and who could with as much ease call back the waters to cover the earth, as he commanded them at first to retire.

Now that there is a vast collection of waters within the earth (besides the seas which are on the surface of it) which Moses calls the great deep, is evident from abundance of instances and observations.

1. From the vast number of wells dug in places where there are no springs nor fountains, 20, 30, 40 foot deep or more, where they seldom fail of finding water, though they may sometimes miss by not lighting on those veins or frata through which it passes.

2. From the waters found in all mines of Coal, Lead, &c. which are drawn off by drains or levels, or raised by engines.

3. From the brooks and rivers that are found to run wholly under ground, as in the salt-mines near Cracow in Poland, which are 200 fathom deep. Others that for some leagues run above ground, and then run under ground, some of them rising again, but others appearing no more. At Pen-Park Hill in
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in Gloucestershire in 32 fathoms from the surface, Captain Sturmy with a miner came to a river or great
water 20 fathoms broad and 8 deep. Lowthorp's
Abridgment.

4. From several local inundations caused by the
eruption of waters from the earth; of which we shall
give some instances in the next section. And

5. By the sudden overflowing of rivers and inundating the neighbouring lands, without any visible
cause; or the least rain preceding.

Moreover that the waters of the great deep or
Abyss have by means of certain openings, Chasms or
Hiatus's in the earth, a communication with rivers,
lakes, seas and oceans, by which the waters are re-
ciprocally refunded from each to other, is proved
by many notorious instances, some of which like-
wise prove a subterraneous fire. Of both which
F. Fournier gives the following instances.

1. In the Maldive Islands almost under the Equa-
tor, in that part of the sea which separates Male' and
Poulidhon, and may be about seven leagues in breadth,
the sea appears as black as ink (a sign of its unmea-
surable depth) though when taken up in a glass, it
differs not in colour from other sea water. It is
moreover always seen boiling up in great black bub-
bles as water upon the fire. And although between
the other Groups of Islands the currents are rapid, in
this place the sea has no current, which is very
frightful to behold. The Natives say that in that
place happen frequent tempests.

2. Among those Islands that are in the Bay of
Mexico close to Guardaloupe, and near the Ile of
Goiane, is to be seen a smoke in the sea, and the
waters to boil, and so hot that one cannot hold the
hand in it.

3. At the bottom of the Baltic in the Duchy of
Angermania, a province in Sweden, there are very
high mountains whose bases are full of deep caverns,
into which the sea flows and empties itself, and from which likewise it pours forth sometimes with so great a noise and so dreadful, that the shock of this flux and reflux puts often into danger those who approach too near either out of curiosity or by misfortune. However the snows that cover those mountains serve as a guide to mariners to avoid the danger.

4. Not far from Ireland is a gulf of waters, to which the waves of the sea from all parts about are gathered, which are there loft and swallowed up as in an Abyss. The same is observed on the coast of Norway; (of which we shall take the account from Gordon's Grammar.)

5. The Fleet which the States of Holland sent to the Indies in the year 1598 reported that on the 15th of August, failing towards the Cape of Good-Hope, they found themselves in a certain place, where for the length of four Musket-shot, and the breadth of 60 or 80 feet, the sea boiled like a Caldron on the fire, but that they failed over it without inconvenience.

6. We must take moreover the sources of the great rivers for so many mouths of this Abyss of waters; as there are an infinite number of waters and rivers that run partly within the earth, partly upon it, then hide themselves, and rise again, and many that never appear at all, which traverse and water all the earth, as the veins do our bodies.

Since then we find (faith he) that there are many rivers that appear not at all, others that appear and then lose themselves, and that we observe upon the earth large openings or mouths, by which vast quantities of waters issue from the Abyss, we may with as much appearance of reason say, that the same happens at the bottom of the sea, and that those great boilings which are seen near the Maldives Islands, and the Cape of Good-Hope, issue from some prodigious
prodigious source of waters in the bowels of the earth. To which I may add another very wonderful, that is to the North of Porto-Rico at the Antilles, where in the midst of the sea there rises a spout of water higher than a Pike. It is with reason therefore that we affirm that there are reservoirs and abysses of water within the earth *.

 Purchas giveth us two instances in confirmation of this truth. 1. In the year 724, the bottom of the sea near the coasts of Asia Minor, burned and sent forth smoke first, and after heaps of stones, with which the shores of Asia, Lesbos and Macedonia were filled, and a new Island took beginning of the heaping together of the earth, which was annexed to the Island called Sacra. 2. At the end of the valley of Tarapaya near to Potosi there is a round lake whose water is very hot, and yet the country is very cold. They bathe themselves near the banks, for further it is intolerable. In the midst is a boiling above 200 feet square. It never increaseth nor decreaseth although they have drawn from it a great stream for metal mills.

 Other like instances Gordon's Geographical Grammar will furnish us with. As 1. Near to Drontbeim is a remarkable lake, whose waters never freeze, even in the dead of winter, notwithstanding the excessive cold at that season.

 2. Upon the coast of Norway near the Isle of Hitreuen in the Latitude of 68, is that remarkable and dangerous Whirlpool commonly called the Maelstroem, and by navigators the Novel of the sea. Which Whirlpool is in all probability occasioned by some mighty subterranean Hiatus, and proves fatal to ships, that approach too nigh, providing it be in the time of flood; for then the sea upwards of two leagues round makes such a terrible vortex, that the

force and indraft of the water, together with the noise and tumbling of the waves upon one another is rather to be admired than expressed. But as in time of flood the water is drawn in by a mighty force, so during the tide of ebb, it does throw out the sea with such a violence, that the heaviest bodies then cast into it cannot sink, but are tossed back again by the impetuous stream, which rusheth out with incredible force; and during that time are abundance of fishes caught by fishermen who watch the opportunity, for being forced up to the surface of the water, they cannot well dive again, so violent is the rising current.

3. Towards the North-west part of Murray is the famous Loch-Ness, which never freezeth, but retaineth its natural heat even in the extremeest cold in winter; and in many places this lake hath been founded with a line of 500 fathoms, but no bottom found. And nigh to Loch-Ness is a large round mountain called Meal-fior-ouery, about two miles gradatim from the surface of the Nefs. Upon the very top of which mountain is a lake of cold fresh water, often founded with lines of many fathoms; but never could they reach the bottom. This lake having no visible current running either to it or from it, is equally full all seafons of the year; and it never freezeth.

4. South-west of Stinna (one of the Orcades) are two dreadful Whirlpools in the Sea commonly termed the Wells of Stinna, with another between Isla and Jura (two of the Western Islands;) during the first three hours of flood all of them are very terrible to Passengers, and probably occasioned by some subterranean Hiatus.

Now that the seas and oceans communicate with the great Abyss by the means of certain Hiatus's or Chasms is further evident from the following instance. The Caspian Sea is an inland sea, which has
no visible communication or outlet into any other sea or ocean. Into this sea many large rivers empty themselves. The Volga alone is supposed to pour more water into this sea in one year than would suffice to drown the world, and yet the Caspian sea remains in the same state, never overflows its banks, nor drowns the adjacent countries. This is a demonstration that the waters poured into the Caspian sea from so many rivers are again refunded into the great Abyss, through the passages by which it communicates with the great Deep. For the same reason a very large lake in the Island of Hispaniola which receives many rivers, and has no visible outlet anywhere, is called by the Spaniards the Caspian sea, but by the Natives Hanegyaban.

Philosophers have been divided in their opinions as to the origin of springs, fountains and rivers; some, and those of great note too, have ascribed them all to the vapours raised from the seas, lakes, &c. and falling down again in rains on the mountains and hills, whence springs, fountains and rivers generally take their rise. Others again make them to arise from the sea, by way of Attraction, Percolation or Distillation, through subterraneous passages; and lastly others make the subterraneous waters which pervade the earth to be the origin of most of them. But not one of all these singly is the cause or origin of all springs, fountains and rivers, but rather all of them concur to the forming of springs and rivers, as may be proved from observations.

1. There are temporary springs which evidently owe their origin to rains, for when these cease for any considerable time, they are dried up. But then 2. There are also many perennial springs which continually flow summer and winter, with or without rains, always the same, having neither decrease nor increase perceptible, except accidentally from violent rains falling therein, or running down from higher
higher grounds into them, and discolouring their waters; but this is but of a short continuance. Now such perennial springs owe their origin to the subterraneous waters. 3. Others again, such as are near the sea, or in islands of no great circumference, may be very well supposed to arise from the sea waters. Of which the Isle of Bourbon formerly called Mascaranes may give a sufficient proof. In this Isle (which is about 8o leagues in circuit) besides the Volcano, is the mountain of Salafes in the midst of the Isle, and higher than all around it. “The violence of the sea, or whatever cause you will assign for it “(faith a Missionary) raises to the very top of it, “by subterraneous ways, so great a quantity of “water as to form three of the greatest rivers in “the Island. These rivers run down with great “rapidity, and in their course make a prodigious “number of noisy Cascades.”

What has been said in this Section fully shews that there is an Abyss of waters within the earth, which is partly the origin of springs, fountains and rivers, and which by certain Hiatus’s communicates with the open seas and lakes, and was the second great fund of waters that caused the Deluge, and raised it to the height mentioned. We shall next take a view of some particular or local Inundations which have happened since the Flood of Noah, as by these we shall be the better able to apprehend in some respect after what manner the universal Deluge was effected.

T 3 CH A P.
Sect. I. Of some particular or partial Inundations since the flood of Noah.

Though after the Flood of Noah God was pleased to promise never to destroy the earth again by a Flood of waters, and to enter into covenant with Noah and every living creature for that purpose, and to give them a token or sign of that Covenant to assure them from their fears of any such judgment to be inflicted on the world, which promise he has hitherto kept and will keep to the end; yet did he not by that Promise tie up his hands from punishing any particular city or country for their wickedness, by water, any more than by fire from heaven, or by earthquakes, pestilence or famine, &c., as by these various ways he has destroyed many flourishing cities and countries for their sins and abominations since the Universal Deluge. As there have been therefore several local inundations in divers ages and different parts of the world, attested by various authors since that time, it may be of use in the present Enquiry to consider to what physical causes they were attributed.

Now some of these were occasioned by the sea's surpassing its ordinary bounds, some by the irruption of waters from the bowels of the earth, others again by the overflowing of rivers, and some by the incroach of the sea and overflowing of rivers jointly.

To begin with those nearest home, a very large tract of land, once the estate of the famous Earl Goodwin, was overflowed by the sea, and is now called Goodwin-Sands.
2. The Netherlands have greatly suffered by inundations of the sea, or of that and rivers together; witnesses the Zuider Zee, the Haarlemmer Meer, and that near the city of Dort between Holland and Brabant, where by a sudden inundation of the sea, and overflowing of the rivers, the Rhine, the Meuse and the Waal, no less than 72 villages were drowned, and more than 100,000 souls perished, with all the cattle.

3. St. Jerome in the life of Hilarion relates that after the death of Julian the Emperor, there was an Universal Earthquake, which made the sea overflow its bounds; and as if God had threatened the world with a second Deluge, or that all things were going to return to their primitive Chaos, the ships hung upon the tops of the hills, whither the fury of the tempest had driven them.

4. In the Isle of Tsong-ming before mentioned, the night before the first day of their sixth moon, in the 35th year of the Emperor Cang-Hi, there happened an Omuragan or tempestuous wind, by which the sea was so agitated, that it flowed in upon the land, and spread itself for above a league into the island, whereby the whole harvest of the year was lost, the houses overturned, and thousands of men, women and children drowned.

5. Sir W. Raleigh mentions some other inundations of the sea, as that in the year 590 in the month of October, Gregory being Bishop of Rome, there happened a marvellous overflowing in Italy, especially in the Venetian territories, and in Liguria, accompanied with a most fearful storm of thunder and lightning; after which followed the great plague at Rome, by reason of the many dead serpents cast up and left upon the land after the waters decreased and returned. —— In the year 1238 Trithemius speaks of an earthquake which swallowed up many thousands, and after that of a flood in Friesland, in which
which there perished 100,000 persons. Of an
inundation in Italy in the time of Pope Damasus,
in which many cities in Sicily were also swallowed
up. Another in the Papacy of Alexander VI. and
another in the year 1515, Maximilian being Em-
peror.
6. But a more particular relation of a dreadful
inundation, first and an earthquake after, that hap-
pened in Peru on Monday October 20th, N. S.
Anno 1687, is given by F. Fournier in his Hydro-
graphy.
Thirty-five leagues to the South of Lima is a no-
ted haven called Pisca, where several persons of qua-
lity reside, who one day perceived that all on a sud-
den the sea retired a great way, and left the shore
dry. Soon after they saw a great swell in the sea,
the water to boil and foam, the waves to mount up
and tumble one on another with great roaring; and
rolling precipitately no more as waves but as moun-
tains of water. The sea then opened and divided
in two, and over-passing its digues and ordinary
bounds, poured itself forth on the right and left to
the height of two Pikes, advancing a large league
into the land, and for 300 leagues along the coast,
raging and foaming, overturning trees, houses and
towns; the waves by much surpassing their highest
walls, and making the whole country desolate for
that space. Camana a noted town 280 leagues dis-
tant from Lima perished with its port, as well as
many others, especially the town and haven of Arica,
where the loss was computed at a million of gold.
The sea having thus inundated the coast three fiv-

* This inundation I suppose is what is now called the Zuider-
Zee between Holland and the remaining part of Friesland.
† Anno 1515 tanta fuit in Germania fluminatur inundatio, ut
platinum pallium damnit darent, & Germania quasi Insula foramin
haberet. Chinon. German.
§ P. 159.
eral times in a short space, when it retired again it left the country covered with fish of very different kinds and sizes, which would have been some relief to those who fled to the mountains, but on St. Ca-
thurine's day (November 25) at an hour and a half past noon, the mountain Ourate, which for some years before had thrown up a great quantity of cin-
ders, began to shake, and a little after the whole country was seized with such a trembling, and shaken after so violent a manner, that no earthquake was ever thought like it, nay they could scarce think the horror of the Last Day could exceed this; for it extended 300 leagues along the coast, and for 70 leagues up into the land, and in the space of half a quarter of an hour, swallowed up many towns, overturned others, made the highest rocks lie in pieces, dfopt the channels of rivers, buried every thing it encountered in ruins, so that scarce was there a space in all that extent of land that a man could set his foot on. Many of those who were not bu-
ried in the ruins were stifled with the dust, which was so thick as to darken the air. A great many Aqueduits, which were the wonder of Peru, and perhaps the finest in the world in the Province of Parancofa 70 leagues distant from Lima, were then overthrown. Although this country was the most populous of all Peru, there remained no more than 15 houses standing, and these all flattened and rend-
ered useless. The tears and cries of a city taken by assault were nothing in comparison of what was then heard. Scarcely was the Earthquake over, and the dust and smoke dissipated, so as to give those who were alive time to behold the desolation of their country, their delightful valleys filled with the ruins of the mountains, their towns a heap of rubbish, and the bodies of their friends half buried under them, when several rivers whose courses had been dfopt, and the channels filled with the rocks, at length
length making way, broke through all obstructions, and with a roaring noise and impetuosity threw themselves upon the plains, and filled all with new terror. But this was soon abated, the Divine Providence giving these rivers a bed and channel whereby to discharge themselves into the sea *.

Add to this the Earthquake which happened at Lima October 28th at half an hour past ten at night, Anno 1746, and lasted about three minutes; by which 1500 souls were lost, 74 churches, 14 monasteries and 15 hospitals, besides some thousands of houses, were buried in the ruins, and the jewels and vessels of gold and silver lost amounted, it is said, to 300 millions of Pesetas. The town of Callao, a sea-port within two leagues of that city, was swallowed up by the sea, and the hurricane was so violent, that several vessels which rode at anchor were afterwards found on dry land several leagues up the country. The sea has filled up the place where the town stood, which was the best port in Peru, and all the inhabitants, between 6 and 7000, perished, except about 200 sailors and fishermen, who were thrown upon land with their vessels .

'Tis somewhat remarkable that as the sea retired before the shock was felt in 1687, so before this dreadful earthquake happened at Lima, the sea in like manner retired two miles from the Port of Callao; and immediately the City sunk downright, also all that space between the City and Callao, suffered in the same manner; so that the sea which in a moment returned with great violence, now possesses the place where the City was; and as it is said of one.

* In 1687 the shock was so dreadful, that Weber, who felt it 150 leagues at sea, affirms, that it frightened the whole ship's company, who thought they had struck upon a rock, and were convinced of the contrary only by sounding. The water was at the time mixed with sand, tho' no bottom could be found.

† First Letter with Dispatches to the King of Spain from Vera Cruz. Gent. Mag. June 1747.
City once famous, nunc segetes ubi Troja stetit; so we may say of this city, ubi stetit Lima, Callao, nunc naves anchora fundant.

A large account of that dreadful earthquake and inundation at Port-Royal in Jamaica, and almost over the whole Island Anno 1692 may be seen in Lowthorp's Abridgment of the Philosophical Transactions *, from which I shall extract a few particulars.

It began on June 7th between 11 and 12 in the day, with a small trembling, soon followed by a second greater, accompanied with a hollow rumbling noise almost like that of thunder, and upon the heels of this came the third violent shock, which in less than a minute's time shook the very foundation of Port-Royal in such sort, that three parts in four of the houses, and the ground whereon they stood, and most part of those who inhabited them, all sunk at once quite under water, the rest of the houses all shook down and shattered. The streets which were next the water, and where their wharfs were, &c. lie now in 4, 6 or 8 fathom water——The shock was so violent that it threw people down on their knees, and sometimes on their faces, as they run along the streets to provide for their safety. The ground heaved and swelled like a rolling, swelling sea, by which means some houses left standing were shuffled and moved some yards from their places. In many places the ground would crack and open and shut quick and fast; of which small openings they have observed 2 or 300 at one time, in some whereof many people were swallowed up, some the earth caught by the middle and squeezed to death, the heads of others only appeared above ground, some were swallowed quite down, and cast up again with great quantities of water, others went down and

* Vol. II. p. 411, & seq.
were never more seen. Other openings that were more large, swallowed up great houses, and out of some gapings would issue forth whole rivers of water spouted up a great height into the air, and seemed to threaten a Deluge. All these dreadful circumstances concurring at once, accompanied all the while with prodigious loud noises from the mountains occasioned by their falling, &c. and also a hollow noise under ground, and people running from one place to another with fear looking like so many ghosts, and more resembling the dead than the living, made the whole so terrible, that the people thought the dissolution of the whole frame of the world was at hand.

Though Port-Royal was a great sufferer by the earthquake, yet it left more houses standing there than in all the Island besides. It was so violent in other places that people could not keep their legs, but were violently thrown on the ground. It scarce left a planter's house or a sugar-work standing in all the island. And had there been 500 or 5000 towns in Jamaica, the earthquake would have ruined every one.—In several places in the country the earth gaped prodigiously. On the North side the planters houses were swallowed, houses, people, trees all up in one gap, instead of which appeared for some time after a great pool or lake of water covering above 1000 acres, which is since dried up, and now is nothing but a loose sand or gravel, without any the least mark or sign left, that there ever had stood a tree, house or any thing else. In Clarendon Precinct, the earth gaped, and spouted up with a prodigious force great quantities of water into the air above 12 miles from the sea, and all over the island there were abundance of gapings or openings of the earth, many thousands.—But in the mountains are said to be the most violent shakes of all, and the nearer the mountains the greater the shake.
shake. Indeed they are strangely torn and rent, so that they seem to be of quite different shapes now from what they were, especially the /Blew/ and other highest mountains, which seem to be the greatest sufferers, and which during the first great shake, and as long as the great shakes continued, which was above two months after the first shake (during which time, the shakes came very strong and thick, sometimes two or three in an hour) bellowed out prodigious loud noises and echoings. Not far from Fellows, part of a mountain having made several leaps or moves, overwhelmed a whole family and a great part of a plantation lying a mile off; and a large high mountain near Port Morant, near a day's journey over, is said to be quite swallowed up, and in the place where it stood, there is now a great lake of 4 or 5 leagues over.—In the Blue Mountain and its nigh neighbours, from whence came those dreadful roarings terrible and amazing to all that heard them, may be reasonably supposed to be many strange alterations of the like nature, but those wild desert places being very rarely or never visited by any body, not by Negroes themselves, we are yet ignorant of what happened there. But whereas they used to afford a fine green prospect, now one half part of them at least, seem to be wholly deprived of their natural verdure. There one may see where the tops of great mountains have fallen, sweeping down all the trees and every thing in their way, and making a path quite from top to bottom; and other places which seem to be pecked and bare a mile together: which vast pieces of mountains with all the trees thereon falling together in a huddled and confused manner stopped up most of the rivers for about 24 hours, which afterwards having found out new passages, brought down into the sea and this harbour several hundred thousand ton of timber, which would sometimes float in the sea in such prodigious
digious quantities that they looked like moving Islands. Some are of opinion that the mountains are sunk a little, and are not so high as they were; and others think the whole Island is sunk by the earthquake.

In this harbour of Port-Royal, at the time of the great shake, though the seas were very calm, was suddenly raised such a strange emotion in the water; that immediately it swelled as in a storm, great large waves appearing on a sudden, rolling with such a force, that they drove most ships, if not all in the harbour, from their anchors, breaking their cables in an instant; but this was soon over, and all was smooth again. Two Gentlemen happened to be in Leguanee by the sea side, and that at the time of the great shake, the sea retired from the land in such fort, that for 2 or 300 yards the bottom of the sea appeared dry, wherein they saw lie several fish, some whereof one of them ran and took up; and in a minute or two's time the sea returned again and overflowed a great part of the shore. At Tall house the sea is said to have retired above a mile. It is thought there were lost in all parts of the Island 2000 people, and had the shake happened in the night, very few would have escaped alive. But there followed a great mortality after it, which carried off many hundreds.

Upon this dreadful Catastrophe Mr. Gordon in his Geographical Grammar has this remark. "Hurricanes and Earthquakes so frequent in the Carribbean are seldom heard of here, whereupon we may justly impute that terrible earthquake anno 1695, (it should be 1692) accompanied with as dreadful an inundation rather to a moral than a natural cause, viz. the many horrid abominations abounding among the inhabitants, which without doubt did loudly call for judgments from Heaven."
Certainty of the Mosaic Deluge. 287

But he seems to be mistaken in saying, that earthquakes are seldom felt in Jamaica, since there was one there on Sunday the 19th of February 1687-8, when Sir Hanse Sloan was on the place, who says the inhabitants expect an earthquake every year; and that he had seen in the mountains afar off bare spots, which he was told was the effects of earthquakes throwing down part of the hills, which continued bare and steep. That which happened in 1687-8 was felt all over the Island. It damaged the houses, but no persons lost their lives by it. And it was on this account that the Spaniards built their houses here very low.

But besides the inundations occasioned by the breaking in of the sea and overflowing of rivers, there are others caused by the irruption of waters from the bowels of the earth.

1. Of these the Lake of Sodom, or the Dead sea, deserves to be mentioned in the first place, as being the first instance of that kind we know of. For though that and the neighbouring cities were first destroyed by fire from heaven, yet after that conflagration, those plains were inundated by an irruption of waters from beneath, that the land which had been defiled with the unnatural lusts of the inhabitants might be no more inhabited for ever; but remain a lasting monument of the Divine vengeance on such crimes to the end of the world.

2. Another, and for the like reason, was the irruption of waters in the County of Permanegh in the Province of Ulter, now called Loch-Erne, said to be 30 miles long and 15 broad, of which Cambden writes thus: "Here is a current report among the people "living hereabouts, that this Lough was formerly "firm ground, well cultivated and full of inhabi- "tants, and that it was suddenly overwhelmed and "turned into a Lake, to extinguish the abominable "crime
crime of B—ry then among them."— The Irish Annals lay this to the charge of certain Scotch Refugees, that were driven from the Hebrides, and took up here. But a fuller account of this is in the Note below *.

3. In the Kingdom of Savady in Pegu there is a great Lake, the original of which was thus accounted for by a Hermit, living near it, to some Portuguese in the year 1545. That about 237 years before, there stood in that place a great city, which the King of Ava had made war upon and taken. And that in gratitude for this victory, his priests, by whom he was entirely governed, counselled him to sacrifice to Quig-Guetur the God of War, all the male children whom he had taken captives, alleging that in case he did not, those children when they became men would regain the kingdom from him. The King apprehending that danger, caused all the children to be brought together, to the number of 85,000, on a certain day, which was a great festival with them, and most inhumanly put them all to the sword, intending the next day to offer them all a sacrifice by fire. But that very night there happened a great earthquake, and after that such thunderings and lightnings fell upon the City from Heaven, that in less than half an hour it was utterly consumed, and every thing reduced to ashes. That

* Nec non irae divinæ index eft perpetuus everfio Sodomaec et Gomorraec ubi nunc lacus eft, quæ in loco ante fuere amacnifima regna et civitates. Eodem modo Ortelius depingens Hiberniam de lacu Erno monet, quod olim fons fuerit, fed ob incolarum nefandam cum beliis venerem. Decr frato in tantam aequorum diluvium crepifit, ut totam cum tactum culfitimum cum hominibus inundatione submergerit; atque in rei geltae veritatem, hodie fereno tempore etiam nunc Templorum turres sub undis hinc inde conficiunt. Terram inquit Gualdus tam turpium contra naturam facinorum conficiam non tantum prinis sed etiam in posterum liabitatoribus indignam Autor naturae judicavit.
Thus by the just judgment of God the King of Ava himself and every one that belonged to him perished, not one escaping, and amongst the rest 30,000 priests, the authors of this wicked counsel; and the whole territory became a lake, which is called Orequantur, i.e. the howlings of the night: For the story goes there were ever after, at every new and full moon, such hideous yellings sent forth from this lake, that the people round were ready to die with fear, insomuch that the whole country was forsaken, there remaining only 85 Hermitages in memory of the 85,000 children, who had been thus massacred by the wicked counsel of the priests.

Ludovico Georgius, in his map of China, describes a large lake in the Province of Sanxi made by inundation in the year 1557, wherein were swallowed seven cities, besides towns and villages, and an innumerable multitude of people; one only child in a hollow tree escaping so great a destruction. Such as escaped drowning, as Boterus adds, were destroyed by fire from Heaven. But a more particular account of this inundation, by some Portuguese, who were at the Port of Lampacaou (where the Portuguese then had a noble Emporium) at the time it happened, take as follows.

"We had been at the Port of Lampacaou, says the same author, six months and a half, when on the 17th day of February (N.S.) 1556, certain news came from Canton, that on the 3rd day of that month, the Province of Sanxi had been wholly drowned in manner following.

"On the first of February the earth trembled from eleven at night to one in the morning, and the day following from midnight to two o'clock, as also the day after from one o'clock to three. During these Earthquakes it was most dreadful to hear the great noise and hurricane, which the violent rains and thunders made everywhere.
At the same time there burst out of the earth Deluges of water, which made such havoc and destruction, that the whole country round for 60 leagues (or 180 miles) was inundated, from which of all the living creatures, men and animals, not one escaped, save one child of seven years old, who was wonderfully preserved, and sent to the Emperor. The news of this disaster no sooner reached Canton, than the people were in great consternation, the Portuguese also at Lampaca were astonished at the report, but not believing it possible, were resolved to know the truth. Of sixty that we were in our ship, fourteen had a strong desire to transport themselves to the place to know the certainty, and immediately set out:

At their return they affirmed the fact to be true, and certain; of which an attestation being made and signed by the fourteen witnesses who had been on the spot, was sometime after sent by Francis Toscana to John III. King of Portugal, and was given to a priest named Diego Rey nel to deliver, who could attest the same by word of mouth, he having been an eye witness with the other fourteen."

N. B. Thofe horrid and unnatural crimes for which the inhabitants of Sodom and the other cities of the Plain, and in the County of Fermanagh in Ireland were destroyed, are by report too common among the Chinese, which might perhaps be the moral cause of this inundation.

I have here purposely omitted the anciently noted flood's of Oggyes and Deucalion, because I look upon them to be nothing but obscure and fabulous remains of the Tradition of the Universal Deluge. Such our learned Bp. Stillingfleet thought them, cenfuring those who had taken a great deal of needless pains to place them in their several ages, and giving the reasons how they came to be accounted distinct and partial floods.*

* Origines Sacrae, p. 401.
S E C T. II.

After what manner we may conceive the Fountains of the Great Deep broken up.

The reason of my bringing so many instances of particular Floods, was in order to our more easily comprehending after what manner the waters of the Great Deep were brought upon the earth at the Universal Deluge. For if we may compare small things with great (as in this case there is a great Analogy between them) we may have reason to think that both that and these were effected in much the same manner. And we may further observe, that most of all the instances I have given of particular inundations, have been occasioned by earthquakes, and that it is highly probable, this was the means God was pleased to make use of in breaking up the fountains of the Great Deep. Not that earthquakes are necessarily the forerunners and bringers on of inundations, since there are several instances of earthquakes that have not been attended with inundations; and besides, those great inundations in Peru, preceded the violent shakings of the mountains there by several days, and the effect of the earthquake was the overturning of the mountains without any inundation following; but earthquakes make way for inundations when God pleaseth to order it.

Neither in truth ought we to be very positive as to the manner of God's operations in extraordinary cases, (as this surely was, if ever there was any) further than is revealed, because we cannot fathom the ways of the Almighty, which are as the Great Deep, and that he is pleased to work variously according to his own will and pleasure, that is, sometimes by

\[ U \]
An Enquiry into the Truth and means, and sometimes without any, by his sole Word and Will.

Thus at the passage of the Israelites through the Red sea, Moses was commanded to stretch his rod over the sea, and the Lord caused the sea to go back by a strong East wind all that night, which divided the waters and made a path-way for his people. But when they were to pass the River Jordan under Joshua at the time of harvest, when that river swells and overflows its banks, there were no means used to stop the waters, but as soon as the feet of the priests who bare the Ark, were dipped in the brim of the waters, the waters above were stopt, and rose up on an heap, and those below failed and were cut off; so that the whole multitude passed over dry. Again when the whole camp was fed with flesh for a month, a strong wind brought the Quails from the sea shores, but when it rained Manna from Heaven daily during their long abode in the Wilderness, no visible means of the miracle are mentioned. In like manner when the Lord Jesus twice miraculously fed some thousands of people, he made use of a few loaves and fishes, and in supplying the deficiency of wine at the marriage feast of Cana, he called for water and converted it to excellent wine. But when there arose a great tempest in the sea of Tiberias while he was asleep, insomuch that the ship was covered with the waves, and the disciples in great fright awoke him, saying, Lord, save us, for we perish, he arose, and only rebuked the wind and the sea, and suddenly there was a great calm. Well therefore might the men marvel and say, What manner of man is this, that even the winds and the sea obey him? From these instances it appears, that God is pleased to operate sometimes with and sometimes without means, according to the pleasure of his Will, and all is alike easy to him.
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Nevertheless, as Holy Scripture informs us that there were means used for bringing the waters upon the earth to cause an Universal Deluge, viz. the forty days rain from Heaven, and the breaking up the fountains of the Great Deep; so we may conclude that earthquakes were the cause of this up-breaking, and made those apertures of the earth to give way for the waters to issue forth on this solemn occasion, as they have been in many instances since. And this seems also to have been the opinion of the Ancients, delivered down to after-ages by the first Post-diluvians, as we may collect from Ovid’s description of the Deluge;

Ipse tridente suo terram percutit, at illa
Intremuit, motuque sinus patefecit aquarum.
Lib. i. 1, 284.

Now that there have been earthquakes of a vast extent is attested by several authors. From them Dr. Woodward in his Essay affirms, “That there is sometimes in commotion a portion of the Abyss, of that vast extent as to shake the earth incumbent upon it, for so very large a part of the Globe together, that the shock is felt the same minute precisely in countries that are many hundred miles distant from each other, and this though they happen to be parted by the sea’s lying between them. Nay there want not instances of such an universal concussion of the whole Globe, as must needs imply an agitation of the whole Abyss.”

But though there may have been some instances of an Universal Concussion of the whole Globe, yet that concussion was not attended with the like effect as at the Deluge, because God willed it not, having promised never to destroy the earth again after that manner. Neither in order to effect an Universal Deluge does it seem necessary that there should be an Universal
Concussion of the whole Globe; it might be sufficient for that purpose that the concussions and the openings of the earth by them, were in very many places both in the land, and in the waters. My reasons for thus thinking are these. 1. Had the concussions been universal, and the openings all over the Globe of the earth, the waters would have covered the earth in far less time than 150 days, during which they were rising to their intended height. Hence it appears that they ascended gradually, and therefore that the apertures were not universal, but in many places of the earth. 2. Had the concussion been thus universal, it must needs have endangered the Ark itself, which being of great length and height, would have received such a violent shock, as it could not bear without danger of being broke to pieces. 'Tis true it might have been preserved even in that case from all damage, but then it must have been by a miracle, of which there was no need, if the concussion was not Universal.

Again, though the earth was broke up in very many places, to make way for the waters of the abyss to ascend and cover the earth; yet they could never have ascended to the height mentioned, though they gushed forth with great violence and mounted to a great height from the apertures of the earth. Their ascending therefore 15 cubits above the highest mountains must be ascribed solely to Omnipotency, who has all Nature at his command, and can do whatsoever he pleaseth in Heaven and in Earth. We can easily conceive how waters may descend from any given height, for that is natural to them, but we cannot conceive how they should ascend to so great a height as the waters of the Deluge did, against their nature. This then must be supernatural. But as the learned Dr. Clark observes. *  "Natural and Supernatural are nothing at all dif-

* Second Letter to Mr. Leibnitz.
ferent with respect to God, but distinctions merely in our conceptions of things. To cause the fun [or earth] to move regularly, is a thing we call natural. To stop its motion for a day, we call supernatural; but the one is the effect of no greater power than the other, nor is the one with respect to God, more or less natural or supernatural than the other. Let this truth then be applied to the waters of the earth. To make the waters when they covered the whole earth, mountains and all, at the Creation, descend into the several receptacles prepared for them, we may call Natural, but to make them ascend again to cover the whole earth, mountains and all, at the Deluge, we must call Supernatural. But both these were the effect of one and the same Almighty Power, and no greater power was required to the one than the other, nor with respect to God was the one more or less natural or supernatural than the other.

But there is one thing we must here take notice of, viz. That though it be very certain that the seas and oceans were brought over the earth at the Deluge, of which they have left manifest tokens in every place on the mountains as well as in the valleys, yet it is observable that the Sacred writer, in his relation of the Deluge, makes no mention of the seas at all; the reason of which appears to be this. All inundations from the sea are occasioned either, 1, and that most commonly, by high winds furiously driving the waves upon the land. But at the beginning of the Deluge, and till after the waters were come to their destined height, there is no mention of any wind, nor could the winds have brought about the end proposed; since in an Universal Deluge they must have blown from all points of the Compass, to bring the sea from every quarter upon the contiguous lands, that is, in quite contrary directions, which would unavoidably obstruct the effect intended,
intended, because that wind which would have brought the seas on the land in one part of the world, must have drove them further into their beds in another. Or, 2. Inundations from the sea extraordinary are occasioned by the irruption of the waters of the Abyss into the sea, by new chasms or openings at the bottom thereof, as in that on the Coast of Peru, and at Port-Royal in Jamaica, the first without any earthquake, the other occasioned by it; and some other instances there are of apertures at the bottom of the sea, which I have not mentioned. And therefore as the sea's overflowing the earth in all places was most probably owing to the sudden irruption of the waters of the Abyss, by new apertures at the bottom of the sea, Moses makes no mention of the seas in particular, but describes the overflowing of all the waters within and upon the earth, to one sole Cause, viz. the breaking up the fountains of the Deep, to make way for the waters of the Abyss to ascend, *The fountains of the Great Deep were broken up*, which then poured forth its waters into the seas and oceans, and made them overflow the earth.

In treating of the structure of the Ark, I said that instead of its being mostly open all along the sides of the second story, as some fancy it was, to give air to the animals whom they place there; it had more need to have been close shut up; because the rains from Heaven, and the earthquakes breaking up the fountains of the Deep, were probably accompanied with thunder and lightning. I am the more confirmed in this, by observing that Inundations caused by earthquakes, have been frequently accompanied with thunder and lightning, as that in the Province of Sanci in China, and others. Thunder-showers are heavy rains, and, as may be seen in that wonderful and singular Phenomenon of the Zuchmisher sea or lake in Carniola, though it be sometimes three weeks
in filling, yet when it thunders at the time the waters return, it will fill in 24 hours, and even in 18. The thunder protruding the water not only from the hills and caverns round, but from the holes at the bottom, with great force, and to a considerable height * . And therefore as we learn from the Psalmist, that God’s command to the waters at the Creation to retire into their receptacles, that the dry land might appear, was attended with thunder and lightning to hasten their retreat; so the command to them to return and overflow the earth again at the Deluge, was accompanied with the same loud voice of God, as a means to protrude them more forcibly from the Abyss.

S E C T. III.

By what means the waters were drained off the Earth again, after they had come to their defined height.

W H E N the ingenious and learned Dr. Keile thought that the drawing off the waters of the Deluge was not at all accountable in any natural way, or by the principles of Natural Philosophy, I may well apprehend it dangerous for me to wade into such deep waters. For in the defence of his Remarks on Mr. Whiston’s New Theory, having demonstrated that the waters of the Deluge could not possibly be drained off, after the manner he assigned, and that the drying of the earth of such a huge column of waters could only be effected by the Power of God, he concludes thus: “So that although Mr. Whiston has been pleased to ridicule my fondness for miracles, viz. those of the Creation and the Deluge,” (the only two he was concerned to vindicate against the two Theorists) “yet since all


the
the natural causes he has assigned, are so vastly disproportionate to the effects produced, he may at last perhaps be convinced, that the easiest, safest, and indeed the only way, is to ascribe them to miracles." His design in the Examination and Remarks on the two noted Theories was to shew that their principles were wrong, and that they reasoned wrong from their own principles. But had he set himself to account for the increase and decrease of the waters of the Deluge by the true principles of Natural Philosophy, without assuming any fanciful Hypotheses, (the way that others have taken) I make no doubt but that he might have shewn the natural causes of the reduction of the waters far better than I can pretend to do. Nevertheless as that is yet left undone, I must endeavour to do it in the best manner I can.

That there were natural causes of drying the earth again, I collect from the time taken to accomplish it; for had it been done in a miraculous way it might have been performed in far less time than seven months. That this was the measure of time from the height of the waters to the fully draining the earth again, may be easily calculated. The Flood began on the 17th day of the 2d month, and Noah came out of the Ark on the 27th day of the 2d month in the year following, which makes one whole year of 365 days (as was proved before) and ten days over. Of these 375 days, the waters began and increased gradually for 150 days, or five months of 30 days each, and then they were at the full height designed, so as to overtop the highest mountains by 15 cubits or 30 feet. All the remaining time of the 375 days the waters were decreasing continually and gradually as they had increased, and the earth drying by degrees. On the 17th day of the 7th month, the Ark rested on the mountains of
of Ararat or Taurus *, that is, 47 days after the waters began to decrease, and yet the tops of the mountains were not seen till the first day of the tenth month, which was 120 days after the waters began to fall; so great was the column of waters upon the Globe of the earth, being near three miles of perpendicular height above the level of the seas, info-much that it required 120 days to exhale or draw off 30 foot of water from that vast depth that covered the earth. Forty days after the tops of the mountains appeared, Noab sent forth a raven, which returned not into the Ark, but hovered about, finding probably some carcaces or other things for its sustenance, on the mountains, which during these 40 days had raised their tops considerably above the waters. After waiting seven days he sent out the dove the first time, which returned again. After other seven days he sent her out a second time, when she returned with an Olive leaf or twig plucked off the tree; staying other seven days more he sent out the dove the third time, which returned not again. Thus the waters were still abating gradually, and on the first day of the first month of the year ensuing, the waters were no more to be seen upon the land, which was dry to appearance, but too soft and muddy for men or animals to tread upon, neither was there yet any thing upon it for their food. Noab was therefore kept in the Ark near two months longer, or 57 days, till the earth by the heat of the

* Mr. Whiston is of opinion, that the mountain on which the Ark rested was one of the highest mountains in the world, but it would seem otherwise; for 1. The highest mountains are not in that part of the world where the Ark rested. 2. Before the Ark rested, the waters had been decreasing 47 days, by which time 'tis probable there could not be such a depth of water on the highest mountains as would suffice for the Ark's safe landing, since it might draw not much less than 15 cubits: Yet a high mountain it must have been, since the tops of the mountains did not appear till 73 days after the Ark had rested.
fun (being in the month of May, as will be proved hereafter) had brought forth vegetables for the sustenance of men and animals at their first coming out of the Ark. Thus wisely and wonderfully did God dispose and order all things for the providing those of maintenance whom he had preferred to replenish the world anew. Now though the Power of God was the first and supreme cause of draining the earth of such a prodigious column of waters, under which it lay buried for a year, as well as it was to bring them on to that height, neither of which could ever have been brought to pass without his Almighty Fiat; yet from the length of time taken to dry the earth again, and the continual and gradual, not sudden decrease of the waters, we may reasonably conclude that there were some natural causes of draining the earth, as well as of bringing the waters upon it. These are what we are now to enquire into.

In order to this we must carefully attend to the words of the Sacred Historian. Having told us in the close of the 7th chapter, that the waters increased and prevailed on the earth, for 150 days, before they came to their destined height, he begins the 8th chapter thus: And God remembered Noah and every living thing, and all the cattle that was with him in the Ark, and God made a wind to pass over the earth, and the waters asswaged. The fountains also of the Deep, and the windows of Heaven were stopped, and the rain from Heaven was restrained, and the waters returned from off the earth continually, and after the end of 150 days the waters were abated. But our Translation of the last part of the sentence is somewhat dubiously expressed, or rather misrepresents the meaning of the Sacred writer, which is not, that at the end of the 150 days, the waters were abated, but that then they began to abate; and should have been rendered, and from the end of the 150 days the waters
Certainty of the Mosaic Deluge.

waters did abate, or began to abate. Thus Junius.

Et transmissis Deus ventum super terram ut sedaretur aquea, occultis fontibus Abyssi, et caterva his coeli, celi-biteaque imbre a coelo; sic recedentibus aquis e superficie terrae, et quidem inde cenerer recedentibus defecterunt a-
qua, exactis centum quinquaginta diebus. And the
LXX. Καὶ ἡ λαττονοῦτο τὸ νὺφρ χαὶ πεντήκοντα καὶ ἑκατὸν ἡμέρας.

Let us now observe the regular process of this
grand transaction; 1. When the waters were raised
15 cubits above the highest mountains, which took up
150 days, the work was accomplished for which they
were sent upon the earth. 2. The two sources of the
waters were stopped, the rains from Heaven and the
waters of the Abyss, not both at one and the same
time, but each at their distinct periods; for the rains
were no longer upon the earth than 40 days and
nights from the beginning of the Deluge, but the
waters of the Abyss continued to issue during the
150 days; so that Moses speaks here only in general,
after the waters were come to their height, and
ceased to flow any more; nor was there any danger
of mistaking the sense of his words, when he had
said expressly before, that the rains were no longer
than 40 natural days upon the earth. 3. God made a
wind to pass over the earth for the speedier drying up
the waters. 4. The rain from Heaven was restrained.
This is no tautology, nor does it mean the same thing
with the windows of Heaven being stopped, for that was
done long before, even 110 days before the waters
were at their height, but his meaning is, that after
the 150 days of the waters ascent, the rains were re-
strained, that is, God suffered it not to rain upon
the earth during the whole seven months that the
waters were diminishing continually, and the earth
a drying, which was a very material circumstance,
highly necessary towards the speedier reduction of
the waters, and therefore is expressly noted by the
Sacred
Sacred Penman, and must be kept all along in mind, to prevent needless objections.

Let us next consider, 1. The quantity of vapours raised by the heat of the sun. Dr. Halley observes, that the evaporations are least in the winter, and greatest in the Summer, and most of all in windy weather. Mr. Sedilau concluded from his observations at Paris, that what is raised in vapours exceeds that which falleth in rain near a half; and Dr Keile affirms that it is evident by calculation, that the vapours raised by the heat of the sun are alone sufficient to serve all our rivers and fountains with water (this was the Hypothesis then in vogue, that the origin of all springs, fountains and rivers, were the rains only, but this is not true in fact; but be it so.) If now the sun exhales such a prodigious quantity of vapours from the seas and waters of the present terraqueous Globe, what must it have done at the Deluge, when the whole was one immense Globe of water, and that during seven months, in his course between the Tropics? And as the greatest evaporation of the waters would be between the Tropics, where the action of the sun is the greatest, so, as the waters diminished and became of a lower surface there, those from the other parts of the world, would be continually and naturally falling down thither for their speedier exhalation, as they ever do, where there is the least declivity; remembering still that God suffereth it not to rain during all that time upon the earth.

2. If the Evaporations are greatest of all in windy weather, and, as we find by experience, that there are some very drying winds that in a manner lick up the water, here was a wind raised to facilitate the daily decrease of the waters, and which probably continued during the whole time of their recels. Whether this was an extraordinary wind out of the course of nature, or a wind that would naturally...
and of course arise by the action of the sun's beams upon the air and that prodigious surface of waters of the whole Globe, together with the earth's diurnal rotation, is needless here to enquire: the expression of Moses will suit either case, for all natural causes are ascribed to God as their author; but it is expressly said that a wind was raised, and raised for that end, that it might contribute greatly to diminish the surface of the waters. But

3. Neither was the action of the sun and of the wind upon the waters the only cause of their daily abating and, diminishing, great part of them would return by those cracks and apertures which the earthquakes had made for their issuing forth, and this seems plainly implied by the Hebrew phrase of their going and returning (v. 3, in the margin.) Nor is this inconsistent with what was said, v. 2. That the fountains of the Deep and the windows of Heaven were stopped, since the obvious meaning of that expression is no more than this, that as after the first forty days it rained no more, but the rain ceased, so after the 150 days, the flux of waters from the abyss was also restrained, so that no more waters were poured forth from thence upon the earth, but not that all the openings were so stopped and closed up that no waters could return by them into the Abyss again. But suppose that expression should mean, that they were closed up again, as no doubt some of them were, yet Moses does not say that all of them were, but only in general that the fountains of the Deep were stopped; and though he had said, All the fountains, it might nevertheless be thus understood, since it is very well known, that this universal all, not only in the sacred but profane writers, and even in common speech, is not to be understood always absolutely for all and every one without exception, but comparatively for the greater part, or for many. There might be many claims
or openings of the earth, by which as the waters issued at first, so they might return again into the Abyss.

Now that there might be many such openings left for the waters to return again into the Abyss is highly probable, because many of them remain to this day.

1. By several instances before given, it is evident that the seas communicate with the Abyss in many places, by the openings that are between them.

2. That strange phenomenon of the Zuchnitzer lake in Carniola is a proof, that there are holes in the earth by which the waters retire in a short time under the earth and quite disappear, and that yearly; and other such like instances there may be in other countries, though there be no learned men there to observe and describe them. 3. Most of the openings by which the waters returned into the Abyss appear to have been upon the mountains, though these would seem to be the last places where to look for them, and which with us are called Swallows, as serving to swallow up the waters of the Deluge; and indeed these at the first recess of the waters would swallow up vast quantities of water, till the waters subsided below them, and seem highly necessary at the beginning to absorb that vast column of waters which rose fifteen cubits above the highest hills. Of these an ingenious and learned Gentleman, in his visiting Crofs-fell mountain in Cumberland, writes thus. * "The Swallows, those incontestable remains of Noah's Deluge, begin here (on Roderic heights) to be very frequent. Some of these are 30 or 40 yards in diameter, and near as much deep, perfectly circular, but contain no water at any season, the ground having gradually fallen in at the sinking of the waters.

* Gent. Magazine for August, 1747.
"But where they have happened amid rocks, the holes are left open to incredible depths. This naturally accounts for those surprising phenomena in the Pyrenean and Narbone mountains, and our Elden-hole in Derbyshire, where depths have never been ascertained with the longest lines." And many more such Swallows there may be in many other mountains of the earth still to be seen, had men been as curious to remark them. And why may not that pretty large lake called Green-castle-lock, mentioned by the same Gentleman, on the same Roderic heights, and many other lakes on the tops of mountains, of which we have mentioned several, which receive no visible feeders and yet are always full, and emit small streams, have been at first also swallows or Absorbers, and which still continue full from the top of the lake down to the Ays. But neither

4. Is it necessary to suppose that the whole vast mafs of waters which covered the earth at the Deluge, was either exhaled in vapours, or descended again by openings in the earth and Swallow-Holes in the mountains into the Ays. I rather suppose that a great part of it was left on the surface of the earth, which partly increased the former seas into those vast oceans which now encompass the Globe, and partly formed those vast lakes that are in several parts of the world, so that the surface of the waters is now greatly disproportionate to the surface of the dry land. Dr. Keile indeed says, that there must be a due proportion between the seas and the dry land; but neither he nor any of the Philosophers have told us (neither is it indeed possible for them) what that proportion is or must be, and 'tis probable they may be mistaken in the proportion they suppose. Dr. Burnet in his Theory supposed, that the surface of the ocean was equal to the surface of the
the dry land, and Dr. Keile argues with him on his own supposition; but an inspection of the Terrestrial Globe, or map of the world may convince us, that the seas and oceans take up the space of more than two thirds of the earth's surface. And if we take in all the lakes, rivers and marshes (from all which vapours are also raised) the surface of the whole waters is near three parts in four of the surface of the present earth. But I do not think it to have been thus in the Antediluvian world, and they who argue from the present state of things to the state of that world must commit many mistakes, since the earth suffered great changes by the Deluge, and this great increase of the waters upon the present earth I take to be one of them. Whether it be that a much greater quantity of vapours or rains are required to render the surface of the present earth fertile, than was necessary for the primitive earth, for a natural reason given before; or whether such an increase of waters was left as a standing visible testimony of an Universal Deluge, and a Memento Peccati for mankind to the world's end, as there are standing visible monuments of the same on the dry land in every country of the earth; or for both these together, and other reasons also that are unknown to us, I shall not determine, but so it appears to be in fact. And yet further,

5. I do not think it necessary to suppose that the whole surface of the Globe, from Pole to Pole, was dried of its waters before Noah left the Ark. The greatest part of it indeed would, from the several causes here assigned, but not towards the Poles. The action of the sun upon the waters in the winter months would be but small, and far the greater part of the seven months in which the earth was a drying, were the winter months in this our Northern Hemisphere, (as will be shewn hereafter) in which the Ark rested.
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rested. It sufficiently answered all the ends of Providence, if the greatest part of the earth, that especially where Noah and the animals were to land and settle, was both dried and afforded sustenance at their first coming out of the Ark: Nor is this at all inconsistent with the account given by Moses. His words imply a generality, not an universality. It is said indeed, Chap. viii. v. 9. that the Dove the first time she was sent forth returned, because the waters were on the face of the whole earth, there was as yet no part dry where she could set her foot on. After seven days more she returned with an Olive leaf pluckt off, so Noah knew that the waters were abated from off the earth. Then it follows, v. 13, that Noah removing the covering of the Ark, looked, and beheld the face of the ground was dry; and lastly, v. 14. And in the 2d month, on the 27th day of the month, was the earth dried. Now all this may be said with strict propriety, if all that part of the earth was dry where the Ark rested, though the whole might not be so from Pole to pole, which at that time was not necessary. When Moses would express an Universal without exception, he does it in very plain terms, viz. *—All the high hills that were under the whole Heaven were covered—all fish died that moved upon the earth—and every man, all in whose nostrils was the breath of life, of all that was in the dry land, died. And every living substance was destroyed, which was upon the face of the ground, both man and cattle, and the creeping things and the fowl of the Heaven; and they were destroyed from the earth, and Noah only remained alive, and they that were with him in the Ark. Whereas here it is only said, the face of the ground was dry, and the earth was dried.

* Genef. vii. 19, 21, 22, 23.

X 2 Before
Before I put an end to this Section, it may be necessary to consider a passage in Dr. Keile’s Remarks on Mr. Whiston’s Theory *, which seems to deny the return of any of the waters of the Deluge by the cracks and fissures of the earth. “It is not possible, says he, that this water could descend through the cracks and fissures of the earth, which of necessity must have been all full at the time of the Deluge; for water cannot lie on the surface of the earth, till all the cracks, holes and fissures in it be filled. This is so evidently certain both to sense and experience, that I think it beyond all contradiction true, it being as impossible to make water lie on the surface of the earth before all its cracks, pits and holes be filled, as it is to make a vessel retain water, whose bottom is bored through with holes. But if I should suppose that the cracks and fissures remained empty during the Deluge, (which is indeed an impossible supposition) yet it is certain that these fissures could receive but little more water than what was at first derived from them. For the crust of the earth, according to Mr. Whiston, lying immediately on the dense and heavy Abyss, and water being lighter than it, it is absolutely impossible that ever water should settle itself between the crust and the Abyss. It is therefore clear, that no more could descend through the cracks and fissures of the earth than what they were able to contain, or what at first ascended through them to the surface of the earth, which Mr. Whiston supposes to have been half of the waters necessary for making the Deluge, and must be according to the former calculation at least eleven oceans of water: though indeed I cannot

* P. 176. 2d. Ed.

“easily
"easily understand, how it is possible for them to contain or receive so much. What then can we imagine would become of the rest? For after the channel of the sea was compleatly filled, there would remain eleven oceans more to be disposed of, which there is no imaginable place in the earth able to receive. And therefore it is clear, even to demonstration, that all this water could never be removed by natural means."

The Reader may observe that the Author's argument here is ad hominem against Mr. Whitson's Hypothesis. 1. That the Abyss was a dense and heavy fluid. 2. That the Crust of the earth lay immediately on the dense and heavy Abyss. 3. That the Cracks and Fissures were empty, and the earth for four miles depth was dry, notwithstanding the waters had issued through it; all which are very unaccountable suppositions: but against the true state of the earth at the Deluge, the Author's argument is of no force. For, 1. The waters of the Abyss are the same as other waters are. 2. Whether the crust of the earth lies immediately on the Abyss, so as to touch its surface, no man can tell; to be sure when the Abyss poured forth its waters, and so far as it emptied itself, there was the same space left to receive them again. 3. The cracks and fissures were doubtless full of water, while the waters of the Abyss flowed through them; and, 4. The surface of the earth itself would be well drenched in water, and all its pits and holes filled with it, while the waters were ascending to their height. But then it will be evident also, that as soon as the waters ceased to be poured forth, and a stop put to their mounting upwards at the end of the 150 days, either because they were all already poured forth, or such a quantity of them as was necessary to raise the Deluge to the height intended; then I say the waters
waters in the cracks and fissures, whether perpendicular or horizontal, would necessarily fall down again into the Abyss, and when these cracks and fissures emptied themselves, the waters above would be running into them, and so on incessantly and continually, the waters would be going and returning, as the Hebrew expresses it. Again, whatever the compass or contents of the Abyss may be, it was surely able to receive again all the waters that came out of it, how many oceans for ever there were; and if at the Creation, after the waters were divided into those above and those below the Firmament*, the inferior waters still covered the earth, mountains and all, till the third day, yet when commanded to retire, the receptacles God had prepared for them, with the Alveus of the ocean, were capable to receive and contain them all, that the dry land might appear, was not the same Alveus, and former receptacles, capacious enough to contain them all again, when the Deluge ended? I should think then there could be no difficulty to conceive how the waters of the Deluge were disposed of. The heat of the sun, with the drying wind, would in seven months exhale as much in vapours as fell in the 40 days rain from the Heavens; and the Abyss, with the channels of the seas and oceans, receive what had before come out of them; and there were no other sources of the waters of the Deluge; not to insist on what I have mentioned before, that the vast oceans which now surround the Globe are a great part of them the remaining waters of the Deluge. The bulk of the Terraqueous Globe is very great, being reckoned above 260 thousand million of miles solid content, its diameter above 7000, and its ambit above 24000. Now how much of this whole content is

* See page 402.
solid earth, or the Crust as they call it, which surrounds the Abyss, no man can tell. But suppose there was no such vacuity about the center of the earth as to contain an Abyss of waters, could not the depth of three miles of water above the whole surface of the earth be dispersed and lodged within the contents of 3500 miles, (the earth's semi-diameter) and an Ambit of 24000 miles, though not one drop of it had gone down to this supposed Abyss? And are there not waters within the earth every where almost, and the deeper men dig the more to be found, and rivers of waters under ground? And yet so vast is the concavity in the center of the earth, that Dr. Halley supposed there was a Globe of Loadstone or lesser earth, placed in this hollow center of the greater, and that the space between the concave surface of the one, and the convex surface of the other, was filled with a subtle luminous vapour, by which he accounted for both the variations of the Compass, and the Aurora-borealis. Though I confess it seems unaccountable to me, how a magnetick globe (of what circumference you please) in the center of the earth should affect the needle upon the surface of it, at the distance of 3000, or even of 500 miles, or indeed why it should be there at all? This is an Hypothesis which can never be proved, and is I fear like that other, that the physical cause of the Universal Deluge was the approach of a Comet which involved the earth in its watry Atmosphere, which it seems originally belonged also to Dr. Halley, and was only deduced into that comfortable length of the New Theory of the Earth by Mr. Whitton; the vanity of which Hypothesis we shall soon make appear by one plain argument.

I have nothing further to add, with respect to the discharging the waters of the Deluge, than that as the coming on of the waters was probably attended with
with thunder and lightning, so probably the drawing them off was attended with the same, these having a mighty influence upon the waters, either to force them up or down, so that the words of the Psalmist, at the voice of thy thunder they hasted away, may be applied to the waters of the Deluge, as well as those of the Creation.

C H A P. IV.

Sect. I. At what season of the year the Deluge began and ended.

THOUGH the season of the year, when the Deluge began and ended, may seem a matter of no great consequence, yet the time assigned by the generality of authors, will, upon due consideration, appear no way proper, but highly inconvenient in itself, and inconsistent with that infinite wisdom which orders and directs all things for the best. Let us then examine this point also, and shew that it is no ways probable that the Deluge begun or ended in the winter season, as the common opinion is.

The Sacred Penman gives us the year of Noab’s life, the month, and the day of the month when the Deluge began *. In the 600th year of Noab’s life, in the 2d month, the 17th day of the month, the same day were all the fountains of the Great Deep broken up, and the windows of Heaven were opened——He likewise marks the time of Noab’s coming out of the Ark. † And it came to pass in the 601st year of Noab’s life, in the first month, the first day of the month, the waters were dried up from off the earth, and Noab removed the covering of the

* Genef. vii. 11. † Genef. viii. 13.
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Ark, and looked, and beheld the face of the ground was dry; and in the second month, on the seven and twentieth day of the month was the earth dried, when Noab received a command to go forth of the Ark, and bring all the animals out with him, the earth being now fully dried, and affording sustenance for them. Thus from the beginning of the Flood, to Noab’s going out of the Ark, was a compleat year of 365 days (as has been shewed) and ten days over, namely, from the 17th day of the 2d month, to the 27th day of the 2d month in the year following.

Now the question is, which were the first and second months in the Antediluvian year, or in what season their year began, whether in Spring or Autumn; or (which will amount to the same thing) in what season of the year the world was created? The common opinion is, that the world was created in Autumn, and that the year began with the Autumnal Equinox. If so, then the second month, when the Deluge began on the 17th day thereof, would fall, as is computed, about the 10th of our November, and end about the 20th of the same month; though Mr. Whiston places its beginning about the 28th of November, and its ending about the 8th of December, according to the time he had calculated the Comet’s approach to the earth.

The chief reason on which this vulgar opinion of the world’s being created in Autumn is grounded, is this, that the Israelites, while they continued in Egypt, began the year in Autumn, till it was changed by Moses upon their coming out of that country. But this reason is not sufficient to support the conclusion. We are not certain that the Israelites reckoned thus before they came into Egypt, nay, we may rather I think be certain that they did not. Abraham came out of Chaldea, where they reckoned the beginning of the year not from the Autumnal, but from the
the Vernal Equinox, or the sun’s entering into the sign Aries. But his Descendants, while in Egypt, were obliged to conform in this point to the Egyptian custom, and begin the year with the Autumnal Equinox, because the Egyptians did. And these might begin the year in Autumn, for a reason peculiar to their country, whose fertility is owing to the inundation of the river Nile, as the Abyssinians begin their year with September. But if we are to bring an argument to prove the season of the year in which the world was created, from the custom of nations, why not rather from the Afiatics than the Africans? From those countries which lay nearest to the plains of Shinaar, where the Dispersion began, and were therefore first peopled? These all in Chaldea, Persia, and the Mogul’s country, in China, &c. begin their year from the Vernal Equinox, and not from the Autumnal, which is a much better reason to conclude, that the Antediluvian year began also with the Vernal Equinox, and consequently that the world began in the spring season; whence it will follow, that the Deluge neither began nor ended in the winter; but that the second month in which it began and ended, was the second month from the Vernal Equinox. Now,

1. The Deluge, I think, could not well begin in the winter months; not that there are less rains in the winter than in the summer, rather ordinarily far more, but for another reason. If we cast an eye on the Terrestrial Globe, or map of the world, we may perceive, that far the greatest part of the Terra firma, or habitable earth, so far as is yet known to us, lies North of the Equator. In the months of November and December, in which they would place the beginning and ending of the Deluge, the sun verges towards the Tropic of Capricorn, and the winter Solstice is in the last of them. At that season
of the year therefore, a great part of the Northern Hemisphere would be subject to frost and snow, and when the rains and the waters of the Abysses were poured forth, they would be turned to ice. How could they then rise to any great height, so as to cover the highest mountains? Or how could the Ark move on Ice, or waters mingled with Ice, and perhaps mountains of Ice? But now, if the Deluge began on the 17th day of the 2d month after the Vernal Equinox, this inconvenience would be avoided, the greater part of the Northern Hemisphere would be free from snow and ice, and the sun's heat, with the rains, &c. would, during the 150 days or five summer months, dissolve the rest. But in the countries lying between the Tropicks and to the South of them, they seldom see snow or ice, and their winters are heavy rains. Highly probable it is then, that the Deluge happened when the far greater part of the earth was free from snow and ice, so that there was nothing to impede the course of the waters, or the motion of the Ark, and that was the Summer season and not the Winter.

2. But if the Deluge could not apparently begin in the winter, much more inconvenient would it have been to have ended in the winter. By the mountains of Ararat, on which the Ark rested, I understand, with St. Jerome, the mountains of Taurus, overlooking the plains of Ararat, as the most probable opinion. Now these mountains are beyond the Tropic of Cancer, and near 40 degrees of North Latitude. In that part of the world they have sharp winters, though not of so long continuance as with us, and the high mountains are covered with snow in that season. Had the Deluge then ended, and Noe come out of the Ark in their winter months, pray what food or sustenance would there have been for man or beast at that time of the year?
All the fruits of the earth had been destroyed by the Flood, and the earth could produce nothing again till the spring. To have ordered them out of the Ark therefore at the beginning of winter, had been the ready way to expose them all to perish for want of food. But the wisdom of God, *who knoweth the times and the seasons*, and has all in his own power, would surely so order the whole, as to bring those men and animals, whom he had so carefully preserved, out of the Ark at that season of the year which was most convenient, *viz.* then, when the earth could afford them maintenance at their first forth-coming. But,

3. Had the Deluge ended in the winter, this Northern Hemisphere could never have been drained of that vast column of waters that lay upon it at that season of the year, the whole surface of which, on the contrary, would have been frozen and thick ice. We have no need here to have recourse to a miracle, as some have supposed, *viz.* That the earth was dried by the supernatural power of God; but from the length of the time, no less than seven months, may very well conclude that it was done by natural means; by the heat of the sun, with the assistance of the wind raised, and the other means mentioned in the preceding section. And this was the reason of Noah's abiding still in the Ark near two months after the face of the ground was dry, till the earth had brought forth vegetables for their sustenance.

Now had Authors considered the unavoidable inconvenience that must have attended the Deluge ending in the winter, or but consulted common sense and reason, that best of all Critics, (as a late ingenious author calls it) they could not so readily have embraced the opinion that the Deluge began and ended in the winter. There was but a right and a
wrong season in the case, and they have chosen the latter.

But though it be the common opinion that the world was created in Autumn, and consequently that the Deluge began and ended in the 2d month after the Autumnal Equinox; yet is it not so general, but that several learned men, both ancient and modern, have been of contrary sentiments. Amongst these last are the learned John Gerard Vossius (the father of our Isaac) and the inquisitive Dr. Woodward. The first of these, in his Iagoge Chronologica, answers the arguments which the others bring for the world's being created in Autumn, after this manner.

"There are two arguments, says he, brought to prove that the world began in Autumn, one from the state of Nature, the other from Scripture. That from Nature is, that the trees, as soon as they were brought forth by the earth at God's command, had ripe fruits fit to be eaten, not only by animals, but by Adam and Eve; whence they infer, that the world must have been created in Autumn, when all the fruits were ripe." To this he replies. "All that can be concluded from this argument from nature is no more than this, that when Adam and Eve were formed and placed in Paradise, there were fruits for them to eat; but it will not necessarily follow that these were Autumnal fruits. Some fruits are ripe in the Spring, some in Summer, and others in Autumn. In hot and well watered grounds, such as that where Paradise was situated, the fruits are early ripe. Now as God was pleased to create fruit-trees for the different seasons of the year, it is not to be supposed that all those trees bore fruit at one and the same time, contrary to their several natures. This would have been confusion in the natural world, rather than order, that the "Spring
Spring and Summer fruits should have been ripe in Autumn, a thing which would never happen again, and a miracle without necessity.” All that this argument necessarily infers, is, that the world was not made in the Winter, but concludes no more for Autumn than the Summer or the Spring, since there are fruits proper to each of these seasons. If the world was created in the Spring, there were some fruits proper to that season, if in the Summer there were Summer fruits, if in the Autumn there were Autumnal ones; but trees of different kinds, and made for different seasons, could not all bear fruit at once, without inverting and confounding the order of nature.

2. The other argument from Scripture is this. “The Israelites, they say, began the year with Autumn; for in Exodus xxiii. 16. they were commanded to keep the feast of Tabernacles in the end of the year, when they had gathered in their labours out of the field. And in chap. xxxiv. 22. the same feast of gathering is at the year’s end, or at the return of the year. Hence it is evident, say they, that the end of the year and the return of the year are placed in Autumn, but that Moses changed this custom; for he appointed that the month Abib, afterwards called Nisan, should be the first month of the year to them, and not the seventh, as it was counted before, because in that month the Lord brought them forth out of Egypt. But that Moses did not altogether abrogate the ancient manner of reckoning the year, but only appointed that in sacred things, they should begin the year with the month Abib or Nisan, but that in contracts for land and civil affairs, the month Tisri, which falls in September, was accounted the first month in the year.” Of which opinion was also Josephus. Lib. 1. c. 4.
To this argument our learned author answers,
1. That it is true the Israelites before the time of Moses, and their exodus from Egypt, did reckon the beginning of the year from the Autumnal Equinox; but it will not necessarily follow that this was their ancient custom derived from their ancestors, since it might very well be, that by their long abode in Egypt, they would be obliged to begin their year and months as the Egyptians did.
2. It is a mistake to think, that the change of the beginning of the year by Moses respected only Ecclesiastical affairs, since it is evident from many instances, that all Civil and Historical matters were reckoned after the same manner. But, 3. That in some cases only, the former custom they had observed in Egypt of beginning the year from the Autumnal Equinox, was still retained as most convenient, namely, in the Sabbatical years and years of Jubilee, and for contracts about land. Thus in the Sabbatical years they were forbid to sow or reap. In the beginning of the seventh year, the seed-time fell in the month Tisri, or September, and the end of harvest in the end of the same year, in the month Hilul. But if the Sabbatical year had been to begin in the month Nisan, or at the Vernal Equinox, the prohibition would have reached to the eighth year as well as the seventh; and the Command would be neither to sow in Tisri in the seventh year, nor reap in Hilul in the eighth; but Moses speaks of the seed-time and harvest in one and the same year. Again, in the Sabbatical and Jubilee years, every man was to return into his own possession, which he had sold or mortgaged. The most convenient time therefore for him to return was at seed-time, otherwise he could have reaped no profit from his land for a twelvemonth, and that was, as I said, in Tisri or September, the beginning of the year, before it
it was changed by Moses. Likewise in all contracts for land or money, the most proper time for payment was, when all the harvest was got in, which was at the end of the year, according to their reckoning while in Egypt. In these cases, and for these reasons, they reckoned the beginning of the year as formerly; but in all sacred and civil matters, the beginning of the year was reckoned from the month Abib or Nisan, which was the first month of the year after their return from Egypt.

Thus therefore we conclude, that a double manner of beginning the year may be observed in Scripture, but one only of the months. Not but that from the double beginning of the year the Hebrews might reckon the months first, second and third, after a two-fold manner also, [that is, beginning from Nisan or Tisri] but that the Sacred Writers never speak after this manner: nor can it with any shew of reason be affirmed, that this way of speaking was commonly used under either Moses, Joshua, the Judges, or even the Kings, to the time of the Babylonish Captivity.

To these arguments of our Author we may add this farther observation. That the Command first given for celebrating the three grand Festivals, was within a few months after their coming out of Egypt, when they had not begun to reckon the beginning of their year from the month Abib, till the return of that month a year after their Egression. And therefore in the first Command for these festivals, the end of the year and the return of the year are mentioned. But in the Book of Deuteronomy, wrote by Moses before his death, when they had been now near 40 years in the Wilderness, and where the same command about the three festivals is repeated in ch. xvi, those expressions, at the end of the year, and the return of the year are omitted, they having then begun the year
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Year with the month Abib, as they were commanded.

2. Though the only reason given by Moses for changing the beginning of the year to the month Abib, is because in that month God brought them out of Egypt; yet the design of Providence in bringing them out in that month, might be to oblige them to quit that manner of reckoning they had taken up in Egypt, and reduce them to the ancient form; the more to separate them in their ceremonies and customs from the Egyptians, (as was done in several other instances) especially if some of their idolatrous ceremonies and feasts were governed by the beginning and succeeding months of their year. But it will no more follow, from the Egyptians beginning the year in Autumn, that the world was created in that season, than it will follow from the Romans beginning the year in January, and all the European nations since continuing that custom, that the world was created in Winter, which none ever yet asserted.

In confirmation of this, our Author further observes, that the number of the months, and to the beginning of the year, are always reckoned from the Sun’s entering into Aries. Thus also the Poets reckoned the beginning of the year, as appears by Virgil’s second Book of Georgics. Thus also the Astronomers, who always begin the signs in the Zodiac from Aries. Thus also the Historians, as Diodorus Siculus in his second Book. Thus also many Jews, as Rabbi Joshua; and thus many of the Fathers, as well as some Moderns.

He then proceeds to give the two reasons which induced him to believe, that the Deluge began and also ended in the Spring. The first: That the world being destroyed by the Deluge, it is more credible that the animals would be sent forth to renew
new it at that time which by nature is most fit for
generation. But that season is rather in the Spring,
succeeded by the Summer, than in the end of Autumn,
with the Winter after it, according to the common
observation in Pervigilio Veneris.

*Vere concordant Amores, vere nubunt alites.*

The second is what I have before largely insisted
on, *viz.* That if the animals had been sent forth of
the Ark in the end of Autumn, they could have no
food during all the Winter: But in the Spring sea-
son, while *Noah* continued in the Ark almost two
months after the recefs of the waters, the earth had
brought forth as much as was sufficient for them at
their first out-coming, and presently in the month
following would furnish all things more plentifully;
but so much would the earth produce in the Sum-
mer, that in the Autumn they would be able to lay
up abundance of provisions against the Winter for
the use both of men and animals.

Now what is thus clear from reason, is further
confirmed from observation on the vegetable and
animal remains of the *Antediluvian* world. Dr. *Wood-
ward*, from the *Vegetable* remains of that first world,
after which he was a diligent searcher, proves, that
the Deluge began in the end of the Spring, or be-
inning of Summer. His words are these: "And"
"there is so great an uniformity and general con-
fent among them, that from it I was able to dif-
cover, what time of the year it was that the De-
"luge began*. The whole tenor of these bodies.

* Genef. vii. 11. "In the second month, the 17th. day of
"the month, were all the fountains of the Great Deep broken up,
"and the windows of Heaven were opened. Moses, writing to
"the Jews his Countrymen, makes use of the form of the year
"then received amongst them, which was indeed the first and
"most ancient, but had been diffused during the time of their abode
"in Egypt, and but newly re-established when this was wrote.
"thus
"thus preferved clearly pointing forth the month of May. Nor have I ever met with so much as one single Plant or other body, amongst all those vast multitudes which I have carefully viewed, that is peculiar to any other season of the year, or any thing that falls out earlier or later, any of them short, or any of them further advanced in growth, seed, or the like, than they now usually are in that month, which assuredly never could have happened, had there really been such an equality of seasons, and temperature of heat as is imagined by the Theorist (Dr. Burnet.) There are some phenomena of the animal remains of that earth, which afford us more arguments to the same purpose, and those not less concluding than the other."

To this demonstrative proof, Mr. Whiston (with whose Theory it did not at all agree, that the Deluge should begin in May) gives a very slight answer, viz. "That it is always Summer in one part of the world or other." Very true; but the month of May is not Winter in any part of this Northern Hemisphere. Besides, Dr. Woodward observes, "That the Terrestrial parts of the Globe, though dissolved and assumed up into the water, did not slit or move far, but at the general subsidence, settled down again, in or near the same place, from which before they were taken up.—That had the seeds of the Pepper-plant, the Nut-

"Exod. xii. 2. In this, Nisan, or, as it was also called, Abib, was the first month, as Iar the second, upon the 17th day whereof the waters of the Deluge came forth, according to this relation: And truly that time (which is not a little remarkable) falls within the compass here chalked out by nature so very punctually, that one can scarcely forbear concluding, that these strokes and lines of nature, and those of that relation, come both from the same hand."
megs, the Clove or Cinnamon trees been born from Java, Banda, the Molucca's and Ceylon, to these Northern Countries, they must all have starved for want of sun. Or had the seeds of our colder Plants shifted thither, they would have been burnt up and spoiled by it; but things generally kept to their proper places, to their old natural soil and climate, which had they not done, all would have been confounded and de-
stroyed *.

But to conclude this argument, let it be observed, 1. That neither the days of the week, nor the months of the year had any names at the beginning, nor perhaps till long after the Dispersion; but both were named according to the order of their succession, first, second, third, &c.

2. That the months and years would necessarily be reckoned from the Creation; the years of Adam and the years of the world running parallel, as both commencing together; any given year and month of Adam's life, being the same year and month of the world.

3. That the first, second, seventh and tenth months, in the relation of the Deluge, must be according to their natural succession in time, as they had been reckoned from the beginning; I mean, that at whatever time of the year the world was created (from which the first month, and so on, would be accounted) at the same time of the year

* This observation of Dr. Woodward confirms what I said in the section of the Mountains, viz. That tho' at the first descent of the rains, and irruption of the waters from the Abyfs, the current of the waters must needs be with a great torrent; yet after a short time, when the waters had diffused themselves, and covered the plain surface of the ground to the height of some feet, they would then rise gently and gradually, without any violent current, till they covered the tops of the mountains, which took up no less than 150 days.
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again would fall in their order, the first, second and other months in the year of the Deluge. But now,

4. It is evident to reason, as has been shewn, that the Deluge could not possibly end in the winter months, nor Noah with the animals leave the Ark at that season of the year, because of the manifest inconvenience that would have attended it; consequently neither could the Deluge begin in the Winter. Therefore the second month in which it both began and ended, could not be the second month from the Autumnal, but the second month from the Vernal Equinox; therefore also the world began in the Spring, and not in Autumn, which were the points to be proved.

Hence then I form an incontrovertible argument against Mr. Whitson's Theory, that the Deluge was occasioned by the near approach of a Comet, into whose Atmosphere and Tail the earth was involved. For without enquiring whether a Comet really approached so near the earth at the precise time he mentions, which Dr. Keile in his Remarks acknowledges might be, (though not so certain neither as to a precise day and hour, since calculations for so many thousand years backwards of the Orbit of Comets may be liable to mistakes) nor yet if a Comet did approach the earth at that time, whether it could have such an effect as he ascribes to it, which the said author denies; it is evident that the Deluge could never be owing to such a cause, for this plain reason, that the Deluge did not happen in the month of November, (to the 28th day of which Mr. Whitson fixes it) but in the month of May, above six months before. But if he is mistaken in the month of the year, he is much more so in the year itself, which falls 600 years short of the true year of the Deluge.
But before we pass from this subject it may be necessary to obviate an objection that may readily occur against fixing the Deluge to the second month after the Vernal Equinox, or indeed to any certain month of the year, which is this: "That we are not certain that the Antediluvians had any intercalary days or months at proper distances in their year, or might not be mistaken in them. In either of these cases the second month, in a long tract of time, might pass through all the seasons of the year, which was the case of the Roman Calendar, till rectified by Julius Caesar." To this I answer, 1. That this objection lies equally strong against those who fix the Deluge to the second month after the Autumnal Equinox. It is as much incumbent on them to remove this objection as on me, since otherwise they can be no ways certain that the Deluge happened at the time they assign for it. But I desire the Reader would observe the difference between the grounds of the two opinions. That the Deluge began in the second month after the Autumnal Equinox, is founded only on the precarious supposition that the world was created in Autumn, and that again supported by this weak reason, that the Israelites, when in Egypt, began the year from the Autumnal Equinox. But such arguments prove nothing certain, and have been fully answered. On the contrary, that the second month of the year is to be reckoned from the Vernal Equinox, is proved not only by reason, but by facts or observations. I answer,

2. That though we have no Antediluvian Calendar to inform us whether they had any Leap-years or intercalary days in that first world, yet we may reasonably conclude that they had some method or other to regulate their years, and observe the proper times of the seasons. It is written, Genesis 1. 14.
And God said, let there be Lights in the Firmament of Heaven to divide the day from the night; and let them be for signs and for seasons, and for days and for years. By them men were to regulate their days and years, and seasons, or set times of Summer and Winter, Spring and Autumn, which come by the course of the Sun, Moon, and Stars or Constellations. It is highly probable then, that God would have instructed Adam in this, as well as other necessary things, if he could not find out this use by his own observation; but

2. Supposing they had no such Divine Revelation, as to the uses they were to make of the Heavenly Luminaries, yet I think it may be taken for granted, that men who lived to the age of 8 and 900 years, and who for a long tract of time had no great variety of matters to take up their thoughts, would employ a good part of their time in making such observations from the heavenly bodies as were of so great use and importance to them. “It is God, saith Job, who maketh Arèsurus, Orion, and Pleiades, and the Chambers of the South, (Heb. Abh, Coel, Cimah, and Mazaroth.) Now of these, Arèsurus riseth in September, and beginneth Autumn; Orion riseth in December, and beginneth Winter; the Pleiades arise in the Spring, and denote that season; and the Chambers of the South, that is, the Southern Stars, which are for the most part hidden from us, as in chambers, do yet some of them arise to us in Summer, as the Dog-star, &c.*

3. Besides those observations from the sun, moon and stars, which men of so great longevity could not but make in a course of years, the earth itself in her annual productions, and according to the different climates, would observe her several seasons,

* Ainsworth.
whether men made any Celestial Observations or not. The Vegetable World, plants, flowers and trees would shew the several seasons of Spring, Summer, Autumn and Winter.

In my opinion therefore 'tis a mistake, to think that the Antediluvians could not regulate their months or years, or that their first and second months might in a course of years pass through all the several seasons. For though they might not have attained to that exact skill in Astronomy, which the Moderns have done in these later ages by the help of Glasses, and with all the observations of the Ancients before them; yet might they be able to make such observations, as to keep their months and years, times and seasons in due order, as well as we do now, though we are ignorant of the rules they had formed in this important matter.

There is another thing also here to be taken notice of. Dr. Woodward's Observations on the Vegetable remains of the Antediluvian world, point out the month of May for the time of the Deluge; but if the Vernal Equinox falls about the 10th of March, when the sun enters into the sign Aries, from which we date the Aera of the World, the 17th day of the 2d month reaches only to the end of April, and not into May. There are two ways to account for this.

1. 'Tis found by Astronomical observations, that the Equinoctial points go backward every year 50 seconds, but by Sir Isaac Newton's Calculations, according to his Principles, they recede 58 seconds, or near a minute in a year, and in 60 years near an hour. Again, Dr. Wallis faith, that most certain it is, that at our Saviour's Birth the Vernal Equinox was not on the 21st of March, N. S. as the Gregorian Account would make it, but nearer the 25th,

* See here Winder's History of Religious Knowledge, p. 70 and 71.
or our 15th. Hence it appears, that the farther we reckon backwards, the later the Equinox fell; so that in the year of the Deluge, some thousand years ago, the Vernal Equinox might fall on the 20th or 25th of March, O. S. and this would bring the 17th day of the 2d month, to the 7th or 12th of May. Or

2. It may be thus accounted for. The greater fertility of the Antediluvian earth might make the vegetables as forward in the end of April, as they are with us now about Mid-May.

I promised in the preceding section to shew, that the greater part of the seven months in which the earth was drying, were the Winter months in this our Northern Hemisphere. The ascent of the waters was during five whole months. If the Deluge began on the 7th or 12th of May, this brings the time of their ascent to the 7th or 12th of October. In the seven remaining months of the earth’s drying, were the Winter months of November, December, January and February.

**S E C T. II.**

_Whether Noah entered into the Ark previously to the first day of the Deluge._

Had not a modern Author asserted, that Noah did not enter into the Ark till the very day the Deluge began, I should have thought it very needful to have made this question any part of my Inquiry, since it clearly appears from Scripture, that the entrance into the Ark was several days before the Deluge began, and reason will shew us that this was highly necessary.

The words of Moses are these*. *And the Lord said unto Noah, come thou and all thy house into the Ark,*

* Genef. ch. vii, 1, &c.
An Enquiry into the Truth and
for thee have I seen righteous before me in this genera-
tion.——For yet seven days, and I will cause it to rain
upon the Earth 40 days and 40 nights, and every
living substance that I have made will I destroy from off
the face of the earth: And Noah did according to all
that the Lord commanded him.——And Noah went in
and his sons, and his wife, and his sons' wives with
him——And it came to pass after seven days (or on
the seventh day) that the waters of the Flood were
upon the earth.

Now to what end was this notice of the precise
day the Flood was to begin, or the command to en-
ter before-hand given; but that all things might be
duly ordered and finished before the fatal day of the
world's destruction came? And is it not expressly
said, that Noah went in as he was commanded, and
after seven days the waters of the Flood were upon
the earth? And indeed what should hinder him
from immediately obeying the Divine Command?
Did Noah distrust the word of the Almighty, or
was he unwilling to enter the Ark till he saw the
rains descend? His faith had been very weak, and
his obedience very tardy, and lost much of their me-
rit, had he delayed his entering into the Ark till the
very day the Flood began; and yet it was by faith
that he prepared the Ark for his safety, and by faith
he and his house were saved. Divine Commands
were not wont to be obeyed with such reluctance by
the faithful, but immediately put in execution.
Abraham no sooner received the command to offer
up his son, than, even on that trying occasion, he
rose up early in the morning, and set out on the
journey; and so without doubt Noah, as soon as
he had notice, immediately obeyed the Divine
Command.

Dr. Bedford observes *, That all the special Com-
munications which man held with his Creator in the

* Kennicott's Dissertation II. 
first ages of the world, were probably made upon the Sabbath, or weekly day of Holiness, and therefore that the Command to Noab to enter into the Ark was made on that day; that during the six following the Sabbath, he entered into the Ark with all the animals, and that on the seventh day after, the waters came, that is, on the Sabbath, which Noab kept in the Ark. This observation is highly probable; and, in the next place, reason will shew, that the time here assigned was no more than necessary to the ordering all things aright.

1. All the animals of every kind, fowls, beasts clean and unclean, and reptiles were to enter into the Ark; not all at once, or in a hurry, (for there was but one door) but successively, and by pairs, which might well take up more than one day. For on that Sabbath the Command was given, we must suppose the animals were at hand, or drew near to the Ark in that and the two or three following days, and were taken in as they came without delay.

2. They were not only to be taken in, but all to be disposed of in their places or stalls; the beasts and reptiles in the first or lower story, and all the feathered kind in the third or upper story. Now the placing all these in order, would require time, care and thought, and could not be done so perfectly at first, but that they might find themselves obliged to change the disposition in several instances.

3. Noab and his family were now to begin a new, difficult, and laborious task; the feeding and watering all the animals, the giving every kind of creature its proper food, and sufficient quantity, which had been gathered and laid up in the Granary, or second story, beforehand to this purpose, besides the cleaning the several stalls and aviaries. This new and extraordinary work to them would require both time and contrivance, to order all things in the best manner; and in order to do so many things as were here necessary,
An Enquiry into the Truth and necessity, it was requisite they should be without diffri
cuit or fear. It had been highly inconvenient there-
fore to have deferred entering the Ark with all the
animals, till the very day the Flood came, because
how strong soever their faith might be, yet dread
and terror, at such a stupendous Judgment on the
world, would undoubtedly seize their minds on the
first pouring down of the waters, accompanied pro-
bably with lightenings and thunders, which must
needs render them unfit to order all things in the best
manner, had not a regular method been contrived
and practised some few days before.

But notwithstanding the express words of Scrip-
ture, and the reason of the thing, Mr. Whiston pre-
tends, that Noah and the animals entered not into the
Ark till the very day the Deluge began. And in-
deed if we will allow him all his Suppositions, he has
provided a Salko for those inconveniences that would
have attended this late entering into the Ark, for one
day at least. His Hypotheses are these. 1. That the
Deluge was owing to the near approach of a Comet
to the earth, which we have in the former section
shewn to be a great mistake. 2. That Noah dwelt
and the Ark was built in China, an assertion without
any possibility of proof. 3. That the Deluge began
but in one part of the earth at first, while all things
were calm where the Ark was, a thing neither pro-
bable nor proveable. But even with these precau-
tious suppositions he seems very inconsistent in his
solution of this Phænomenon. For, 1. He tells us,
that this day (the day the Deluge began) though so
outragious and destructive a one to the inhabitants
of the other parts of the Globe, was yet here (in
China) fair and calm, as at other times. Which,
says he, is thus demonstrated. " 'Tis evident that
" the Gordyean mountains are situated not very far
" from the center of our Northern Continent, or
" indeed somewhat to the North-west of the same---
which mountains were almost directly exposed therefore to the Comet at his nearest distance.—
The first fall of the vapours then would only af-
flect one Hemisphere of the earth, that, namely,
which was properly exposed to their descent, and
the other would be not at all affected therewith—
so that seeing the Ark or China was much below
the point $b$, (in his figure 7.) it would remain in
the same during all the time of this violent fall of
the waters, and have a calm and quiet day for the
entry thereinto." But then in the first Corollary
to the LXX solution, he says, "So that now we
may agreeably, both to the Sacred History, and
the Calculations from the present Hypothesis, af-
fert, that the Deluge began at the Meridian of
Pekin in China, on Friday the 28th day of No-
vember, in the year of the Julian Period 2265
about noon." But here, methinks, the solution
and the Corollary flatly contradict one another. For
if the Deluge began at the Gordyean mountains, as in
the Solution, how could it begin at the meridian of
Pekin in China, as in the Corollary? Again, if it be-
gan at Pekin in China, how was that country, and
the Ark in it, free from the first violent fall of the
vapours, to which he owns if it had been subject, it
would probably have been crushed to pieces by
them? The first fall of the vapours, he says,
would only affect one Hemisphere of the earth. If
by the Hemisphere affected, he means that North
of the Equator, are not the Gordyean mountains and
China both in the same, and must be both equally
affected by the first fall of the vapours? But if the
Hemisphere South of the Equator, how came the
Gordyean mountains almost directly exposed to the
Comet at its nearest distance? Mr. Whiston may
draw a figure of the earth, with the approach of the
Comet, and the fall of the vapours, on what part of
the earth his fancy leads him to; but where is all
this
An Enquiry into the Truth and this while the Demonstration pretended, except a fanciful figure must pass for a demonstration?

But now leaving all these Reveries about a Comet and the fall of the vapours, and the Gordyean mountains and Pekin in China, and the hour of the day when the Deluge began, which Moses mentions not, (though it be far more probable that it began early in the morning) let us examine the ground of this opinion. It is founded on v. 13. of the same 7th chapter. In the self same day entered Noah, and Shem, and Ham and Japheth the sons of Noah, and Noah's wife, and the three wives of his sons with them into the Ark, they and every beast after his kind, &c. Now here the sense should have been minded as well as the found, and these words made consistent with what Moses had said in the beginning of the chapter. There are two ways of understanding this last sentence, without making Moses contradict himself in the compass of a few verses. 1. We may observe that when God gave Noah a command to build the Ark, and gather of all food that was eaten, it is added, Thus did Noah, according to all that God commanded him, so did he; that is, he immediately set about the work, the preparing the work in the first place, and gathering the food as soon as it became necessary. So here likewise, when the Command was given him to enter into the Ark with the animals seven days before the Flood came, it is also added, And Noah did according to all that the Lord commanded him; that is, he went in as soon as he received the Command, when the sabbath was over; and so it is added, v. 7, 8 and 9. And Noah went in, and his sons, and his sons wives, &c. And then it is said, v. 10. And it came to pass after seven days (or, on the seventh day) the waters of the Flood were upon the earth. Here then it seems very plain that they entered into the Ark before the Flood came; and therefore what is said, v. 13, 14, 15, 16. is only a repeti-
repetition of the same thing with some variation and enlargement *, to wit, the sons of Noah expressed by their names, which had not been done before, neither in the first nor seventh verse, with some variation also in recounting the animals; and besides, with this remarkable and necessary addition in the Conclusion, And the Lord shut him in, so that the self same day has no need to be referred to the very day the Flood came, but means only this, that Noah and his sons by name, with their wives, and the animals of every kind, male and female, went into the Ark, on the self same day, or at the same time, as he had before said, ere the waters were on the earth. Such repetitions, with some variation or addition, are very frequent with Moses and the other Sacred Writers, of which we have two or three instances in this very chapter, and on this very subject; as v. 6. And Noah was 600 years old when the Flood of waters was on the earth; and v. 11. In the six hundredth year of Noah's life, &c. Again, v. 12. and the rain was upon the earth 40 days and 40 nights; and v. 17. and the Flood was 40 days upon the earth. And again, what is said of the animals in v. 8. and 9. is repeated in v. 14, 15 and 16: but with some little variations. But

2: The words may be very well understood, according to that sense Junius and Tremellius give them in their Translation of the 11, 12, and 13 verses. "Anno sexcentesimo vitae Noachi, mense secundo, "decimo septimo die hujus mensis, hoc ipso die dif-
"fiderunt se omnes fontes Abyssi magnae et Cata-
"raetae Coeli se aperuerunt, ut effet imber ille su-
"per terram quadraginta dies et quadraginta noc-
"tes, eodem ipso die quum ingressus esset Noah, et
"Schem, et Cham et Japheth filius ejus, &c. in

* Amant Hebraei verborum copiam, itaque rem eandem multis verbis exprimunt. Gratius. The reason of the Pieonufm is given by the learned Mr. Warburton.

"Arcam."
"Arcam." "In the six hundredth year of Noah's life, in the second month, on the seventeenth day of that month, on that same day all the fountains of the Great Deep were broken up, and the Cataracts of Heaven were opened, that the rain might be upon the earth 40 days and 40 nights; on that same day, when (or after that) Noah and his sons, &c. had entered into the Ark." So that the self same day in v. 13. does not refer to the day of Noah's entering the Ark, but is a repeated assertion, that the rains descended, and the fountains of the Deep were broken up, both on the self same day; and the adverb quum, when, or after that, is necessarily to be understood.

S E C T. III.

Whether the Posterity of Noah had any means whereby to know for certain, what the true extent of the Deluge was?

Had those who now doubt or disbelieve the relation of the Deluge given by Moses, lived in some of the first ages after the Flood, they might soon have been satisfied of the truth by ocular demonstration; since it is not a point of Speculation, but a matter of fact that is in question; and if the Deluge was Universal, it must needs leave indelible marks of itself in every place for many ages after. But though these Unbelievers did not, yet the children of Noah lived in those first ages; and therefore in a course of years, though not immediately, could not but know for certain how far the Deluge had extended, whether over all the earth, or only some small part of it; and as they found it in fact to be, so would the report or tradition thereof be delivered down to all after ages.
In order therefore to answer the question proposed in this section, let it be remembered, that it is confessed on all hands, 1. That there was a Flood in the days of Noah. 2. That Noah and his house were saved in an Ark from that Flood; and 3. That animals of every kind were taken into the Ark by him. These three points are not called in question, at least by those I have to do with. From these confessed facts then it is evident, that Noah himself was fully persuaded that the Flood would be universal in extent, otherwise he would never have bestowed so much time and labour in building so large a vessel, nor yet have taken the trouble and care of all the animals in it for a year, since had the Deluge been only partial, and confined within small bounds, as some pretend, there was a much easier and speedier way for his safety, by removing into some distant land, whither the Deluge was not to reach; and after the warning given him, he had time sufficient to have removed to any part of the earth.

But notwithstanding this full persuasion of Noah that the Deluge would be Universal, we will, for Argument's fake suppose, that he might be mistaken, and that some of his descendants might doubt whether the Flood was so wide extended as their father made them believe, from a Revelation, he said, that had been communicated to him. Nay, let us suppose that some of his posterity were as much Scepticks and Infidels in this point as some are now. If we will suppose this, I say, we must likewise suppose, that they would be very earnest to know the truth of the matter, and be very inquisitive into it for their own satisfaction. And thus we are naturally brought to the question proposed, viz. Whether the posterity of Noah had any means whereby to know for certain what the true extent of the Deluge was?
I think it will appear very evident, that how doubtful or uncertain forever they might be as to this point, for some time after their coming out of the Ark, they could not but in a course of years discover the truth; when by their increase, and spreading themselves over the face of the earth, they might with certainty know where the Deluge had extended, and where not, in case it was not Universal. For,

1. If the Flood was universal in extent, as it is affirmed by Moses in his History, the posterity of Noe would find no remains of mankind, nor of their dwellings, nor any standing monuments of former transactions, into what countries forever they came after their Dispersion; nothing but the wrecks and ruins of a deforested world, which must have been very apparent, for many Centuries after the Flood in all parts of the earth, till it became inhabited and cultivated by mankind. But if contrariwise they found any of the former race of mankind, any places unbroken and cultivated as before the Flood, they might then be certain that the Flood had not reached to those parts. Again, if the Flood was Universal, they must needs find visible marks of it in all places for many ages, when they came to extend themselves into the remotest parts in a succession of Generations; if it was not, they must needs find a vast difference in those places where it had not reached. Here was then a certain and infallible way whereby to know the truth in this case beyond all possibility of doubt or deception. And from this certain means of knowledge, by sense and experience, the report or tradition of the extent of the Deluge would be handed down to posterity, as they found it in fact to be. But if the tradition of the Flood's being Universal prevailed all over the World, as is evident from hence, that
most nations in the most distant parts retain an obscure knowledge of it to this very day, then this is a certain proof that the Deluge was really and actually Universal; for had it been local, or partial, in one part of the earth only, such a tradition could never have prevailed all over the world.

2. We have before proved, that the earth was full of people before the Flood. In that case then, where should the posterity of Noah have found room to settle, when they increased and multiplied after some generations? But so far were they from being under any difficulty in this particular, that for more than eleven or twelve hundred years after the Deluge, the earth was not thronged with inhabitants, and great part of the lands lay yet in common, as is evident from the History of Abraham, Isaac and Jacob, who removed from place to place in the Land of Canaan, as their occasions required, undisturbed, though they had not a foot of land they could call their own, save a burying-place or two.

But though there be not the least ground in Scripture to imagine, that there were two distinct races of men of different originals after the Flood, the one Antediluvians, the other Post-diluvians; yet Mr. Coetlogon, who seems always willing to help Infidelity at a dead lift, imagines that he has even there found out this distinction and different races.

"Abraham and his family, says he, which was but the sixteenth generation from Shem, when they went into Canaan, and from Canaan into Egypt, don't seem so much as to have the least notion of those people from whence they came, who was their first parent or founder, though according to the text they should have all sprung from the same source; and not so long since neither, as to be quite out of their's or of Adam's
An Enquiry into the Truth and

"(Abraham’s) remembrance. How could we then
"depend on the relations of those times; for Noab’s
"descendants having overspread the whole earth,
"since so near the time of their separation, their
"own descendants don’t seem to have known it
"themselves; and the nations who inhabited those
"parts so near the place of their separation, are
"considered by Abram and his family as a quite
"different sort of people, entire strangers to them.
"The Egyptians were a formidable people, their
"monarchy very well established, and pretended
"to reckon a considerable succession of their Kings
"when Abram came among them with his family,
"which did seem then like a new race, newly be-
"gun the world, though Abram was descended
"in a direct line from Shem, one of Noab’s favour-
"ite sons, to whose posterity a particular blessing
"seemed to be annexed."

The meaning of this not over clear paragraph is,
that neither the Canaanites nor Egyptians knew any
thing of Abraham’s race or genealogy, nor he of
theirs, so that they seemed to one another to have
sprung from different sources. Now this is news
indeed. But whence does he collect this? Not
from Scripture surely; for to any one who reads
there the history of mankind after the Flood, this
must appear the very reverse of the truth. Noab
had but three sons, Japhet, Cham and Shem.
The Land of Canaan was then the possession of the
Canaanites descended from Canaan the fourth son of
Cham, and whose name it bore. Egypt was also cal-
cled the Land of Ham, even to the days of St. Je-
rome*. And both Canaanites and Egyptians knew

* Frequenter Septuaginta Interpretes non valentes Hebrae

oration, que duplicem aspiracionem suam, in Graecum sermonem
vertent. Chi Graecam litteram addiderunt, ut nos docerunt. Sfiut-
modi vocabula asperari debebile, unde et in presenti loco Cham
translation.
that Abraham came out of Chaldea from beyond the River, viz. Euphrates, and also from whom he was descended, namely, from Heber, of the posterity of Shem, for he had the appellation of Abram the Hebrew.

2. When Abram came out of Chaldea into Canaan and Egypt, he and the inhabitants of those lands were no doubt strangers to one another, that is, they had never seen one another's faces before; but will it therefore follow that they knew nothing of one another's race or pedigree? If a noble Frenchman or a German comes into England, is it not soon known from what country he comes, and of what family he is?

3. Abram, says he, was but the sixteenth generation from Shem. Here he is mistaken, Abram was but the tenth from Shem, though we take in Cainan with the Septuagint and St. Luke; and Moses himself was the sixteenth. And was the sixteenth generation (according to him) so near the time of the separation? It would be more than 1600 years in those days of Longevity. In a word, these mistakes, I am apt to think, are owing to an egregious blunder. There is a passage in the History of Joseph which may have given birth to them. When Joseph's brethren came out of Canaan into Egypt, to buy corn in the time of the famine, he made himself strange unto them, and spake roughly unto them, and said unto them, Whence come ye? This he has apparently transferred to Abram, as if the Egyptians knew not whence Abram came; and so has confounded times, persons and facts.

translitterunt pro eo quod est Ham. A quo et Aegyptus usque hodie Aegyptorvm lingua Ham dicitur.— Now if Egypt still retained the name of Ham in St. Jerome's days, could this be unknown in the days of Abraham and Moses? Or could Abraham be ignorant from which of the sons of Noah the Egyptians were descended?
S E C T. IV.

Whether Moses was under any temptation from Political Views to enlarge the Extent of the Deluge, or recede from the general Tradition thereof.

HAVING in the preceding section shewed, that the true extent of the Deluge must have been well known and established in the world long before Moses wrote his History, it may be proper in the next place to enquire, whether Moses has given a true relation of this universal Tradition? Or whether he might not, from some political view, give another account of it in his History, than what mankind before his writing did really believe it to have been?

Now it seems highly improbable that Moses would give a different account of the extent of the Flood, from the common tradition established in the world, for these reasons.

1. Because if he had, his own people would have soon discovered the falsity of his narration, as no ways agreeable to the tradition they had received from their Forefathers: Nor were they so ready to take his bare word in things contrary to the publick faith, nor submissive always to his authority, but that they often murmured against him, and were sometimes ready to stone him. 2. Because had he given any other account of the Deluge than what they had received from their Forefathers, it must necessarily have discredited his whole History, ruined his authority, and made them pay little or no regard to the many laws he delivered them, as from the mouth of God, and by which he bound a heavy
heavy yoke upon them. 2. From that sincerity, simplicity, and naked relation of facts, without any disguise or colouring, which shine with great lustre throughout all his writings, no man of reason and judgment can think, that he could be guilty of imposing a notorious falsehood on the world, in representing the Deluge Universal over all the earth, if he knew it to be otherwise in fact.

But notwithstanding these clear evidences for his truth and sincerity, Mr. C—who befriends Infidelity as far as he can, pretends to suspect Moses of prevarication in this particular of the Deluge; and in order to lessen his character tells us,

"That that Inundation having been the first of the kind, when related to Moses with all the exaggerations of the relators, might have appeared a prodigy to him, who had never heard of any thing like it before. [No: I dare say he never had.] And Moses himself, who was glad of all the opportunities he could make use of to keep the stiff-necked people under his conduct in awe, [where is there one such instance to be found,] or by the hope of some rewards, or through the fear of some punishment, might have exaggerated that History himself, with no other design than to intimidate the Jews by the apprehension of being treated with the same severity, in case they were to rebel against God, or those whom he appointed his Vice-gerents among them, for which Moses could not be blamed; since those things which we called (call) pious frauds have always proved of some utility in all Religions, and under all sorts of Government." But as a feken to this impious suggestion, he adds,—"Though I have not the presumption to say, that Moses's relation of the Flood is of that kind."
In this passage it is suggested, that probably the account of the Deluge may have been much exaggerated beyond what it was in fact, either by those who related it first to Moses (for it seems he took it only from hearsay) or by Moses himself from a political view. But we shall fairly acquit them both from any insincerity or unfaithfulness in this point. For,

1. The Deluge was a matter of fact, the extent of which, how large or bounded soever, was known and put out of all doubt and uncertainty some ages before Moses was born; nor is there any reason to imagine, that those who related the matter to him should give any other account of it, than what the common belief and tradition was.

2. Moses was first nursed in his own family, was not ignorant of his own people, and could not but know from them the tradition of their fathers. After his infancy, he was brought up in the Court of Pharaoh, and taught in all the learning of the Egyptians, where he stayed till he was forty years old, and so had full time and opportunity to know the account they gave of the Flood. When he was obliged to leave Egypt, he dwelt 40 years more in Midian, where he had leisure sufficient to converse with Jethro his father-in-law, on that and all other subjects. Now it would be strange if Israelites, Egyptians and Midianites should all conspire to deceive Moses, and impose a falsehood on him for truth? But if these different nations gave him one and the same relation of an Universal Flood, then this is an undoubted proof of the uniform tradition of the Deluge that was then current in the world, from which, as I said, Moses would not recede in his relation of that dreadful Event.

But perhaps Moses might himself exaggerate this event, out of policy to keep the people in awe, &c.
How well this Imagination agrees with the character and history of Moses, will presently appear.

1. Moses had not the least temptation to use any sinister means to keep the people in awe: He had shewed signs and wonders sufficient to justify his Mission, and establish his authority.

2. He had the most powerful motives, and effectual means to persuade the people to obedience, such as no Legislator before or after him could make use of, because they never had it in their power to make them good; I mean, the temporal rewards and punishments, which were the sanctions of his Laws.—The Rewards of all manner of temporal blessings to their obedience, and, on the contrary, the Infliction of all manner of temporal evils, specified at large, to their disobedience. Of both which blessings and cursings, they had the experience in several instances, even during the life of Moses; of the first, in their being fed with Manna and Quails, and drinking the waters fetched out of the rock, their deliverance from the Egyptians who pursued them, and some victories; of the latter, in the plague sent among them, the fiery serpents, the uncommon end of Corah, Dathan and Abiram, &c.

3. The solemn manner of giving the Law on Mount Sinai with thunderings and lightnings, the smoke and the fire, and the voice of the trumpet exceeding loud, all which the people heard and saw, did more than intimidate them, it struck them with dread and terror, insomuch that they said unto Moses, Speak thou with us, and we will hear, (i.e. obey) but let not God speak with us lest we die. But,

3. Such a malevolent suggestion could proceed from nothing but mere ignorance of the relation of the Deluge, and in this ill chosen instance will appear quite ridiculous. And this we shall now shew to
to be the case— When the Deluge was ended, and Noæ had offered his sacrifice of thanksgiving and prayer, "The Lord said in his heart, I will not again curse the ground any more for man's sake, although the imagination of man's heart be evil from his youth, neither will I again smite any more every living thing as I have done. While the earth remaineth, feed-time and harvest, summer and winter, day and night shall not cease." This gracious purpose of the Divine Being is afterwards communicated to Noæ, in full and express terms—† "And I, behold I establish my covenant with you, and with your feed after you, and with every living creature that is with you; of the fowl of the air, of the cattle, and with every beast of the earth that is with you, from all things that go out of the Ark, to every beast of the earth—And I will estab- lish my Covenant with you, neither shall all flesh be cut off any more by the waters of a Flood, neither shall there be a Flood any more to destroy the earth." Thus was God pleased to enter into a solemn covenant, not only with Noæ and his sons, but even with every living creature, that he would not destroy them nor the earth any more by a Flood of waters. Moreover to secure mankind to the end of the world from all fears of an Universal Judgment of the same nature, it is added. "And God said, this is the token of the Covenant which I make between me and you, and every living creature that is with you for perpetual generations. I do set my Bow in the cloud, and it shall be for a token of a covenant between me and the earth: And it shall come to pass, when I bring a cloud over the earth, that

† Genef. viii. 21, 22.   † Genef. ix. 8—17.
"the Bow shall be in the cloud, and I will remem-
ber my covenant between me and you, and every 
living creature of all flesh: And the waters shall 
no more become a Flood to destroy all flesh.
And the bow shall be in the cloud, and I will 
look upon it, that I may remember the ever-
lasting covenant that is between God, and every 
living creature of all flesh that is upon the 
earth."—How earnestly, and how seasonably 
is all this said, inculcated, and repeated again and 
again, to deliver mankind from that dread and ter-
ror, which would otherwise have seized on their 
minds, as often as they reflected on that dreadful 
overflowing scourge which had destroyed all flesh; 
and to secure them against those fears they must 
otherwise have laboured under, that the earth and 
all mankind might be destroyed again by a Flood 
of waters. Without this covenant and solemn as-
servation, they could not have been secure, but that 
what had once happened might happen again.

Is it not very apparent, that had Moses been a 
man of guile, or wrote from a political view, and 
with a design to intimidate the people by his relation 
of the Deluge, he would have concealed this part of 
its history, and kept out of view this ample and 
gracious declaration of the Almighty, so necessary, 
and so reviving to mankind at the time? And how 
ridiculous would it have been to exaggerate a par-
tial Deluge into an Universal, in order to keep the 
people in awe; and with the same breath to assure 
them, in the most solemn manner, that no such 
thng should ever happen again to the end of the 
world.

5. As to the pious frauds, and their utility in all 
Religions, and under all Governments, here justi-
fied, or at least excused, we know from what quar-
ter that comes recommended. But whatever uti-
An Enquiry into the Truth and

liety they may be of in human Governments or false Religions, they can be of no service to the true, which wants them not, nor ever proposed to persuade or convince men but by reason and truth. On the contrary, they would do the greatest disservice to it; nor can any instance of such be given in Moses or the Prophets, in Christ or the Apostles. They who make use of pious frauds must be weak minds indeed, or rather have other ends to serve than those of true Religion. Sincerity and Truth are as essential to true Religion, as Holiness and Righteousness. God is the God of Truth, and all that comes from him must be truth; for the fruit of the spirit is in all goodness, righteousness and truth. But the Devil is the Lyar, and the father of lies: and they who falsify the truth, or make use of frauds falsely called pious, but truly impious, are so far partakers with him.

"For which, says he, Moses could not be blamed." No! surely but he could. Every honest man, and lover of truth, Christian or Heathen, must have blamed him, and that justly; and his character for sincerity and truth must have fallen to the ground. If he prevaricated in one instance, he might do so in others, and there could be no dependance on the truth of his history. I think it is very apparent, that Mr. C——'s main design, in this whole Antediluvian Article, was slyly to invalidate the authority of Sacred Scripture, and render it of dubious and uncertain faith, in order to carry on the pious frauds of a certain party, whose endeavours are ever restless against the truth, who have learned to do evil, that good may come, whose damnation is just *

* Rom. iii. 8.
6. But to leave this our Philosopher for a while. From the tenor of that gracious and merciful covenant into which God was pleased to enter, not only with Noah, but with every living creature also that was with him in the Ark, arises a full and convincing proof of the Univerality of the Deluge, superior to all cavils and objections—— All mankind had been destroyed by the Flood, save Noah and his house; and God in that Covenant promises not to destroy mankind any more by the waters of a Flood, notwithstanding that he knew men would still be wicked. All the animals had likewise been destroyed, except those that were with Noah in the Ark, and therefore God condescends to promise, even to these inferior creatures, that he would not, after this manner, destroy them all again. But now if, as some have supposed in support of a partial Deluge, that all the animals were not destroyed, but those only where mankind lived, what occasion was there for this condescending covenant with the animals? The only reason of which was, that all other animals on the face of the earth had been destroyed, save those in the Ark; as for the same reason God entered into covenant with Noah, because all mankind had been destroyed by the Flood, save he and his house. Hence it evidently appears, that the Flood had been over all the earth; which was the point to be proved.

7. From God's making the Rainbow, the token and memorial of his covenant, some have thought that there was no Rainbow * before the Flood. But

* And the Bow shall be in the Cloud. Not that before the Flood there was no such creature, but that then this use of the creature was ordained; any more than that there was no water, bread or wine before the institution of the Christian Sacraments; which name and dignity, not Nature, but Use, by the appointment

1,
But this is a mistake. For in that case there would have been no rain before the Flood, which cannot be supposed; for how then should the earth have brought forth her fruits? But how the rainbow, a natural and common phenomenon, came to be made the token and memorial of this covenant, see the learned Mr. Warburton's Divine Legation *.

But now for a finishing stroke with our Universal Philosopher, and we have done. In order to shew the feasibleness of magnifying a particular Flood into an universal, he brings a similar case. "Men of any religion, says he, at all times, and in all ages, have always represented those phenomena and extraordinary events, as a scourge in the hands of the Almighty to punish the sins of mankind; so that if the sea was to overflow the Digue in Holland, and drown the whole country, (as such a thing might very well happen without a miracle) our posterity two or three hundred years hence, would easily be persuaded, that such an accident happened to punish the sins of the Dutch, or believe, perhaps, that all Holland (all the United Netherlands, he would say) had been overflowed, when the inundation had been confined to one Province, or perhaps to a part of it."

* Vol. II. Ed. 2. p. 335. Note.
Certainty of the Mosaic Deluge: 351

Why really men, if they have any religion, or if their hearts be not quite hardened, will be very ready to think just as Mr. C—— here says. For though we cannot pretend to judge of the state of particular persons, by the evils that befall them in this life, (which to them may be beneficial) yet when a sweeping, devouring scourge of water, fire, the sword, pestilence or famine, shall destroy or lay waste whole cities and countries, as was done to Sodom and Gomorrha, we may justly conclude them sent to punish the sins of the inhabitants; since all these instruments of destruction are in the hands of the Almighty Governor of the world, and fulfill his word. Nor need we wait 2 or 300 years to make this judgment, but would presently conclude thus on the certainty of the fact. And should the sea happen to overflow all the Dugues in Holland, and drown the whole Province, (which God forbid) not only the neighbouring Provinces, but others also would undoubtedly look upon it as a judgment from Heaven; for though this might happen without a miracle, yet could it not well happen without violent winds and inundations from the sea and rivers, all which things are at his command who governs the world.

But how much better Heathens can reason on such a destructive event, than some pretended Christians, will appear from the effect which the inundation of the Province of Sancy in China had upon a neighbouring Province, that of Canton (for we know nothing of the others) a relation of which I gave in the Section of particular inundations. Now follows the account how the news of it was received at Canton.

From the first day that this news reached the city, at two o’clock in the afternoon, proclamation was ordered to be made of it, through all the principal
principal streets of the City, by six men on horseback clad in long mourning garments; who with a sad and lamentable voice, went through the streets crying, "Miserable Creatures! who cease not daily to offend the Lord of all things, hear the most dismal and mournful event that can ever reach your ears; hear it with crying, lamentation and tears. You are to know, that for the sins of us all, God hath taken the sword of his divine Justice in his hand against all the people of Cuy and Sancy, destroying promiscuously with water, fire, and storms from Heaven, all that great Province of China, without saving one soul, but a child whom they have sent to the Emperor." Hereupon they rung a little Bell thrice, at which all the people falling down to the ground, cried with a lamentable voice, *God is righteous in all that he doth.* When this was done, all the people retired to their houses, which were close shut up for five days, and the city looked so much like a desert, that not a living creature was to be seen; at which we Portuguese were confounded, and ready to faint, when we could not find a soul to speak to.

At the end of the five days, the Cheem and the Auckeaffis of the Government, together with all the people, went in procession through the principal streets of the city, while the priests, who were in number more than 5000, cried with a voice loud enough to pierce the Heavens, *O wonderful compassionate Lord, regard not our iniquities, for if thou keepest them in remembrance, we shall be dumb before thee!* To which the people answered, with a loud and lamentable voice, *Lord, we confess our faults before thee.* And thus the procession went along, till they came in the end to a magnificent temple called Nacapirau. The next day they went in the same manner to another temple called the *God of Justice,*
Justice, and continued this form of procession for 14 days together, during which time a great many charities were done, and many prisoners set at liberty. Many sacrifices were also offered of the perfumes of Aloe and Benjoin, likewise many bloody sacrifices of cows, deer and swine, the flesh of which was given to the poor. After this, during the three months that we were there, they continued to do many other good works, at so great an expense, and with so much charity, that had the faith of Jesus Christ been joined with them, we may justly think they would have been very acceptable to Almighty God.—The King left Peking and came to Nanquin, where it was said he did great charities, and set at liberty a number of slaves, among whom, it pleased God, there were five Portuguese, who had been detained prisoners in the city of Pocassin for more than 20 years. These came to Canton, where they related to us many great things done. Among the rest, that the charities which the King had given amounted to 600,000 Ducats, without including the magnificent temples he had built to appease the anger of God, one of which was erected in this city, very magnificent and sumptuous, under the name of Hypatian, i.e. The Love of God. Fernand Mendez.

Our Author here confesses, that this wonderful humiliation, and devotion of the Chinese, put them that were Christians to shame. And in truth should any such dreadful judgment befall this Island, (which God in his mercy forbid) that a whole county or shire was drowned, or otherwise destroyed, and every living creature therein perished, the News-papers would undoubtedly give us repeated accounts of the calamity; but as for any such severe humiliation, great devotion, vast charities, building of churches, &c. I fear, we should hear not a syllable; nor would
would the horse-races or cock-fightings, two of the sources of vice and drunkenness among the common people, nor any other fashionable or criminal diversions in the Metropolis, or other cities of the kingdom, be omitted for one week, or, perhaps, one day on that account. We are come to that pass, that we regard not the Lord, nor the operation of his hands, we mind neither his mercies nor his judgments.

Thus we see what reflections men, by the mere light of nature or improved reason, would make upon publick calamities or judgments.----But now as to the similar instance which Mr. C---- has brought to shew how easily things may be magnified far beyond the truth, it will recoil with double force upon himself. For how could we believe that all Holland, or all the seven provinces rather, had been drowned, when only one, or a part of one, had suffered that calamity? What he here supposes only, is real fact, actually has happened, and is mentioned by himself at the close of this Article; but the very contrary of what he brings this instance for, is most notorious. "Of the like kind, says he, were those inundations in the Netherlands, which, in 1277, overwhelmed and covered with sea, all that part now called the gulf of Dollart in the United Netherlands; and in 1421 all that part between Brabant and Holland." Now it is near 500 Years since the first of these inundations, and above 300 years since the last of them. But did ever any one from that time to this believe, that these inundations had drowned all Holland, or all the United Netherlands? Or was there ever any such report made, or false tradition of them handed down to posterity? Or how could such a report be believed for a year or a month, when men might daily see the contrary with their eyes, and thousands of the inhabitants were
were alive to contradict it? The like we may say of the inundation of the whole Province of Sancti in China, or that very large one for 300 leagues along the coast of Peru; was there ever such a report as that all China or Peru were destroyed? In truth, the simile he has brought is a very pleasant one. Instead of shewing thereby what he intended, he has effectually proved the impossibility of the thing.----From the supposed case, but real fact, here alleged by himself, it is manifest beyond all contradiction, that no particular inundation ever could, or ever did, for any time, pass for a general one, because contrary to certain knowledge and experience. This it proves in the first place. The plain and necessary consequence of which, in the next place, is, That the tradition of an Universal Deluge could never have prevailed in the world as it did, but from certain knowledge and experience, that in fact it was Universal.——Therefore the account which the Sacred Historian gives of the Universality of Noah's Flood, supported by universal tradition, is undeniable the truth of the case. Which was the Point to be proved.
AN

ALPHABETICAL

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