

THE BIBLE AND MODERN SCIENCE

BY

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A Series of Articles

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WITH FOREWORD BY

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TO
MY WIFE
MY SWEET COMPANION IN FAITH
WHO HAS WILLINGLY MADE MANY SACRIFICES
TO FACILITATE MY WORK
UPON THE SUBJECTS HERE DEALT WITH

FOREWORD

ONE of the best signs of the times is the increase in the number of books demonstrating the trustworthiness of the Bible. This book is a notable illustration. Major Davies is a man of high attainment, both as Biblical scholar and as scientist: widely read: simply overflowing with facts: and wielding the pen of a ready writer. As a geologist he has made his mark by researches in some of the more remote Indian provinces.

That stalwart journal, *The Indian Christian*, did fine service by publishing the articles which are here substantially reproduced. The three great topics dealt with are the Astronomy, the Physics, and the Biology of the Bible. Major Davies adduces a glittering galaxy of facts from astronomy and physics, showing how the Bible waits at the head of the paths of scientific progress to greet the discoverer with its Revelation of Prior Knowledge. The investigator climbs upward through the twilight and finds Scripture illuminating the summit of his climb! It must be bewildering to the Rationalist: but to the Bible Christian it is further and invaluable confirmation of *the miraculous trustworthiness* of the Book.

In the chapters upon the Biology of the Bible Major Davies refutes, and indeed positively routs, the advocates of Organic Evolution. Let there be

no doubt that to-day the Theory of Evolution is the supreme weapon of religious rationalism : and I believe a brilliant and crushing assault like this is the best intellectual service which can be rendered to the Faith.

The chief glory of Science is to serve God and humbly certify His Word. May she swiftly realize this high calling: and may the God whom the author serves bless this book and make it a great blessing.

HAROLD C. MORTON.

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INTRODUCTION

[*N.B.—The numerals refer to the footnotes at the end of the Introduction.*]

THE papers published in the following chapters first appeared as a series of articles in *The Indian Christian*, during the years 1923-1925. They were written at the suggestion of my friend Mr. Irvine, the Editor of that periodical, who knew that I was both a working geologist and a convinced believer in the Bible as the very Word of God.

It is true that knowledge of geological science, and belief in the literal Inspiration of Scripture, are generally supposed to be incompatible with each other ; but I have not found this to be the case.

There are, of course, any number of people who confidently assure us that the early chapters of the Bible must now be dismissed altogether, from serious consideration, as being mere "legends" or "fables." Such people, however, invariably prove either to have very little knowledge of the Bible, or of science. They either make *ad captandum* appeals as Huxley did,¹ to crude translations of Scripture, as if the actual Hebrew text were itself committed to those crudities, or they mix up the theories and speculations of scientific men with their actual scientific work."

On the other hand we are often told, by professing "Christians" themselves, that it is wrong even to attempt to vindicate Scripture from these palpably ignorant attacks upon it, since "the Bible is a *theological* text-book, not a *scientific* one", and we "must not treat the Bible as if it were out to teach science". Although such statements are, of course, perfectly true in themselves, yet to quote them in this connection is simply fallacious. Even a theological text-book, and one which makes no pretensions to teach science, cannot

be justified in making *false* references to scientific facts. Besides this, as an American geologist, G. McCready Price,* has rightly pointed out, the actual theology of the Bible is inseparably *connected* with facts. If the facts be disposed of, the theology is left without foundation. Dispose of Creation, Fall and Curse, and you automatically dispose of the Gospel of *salvation*. Our Lord becomes a mere reformer, separate only in degree (if at all) from other reformers like Buddha or Mahomed. Our Lord's words to Nicodemus were pregnant: "If I have told you of earthly things" said the Saviour, "and ye believe not, how shall ye believe if I tell you of heavenly things?" (John 3: 12). Earthly and heavenly facts are, in Christianity, inseparably connected; and he who attacks the Bible version of the one, undermines the Bible version of the other. Indeed the very people who talk so glibly about the Bible being a "theological" text-book, not a "scientific" one—when the object is to hamper those who would defend its scientific accuracy—are generally the first to show that they themselves can no more accept it as the one than as the other. Surrendering its accounts of the Creation and the Fall, they soon show, by the whole character of their own public professions and preachings, that they themselves now regard all talk of *salvation* through the *blood* of Christ as simply meaningless; although nothing is mentioned more urgently in the Bible, in its capacity as a "*theological* text-book"!

It is to protest against such things that the following pages have been written. As a student of the Bible, I refuse to accept illogical attacks upon it as legitimate criticisms. In the earlier part of this book, some typical examples of such attacks will be found to be analysed for what they are worth. As a working geologist, too, I am very well aware of the *sort* of evidence which geology produces, and the *sorts* of things which that evidence can actually prove. Evolution is not one of them. That I go into in the latter part of this book.

It is true, indeed, that my own acute scepticism in regard to evolution is not shared by the vast majority of other workers in geology to-day. That, to my mind, proves something; but it is not the truth of evolution.⁴ Knowing *how* the facts which are supposed to prove evolution have

to be chosen, and trimmed, and packed round with an infinity of questionable suppositions—both negative and positive—in order to fit them together as parts of a supposed definite “case” for Descent, I know that it would puzzle any geologist to produce the least shred of evidence for evolution, which could stand the test of rigid examination by a capable critic. Whether I myself could rank as such a critic or not, I would guarantee to get up on a platform with any number of evolutionists as opponents, and riddle their supposed “scientific” case throughout, by putting one fundamental question after another which they would be powerless to answer satisfactorily; although failure to answer any one of those questions would be fatal to all idea of “demonstrating” the truth of Descent.

If, then, these men do agree among themselves to believe in evolution, such agreement is worthless, under the circumstances, as an evidence of the soundness of belief in evolution *as science* or demonstrative *knowledge*. Undoubtedly the agreement constitutes a phenomenon to be accounted for; but it is not to be accounted for *in that way*.

Now here is where the peculiar marvel of Scripture comes in. It judges its judges. At a time when all else round us is rapidly taking shape to drive home the conviction that we have indeed entered the “last days” of our Christian dispensation, we find Scripture sending a shaft of light down to the very root of things and exposing the basal *dogma* which influences the thinking of the men of our days. The dogma so defined in Scripture is unmistakable; in its history and terms it is none other than our modern DOCTRINE OF UNIFORMITY which, although utterly unprovable, controls all geological thinking to-day, and compels all its adherents to become and remain believers in evolution. This dogma it is which produces the belief; this dogma which makes men of science read evolution *into* the facts, while they suppose themselves to be reading it *out* of them; which makes them still believe in evolution although the fancied proofs of it be shattered, and although there is not (strange to say) so much as one single *line of argument* for it which they can agree even among themselves to regard as sound.

Both the cause and its effects are found to be described in Scripture, in writings penned nearly two thousand years ago, and some 18 centuries before the facts came clearly into view which have now at last fulfilled the ancient predictions. What the significance of it all is, will be found discussed in the closing chapter; and to that I must refer the reader. All I will say before ending these introductory remarks is, that the succeeding pages necessarily cover a great deal of ground in a manner which has to be very condensed, and may seem to some inadequate. Any important point, however, that is questioned, could be defended at far greater length if necessary.⁶

Footnotes to Introduction

1 Thus he spent much time in ridiculing the words "*without form*", in the A. V. of Genesis 1: 2; although, as Hugh Capron showed, he himself, in his less guarded moments, talked of things being "formless", in the very manner which he derided when he thought he detected it in Scripture. And Scripture does *not*, as it happens, use this expression at all. The word *tohu* which is so rendered in the A. V., cannot be shown to have any such significance; indeed it is elsewhere used in reference to idols and men, who are certainly not without form! Even the R. V. changes the rendering in Gen. 1: 2 to "waste". Although this term is not much better, the very fact that "*without form*" was discarded shows that no legitimate argument against Scripture could be founded upon its appearance in our A. V.

Huxley, however, often attacked Scripture in this unjustifiable way. No doubt it "went down" with loose thinkers; but Huxley was careful not to meet a man like Sir Robert Anderson, when the latter specifically challenged him to defend the practice in public debate.

2. The most extraordinary nonsense is sometimes talked in support of evolution. Not only is it freely referred to as "science", but if some people are to be believed no man can, in these days, reject evolution without "committing intellectual suicide". How is it, then, that I have, while these papers were actually in course of appearing in *The Indian Christian*, been elected a Fellow of the Geological Society? I did not ask to be recommended for election: professional geologists very kindly proposed that election, of their own volition, on account of my stratigraphic work among Indian Tertiary beds. Papers of mine have meanwhile been accepted both for reading before Science Congresses out here, and for publication by scientific bodies. If I have committed "intellectual suicide", then such suicide affords no obstacle whatever to the production of "most valuable contributions to science"; for that is what some recent papers of mine were called by a very well-known geologist indeed.

It is true that that particular geologist had probably no idea, when he so described my papers, that I oppose evolution. In my direct research work among fossils I deal only with *demonstrative facts*, and deliberately avoid the subject of evolution altogether, since it is inseparable from matters of supposition. The other day, when reading a paper before a gathering of geologists, I specifically declined to discuss any question of aetiology (i.e., origins), when asked for my opinion regarding the possible "evolution" of a group of fossil forms I was describing. I declared that I considered all such things to be outside the sphere of demonstrative fact; and my questioner left it at that, with a smile. Afterwards he (a most capable palæontologist) admitted that I was perfectly right. Nor did any of the other geologists present protest against my assertion; yet, if justified, it meant that *no* evolution could be actually proved.

All my own experience goes to show that belief in evolution is a purely speculative side issue to practical work in geology. In any case, the fact that I hold the most decided views *against* evolution, has not, of itself, interfered in the very least with my effective intercourse with other geologists in matters of practical research. So much for the idea that one commits "intellectual suicide" if one refuses to believe in evolution.

3. Mr. Price is another geologist who has no faith in evolution. I am familiar with his works, and in many ways agree with his strictures on current geological methods. If I do not refer to his works more often in the following pages, it is only because I do not think that he has sufficiently considered the indications given in Scripture regarding *successive* creations; and I cannot think it possible to assign, as he does, practically all geological phenomena to the effects of one brief Deluge. The very nature of *local* successions, quite apart from any "onion coat" theory, makes that idea, to my mind, impossible. I corresponded with Prof. Price at some length, regarding the latter point, a few years ago, and we had finally to agree to differ.

If in some points, however, we disagree as geologists, we seem remarkably in accordance as Christians and students of Bible Prophecy. I find that Price has come to exactly the same conclusions as myself regarding the peculiar significance of our modern *doctrine of uniformity*, in the light of 2 Peter 3. That significance is indeed unmistakable to anyone familiar both with Scripture and with modern geological methods.

4. As Schopenhauer pointed out, in his *Art of Controversy*, if general consent were to determine the truth or otherwise of propositions, then we would have to admit that truth varies both with time and space; since totally different opinions have come, in the course of time, to be generally accepted among the inhabitants of Europe; and local majorities will be found to hold quite different opinions, as we pass round the world to-day. The whole of Schopenhauer's remarks in this connection are well worth studying by those who think that issues are to be decided by appealing to majorities.

5. There is one more thing, perhaps, which should be added. Some people think that I am trying to *prove the fact* of creation. I am doing nothing of the sort. Creation can no more be *proved* than evolution; that is why, in my definitely *scientific* work, I avoid all question of origins. Whatever the geological facts may be, it is always possible to raise suppositions to square them *either* with creation *or* with evolution. Personally, for reasons stated later on, I think the facts actually look far more *like* creation than evolution: but that is not a scientific demonstration of creation; it is only a justification for *belief* in it. The Christian, like the evolutionist, has to walk by faith not by sight; and it is to the Christian's credit that he generally knows that he walks by faith, whereas most evolutionists walk by faith without knowing it. What the Christian *has* got is the fact that a marvellous book like the Bible is behind him, in his belief in creation; while the evolutionist has nothing better than the speculations of men, based upon a dogma foretold by the Bible.

PART I

General Science : Astronomy, Physics, Etc.

CHAPTERS :

- I. THE "SITUATION" OF THE WORLD.**
- II. SUBTERRANEAN WATERS AND FIRES.**
- III. THE SHAPE OF THE EARTH.**
- IV. THE ASTRONOMY OF THE BIBLE.**
- V. THE PHYSICS OF THE BIBLE.**

I

THE "SITUATION" OF THE WORLD

WHEN attempting to show that the statements of the Bible could not be taken seriously in regard to scientific matters, Canon Barnes of Westminster (now Bishop of Birmingham) declared that "Darwin, like Galileo, has triumphed". He meant by this that both Darwin and Galileo had shown that the Bible contained such mistaken views about nature, that we could no longer regard it (the Bible) as being what our fathers always thought it—the actual and infallible Word of God.

Before we go on to discuss this, however, it seems necessary to point out in the first place that it is hardly fair to a real man of science, like Galileo, to compare him with a man like Darwin. Galileo dealt in *facts* and their *necessary* consequences, whereas Darwin refused to limit himself in any such manner, even when writing in the professed name of *science*.

Readers of Mr. Darwin's works cannot have failed to notice how freely he dealt in fancies and mere suggested possibilities. "It is not altogether incredible" Mr. Darwin would urge, or "it is quite conceivable", etc., etc., when putting his notions before the public. It has been estimated that no fewer than 800 phrases in the subjunctive mood

(such as "Let us assume", or "We may well suppose", etc.) are to be found between the covers of Darwin's *Origin of Species* alone. In other words, Mr. Darwin did not hesitate to base his ideas about the "Origin of Species" upon some 800 things which he could not prove to be true. As a reviewer (whose capacity both Darwin and Huxley admitted) wrote of that work: "We are asked to believe all these maybes happening on an enormous scale, in order that we may believe the final Darwinian 'maybe' as to the origin of species. . . There is little direct evidence that any of these maybes actually *have been*" (*North British Review*, July 1867, p. 313).

It would have been quite unnecessary for anyone to point this out, had not Darwin been giving out his speculations in the name of *science*. It was Darwin's habit of confusing the provable with the unprovable which constituted, to my mind, his unforgivable offence against *science*.

Galileo, however, was a man of a very different stamp; he was much more careful to produce "direct evidence" for his views; so if *his* conclusions are to be taken as opposed to the Bible, then the claim is serious. But are his conclusions really opposed to the Bible? Canon Barnes thinks so! He informs us that, since Galileo has shown that the earth *does* "move," we can no longer take the Bible seriously when it says, for instance, that the earth "is stablished, that it cannot be moved" (Psalm 93: 1).

Similarly other sceptics have waxed merry over Job's talk of God's rising in judgment and

causing the earth to be shaken "out of her place" (Job 9: 6). All such passages, say these gentlemen, prove that the writers of Scripture imagined the earth to be fixed so rigidly to some spot in space that movement of any kind was impossible apart from Divine intervention. So our Higher Critics regard such passages as being hopelessly incompatible with the facts now known to us, e.g., that the world is continually in motion, both round its own axis, and in an orbit round the sun, etc.

The question, however, is not whether we can read nonsense into the words of Scripture (I am afraid it is easy to read nonsense into a good many things) but whether the words of Scripture are necessarily opposed to the facts as now known to us.

So I wish to draw particular attention to Canon Barnes' (and other Critics') plea, as referred to above; for it is typical of that unsound reasoning which Modernists employ against the Bible. They simply assume (no doubt because it suits them) that the first thing which happens to strike them as incongruous must actually be incongruous; they make no attempt whatever to discuss the possibilities of reconciliation. Let us, however, bring them down to reason upon this particular point; let us ask them the following question: "What makes you so sure that the words of the Bible are really incongruous to the facts? Can even a moving thing not be said to have a *place* from which it does not move?"

If they think it cannot, I would invite them to go to a tennis court, or to a football match, and

listen to the comments of the spectators. How often does one not hear it said of a player that "he always keeps in his place", when the remark certainly does not mean that he always *stands still*? It is clear that the word "place" can be used of a broad area, such as a portion of a tennis court; and (what is still more noticeable) it can even be used of a *certain relationship to other players*, even when the whole lot are in rapid motion (as in football) right up the field. What would a football player think, if Canon Barnes told him that it couldn't possibly be true that he always kept in his proper "place", because Canon Barnes had distinctly seen him "move" quite a lot? The player would probably think the Canon mad; and who could blame him?

Nor is this use of the word "place"—as referring to a certain relationship between moving bodies—confined to the sporting public; it is common to all mankind. Soldiers, for instance, are told to "keep in their places" and "not fall out" while on the march; yet they may be wheeling about and performing all sorts of evolutions at the time. What is still more significant, the same expression is used among philosophers themselves, and in regard to those very heavenly bodies of which the Bible speaks. Thus the well-known writer Locke himself remarked as follows:—

"Were this earth removed but a small distance out of its present situation, the greatest part of the animals in it would immediately perish" (*Essay*, Book iv, c. 6).

Here you get exactly the same talk of *move-*

ment and *location* as you find in the Bible ; indeed, Locke actually talks of a "situation" for the earth, a term which usually implies exact location even more definitely than the broad word "place" does. Yet who shall say that this use of terms is unjustified? Locke wrote long after Galileo was dead, and in full knowledge of all that Galileo had proved; yet he uses language—and sees no discrepancy whatever in using language—exactly similar to that of the Bible. The Bible says that the earth is not *moved* out of its *place*, and Locke shows what terrible things would happen if the earth were *removed* out of its *situation* !

So what becomes of Canon Barnes' leading argument against Scripture? If Locke's use of these terms cannot be regarded as proving *his* ignorance of the facts, how can the Bible use of them prove anything against the Bible?

On the contrary, is it not clear that the Bible references are really exceedingly apt ones? For it is *modern science* which has shown how important it is that the earth should not be removed even "a small distance" (as Locke says) out of its present situation; but who taught both the Psalmist and Job, some 3,000 or more years ago, to imply that terrible things *would* result from such movement, and that we should be thankful that it did not normally occur? How could they tell (unless God taught them) that the exact "situation" of the earth was a matter of such importance?

* * * * *

It seems, then, that the very texts specially chosen by the critics to show that the Bible is *not*

Inspired, really go to show very clearly that it *is*. It hardly says much, either for the intelligence of the critics, or for the soundness of their case, that it only requires the exercise of a little common sense to make their chosen arguments recoil upon themselves.

It is worth remembering, therefore, that among the Bible prophecies we find it recorded that men *will* band themselves together to attack the words of the Almighty, while "He that sitteth in the Heavens shall laugh: Jehovah shall have them in derision" (cf. Ps. 2: 4; 12: 4, 6-7). We certainly find pseudo-Christians and pseudo-critics banding themselves together to-day, in the biggest mutual-admiration-society which the world has ever seen (cf. Ps. 12: 2-4), in order to discredit the Bible; yet, in spite of the assurance shown by these men, the *quality* of their attacks is such as to rob us of all respect for their intelligence.

It is as well that Christians should note their methods: First they assume the right to tie the Bible down to a wholly arbitrary use of terms, a use which is far more limited than that in common practice among their own selves; and then they decry the Bible as "disproved", although others (whose knowledge of the facts is unquestioned) independently use exactly similar terms to those of the Bible in regard to the very same facts.

How is it that Modernists feel free to play such pranks with Scripture? They certainly would not dare to employ similar tactics where their fellow-men were concerned. Anyone, for instance, who tried, in a Court of Law, to discredit an

opponent along such lines as these, would soon find that his own honesty or intelligence was being called in question in return. Counsel for defence would soon be urging that *such* a witness must either be a knave or a fool. Perhaps, in the case of Canon (now Bishop) Barnes, we should prefer the latter alternative; for it would be sad if we were compelled to accuse so high an ecclesiastic of deliberate knavery. It is noticeable, however, that we can only retain our belief in Canon Barnes' good faith at the expense of our belief in his good sense.

Seeing, then, that *he* passes for a *leading* Modernist, what are we to think of the intelligence of the average one?

II

SUBTERRANEAN WATERS AND FIRES

SO much for Canon Barnes' attempt to disparage the Bible.

Let us now take another illustration, of a very similar kind: The late Dr. S. R. Driver (one of the most prominent Modernists of the last generation) taught that Genesis was written by people who believed that "the earth was not a large globe, moving through space round the sun, but a relatively small flat surface resting . . . upon a huge abyss of waters underneath" (*The Book of Genesis*).

This was supposed to be shown by the fact that the Bible talks about the "water under the earth" (Exodus 20: 4; etc.)—and Dr. Driver apparently chose to read the crudest possible ideas *into* such phrases, without ever stopping to consider whether those crudities were *necessary*. (Even supposing that some ancient Hebrews did indulge in such fancies, it would no more follow that the Pentateuch was based upon those ideas than that the New Testament was based upon Mediæval legends. A savage to-day may go away with the strangest ideas in his head, after listening to a scientific lecture; but it does not follow that the lecturer based his statements upon the ideas of the savage.)

It is worth noting, therefore, in regard to this

particular assertion of Dr. Driver's, that one of the oldest books of the Bible—Job—also talks of *fire* being "under" the earth (Job 28: 5). It is hardly possible that the Bible-writers could have regarded the earth as resting upon a mixture of fire and water; in any case, it is a pity that Driver did not notice this *other* passage when declaring his ingenious theories about the former.

And it does seem singularly unfortunate for Dr. Driver and his followers that *this same* extremely ancient book of Job also most definitely tells us that God :

"Stretcheth out the north over the empty place,
"And hangeth the earth upon nothing" (Job 26: 7).

Notice, here, the direct repudiation of all idea that the earth is propped up by anything at all, whether by fire or by water; for it is *hanged*, or suspended (an idea which directly eliminates all notion of propping up from below) "*upon* NOTHING".

So we see how unnecessary the Modernists' assertions are. A comparison of passages shows that Job could talk of fire being "under" the earth, without any necessary idea at all of the earth resting *upon* fire (for he had already definitely stated that the earth rested *upon* nothing); so it is clear that waters could also be spoken of as existing "under" the earth without the earth being supposed to rest *upon* them. In other words, we see that the writers of Scripture could talk just as we ourselves do to-day, both of "subterranean" waters and "subterranean" fires, meaning thereby

simply waters and fires which exist *under the surface* of the earth, and not under the earth as a whole. If Job were alive to-day, it would be easy for him to poke fun at Dr. Driver, by doing to Driver just what Driver did to the Bible, i.e., picking a sentence here and there and "proving" (by disregarding whatever he said elsewhere) that Dr. Driver must have believed that the earth rested upon a mixture of fire and water, since he also could talk of such things being "subterranean", and "subterranean" is only Latin for "under the earth"!

Another of Dr. Driver's arguments was that since the sun, moon and stars are said to be "in" the firmament of heaven (Genesis 1: 17), therefore the writers of the Bible must have meant that the waters "above" the firmament (verse 7) had been removed *beyond* the stars! Here again you get an absolute fantasy being read into Scripture, without any actual necessity whatever. Driver completely ignores the fact that the firmament can be said to separate the waters "above" from the waters "below" as soon as any part of the firmament gets between those waters (just as we talk of a thing being "subterranean" or "submarine" which gets below the surface of the land or the sea). Also, as we now know that gases *do* exist even in interstellar space, it is clear that the sun, moon, and stars do lie "in" the heavenly firmament! So we see that the Bible is perfectly true, even where Dr. Driver was most certain that it could not be true.

Indeed we only see, here again, how easy it

would be to turn the tables upon the Higher Critics; for supposing that some ancient Bible-writer, a Job or a Moses, were to come to earth again, he could easily "prove" (by using the Modernists' own methods against themselves) that these learned 19th and 20th century Critics could have no idea whatever of the depth of the ocean, since they call a vessel which merely goes below the *surface* of the sea a "submarine", or "under the sea" boat. This would clearly prove (by Modernist logic) that the moment a boat got below the surface of the sea it was supposed to get below the sea itself. Also, as Modernists often speak about the fishes "in" the sea, is it not clear (by Dr. Driver's own logic) that these gentlemen must be cherishing the absurd belief that every fish "in" the sea is *above* a "submarine"?

It is so fatally easy to read nonsense into almost anything, by employing the methods which Modernists use against the Bible, that one is surprised sometimes at the pride which Modernists seem to feel in their obviously fallacious conclusions. Their own writings could always be picked to pieces with the greatest ease, by simply turning against themselves the very methods which they employ for disparaging Scripture. That Modernists themselves never seem to suspect this until it is pointed out to them, only seems to indicate how little sense of humour these gentlemen have as a body.

This is a pity; for criticism, like charity, should begin at home.

III

THE SHAPE OF THE EARTH

ONE of the hardest things for earlier generations to understand, was how the earth could possibly have a spherical form. Until Newton had shown that what we call "weight" was simply a manifestation of the attraction existing between the earth and bodies in its vicinity, it seemed simply against reason that the earth could be a sphere and the bodies on its underside not drop off it.

Modernists, therefore, are very unwilling to allow that the writers of Scripture could have had any inkling of this fact of the sphericity of the earth. We have seen how Dr. Driver tells us specifically that the ancient Hebrews (and hence, in his opinion, the writers of the Bible) believed that "the earth was not a large globe . . . but a relatively small flat surface", etc.

Now I am not concerned to discuss what the ancient Hebrews may or may not have thought; they may have read all sorts of fancies into the words of Scripture, just as Mediæval Churchmen read all sorts of fantasies—indeed a whole Dante's "Inferno"—into the simple but terrible Scripture references to a Lake of Fire which burns for ever and ever. What I am concerned to do here is to show that the Bible itself nowhere ties us down to

regard the earth as a "small flat surface"; on the contrary, it contains a number of references which, although they might well be obscure to those who believed the earth to *be* a "small flat surface", are clearly intelligible to those who have discovered that it really is something very different, namely "a large globe".

I would first draw attention, then, to that passage in Job already quoted, where the patriarch declares that Jehovah :

"Stretcheth out the north over the empty place,
"And hangeth the earth upon nothing" (Job 26: 7).

For I wish to ask: What could this talk of the *north* being *over* the "empty place" convey to a man who regarded the earth as a "small flat surface"? The "North" to us is a *horizontal* direction, just like each of the other points of the compass. How then could one go, on a world which was "a small flat surface", to a spot where the North would change direction from the horizontal to the vertical plane? And if the North, why not the East?

Yet we may go as far East as we like on this globe, and never find a spot where the East can be said to be "over" us: but if we travel to the North we *do* come to a spot (the "North Pole") where the North ceases altogether to exist as a horizontal direction and becomes a *vertical* one. All horizontal directions, at the North Pole, point South; and so does the direction vertically downwards. The North, however, is *overhead*; and this is a consequence of the *spherical shape* of the earth.

How true, also, is Job's statement that the North is stretched out over the "empty place"! The word so rendered is *tohu*, and is the same word as is rendered "waste" (R. V.) in the second verse of Genesis. Dry land is not visible at the North Pole. There, as probably in the second verse of Genesis, the world is found covered with a waste of frozen waters. (And note that this very North Polar condition of things is also a consequence of the shape of the earth!) But who told Job that the North would not only be found *over* a terrestrial spot, but that spot would also be a "waste" one?

I would now invite the Bible student to look at Isaiah 40: 22, where the Almighty is said to be seated upon the *chug* of the earth. Our translators have rendered this the *circle* of the earth, but the word really signifies an arch or a dome; and this obviously would make better sense here—for while one may well be seated on a *disc* it is hard to see how one can be seated on a *circle* (a circle being a line bounding a disc) unless the disc be turned edgeways up. How far though, from anomaly, the sentence is if rendered: "It is He that sitteth upon the arch (or dome) of the earth"; and how well it fits the fact that the earth is a globe!

I would point out that this "arch" or "dome" is certainly not the heavenly vault, for the heavens are separately mentioned in the same passage; this arch is apparently the arched surface of the earth itself.

Let us now turn to Deut. 4: 19, where Moses

refers to the sun, moon and stars, the "host of heaven", which "Jehovah thy God hath divided unto all nations under the whole heaven". This talk of "dividing" the host of heaven is interesting; for if the earth were really a "small flat surface", then there could be no question of any dividing of the stars, for the same stars would be seen everywhere. Since the earth is a globe, however, such common property in the stars does not exist. As we go from North to South (or *vice versa*) different stars are seen; the "Southern Cross", for instance, is not visible in England. This remark by Moses, therefore, may be said to recognize and imply the existence of our "degrees of latitude".

And, if the degrees of latitude are recognized here, it seems clear that the other component of the earth's sphericity—the degrees of longitude—are also recognized and implied in Scripture. Thus St. Paul tells us that, at our Lord's return to earth, "we shall all be changed, in a moment, in the twinkling of an eye" (1 Cor. 15: 51-52); and yet our Lord, in speaking of the same event, implied that it would take place by "day" (Matt. 24: 36), and also be at "night" (Luke 17: 34), yet might also be at any hour, at even, or "at the cock-crowing, or in the morning" (Mark 13: 35). Besides this, in picturing the actual occupations in which people will be engaged at that moment, He gave instances of couples asleep in bed, walking in the field, and grinding corn (Luke 17: 34-36)—in other words, following the pursuits of both day and night. It seems obvious that all this is hard to

understand if the earth is to be conceived of as a "small *flat* surface"; but it is clearly inevitable if an instantaneous event is to affect an inhabited *globe*.

Although, therefore, the Bible does not actually "set out to teach us science", it seems clear that the Holy Spirit who inspired its writers led them, quite incidentally, to touch upon truths which are utterly incongruous to the idea of a "flat" earth, and give a complete picture of a spherical one. We find the degrees of longitude implied as also the degrees of latitude; the domed or arched shape of the earth's surface is mentioned, and the extraordinary fact is quoted that a barren spot exists on earth where the North (not East or West) ceases to be a horizontal direction and becomes an overhead one.

And yet Dr. Driver tries to insist upon a "small flat surface"! Every one of these references is incompatible with *flatness*.

IV

THE ASTRONOMY OF THE BIBLE

ONE of the most constant reproaches cast upon the Bible is that it takes a "geocentric" view of the universe—in other words, that it represents the earth as being situated at the centre of the universe, instead of being a comparatively insignificant speck of matter floating about in the limitless spaces of that universe.

Personally, I have never yet found any passage in Scripture which definitely states—or even clearly implies—that the earth is situated at the precise centre of the universe. What we do find is that there are far more references to the earth than to other heavenly bodies: but this seems only natural, seeing that the Bible was written for the inhabitants of the earth. And now it seems that, even if the Bible did encourage a "geocentric" view of things, this would not be so far from the probable truth, since so unprejudiced a man of science as the late A. R. Wallace could come to the conclusion (in his book *Man's Place in the Universe*) that even although we cannot tell where the exact centre of the universe may be—seeing that the latter is so vast, and its shape so indeterminate—yet the apparently similar distribution of stellar bodies on opposite sides of us makes it extremely probable

that we ourselves cannot be far from that centre.

So apparently we can neither prove that the Bible takes a geocentric view, nor that a geocentric view would be wrong if it were taken.

As a matter of fact, it really seems clear, here as elsewhere, that while the Bible may not be "out to teach science" yet its incidental allusions are not only in complete harmony with verified facts, but often imply a knowledge of them which anticipated the actual discoveries of science by many hundreds of years. Thus we find references being made to the stars which imply an understanding of facts, (e. g., as to their enormous numbers, their relative movements, and their varying composition) which was far ahead of all contemporary science.

To appreciate something of this, we should remember how repeatedly the best astronomers of ancient times, (e. g., Hipparchus in 150 B. C., and Ptolemy in A. D. 150) had estimated the total number of the stars at about 3000. Nor could the unaided eye detect any more. Thus Dr. Wallace tells us that the American astronomer Pickering has estimated that all the stars visible to the naked eye "under the most favourable conditions and by the best eyesight" are 2509 for the Northern Hemisphere and 2824 for the Southern (*Op. cit.*, p. 39). Indeed it was not until the first telescopes were made, at the close of the Middle Ages and dawn of modern times, that the first positive evidence was obtained that the number of the stars vastly exceeds 3000.

Yet what unhesitating evidence the Bible had always borne to this fact! The promised seed of Abraham was compared, for limitless numbers, alike to the dust of the earth and the stars of heaven (cf. Gen. 13: 16, and 15: 5); while the stars are also bracketted, as representing an equally unlimited number, with the sand that is by the sea-shore (Gen. 22: 17). Indeed, the Jews were directly given to understand that "the host of heaven *cannot be numbered*" (Jer. 33: 22). How true these allusions are to the facts *as we now know them* (for every increase in the power of our telescopes has revealed a further abundant increase in the apparently limitless numbers of the stars); but how incongruous these same allusions must have seemed during all the centuries that astronomers themselves thought the stars could not only be numbered, but that the numbers were no more than about 3,000 (or roughly equal to the population of a fair sized village, and far less than that of even a very small nation)!

It seems clear that, so far from merely representing the views of their contemporaries, the writers of Scripture were by no means anxious to square themselves with even the longest-standing opinions of the best contemporary science. Yet how often has not our *growing* science thrown light upon passage after passage which for centuries (even millenniums) had seemed obscure. The above is one of the clearest instances of this; although few people realize its significance, because we are so accustomed ourselves to think of the stars as unlimited in numbers, that we forget what it

meant to proclaim them as numberless in the days when the Bible was written. Let us, therefore, touch on a few more modern concordances with Scripture, which may seem more striking, because less familiar perhaps to some of us.

One of the more recent developments of astronomical methods has been the turning of attention to the spectral analysis of the light coming to us from the various heavenly bodies. It is now found possible to determine both the composition of the stars, and their speed of movement in the line of the light they send to us. And the result? We have discovered the *literal* truth of St. Paul's statement (1 Cor. 15: 39-41) that "star differs from star in glory". Note that St. Paul does not mean that this is simply a difference in degree or intensity; he implies a difference in *kind*, since he quotes as a parallel illustration the differences between the "flesh" of men, beasts, fishes and birds. This is exactly what we find to be the case; for the "glory" or light of the stars can now be analysed as effectively by the astronomer as the flesh of creatures can be analysed by the chemist, and both are found to differ in a precisely analogous way! Both the lights and the meats vary; and both sets of variations are due to differences in chemical ingredients.

Besides this, we find peculiar significance thrown upon a still older passage—perhaps twice as old—i. e., Job 38: 32, where the Almighty asks the Patriarch, "Canst thou guide Arcturus with his sons?" For if Dr. Driver is right, then the ancient Jews regarded the "fixed" stars as being

immovably fixed, like nails, in an immense hollow sphere that revolved round the earth. Arcturus, being as apparently "fixed" as any, would just be supposed to go round with the rest and hardly (in the light of contemporary science, according to Dr. Driver) require any special guidance whatever—so why the question? Even to this day, Arcturus appears as "fixed" as any other star. It seems significant, therefore, that spectral analysis has shown that Arcturus is probably the fastest moving of all the greater bodies; one single component of its velocity, its speed in the direction of this earth, being alone 200 miles per second. Arcturus might therefore have been well singled out for mention as requiring special guidance; and modern science gives special appropriateness to a remark which (on the Critics' own showing) flew in the face of all contemporary human ideas of things.

Many are the allusions of Scripture to whose significance no such definite clue can yet be found in our modern science. This, however, is only to be expected, if the Bible be God's Book. "Canst thou" asks the Almighty of Job, "bind the sweet influences of the Pleiades, or loose the bands of Orion? Canst thou bring forth Mazzaroth in his season?" (Job 38: 31-32), etc. As to the significance of these we can still only guess; but their obvious intention to *be* significant at least warns against accepting the crudities of the Higher Critics, who would have us believe that all these constellations were supposed, by the writers of the Bible, to have no more interrelated movements or influences

than nails in a revolving roof. It seems indeed possible that very peculiar significance may finally be proved to lie in the first of the Almighty's questions, quoted above; for it has been suggested by several astronomers who have been trying, by spectral analysis of their motions, etc., to obtain a general idea of the movement of the stars as a whole, that the centre of gravity of the entire sidereal system must be situated somewhere near the Pleiades. If this be so, then well might Jehovah have referred to the "sweet influences" of the Pleiades, which "bind" the whole mass of heavenly bodies together!

It is time to be drawing this chapter to a close; before we do so, however, I would like to select one more passage for reference, and choose Psalm 89: 37, where the Almighty quotes the moon as a type of "a faithful witness in heaven". This is a striking passage, poetic and yet strictly true to scientific fact—how different from some other ancient ideas about the moon, to be found in pagan mythologies! For the moon is, indeed, a *witness*. It does not shine by its own light but by reflected light. The moon which we see in the middle of an otherwise dark night, is directly "witnessing" a sun whose beams are hidden from us by our position on the shadowed side of the earth. By reflecting some of those beams across in our direction, the moon also "witnesses" to us that the sun is still shining. The moon thus, so to speak, performs both of the functions of a witness; it both sees, and testifies to seeing, what others cannot.

Thus we find how closely the Bible, even in

its poetry, keeps to the literal facts of science ; and we have seen how even the latest and most unexpected developments of science tend not to overthrow the Bible but rather to throw light upon obscure passages in it. Is there any other book, of approximately the same age, of which such things could be said ? And if not, who are likely to be right—the Critics or the believers ?

V

THE PHYSICS OF THE BIBLE

(A) THE ATMOSPHERE

IN JOB 38: 5 the Almighty is represented as drawing the Patriarch's attention to the fact that the earth has definite dimensions, and asking him who settled them:—

“Who determined the measures thereof, if thou knowest?”

“Or who stretched the line upon it?” (R.V.)

This is one of those passages, so frequent in Scripture, which may seem obscure enough at first sight, and yet is found to be increasingly full of significance as our knowledge of science advances. Thus one might well be tempted to ask here, Why the ancient writer should ever have counted it among the *more important* works of God that He settled the *size* of the earth? To a savage, a particular size could have little enough significance: to him, the bigger the earth the greater its importance. Yet we are not asked who made the earth *so big*, but who “determined its measures” and “stretched the line upon it”—the figure being that of one who saw that it should have certain dimensions, neither more nor less.

This is indeed a *scientifically* significant

question. Space will only admit of our considering two main subjects here, under the head of "Physics", namely (*a*) the Atmosphere and (*b*) the Water on the earth; and both are vitally affected by this very question of the *size* of the earth. Thus Douglas Archibald points out, in his book *The Atmosphere*, that whether or not a globe "ceases to possess a liquid or gaseous covering, and becomes like the moon, or still retains an atmosphere and oceans like our earth, depends on the attraction (gravity, as we term it) by which it holds its gaseous portions to it. This, again, directly depends on the amount of matter it contains, and therefore again upon its size" (p. 12).

So he goes on to show that:—

"The fact, therefore, that we possess at the present time a gaseous atmosphere of exactly that particular degree of tenuity that suits our breathing apparatus, remarkable though it may seem, is a direct consequence of the particular size of the globe on which we stand" (pp. 12-13).

Note that he does not say it is a direct consequence of the "great" size of the earth—for if the earth were greater still, the consequent atmosphere would certainly *not* suit us—but of the "particular" size; and this he describes as a "remarkable" fact. We may, therefore, surely claim a "remarkable" aptness in the ancient Bible reference to this same *particular* size of the earth!

And now, as regards the atmosphere itself, I would ask the reader to look up Eccles. 1: 6; Job 28: 25; and Job 38: 24, where he will find

references to atmospheric "winds", which are treated :—

(a) As having a constant existence, "whirling about continually and returning again according to his circuits";

(b) As having *weight*, for we read of "weight for the winds";

(c) As being driven forward by the light, in the form of an east-wind upon the earth.

This is a fairly remarkable collection of statements for a very ancient Book. The fact that the air can be regarded as an invisible fluid having constant existence and perpetual currents, "returning in circuits", is certainly not self-evident; indeed it is very hard to see how the ancient writer could have formed such a generalization except under the influence of inspiration. To this day we ourselves can still only *infer* the truth of what he said from a number of facts only revealed to modern science: how did he come to make his strangely accurate generalization without those facts?

And think of the still older writer, in Job, boldly declaring that winds had weight! Here is a striking case of the Bible anticipating science, for the fact that the atmosphere has *weight* was a thing absolutely unknown to science until about the year 1643, when some Florentine gardeners found that they were unable to pump water up higher than 33 feet. Until then, the fact that water could be pumped up at all, even one foot, had been explained by the senseless dogma that

"Nature abhors a vacuum". When, therefore, water pumping powers ceased at 33 feet, Galileo himself was nonplussed and could—or would—only explain it by saying that it had become obvious that nature "only abhorred a vacuum up to 33 feet". It was left to his pupil, Torricelli, to discover the true solution, i.e., that pumping powers could be better explained by attributing a *weight* to the atmosphere; and their limit by inferring that this weight was equal to that of a column of water 33 feet high over any given area.

Thus we now speak of barometric *pressure* (for air, in common with all fluids, exerts pressure, according to its weight, in all directions); but even Galileo had had no idea of this fact, which was nevertheless mentioned in the ancient Hebrew Scriptures from before the days of Moses, and had actually appeared in good English in our A. V. Translation a generation before Galileo! For remember that the very English of Job 28: 25, as we now have it, was in existence some 32 years before science admitted that the air had weight. Might we not, therefore, here reverse the trumpetings of Canon Barnes, and talk of Scripture "triumphing" *over Galileo*?

And note the peculiarly significant connection that exists between the winds and their weights; for it is simply the difference in *weights*, bulk for bulk, between various masses of air that causes movement between them. "Weights" are thus truly necessary "*for*" winds, exactly as Job implied.

And why should the ancient writer have

directly attributed "east" winds to the action of "light"? Why any connection at all between light and any wind? And why east-wind more than any other? It is difficult to see what facts he could have had to go on, if we are to find a naturalistic explanation for his statement; yet that statement is remarkably true to what is known to *modern* science. Perhaps it will be best, here, simply to quote directly from a work by Dr. A. R. Wallace: "Winds" he tells us, "depend primarily on the local distribution of heat in the air, especially on the great amount of heat constantly present in the equatorial zone, due to the sun being always nearly vertical at noon. . . . Heated air being lighter, the colder air from the temperate zones continually flows towards it, lifting it up and causing it to flow over, as it were, to the north and south. But as the inflow comes from an area of less rapid to one of more rapid rotation, the course of the air is deviated, and produces the north-east and south-east trades" (*Man's Place in the Universe*, pp. 201-202).^{*} Here we have, by a modern scientist, a recognition of the fact that the sun's *light* scatters the *east* wind upon the earth; but how did the writer of Job come to know it?

I would particularly ask the reader to remember that Job *did* know this, for I have heard our

^{*} I am aware that this explanation, as to the mechanism causing the eastern trade-winds, has been challenged by many physicists. I quote Dr. Wallace's opinion, however, as that of a modern authority in its support. The point to remember at present is that, whatever explanation they may offer as to the mechanism causing the trade-winds, all parties are agreed that it is *ultimately* true, as the Bible says, that it is the "light" which "scattereth the east-wind upon the earth". The sun's emanations are ultimately responsible for all the winds on our earth; so the actual words of Scripture hold good in any case.

Lord's own words : " The wind bloweth where it listeth " (John 3 : 8), being quoted to prove that our Lord Himself was ignorant of the natural origin of wind action and regarded it as purely arbitrary. This is simply one of those cases where the critic reads nonsense into Scripture without ever troubling to prove his right to do so. Our Lord's words do *not* necessarily imply any ignorance whatever of natural causes ; on the contrary, and simply as a student of the Old Testament, He must have known that the " light scattereth " the " wind upon the earth ".

There are many other passages, which we cannot stop to examine here ; but before leaving this subject of the Atmosphere I would like to refer to a passage concerning one of the commonest things found in it, so would turn to Isaiah 40 : 12, where we read that God has comprehended the " dust " of the earth in a measure.

Surely if there is one thing that we generally regard as an unmitigated nuisance, it is dust ; and to primitive peoples it is also a symbol of degradation. Yet here we read of its being measured out as a thing necessary to our good (and note that it is grouped together with other things which tend to our benefit or service). So it is interesting to find that Dr. Wallace fills up no less than seven pages (205 to 211 inclusive) of his book with a discussion of the terrible loss it would be to us if there were no dust in the air. Dr. Wallace refers mainly to the extremely fine dust of the upper atmosphere ; a thing to which few of us give a thought, even if we are aware of its existence, but

to which the Bible seems to allude when it speaks of "the highest part of the dust of the world" (Prov. 8:26), as one of the things which the Almighty set Himself to prepare. Dr. Wallace shows that, if this dust did not exist, a vastly lessened rainfall would result, and we should have a greater prevalence of fogs and abnormally heavy dews instead. This would only represent part of the consequences. Vegetation would be greatly reduced. Even our blue skies would go, and be replaced by dense black ones, for the blue colour now seen by us is due to the fact that the fine dust in the air reflects only the light of short wave-length from the blue end of the spectrum; our gorgeous sunsets and sunrises would also be unknown; the stars would appear at midday as at midnight, owing to the absence of light-reflecting elements in the air, which would lose all power of diffusing the sunlight entering into it. This last would be a most serious matter, for everything not in the direct path of the sun's rays would be in total darkness except under special circumstances, e.g., as where some reflecting surface happened to throw light in that particular direction; in other words, the insides of all houses built as ours are now would be in pitch darkness even at noonday. So much do we owe to the presence of *dust* in our atmosphere, and especially to "the *highest part* of the dust of the world"; (*strange*, is it not, that the ancient writer should have thought of referring to such a thing? There seems little doubt about this translation, although our R. V. alters it; for the Hebrew word is *rosh*, the usual significance of which is unquestionably "head" or "top". But who, apart from Inspiration, would

ever have thought of singling out the *upper part* of the *dust* of the world for special mention among such more obvious factors conducing to our benefit as fountains of water, hills and fields, etc. ?). And the problem as to how this microscopic *upper* dust, upon whose existence our welfare so much depends, was produced, is by no means a simple one. According to Dr. Wallace we depend for the production of this dust upon the existence of volcanos and deserts ; so he remarks as follows :—

“ It is a very suggestive fact that these two phenomena, usually held to be blots on the fair face of nature, and even to be opposed to belief in a beneficent Creator, should now be proved to be really essential to the earth’s inhabitability ” (p. 185).

That is, perhaps, going a little off our subject, although the point may interest some. It shows, at any rate, the value put by Dr. Wallace upon the “ highest part of the dust of the world ”, when he regards a source for its supply as “ really essential ” to the earth’s inhabitability. But how came the ancient writers of Scripture to suggest, ages before science ever dreamt of the fact, that this very thing *was* of interest to the inhabitants of the earth ?

It is true that the Bible references are hardly of a nature to show the way to scientific discoveries; the Bible “ is not out to teach science.” But the Bible *does* indicate, by its very hints of unknown and unappreciated factors, that many things are known to God which are undreamt by contemporary science. And, being the Word of

that God Himself, the progress of our science brings out, one by one, the peculiar aptness of these hints.

Is it not significant that, as our knowledge of natural science increases, the Bible does not become less and less "possible" but, on the contrary, passage after passage in it "comes into its own", so to speak, which had before seemed pointless or even misplaced? Has any other book this property?

(B) TERRESTRIAL WATERS.

I quoted Douglas Archibald, in the previous pages, to show that the question of the size of our earth is now known to affect, very vitally indeed, its power to retain either liquid or gaseous covering. The former, i.e., the liquid covering, will be our subject now. Before we leave the subject of the gaseous covering, or atmosphere, however, it may be interesting to touch on one point where the two subjects overlap; for if the gaseous covering were appreciably less than it is now, the "liquid" covering would largely cease to be liquid!

The reason of this is that the atmosphere acts as a great reservoir and distributor of the sun's heat; it has, as Dr. Wallace remarks, the "peculiar" property (most fortunate for us) of "allowing the sun's rays to pass freely through it to the earth which it warms, but acting like a blanket in preventing the rapid escape of the non-luminous heat so produced" (*Op. cit.*, p. 173). Thus it is our dense atmosphere alone that prevents our tropical regions themselves from being covered with

snow! This may seem a strange statement at first sight, but as Dr. Wallace points out, its truth is witnessed in the tropics themselves; for once you get high enough, even in the tropics, you find snow lying on the ground all the year round. As an instance in point one may mention the snow-capped top of Kilimanjaro, a vast mountain in tropical East Africa, round the base and up the lower slopes of which are the dense banana and other forests in which we had so much stiff fighting in 1914—16. The difference in state of affairs at top of that mountain and at its bottom, is due simply to the difference in density of atmosphere at those levels. The latitude and the longitude are the same, and the sun's rays are the same; but at over 18,000 feet (and Kilimanjaro rises to 19,000) the atmosphere is less than half as dense as it is at sea-level, and so has far less capacity for storing heat. As a result of this, we find perpetual snow on top of the mountain, and hot-house conditions at bottom.

A world, however, that was appreciably smaller than our own, would only be able to retain an appreciably less dense atmosphere; what are mountain-top conditions with us would be sea-level conditions on it. So Dr. Wallace calculates that if the density of our earth were only one-fourth less than it is (i.e., if its diameter were 7,200 miles instead of 8,000), almost the whole of it would, owing to the consequent lessening of atmospheric mantle, be reduced to "a snow and ice-clad waste, and the remainder liable to such extremes of climate that only low forms of life could have arisen and been permanently maintained" (p. 174).

Such then, would some of the results be if our earth were only slightly smaller than it is at present. It seems, however, that the results would be even *more* drastic if the earth were slightly bigger than it is !

The denser atmosphere of such a world would certainly *not* suit our present "breathing apparatus", as Douglas Archibald calls it. Nor is it likely that, with an increased atmospheric mantle, the heat received by day would be sufficiently released by night (as it is by our present atmosphere) to prevent undue accumulation. If nothing else were to result, the increase in atmosphere alone would probably convert our earth into an uniform, intolerable hot-house.

A far greater change, however, would result from the enormously increased bulk of water which the earth would then possess. Dr. Wallace points out that if our terrestrial waters were to be increased by only *one-tenth*, practically our whole land surface would cease to exist, everything being covered with water (p. 217). The wonder, indeed, is that the sea does not cover everything even now (we will return to this later) ; but as Dr. Wallace points out, if the diameter of our earth were about 9,500 miles instead of 8,000, its mass would be doubled, and the quantity of water on it doubled. As, however, the *surface* of such a globe would only be increased by *half*, its waters would undoubtedly cover that whole surface in the form of a shoreless ocean "several miles deep" (p. 128).

As a matter of fact, it is probable that the amount of water on a planet would vary much more

rapidly than its mass. As Dr. Wallace himself notices, "All the larger planets can have very little solid matter, as indicated by their very low density notwithstanding their enormous mass" (p. 218). So probably the water supply on our earth would be doubled long before (so to speak) its diameter touched 9,500 miles.

In any case it seems clear that, as Dr. Wallace says, the habitability of our earth "is *primarily* dependent, within very narrow limits, on its size" (p. 218). The italics are his own. Surely this affords an unique comment, by a modern scientist, upon the significance of Jehovah's question to Job, in regard to the earth, "Who determined the measures thereof?"

The vital importance of these measures is only beginning to be realized to-day.

The problem, however, is vastly more complicated even than the above facts indicate, and I would next ask the reader to turn again to Isaiah 40: 12 and also look up Psalm 33: 7. He will find the one talking of the waters of the earth being measured in the hollow of God's Hand, and the other of their being "gathered as an heap" and "laid up in storehouses". Now here, again, it is modern science alone which has brought out the unique appropriateness of what the Bible says.

For the facts show us that an earth which is big enough to have exactly the right amount of atmosphere for us, is so big that its consequent oceans would, if the earth had a smoothly rounded surface, cover that surface to an uniform depth of

two miles everywhere. How comes it, then, that we have so much land surface as we actually enjoy?

This problem clearly astonished Dr. Wallace, when he came to think it out: for in spite of the enormous amount of water on our globe we have, as he showed, just the right proportion of land surface to water surface. (E.g., if our water surface were much more or less than it is, in proportion to land, the latter would be proportionately over or under-supplied with rainfall in consequence, evaporation being in proportion to water surface. This is only one of the many adjustments concerned.) But in order to provide the extensive land surface which we require, the portions of the earth's crust devoted to water are made up of astonishingly and abruptly deep ocean basins: from the so-called 100-fathom line of the "Continental shelf", the ocean floors dip steeply down, to the great depths at which they regain their horizontal character. So vast, indeed, is the capacity of the consequent ocean basins that the water—which so exactly fills them—is no less than *thirteen times the bulk* of the land which rises above their surface.

How these immense ocean basins were ever formed, is one of the most perplexing problems of science; and Dr. Wallace's own hypothesis will seem fantastic to many. How they were so exactly filled, and no more, that (as Dr. Wallace shows) an increase of even 10% in the water would have overflowed the land, is another mystery. But there the facts stand. "How the adjustments occurred"

he cries in perplexity, " it is difficult to imagine. Yet the adjustment stares us in the face " (p. 217).

What better comment could we have in the words of a modern scientist, on the ancient Biblical statements, now seen to be so peculiarly significant, that the Almighty measured the waters in the hollow of His Hand, and laid up the deep in storehouses ?

I have dwelt at some length upon these facts, for few seem to have noticed them, even among those who might have been expected to appreciate their significance. Thus Dr. Wallace himself seems never to have dreamt what a striking comment his own writings were affording upon ancient Scripture. In a way, of course, that increases their value *as* a comment ; but one wonders how he missed it. On other occasions, men of science have often enough remarked on the peculiar appropriateness, to modern knowledge, of the words of ancient Scripture. Thus Douglas Archibald, in his book on Meteorology from which I have already quoted, remarks (p. 117) that :—

" In Ecclesiastes we have a wonderful insight into the whole scheme of water circulation in the verse which says, ' All the rivers run into the sea, yet the sea is not full. Unto the place from whence the rivers come, thither they return again ' " (Eccles. 1 : 7 ; cf. Amos 5 : 8).

It is, indeed, the way of the Bible to show " wonderful insight " into the problems of those who take up particular lines of research. As a

geologist myself, I was peculiarly pleased to find a much more experienced geologist, Grenville Cole, remarking in the preface to his book *Open-Air Studies in Geology*, that his object was:—

“To urge the reader to see for himself how ‘the mountain falling fadeth away, and the rock is removed out of its place; the waters wear the stones; the overflowings thereof wash away the dust of the earth’.”

Although Mr. Cole does not say so, his quotation is taken from Job 14: 18-19 (R. V.). As a summary of geological action (which is so largely one of terrestrial waters) it could hardly be bettered. A geological sermon, so to speak, could be preached on it as a text, for every word is significant. So marvellously does the Bible express the very spirit of the subjects with which it deals.

PART II

Biology and the Bible.

CHAPTERS :

- VI. CREATION AND VARIATION.
- VII. "RUDIMENTS" AND THE CURSE.
- VIII. SEPARATE CREATIONS.
- IX. THE DISASTER.
- X. "CONVERGING LINES."
- XI. THE DOCTRINE OF UNIFORMITY.
- XII. CONCLUSION.

N.B.—The longer Notes to Part II, referred to in the following pages by small numerals (see footnote on page 49), form *important additions* to the text, and should be read.

VI

CREATION AND VARIATION

THE subject of Biology is an enormous one. It is one, however, from which the modern geologist cannot hope to escape. So many of the geological formations are now minutely sub-divided according to their fossil contents, that he is compelled, when dealing with them, to take up the study of Palæontology, which is the science of fossil remains; and that of course means that he has to do with biological questions, since fossil forms have to be studied as once living ones. Now this, in turn, inevitably brings the geologist face to face with the subject of Evolution; for modern books on Palæontology are simply full of it. Fossils, to-day, are not simply taken on their merits as they stand, but are regarded as parts of the supposed evolutionary "tree of life". Endless are the efforts made to fit them into ancestral series.

I have seen too much of this last process, however, to feel any confidence in it. * As I said

* Nor am I alone in feeling this distrust. "The ludicrous discrepancies" remarks Prof. W. B. Scott, "which often appear between the phylogenetic 'trees' of various writers ... have led many zoologists to ignore palæontology altogether as unworthy of serious attention ... What one writer postulates as almost axiomatic, another will reject as impossible and absurd" (Article on "The Palæontological Record" in *Darwin and Modern Science*, p. 189).

before, I am no evolutionist. At the same time, though, the subject cannot be ignored ; I am bound to admit that there actually is a certain amount of real evidence for changes of form, or splitting up of types, at least among existing creatures ; and I am compelled as a Bible lover to make up my mind *why* I reject evolution.

The fact then, which I wish to bring out in this chapter, is that the Bible, while insisting upon the literal Creation of all creatures during the Six Days, allows ample scope for their change, or splitting apart in the persons of their descendants, since those days. I am afraid that some Christians, who do not realize this, have given a handle to evolutionists by quoting the words "after his kind", in Genesis 1, as if they prohibited all idea of subsequent change. As I shall try to explain presently, I do not think that those words can be shown to have any such significance ; and to quote them as if they applied to our present day, only puts the Bible in a false position. Thus when changes, or splittings up of types are actually proved to take place now, the impression is encouraged that the Bible is disproved, and hence that evolution can be taken as "proved". Let us be careful, therefore, *how* we quote Scripture.

My own belief, after careful study of the subject, is that there is no discrepancy whatever between the statements of the Bible and anything that science can definitely prove. In the first place, there is really extraordinarily little actual change in forms that science can prove to have taken place in the known course of natural descent ; and to

obtain these proofs we have to turn to the zoologist, not the palæontologist. In other words, connections of types through descent can only be actually proved among *existing* forms, not *past* ones. We can suppose, if we like, that present conditions have continued for a very long time, but nobody can say for how long; and existing conditions themselves show us how little we can argue to descent from mere analogy. Thus all absolute proofs of descent, even to-day, depend upon our actually seeing things happen; nobody can even tell who was a man's own father, much less whether he is descended from some ancient celebrity, apart from historic testimony. *Science is powerless to establish descent apart from history.* History is the only source of direct evidence, and it is entirely missing whenever we deal with the remote past. From the moment that we pass beyond *historic* times—and all the more when we began to deal with fossils—we simply find, as Hugh Miller remarked long ago, "Things lying on top of things." *Proof* of descent becomes impossible. It is an important fact, therefore, which should never be forgotten by the Christian, that fossil series, as such, can never prove anything for evolution. *No fossil series, however perfect, can ever prove descent.* I have now studied the subject for many years, and I know that there is not a single fossil series which I could not at once pull to pieces as a "proof" of descent. Thus at least *five separate lines of assault* upon even the most perfect of such series are open to any one who chooses to question it; and the palæontologist is powerless to answer objections raised along any one of the five lines.

As a result of this inherent weakness of all fossil series, the best palæontologists (even when convinced evolutionists) are generally the most cautious of all people in accepting such series as proving descent. Let us take an instance in point: Perhaps no fossil series has ever created a greater impression, or been quoted more often as proving descent, than the famous "ancestry of the horse". Probably everyone has heard of it. In some form or another it appears in countless books, as demonstrative evidence of the evolution of the horse. Yet—and note this—while *lesser* people are accepting that series with such complete confidence, one of the greatest of modern palæontologists, Charles Depéret, rejects it altogether! He tells us that: "The *supposed* pedigree of the Equidæ is a deceitful delusion which . . . in no way enlightens us on the palæontological origin of the Horse" (*Transformations of the Animal World*, p. 105. The italics are his own). Similarly another eminent palæontologist, our own Dr. F. A. Bather, when referring to this same supposed ancestry of the horse, showed how little it had stood the test of expert criticism, and remarked that: "Descent, then, is not a corollary of succession" (Address before British Association; see *Advancement of Science*, 1920: *Geology*, p. 6).

In other words, this very series only serves to show how certain forms may succeed each other in the rocks, and seem to form an evolutionary sequence, and yet *not* be descended from each other! So what this series really proves is not the descent of the horse but the deceptiveness of fossils.

We see, then, that no fossil series is safe from attack by the most able evolutionists themselves; and the more perfect the series is, the more effective it may one day become for undermining the credit of all fossil series! Nor can we doubt that the remarks of the two palæontologists quoted above are fully justified, for yet another eminent palæontologist, Sir J. W. Dawson (who was *not* an evolutionist) put the whole thing into the simplest terms 30 years ago, when he pointed out that the inherent weakness of all fossil series was surely seen when the modern horse was traced back, by two equally persuasive fossil series, to *two entirely different origins!* (See his *Modern Ideas of Evolution*, p. 119. In Europe, the horse has been traced back to *Palæotherium*, in America to *Eohippus*.* Both series still have their advocates; and the advocates are seldom even agreed about the animals to put into each series. I have compared many supposed ancestries of the horse, and know that the only animal common to all is the modern horse itself.)

There are many other things that could be dealt with, but there is no space for them here. The five lines of assault upon fossil series would themselves take far too long to explain. The points already touched on, however, may perhaps help to

* "Both genealogies" remarked Sir J. W. Dawson, "can scarcely be true, and there is no actual proof of either. The existing American horses, which are of European origin, are, according to the theory, descendants of *Palæotherium*, not of *Eohippus*; but if we had not known this on historical evidence, there would have been nothing to prevent us from tracing them to the latter animal. This simple consideration alone is sufficient to show that such genealogies are not of the nature of scientific evidence."

show why I regard evolution, in the exclusive use of the word, as being both unproved and unprovable. If the Bible talks of the direct creation of types in the past, there is no way of disproving such creation. The opponent of Scripture is invariably driven, by the sheer inadequacy of facts, to base his case upon philosophical arguments rather than scientific ones. Often have I had it out with evolutionists; invariably, before I had been at them long, have they shifted ground from science to (whether they knew it or not) undiluted philosophy.

This is a significant fact, although we must leave the more particular discussion of it to a later chapter. If I mention it now, it is in order to show that while Zoologists have undoubtedly been able to prove that a certain amount of change of form can occur, given certain circumstances, in the course of genetic descent, it can be said of no man whatever that he has made belief in direct creation scientifically untenable. Thus belief that forms were directly created, yet created capable of some variation through genetic descent, would exactly meet all that science can actually *prove*.

Now this, to my mind, is exactly what the Bible itself does allow. If not, how are we to explain the fact that the Bible speaks only of the creation of *one* original human pair, and regards the Ethiopian as being quite as much descended from that pair as the Greek? The writers of the New Testament, who insisted that "all" nations of men were of *one* blood (Acts 17: 26), were not the people to leave out the Ethiopian (Acts 8:

27-39). In other words, if the writers of Scripture knew of the existence of even the most marked varieties (or "sub-species" as some would like to call them to-day, and I have even heard one palæontologist refer to them as distinct "species"!)* of the human race as we do, and still insisted upon a common origin for all, did not they themselves believe in a marked *splitting up* of the human race after its creation?

And if the human race could thus split apart, in the persons of its descendants, why not other races also? Indeed it seems to me that surviving creature races can, in full consistency with the Bible, be expected to exhibit a far *wider* range of variety than the human, since the most extreme human types mentioned in Scripture, the "Nephilim", a word rendered "giants" (in Gen. 6: 4 and Num. 13: 33), are said to have been exterminated for their wickedness. We are nowhere told that the most extreme animal varieties have been exterminated; therefore, they probably remain.

So I would here draw the reader's attention to Jer. 13: 33:—

"Can the Ethiopian change his skin, or the leopard his spots? Then may ye also do good, that are accustomed to do evil."

Given as this passage no doubt was, to impress a spiritual lesson, its structure at the same time does seem to imply that both the skin of the Ethiopian and the spots of the leopard are not original

* The small numerals refer to the longer Notes which will be found at the end of the text and before the Appendices.

characters but acquired ones. For it is only *as* acquired characters, which have now become permanent, that these features could be put into true parallel with sinful habits, and the challenge have full significance. Now this is interesting; for if both Greek and Ethiopian are descended from Adam, the question might well suggest itself: Was Adam white or black? This passage seems distinctly to imply that he was, at least, *not black*. Otherwise, why is some other race not invited to change its skin instead?

I was, therefore, interested to see, in a work *The Human Species* by so excellent an anthropologist as de Quatrefages (who was by no means concerned to support the Bible) how certain he was that the black skin, not the white or the yellow, represents a *late* character in the history of the human race. Evolutionists, trying to place the negro—on account of his prognathism, etc.—between men of other races and the apes, have often been inclined to regard his black skin as a “primitive” feature. De Quatrefages would not have this. Perhaps I may as well quote one of his remarks on the subject. Talking of Negroes, he says: “Among the most strongly characterized peoples belonging to this type the appearance has been noticed of individuals of a lighter colour, sometimes almost resembling the Whites in this respect, sometimes tending more or less to yellow, without presenting any of the phenomena of teratological albinism. These peculiarities of colour may be attributed to atavism. Now among no white or yellow race have facts been noticed which can be

regarded as reciprocal to the preceding." So he concludes his arguments by saying: "Nothing therefore authorizes us to regard the Negro race as having preceded the other two; and, on the contrary, the ancestors of the Negro were a race of a much lighter colour" (*Op. cit.*, pp. 241-242).

So the Bible seems to be justified by the facts; but it is modern science which brings out these facts.

Space will not allow me to deal with many other Scripture references to changes of forms either through natural agencies or by Divine Intervention. As a single type of the former I might instance the classic case of Jacob, who was convinced that he could alter the progeny of his cattle much as modern breeders claim to change theirs; and who is duly recorded as having succeeded (Gen. 30: 37-42). As a type of the latter I may refer to Babel, where the whole human race was said to be split apart instantaneously, into a number of families with different languages and, presumably, different organs of speech (Gen. 11: 1-9); and the effects of these changes are obviously regarded as being truly inherited by the descendants of each family. Although Babel is attributed to the direct Intervention of God, it is clear that the principle of the splitting apart of an original type, without creation *afresh*, is clearly involved and as directly allowed.

We see, therefore, that a rigid fidelity to an exact original type is nowhere postulated in Scripture—at least, outside the conditions of that first chapter of Genesis in which the words "after his kind" are found. For what I wish to point out now

is that those words *are only* found in the first chapter of Genesis, and appear as a command upon the *uncursed* earth, at the very same time that the "green herb" is given as their "meat" to all creatures—"to every beast of the earth, and to every fowl of the air, and to every thing that creepeth upon the earth" (verse 30). Now we know that the curse is represented as having changed the *latter* injunction—for the Bible writers certainly knew that many animals were no longer vegetarian in their own day; although they looked forward to the time when the Curse should be removed, and the lion again "eat straw like the bullock" (Is. 65: 25). So if the Command as to food could be changed, why not the Command as to reproduction? We see that, at least, analogy suggests that it *was* changed.

Let us, therefore, be very careful how we treat these words, actually addressed to an *uncursed* earth, as applying to our present, or CURSED one. Let us rather bear upon the cases of *change*, so clearly allowed in Scripture; for *they* carry the clue to the problem.

The clear-cut lines of an Edenic fauna have, on Scripture's own showing, been blurred and re-blurred* so often, by successive Curse and Judgment, besides the more gradual changes seen

* Note, in this connection, the remark of Prof. L. B. Walton, that: '(The) supposed progress made in the improvement of domesticated animals and plants is nothing more than the sorting out of pure lines, and thus represents no advancement' (*Science*, April 3, 1914).

How completely this fits the Bible idea that creatures were first perfect, before they were Cursed! If evolution were true, why should *improvement* lie in the "sorting out" of "pure lines", which must on any theory have *come first*?

by subsequent years, that it is natural enough, and no difficulty *to Scripture*, that scientists groping through a smitten creation fail to distinguish the clear-cut lines of an unsmitten one. The dog may, without troubling any Christian, be descended from the wolf—or *vice versa*—and both may have a common origin with the jackal and the fox. The whole cat tribe—from our domestic pet to the lion and the tiger—may also have both a recent and a common origin.* The only effect of such admissions would be, not to destroy the credit of Scripture, but to reduce the number of animals that Noah would have to take into the Ark!† (It is strange how one mistake leads to another, in troubling the servants of God; an unnecessary identification of “kind” with arbitrary morphological ideas as to “species” has led to a totally unnecessary difficulty as to how Noah could find room for all his types in the Ark. To my mind, no such difficulty exists.)

I would say, therefore, let us not indeed jump

* As Prof. Price points out, when discussing the same question: “The yak and the zebu of India, and the bison of America, would on this basis have to be surrendered, for it is well known that they will all breed freely with the common domestic cattle, as well as with one another . . . All of the dogs, wolves, and others of the *Canidæ* might thus be considered as fundamentally a unit. The cats (*Felidæ*) are well known to breed freely together, Karl Hagenbeck of Hamburg having crossed lions and tigers as well as others of the family”. etc., etc. (*Q. E. D.*, p. 71).

† Thus as Prof. Bateson remarks. “We may even be certain that numbers of excellent species recognized by entomologists or ornithologists, for example, would, if subjected to breeding tests, be immediately proved to be *analytical varieties*, differing from each other merely in the presence or absence of definite factors” (*Mendel's Principles of Heredity*, p. 284).

We have only to suppose that Noah was able to avoid the mistakes made by modern biologists: which is not so unreasonable, seeing that, according to the story, he was directly inspired and helped by God to achieve the necessary object.

at unproved ideas of change, but let us by no means fear whatever *is* proved. Let us remember that nothing of this sort is ever really going to contradict Scripture. The Bible gives ample scope for all such things. Actual evidence of rapid and great changes would, in fact, only tend to *remove* difficulties; * while nothing on earth is ever going to disprove the literal Creation of the first ancestors of all existing types. On science's own showing, all lines of descent go back to those vague fossil † times which may, for all we can ever *prove* to the contrary, represent not only one Creation, but actually Creation after Creation (as, indeed, was stoutly held by the fathers of our modern science of palæontology, whose works are still standards of reference for the *practical* student of fossil forms).

* Thus we are sometimes told that the differences between the Negro and the White are so great that, if we accept their common origin, we have to allow an immense period of time for these differences to have arisen. It does not follow. Mendelian experiments show that very great differences may arise in the most sudden fashion, and so imply no great antiquity.

"I may recall in this connection" remarks Prof. Morgan, "that wingless flies also arose in our cultures by a single mutation. We used to be told that wingless insects occurred on desert islands, because those insects that had the best developed wings had been blown out to sea. Whether this is true or not, I will not pretend to say; but at any rate wingless insects may also arise, not through a slow process of elimination, but at a single step . . . Formerly we were taught that eyeless animals arose in caves. This case shows that they may also arise suddenly in glass milk bottles, by a change in a single factor" (*A Critique of the Theory of Evolution*, p. 67. Cited by Price).

† Thus Professor G. H. Parker of Harvard University, writing an article on "Zoological Progress" in *The American Naturalist* for Feb. 1908, admits that the question of their origin cannot be settled by examining existing forms themselves. "It is plain" he says, "that the history of the animal kingdom is to be sought for not through ingenious speculations on the recent groups of animals, but by the persistent and patient exploration of the fossil-bearing rocks" (p. 121).

So the zoologist points us back to the palæontologist: while the palæontologist, like Sir J. W. Dawson, shows that fossil evidence for evolution is "not of the nature of scientific evidence"!

In regard to those fossil times, it is worth remembering that even Haeckel, that arch constructor of "pedigrees", realized in his less elated moments that there was not, and never could be, any proof that the fossil forms he strung together were actually connected in the ways he proposed. "All ideas" said he, "we can possibly form about the stem-history of any organism, even after the most critical investigation, are and must remain hypotheses" (*The Story of our Ancestors*, Jena, 1908, p. 6). "It is self-evident" he elsewhere admits, "that our genealogical history is and ever will be a fabric of hypotheses" (*Systematic Phylogeny*, Berlin, 1894—96, Vol. I, preface p. vi).

This is just what people forget: Evolution "is and ever will be a fabric of hypotheses."

Once more we find that Scripture has made ample provision for all that science has ever *established*.

VII

“RUDIMENTS” AND THE CURSE

WE have seen, then, that direct evidence for evolution cannot be said to exist. No amount of evidence that creatures can and do change would ever serve to disprove the creation of their first parents. The Bible itself shows that many and great changes have occurred since the events of Genesis 1 and 2; so it is useless to try and quote such things as incompatible with the Scripture scheme. The question of actual origins must, in any case, go back to fossil times; and fossil series are incapable of proving evolution.

The opponent of Scripture, however, has other lines of attack, and to the most impressive of these we will now turn. Eminent authorities like Huxley himself in the past generation, and P. C. Mitchell in our own, have remarked that, of all the arguments for evolution, the appeal to “RUDIMENTS” has been the most effective in shaking belief in Creation. That is to say, its opponents have attacked that belief with greatest success by pointing to the existence in all creatures of useless, noxious, or aborted structures which are more fully, or differently, developed in other creatures. Thus the “vermiform appendix” in man is held to be the *rudiment* of a larger structure found in the anthro-

poid apes;* the little pad of flesh in the inner corner of the eye is regarded as a *rudiment* of the nictitating membrane, or third eyelid as found in birds; the "pineal" gland in the human brain is held to be the *rudiment* of a third eye, such as is found in more developed state in certain lowly reptiles like the Tuatera (*Sphenodon punctatum*) of New Zealand. And so forth.

In other words, as direct evidence fails, the evolutionist tries to establish his case by a form of inductive argument, drawn from indirect evidence. He pleads, with much show of reason, that imperfect, aborted, or perverted structures are wholly incompatible with a perfect Creation, such as is described in the first two chapters of Genesis; and he claims that the appearances of such structures prove him right in accepting belief in a gradual evolution of types, during which structures have slowly adapted themselves, by the most protracted processes, to repeated changes of function.

The question, however, remains for consideration as to whether the evolutionist is right. In other words:—

(a) Is the existence of Rudiments really incompatible with Scripture? And,

(b) Is it really a proof of evolution?

* As the monkeys have no appendix, it is clear that the apes are out of series in this respect, man being more primitive than they. Indeed, an excellent anatomist like Professor F. Wood-Jones directly declares that man's appendix probably represents the original type from which the others were derived by "specialization"! (*The Problem of Man's Ancestry*, p. 33.) This is only one of very many facts which show that it would be easier to make out a case for the descent of apes from men than of men from apes.

In the first place, then, we may note the singular fact that cautious thinkers, from Huxley onwards, have themselves always treated the appeal to Rudiments with the gravest suspicion. It has always been the *less* clear thinker who has turned to it with confidence. As a typical instance of the confidence shown by an indifferent *thinker*, I may refer to the case of Mr. Darwin himself. Thus when Darwin proposed that the existence of "Homologies" (or similar structures) in different creatures was "utterly inexplicable" upon the theory of their separate creation, and Professor Bianconi took him up, showing (as Darwin himself admitted) that *all* the structures named by Darwin were "admirably...adapted for their final purpose", Darwin promptly dropped the whole question of *those* structures (i.e., the hand of a man, foot of a horse, flipper of a seal and wing of a bat), and switched off onto the subject of "Rudiments", pure and simple.

Now this, of course, raised an entirely different issue. Darwin's shift of ground betrayed his own feeling that it was *not* "similarity of pattern" that was really "inexplicable" by creation, but *uselessness* ;* not "Homologies" as such, but "Rudiments". That Darwin himself never frankly admitted this, nor even seemed to realize what his own shift of appeal implied—that after *dropping* the whole question of the Homologies he himself

* Similarly P. C. Mitchell remarks that if rudiments can be supposed to have any uses, there is no reason why, on the theory of Creation, they should not have been specially created (Art. "Evolution" in *Encyclopædia Britannica* 1910-11, Vol. X. p. 34). The whole appeal to "Rudiments" is based upon their supposed "uselessness".

had named, and flying to Rudiments, he afterwards returned to repeat his undefended assertion about the former—helps us, perhaps, to realize what a fuddled writer Mr. Darwin could, on occasion, show himself to be. It also shows how blindly he could trust himself to the supposed invincible appeal to “Rudiments”. (See p. 35 and note 56 to chapter 1 of the 2nd edition, reprint 1906, of his *Descent of Man*.)

Let us, therefore, remember that Mr. Darwin absolutely failed, when challenged upon his own ground, to give a single reason *why* “similarity of pattern” should not exist, even among the most diverse creatures, on the theory of their creation. He shifted ground, showing that his own whole case against creation was really based upon the existence, actual or supposed, of *useless* organs—and *that* is all we have to deal with.

I will not stop long here to point to the many reasons now offered by anatomists for doubting whether any structures at all can be safely regarded as useless.* Sufficient to say that even the vermiform appendix has its defenders in these days, while E. S. Goodrich declares that: “He would be a rash man indeed who would now assert that any part of the human body is useless” (*Evolution*, p. 68).†

Let us, however, waive all this. Let us assume that worshippers of Haeckel’s “Dysteleology”†

* Sir Arthur Keith remarks that “As our knowledge of the body has increased the list of useless organs has decreased” (*The Human Body*, p. 236).

† *Teleology* is the study of design and purpose. “Teleologists” are people who argue to the existence of God from the evidence of design in

are right in finding traces of the useless and even noxious in every animal and vegetable structure under the sun—What then? The battle for evolution is by no means won, as some gentlemen seem to think! Indeed all we have to do with such persons is to thank them for their information, and draw their own attention, in return, to the *third* chapter of Genesis. Is is really a wonderful chapter. Even at their own computation some 3,000 years before these people were born, provision was made for accounting, consistently with Creation, for the whole class of "difficulties" about which they make such a noise.

It is really an extraordinary thing that students—and especially critics—of the Creation account so constantly speak and write as if only the *first two* chapters of Genesis had to be taken into account, when considering nature as we find it to-day. Yet nothing could be further from the truth. The first two chapters simply describe an uncursed world; a world in which everything is found to be "very good", death does not exist, all creatures are vegetarian, and mutual strife and conflicting interests are unknown. Such conditions

nature. Haeckel, who opposed belief in God, sarcastically invented the terms *Dysteleology* for the study of *disproofs* of design in nature; under which heading he collected rudiments of every sort and kind, which he considered "alone sufficient to refute" belief in creation (*History of Creation*, Eng. ed., ii, 353).

Haeckel was not a very clear thinker. It is to Huxley's credit that, in reviewing Haeckel's book, he pointed out that appeals to rudiments "cut two ways", and were likely to help Haeckel less than he supposed ("The Genealogy of Animals"; *The Academy*, 1869). Had Huxley condescended to study the third chapter of Genesis, he might have seen that he could go a little further; for rudiments can only cut ONE way—against evolution—since Moses definitely provided for them in his creation account.

are absolutely unlike anything described in the Bible as existing *to-day*, when we are told that "the whole creation groaneth and travaileth in pain together" (Rom. 8: 22); they can be matched only by the prophecies regarding what is to happen when the Curse is removed (Rev. 22: 2-3). Our present world is no more (according to Scripture) the world of Genesis 1 and 2, than it is the Millennial world of Isaiah 11 and 65. It is under the Curse. And if we would understand what Scripture means by the Curse *as affecting animal and vegetable structures*, we must turn to Genesis 3.

Now it is certainly true that, in the severe economy of Scripture, only three organic structures are there mentioned as typifying the Curse; but the singular thing is that they are all three *remarkable by reason of abortion*, and the abortions themselves are essentially of a nature to introduce *degradation, perversion of function*, and *internecine strife* into the world. In other words, the very things in nature which are particularly quoted by sceptics as affording their most reasonable case against belief in a benevolent Creator and perfect Creation, and so as being incompatible with chapters 1 and 2 of Genesis, are the identical things for which special provision is made in chapter 3, in describing an universal Curse which was *superimposed* upon the whole creation!

Remarkable as these facts are, too, there is nothing particularly new about them. They have often been pointed out before. Pember, for instance, drew attention to them long ago. Nor were his arguments ever answered; and if they

have to be re-stated now, it only shows how constantly we have to remind ourselves of the permanent marvels of Scripture. Let us, then, rapidly go over the ground :

The first subject of the Curse is the serpent himself. The fact that he is said to be cursed "above all cattle, and above every beast of the field" implies that the Curse extends far and wide over the animal kingdom, though the serpent is the most affected by it;* and the first clause of the sentence upon the serpent itself shows, as Pember remarks, that it did not originally go upon its belly, and so *its whole structure must have been entirely changed*, and changed by way of *abortion* of limbs and extreme *degradation*.

Now any anatomist who will study the method of progression of a serpent and compare its mechanism with that of a creature which moves about on limbs, will (I think) agree with me that the writer of Genesis 3 could hardly have hit upon a more extreme case of modification, to quote as such. Yet how could he have been so sure, apart from Inspiration, that the serpent ever had limbs? Was he an advanced anatomist, to know of *our* reasons for thinking so? The choice of form was indeed a good one. All *other* changes of form, e. g., of vegetarian creatures into carnivorous ones, are comparatively small, and the indicated change in the serpent's form might well be referred to as "above" all other implied changes. The account stands four-square with nature as we find it.

And now as to the vegetable structures, thorns and thistles, which are also quoted as typifying the

Curse, I may simply repeat the remarks of Professor Balfour, as quoted by Pember:—

“When branches” said he, “are arrested in growth they often appear in the form of thorns or spines,* and thus thorns may be taken as an indication of an imperfection in the branch...That thorns are abortive branches is well seen in cases where, by cultivation, they disappear. In such cases they are transformed into branches. The wild apple is a thorny plant, but on cultivation it is not so . . .

“Again; thistles are troublesome and injurious in consequence of the pappus and hairs appended to their fruit, which waft it about in all directions, and injure the work of man so far as agricultural operations are concerned. Now it is interesting to remark that this pappus is shown to be an abortive state of the calyx, which is not developed as in ordinary instances, but becomes changed into hairs . . .

“I have thus very hurriedly stated to you what occurred to my mind as to the curse of thorns and thistles, and I have endeavoured to show that the spines and hairs are abortive, and, so to speak, imperfect portions of plants. The parts are not developed in full perfection like what may have been the case in Eden, and like what will take place when the curse is removed” (*Earth's Earliest Ages*, pp. 153-154).

* Similarly Dr. Marie Stopes, in her book on *Botany*, points out that “in the Cactus the leaves are all reduced to needle-like spines” (pp. 17, 18, 63). So we see that this peculiarly unpleasant plant need not have been created as it stands.

It is, as Pember goes on to remark (p. 155), deeply significant that our Divine Lord suffered Himself to be crowned with thorns, "so that even His enemies set Him forth as the great Curse-bearer; when He wore on His bleeding brow that which owed its very existence to, and was the sign of, the sin which He had come to expiate."

Singular, indeed, are these facts, and capable of wide extension. How well, for instance, do they fit the modern discovery that diseases are due to germs, and that these germs might, with very little modification, be conceived of as harmless! In other words, all the evidence shows that the things which the Bible regards as evil need not at all be regarded as *necessary* ingredients of nature, but can quite well be regarded as due to the preversions of things originally harmless and good.

But what a proof of inspiration it is in the ancient writer to provide, in a few incidental touches, in the course of a single chapter dealing with the history of man's Fall, a complete scheme, itself wonderfully true to nature, to allow for all that is incongruous in nature to a perfect creation!

People laugh at the talking serpent and the garden of Eden; but truly the foolishness of God is wiser than men! These simply worded, but truly superhuman, first three chapters of Genesis give a more perfect, and consistent, philosophy of nature than all the countless books of man that ever were written upon the subject; and they hopelessly outwit *Darwin*. Not only do they, by proposing two *opposed* factors in nature—perfect Creation and universal Curse—completely antici-

pate, by 3,000 years, all the difficulties which that illustrious, though misguided, gentleman thought to be "inexplicable", but their scheme is demonstrably superior to his. For a really useless rudiment is infinitely more fatal to Darwin's own explanation of nature than to the Bible's. Huxley had the wits to see this, though Darwin had not; hence the caution, to which I have alluded above, which Huxley always showed in dealing with "rudiments". Huxley, with his clearer brain, saw only too well that the more "useless" he called any structure, the *less* credible he made a materialistic explanation of nature! For while, say, a man with an incredibly marvellous organ of sight combined with a bothersome appendix, offers no anomaly whatever on the theory of a perfect Creation superimposed by a drastic Curse, he is simply *inexplicable* on any materialistic basis! Remember that there is no room for a Curse in Evolution, and the unconscious agents of the materialist cannot be supposed to discriminate as a Creator might. Whatever materialistic agent, therefore, produced the countless microscopic adjustments of the eye, could never have left the appendix as it stands; whatever left the appendix could never have produced the eye.⁴ All talk of "useless" organs disparages the whole idea that the agent of evolution could ever have effected the marvels of finesse attributed to it.

Thus it seems that the answer to both our questions, suggested above, must be in the negative. Not only is the existence of Rudiments in no way incompatible with Scripture, but it directly tends to confirm Scripture, while it is no proof whatever

of evolution. Indeed, a really useless organ (if such a thing exists) so far from supporting belief in Evolution, is its very worst enemy. It may sound paradoxical, but it is true nevertheless, that the only belief which a really useless organ can support, is a belief in literal Creation.

VIII

SEPARATE CREATIONS

I KNOW that some people will wish to ask questions after reading the last chapter. They will declare that even if evolution cannot be proved, either by direct evidence, or by induction from "Rudiments", yet there are many serious difficulties to be faced if we are to accept belief in Creation. Thus they will say that, while it is all very well to argue that the first three chapters of Genesis give us a wonderful explanation of nature as we find it round us to-day, we have yet to reckon with the problem of the fossiliferous rocks. For as Adam is only supposed to have lived a few thousand years ago, how are we to account for the undoubted remains of men found in rocks apparently hundreds of thousands of years old? And how are we to square with Genesis the fact that clear evidences of death, strife, and rudimentary structures are found as far back as fossil records go—thus apparently long before even the earliest men came into existence?

Well, these supposed difficulties are no more formidable than the others: the Bible has provided for them just as it has provided for those discussed in our last two chapters. Let us note, then, to start with, that the first clue in answer to this particular problem is to be found in the structure

of the opening verses of Genesis; for it is a notable fact, which has been pointed out times without number, that there is a a totally indefinite *gap* between the first two verses of Genesis.⁵ Nor is this all; for the language of the second verse further implies that it does not at all refer to a primitive condition of the world, but to a late and *ruined* condition.⁶

So we see, from the very beginning of Scripture, that we not only have ample provision made, between the first two verses of Genesis, to allow for the discovery of any required age of the earth prior to the creation of Adam, but we also have the clearest hint that this indefinite interval contained its own history—or histories—of sin and punishment, since it finally ended in a disaster of greater magnitude than anything which our own world of life has ever yet seen.⁷

What then becomes of the supposed difficulties? On Scripture's own showing, it is only natural that we should find traces of similar curses, and similar sufferings to our own, testified to in very ancient strata! On the other hand, the very fact that Scripture *has* provided for such things should serve to warn us against confusing the remains of our own world of life with those of former creations.* Let us particularly beware, therefore, of the danger of arguing from the evidences of very ancient forms of life, similar to our own, to the very great age of our own creation.

*Fossilization sometimes proceeds very rapidly, and some fossil forms may, upon any theory, belong to our own creation. Even this, however, only serves to accentuate the dangers of confusion.

The correspondences between those forms and our own may (as the fathers of palæontology stoutly held from the first) be purely analogical; and it is certain that we can never prove them to be anything else. "Descent" as Dr. Bather remarked, "is not a corollary of succession."

It seems then, that, on the Bible's own showing, we must keep our own world of life absolutely distinct from those that went before; and the discovery of former creations may find ready accommodation, both as to time required and as to penal character, in the special provision made between the first two verses of Genesis.

What, therefore, are we to say regarding these implied former creations? Scripture gives a few striking hints, but no details; so any complete philosophy regarding them must largely be formed independently of Revelation. The main point to note is the definite genetic cleavage which Scripture indicates between our own creation and those that existed before. Since it also implies that former creatures fell, as our own race has done, it seems obvious that former types (or, if creations have been progressive, types of the last creation prior to our own) may closely have resembled ours. If former creatures fell, then suffering and death, curse, rudiments and internecine strife, are as much to be expected in former creations as in our own.

In other words, I can see no reason whatever why I should let merely parallel phenomena in geology disturb me from noting *the marked agreement of Genesis 1—3 with nature as we find it*. If anyone wishes to show that these parallel pheno-

mena have anything to do with the case in the way that he supposes, then the very first thing that I demand of him is actual proof that these fossil forms are *genetically connected with the living*. In other words, I invite him to *prove* the one thing which every evolutionist invariably takes simply for granted, namely, *the continuity of life*. Without actual proof upon *this* point, all appeals to analogical phenomena in palæontology simply beat the air.

And who is to prove genetic continuity? Where are the proofs of it even to be looked for? Certainly fossils themselves can contain no evidence of it, for it seems obvious that identically similar forms might, upon the theory of their creation, have been created over and over again; so how could even the most perfect identity prove continuity as against creation? Indeed what we actually find is that the evolutionist himself, even upon his own theory, can never be sure that the similarities among his forms were not produced by convergences of different types, or migrations of collateral ones, which were in no way related as father to son! "The palæontologist" as Dr. Bather remarked, when discussing such uncertainties, "cannot assist at even a single birth" (*Op. cit.*, p. 7). In other words, nobody ever saw a single fossil "ancestor" actually being born of another; and yet we are asked to accept endless genealogies of which (admittedly) not one link in a million is *ever seen at all*! Everything is imaginary. And, what is more, the evolutionist is not only everywhere compelled to *imagine* the vast

majority of his "links", but he is generally unable even to guess what would be the connections if his own theory were true! Thus so convinced an evolutionist as J. A. Thomson sums up the matter by telling us that: "In regard to the origins of domesticated animals and cultivated plants, we remain in great obscurity. In regard to the actual pedigree of wild species we are in still greater ignorance" (*Heredity*, p. 137).

I could give many other quotations to the same effect; but this one is so complete, and the authority so good, that it must, for lack of space, suffice. "Great obscurity" is the best verdict which an eminent evolutionist himself can give, when trying to link up living forms with fossil ones. Where then, may we ask, is the actual proof of connection between them? The philosophical necessity for supposing such a connection may indeed be overpowering to some minds to-day, when defenceless infants suck in the unproven postulates of evolution with their mother's milk, but the absence of all *scientific* necessity for such belief should be obvious to anyone who will study, say, the life of Louis Agassiz, or the methods of Georges Cuvier. Were those men "unscientific" because they resisted evolutionary fancies to the end? Why, the best authorities on palæontology admit their justification to this day! "The genealogical trees we are able to draw up" remarks Depéret, "are subjective to the feeling of each observer" (*Transformations*, p. 114). In other words, we can believe just as much or as little of them as we like, for there is no actual proof of any of them.

It seems clear, therefore, that we can accept the Bible's statements about our own creation, without troubling about evidences of former ones.

* * * * *

This, then, seems to settle our first question. There was *at least* one creation before our own, and it ended under the effects of a *penal* disaster more complete even than the Deluge of Noah, since no survivors of any sort remained. Clearly, therefore, that creation *may* have contained human beings, and many of its last remains may be indistinguishable from the first remains of our own. The existence of human beings* in it would, indeed, only complete the analogy between its terminating disaster *and* the Deluge; for it was the wickedness of *man*, in our own creation, that brought about the Deluge, which exterminated so great a proportion of the world of animal as well as human life. Preadamic man, therefore, affords no difficulty whatever to Scripture. Indeed Pember, writing in days before very ancient man had yet been definitely found, confidently declared, from his study of Scripture alone, that the discovery of such remains was to be expected. Instead of affording an *objection* to Scripture, therefore, the discovery of very early man only goes to *confirm certain inferences* to be drawn from Scripture!

And now we have to discuss the remaining question, namely, as to how we are to square with Genesis the fact that clear evidences of death, strife, and rudimentary structures are found as far back

* I reserve further and more direct evidence that there actually *were* human beings in it, for discussion in a later chapter. I wish to let the very language of Genesis 1: 2 here speak for itself.

as fossil records go—thus apparently long before even the earliest men came into existence.

In the first place, then, (since this second problem, of course, takes us far back, beyond the last creation prior to our own; and so all direct touch between it and our own creation can no longer be expected), we should remember that Genesis can only be reasonably taken to represent an *extract* from history prior to the introduction of our own race. We can certainly expect it to contain all essential facts which directly concern ourselves *as sons of Adam*; but we have no business whatever to suppose that it is meant to be a complete cosmic account. Such an account would necessarily contain many things which do not in any way concern *our own* responsibilities to God; and we cannot, therefore, expect them to be revealed. Students of Scripture should never forget the *basic principle of revelation*, as declared by Moses: "The secret things", said he, "belong unto Jehovah our God: but those things which are revealed belong unto us and to our children for ever, *that we may do all the words of this law*" (Deut. 29 : 29). The purposes of Scripture are thus always *practical*, and are aimed at showing man what he himself owes to God, and what his own duties are in return.

If we now turn back again to the first chapter of Genesis, we see how this principle is exemplified there. The first verse alludes to the original creation of heavens and earth, apparently in order to show us that all things round us owe their ultimate origin to God; the second verse indicates

the subsequent ruined state of things, apparently because that is the state from which earth and heavens had to be redeemed for our own special benefit; but the whole account in between, which would explain *how* the heavens and the earth ever came to be in such a state, is missed out, apparently because it is *no direct concern of ours*. Nor indeed, under the circumstances, would it be.

If, then, some people are offended at this, and consider that the Bible should tell us about such things, we have only to retort in the pseudo-Christians' own words, that the Bible is "a *theological* text-book, not a *scientific* one", and the Bible "is not out to teach science".*

It happens, however, (in spite of the pseudo-Christians), that the statements of the Bible—even its incidental references—*are* in actual accordance with facts; and so we are sometimes able to gratify curiosity, even although the Bible never definitely panders to it.

Thus we have already seen how we can infer, from the very language of the second verse of Genesis, that *men* existed in the creation last before our own, and that they fell; indeed that their final ruin was accomplished by a judgment far greater than any that has yet overtaken our own race, since no survivors remained. Similarly as to the Devil himself. He comes before us as already fallen, at his very first appearance in Genesis; and it is through *him* that the first members of our own

* As I remarked before, in the first chapter to this book, this claim in itself is a perfectly true one; although loose thinkers are apt to quote it in impossible connections. I here try to show it in its *true* setting.

creation fell. *His* fall, therefore, appears to belong to the tragic interval between the first two verses of Genesis. There is nowhere else that it can so well be placed; and analogy with the history of our own race also suggests that it was through the seductions of the Devil that preadamite races fell. So *since* no details are given of his fall, we again see that Gen. 1 represents not a complete cosmic history but an extract from that history. We also see that the interval between the first two verses may indeed be crowded with many unrevealed histories, the possible extent of which simply cannot be limited.

That the fall of the Devil occurred *between* the first two verses of Genesis—i.e., *after the first* verse as well as *before the second*—we seem to find indicated in Job 38 : 7; for there, while describing the actual “foundation” of the earth (undoubtedly, therefore, in parallel with the events of the first verse of Genesis), the Almighty declares that “*all*” the Sons of God (i.e. Angels) shouted for joy at the event. Since evil joy could hardly be bracketted with good in this connection, it seems clear that the fall of the angels (elsewhere repeatedly referred to in Scripture) had not yet taken place. If the Devil was already in existence,* then, he was still unfallen. So note that we afterwards find him,⁸ undoubtedly in existence, and still *unfallen*, in a *pristine* Eden, described in Ezekiel 28 : 13. So note the peculiar characteristics of this early Eden ;

* Ezekiel seems to imply that he was created in the first Eden, just as Adam was in the last. If so, the lesser angels (or many of them) must have been in existence before him, just as lesser creatures were formed before man during the Six Days.

for they are utterly different from those which distinguish the Eden known to Adam in our own, or last, creation. The glories of that *pristine* Eden *are purely mineral ones*. Not one single word is spoken either of animal life, or of anything corresponding to that luxuriant vegetable life which so peculiarly marked the later Eden of our own first parents.

This, to a geologist, seems most significant. It means that Scripture defines both ends of the geological series as known to us: first, the primitive azoic rocks, devoid of all forms of terrestrial life; and last, the perfections in every form of terrestrial life, of our own creation. Scripture confirms that a (terrestrially speaking) *lifeless* Eden, whose glories were of a purely *mineral* character, came first, and an Eden such as would befit our own world of life came last, in the history of our world. It thus allows for all possible gradations of successive creations in between. Also, by placing Satan, as unfallen, in that *pristine* Eden alone, and implying that it was *there that he fell*, it supplies the essential *first cause* for consequent evidences of Curse, Strife, Death, and Suffering, in all succeeding creations, from the lowest upwards.⁹

How animals become involved in Judgments on sin, when man is not present, we are not told. It is, of course, no business of ours. What we do see, however, is that even animals are not treated in Scripture as being wholly irresponsible creatures. The actual beast—the animal serpent—seems to have been seduced before it was used as the instrument to seduce Eve; and the animal creation

seems to have been cursed for the *serpent's* sin, since it was the *earth* that was more especially stricken for *Adam's* (cf. Gen. 3 : 1, 14, 17, ff. ; 5 : 29 ; 8 : 21 ; etc.). God's Covenant, also, is with beast as well as man in Gen. 9 : 16 ; and we find that the beast which slays a man is to be treated exactly as a human murderer is (cf. Gen. 9 : 5-6 ; Ex. 21 : 28-29, 32).¹⁰ Whatever we may think about such things, it is clear that there is *nothing incongruous to Scripture* in geology showing us the remains of creatures who suffered apart from *human* transgression. Let us remember, therefore, that while vertebrate life *may* not be represented in the earliest fossiliferous rocks, we find some of the very highest representatives of *invertebrate* forms of life. How they became involved in transgression we certainly are not told ; but there is no insuperable gulf between the problem of *their* seduction and that of our own serpent, the details of which we are *also* not told. Thus while the Bible is silent as to the details of all Falls but our own, it *allows* for every type of Fall that it may be necessary to postulate, in order to reconcile Genesis with geology !

Since Scripture allows for these things, then, who can prove a discrepancy ? ¹¹

IX

THE DISASTER

I HAVE now tried to show how I, as a geologist, can accept the Bible account of Creation in face of the more popular theories of nature current to-day. I hold that the opposed factors of Creation and Curse explain the anomalies of existing nature round us in far more perfect fashion than any other factors possibly can, and should not be lightly discarded in favor of the latter. If it be objected that the Bible interpretation of nature can hardly be held to apply, since the fossiliferous rocks bear witness to the fact that similar sufferings and curses to our own must have existed at a date far anterior to that of Adam, I reply that the Bible age for the earth is absolutely unlimited, and the second verse of Genesis clearly implies that at least one former Creation had been wrecked before our own was brought into existence during the Six Days. Besides this I very well know, as a geologist, that fossil series are incapable, in themselves, of proving genetic connections; and I also know that the continuity of life between our own world and the fossil one, so universally taken for granted to-day, has simply to be assumed, for there is no way of establishing it. If the Bible denies that continuity, it contradicts nothing that science can *prove*.

A very real difficulty, however, will here occur to some, who will probably say : " But what of this break in life which you suppose to have taken place between our present world of nature and former ones ; must it not be regarded as taking the form of a most terrific convulsion of nature ? You are bound to admit that the wording of the second verse of Genesis, together with the events of the first three Days, would compel us to postulate, upon your understanding of the Chapter, a world-wide *physical* catastrophe between our own Creation and the last one prior to it. Have you found world-wide traces of such a catastrophe ? And if not, how do you get over the fact ? "

Now questions like these are obviously well-founded. The difficulty is, at first sight, a most formidable one, for it is only too clear to a geologist that no great *physical* break seems to lie between our own creation and fossil ones ; and yet, if the events of the Six Days are to be taken (as I believe they must) as describing the restoration of a *ruined* earth,* then such a break is most certainly indicated by them.

I do not suppose that anyone could have felt the force of this difficulty more acutely than I have done ; and I was long ago compelled, in consequence, to make a special study of this particular

* I do not mention it in the text, but it is interesting to Bible students to see what a close analogy exists between the events of the Six Days and the *Redemptive* methods of God where sinners are concerned ; a fact which seems strongly, if indirectly, to confirm the " restoration hypothesis ", since the world of Genesis 1: 2 has to be put in parallel with *ruined* man.

A very full treatment of the analogy between the Six Days' works of Gen. 1, and God's Redemptive dealings with fallen man, is given by Philip Mauro in his book *Man's Day*, pages 35 to 86.

problem. As a result of this study, however, I now not only insist upon the "restoration hypothesis" as the only one consistent to Scripture, but I also claim the literal truth and marvellous consistence to physics of the descriptions in the early verses of Genesis; and I further deny that any recognizable trace whatever of the disaster need be found in the rocks!

Such statements, of course, will require a good deal of justifying, and the whole of this chapter will be required for the purpose. Indeed, it will be very difficult to compress so big a subject into a single chapter! I may say however, to begin with, that the key to this particular problem seems to lie in the fact that *the sun's light is withdrawn between the first two verses of Genesis*. Once grant that proposition, and everything else fits into place in the most remarkable manner. Let us therefore first look at the Scripture indications as to the *fact* of this occurrence, and then we will consider its *consequences*.

THE FACT

Now the fact that the sun's light was withdrawn at this point was suggested long ago by Pember,* and others have shown that the complete "darkness" of Gen. 2: 2 is foreign to the *pristine* creation of Job 38: 4-7, where the morning stars, at least, are found to be already in existence, and presumably shining.† That this darkness was due to a *with-*

**Earth's Earliest Ages*, p. 81.

†This passage, which clearly indicates the existence both of the stars and of the "Sons of God" (i.e. the Angels) before the earth, can be put in parallel with Gen. 1: 1, which also clearly refers to the ORIGINAL Creation, and similarly mentions the "heavens" before the "earth"; but it cannot be put in parallel with the events of the Six Days, which seem to represent something quite different and altogether subsequent.

drawal of the sun's, and other lights, appears also to be indicated in Jer. 4: 23-26, which is rendered by Driver as follows:

23. "I beheld the earth, and, lo, it was *tohu va-bohu*: and the heavens and they had no light.
24. "I beheld the mountains, and, lo, they trembled and all the hills moved to and fro.
25. "I beheld, and, lo, there was no man, and all the birds of the heavens were fled.
26. "I beheld, and, lo, the garden-land was a wilderness, and all the cities thereof were broken down before Yahweh, even before his fierce anger." (*The Book of Jeremiah*, pp. 23-24.)

Now this is the only other passage in the whole Bible in which the identical words "*tohu va-bohu*" (rendered "without form and void") of Genesis 1:2 reappear; and the connection here is with a wrecked and ruined world, which has been the habitation of man, but whose *heavenly lights have been withdrawn* under the judgment of God. So if this passage does nothing else it clearly shows, as Skinner himself allows (*A Critical and Exegetical Commentary on Genesis*, pp. 16-17), that the "safest" way of regarding the 2nd verse of Genesis is to take it as representing a "darkened and devastated earth, from which life and order have fled".* We could hardly, therefore, have a

*Even Driver who still clung to the illogical "chaos" interpretation of Gen. 1:2, had to admit that the words *tohu va-bohu* in Jeremiah's

better warrant for so taking it. If, as a critic like Skinner admits, this view is the "safest", it is surely the one which cautious exegesis should accept before any other!

It seems noticeable also that this doctrine, that the darkening of the sun is a supreme mark of God's anger, runs right through Scripture and appears to be integral to it. For not only is it laid down as a general principle, in Job 38: 15, that "from the wicked their light is withholden", but we find the same thing recurring over and over again in the prophecies regarding the coming wrath of God. Thus Isaiah, Ezekiel, Joel and Amos all prophesy the darkening of the sun during the coming Day of the Lord; we find the same thing in our Saviour's own prophecies about His Second Coming; and it is prophesied again repeatedly in the Apocalypse. The darkening of the sun, then, seems to be integral to the greater demonstrations of God's anger; and it seems to be a deeply significant fact that when our Divine Lord took upon Himself the wrath which our sins had earned, the sun was darkened from the sixth hour of the day. (Remember that this was at a time near the full moon, when an eclipse would

vision "suggest the idea of return to primeval chaos" (*Book of Genesis*, p. 4). On the face of it, this seems to give his case away; for if we could thus "return" to primeval chaos, how could we ever be sure that the chaos was really "primeval"?

In any case, there is no escaping the fact that Jeremiah uses the exact terms to describe a *ruined* world, as are used in Gen. 1:2 to describe the state of things on earth just prior to the Six Days.

(It is worth remembering, too, as Skinner points out, that *chaos* is a Greek conception, not a Hebrew one. Its application to Gen. 1:2 seems wrong upon every count.)

not be possible.)* Indeed, so far as we can see, it is only because He did die for us, that this judgment is never more than partial in the history of our own creation.

That other creations, however, have suffered this judgment to the full, seems to be indicated not only in Jer. 4 as above, but also in Psalm 104 : 29, where the words "Thou hidest Thy face, they are troubled . . . they die", seem to afford a poetic-literal reference to this type of disaster. It is true, of course, that the sun's face is certainly not God's, but as our Saviour remarked that God causes His sun to rise on the evil and on the good (Matt. 5 : 45), the extinction of the sun would be the visible mark of the cessation of all God's further favours—and it would naturally accompany such a cessation. If we turn, also, to Job 9 : 4-7, we will find it directly declared that at least one creation has actually suffered the extinction of all its heavenly lights. Pember† renders the passage as follows :—

"The Wise in heart and Mighty in strength,
Who hath defied Him, and remained unhurt ?
Who displaceth mountains, and they know not
That He has overturned them in His wrath :
Who maketh the earth to tremble out of her place,

*Note, too, that this darkening of the sun, like every other penal one in Scripture, is attended by a great *earthquake* and other terrestrial disturbances which would by no means necessarily accompany an eclipse. Modern astronomers, however, have found that disturbances, such as "sun-spots" within the sun's light-giving envelope, are invariably accompanied by magnetic disturbances on earth. Dr. Wallace points out that "variations in terrestrial magnetism follow them with great accuracy" (*Man's Place in the Universe* p. 87). It seems singular that the Bible always indicates an apparently similar association of phenomena.

† *Earth's Earliest Ages*, p. 82.

So that Her pillars rock to and fro :
 Who commandeth the sun, and it riseth not,
 And sealet up the stars. "

Note that the question of the second line shows that the reference here is to *historic* events, not future ones. *

Thus we see how Scripture hangs together. The whole structure of the second verse of Genesis shows that it does not describe an *original* but a *ruined* state of the world (as pointed out in the last article and its notes); Jer. 4 confirms this, and also shows that this ruined state was correlated with a "darkness" which was also not primeval, but which the "safest" exegesis would explain as due to a *withdrawal* of heavenly lights; and Job, while discussing historic judgments by God, gives us directly to understand that this very event has actually happened in the course of the history of this world.

Now as this certainly has not happened during the course of our own race, the disaster can only have befallen some *previous* race which defied God. In other words, this withdrawal of all heavenly lights can only be placed *between the first two verses of Genesis*.¹²

Is there then such an intimate connection

* This is not only clear from the context, but examination also shows that the passage cannot, in any case, be regarded as prophetic. Thus the events described by Job, while far too terrible to be matched by anything which has yet occurred in the history of our own race (i.e. *since* the Hexaemeron), are not nearly drastic enough to be put in parallel with the greater events yet to come. Thus they only talk of the earth being shaken out of her place, not destroyed by fire; and the heavenly bodies are merely sealed up, and neither consumed nor finally dismissed (cf. Rev. 20: 11; 2 Peter 3: 7-12). These events, therefore, can only be placed *before* the Six Days.

between this *withdrawal* of the sun's influence, and the ruined condition of the earth of Gen. 1: 2, as I have declared to be the case?

ITS CONSEQUENCES

We have to ask ourselves four questions :—

First : Would the withdrawal of the sun's radiations lead to the extinction of life implied by the works of the 3rd, 5th, and 6th days ?

Second : Would it bring about the physical state of things on earth described in the second verse of Genesis and implied by the works of the first 3 days ?

Third : Would the process of restoration involve the phenomena of the first 3 days ?

Fourth : Would the form of catastrophe avoid the geological " difficulty ", i.e. would the disaster be such, in spite of its magnitude, as to leave no distinctively *abnormal* geological traces in the rocks ?

I think it will be agreed that there must be something singular about the structure of Genesis 1, if all four answers prove to be in the affirmative. Whether we accept the Bible record or not, the fact will remain that Scripture will have indicated a mechanism capable of effecting the required extinction of life upon earth; it will have stated its resulting phenomena in true relation to the physical consequences of such an event; and it will have surmounted geological difficulties which

have been regarded as insuperable for nearly a century.

1. THE EXTINCTION OF LIFE

In the first place then, let us repeat Pember's quotation from one of Herschel's *Familiar Lectures on Scientific Subjects* :—

"In three days," said Herschel, "from the extinction of the sun there would, in all probability, not be a vestige of animal or vegetable life on the globe; unless it were among deep-sea fishes and the subterranean inhabitants of the great limestone caves. The first forty-eight hours would suffice to precipitate every atom of moisture from the air in deluges of rain and piles of snow, and from that moment would set in a universal frost such as Siberia or the highest peak of the Himalayas never felt—a temperature of between two and three hundred degrees below the zero of our thermometers."

Thus one of the first results of an extinction of the sun would be the covering of the earth's surface with a universal mantle of ice and snow; the precipitation, in frozen form, of almost every atom of moisture in its atmosphere at the moment. All the higher forms of life, too, would be destroyed at once in this sudden appalling cold, which would kill them, as Herschel goes on to say, as effectively as boiling water would.

Bacteria and seeds, however, would probably not, as we now know, be killed off at once. They exhibit, indeed, a surprising power of resisting extremely *low* temperatures. Some experiments, however, have indicated that this power is by no

means absolutely indefinite; * and if a *tohu* period lasted, as it well might, without assignable limit, it is unlikely that any life would be found to survive it. As M. de Candolle has pointed out,† seeds do not retain vitality indefinitely, even under the best possible conditions for their preservation; and the extraordinary sterility of regions once occupied for long by ice, has been remarked on by many observers.‡ On land, therefore, the great cold would probably in the end prove fatal to even the humblest and most tenacious forms of life.

In considering the case of deep-sea life, however, matters become more complicated; for the great cold would not there be applied so directly to the living organism as on the surface of the land, although its indirect effects might be no less fatal. Speaking generally, then, we may say that assimilating *vegetable* organisms can only live in the sea to the depths at which they are still able to receive some benefit from the sun's rays through the waters. This depth varies from about 200 metres in the Antarctic, down to some 350 metres in the brighter tropical waters. At greater depths than these such organisms cannot live, owing to the almost complete darkness.

* Thus certain seeds frozen by Messrs. Brown and Escombe, for about 5 days in liquid air, were affected by a "certain inertness" from which they were, however, able to recover. A freezing for 5 years (not to mention 5 centuries or millenniums) might have affected them with an inertness from which they could never have recovered. Similarly Mr. Harold Swithinbank found that "very prolonged" exposures to liquid air modified the virulence of the tubercle bacillus. What is "very prolonged" for a laboratory test is, of course, a mere nothing in regard to the possible duration of a calamity such as we are considering. (See *Enc. Brit.*, Vol. 16, Art. "Liquid Gases", for the above references.)

† *Origin of Cultivated Plants*, p. 362

‡ For a discussion of this matter, see *Geol. Mag. N.S.*, vi. 420.

This darkness, however, does not in itself prohibit the continued existence of *animal* plankton life; and Hertwig informs us that even at the greatest depths (9,400 metres, or $5\frac{1}{2}$ miles, we still find not only bacteria but also "Hexactinellids, Crinoids, certain starfishes and sea urchins" (*Lehrbuch der Zoologie*, p. 155). These abyssal creatures are nourished, according to Steuer, by "the steady rain of dead bodies from the upper layers" (*Planktonkunde*, p. 371). Thus the creatures of lower depths are dependent for their food upon the existence of those above them; and the diminishing animal life found by Steuer below 800 metres is apparently to be explained by the diminishing food supply at lower depths, owing to the fact, as Joly points out, that dead organisms tend to disappear before they reach the lower bottoms, owing to the ever-increasing pressure and dissolving powers of the waters through which they have to pass (*Radioactivity and Geology*, pp. 119-120).

If, then, the sun's radiations were withdrawn, what would happen? It seems certain that the vegetable life of the upper waters would soon be entirely destroyed. This might, indeed, produce at first a deluge of food, with which the animal life of lower waters would probably be unable to deal; but there would be no more after that. It seems impossible that assimilating animal organisms could continue their existence indefinitely under such conditions.

But food is not the only necessity of life for which animals in the sea depend upon the veget-

able plankton, since they also (at least, in enclosed basins) receive their supply of oxygen from the activities of vegetable organisms. In areas not enclosed, the lower waters are also aerated by the passage downwards and across the ocean bottoms of the cooler surface waters from the poles. Once however, the vegetable plankton activities were cut off by the cessation of the sun's rays and the seas completely frozen over by the same catastrophe, all further aeration of the lower waters would become impossible by either method; and that alone would make the final extinction of all assimilating animal life a certainty.

Besides this, there are other effects that would set in—e.g. from the very stagnation of the waters—which we cannot stop to discuss here, but which would tend to hasten the end, and make the destruction of all but bacterial life a certainty.

Finally we have to consider the increasing *salinity* of the sea itself; for "when salt water freezes," says Sir John Murray, "many of the salts in solution are left behind in the brine, so that the salinity of the water from which the ice has been formed is increased" (*The Ocean*, p. 51).^{*} If this process were carried out to an extreme degree, it would produce a state of affairs in which

^{*} Experiments have shown that when sea water freezes "It is only the water that freezes; the dissolved salts are excluded in the process in a regular order according to temperature . . . After long continued frost the last of the included brine may be frozen and the salts driven out in crystals on the surface" (*Enc. Brit.*, Vol. 19, p. 985). The salts driven out to the lower surface are thus added to those of the waters beneath; and as the ice increased in thickness from above downwards, it would, later on, be to the lower surface that *all* the salts were driven.

even bacterial life itself would become impossible! *

Thus a great freezing of sea water would, it seems, finally prove fatal to every kind of life within it; the extinction of the sun would exterminate marine life as effectively as it destroyed life on land. ¹³

Even, therefore, if Scripture demands a complete destruction of all life on earth, and gives only the extinction of the sun as the means for effecting that destruction, we cannot say that the means would be inadequate to the end. If the sun's light were withdrawn for an indefinite period, the great probability is that *no life whatever could survive on earth*.

It seems, therefore, that the answer to our first question must be in the affirmative.

2. THE PHYSICAL EFFECTS

We have now to consider the actual physical effects more closely. We have seen something of these from the fact that, as Herschel said, one of the earlier results of the extinction of the sun would be the precipitation of all water vapour present in the atmosphere, in frozen state upon the surface of the ground, over which it would thenceforth lie as a permanent mantle of snow and ice. But matters would not stop there, for this removal of all moisture from the air would itself involve the ultimate starvation of every body of water moving from land

* Thus the Dead Sea, which is about six times as salt as ordinary sea water, apparently contains no animal life whatever; the existence even of occasional traces of bacterial life being unconfirmed (*Enc. Brit.*, Vol. 7, p. 897, Art. "Dead Sea").

to sea. So, as the cold continued and increased, all streams and rivers would inevitably come to a final dead stop, being frozen both from their sources and in their beds. And, ultimately, the oceans themselves would freeze over. We seem to find some such calamity pictured in the words: "The face of the deep is frozen, and the waters are hid as with a stone" (Job 38 : 30). The whole world, in fact, would be reduced to a condition now faintly pictured by our present polar regions: so it is interesting to remember that Job refers to the latter as *tohu*, when he says that God stretches out the North over the *tohu* (26 : 7). He shows, therefore, that the word *tohu*, of the second verse of Genesis, is perfectly *applicable to a FROZEN world*: a point of peculiar interest to our present investigation.

Now it will not be possible to pursue this subject into great detail in a short article. There are so many factors involved, in considering what would happen if the sun's radiations were withdrawn, that we could not, in such small space, refer to them all. Nor does it seem to be necessary to follow the subject into many particulars. The general conclusions may be stated as follows:—

The surface of the land would tend to contract as it cooled, and this might produce numerous cracks upon it. That these cracks would be very great, however, cannot be affirmed, since the earth's surface possesses a certain amount of elasticity, and is already under great compression due to its own weight; so the contraction of the crust might only tend to reduce this compression. Besides this,

the depth to which the great cold would penetrate into the *solid* parts of the earth might not be very great, for several reasons. So it seems that we would probably have intense frost upon the surface of the earth, decreasing rapidly as we got below that surface. Numerous cracks might be formed, but they would not be likely to be very large ones ; and as there would be no geological action whatever during the time that the extreme cold lasted, the cracks would remain permanently unchanged, and thus simply close up again when normal conditions were restored, and be indistinguishable from cracks which are everywhere found in the rocks.

Water, however, would everywhere expand upon freezing. As the oceans froze, their surfaces would rise, and also bear heavily against the shores of all continents and islands. Where these were shelving, the ice would over-ride them and invade the land, at first very rapidly, and afterwards more slowly. Where the coasts were steep and rocky, the ice would perhaps be forced back upon itself. Mountains of ice might thus be formed, here and there, upon the ocean surfaces, which would also mount ever higher and higher, the deeper the waters froze.

Meanwhile, as the earth's crust has less specific heat than water, its surface would tend,* at first,

* This might, for some time, be counteracted by the disturbances on land following on the sun's extinction, as described by Jeremiah, who apparently describes the onset of the calamity. Thus the earthquakes, etc., of which Jeremiah speaks, would induce and for a time maintain a certain amount of heat in the land ; so the sea might at first cool the more rapidly, and the currents of air be at first landwards. This, however, probably would not last long ; and its only effect would be to pile up more snow, etc., on the land.

to cool more rapidly than any sea ; and so there would soon be tremendous winds blowing from all land surfaces towards the seas. These very winds, however, would themselves tend to level down the surface temperatures of the world, which would finally become very uniform and very low.

The final surface temperature of the world, however, would probably never quite touch that of interstellar space (although it would approach very near to it) since the earth has certain sources of heat within itself. Good authorities have differed considerably in their ideas as to what the surface temperature of the earth would be if the sun's influence were withdrawn ; estimates vary from $-150^{\circ}\text{C}.$ to $-252^{\circ}\text{C}.$ We probably find the safest estimate in the words of a modern authority, Prof. W. B. Wright of the Geological Survey of Ireland, who says :—

“The temperature of the earth's surface is largely maintained by the sun's radiation. If this was removed it would fall nearly to the temperature of space, which is very little above absolute zero. It would be quite justifiable to say that the temperature of the earth is maintained by the sun $400^{\circ}\text{F}.$ above what it would have been if the sun were absent ” (*Quaternary Ice Age*, p. 314).

Now 400 Fahrenheit degrees correspond to 222° Centigrade ones ; and as the records of L. Teisserenc de Bort show us a mean ground surface temperature of $6.9^{\circ}\text{C}.$ for Europe (which itself strikes a mean between Arctic and Tropical conditions), a deduction of $222^{\circ}\text{C}.$ from this would

bring us to between -215°C. and -216°C. But at just about this point, or at -216°C. , it has been found that air becomes not only liquid but solid, under a vacuum of 14 mm. (*Enc. Brit.*, Vol. 16, Art. "Liquid Gases", p. 750). So as the pressure of the atmosphere at the earth's surface is 76 cm. of mercury, this means that at about the temperature reckoned by Dr. Wright as a reasonable consequence of the withdrawal of the sun's influence, some 98% of our atmosphere (or all but 14/760ths of it) would not only have liquified but become solid !

So without going into futher details, which would only become technical and wearisome, we can sum up by saying that, if the sun's radiations were withdrawn, there would first be a wholesale precipitation of the moisture contained in the air, in deluges of rain, hail, and snow, which would everywhere remain as a frozen mantle over the land. All streams, rivers, and oceans would also congeal—the ocean ice partly over-riding the land. All animals and plants would be killed, whether on land or in the seas ; the carcasses of those that died on the land being held immovably in position where they perished (much as the bodies of mammoths are preserved in the frozen soil of Siberia to this day), while those that died in the sea would be heaped together in shambles at the ocean bottoms, or locked in the freezing waters before they got there. Sea and land would be cased in ice ; and the atmosphere itself would finally congeal on top of this. The earth would then roll on through space in utter darkness, ruined and desolate, with

all its processes both of life and of geological action totally suspended.

And now how does this compare with Genesis 1? We have seen how verse 2 shows us an earth become "worthless and empty", with "darkness" over the face of its deep. Whether its waters are "hid as with a stone" or not, by being frozen over, we are not told; but it seems quite possible, for the same word *tohu* is used of our present North polar regions. We also find that this world has no proper atmosphere (Hebrew *rakya* rendered "firmament" by our translators)*, for that has to be prepared on the second day. The land is also covered with waters in some form, which have to be drained off on the third day. This land, however, is not itself damaged, † for no work has to be done to it beyond clearing it of those waters.

Do not the two accounts match, seemingly, to a hair?

It appears, then, that the answer to the second question must also be "Yes".

3. THE PROCESS OF RESTORATION

We now come to the third question: Would the process of restoration involve the phenomena of the first 3 days?

This will not keep us long; for an earth reduced to such a state as we have seen would require first to be thawed. But when heat began to return to it, then the atmosphere, as being the

* I cannot stop here to discuss the puerilities of Driver upon this point.

† Much less *unshaped*, as the "chaos" theory demands.

most volatile element, would be the first to resume its normal state; and before the thaw was completed, a certain amount of water-vapour would have risen into it. The completion of the thaw would see the land drained and dry.

Now this is very much what is said to have happened. We cannot indeed say what the light of the first day was; it was obviously miraculous;¹⁴ but presumably it was a manifestation of energy of some sort, and so might well precede the more concrete evidences of returning warmth to the earth. So note how, *after* the appearance of light (vv. 3-5), and *before* any other physical change takes place, the *atmosphere comes into being as such* (vv. 6-7), and at once begins to take up water-vapour from the elements below, thus dividing between the waters "above" and "under". Finally the *whole mass of waters overlying the land comes into motion*, and pours off into the sea basins, exposing the "dry" land to view (vv. 9-10).

Here too, then, it seems that there is a remarkable concordance; so the answer to our question must again be "Yes".

4. THE TRACES IN GEOLOGY

Our last problem now faces us, regarding the marks which such a disaster would leave in the rocks. It is really hard to imagine what traces we could find that would be specially recognizable as such! It is possible that some boulders might be carried inland when the frozen sea over-rode the coasts; but these would be comparatively very few, for there would be only one invasion, and no

continuous action. Besides this, the land itself would be protected to a great extent by the waters already frozen on its surface, over which the invading ice would simply tend to slide. *All geological action would be suspended.* Rivers would be congealed in their beds, and the dead creation frozen into place where they perished. Some weathering of stone surfaces there would be, owing to the freezing of all water—some slight formation of mould—but only such as a single great frost might accomplish. Some of this mould would be carried off to sea when the thaw set in; but it would be indistinguishable from deposits due to other causes.

On the contrary, however long the *tohu* period lasted, it seems that nothing would be produced to mark it; even chemical action being suspended among the surface deposits, where the cold would be most extreme.* Thus as soon as the thaw set in, the rivers would simply resume their former courses and denudations, at the points where they had left off, exactly as if nothing had happened; and the same might be said for erosions by the sea. Indeed, the first remains of the new fauna and flora, by mingling with the last remains of the old, might even make it appear that the two sets of creatures had been contemporaries, as they would be found side by side in the same sediments!

So far as we can see, then, there might be absolutely NOTHING in geology to mark the fact of this disaster, beyond the possible differ-

* Thus even the strongest acids will not act on metals at -200° C.
M.S.

ences between the fossils themselves—exactly as appealed to by the older palæontologists!

Thus it seems that our final answer must also be “Yes”; and this is surely rather remarkable when we remember that the idea of “separate creations” has been challenged so confidently, for three generations, owing to the supposed proofs of the “uniformity” of geological processes.¹⁵ The *Bible* disaster can cut through any part of even the most perfect scheme of uniformity!

X

"CONVERGING" LINES

THE foregoing facts are surely worth noting.

Unless the Bible had been Divinely inspired, how could it still so perfectly accommodate itself to all that science has discovered during the 3000 years, and more, that have elapsed since its earliest chapters were written? Note, too, the significant way in which the Bible does accord with nature, for it accords after the manner of true genius, by affording *key touches* to explain the greatest

Thus the doctrine of man's Fall is made the *key* to all nature as we find it to-day; it explains, through the Curse, the existence of everything in nature which is foreign to an ideal Creation, such as we instinctively attribute to the perfect JEHOVAH. Indeed it offers, through this key, a more perfect explanation of the *opposed structures* in nature (such as the eye and the appendix) than all the attempts of natural man have ever succeeded in affording. The simple hint, too, as to the withdrawal of the sun's light between the first two verses of Genesis, is found to afford the most perfect *key* for correlating all the different accounts of Creation in the Bible, besides bringing out the significance of its hints about world catas-

trophy, and the significance of the first 3 Days' works—which are all thus turned from seemingly arbitrary enigmas into a perfect anticipation of the knowledge of modern physics; and they also combine to provide a perfect scheme for allowing of all the recently discovered facts as to fossil creations, together with any amount of apparent merging of our own creation with them, without in the least affecting the perfect distinction of our own!

Belief, therefore, is not only possible, it is *reasonable*; and the child of God will ask no more when he remembers how our Lord Himself took the Old Testament. Those who clamour for *final* proofs will never be found in the ranks of Christian and avowed faith: their proper place is in the ranks of evolutionists, who walk by faith without knowing it.¹⁶

Some, however, who are true Christians, may be troubled by the talk of those who claim that the *convergence* of many lines of evidence makes belief in evolution, rather than creation, almost inevitable.* Now the appeal to "converging" lines of evidence is certainly reasonable, and (if justified) strong. We will therefore turn our attention to this claim, in the present chapter, in order to judge of its force.

We may note, then, that the main lines of evidence claimed for evolution are generally the following seven:—

1. *Variations* : or the fact that forms are not

*This plea was cited by Dr. Orr (*God's Image in Man*, p. 86); and many others have naturally felt, as he did, that there must be a good deal in it, so it seems to require some special attention.

absolutely stable to-day, but change before our eyes.

2. *Palæontological succession*: or the succession of fossil forms in the rocks, from lowest forms ¹⁷ in the oldest fossiliferous rocks to highest forms in the most recent.
3. *Homologies*: or the existence of similar fundamental plans in the structures of otherwise very different creatures.*
4. *Rudiments*: or aborted, perverted, and useless homologies, as existing in all structures.
5. *Embryology*: or the individual development of each creature through a series of stages said to resemble lower forms of life.
6. *Reversions*: or the idea that creatures sometimes "throw back" to earlier ancestors, e.g. the 3-toed horse.
7. *Geographical distribution*: or the fact that creatures, both living and fossil, of each geographical area, resemble those of adjoining areas more than those of distant ones.

*These common plans are not alike in *all* creatures, since each "Phylum" is quite distinct. This was pointed out long ago by Cuvier, and was emphasized again, in this present century, by Fleischmann, who tells us that:—

"Modern zoology recognizes not merely the four types of Cuvier, but seventeen different styles, phyla, or groups of forms, to derive one of which from another is hopeless. And what is true of the whole is true also of the sub-divisions within each phylum: e.g., within the vertebrate phylum with its fishes, amphibians, reptiles, birds, and mammals. No bridge leads from one to another" (*Die Descendenztheorie*, ch. ii).

Now if seven lines of evidence really converge upon one theory, and oppose another, there is no doubt that they produce a very strong impression in favour of the former. But do the above seven really "converge" upon evolution *as against* Creation?

VARIATION

I think not. Thus No. 1, for instance, is simply neutral. I showed in the chapter on "Creation and Variation" (ch. vi, p. 43.) that variation of types is quite compatible, according to the Bible, with their original Creation. On the other hand, it has never yet been shown that the variation we see is of a kind to suit evolution. Thus as evolutionists like Dewar and Finn themselves admit (in their book on *The Making of Species*), it is not proved that variation is either continuous or purposeful.* There is nothing, in short, to show that new or useful organs could ever arise from such changes as we actually see; types simply *split up* rather than *evolve*. No. 1, therefore, can be cut out of the roster as neutral. Its evidence accords at least as well with creation as with evolution.

*By far the greatest (indeed, the only tangible) triumphs of the evolutionist, in regard to proving current changes of form, are along the lines of Mendelian experiments. Yet these, although often startling in their own way, do not help evolution at all; for they prove to represent a sorting of existing factors, rather than the creation of any new ones. Thus Prof. Bateson, one of the foremost authorities on the subject, sums it up by telling us that: "The essence of the Mendelian principle is . . . that the parent cannot pass on to the offspring an element, and consequently the corresponding property, which it does not itself possess" (*Scientific American Sup.*, Jan. 3, 1914). Thus Mendelism, in its essence, can never hope to explain Creation. It can only presuppose Creation, and show how it can be *disturbed*.

PALAEOLOGY

Much the same might be said of No. 2, except that we have to postulate *former* creations in order to explain it. But that is exactly what the Bible itself permits us to do. For if, as we have seen it indicating, there was at least one previous creation, why not any number? And why should these not as well have been progressive as otherwise—higher creations being introduced upon the ruins of old ones? Some of the greatest students of Palæontology, like Agassiz and d'Orbigny, believed in progressive yet separate creations to the day of their death. Their ideas are now only looked upon as discredited because the creations they regarded as separate often seem to merge into each other; and yet, if former creations were split up by Curse and variation as ours has been, they might easily mingle, and often seem to prove a gradual progression in the rocks, although perfectly distinct in origin and history. Meanwhile the geological conditions need not have been distorted; they might have been as apparently continuous as the Bible implies their being between our own creation and its immediate predecessor. As we saw in the last chapter, the disaster which intervened just before our own creation was not of a kind to leave any physical mark whatever in the rocks; and this may have happened more than once. So we see that, with "disasters" unmarked by any apparent physical interruptions, the geological sequence might appear to be far more complete than it actually is, and yet offer no argument whatever against repeated creations. No. 2, therefore, can

give no evidence against creation, and so must also be removed as neutral—if not, indeed, owing to its terrific “gaps”, favouring creation (as I believe) far more than evolution.¹⁸

HOMOLOGIES

No. 3, again, or the existence of similar fundamental designs underlying different external structures, has nothing whatever to do with the case, as Darwin himself showed by flying so precipitately to “Rudiments” when challenged upon this very score by Prof. Bianconi (see the chapter on “Rudiments and the Curse”, p. 56).^{*} If Darwin himself could not explain why similarity of plan should not obtain under Creation, the point must indeed be somewhat obscure. As a matter of fact, common sense would suggest that the very existence of type designs, capable of answering such very different purposes as are met by the structures found in each phylum, affords a striking argument for Creative design *as against* blind evolution. For if a human inventor were to produce a design capable, under modifications, of serving very different purposes, it would be taken as proving his almost superhuman mastery of his subject, rather

^{*}Unable to offer a single definite reason why homologies should not exist under creation, Mr. Darwin fell back upon that last resort of the special pleader—a sneer. He called the creation explanation of homologies an appeal to “mere adaptation” (*Descent of Man*, p. 35, footnote 56). This was really delightful; for what was Darwinism itself but an appeal to “adaptation” in all things? Darwinism represents the very apotheosis of “adaptation”—with a blind instead of an intelligent basis. For Darwin, of all people, to decry any theory as appealing to “mere adaptation” had a delightful flavour about it, and showed how deficient the great man was of an “homology” to that sense of humour found in most other mortals.

than that he never thought about it. No. 3, therefore, can safely come out. ¹⁹

RUDIMENTS

No. 4, is rather amusing. Its existence at all, in this array, is a hopeless anomaly, as we saw in the chapter on "Rudiments and the Curse". Not only have the clearer-sighted evolutionists, like Huxley and Mitchell, treated it with the greatest suspicion from the first, but we find that Genesis alone can explain the existence of a really useless "rudiment". The more such things are claimed, therefore, by the thicker-headed evolutionists, the more ammunition do they pile up for use against evolution; for it is against their own system, not against creation, that rudiments bear witness.

Thus of our array of 7 lines of argument for evolution, the first 3 have already been shown to be neutral if not adverse, while the fourth is most definitely *adverse* to evolution! This makes the "convergence" look rather foolish! However, we will now examine the remaining 3, namely, *Embryology*, *Reversions*, and *Distribution*, since they have not been dealt with before in the course of these articles, in order to see if anything of a case can be made out of them.

EMBRYOLOGY

This line of argument has probably had more effect than any other (except the argument from "Rudiments") in leading people to believe in evolution. The basal idea of it is that every creature, in its development, is compelled to "climb

its genealogical tree"; i.e., to pass through stages similar to those which its remote ancestry passed through in evolving upwards from primeval slime. In other words, the "Ontogeny", or development of the individual, is supposed to *recapitulate* the "Phylogeny", or development of the race. Thus every human being, for instance, begins life as a simple cell, and is said to work upwards through fish, reptile, and monkey stages, until finally born as a sort of missing link, half way between ape and man. It is pointed out that at one time the human embryo has gill-arches like a fish, at another a tail like a monkey; and at birth the soles of its feet still turn in, and its jaws protrude, as with the anthropoid ape.

All this, it is claimed, shows that the memory of man's brute ancestry is so indelibly fixed in his organization, that he cannot even have a son without the latter "recapitulating" the ancestral history of the species, and so proving the fact of evolution as opposed to creation. For why, it is asked, on the theory of creation, should the embryo climb a genealogical tree which represents that of evolution?

Persuasive as such talk may seem, however, to those who know nothing about the subject, it is really quite unsound. Indeed, one would think that the very simplest analysis of his own case should warn the evolutionist that he could never safely appeal to embryology. For, suppose that he is right in accepting evolution: suppose that some force does exist (call it "Natural Selection" if you will) which has changed the forms of adults

from amoeba to man, and has also changed the very methods of reproduction (e.g., from that of Reptiles to that of Mammals); then that force is certainly no *conservative* agent, but the very reverse. All its efforts must be aimed at improving both the method of development of a creature, and also its final form. Darwin himself admitted this. So how could *any* feature be regarded as surviving the age-long censorship of the forces of evolution, unless it were *useful* as well as ancestral? And once its usefulness is admitted, what is to prevent our supposing that the forces of evolution may have produced it *independently of ancestral phases*, just as they have produced so many other new features? So how can we ever prove ourselves right in claiming "ancestral" significances?

Thus we see that it is simply illogical to appeal to such very ancient structures as the supposed monkey's "tail" or (still more) the supposed "gill-arches" of a fish. The forces which have entirely removed the supposedly most recent anthropoid foot* from man's embryology, presumably because it was no longer wanted there, could hardly have allowed such vastly older features to remain unless they *were* wanted. And if they were wanted, there is no reason to regard them as ancestral. They would be there in any case.

So the very arguments of the evolutionist

* "So far as concerns the foot", says Sir Arthur Keith, "it may be said definitely that a child has never been seen with an anthropoid foot" (*The Human Body*, p. 107). "And what is more striking still", says Prof. F. Wood-Jones, "the human foot as soon as ever it is formed in the embryo is of the characteristic human type" (*The Problem of Man's Ancestry*, p. 38). In other words, no fin, hoof, paw, or anything *else* is found. The human embryo either has human feet or none at all.

recoil upon himself. We see that his appeal to embryology must be *unsound in any case*.

Investigation, also, simply bears this out. It shows that in no case whatever is there any real correspondence between embryo forms and adult ones. The human embryo "tail" is never a tail (as I myself demonstrated to a college surgeon-lecturer 12 years ago!), nor are the "gill-arches" ever real gill-arches; their internal structure and final purpose being entirely different, and the resemblance purely superficial.* Indeed, the more serious evolutionists themselves have pointed these facts out, time and again, and the deepest students of embryology are ever the most chary in claiming embryology as a proof of evolution. They generally prefer, themselves, to fall back upon the evidence of Palæontology, or some other line of argument for evolution, with which they are less familiar, just as palæontologists often wish to fall back upon embryology.†

It seems perfectly clear, when we go into the case, that little if anything exists in embryology which cannot be explained as existing on the score of its *usefulness*. Thus the short legs and turned-

*See Wasmann's remarks on pages 454 and 503 of his *Modern Biology and the Theory of Evolution*. Sidgwick and others have pointed out the same facts.

†It is worth noting that, as Dennert points out, the embryologist Hertwig "makes not the least mention" of the evidence of embryology, but "evidently regards as the sole really empirically and inductively serviceable proof of Descent, that which is drawn from palæontology" (*At the Deathbed of Darwinism*, p. 140). At the same time a palæontologist like Dr. Bather rejects palæontological succession as a proof of descent, and tries to prove evolution by quoting the scanty traces of fossil embryology. Each man trusts the *class* of evidence which is not in his own main line.

in soles of the human infant are an obvious convenience both to it and to its parent before its birth; and they are changed after birth in time for the first efforts to walk that could be made without injuring the babe.* Similarly the slightly protruding jaws are an obvious convenience to a little creature that has to breathe at the same time as feeding after the fashion natural to a human infant. The actual structure of the baby's leg and foot—complete with *peroneus tertius*,†—and of his jaw, is entirely human, not ape, from the very first.

It thus becomes obvious that the evolutionist is simply and solely picking purely superficial “happy coincidences”, when he appeals to the phenomena of embryology as supporting his belief in evolution. His appeal is illogical to start with, and his supposed facts will seldom bear examination. Moreover, it is just as easy to pick out facts which point in an exactly contrary direction! For the ape embryo distinctly resembles man far more than the grown ape does; ‡ so why should we not quote the ape embryo as evidence that apes descend from men? One could, indeed,

*Note, by contrast, the comparatively *long* legs and *short* bodies of very young cattle, as camels, horses, donkeys, cows, sheep, goats, etc., which are certainly not supposed to be derived from remote ancestors having such characters. It is clear that proportionate length of limb in the young is not controlled by ancestral reminiscence but by present convenience. The long limbs of *those* young creatures are an advantage, so they have them. It is sheer dogma to suppose that the human infant has short legs for any but a similar reason—their advantage.

†A muscle peculiar to man, and related to his upright carriage.

‡The ape embryo resembles man in its absence of supra-orbital ridges, protrusion of occiput, development of frontal region of the brain, proportion of brain to body, reduced prognathism, and many other features which we cannot stop to detail here.

claim a series grading from human infant through human adult, to ape infant and ending in ape adult, to prove that apes descend from men, and men from super-men!

The whole appeal to embryology, in fact, is hopelessly unsound, as has often been frankly admitted by evolutionists themselves. Drastic indeed are Sidgwick's remarks, for he tells us that the whole idea that embryology *can* give evidence for evolution is itself a mere hypothesis, based upon the supposed truth of evolution.*

Such being the actual facts of the case, we can fairly cut the appeal to embryology out, as many of the best embryologists themselves insist,²⁰ as having nothing whatever to do with evidences for *evolution*, or anything else but the marvellous existing fitness of thing

REVERSIONS

Here, as usual, the evolutionist is found to be simply picking happy coincidences. A three-toed horse may suit evolution, but a six-toed man does not; extra teats on the abdomen may suit evolution, but a functional pap on the thigh does not.†

* "In the first place", says Sidgwick. "it must be noted that the recapitulation theory is itself a deduction from the theory of evolution. . . the facts as we know them lend no support to the theory. . . a deduction it still remains" (Article on "The Influence of Darwin on the Study of Animal Embryology", in *Darwin and Modern Science*, pp. 173-176). Indeed he clearly shows that, in his own opinion, recapitulation is not only unproved, but it is very doubtful whether the Theory of Evolution and the Theory of Recapitulation could both be true!

† It is delightful to see how Darwin, after failing utterly to account for *mammæ erraticæ* on the back, in the armpit, or on the thigh, as "reversions", could still point out that a medial teat might be matched by certain BATS! (*Descent of Man*, Chap. 2, note 38). The suggestions

Time and again, too, things which seemed to the ardent eyes of evolutionists to be clear cases of "reversion", have been proved by the cold facts of later discoveries to have nothing whatever to do with reversion. "The list of so-called reversions" remarks Prof. J. A. Thomson, "has been remorselessly thinned by the more modern students of inheritance" (*The Wonder of Life*, p. 610). Elsewhere, discussing some really fantastic ideas that have been proposed as to reversions, the same author remarks that: "Such instances are almost sufficient to damn the reversion hypothesis altogether" (*Heredity*, p. 131).

Note, therefore, that the very idea of reversion is itself admittedly only an hypothesis. Now you cannot call an *hypothesis* a line of *evidence*!

"Reversions" then, must go with the rest, and the question of "Geographical Distribution" alone remains.

GEOGRAPHICAL DISTRIBUTION

This need not detain us long. I could show, if space permitted, how strangely "double-edged" this particular line of argument is.²² Indeed the camp of the evolutionists is split into two entirely opposed parties on the score of this very question of "Distribution"; namely, those who reconcile the facts of physical *Geography* with evolution by shutting their eyes to the facts of *Distribution*,

raised here are truly Homeric; and we see how, after all *necessary* idea of "reversion" was shattered, the great man could still add impossible ideas to improbable ones, as always better than nothing. His followers to this day exhibit the same endless capacity to suggest things, and incapacity to think them out.

and those who reconcile the facts of *Distribution* with evolution by shutting their eyes to the facts of physical *Geography*. The quarrels between otherwise most eminent men, like Prof. J. W. Gregory and the late A. R. Wallace, afford an interesting illustration of this sort of thing, which I have not space to go into here. I will just mention one significant fact, however, from a different angle: It has long been argued that the indigenous fauna of Australia, limited to Marsupial Mammals, affords a striking proof of the fact that the *isolation* of Australia has prevented it from sharing in the evolution of placental types, which are found on other continents; for why, it is asked, on the theory of creation, should not placental types have been created in, or found their way to, Australia as much as Marsupials? Well, I see that Depéret now knocks the bottom out of this really rather plausible argument by coolly proposing that the present fauna of Australia and Tasmania is *not* an indigenous survival from the Mesozoic, but has come there by *immigration* "at a recent epoch", namely, "the upper Tertiary or Quaternary"—in other words, at the heyday of Placental development elsewhere! (*Transformations of the Animal World* p. 306). And the very place from which he supposes the migration to have come—South America—is admitted by the same author (p. 309) to have possessed "several already perfectly differentiated orders of Placental Mammals" from the "lower Eocene"! *Why*, then, did Placentals not go across with the Marsupials? Thus we see how a difficulty which is claimed as "insuperable" when it is supposed to witness against creation, is

brushed aside without a qualm when evolution itself requires us to ignore it ; and any " explanation " which will suit evolution here will equally suit creation ! It would really be intensely amusing if it were not so tragic for some.

When evolutionists themselves can so freely play havoc with their own best data on this subject, their opponents need not take it very seriously—except to use it against evolution on account of the split which it causes in the evolutionists' camp.

Where, then, is the boasted " Convergence " ? We have now taken every one of the supposed seven lines of evidence for evolution, and found that four out of the seven could just as reasonably be quoted as " Converging Lines " of evidence for creation ; two others (" Embryology " and " Reversions ") are not lines of evidence at all, being mere hypotheses ; and the remaining one (the appeal to " Rudiments ") is simply ridiculous as a supposed argument for evolution, being wholly opposed to all ideas of Descent, and testifying in unmistakable fashion to the truth of the Bible factors of *creation* and *curse* !

It seems clear, therefore, that when the Bible talks of the direct creation of man and other types, true Science knows nothing of any " convergence " of evidence to the contrary. Those who like to believe in evolution can do so on their own responsibility. Their appeal to " science " is fallacious.

XI

THE DOCTRINE OF UNIFORMITY

"IF any human being desire . . . to attain . . . to clear and demonstrative knowledge instead of attractive and probable theory, we invite him as a true son of science to join our ranks."—*Bacon, Novum Organum.*

I have often been asked why, even supposing that evolution cannot be proved, I oppose it so persistently. When so many professed Christians in all denominations now accept it,²³ why should I continue to resist?

Well, there are several answers to that. In the first place, I never found the evolutionist yet, so-called "Christian"* or no, who could take the Bible to be the very Word of God as I take it; and I know that from the moment I accepted belief in evolution (understanding evolution as I do) I would automatically have to cease taking the Bible in that way myself. And I do not, please God, intend to give up my heritage of belief lightly.

Again, and although this reason is of far less importance to me it is still important enough, I

* Some talk of believing in evolution, who have not yet grasped its final implications. They often remain genuine Christians for quite a long time. As the deadly significance of evolution sinks into them later on, however, their Christian joy and vitality gradually die out.

object to the way in which evolution is treated as SCIENCE when it is nothing of the sort. "Science", as I understand the term, is knowledge; and so long as evolution is not absolutely proved to be true, it is not *knowledge*.²⁴ I have therefore quoted above an extract from Bacon's *Novum Organum*; words which have been adopted as its motto by the Geological Society of London, the oldest and most famous Society of its kind in the world. As the reader will see, these words draw a definite distinction between "clear and demonstrative knowledge" on the one hand, and "attractive and probable theory" on the other, in order to welcome him as "a true son of science" who rejects the enticements of the latter in order to aim *at the first alone*.

Adhering to this motto, then, I flatly refuse to call evolution "science" when I know so well that it cannot possibly rank as "clear and demonstrative knowledge". Indeed the very best that can be said for evolution by an honest man, even when he believes in it, is that it is an "attractive and probable theory"; but that is exactly what Bacon refused to recognize as *science*.

Now the reason, I believe, why evolution is so popular to-day is not that it can be proved to be true (for it cannot) but that it is so comprehensive and easily understood that all can grasp it as an explanation of things around us. Thus Mr. Darwin repeatedly appealed to the superiority (real or supposed) of his "views" to those of his opponents,²⁵ and his followers have done the same ever since.²⁶ We are told that the "modern

mind" rejects the idea of Divine Interventions; that creation is not "acceptable" to it; that "miracles" must be "ruled out"; that evolution affords an "unified concept" of nature, and so forth. But such appeals are not scientific ones at all; they are essentially philosophic, even when scientific men indulge in them, and are quite distinct from the things which build up "clear and demonstrative knowledge". Indeed it is noticeable that, from the moment an evolutionist can really *prove* anything, he drops all this sort of talk at once in favour of something very different. Thus if you ask him whether a certain rock has a particular composition, he will get down to things at once without any reference at all to the "modern mind" or "unified concepts". Such references are only brought in when he can no longer prove his way, having left the solid ground of science and embarked upon the waters of philosophy. Their appearance is, so to speak, the sure sign that he is afloat.

Evolutionists themselves—I refer to those of more intellectual type—have realized and admitted this.* Both Mivart† and Dennert‡ have clearly shown that evolution is really a philosophy, and

* As Professor Scott admits: "From the very nature of the case, complete demonstration is impossible" (*The Theory of Evolution*, p. 168). From the very nature of the case, then, evolution can never be science.

† *Man and Apes*, pp. 172, etc.

‡ He tells us that: "We have no specific knowledge of Descent but we believe in it. In short, this is not natural science but natural philosophy. The doctrine of Descent. . . must be excluded from the realm of exact science. (It) involves a creed, and therefore belongs to the domain of cosmic philosophy" (*Am Sterbclager des Darwinismus*, Eng. edn., pp. 142, 131).

should be recognized as such by its adherents. Fleischmann refuses to admit evolution as science simply because it *is* nothing but philosophy.²⁷ Depéret, in discussing the views of the older palæontologists, cannot reject them as scientifically untenable, so questions their *philosophic* merits.* Messrs. Thomson and Geddes trace the roots of evolution back, not to scientific facts but to social theory, pointing out how the ideas of Lamarck and Darwin originated in the popular movements of their day, which were *read into* the facts of nature; so that the biological teaching of each of these two men is to be taken as "the philosophic epic of a great nation at its epoch" *Evolution*, p. xii; cf. p. 218).

Now that is all very fine, but we do not believe that the world is round because it is a philosophic epic to think so, but because we can prove it. So we see the difference between dealing with the "attractive theory" of Darwin and the "demonstrative knowledge" of Galileo.

What I claim, then, is that evolution is justly described as a philosophy, but is not justly described as science. If it is *called* science, then it is science falsely so called.† Now this, to me, seems

* *Transformations of the Animal World*, pp. 121-122. As regards their actual dealing with the facts of geology, he admits that: "The hypothesis . . . of *successive creations* has been maintained with real talent by d'Orbigny, Agassiz, d'Archiac, and Barrande." These were the men, remember, who opposed "objections of fact" to Darwin's "theoretical arguments".

† And the acceptance of it as science, has brought its own penalty. It is useless to deny that modern biologists have got into the worst possible habits through following evolutionary fancies. Their premature surrender to evolution seems absolutely to have degraded their scientific morals. The fact is only too well known to scientists themselves, and I

significant, especially when I know that evolution is opposed to belief in God's Word; ²⁸ for that Word directly warns us against *philosophy* and *science falsely so called* *—not against "philosophy falsely so called" and "science", be it noted, but the other way about—the philosophy is accepted as legitimately so described, while the talk of science is flatly denied.

Now the significance of this will perhaps be missed by some, who will think that the doctrines which the early Christians opposed must have been very different from those with which we are dealing here. As a matter of fact, they were not. Space forbids my going into the details of this very interesting subject, but it has been pointed out by evolutionists themselves,²⁹ and is well worth noting by Bible lovers, that the Gentile world of our Lord's day was essentially a world which *believed in evolution*. It is a proved fact that the early Church would have nothing whatever to do with evolutionary doctrines which, in revived form, are sweeping the Churches to-day. On the contrary, it was the rise of the Gentile Christian Church which expelled the longstanding Gentile belief in evolution, driving it into the limbo of forgotten things for nearly 2,000 years. It is clear that, from the very beginning, evolution and Christianity have refused to mix.

could give endless instances which have come under my own observation. As Messrs. Dewar and Finn say: "The average scientific man of to-day makes facts fit his theory; if they refuse to fit he ignores or denies them" (*The Making of Species*, p. 10).

Note the words "of to-day"; for this was not the case until Darwin taught men of science to follow the will-of-the-wisp of attractive theory, instead of keeping strictly to demonstrative knowledge. He reversed the whole Baconian conception of "a true son of science".

* Col. 2: 8; 1 Tim. 6: 20.

Why was this? When Greek philosophy had prepared men, all over the Gentile civilized world, to regard evolution as the most plausible explanation of nature how was it (if evolution be true) that the early Church, filled with the Spirit, was not led to accommodate Christian beliefs to this doctrine but to oppose it? Why was the early Church led to insist upon the *literal creation*? Let modern temporisers, who like to regard themselves as the true successors of the Apostles while acting as no Apostle ever acted, answer that question.

As a matter of fact, we cannot even say that Genesis itself may have been given as an "easier" account for "primitive" people to understand than evolution, for facts show that not only do the youngest children grasp the idea of evolution quite as easily as that of creation,* but the very lowest tribes have spontaneously believed in evolution. Thus the Iroquois have claimed their descent from the Turtle, the Choctaws from the Crawfish, the Ootawak from the Carp, and some Ojibways from the Crane; certain Peruvians, East Africans, Malagasy and Tshi-speaking tribes, have all been equally convinced of their descent from lower animals; while the Aborigines of Western Australia, and the Dieri and Arunta tribes of the interior, trace *their* lineage back to "lizards, rats, parrakeets, ants, emus, trees".† Surely Darwin himself had no greater faith in evolution than these

* A fact of which school teachers are unfortunately taking advantage to-day.

† Cf. article by J. G. Frazer on "Some Primitive Theories of the Origin of Man" in *Darwin and Modern Science*; also the writings of Messrs. Baldwin, Spencer, and F. J. Gillen.

people have exhibited, so it seems clear that a large intellectual equipment is by no means necessary in order to be an evolutionist. Wherever we look, from the top of the human scale to the bottom, we find opinions divided as to whether man came into existence by creation or by evolution.

Why, then, have the writers of Scripture so consistently taken the one side against the other? The fact that they did so is unmistakable.

Let us remember, therefore, that when St. Paul opposed contemporary "philosophy" and "science falsely so called", he opposed ideas which were in many cases essentially kin to those of modern evolutionists; and his opposition actually led to the stamping out of evolutionary belief for nearly 2,000 years. There is little reason to doubt that if he were alive to-day he would behave exactly as he did then.

So let us remember also the *urgency* with which he and the other Apostles warned the early Christians against the beliefs of the Pagans round them, to which they were on no account to yield; and their anticipation of the time to come, at the end of the age, when terrible and overwhelming apostasy *would* overtake the Church, and the spirit of Antichrist, already at work, should finally come into its own. It seems significant that our present time of undoubted apostasy from the traditional Faith of the Church is found to follow the acceptance, by such multitudes within the modern Church, of ideas essentially kin to those which the early Church resisted with so much determination.

But is the present-day *case* for evolution similar to that which existed in our Lord's day? This I can hardly think, in spite of the close comparisons which have been drawn by evolutionists themselves between ancient and modern *methods* and *conclusions*. A source of strength lies at the root of our modern speculations which was lacking to those of ancient times, and this new element I recognize in the famous present-day Doctrine of Uniformity, to which I would now draw attention.

* * * *

When geology began to exist as a science, towards the end of the 18th century,* the problem as to how various rocks were formed presented many serious difficulties; indeed some of those difficulties have not been cleared up yet, and theories keep changing to this day. We cannot detail those matters here, but the important thing to note is that at that time,† and before anything was certainly known regarding the actual method of origin of many features, a tremendous dogma was announced by one of the most famous of the first geologists, James Hutton, who declared that nothing was to be supposed to have happened in the past which could not be shown to be happening to-day. In other words, whatever enigmas we might meet with in trying to account for things as we find them in the rocks, we should always assume, as a foregone conclusion, that those diffi-

* The word "Geology" was first used to denote our present science by J. A. de Luc, in 1778; and in the following year we find H. B. de Saussure referring to "geologists" as to a known type of naturalists (H. B. Woodward, *History of Geology*, pp. 19, 24).

† Hutton's *Theory of the Earth* was produced in 1785.

culties are only apparent, and that things actually were produced by processes essentially similar to those in existence at the present day.³⁰

Now a more typical case of downright assumption could hardly be imagined. Here we have an illustration of the way in which the purest dogma can invade the precincts of science itself; for what could be more utterly opposed to the ideal of "clear and demonstrative knowledge" than this opinion laid down before any demonstration was possible? It seems clear that a man who accepted such a dogma could not be trusted even to rely upon "attractive and probable theory", since he could announce his conclusion before he was even in a position to show that it agreed with the facts of nature. It is also clear that followers of Hutton are the very people never to go *beyond* "attractive and probable theory", since, with their pre-conceived idea filling their minds, it would be quite enough for them to be able to argue that things *might* have been formed as they suppose, for them to take it as proved that they actually were so formed. People who announce their conclusions before their evidence is complete, are just the ones to claim happy coincidences as proofs—the besetting sin of evolutionists.

No one denies, of course, that it is reasonable to suppose that many causes in the past were probably very kin to those acting to-day; this is mere common sense. The glaring anomaly comes in when professed men of science *limit* themselves to Hutton's dogma, which is utterly unproved and unprovable to this day. It is clear that if any-

thing ever has happened of an abnormal nature, then these men are the last people to be trusted to discover the fact. Their dogma ensures that they will deny or get round the evidence at all costs.

Something of this sort was widely felt at the time that Hutton put forward his proposals. In spite of the advocacy of his supporters, Playfair and Hall, Hutton's "Theory of the Earth" made little impression upon his immediate contemporaries. Cuvier seems to have treated Hutton's dogma with simple contempt, and his immediate successors appear to have done the same.

Lyell, however, subsequently took up Hutton's ideas with the greatest fervour. Like Hutton, this otherwisereallygreat man determined to see nothing in geology which could not be explained upon a basis of present-day processes. With him and his followers, as with Hutton, it has been enough simply to *imagine* circumstances under which things *might* have been effected slowly and normally, in order to assume that they *were* so effected. Indications to the contrary have received scant attention, being opposed to the dogma which these men were supporting.³¹ Unfortunately, too—and upon this fact our present chapter hangs—this dogma now rules supreme in geology. It affords the basal axiom of modern geological theory.*

* According to Zittel, the main "principle" of Lyell's teaching has remained "as the secure basis of all modern geological investigation" (*History of Geology and Palæontology*, p. 197). Note that it is still a basic principle, not a proved conclusion! So, inasmuch as it takes the form of a definite prejudice, it must definitely limit our powers of discovery. If we refuse to recognize evidence of the abnormal, we are never likely to see it. If a modern geologist, therefore, professes that he can find no evidence of the abnormal in the rocks, the fact is apt to prove nothing. There may or may not be such evidence. All we can be sure of

The success even of Lyell's pleading, however, was not achieved rapidly but very slowly. The older geologists, brought up to inductive and unbiassed methods of study, regarded his presumptive methods with determined suspicion.* The greatest names in science were opposed to him. Facts were quoted from all sides to show how unproven and premature, to say the least, those methods were. Many of these objections, too, are valid to this day; while others have since arisen which were unknown to early geologists. It is, indeed, an admitted fact that Lyell and his followers could make no real headway until the chief upholders of the old school were dead.³² In other words, they popularized a new fashion of thinking about things, rather than proved the old way to be wrong. It is an extraordinary thing—if Lyell's views were really *science*—that they had to await the death of their opponents before they could make headway! It is equally singular that some of the greatest authorities in geology throw wholesale doubt on those doctrines to this day! †

is that if the rocks were full of it he would not see it. (I refer, of course, to Uniformitarians.)

* Lyell actually tried to improve upon Hutton's dogma by saying that "the physical operations now going on are not only the type but the measure of intensity of the physical powers acting on the earth at all anterior periods" (*History of the Geological Society of London*, pp. 86—87). This was too much for Sedgwick!

It is undoubted that Lyell was a very great geologist, who did an immense amount of service to the science by investigating the workings of existing geological processes. The above quotation, however, may show to what an extent even a scientific man can allow the purest dogma to invade his mind. This extreme form of Lyell's teaching has long been given up, as hopeless, by Uniformitarians themselves.

† Thus Eduard Suess throws repeated doubt on the capacity of existing processes to explain the formation of ancient sediments (*The Face of*

The growing popularity of Lyell's views, however, among the then rising generation of geologists, was of the greatest service to Darwin. As Huxley pointed out,* Darwin's success was based upon that of Lyell, for Darwin simply extended into the *biological* world the same dogma of Uniformity which Lyell had already made fashionable in regard to the *physical* world.³³ If Lyell declared that the types of physical nature round us, mountains and rocks, had been built up by processes similar in all respects to those continuing to this day, Darwin protested that the types of living nature round us, from elephants to seaweed, had also been produced by forces still in operation. Hence Darwin's appeal to Natural and Sexual Selections, forces supposed to be everywhere operating to-day, as competent to explain the appearance of everything, out of primeval slime, from a whale to a daisy, from a flea to an oak.

Thus the great fundamental postulate of the *whole scheme* of modern evolutionary belief is that the intervention of God in nature must in no way be recognized as even a possibility;† that, instead,

the Earth, vol. 2. pp. 24, 295, etc.). He also admits that there is evidence of geological "catastrophes" which must, as he says, have been "of such indescribable and overpowering violence that the imagination refuses to follow the understanding and to complete the picture" (vol. 1, pp. 17-18). Cuvier himself said no more than this.

*Huxley said that Lyell was "the chief agent in smoothening the road for Darwin. For consistent Uniformitarianism postulates evolution as much in the organic as in the inorganic world" (*Life*, vol. 1, p. 168).

†As Carl Vogt put it, with his customary bluntness, when explaining the principles of modern evolutionary doctrine: "The Creator must be put out of doors unceremoniously, and we cannot allow the least room for the operations of such a being" (*Vorlesungen über des Menschen*, p.

we must accept the only method then left us, and explain *all* things in nature past, and the origin and development of all things as we find them to-day, by appealing to *present-day processes*.

This is the great "Doctrine of Uniformity", which rules to-day with iron hand, giving their shape to all the published ideas of men of science; and this it is which affords a distinction between our modern belief in evolution and that of the first century of our era, giving to the former a consolidated POWER which was lacking to the latter. An unified concept of this sort was wanting to the first century speculators, whose ideas were more disconnected than ours are to-day. There was no such basic principle underlying their ideas, to bind them into a single formidable weapon for assault upon the infant Church, such as we find being levelled against the Church at the end of the age.

What, then, is the reason for this? Seeing that this Doctrine of Uniformity is (as we have seen) itself a mere unproved dogma, and hints are not wanting that it had suggested itself to the ancient Greeks, how is it that *they* could not use it with the same effect as it is being used to-day? This question is important, for their writings show that the ancient Greeks were not the men to miss the chance of using any argument which they could employ as well as we can. It seems to me that there can be only one answer to this question, and

133). Note that he does not say he can disprove "the operations of such a being", but that he "cannot allow the least room" for them. If the Creator *has* acted, Carl Vogt refuses to recognize the fact. And yet we call such men "scientists"!

it is that the ancient Greek sceptics found no support in *history*, as it then existed, whereas our modern sceptics can appeal to nearly 2,000 years of reliable history, all of which testifies to current "uniformity".

Remember that, in the first century of our era, reliable history testifying to uniformity (and thus raising the impression of its invariability) hardly existed. Only a few hundred years before that, even the most civilized nations—the Greeks and Romans—had been in their infancy; and the intervening years had been riddled with ideas of portents and the interventions of the gods. The nations round them still, whether rightly or wrongly, believed in such things. Scepticism had indeed set in, but was confined to the few, and had no depth of historic appeal behind it. The Ephesians had no doubt whatever that the statue of their goddess had actually been sent to them from heaven.* Under these circumstances there could be no appeal to "Uniformity" as now understood by us.

Now, however, things are different. 2,000 years of history, characterized by what Sir Robert Anderson has called "The Silence of God",† have induced a different *frame of mind* in our contemporaries, and put the pleaders for evolution in a seemingly much stronger position. Remember that according to Le Roy, the interpreter of Bergson, every philosophy "presents itself, in its initial

* Acts 19: 35-36. Ephesus, remember, was the principal city in Roman Asia.

† See his book under that title.

stage, as an attitude, a frame of mind, a method " (*A New Philosophy: Henri Bergson*, p. 12). Our contemporaries, with 2,000 years of uniform history behind them, are in a "frame of mind" to be highly doubtful whether anything else but uniformity can exist. They therefore adopt an "attitude" of hostility to all ideas of Divine Intervention, and a "method" of explaining everything through Uniformity. The whole thing, on analysis, resolves itself into a matter of sheer philosophy; and the philosophy itself is found ultimately to rest upon recent historical Uniformity. Thus Hume, when disputing the possibility of miracles, declared that "firm and unalterable experience" was against them, and they were "most contrary to custom and experience" (*Essay on Miracles*).³⁴

Yet this "custom and experience" is simply a matter of the last two millenniums at most; a man who wishes to extend it beyond that will have to "edit" his material pretty severely!

So we see how the Silence of God, from our Lord's day to our own, has encouraged our contemporaries to deny that He is ever anything but silent. They found that He did not interfere during all this period, and so began to deny that He ever had interfered in any previous period. This dogma was first taught by general writers like Hume; and as it gained in popularity geologists became theoretically compelled—whatever appearances might be—to explain everything in the rocks upon a basis of present-day processes; and finally biologists and palæontologists were in turn compelled, by the extension of the same Doctrine of

Uniformity, to explain all life forms, also, upon a basis of evolution through present-day processes.

I think that few would care to deny these facts: (a) the preliminary use of the historic period, or Christian era, "Silence of God" to discourage the idea that God ever does interfere; (b) the consequent acceptance of the "Uniformity" dogma of Hutton, Lyell, and the modern school of geologists; and (c) the final extension of the same dogma from the *physical* world into the *biological* one, in order to compel belief in universal evolution.

First miracles were denied (Hume); then the Flood was ruled out of physical geology (Hutton and Lyell); and finally Creation itself was replaced by evolution (Darwin); all as links in one continuous process of deduction from Uniformity in history.

* * * *

I hope that these details have not wearied the reader. I was compelled to go into them at some length, however, since they are not generally known, in order that the peculiar significance of a certain passage in the Bible might be better understood. I have now shown, above, how the "SILENCE OF GOD", for the last 2,000 years of our era, has resulted in the appearance, at the end of that era, of a "DOCTRINE OF UNIFORMITY", which began by denying Miracles, went on to deny the Flood, and has ended by accepting Evolution.

This is not theory upon my part; it is simple geological history, which I, as a geologist, defy anyone to question.

I will now ask the reader to turn to 2 Peter 3, where we read as follows:—

“ This second epistle, beloved, I now write unto you . . . that ye may be mindful of the words which were spoken before by the holy prophets . . .

“ Knowing this first, that there shall come in the last days scoffers, walking after their own lusts, and saying, ‘ Where is the promise of His coming? For since the fathers fell asleep, all things continue as from the beginning of the creation.’ 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, being over-flowed by water perished . . .

“ But, beloved, be not ignorant of this one thing, that one day is with the Lord as a thousand years, and a thousand years as one day. The Lord is not slack concerning His promise . . . but is long suffering to us-ward, not willing that any should perish, but that all should come to repentance.

“ But the Day of the Lord will come as a thief in the night . . .

“ Therefore . . . beware lest ye also, being led away with the error of the wicked, fall from your own steadfastness.”

Now the reference to the “ last days ” makes it clear that this prophecy deals with the state of affairs which is to exist upon earth at the very end of our Christian dispensation, i.e., just before our Lord returns to earth; and it also seems clear that Peter is referring to that great final apostasy, with-

in the Church, which is to be the peculiar mark of the end of the Christian dispensation, as we are so often warned in other prophecies regarding the same period.*

(Remember that scoffers at Christian doctrine have always existed *outside* the Church, while the phenomenon described here is regarded as something new. It has been reserved for our own day to see Christian doctrines scoffed at *within* the Church itself !)

Note, therefore, that these "last days" apostates are represented as basing their contempt for the idea of our Lord's promised Return, upon a peculiar *doctrine* which they seem to have accepted. It is a doctrine of *uniformity*, and has certain marked characteristics. Thus it *starts* with an historic appeal to the *silence of God*: "Since the fathers fell asleep", say these people who cannot believe that God ever really means to interfere, "all things continue as from the beginning of the creation."

Now since the context is a Christian one—concerning an apostasy within the Christian Church, at the close of the Christian dispensation—it seems clear that these particular "fathers" must be the fathers of the Christian Church; in other words, the Apostles themselves and their immediate successors. Note, therefore, the implied reserve: "Since the Fathers fell asleep." Apparently these scoffers, being nominal Christians, feel compelled to allow that something rather abnormal may have

* See for instance, Matt. 24 : 12 ; 2 Thess. 2 : 3 ; 1 Tim. 4 : 1, ff. ; 2 Tim. 3 : 1 to 4 : 4 ; 2 Peter 2 : 1, ff. ; Jude 18 ; etc., etc.

occurred in the days of the Fathers; they are prepared, at least, to leave that question open to dispute; but they are very positive that nothing abnormal has happened *since*.

And in that, at least, they seem to be right. St. Peter, at any rate, says nothing to imply that they are wrong here; on the contrary, he distinctly goes on to imply that they are right, for he speaks of the patience of God, even dealing with thousands of years;* although he significantly warns faithful souls against drawing the same conclusions from that coming protracted *silence* as the apostates of the end would draw from it.

For note that these apostates do not stop at merely claiming the true *historic* silence, which lies between the death of the "fathers" and their own "last days" period, but go on, with equal assurance, to make a claim which directly insults the whole Old Testament, and which the Apostle emphatically does deny, for they coolly bracket this *historic* Silence *since* the days of the "fathers", with a *supposed* Silence reaching *backwards* from those days even to the very *beginning* of the Creation.†

* Note this; for it is often said, nowadays, that the the early Church expected our Lord to return at once. It is, of course, quite true that many early Christians did expect Him to do so. Loving Him as they did, and desiring His return so intensely, it was natural that the wish should become the father to the thought.

It is wrong, however, to regard Scripture itself as being committed to the idea of our Lord's early return. The Saviour Himself gave parable after parable which implied the indefinite *postponement* of His Second Coming. Similarly St. Paul most urgently warned the Thessalonians to give up the idea, when they regarded that Coming as being imminent in their own day; and St. Peter here shows that the Apostles themselves must all die, and be relegated to a hoary antiquity, before the Day could be really at hand.

† There is no mistake about this rendering. The Greek word *arche*

I would ask the reader to think of the peculiar significance of this, in the light of the events of the last century; for it is clear that these "last days" apostates are described as doing the very thing which our own apostates are doing before our eyes. They are described as extending the *true historic uniformity* of a prolonged Christian era *illegitimately backwards* to cover the *pre-Christian* period right down to the very *beginning* of Creation, *thus involving creation itself in their scheme of uniformity!*

Their doctrine of "creation", therefore, is one which dispenses with God's interventions, and appeals to present-day processes alone, as being perfectly sufficient of themselves to explain the origin and development of everything in nature. In other words, their doctrine is identical with the new-found doctrine of *twentieth century evolutionists*.

See, too, how these people are represented as making their statements with the greatest assurance, just as if the Pre-Christian Uniformity were as certain as the Post-Christian. They do not say that all things continue as "they are held to have continued" from the beginning of creation, but that they continue "as from" that beginning. They admit of no doubt upon the matter. Although they extend Uniformity back to the very beginning of creation, and thus flatly contradict Genesis, they speak as though they were quoting "clear and demonstrative knowledge."

meaning "*beginning*", is there; so that Creation itself is clearly meant to be involved in the continuity of *present-day processes*.

Thus an illegitimate extension of Uniformity is given out, by these men, as the purest *science*.

Now that there is no mistake about this, but that these people are indeed represented as extending a recent historic Uniformity *illegitimately* backwards, exactly as our modern evolutionists are doing, is shown by the Apostle's prompt attack upon the very middle of that *false* extension. For an Uniformity reaching backwards from the "Fathers'" day to the beginning of Creation must pass, in its course, the days of Noah ; and St. Peter makes it clear that these Uniformitarians *are* passing that point, and denying God's intervention in those days, for he directly condemns them for doing so, and reaffirms the Deluge account in despite of them.³⁵

So note his peculiar expression regarding these men's false denial at this point: he calls them "willingly ignorant" of the fact of the Flood. Now this is a strange-sounding phrase, yet it exactly describes the attitude of *modern Uniformitarians* ; for, having accepted the dogma of Uniformity, these people have striven at all costs to explain away or ridicule the massive evidences produced by the older geologists and palæontologists in defence of belief in the Flood, until few to-day realize how strong and unanswered that case remains. Evolutionists, of course, do not wish to realize anything of the sort. They prefer to ignore the case, and so they remain "willingly ignorant."*

Things have thus come about *exactly as foretold*. This ancient prophecy, which has stood on

* See the "Appendix" II.

record for over eighteen hundred years, has now at last been completely fulfilled by the appearance of our modern *doctrine of uniformity*.

* * * *

What then are we to say? Are we to join in with the current popular movement in "science", or to resist it?

It is clear that, if we join in, we identify ourselves with a movement whose essential character was foretold nearly 2,000 years ago, in writings which warned men of the coming prolonged *silence of God*, and of the exact inferences which would be drawn from that Silence, by the advocates of a *false DOCTRINE masquerading as science*, at the end of the age.

If we resist the movement, we will certainly meet with opposition from men, and must be prepared to face all the ridicule of these "scoffers"; but we will keep ourselves upon the right side of that marvellous Book which did so wonderfully foretell this movement. For surely nothing but Divine Inspiration could have thus described the basal dogma of modern evolution, in its appropriate twentieth-century garb, eighteen centuries before that garb was ready to be used! And see how the whole thing is done—both the history and the essential character of the movement indicated—by the unerring Spirit of God *in a single sentence*. The great modern *doctrine of uniformity* stands pilloried, by Scripture, in a flashlight portrait of 15 words:—

"*Since the fathers fell asleep all things continue as from the beginning of the creation.*"

Let those, therefore, profess themselves Uniformitarians who will. All who do so are compelled to identify their creed with the above formula, which expresses the essence of Uniformitarian belief. So let Christians remember that the same Scripture which foretold the rise of this Doctrine, also described it as a false Doctrine, and a blunder founded upon perversity. The same Scripture which describes this Doctrine, definitely refers to it as "*the error of the wicked*".*

* Verse 17. Note that the word translated "error" here, is the same Greek word, *plane* which is rendered "delusion" in 2 Thess 2 : 11.

XII

CONCLUSION

“THIS know that in the last days perilous* times shall come, for men shall be . . . ever learning, and never able to come to the knowledge of *the truth* . . . For the time will come when they will not endure sound doctrine; but after their own lusts shall they heap to themselves teachers, having itching ears: and they shall turn away their ears from *the truth* and shall be turned unto fables ” (2 Tim. 3: 1 to 4: 4).

“Because they received not the love of *the truth* that they might be saved . . . God shall send them strong† delusion ” (lit. *error*) “that they should believe *the lie* ” (2 Thess. 2: 10, 11).

We have now, even if only briefly, compared the statements of Scripture with the findings of modern science over a very wide range of subjects ;

* The word rendered “perilous” here is the same one (Gr. *chalepos*) as is rendered “fierce” in the story of the demoniacs of Gadara (Matt. 8: 28). It appears nowhere else in the Bible. Apparently these men of the Last Days are to act much as those do who are under evil spirit influence. This reminds one of 1 Tim. 4: 1; for we have already seen how F. W. H. Myers felt himself driven to Spiritism by his belief in evolution.

† The word rendered “strong” here is *energeia*, and indicates a powerful *working*. It is used of the Spirit’s workings in Eph. 1: 19; 3: 7; 4: 16; Phil. 3: 21; and Col. 1: 29. Its use here suggests that the delusion, or “error”, has an actively working influence upon those who accept it. This is certainly borne out by facts; for *uniformity* implies Evolution, which attacks one stronghold of faith after another until all are destroyed. No evolutionist can be anything but either illogical as an evolutionist or merely nominal as a Christian. Also note that the Man of Sin, who comes as the climax to this movement, is said to come after the “working” (*energeia*) of Satan (v. 9).

and it is worth remembering that, so long as we were dealing with the things which science can really claim to have established, we found no difficulty whatever in showing that the statements of Scripture are in the most perfect harmony with them. The taunts of sceptics can be returned with interest. Their own writings are full of expressions exactly similar to those which they would twist into proofs of ignorance when found in the Bible. Whatever subject we took up—whether we dealt with the position of the earth, with the question of subterranean waters and fires, with the shape of the earth, with astronomy in general, or turned to the subject of physics—we found that the references made to all such things, by Scripture, agree in the most remarkable way with the things which science can really *prove*. Indeed we found, in the majority of cases, that although the Bible is obviously not “out to teach” science, yet it actually anticipated the findings of modern science by many hundreds of years. The force and appropriateness of Biblical allusions are seen to come out more and more clearly, as human science emerges from the ignorance of the past into the fuller light of the present.

We found, however, that this conformity, between the Bible and what commonly passes for science to-day, came to an abrupt end when we entered the sphere of Biology *and* took up the question of Evolution. For it is not the case that the biology of the Bible is opposed to verified biological facts : in biology, as elsewhere, Scripture conforms closely to whatever science can actually

show to be matters of fact;* and it repeatedly anticipates the discovery of such facts—here as elsewhere—by many hundreds of years.³⁶ What the Bible refuses to do is to accommodate itself to that doctrine of universal evolution, which would dispense with creative acts and trace all forms of life back to a common origin in primeval slime.

It is worth remembering, therefore, that it is also just here that the true man of science should himself call a halt. We have now examined the case for Evolution from every point of view, and found it to be hopelessly unsound throughout. In no conceivable way can evolution claim to rank as “demonstrative knowledge”. Together, also, with this coincidence of facts (namely, that Scripture opposes evolution, and that evolution cannot be proved), we also find that Scripture singles out the basal dogma of modern evolution,—the so-called *doctrine of uniformity* upon which, as Huxley showed, belief in evolution is itself founded, and which controls all evolutionary thought to-day—in order not only to define it in unmistakable terms, but also to hold it up before us as being the peculiar “*error of the wicked*”, which is to dominate apostate thought in the last days of our Christian dispensation.

* * *

That being the case, I will now ask the reader to examine the two quotations given at the head

* Thus it allows for all the facts we can actually prove as to the splitting up of types; it anticipates the evidence that the black races are descended from the white; and it clearly allows for all our modern discoveries of very ancient forms of life by its unmistakable hints regarding separate creations.

of this chapter; for they are both * taken from passages in which St. Paul refers to the same closing period of our age as was dealt with by St. Peter when he spoke of this particular "error". So note that Paul also speaks of a great fundamental *error* as controlling men's beliefs at that time. It is true that he does not specify the nature of this error, but there seems to be little doubt that he is referring to the one described by Peter. Remember that both Paul and Peter are dealing with the same period and the same people—the time of the end, and the apostates of that time—and each speaks of one great "error" as being the source of confidence of those apostates while pursuing their lawless courses. There could hardly be two supreme errors capable of holding this central position with the same people at the same time, so it seems significant that neither apostle speaks of more than one error. Thus the terms of their prophecies indicate that both Peter and Paul are referring to the same "error"; and we have seen that it is none other than our modern *doctrine of uniformity*.

It is worth noting, therefore, that while Paul speaks of only one basal *error*, he talks of many *fables* as gaining currency at the time of the end; and this is in spite of the fact that the men of that

* The first quotation speaks for itself. As regards the second, note that St. Paul is speaking expressly of our Lord's Return (vv. 1-2), and connects it with a final "falling away" (v. 3, Lit. "apostasy"), which could only take place from within the professing Church itself. The "delusion" (*error*), LIE, and Man of Sin are all mentioned in connection with this apostasy, to which the definite article is also attached, since it is well known from other prophecies regarding the same period of the end.

time should be "ever learning"! This seems to be rather a strange combination of circumstances, and yet we can see before our eyes how the prophecy is being fulfilled. For the men of our days are indeed "ever learning"; their knowledge of physical facts is being indefinitely extended in all directions; and yet, since they have accepted that extraordinary dogma of "Uniformity", they feel compelled to *interpret the past* in accordance with its God-denying requirements. It is belief in Uniformity, as Huxley showed, that has led to belief in Descent; and, as the Duke of Argyll pointed out, all theories of Descent "ascribe to known causes unknown effects".* Thus our modern men of science, when interpreting the records of the past, are compelled, by their belief in Uniformity, to do exactly as inventors of fables have done from the days of Aesop to those of Uncle Remus. The endless genealogies of the palæontologist, striving to establish the *fact* of evolution, are but persuasive fiction at best, since "Succession is no proof of Descent"; while the conflicting theories of Lamarckian and Neo-Lamarckian, Darwinian and Neo-Darwinian, etc., etc., as to the *method* of evolution, are essentially kin in principle to the "Just-So" stories of Mr. Kipling. "Ever learning" as we are, we have yet accepted the "error" of Uniformitarian doctrine, and so have literally heaped to ourselves teachers of "fables".

But this "error of the wicked" does something more than merely lead men to accept fables

* *Primeval Man*, p. 44

as to the past: it also makes them hold false views as to the future; for our anticipations as to the future are closely bound up with our ideas as to the past. The consistent evolutionist, as Peter shows, cannot accept belief in the Second Coming, because, having begun by denying all God's interventions in the past, he can then find no precedent in the past for such a Coming in the future. The *doctrine of uniformity*, in leading men to accept evolution as the only view of nature in tune with the "Modern Mind" (i.e., the Mind which has accepted *uniformity*), also leads men to accept views of the future which are of the same nature. It teaches men to think that if God has not interfered in the past, neither will He interfere in the future: if man has risen through evolution to his present status, he can through the same evolution rise indefinitely further.* This *prospective* aspect of evolution has been clear to thinkers from the very beginning, and was actually pleaded in defence of Darwin. Thus when Darwin's opponents expressed disgust at the idea that we could be descended from apes, Professor Paul Broca (famous for his theory as to the location of

*The argument has been put in poetic form as follows:—

"And if, my friend, this onward upward movement
Has held since earth from blazing gas began,
Explain me why this marvel of improvement
Must stop when reaching man.
For if 'tis easy in the opening portals
Of science thus man's climb from slime to solve.
'Tis quite as easy to suppose from mortals
That angels may evolve."

(New York *Independent*, Aug. 9. 1906.)

But why this modest stopping at mere "angels"? And note the reference to evolution as "science", in support of this doctrine of self-advancement.

the faculty of speech) defended Darwin in the following words:—

“I find more credit” said he, “in mounting than in descending, and . . . I would rather be a perfected ape than a degenerated Adam* . . . I would rejoice to think that my descendants, indefinitely following the splendid work of progress, would be able to raise themselves as much above me as I raise myself above the ape, and to realize at last the promise of the serpent of Genesis: ‘*Ye shall be as Gods!*’” (*Sur le Transformisme*, p. 2.)

This flattering idea of *self-improvement* is inherent in evolution, and is probably what Darwin referred to when he himself called evolution “the Devil’s gospel” (Letter to T. H. Huxley, August 8, 1860. See *Life and Letters*, p. 331).³⁷ No title for evolution could be more apt, for it cuts at the very roots of the Gospel of Jesus Christ. Thus the Bible doctrine, that the Son of God became Incarnate to die for our sins, is in logical harmony with the doctrine of man’s hopeless *Fall*: but it is completely out of place if man is, as evolution teaches, a *Risen* creature, already far higher and better in every way than his first human, or pro-human, parents could ever have been. Christians should never forget that it is their religion alone, among all the religions of the world, that talks of

* This expression caught on, and was soon repeated by others. “It is better”, said Carl Vogt, “to be a perfected ape than a degenerated Adam” (*Lecons sur l’Homme*). Even Christians like Bateman failed to see the significance of it, and quoted it with approval, while denying that evolution could actually be proved to be true (*Darwinism Tested by Language*, p. 58).

an *Incarnate Saviour*; and so it is their religion alone that is undermined by belief in evolution. Yet, as St. Paul prophesied would be the case, the men of our day seem to be singularly out of love with "sound doctrine". So few seem to mind, even when the Gospel is attacked in the most barefaced manner. It is a singular fact that, while we still talk of the "Christian" nations of Europe and America, these nominal Christians are so little in love with *the truth* as defined in Scripture, that they are listening with approval to announcements of which the following is typical:—

"Ellen Key, that remarkable Swedish writer, has an article on 'Motherliness' in the *Atlantic Monthly* . . . 'Many' (she says) 'are the women in our day who no longer believe that God became man. More and more are coming to embrace the deeper religious thought, the thought that has given wings to man created of dust, the thought that men shall one day become gods!'"*
(*Public Opinion*, Friday, Nov. 1, 1912, p. 447).

Here we find Paul Broca's logic carried a step further; for if men will indeed "become gods" in the normal course of evolution, why ever should we believe that God became Incarnate to *save*

*Such opinions are indeed more widespread to-day than most Christians realize. "No god for a gift. God gave us", cries the writer of the Harvard Class Poem for 1908, thus flatly denying John 3 : 16, "Mankind alone must save us". Mr. Kipling, on recovering from a recent severe illness, gave a widely published speech in which he thanked the doctors and, referring to the marvellous advances of modern science, talked of the real divinity, as being latent in man himself. "Man", we read on the cover of *Bibby's Annual*, "is a god in the making."

man? We see, therefore, how the *doctrine of uniformity*, in supporting evolution, leads to the very denial foretold as characterizing the last days; for the denial that "God became man" is nothing more nor less than the denial that "God was manifest in the flesh" and that "Jesus Christ is come in the flesh".³⁸ And this denial is the special mark of the "spirit of Antichrist"! (I John 4:3; cf. 1 Tim. 3:16).³⁹

Thus our modern *doctrine of uniformity*, foretold by Peter as characterizing the apostates of the Last Days, has not only come into being before our eyes, in spite of the fact that we are "ever learning", but is also supporting both the "fables" spoken of by Paul, and the antichristian "denial" spoken of by John.

Is all this merely coincidence?

Nor is this all. I would now ask the reader to think of the further significance of the fact that it is, as Broca said, the promise of the serpent *in Genesis* which is revived by belief in evolution. For if we turn back to that wonderful 3rd chapter of Genesis, we will find that this particular promise is inextricably mixed up *there* with a terrible *lie*, the first and greatest lie mentioned in the Bible, the lie which caused the Fall, and to which we owe every trouble which afflicts us, since all have sprung from the Fall. "YE SHALL NOT SURELY DIE", said the serpent, "for God doth know that in the day ye eat thereof . . . ye shall be as gods" (Gen. 3: 4-5). It is worth remembering that the thing which was preventing Eve from eating the fruit was God's warning that she should

surely *die* if she did eat it. In flatly denying the truth of *this* warning, the Serpent told the first and greatest lie associated with his name in Scripture; for the rest of his speech is not so much a lie as a piece of false reasoning which promoted Eve's belief in the lie.

Now this is worth noting; for we have seen how the *error* spoken of by Peter and Paul is none other than our modern *doctrine of uniformity*, which both implies and necessitates belief in evolution, and hence implies and necessitates the belief that men shall one day "become gods". In other words, the *error* spoken of by the apostles revives, in our own day, the identical plea by which the Devil supported his great first lie in Eden! So see how St. Paul says that this "error" is to perform *exactly the same function* as that plea served in Eden! For he tells us that this "error" is being sent *in order that men should believe THE LIE*.

It is typical of the internal cohesion of Scripture, and of the exact accuracy of language used in it, that the apostle here speaks of "THE" Lie, and not simply of "a" lie as it is rendered in both our versions. For there is only one lie which could be given such pre-eminence in the Bible, and that is the lie to which we all owe "Paradise Lost". Indeed the whole Bible itself, as the record of God's dealings with *fallen* man, has come to be written in sole consequence of the effects of that one *lie*. The context here also shows that this is the lie to which the apostle refers, because he goes on to say: "That they all might be judged⁴⁰ who believed not THE TRUTH but *had pleasure in*

unrighteousness " (2 Thess. 2: 12). It is by transgression of the Law that we come under judicial sentence as sinners; and those who love the idea of transgression, as Eve did, * give way to it, just as she did, as soon as their fear is removed of the penalties attached to it. † Thus those who have pleasure in unrighteousness unmask themselves for judgment as soon as they believe *the lie*.

So note, also, how *the lie* is here mentioned by St. Paul in direct contrast to *the truth*. This contrast keeps recurring right through the Bible, being found even from the very beginning; for the same 3rd chapter of Genesis, which records the first appearance of *the lie*, also gives us our first indication of *the truth*. Thus when the Serpent had declared his lie, "Ye shall *not* surely die", and when this promise of impunity had done its deadly work in bringing our first parents under judgment as sinners, God in His mercy announced the first hint of that truth which was finally manifested long afterwards, in Christ Jesus. In verse 15

* Eve's first recorded words show that she was fretting against God's prohibition. Feminine-wise she exaggerates its terms, making them harsher than they really were, as if death would follow even from *touching* the fruit, which was not the case (Gen. 3: 3; cf. 2: 17). Also she minimizes the permission regarding the whole rest of the garden, by talking only of being allowed to eat of "the" other trees, instead of "freely" of "every" other tree (3: 2. cf. 2: 16).

† It appears to be those who "have pleasure in unrighteousness", or hanker after the breaking of God's Laws, who are the readiest to believe the Devil's lie of impunity. St. Paul tells us that Adam was not deceived by it, although Eve was (1 Tim. 2: 14). Why Adam also gave way to the sin, we are not told; presumably his great love for Eve, made him determine to share her fate. But this was to "worship and serve the creature more than the Creator" (Rom. 1: 25). Nor did it help Eve, for the inevitable degradation of sin was seen shortly afterwards when the man, faced by the consequences of his act, tried to throw the blame upon the woman (Gen. 3: 12).

we read of the Seed of the woman, Who should crush the Serpent's head;* and in verse 21 we read of the sinners being clothed in coats made of skins—fit type of our being clothed in the garments of Christ's righteousness, the Sacrificed Lamb of God.

It is very interesting, in this connection, to study our Lord's own treatment of the subject; for we find Him, in the 8th chapter of St. John's Gospel, also speaking of *the truth* and *the lie* as being in opposition to each other (for there again it is "*the*" Lie, and not "*a*" lie as rendered by our translators). So note how the context there deals with *sin* and *death*, for our Lord had said to the Jews: "If ye believe not that I am HE, ye shall die in your sins" (v. 24); and then see how, in verses 32 and 36, He identifies *Himself* as *Son of God* with *the truth*. It is, therefore, the denial of faith in Christ, as Son of God, which leads to *death* for our sins (cf. John 3: 16, 36); and when the Jews showed that they did not believe that they would die in their sins, even if they rejected Christ as God's Son, our Lord told them that they were of their father the Devil, who both speaks *the lie* and is the father of it (v. 44). It is also significant that our Lord calls the Devil, *in this connection*, a "murderer", and says that he was a murderer

* As Colonel Biddulph says, in his *Notes on Genesis*, p. 19, "It is remarkable that the primitive Hebrew text of Gen. 3: 15, translated 'it shall bruise thy head and thou shalt bruise *his* heel', is capable of translation 'it shall bruise thy head, and thou shalt bruise *our* heel'. The special form of the suffix meaning 'his' has been so chosen as to be identical in consonants with that meaning 'our'. Did not the Lord foreshadow the identification of the promised delivering Seed with the Godhead?" Thus the first hint of God's TRUTH, the *Incarnate* Saviour, appears in answer to the first appearance of the Devil's LIE of impunity.

"from the beginning"; for the first thing recorded of the Devil, at the very beginning of the history of our race, is his speech to Eve, in which he told the *lie* which led to her Fall and death—and so murdered her. It is, therefore, clear that when our Lord speaks of "*the lie*" He can only be referring to the one spoken in Eden. In connection with no other lie could the Devil be called "a murderer from the beginning".

"THE LIE", then, is a technical expression in Scripture, and refers to the primæval lie in Eden, which recurs down the ages, always leading men to sin by denying God's sentence of *death* for sin (Ezek. 18 : 4). Thus see the first chapter of the Epistle to the Romans: for there the apostle, in speaking of former apostasies from God, again puts *the truth* and *the lie* in opposition (v. 25. It is again "*the*" Lie, not "a" lie in the Greek), and shows how belief in the latter leads at once to the breaking of God's Laws, and the bringing of men under God's Judgment (lit. "Sentence") of *death* (v. 32).

Indeed it is clear that the opposition between *the truth* and *the lie* is fundamental; for once a man loses his sense of God's sentence on sin, he loses his sense of the need for a *Saviour* from that sentence. * Thus we see that there is a natural and deep-rooted antipathy between the Devil's

* Nobody wishes to be "rescued" who is in no danger. Indeed, he feels that the very talk of rescue is both ridiculous and insulting. Thus Modernists, being Uniformitarians, invariably refer to our Lord's *Life* rather than to his *Death*; for their evolutionary scheme of self-advancement can find place for an Example, but none for a SAVIOUR. So no Modernist ever speaks of the *blood*, although there is nothing which the Scriptures themselves mention more often.

promise of impunity, and God's promise of salvation. *The lie* automatically dispenses with all need, so to speak, of *the truth*. It encourages men not only to sin without fear, but also to spurn salvation.

We see, then, that Scripture does not treat the appearance of *the lie* as being, in itself, a new thing. It was seen in Eden; it has been seen repeatedly ever since, all down the ages following Eden. What is new in our own day is the *manner* of its appearing, i. e., *among professing Christians themselves*. * This is significant, for, among Christians, *the lie* can only mean the *denial of eternal damnation*. Remember that the New Testament which brought Life and Immortality to light through Gospel (1 Tim. 1 : 10), also brought us word of a second and eternal Death for those who disobey the Gospel (Rev. 21 : 8 ; cf. 2 Thess. 1 : 8-9).⁴¹ The first death, indeed, is cancelled in Christ ; for "as in Adam all die, even so in Christ shall all be made alive" (1 Cor. 15 : 22). As universal as the first death is, so universal is the redemption from *it*. Whether they like it or not, both saint and sinner must rise again ; the one to meet his Saviour the other to meet his Judge. That the death *now* to be feared lies *beyond* the first death, as spoken of in Eden, was shown by our Lord when He compared the two to His followers (Matt. 10 : 28).† Nor has the Christian

* Remember that Paul is speaking of "The Apostasy" (Gr. *apostasia*) ; and uses the definite articles, since it is also well known from other prophecies of the end (2 Thess. 2 : 3).

† It was also implied when our Lord told the Jews that they would die *in their sins* (John 8 : 21, 24). This implied a further calamity (presumably Death, for *Death* is God's sentence on sin,) *beyond* the first death.

Church ever, until quite recent times, thought of denying this *second* Death spoken of in the New Testament. Mediæval writers might, indeed, corrupt the doctrine by adding uninspired fancies regarding "infernos"; but the stark fact of eternal fire (Matt. 18: 8; cf. Rev. 20: 10, 15) was never lost sight of by any section of the Christian Church, until the latter part of the 19th century.⁴² And if we ask why the denial of this Second Death came, there is only one answer: it is abhorrent and incredible to the Modern Mind.* But this is simply the Mind which has accepted the *doctrine of uniformity*.

Those who believe that God has never interfered in the past, nor ever means to interfere in the future; that there can have been no Fall, since man has *risen* to his present state; find it incredible that eternal fire should be awaiting those who transgress the Commandments found in a discredited Bible.

"Impunity" is the Devil's gospel, not "Salvation"; "Impunity" is implicit in the *doctrine of uniformity*, that great "Error of the wicked" which urges via the Eden slogan (now once more resounding on all sides of us) "Ye shall be as gods!"—the Eden *Lie*, "YE SHALL NOT SURELY DIE".

* For it is logical enough on the Christian view. If a single sin by the first human pair was sufficiently appalling, in the eyes of an unspeakably holy God, to cause the whole earth to be blasted by the Curse, the accumulated sins of a human life, including rejection of the Infinite Sacrifice of the Cross itself, could never be dealt with by anything short of Infinity of flame. In other words, the whole thing turns on the measure of guilt; and God's revealed scale for this is the Curse. The more we lower that scale, the more we approximate to the Devil's gospel of complete impunity.

The consistency of Scripture is marvellous ; the fulfilments of its prophecies are far beyond the power of man to have arranged, or the scope of coincidence to explain. * As certainly as all the marks of the Last Days are closing in upon us—the basal “Error” so wonderfully described in 2nd Peter, the “Fables” mentioned by Paul, the antichristian “Denial” specified by John, and the revived transcendent LIE, † all grouped together in one family tree with the “Error” at the roots of the whole—so certainly may we also expect to see the Man of Sin, spoken of by Paul, appearing as the final manifested fruit of that same “Error”. ‡

For evolution, based upon *uniformity*, is already making the men and women of our day anticipate the arrival among them of the “Superman” ; ‡

* Remember also how, on the showing of F. W. H. Myers, it is belief in Evolution (the child of *uniformity*) which is reviving belief in ancient Pagan ideas, and driving former Christians themselves to resort to Spiritualism : thus fulfilling the “express” mark of Last Days’ *Apostasy* mentioned in 1 Tim. 4 : 1, ff. This cursed system is at the root of everything. It is responsible for the simultaneous appearances, in our own day, of all the prophesied marks of the end.

We have already seen, too, how exactly the dogma of *uniformity*, with its spawn called “Evolution”, constitutes a system which can only be described as a *Philosophy*, and *Science*, (lit. “Knowledge”) *falsely so called* ; such being the very type of thing against which Scripture so urgently warns us. The key fits all the wards.

† Also the other signs of the end, mentioned in the notes above ; for *uniformity* is indeed a strongly *active* error, producing, in the most significant fashion, *every one* of the foretold signs of the end, in apostate Christendom.

‡ Thus the Rev. R. J. Campbell tells us that the end towards which all present-day movements are sweeping is : “the greatest the mind of man can conceive—the perfect relation of perfected man to a perfected universe—the birth of the SUPERMAN. The striving for this is *religion*. It is the true worship of God.” He also tells us that, with the arrival of Superman and the ideal “perfectly democratic and perfectly autocratic” organization which he will head, “all humanity will be at one with God, and *every man will be a god*” (cited by Philip Mauro, *Number of Man*, p. 220). Surely the Devil’s more inspired children are now themselves detecting the outlines of coming things spoken of in Rev. 13.

and Scripture says that he shall come. That same 2nd chapter of 2nd Thessalonians, which tells of the "Error" leading to belief in the "Lie", also tells of the climax to this movement being represented by a terrific being who will claim to realize the very expectation which Ellen Key and others have expressed. Just as they expect that men shall one day become gods, so will this being, a *man*, claim to have become one. We are told, in the 3rd and 4th verses, that he shall "oppose and exalt himself above all that is called God, or that is worshipped; so that he as God sitteth in the temple of God, showing *himself* that *he is God*".*

Since all other signs of the end have now come about, as the patent fruits of one and the same "Error" so exactly described by St. Peter, the appearance of this final sign, the logical climax⁴⁴ to that same "Error"—and already expected, as such, by anti-christian writers themselves—cannot be in the very distant future.⁴⁵

So, when we see how the whole body of Scripture warns us of what is coming, it is the prayer of the writer that his brief notes may help some to see what this devilish doctrine of *uniformity*, with its swarming brood of fables called "evolution", means in the present trend of things. May the Saviour Who died for us keep us fast, as fallen creatures, in that faith in his SHED BLOOD, where alone we can be safe from the everlasting Wrath to come.

* Cf. Daniel 11 : 36-37, where we read of the same lawless and self-willed being.

NOTES
AND
APPENDIXES

NOTES TO PART II

Note 1

It is difficult, perhaps, for people not familiar with the subject to realize how loose and arbitrary the terms "species", "genus", "family", etc., are in science. In the old days, when the physiological test of reproduction was allowed to decide what should constitute a "species", there was a considerable degree of uniformity among scientists in their opinions regarding, at least, the "species" of *living* forms. From the moment, however, that the quibbles of Darwin led men to abandon the physiological test in favour of judgment by morphology, or form, confusion set in. As Darwin himself admitted, the different *breeds* of pigeons, if found in the wild state, would be regarded as *separate genera* by ornithologists, on account of their differences in form!

In regard to fossil types, of course, the physiological test is, and always has been, out of the question. The species of the palæontologist are of necessity purely morphological ones, and the case of living creatures may show us how arbitrary they must be in consequence. Indeed, many fossil forms have I found (e.g. "Sea-urchins") which are classed as separate species in palæontological works, although their differences are no greater than exist, say, between a long-headed Scot and a short-headed German. Every detail of plate and tubercle is the same in the one as in the other; simply the general silhouette, so to speak, is somewhat different. And that might have been produced by rock pressure!

Similarly with Foraminifera. I have found numberless specimens in Eocene beds which closely resemble certain forms of the Cretaceous. Yet they are not only given different generic names (*Fatellinæ* and *Orbitolinæ* respectively), but are actually put into different *families* by an excellent authority, who himself declares that they all belong to the

"same morphological species"! So even the test by "morphology" goes for nothing, since, by putting them into different "families", he associates them apart, with entirely different *forms*, which are thus regarded as more closely related to them than they are to each other. And his reason for doing this is that the *Patellinæ* have calcareous tests (shells), while the *Orbitolinæ* are sub-arenaceous; yet other creatures, within the same general Order, which range from *hyaline* to *coarsely* arenaceous (i.e. the *Spiroplectinæ*), are included by another excellent authority within a *single genus*!

Could confusion be worse confounded?

Note 2

The truth is that the more sober evolutionists now realize that the existence of a really useless rudiment would be a very awkward thing for themselves to explain. Even Darwin saw that the continued existence of a structure *noxious* to its owner would be incompatible with evolution, as it would show how hopelessly incapable the supposed agent of evolution really was; and clearer thinkers are now beginning to realize that any structure which is totally useless must also be definitely regarded as noxious. Thus, however minute an anatomical structure may be, it is bound, as a living part of a living organism, to be continually drawing on the nourishment taken in by the latter. Unless, therefore, it performs *some* functions for the good of the body as a whole, it exists simply as a drain upon the latter, and hence must be regarded as not only useless but actively harmful. So the clear-sighted evolutionist is in a dilemma. Either he is compelled, like E. S. Goodrich, to suppose that structures *must* have their uses, or else every rudiment gleefully produced by his thicker-headed fellow evolutionists becomes an additional argument for throwing up belief in evolution and returning to belief in a Creator!

Note 3

Some enemies of Inspiration, like Dr. Driver, have felt the force of Pember's appeal to the third chapter of Genesis.

Driver's remarks, therefore, are interesting, as showing how little can be urged against Pember. Thus Driver himself admits (see his *Book of Genesis*, pp. 25-26) that "the narrator (of Genesis) considered the original condition of animals to be one in which they subsisted solely on vegetable food"; yet Driver tries to make out that the serpent was the only creature which was supposed to be affected by the curse! But when, in that case, would the other creatures be supposed to have changed their diet? For the narrator of Genesis must have known only too well that all creatures were not harmless vegetarians in his own day; indeed, the more "primitive" we suppose him to be, the less conceivable it is that he should be ignorant of the existence of carnivores! If, then, he regarded the latter as sufficiently incongruous to a perfect world to be left out of chapters 1 and 2, how could *he* account for their appearance except as one of the results of the *Curse*? So when we find that the serpent is said to be changed into a pre-eminently degraded and deadly creature, by a Curse which affects him "above" other creatures, is it not obvious that the intention must be to regard the rest of creation as affected in various degrees in similar ways?

Thus Driver's own admission, that all creatures in the uncursed world *were* regarded a vegetarian, itself compels us to admit that the Curse must have been regarded as universal.

N.B.—The Hebrew word rendered "above" means literally "from among", just as our own word "above" means literally "on top of". Both expressions mean idiomatically "more than", which is obviously the intention in each case here. Indeed the *context* actually makes the Hebrew idiom even more unmistakable than the English: for I would point out that the serpent is said to be cursed "above" (lit. "from among") *two* classes of creatures (the cattle and the beasts of the field) which are always, when mentioned together, treated as distinct in Scripture (cf. Gen. 10: 9). So, as the serpent could only literally come "from among" *one* of these, the mention of *both* shows that the only possible way of understanding the Hebrew here is to take it *idiomatically* as meaning *more than*.

So much for Dr. Driver's attempt to evade the issue here!

Note 4

Students of an organ like the eye know that it is only by stretching credulity to the utmost, and supposing that Selection can recognize and seize upon the most unthinkably minute differences, in the struggle for existence, that its efficacy to produce such an organ can be maintained. How then could it have ignored an organ like the appendix, which is millions of times bigger than those which it supposedly attacks with infinitely less cause; an organ which is capable of slaying its owner without any hint derived from the struggle for existence? Can such a blunderer be credited with unthinkable delicacies of adjustment?

Nor will the evolutionist's glib appeal to "time" serve him here. There is *nothing* in palæontology to show that creatures of the past had any less perfect vision than those of corresponding types to-day.

Note 5

This doctrine has, indeed, been taught since the earliest days of the Church, as shown by Dr. Molloy in his book on *Geology and Revelation* (1873), chapter XIX and Appendix. He quotes, amongst early Fathers, the opinions of St. Basil, St. Chrysostom, and St. Ambrose, all of whom noted this gap. They were followed in the middle ages by the Venerable Bede, Peter Lombard, Hugo of Saint Victor, St. Thomas, Perrerus, and Petavius. Modern writers who have pointed out the same facts are too numerous even to name. Thus we see how, long before geology was even heard of as a science, it was clear to commentators that the structure of the opening verses of Genesis was such that nobody could insist that the world began to exist only six days before Adam. It was pointed out, over and over again, that there was an interval between the first creation and the commencement of the Six Days' works. "How long that interval may have lasted" said old Petavius, "it is absolutely impossible to conjecture" (*De Opificio Sex Dierum*); while Perrerus declared that it could only be made known by a special revelation (*Comment. in Genes.*).

Note 6

I can only offer the briefest notes on these points. The word *tohu* (rendered "without form" in the A.V., and "waste" in the R.V.) is perhaps best translated "worthless" or "worthlessness", as that word will fit all contexts. It is also found *everywhere else* in the Bible as a term of depreciation or reproach, and often in connection with judgments on sin; so that seems to be the implication here. *Tohu*, therefore, does not suit a pure primæval creation over which angels could shout for joy; and the Hebrew of Isaiah 45:18 (sadly mistranslated by us) definitely declares that *God did not create the earth TOHU*. So we have no right whatever to take the second verse of Genesis as describing the state of things produced by the *creation* of the first verse.

Then again the word *hayañ*, rendered "was" in the second verse, is better translated "became" or "had become". Thus in Genesis 19:26, where we read that Lot's wife "became" a pillar of salt, the verb is simply *hayah*. Even Driver admits that "became" is an "exegetically admissible" rendering for the second verse of Genesis (*Book of Genesis*, p. 22), while Pember and Martin Anstey will allow no other. I myself referred the point to Professor T. Jollie Smith, some time ago, who kindly replied saying: "I think that verses 1 and 2 in Genesis 1 may legitimately be separated...*Hayah* does generally mean 'became' or 'came to pass' . . . Its use as a mere copulative is most extraordinary" (letter of 23—8—1923).

So we accept a "most extraordinary" reading if we take *hayah* to mean "was" in the second verse of Genesis!

Thus it seems that the most literal and accurate rendering of the opening words of Genesis would be somewhat as follows:

"In the beginning God created the heavens and the earth.

"And the earth became (as) worthlessness and emptiness."

Note 7

There are some interesting facts to be noted, both as to this disaster and also as distinguishing still further between

the first Creation and the works of the Six Days. Thus it seems that the pre-Adamic disaster affected the heavenly bodies as well as the earth, since references to the original creation imply that the heavens were in existence before the earth (see Gen. 1 : 1, where they are mentioned first, and Job 38 : 4-7, where the morning stars are represented as witnessing the origin of the earth); yet the heavenly bodies *during the Six Days* have to be attended to on the 4th day *after* work on the earth had commenced! (They are also there said to be "prepared" and "set"—not "created"—which seems to refer to some restoration of light, and perhaps also adjustment of courses, after the nameless disaster which had brought darkness down upon the world of the second verse.)

The references to the first creation are also notable as having to do with work upon the *solid earth* (its origin in Gen. 1 : 1; its measurements decided and structure perfected, in Job. 38 : 4-6); while it is a singular fact that *no work whatever upon the solid earth is mentioned during the Six Days!* Note that the solid earth is treated as already pre-existing in fully appointed shape, under the waters of the first two days, since it is simply "seen" when those waters are drawn off on the third day. (Skinner himself remarks on the significance of this fact. See his *Crit. and Exeget. Comm. on Genesis*, p. 23.)

Thus the first creation had to do with the heavens before the earth, instead of the other way about as during the Six Days; and the first creation had also essentially to do with work upon the *solid earth*, while the Six Days saw no work upon the latter. Again, the disaster between the first two verses of Genesis affected the heavenly bodies as well as the earth, but left the *solid earth unaffected*. We will return to this fact in a later chapter. (See Chap. IX, p. 78).

Note 8

Students of Scripture have always realized that it is the Devil who is referred to by Ezekiel as the "King" of Tyre (presumably as implying his influence over the evil, yet distinctly human, "Prince" of Tyre, referred to in the previous verses). See the whole passage in Ezek. 28 : 1-19,

and note that while the superhuman pretensions of the "Prince" are exposed for what they are worth, the treatment accorded to the "King" is of the very reverse nature. Things are said of the "King" which could never be applied to man; things which, therefore, definitely admit and imply by contrast *his* supernatural status. Nor is any effort made to decry the real dignity of *this* culprit. While the human "Prince" is treated with angry contempt, the "King" is "lamented" over, his real majesty being treated as unquestionable, and the tragedy of *his* fall, supreme.

Note 9

Some people, doubtless, will wish to ask what the scheme of Salvation for preadamite races could be, and what place the existence of animals could have in theological systems prior to man.

I will answer the latter question when the person who puts it has first explained to me the place which animals have in our present theological system. Since, even in our own creation, animals fell before men and were cursed before men, the presence of man does not seem to be indispensable to their own judgment, according to Scripture. The applicant's answer to my question, therefore, will probably answer his own. In any case he will, after answering *my* question, be able to show what *new problem* is here presented by the rocks; at present there does not seem to be any!

As regards preadamite *man*, the case is different. Here again, of course, the subject is no business of ours; but the Bible does again seem, incidentally, to give very distinct hints, which appear to afford the basis for a Scripturally consistent theory regarding former races, and their final share in the benefits of Christ's Sacrifice; which was not offered often from the foundation of the world, but once only, in our own age (Heb. 9: 26-28). The question of preadamite man's Salvation is, however, almost a purely academic side issue for our present purposes, and a very big digression would be necessary in order to deal with it. So I will simply say that I have gone into the subject elsewhere, i.e. in a pamphlet called "The Prophetic Scheme of the Ages", to the purpose of which this particular discussion was more relevant.

Note 10

The Scripture doctrine that *animals can fall* runs counter to the idea that man alone has "free will". This is too big a subject to be enlarged on here ; but the fact is only too plain that Scripture does recognize that animals can be regarded as doing wrong. Indeed, every man who beats his dog recognizes this truth by act, whether or not he will admit it in words. Obviously Scripture itself justifies no wordy subterfuge : an ox was not judicially *stoned* in order to give it any "association of ideas" to control its future conduct ! Similarly, Balaam's ass could recognize punishment *unjustly* given ; hence apparently the principle of right and wrong. What it could *not* do, as an uninspired *animal*, was to indicate, or in any way define, its vision of the Angel. *Spiritual comprehension* of the supernatural is the mark of man ; not choice of action, which the beasts most certainly have.

For further notes on this bracketting of the actions of animals with those of men, see Appendix I on the "Primæval Laws" (at end of Notes).

Note 11

I would again remind the reader that I am not attempting to prove the truth of the Bible account of creation. That is impossible. What I *do* claim to "prove" is that the Bible account *accords with the facts*, and so is *credible* ; and I also claim that the internal consistences of Scripture, brought out by comparison of its statements both with the facts of science and with contemporary events, are such as to make its account a marvellous one, and credibly Supernatural. That I walk by faith, I know and admit ; what I challenge the sceptic to prove, is that my faith is unreasonable.

The average sceptic, however, is not a very impressive person. Experience has shown me that nothing is easier than to *prove* that he also walks by faith, but *without knowing it*. His "thinking tackle is out of gear" ; and it was Darwin who put it out of gear, by teaching men to talk of "proving" things by simply suggesting possibilities about them. In biological science, and in religion, the average sceptic cannot distinguish fact from fancy.

Note 12

I would again remind the reader of the very definite statement, in Isaiah 45 : 18, that God *did not create the earth TOHU*. As this denial appears in the middle of a statement regarding the greater works performed by God for our benefit, the context makes it clear that it would actually be wronging God to suppose that He did create the earth *tohu*. So there is no mistaking the force of this denial, which is also given as a direct statement by Jehovah Himself. We see, therefore, that we have no right whatever to regard the *tohu* condition of things in the second verse of Genesis as a direct result of the *creation* in the first verse. *Something* terrible had happened in between. As to what this something was, we get our clearest hints from the vision of Jeremiah and the statement by Job. Even a critic like Skinner admits the application of the former ; and Job's declaration will fit nowhere else. Both Jeremiah and Job emphasize the *removal of all heavenly lights*.

Note 13

Dr. Wallace was very definite upon this point. When speculating about the causes which could be sustaining the internal movement of the sun, he remarked that without such movement the sun's "exterior surface would rapidly become cool and all planetary life cease" (*Op. cit.*, p. 90).

I would draw attention to Dr. Wallace's remark, for he touches on a difficulty which evolutionists to-day are apt to ignore. What right have we to take it for granted that the sun's influence has continued much as it is now, for the 1,500 *million* years and more that are supposed to have elapsed since geological processes first began on earth ? Such incredible constancy is no necessary property of heavenly bodies, so far as we can see. According to Flammarion, seven stars have disappeared altogether from the sky, and thirteen others have appeared in their place, in the short time since reliable astronomical records were instituted. Other stars have changed their aspect : thus Capella looked red to Ptolemy ; it is now a yellowish white, and has increased so much in brilliancy that it outshines Vega. No. 6 in Perseus has turned

from red to white within the last 40 years. No. 96 in Hercules, which was formerly green and red, is now white. Above all, Sirius, that monster sun which apparently excels our sun 5,000 times in lustre, was (according to the coinciding testimony of Cicero, Horace, and Seneca) red, even redder than Mars, a bare 2,000 years ago, while it is now a dazzling white. Its light and heat, in spite of its probable size, have thus magnified several hundred times, from unknown causes. (Bettex, *Modern Science and Christianity*, pp. 160-161.) What, then, has kept our own sun so absolutely constant in temperature as it is assumed to have kept, through natural causes, for unthinkable ages? The Christian who (on Bible authority) believes that the sun has been extinguished and restored, certainly once and perhaps often, by the interventions of God, is not exercising his powers of faith any more vigorously than the evolutionist who (without any authority) believes that the sun's emanations have remained absolutely uniform for anything up to 3,000 million years. Indeed the Christian's faith is in more apparent harmony with astronomical facts, which are all against belief in such unthinkable constancy.

Note 14

It seems to me very significant that the restoration of the sun's light is postponed until the fourth day after work upon earth begins. For although the extinction of the sun's influences might bring about all the consequences we have been considering, yet their return could not restore matters so easily. Applied only to the surface of the frozen earth and sea, the sun's influence, unless of great and destructive intensity, would take long to effect its purpose. It is fitting, therefore, that such agency is not appealed to by a writer who describes a work of six DAYS. The terrific business of freeing the atmosphere, loosening the frozen waters of ocean and land, and restoring vegetable life to the latter, are all attributed to direct and miraculous action of God *upon the earth*, before attention is turned to those heavenly lights which may support the mechanism of life, but could neither have created it nor have rapidly performed such tasks as these.

An amusing illustration of this is found on p. 617 of

Note 15

Vol. 5 of Hastings' *Encyclopedia of Religion and Ethics*, where the writer of the article on "Evolution" says:—

"It had been perceived that, on the whole, the different strata of the earth's crust contained different collections of fossil forms, and Cuvier had sought to explain this through a series of world catastrophes which blotted out animal life, followed by a series of separate creations which reseeded the earth with new and distinctive fauna." All this, however, was changed, according to this writer, when "Lyell pointed out clearly and forcibly that the formation of the rocks in past ages could be referred to the operation of causes similar to those now at work . . . By abolishing the catastrophe the geologist brought the naturalist face to face with the problem of explaining the connection between the fossil forms of life and those still living."

I pass over the ignorance displayed by a man who attributes ideas to Cuvier which Cuvier never expressed; what I ask the reader to note is the characteristic assumption that if the *formation of rocks* in the past can be explained upon a basis of present-day processes, we cannot believe in the *extinction of faunas*! I hope this chapter may help to show something of the absurdity of *that* idea.

Note 16

Not all evolutionists are of this stamp, but, strangely enough, it is generally only the best informed ones who seem to realize that they do walk by faith in accepting evolution. Thus while any number of people, like Canon Barnes, would have us believe that the truth of evolution must now be taken for granted, we find that an actual expert on palæontology, like Depéret, deliberately quotes the remarks of Zittel, another first rate authority, to the effect that:—

"The theory of descent . . . is at present only a theory, which requires to be proved . . . I ought not to conceal the great gaps in our demonstrations. Science aspires above all to truth" (*Transformations of the Animal World*, pp. 117-118).

The italics are Depéret's, who adds his own endorsement to Zittel's remarks.

Thus we see that the actual leaders of science speak after a very different fashion from their camp followers. One expert says, and the other underlines, the very thing which is loudly denied by an apostate clergyman.

Note 17

This is the usual claim made, but much overstates the case. Thus ALL the great Phyla (or fundamental types) of animal structure are represented (with the possible exception of the Vertebrates) in even the earliest fossiliferous rocks, and include many highly specialized forms among their representatives, such as *Agnostus* among the Arthropods, and Pteropods and Cephalopods among the Molluscs. A very perfect Jellyfish (*Medusina costata*) has actually been obtained from the Lower Cambrian of Sweden, to represent the Hydrozoa. Now these facts are significant, for Cephalopods represent the very highest forms of Invertebrate life; Pteropods are (on the evolutionary theory) supposed to be derived from the Opisthobranchiate Molluscs, which do not even begin to appear until the Carboniferous, or four great geological SYSTEMS *later on*; and the presence of the fossil *jellyfish* in the *Lower Cambrian* shows how inadequate is the stock excuse offered, from Darwin's day to ours, that we "cannot expect" such old rocks as the pre-Cambrian to preserve the long lines of ancestry required, by evolution, to explain the highly differentiated life of the Cambrian itself. If the Lower Cambrian can preserve a jellyfish, previous formations should be capable of preserving fossils for at least as far back, from the Cambrian, as the Cambrian is from us. But, although the state of those earlier rocks themselves often bears this out to the full, *the ancestries are missing*. Thus Wadia, in discussing the early (Algonkian) formations of India, tells us that: "The entire series of Cuddapah rocks are totally unfossiliferous, no sign of life being met with in these vast piles of marine sediments. This looks quite inexplicable, since not only are the rocks very well fitted to contain and preserve some relics of the seas in which they were formed, but also all mechanical disturbances, which usually obliterate such relics,

are absent from them . . . (In) formations immediately subsequent to the Cuddapahs, and in areas not very remote from them, we find evidence of fossil organisms, which, though the earliest animals to be discovered, are by no means the simplest or the most primitive" (*The Geology of India*, pp. 72-73). Thus the earliest known forms of life still present themselves before us with every appearance of having been specially created. So we see how Mr. Wadia's remarks (dated 1919) show that exactly the same difficulty remains for the evolutionist to-day as Darwin himself admitted to be "inexplicable" in 1859 (*Origin of Species*, p. 381).

Note 18

We have seen in the Note above, how suddenly and (from the evolutionist's point of view) how inexplicably the first forms of life come before us; and similar "suddenness" in the manner of introducing new types, seems to obtain all down the geological scale. The most striking forms—fishes, ichthyosaurs, plesiosaurs, pterodactyls, birds, mammals, bats, whales—the forms which represent the most striking departures or specializations of structure, come in the most abruptly. The links are ever the fewest just where they are the most wanted; it is, almost always, just where evolution must be supposed to have travelled furthest, that we have least evidence that it has travelled at all. As Depéret frankly admits (and the italics are again his own): "*the majority of the fundamental types of the animal kingdom come before us without any links between them from a palæontological point of view . . .*" (We) have to confess that at the present day we are utterly unable to see and even to explain otherwise than by simple theoretical views the fundamental divergences which separate the orders, classes, and great ramifications of the animal kingdom" (*Op. cit.*, pp. 74, 279).

Facts like these have been a sore embarrassment to evolutionists from the first. Their only resort is to blame the geological record for not giving them what they want. Darwin accused it of "imperfection" in direct proportion to its failure to support him, and Haeckel postulated whole "ante-periods"—as he called them—of which the entire geological record was supposed to be missing. Unfortunately, the difficulty is not to

be got over so easily, as Paulin pointed out. Although an evolutionist himself, he wrote the following shrewd criticism:—

“(The) imperfection of the geological record does not tell more strongly against the preservation of intermediate forms than it does against the preservation of finished forms . . . (Even) the most rapid form of evolution of which I can conceive or conjecture fails to account for, or even render remotely explicable, the sudden appearance among heterogeneous organisms of finished fish forms, finished bird forms, and finished mammals.” Paulin regarded this as “not less than miraculous” on the hypothesis of evolution, and added: “These considerations to me, a lifelong evolutionist, have proved of a highly disconcerting nature; . . . I must in all honesty confess that logically, as the matter presents itself to my mind, the argument is in favour of those who believe in the doctrine of special creations as our fathers believed in it” (*No Struggle for Existence*, pp. xvii-xix).

The justice of these remarks can, indeed, hardly be disputed; and the works of Darwin do not help us in the least. For although Darwin was at pains to explain the absence of numerous living transitional varieties between species (see chapter vi of his *Origin of Species*); and the paucity of fossil remains in general (chap. ix); yet he never even thought of explaining why the fossil remains of a world which, on his own showing, was always full of evolving creatures, should afford such a preponderance of types which must be regarded not as transitional but as terminal ones.

One might liken the position of the evolutionist to that of a man who insisted that a volume, torn to shreds, had been a treatise full of prolonged sentences; although almost every word, recovered at random from those shreds, had a full-stop after it. No talk of “imperfection”, or even of whole chapters being entirely lost, would help that man to explain *the large proportion of words with full-stops*.

So it seems clear that, even after he has accepted the rich absurdities of Ante-Periods, the believer in Descent must still face the fact that the very quality of fossil evidence is itself opposed to his theory.

Note 19

Anatomical studies constantly show that homologies exist where common descent is simply out of the question. Thus Carl Vogt long ago cried in despair, after dealing with some such cases: "Who can reconcile facts like these? One thing, however, plainly follows from the foregoing remarks: the dogma, 'Like formation, like descent', on which all our phylogenetic studies rest, cannot pretend to universal validity. The *onchidium* with the eyes of a vertebrata is no offspring of a vertebrata, nor the vertebrata of an *onchidium*" (*Die Natur*, March 1889). We therefore, now, hear a great deal about "Convergence" and "Homoplasy", etc., in evolutionary works. The result however, is that we can never, now, be sure that any structure is derived by immediate descent from another, since we never can tell how far "convergence" is responsible for their correspondences. The old assurance is gone; proof of affinity recedes from our grasp; and it is interesting to learn, from a materialistic man of science like Vogt, that science herself has her "dogmas", and one of these lies at the root of her appeal to "homologies". Homologies actually do, on any showing, exist quite independently of common descent.

Note 20

We have seen what Sidgwick says, and C. H. Hurst argues much as I do: "My object now" he says, "is to show that in neither case can a record of the variation at one stage of evolution be preserved in the ontogeny" (*Natural Science*). In other words, the very idea of appeal to embryology is illogical and, as the American, T. H. Morgan calls it, "*in principle false*". Similarly Ballantyne declares his own opinion in his article on "Human Embryology" (in Vol. 3 of *Green's Encyclopedia and Dictionary of Medical Surgery*, p. 72) by saying that: "ontogeny does not give a short recapitulation of evolutionary progress; it is not an epitomized phylogeny." In other words, the development of the individual does *not* record that of the species. Space forbids further quotations. What I ask the reader to note here is that Ballantyne's remark represents the official finding of an expert writing on his own subject, in a standard text-book.

Note 21

Thus as Owen pointed out, the new-born kangaroo is only an inch long and unable to suck; so its mother has a special adaptation of the *cremaster* muscle which enables her to squirt milk down her infant's throat. Now this might choke the latter, if its larynx were formed like the mother's; so it has, *at that stage*, a particular adaptation to prevent the milk going down its wind-pipe. As Owen (one of the greatest of English anatomists) remarked: "The parts of this apparatus cannot have produced one another; one part is in the mother, another part in the young; without their harmony they could not be effective; but nothing except design can operate to make them harmonious."

Such facts are inexplicable by evolution. Even more remarkable, perhaps, is the provision, by the plant *Duvana dependens*, of a special gall to cherish the moth *Cecidosis eremita*, shaping a cover (as Karl Frank points out) of "precisely" the right size "at the right time, not earlier and not later, so that when the moth creeps out of the gall the chrysalis skin and that alone is torn off" (*Theory of Evolution*, pp. 232-233). Now here is a structure gratuitously provided, at *its own undoubted expense*, by a member of one species, for the good of a member of ANOTHER SPECIES; the very thing which Darwin himself said would "annihilate" the Darwinian theory if it could be found! (*Origin of Species*, 5th ed., p. 247). "What need" asks Frank, "is there for the plant to keep and cherish a moth—since it only does so by a constant expenditure of nutrition?" Evolution is powerless to answer.

Note 22

As a reviewer long ago remarked: "The peculiarities of geographical distribution seem very difficult of explanation on any theory. Darwin calls in alternately winds, tides, birds, beasts, all animated nature, as the diffusers of species, and then a good many of the same agencies as impenetrable barriers" (*North British Review*, July 1867 p. 316).

Apropos of Darwin's methods, it is interesting to read that illustrious author's own reference to them. Writing to

Hooker about Spencer, on the 10th December 1866, Darwin said : " I feel rather mean when I read him : I could bear, and rather enjoy feeling that he was twice as ingenious and clever as myself ; but when I feel that he is about a dozen times my superior, even in the master art of wriggling, I feel aggrieved " (*Life and Letters*, Vol. iii, pp. 55-56). Can we imagine any consciously unbiassed man, however humble, classing himself as a would-be expert in WRIGGLING ?

Note 23

I have read many works by " Christian evolutionists ", and carefully studied their several systems—Drummond's *Natural Law in the Spiritual World* and *Ascent of Man* ; Baden Powell's *Creation and its Records* ; Capron's *Conflict of Truth* and *Antiquity of Man* : Mercer's *Problem of Creation* ; etc.

They all assume the unprovable—the truth of evolution. They all assume that God once called " very good " what He now regards as anything but good. The honest intent of these men is obvious, but I cannot possibly endorse their methods.

I have also studied works like Bergson's *Creative Evolution*, etc. The same applies to them. They all assume the unproved. They merely suggest, so to speak, that the pill need not be so very bitter to swallow, but add nothing to the scientific case for thinking that we need swallow it at all.

Note 24

A few years ago I went to hear a series of lectures, up in Simla, on what was called the " New Knowledge ". I found that the subject was evolution. The lecturer was, as usual, childishy ignorant of the actual facts of palæontology and biology, and I challenged him to public debate on the subject. He declined the challenge. I then gave a public lecture on the other side, at which he was present, and at which he had not a remark to make when I opened the lecture to discussion at its close. In talking to me, after the affair, he admitted that his beliefs were entirely theoretic ; yet this had not prevented him from giving out his speculations

as "New Knowledge". By his own admission, then, he had been giving out "knowledge falsely so called".

This person's case is typical of the effects of evolutionary belief; for although he was tragically ignorant even of its supposed scientific basis, yet he had absorbed the full philosophic *consequences* of that belief. So although a professing Christian, of a noted Christian family, and socially one of the most charming of men, he poured ceaseless scorn on the Bible throughout his lectures, wrecking the faith of defenceless youngsters who took his ridiculous statements for actual science; and it was clear that he himself had lost all belief in the Gospel of SALVATION.

Evolution inevitably kills *that*.

Note 25

The anomaly of this has often been pointed out by scientific writers. As Depéret says: "it is important to notice that Darwin was very little of a palæontologist"; and when his ideas were attacked by experts in palæontology, "men of such authority as E. Forbes, Woodward, Murchison, Sedgwick, Pictet, Agassiz, Barrande, d'Archiac, and many other determined partizans of the fixity of species, and of the integral renewal of fossil faunas", Darwin had no scientific answer to offer. "Compelled to answer these objections of fact", says Depéret, "Darwin could only combat them by theoretical arguments" (*Transformations*, etc., p. 37). It is worth remembering this verdict by a modern first-rate palæontologist, for evolutionists are fond of declaring that Darwin was opposed only by prejudiced theologians and other people ignorant of science. Darwin himself admitted that all but one of the greatest geologists and palæontologists of his day were against him! (*Origin of Species*, end of chap. IX).

Note 26

"Exact proof being found impracticable, the principles of rationalism were adopted. Like Descartes or Spinoza, Darwin, Haeckel, Huxley and Wallace place unlimited confidence in 'ideas'" (E. K. Simpson, M.A., Notes from Prof. Fleischmann's *Die Descendenztheorie*).

Darwin had the effrontery, at times, to try to rule the whole idea of creation out of court as "unscientific". His opponents being, as Depéret shows, able to prove that their views agreed better with *facts* than his did, we might well ask "What is a 'scientific' theory, if not one which agrees with the facts?" That Darwin's own views did not square with facts, even in his own province of zoology, is shown by the modern zoologist Fleischmann, who declares that there is not a single fact in nature to confirm them. "Darwinism," says Fleischmann, "is not the result of scientific research, but purely the product of the imagination" (*Die Darwin'sche Theorie*).

How could responsible experts like Fleischmann talk of Darwin's conclusions in such terms if Darwin had acted on sound scientific lines? Yet I could quote similar sweeping statements against Darwin, by other responsible authorities, absolutely without limit. No man has ever been more thoroughly hammered, for wrong use of pure imagination as "science", than Darwin himself has, even by his own fellow evolutionists.

Note 27

Fleischmann's case is interesting. He is known to scientists all over the world as a "reputable zoologist" and a "biologist of recognized position" (see Kellog's admission, *Darwinism To-day*, p. 8), and long believed in evolution. Although still a professed Agnostic, however, and so in no way concerned to support belief in Scripture, he finally became so convinced that nothing in science could actually *prove* evolution, that he finally attacked the whole supposed case for it, ridiculing the idea that evolution could be said to be scientifically established. Evolutionists were powerless to answer him. Nor did he stop at merely attacking the existing case: "I go further" said he, "and affirm that the discussion of the question does not pertain to the domain of strict zoology or botany" (*Die Descendenztheorie*, p. 17, by Fleischmann, Professor of Zoology and Comparative Anatomy at Erlangen University). In other words, we can never even hope to prove evolution by the sort of data available to science.

Note 28

Nobody can accept evolution, in however "Christianized" a form, without beginning to doubt and reject some part of God's Word, and legitimizing attacks upon it. Thus he automatically, at the very start, legitimizes Haeckel's insulting talk of "*dysteleology*", and also makes suffering and death integral to God's Plan of Creation. This in turn legitimizes attacks upon the Physical Resurrection of our Lord, which loses its whole point apart from the doctrine of man's original sinless and deathless state, fall, and redemption from *that fall*. So one surrender paves the way for another to the thorough-going materialist, who is *always* able to show that a yet more advanced position is more logical than the one where the increasingly despairing "Christian" evolutionist struggles to cry a halt. I have searched the whole road, from the evolution of Christians like Drummond and Capron to that of sheer materialists like Darwin and Haeckel, and I know that there is no logical halting place in between. The materialist has the perpetual advantage, until we accept some un-Christian idealism like that of Bergson, or anti-Christian idealism like that of "Spiritualism" or "Christian Science."

It is significant that the things which are logically doomed, as soon as a man accepts evolution, are the essential Christian facts of SALVATION through the BLOOD of the INCARNATE SON OF GOD. The only things which can be fought for by the evolutionist are those which are common to all man-made creeds. So, among evolutionists, the Gospel of Christ invariably gives place to a "Social Gospel", based on ideas of the innate perfectibility of man as man.

If anyone would like to see the logical consequences of evolution, *if once accepted as science*, worked out, I advise him to read F. W. H. Myers' *Science and a Future Life*—especially the Essays on "Charles Darwin and Agnosticism", and "The Disenchantment of France". One might make a précis of those chapters by saying that Mr. Myers shows the direct connection between the acceptance of modern evolutionary doctrine and :—

i. Loss of belief in Divine Providence ; loss of sense of sin and forgiveness ; loss of hope and reasonable optimism ;

loss of belief in one's fellowman; and the degradation of sexual and family relationships.

ii. The rebirth of the old Pagan doctrine of Transmigration, and of eastern fatalism.

Remember that this writer was an enthusiastic admirer of Darwin's, regarding that famous speculator as the very best man that ever did or could exist: "Fate wrought him without a flaw" (p. 74). These are but the logical consequences of the doctrine of evolution, which Mr. Darwin persuaded Myers and others to accept as "science".

Mr. Myers bewails these consequences and recommends a resort to Spiritualism as the Hope of the Future. (Cf. 1 Tim. 4: 1.)

Can anyone wonder that I insist upon the basal fact that evolution is unproved and unprovable?

Note 29

See, e.g., Osborn's book *From the Greeks to Darwin*; also Hastings' *Encyclopedia of Religion and Ethics*, Vol. 5, Art. "Evolution", p. 615; and compare with remarks in Darwin's *Origin of Species*, 5th edn., p. xv; Lyell's *Antiquity of Man*, pp. 379-380; Woodward's *History of Geology*, p. 4; etc.

Bettex tells us that "the Darwinian theory was first broached by Empedocles, in 470 B. C." (*Modern Science and Christianity*, p. 138), and all the ideas of the last century, were, as the above writers show, current coin by the time of our Lord—Natural Selection, Struggle for Existence, Survival of the Fittest, Spontaneous Generation of Life, Universal Evolution from the lowest forms of life up to Man, and the gradual rise of human Speech and progressive Cultures out of a primitive condition when the human race was still a "dumb and filthy herd of animals" occupied in scrambling for "acorns and lurking places". Could anything match modern ideas more closely?

Note 30

Thus the late Sir Archibald Geikie tells us that: "It was a fundamental feature in Hutton's philosophy that the present

affords the key to the past, and we are not at liberty to imagine new causes of change when these seem insufficient which occur in our experience" (Presidential Address at the Centenary of the Geological Society of London, Sept. 26, 1907).

Had he said "sufficient" instead of "insufficient", the thing might have seemed more plausible. As it is, mark that this excellent authority calls Hutton's creed a "philosophy"; and note its dogmatism as expressed by the words "not at liberty" and "in our experience". For what right have we to admit any such limitation? What would an astronomer say if told he was "not at liberty" to recognize signs of any element, in the spectral light of a star, which could not be matched in our experience on earth? Are we to accept dogmas in regard to matters distant in time which may not be applied to those distant in space? And if so, why?

Note 31

The conditions in which fossils are found—standing trees buried up to 40 feet or more in height; fishes and other soft bodied vertebrates buried before their flesh, etc., could decompose and their bones fall apart, and found heaped together, intact, in countless swarms; molluscs found in countless numbers, with valves still joined together and closed as in life; etc., etc.,—often witness as clearly to the fact that the sediments which contain them must have been laid down rapidly, as the houses and bodies found in Pompeii testify that the ash which buried *them* did not come down in homœopathic doses.

Although analogy with the present itself shows how such facts should be interpreted, the magnitude of the catastrophes thus often witnessed to in the rocks is apt to offend the follower of Lyell. The strangest reasoning is sometimes resorted to in order to get round the dreaded witness to "catastrophe"; thus the large wings of certain insects, found buried intact, have been appealed to as testifying against catastrophe, by showing that the creatures must have lived under the mildest atmospheric conditions. As well point to the outlines of a corpulent Roman gentleman or delicate Roman lady, as counteracting the idea that *they* could have suddenly perished at Pompeii.

The very fact that the creature is so perfectly preserved shows that it was buried as suddenly as it had lived luxuriously. The very contrast only serves to emphasize the catastrophe.

Note 32

Neither Sedgwick nor Murchison would ever subscribe to Lyell's *presumptive* views. "In Germany", Zittel tells us, "the personal influence of von Humboldt and Leopold von Buch was still too powerful to allow a rapid acceptance of the Uniformitarian doctrine." "France" he adds, "was even more reserved towards this aspect of Lyell's work. The ideas of Cuvier were deeply rooted, and were ably supported by Elie de Beaumont and Alcide d'Orbigny. It was not until after the death of these two gifted scientists that the Uniformitarians could become successful" (*Op. cit.*, pp. 196-197).

It hardly says much for the intrinsic merit of a theory that it has to wait for the death of its opponents before it can make its way. According to Zittel, von Buch was "rightly regarded as the greatest geologist of his time" (p. 64).

Note 33

And the Doctrine of Uniformity is, of course, as great a dogma in biology as Suess and others have shown it to be in geology. As the Duke of Argyll pointed out long ago: "The first fundamental difficulty is simply this—that all the theories of development ascribe to known causes unknown effects" (*Primeval Man*, p. 44).

In other words, since he is compelled to suppose that everything was produced by the normal processes of nature going on around us to-day, the Uniformitarian is perpetually compelled to assume that those processes are capable of producing effects which they have never actually been known to produce.

But this is exactly what inventors of *fables* have done from the first! Thus "Uncle Remus", when wishing to explain how the guinea hens got spotted, felt compelled to appeal to a *known cause*. So he remembered that milk could

be splashed, and would tend to settle in minute white spots if it were splashed. Therefore he told a story of how Sis Cow had dipped her tail into a pail of milk and splashed it over the birds. It never troubled him that he was ascribing an *unknown effect* to his cause, by assuming that such markings could be permanent, and inherited by the offspring of the birds. Like the Uniformitarians, Uncle Remus was quite ready to "ascribe to known causes unknown effects".

It is a singular thing that, in one of the most detailed of the prophecies of the end of the age (2 Tim. 3 : 1 to 4 : 4), we are warned that men shall be: "ever learning, and never able to come to the knowledge of the truth . . . And they shall turn away their ears from the truth, and shall be turned unto *fables*." As the Duke of Argyll showed, "all the theories of development" (i.e. evolution) bear the essential characteristics of *fables*, since they all "ascribe to known causes, unknown effects".

Note 34

It is extraordinary that such talk should ever have carried weight with men who claimed to be reasonable, for *reason* must always admit that no experience, however prolonged, could ever be quoted as the measure of the possible. Little peas may remain inside their little pod for thousands of years, without tending in the least to disprove the existence of an outside world which they have never seen.

As regards the abstract soundness of the Uniformitarians' methods, we may remember the declaration of Professor Tyndall, who said: "It is self-evident that if there is a God, He is Almighty and, therefore, can perform miracles" (Cited by Bettex, *Modern Science and Christianity*, p. 169).

"It seems to me" admitted Huxley, "that 'creation' in the ordinary sense of the word is perfectly conceivable . . . The so-called *a priori* arguments against Theism, and given a Deity, against creative acts, appear to me to be devoid of reasonable foundation" (*Life of Darwin*, Vol. II, p. 187).

We therefore see that, on the admissions of both these sceptics, Divine Intervention must always be possible so long

as the existence of God is possible. To prove the soundness of Uniformitarianism, therefore, we must begin by disproving the existence of God—and who is to do that?

Note 35

It is very striking that the Apostle did foresee that a denial of the Flood would take a prominent place in the scheme of latter-days' apostasy; for neither Jews nor Pagans—much less professing Christians—ever thought of denying the Flood in Peter's day. *Their* oppositions to Christian belief took very different lines, for traditions of the Flood were universally accepted. Indeed, according to Sir Henry Howorth, belief in the Deluge was generally dominant right up to the year 1840 (*Glacial Nightmare*, Vol. I, pp. 123, 185, 192). Among Christians themselves this belief was, owing to our Lord's own testimony to it, practically an article of faith. As Driver remarks, "Until comparatively recent times, the belief in the Deluge . . . was practically universal among Christians" (*Book of Genesis*, p. 99). So it was not until "comparatively recent times" that the prophecy showed clear signs of being fulfilled. Yet its fulfilment is now complete. Modern so-called Christians, in countless numbers, do not hesitate to deny all belief in the reality of the Biblical Flood; for that denial forms an integral part of our modern philosophy of "Uniformity", just as St. Peter anticipated.

Note 36

There is a very striking instance of such an anticipation in the 3rd chapter of Genesis onwards. I refer to the talk of a SEED of the *woman*. This may not strike one at first sight as being a peculiar thing to find in a very ancient book, and yet R. C. Punnett tells us that:—

"Few if any of the more primitive peoples seem to have attempted to define the part played by either parent in the formation of the offspring . . . (It) is not until the time of Aristotle that we have clear evidence of any hypothesis to account for these phenomena of heredity. The production of offspring by men was then held to be similar to the production of a crop from seed. The seed came from the man, the

woman provided the soil. This remained the generally accepted view for many centuries, and it was not until the recognition of woman as more than a passive agent that the physical basis of heredity became established. That recognition was effected by the microscope, for only with its advent was actual observation of the minute sexual cells made possible. After more than a hundred years of conflict lasting until the end of the eighteenth century, scientific men settled down to the view that each of the sexes makes a definite material contribution to the offspring produced by their joint efforts" (*Mendelism*, 4th Edition, 1912, pp. 1-2).

Thus we see how all ancient science and all ancient philosophy, right up to the end of the 18th century, was definitely opposed to any idea of woman being said to have her "seed". In talking of *woman's* seed as well as man's, Scripture anticipated by thousands of years the discoveries of modern science. (Galileo himself, and his successors for nearly 200 years, held wrong views here, in spite of the testimony of Scripture; so we may again talk of the Bible "triumphing over Galileo"!) It is worth remembering, therefore, that in the very hey-day of Grecian philosophy, the whole new Christian scheme appeared absolutely *staked*, from the first, to this ancient and right Biblical view of things biological; for if Mary had supplied merely the field, so to speak, for the Incarnation, and had not actually contributed to its *seed* or substance, how could our Lord ever have been truly human as well as truly Divine?

The Christian insistence upon the *humanity* of our Lord, throughout all those centuries when science knew nothing of, and philosophy derided, the very idea of a literal "seed" of woman, is a standing testimony to the persistent defiance of, and final triumph over, human science and philosophy by the Revealed Word of God.

Note 37

"My good and kind agent" he called Huxley, "for the propagation of the gospel—i.e., the devil's Gospel."

Some opposers of Darwin, like Sir Robert Anderson, have imagined that Darwin himself remained a Christian to

the end, in spite of his theories about evolution. I cannot myself believe this. Some passages in Darwin's works breathe a spirit of downright blasphemy which is unmistakable; and his private correspondence is often equally pointed. Thus when a young student of the University of Jena wrote to ask Darwin what he thought of the Christian revelation, the great speculator replied saying: "Science has nothing to do with Christ, except as so far as the habit of scientific research makes a man cautious in admitting evidence. For myself I do not believe that there has been any revelation" (letter of June 5, 1879. See Dulau's Catalogue 114 of 1924, p. 46). As a Uniformitarian, of course, Darwin could not believe in revelation: and this admission in itself was an honest one, although it disqualified him from ever being called a Christian. But the preceding reference to caution in admitting evidence, as if it were *that* which caused his scepticism, was a sheer piece of cant. Darwin's unbelief was founded solely upon his basal Uniformitarian dogma that God never does interfere; and how little hesitation Darwin had in accepting anything whatever as "evidence" when it suited himself, is seen by the 800 odd postulates in the subjunctive mood—sheer suggested possibilities, without one tittle of actual evidence—by which he supported his own belief in the "Origin of Species". No one ever showed better, than Darwin himself did, how swarms of "Fables" can arise out of one fundamental "Error".

Note 38

Or that "Jesus is the Christ" (1 John 2:22). Remember that, among the Jews of our Lord's day, to claim that Jesus was the "Christ" was equivalent to claiming both that He was God's Son and also Himself God. Thus Caiaphas asked if our Lord was THE Christ, *the Son of God*; and rent his garments when our Lord answered "Thou hast said" (Matt. 26:63-65; cf. John 19:7). The reason for this is clearly seen in the Psalms. Thus Psalm 2, which treats of Jehovah and His Anointed (v. 2, i.e. "Christ"), speaks of the King Whom Jehovah appoints, Who is also Jehovah's SON (vv. 6, 7, 12). That the Anointed One (or "Christ") is indeed Jehovah's Kingly SON we find confirmed in Psalm 45:6-7, where He is addressed both as having a Kingdom, and as

being God Himself, while God is His God! To admit that "Jesus is the Christ" therefore, is to admit that "God became man" in the person of the man Jesus.

Note 39

"Antichrist" himself seems to be the same person as Paul's "Man of Sin". So note that the words rendered "Man of Sin" and "Mystery of Iniquity" in 2 Thess. 2: 3, 7, are literally "*lawless one*" and "*mystery of lawlessness*". Thus *the lie* is mentioned here (v. 11), as everywhere else in Scripture, in direct connection with lawlessness towards the God of the Bible. As it led to the breaking of His Law in Eden, so has it operated against His Laws ever since. Remember, therefore, that evolution (the child of *uniformity*) not only directly supports *the lie* but is always found, in practice, to encourage the breaking of God's Laws. It is indeed natural that this should be so, in spite of the attempts of evolutionists to clothe their creed in as fair a garb as possible. The instinctive logic of fallen man is too much for them. Thus when the beautiful idea (quoted by some evolutionists) that: "There is no chasm of six thousand years between the evolutionist and his Creator!" is realized to mean that the evolutionist has no Creator at all beyond senseless nature and his own dead ancestry—of which he himself is the last and highest representative—and when the declaration that the evolutionist "actually lives in the Creation Days!" is seen to mean that his own surrenders to his lusts are probably as creative as anything that has ever happened; one can hardly be surprised that he does surrender. In any case, the descendant of lower creatures who "raised themselves" by Natural and Sexual Selections (*alias* Blood and Lust), can hardly be going far wrong if he continues to practise the (supposedly) well proved ancestral methods. Thus *uniformity*, by leading to belief in Evolution, teaches us to think that we ourselves have been raised to our present state through the surrenders to their "natural" instincts (i.e., any impulses they may have felt) of our animal ancestors; and so, since such surrenders have not been penalized in the past, but actually represent the means of *progress*, we can be sure that, similarly surrendering ourselves, we "SHALL NOT SURELY DIE, but

even *become as gods*". Thus the "Error" (Uniformity), the "Fables" (Evolution), the "Lie" (denial of God's Wrath), and "Lawlessness" (contempt for the Laws of the Bible), are all in direct relationship to each other.

Note 40

The word here is *krino*, meaning "judged" rather than "damned"; although the sense is certainly that of condemnation. The passage indicates that men shall be made to come out in their true colours. As an illustration, I may quote the words of J. Howard Moore, Instructor in Zoology, Chicago, who wrote: "Man is not made in the image of the hypothetical creator of heaven and earth, but in the image of the ape. Man is not a fallen god, but a promoted reptile." He laughs at the idea "of a god with royal nostrils miraculously animating an immortal duplicate", and asks: "Is it not better after all, to be the honourable outcome of a straightforward evolution than the offspring of flunkey-loving celestials? Are the illustrious children of the ape less glorious than the sycophants of irrational theological systems?" (*The Universal Kinship*, 1906, p. 107). The God of the Bible, then, is a "flunkey-loving celestial", while those who worship Him are "sycophants."

Does this sort of thing not show how evolution removes the fear of Jehovah from men, and so encourages His enemies to unmask themselves? That is exactly what the "Error" (*Uniformity*, the parent of Evolution) was to do, "that they all might be *judged*". And we are to be justified or condemned by our *words* (Matt. 12: 36-37). Note, too, how this scoffer's whole case is based upon the unproved and unprovable assumption that evolution is a fact.

Note 41

It is remarkable that the Bible talks of "obeying" the Gospel, as if it were a definite *command*. So remember that the "beginning" of the Gospel of Jesus Christ is the *command* to repent (Mk. 1: 1, 4; cf. Matt. 3: 2). It is *after* repentance that we are told to believe (Mk. 1: 15; cf. Luke 24: 47). Note this, for many talk to-day of finding difficulty in "believing". Such difficulty lies, almost if not quite invariably, in the hardened state of the heart itself, which has not yet

repented. The truly *penitent* soul finds little difficulty in accepting, gladly, salvation through the BLOOD of Christ. Similarly St. Paul, in referring to those who have sinned wilfully after receiving the light, talks of the impossibility of renewing such again to *repentance* (Heb. 6: 4-6). There lies the crux. So our Lord, when emphasizing the condemnation of those who do not believe on Him, gives as the basal reason of their unbelief that they "loved darkness rather than light, because their deeds were evil" (John 3: 18-20). Here the refusal to repent is at the root of unbelief; and our Lord treats it as a universal fact.

Note 42

Dr. Farrar's five sermons on "Eternal Hope", given in Westminster Abbey during November and December 1877, caused a great sensation at the time, both in England and America, because he denied that many would suffer eternal torment. Yet even he believed that some would do so. The denial of the very principle of everlasting punishment is, therefore, a relatively very recent thing among professing Christians at large. *The Lie* has only established itself inside the Church within living memory.

In its more recent forms, *The Lie* is very complete. Thus a pioneer apostate of our own generation, the Rev. R. J. Campbell has not hesitated to declare that: "There is no such thing as punishment, no far-off Judgment Day, no great white throne, and no Judge external to ourselves," (*New Theology*, p. 213).

Note 43

In this connection see the wording of 2 Thess. 2: 7-8, for the passage has often been wrongly rendered. Thus our A. V. says: "For the mystery of iniquity doth already work: only he who now letteth will let, until he be taken out of the way. And then shall that Wicked be revealed." But the words rendered "taken out of the way" are *ek mesou genetai*, which mean literally "out of the midst develops". The reference is to the mystery of iniquity, not to the one who "lets"; and the passage should be rendered: "For the mystery of lawlessness doth already work (only he who now hindereth will hinder) until it develops out of the midst. And then shall

that Lawless One be revealed." This clearly means that the mystery will continue to work, although continuously hindered, until it finally "develops out of the midst", or comes to an open head. And then its great exponent will appear. It is apparently in order to secure this very coincidence of the conditions and the man that the "hinderer" works, for we are told that he "withholdeth" the mystery of lawlessness in order that the Lawless One "might be revealed *in his time*" (v. 6). So we see that Antichrist himself is simply led up to by the preceding apostasy.

All prophecies show, too, that the development of lawlessness in the Last Days is a gradual process, rather than an instantaneous affair; and yet, although somewhat prolonged, it is not to be reversed. For "evil men and seducers shall wax worse and worse, deceiving and being deceived" (2 Tim. 3 : 13). This agrees with the very manner in which the prophecies appear. Thus Peter, in showing us the initial stages of the apostasy, defines the basal "Error", indicating its attendant denial of the Flood, acceptance of Evolution, and denial of the Second Coming. Yet Peter's scoffers still seem to think that an Intervention may have taken place in the days of the "fathers"; i.e., at the time of the Incarnation. John, however, clearly shows that belief in the Incarnation itself would be definitely denied in the end; while Paul here (in 2 Tim. 3) shows that the apostasy would be a progressive affair, men first becoming merely nominal Christians (v. 5; "having a form of godliness, but denying the power thereof"), while things get worse and worse, as the shadows deepen towards the end, until all real Christians have finally to suffer active persecution (v. 12), and men at last definitely refuse even to *listen* to "sound doctrine" (4 : 3). Finally, just before God's judgments actually break upon the world, we find that men seem to have lost all knowledge whatever of God as Creator or Christ as Saviour (Rev. 14 : 6-7).

Note 44

Note, however, that although this "Superman" is the *logical* climax to evolutionary doctrine, that of itself could not cause his appearance, since evolution is, according to Scripture, a false doctrine. It is consistent, therefore, to Scripture,

that the actual appearance of this being is attributed to supernatural agency. The Man of Sin (lit. "Lawless One") will be in very truth a Superman, yet not by his own naturally derived powers, for, since evolution is *not* true, this apparent proof of its truth will, according to Scripture, come about through the direct energizings of the Devil, "with all power and signs and lying wonders" in "them that perish" (2 Thess. 2 : 9-10). The same thing is indicated in all the prophecies about this transcendent being : e.g., Dan. 8 : 23-24, where we are told that "his power shall be mighty, but *not by his own power*", and Rev. 13 : 2-6 where we learn that his wonderful powers are received from the Dragon, or Serpent, himself.

Note 45

There seems to be a *speeding up* of things, as the end draws near. Thus there was a long interval between the first hints of *uniformity*, and its final enthronement in orthodox geology. Biological Evolution came in before this enthronement was complete, but completed its own triumph not long afterwards. The Lie was not openly hinted at until 1877, but was fully declared less than 30 years afterwards. During the 25 years of our present century, all the heads of latter-day apostasy have come to be taught, as a matter of course, in almost all our secular schools and theological colleges ; so that the children of to-day are growing up in almost complete ignorance of vital Christian *doctrine*, while they are being saturated with talk of the wonderful and progressive powers of man himself. When the last brakes are removed, the speed cannot help but accelerate.

Let Christians themselves, however, hold up their heads in these days ; for it is at just such a time, to a re-paganised earth (Luke 18 : 8), that our Lord shall come for them. The very fulfilment of these prophecies means that the Christian's own hour of redemption draws near (Luke 21 : 28). The Man of Sin himself is to be destroyed by the Manifested Christ (2 Thess. 2 : 8 ; cf. Rev. 19 : 11-20) ; and Christians shall be removed even before that (Luke 21 : 36 ; cf. 17 : 34-37 ; Matt. 24 : 40-41). Note our Lord's simile of the eagles and the body ; for even as we have fed on Him by faith, so will we be gathered to Him—Who was slain that we might live).

APPENDIX I

THE PRIMEVAL LAWS?

IT is a very remarkable thing that Scripture does (as we have seen above) bracket together *animals* with *men* under judicial *law*. The occasion of the bracketting is also significant, for it takes us back to the Flood, which destroyed the antediluvian possessors of the earth. These things remind one of a very significant fact, upon which we can only briefly touch here, namely, that man holds his own present dominion over the earth *as an animal* rather than as a man. Thus there are certain Primeval Laws quoted in the Bible, which apply to all mankind, and are well worth special study. Unlike other laws, these ones were enunciated to the parents (Adam and Noah) of all living men ; and they were announced on three pregnant occasions, all of which had to do with man's sovereignty over the earth. The first was at the Creation, when man was put in possession of the earth ; the second was at the Curse, when the conditions were changed under which man might continue to possess the earth ; and the third was after the Flood, when man was again put in possession of the earth. Now these laws *all refer to conduct*, not to worship. There is nothing, for instance, to match the first three purely theological

commandments to the *Jews* (Ex. 20: 2-7). So long as men obey the laws of conduct—so long e.g., as they *rest* on the Sabbath (Gen. 2: 2-3; cf., Ex. 20: 8. Note the word “remember”, for the law was already in existence); so long as wives obey their husbands (Gen. 3: 16); so long as the murderer is faithfully executed (Gen. 9: 5-6);—men observe the Primeval Laws, and so there is no *Scripture* reason why they should be dispossessed of the earth, whatever gods they may worship.

(This does not deny, of course, that man has, from the first, been called to live on a higher plane; it only means that his actual possession of the earth is not, at present, made dependent on his doing so.)

Whatever may happen to men *after* death, and however much Jews and Christians may suffer even in this life for serving false gods, man *as man* can never reasonably be dispossessed of the earth (so far as Scripture goes) so long as he obeys the *Primeval Laws*. Those Laws are placed upon the lowest possible basis—man’s conduct as a *creature* not as a *worshipper*. Hence we find, in Scripture, that *Jews* might be disinherited for serving false gods; but no heathen were ever disinherited for such a reason. The Canaanites were dispossessed for their sins of conduct, not of worship. God treats man, outside the Jewish or Christian categories, *as an animal*. Conduct is demanded of *him*, not worship.

Remembering this, then, it is very significant that, within the last century, we have not only seen an apostasy developing from traditional *Christian* beliefs, but one movement after another has also

arisen specifically to attack the *Primeval Laws*. When we talk of the "Decay of Sabbath Observance", of the "Feminist Movement", or the "Movement for the Abolition of Capital Punishment", (to say nothing of the "Vegetarian Movement", or modern attacks upon God's Institution of Marriage, etc., which also come into the same category), we refer to things which show that not only is our *Christian* era drawing to an end, but "Man's Day" itself is also doing so. Note this, for it means that the Bible indications that the final Christian apostasy would end in the opening of "THE DAY OF THE LORD", receive a striking comment. We see the *Christian* apostasy, and man's *secular* revolt, appearing together; just as was prophesied (against all apparent probabilities) nearly 2,000 years ago. (For both Pagans and Jews, in those days, while resisting Christianity, still held firmly as a whole by the Primeval Laws. Nobody could have thought it probable that a world-wide *secular* revolt against the Primeval Laws should finally appear in company with the Last Days' *doctrinal* apostasy from Christian Faith. Yet it was indicated in Scripture that the revolt and the apostasy would appear together at the time of the end; and we now see them appearing together before our eyes.) So note that when that secular revolt is fully developed, and when it is clear that man, as a whole, no longer means to observe the Primeval Laws, then the "Day of the Lord" must be logically expected!

The early chapters of Genesis—the most wonderful in all literature—make it clear that the

kingdoms of this world cannot logically (i.e., in strict legal justice) become the kingdoms of our Lord and of His Christ (Rev. 11 : 15), until *man* has first disqualified *himself* by deliberately rejecting his own terms of tenure—the Primeval Laws ! Hence the significance of these modern movements, which represent man's growing efforts to disinherit himself ; and hence also the significant fact that, in the opening chapters of the Revelation, we see—just before the Day of the Lord begins—God seated to Judge the earth, on a Throne surrounded by the special symbols of the Noachian Covenant (Rev. 4 : 3, 6, ff.). For the rainbow, and the four great beasts, irresistibly recall that Covenant and the four classes of creatures with which it was made. The beasts represent the leading types of those very classes ! (cf. Gen. 9 : 9-10).

Remember that the Noachian Covenant represents the last addition to Primeval Laws—under the complete set of which we all come as sons of Noah, since not one of them has ever been abrogated in Scripture. Both Paul and Peter specifically reaffirmed the Law for the subjection of women, even among Christians ; and Christians never questioned the point until the world at large began to do so. The appearance of such a Throne as is pictured in Rev. 4 shows how little we can trust the arguments of those misguided Christians who would encourage such sinister movements to-day. John shows us not only that the Primeval Laws remain unchanged, but that they remain the basis of Legal Judgment right up to the end of our age, by the *God of Creation* (cf. Rev. 4 : 11).

The significance of this seems unmistakable. In the meantime, however, I repeat that these Primeval Laws are Laws purely of *conduct*, not worship; they are Laws on man *as animal* rather than as distinctively *man*. Hence animals can be bracketted with him in them: and consequently we see that former creations *as such* need *only* have been possessed by *animals*!

Here again we find how little the testimony of the rocks can invalidate Scripture.

NOTE.—Certain restrictions on diet were certainly made under the Mosaic Law; but they were made on ceremonial, not moral, grounds, and were removed when Christ came. It was never morally wrong, from the natural point of view, for a Jew to eat certain foods; although he once committed a spiritual offence by doing so, just as a Christian can commit a spiritual offence by eating things sacrificed to idols. In each case the offence lies in the spiritual implications of the ceremonial act, not in its intrinsic morality from the point of view of Primeval Law.

We should never forget that the Law which was abrogated by Christ was the Mosaic *ceremonial* Law, which represented the former method by which man could come into spiritual relationship with his Maker. It was the old *spiritual* not *secular* Law, and related to *merit*. It pointed forward to Christ; and so its functions, *as Law*, were completely fulfilled and put aside when Christ came.

It is different with the Primeval Laws, which are based upon the facts of our physical being, as products of Creation and Curse. Since these *physical* facts remain, the Primeval Laws also remain. (Thus the Law of life for life is physical justice, and it is also a physical deterrent to the would-be murderer. Even the Law of subjection for women is based upon their special weaknesses *as women*; i.e., their greater liability to be deceived, as shown by the details of the Fall, and their relatively multiplied sorrows and weaknesses under the effects of the Curse.) Remember that *secular* Law is definitely endorsed by Paul, who would have nothing to do with further *ceremonial* Law. Indeed he regarded the *sword* of the magistrate, even among heathen, as having the direct authority of God (Rom. 13 : 4); thus pointing back to the time when the duty of administering capital punishment for murder was impressed upon the parents of all living men.

Now the only ambiguous Primeval Law is the one regarding the Sabbath; for no direct injunction is given to rest on it. Yet the day was blessed and sanctified because God rested upon it; so it might be inferred

that blessing and sanctification would be found by all creatures who did the same. Note therefore that, among the Jews, this Law of rest was applied to *beast as well as man*. All other Primeval Laws took the form of definite injunctions as to food (e.g., the legitimacy, as such, of all vegetable and all animal, food for man), marriage, the position of wives, and the sanctity of human life. No *such* things were ever abrogated by Christ, nor can we expect them to be abrogated until we receive our new bodies!

Our Lord insisted upon the *irrevocability* of marriage, appealing to the Creation account (Matt. 19 : 3-9). Paul showed that attacks upon the very institution of marriage, as well as blasphemous restrictions on diet, would characterize the "latter times" (1 Tim. 4 : 1-3).

Note how Paul shows that these things would appear, under the *hypocritical* influence of demons, simultaneously with an apostasy from the Faith. It is significant that modern spiritualists, while denying the Gospel of Salvation through the BLOOD of Christ, advocate both complete "chastity" (under which *hypocritically* used term they prohibit even legal marriage) and abstention from a flesh diet (pretending to abhor animal slaughter). Thus our later-day *doctrinal* apostasy is conjoined with *secular* revolt, under an assumed *higher morality* than that of Scripture, exactly as foretold in Scripture.

APPENDIX II

THE FLOOD

IT is hardly possible, in a short appendix, to do justice to so great a subject as the Deluge of Noah. The following remarks are therefore offered simply as a few notes regarding matters referred to in the text above.

In the first place, then, the reader who is interested in the subject may do well to refer to Colonel Garnier's book on "The Worship of the Dead" (London: Chapman and Hall). The Colonel shows how probable it is that the traditions and customs of Pagan nations find a common origin in the worship offered, soon after their death, to certain of the first descendants of Noah. He shows the interlockings of the details of this worship with the histories of those persons and the details of the Flood. He also emphasizes the remarkable fact that the most different, and often the most primitive and isolated peoples, all over the world, have observed, from the earliest times, a "festival of the dead" on the 17th day of the 2nd month of their respective calendars—that being the anniversary of the day on which, according to Genesis, the Flood started, and the Antediluvian world was exterminated (Gen. 7: 11.)

It is a remarkable fact that the Deluge of

Noah does give us such a key explanation to otherwise inexplicable points of correspondence in the customs, mythologies, and actual Flood legends, of people scattered all over the world.

The correspondences in the legends themselves are sometimes very striking; thus the actual number of the survivors is repeatedly reported to have been eight (cf. 1 Peter 3: 20). These were, according to Scripture, Noah and his wife, his three sons, and their three wives. Similarly Fohi, the Chinese Noah, is saved together with his wife, three sons and three daughters; or eight souls in all. Manu, the Indian Noah of the Mahabharata, is saved together with the seven Rishis, or holy beings; again eight in all. Even the Fiji Islanders talked of eight souls being saved from the Flood, and landed at Mbenga (Smith's *Dictionary of the Bible*, Vol. III, pp. 572-573). It seems significant that the number of the saved is almost invariably recorded as being either a single pair, or a party of eight.

One of the most remarkable facts in regard to the Flood is the way in which ancient chronologies go to support the approximate Scriptural date of its occurrence. Thus we read that, "According to ancient traditions (Luken) the Assyrians placed the Deluge in 2234 B. C. or 2316, the Greeks in 2300, the Egyptians in 2600, the Phœnicians in 2700, the Mexicans in 2297" (*The Catholic Encyclopedia*, Vol. IV, p. 705).

Whatever modern archæology may urge—assuming the numerous dynasties of Manetho to be successive instead of contemporaneous, etc.—the

fact of these correspondences remains to be explained. This should not be forgotten ; for although it is the custom nowadays to belittle the testimony of general tradition to the Flood, it is most unscientific to treat in this fashion a "consentient belief", as Rawlinson terms it, appearing "among members of all the great races into which ethnologists have divided mankind".

It is indeed strange that the testimony of world-wide traditions should be treated with such scant respect to-day ; for although this practice is sometimes supported by the plea that Geology and Palæontology make belief in the Flood untenable, it is really quite clear, on the contrary, that the latter sciences do nothing of the sort.

The truth seems to be that a tremendous prejudice exists, to-day, against all arguments that may be offered in defence of belief in the Flood. Thus it is a singular fact that the really monumental works of Sir Henry Howorth, on the Palæontological and Geological evidences of the Flood, have been almost totally ignored by orthodox geologists. Indeed, the very allusions made to them in current scientific literature only go to show that those who criticize them have never even read them.

We may note, then, that Sir Henry (who had no faith, himself, in the accuracy of Genesis, and was interested solely in the observed facts of nature) went about things in the most methodical manner possible. In his first work, *The Mammoth and the Flood* (1887), he examined the evidence on the Palæontological side, showing how the existence of the remains of mammoths in vast herds, in places

where they could only have been overwhelmed by a sudden flood of waters, points unmistakably to the occurrence of an extraordinary deluge. He supplemented this, at the same time, by collecting a great mass of evidence in regard to the destruction, all over the world, and simultaneously with the mammoth, of numberless other creatures, including man himself, under circumstances which could only be explained by their all being overwhelmed, at a comparatively recent date, by the waters of an almost universal Deluge.

In his second work, *The Glacial Nightmare and the Flood* (1892), Sir Henry supplemented the above Palæontological evidence by turning to the Geological side of the question. This again he dealt with in the most systematic manner, taking in turn every one of the theories which have been offered to explain away the evidences of the Deluge by postulating, e.g., great ice sheets, marine submergences and icebergs, etc. He showed that the physical properties of ice will not accord with the idea that great masses of it could ever have moved over level surfaces and rolling plains, far from the mountain sources of their momentum. He also showed that the theories of cross-currents in ice, invoked to explain divergent striations in the rocks, have nothing in nature to justify them. He then went on to prove that the waters from melting ice could never explain the peculiar post-glacial sortings of glacial debris, nor account for the transfer, across seas and continents, of great erratic boulders. He similarly disposed of the idea that submergence under the sea could explain

the phenomena ;—since any such prolonged immersion would inevitably have left traces of a very different character from those which are found ; and ocean currents could have had no power to produce the effects of striation, and the universal sortings of rocky debris, which exist around us.

Having thus analysed and disposed of all contrary hypotheses, Sir Henry then showed how the evidence all points to the fact that great waves of translation have risen from the sea, inundating all lands ; throwing huge masses of marine shells on to the coastal areas ; transporting great blocks of stone for vast distances ; sweeping over the ground *irrespective of its contour* : forming cross-striations on the rocks over which they dragged their sediments ; throwing up great “tails”, “kames”, and “escars” of debris where their currents met ; and sorting and spreading out wide sheets of gravel, sand and loam, over the face of all countries. In other words, the geological evidence completely confirms the palæontological evidence and the evidence of universal tradition, etc., in testifying that an extraordinary Deluge, of world-wide extent, has overtaken nature at a very recent geological date, exactly as recorded in Scripture.

So when we find that these arguments, eminently reasonable in themselves and based upon undoubted facts, are simply dismissed to-day, without even a decent attempt at refutation, we may be pardoned for thinking that the men of our times are indeed fulfilling St. Peter’s prophecy by showing themselves “willingly ignorant” of the fact of the Flood.

It took Sir Henry a long time to realize that he would get no hearing. In 1905 he published a third work, entitled *Ice or Water*, in which he again urged students of geology to deal with facts inductively, and admit their obvious significance; and again he was ignored.

We may remember, however, that Sir Henry Howorth is by no means the only authority of modern times who has accepted the fact of the Flood on the strength of geological evidence; although Sir Henry was undoubtedly the writer who drew up the most formal treatises on the subject. Some of the most eminent workers in geology have agreed with him. Books and papers, on much the same lines as Sir Henry Howorth's works, have also been written by geologists like the late Duke of Argyll, *Geology and the Deluge*, 1885; Prestwich *Evidence of Submergence of Western Europe*, "Trans. Royal Society", 1893; *Phenomena Belonging to the Close of the Last Geological Epoch*, (New York, 1895, etc.); Boyd Dawkins (article in "Journal Anthropol. Inst." for Feb. 1894); Sir J. W. Dawson (*Meeting Place of Geology and History*, 1895); and G. F. Wright (Three articles on *Geological Confirmations of the Noachian Deluge*, in "Bibliotheca Sacra" for 1902), etc.